Aerobahn User Guide

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Saab, Inc.
85 Collamer Crossings
East Syracuse, New York 13057
USA

TELE: +1 315 445 0550

FAX: +1 315 445 9401

CAGE Code 6ZQN9

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Language

Regardless of the language specified by contract, the definitive version of this document is in Standard American English, and it is governed by that Standard.

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1 Welcome!

Aerobahn® collaborative decision-making tools facilitate proactive management and measurement of airside operations. By improving the predictability of operations and increasing efficiencies, Aerobahn provides tangible cost-saving benefits for airlines and airports.

Aerobahn provides...

- Situational awareness and predictive capabilities that enable improved management of surface-traffic flows. Using Aerobahn can facilitate queue reduction for inbound aircraft on active taxiways, especially during irregular operations.
- Capability to set thresholds for visual alerts. Aerobahn can help you see taxi-out delays that reach or exceed a specified length. It can also help you see inbound aircraft that have waited for more than a set amount of time to block into the gate.
- Capability to analyze arrival-demand and gate-availability data to support investment decisions regarding gate allocation and expansion.
- Real-time view of departure demand on non-movement and movement areas. Using Aerobahn can facilitate coordinated operations between Air Traffic Control (ATC) and airport tenants responsible for ramp management, minimizing the impact of traffic-management initiatives that might reduce capacity.
- Rule-based alerting to increase situational awareness.
- Extensive analytical and reporting capabilities that enable the collection of data that facilitate efforts to improve efficiency.

This guide helps you to leverage Aerobahn capabilities by providing step-by-step instructions for using the following:

- System tools and controls
- Workspace controls
- Real-time tools
- Post-operation analysis tools
- **SystemAdmin** utility

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2 Quick Start

This section helps you to start Aerobahn and to get to know the interface. Your creativity will show you new ways to use the suite of Aerobahn tools to measure and manage airside operations to improve customer satisfaction and profitability.

Start getting to know Aerobahn by reviewing the following:

- *Start an Aerobahn Session* below
- *Workspace Overview* on page 3-1

2.1 Start an Aerobahn Session

> **NOTE:** If you use VPN, make the VPN connection before you connect to the secure link that supplies your Aerobahn service.

> **NOTE:** When you click **Forgot your password**, the password is reset. Aerobahn automatically sends an Email to the address for that user name. *Only one Email address is given to each user name.* All users who share the user name are shut out of Aerobahn until they use the new password. The person who receives the new password must tell other users of the shared account what the new password is. (For more information, refer to *Reset Password* on page 10-12.)

You can start an Aerobahn session with the **Aerobahn Launcher** application (which does not require a browser to launch Aerobahn, refer to *Start Aerobahn with Aerobahn Launcher* below), or you can start Aerobahn in a web browser (refer to *Start Aerobahn in a Browser* on page 2-3).

2.1.1 Start Aerobahn with Aerobahn Launcher

Use this procedure to select and start a single Aerobahn site through the Aerobahn Launcher interface.

> **NOTE:** Aerobahn Launcher can be set up with its own proxy settings, JRE settings, and custom Aerobahn cache location, or you can select **Use SysAdmin Settings** in **Options > Advanced** tab to use the settings configured in the SysAdmin utility for the named Aerobahn site. The example shown in this topic shows settings configured in Aerobahn Launcher.

Use this procedure after you have set up a connection to an Aerobahn server (host).

1. Open the login screen:

   - ▪ Double-click ![icon] (**Aerobahn Launcher** desktop shortcut). It can take a few seconds for the app to start.

     or (if the desktop shortcut is not installed)

   - ▪ Select **Start > Aerobahn > Aerobahn Launcher.** The **Aerobahn Launcher** login dialog box opens.

2. Select a site from the Nickname list.

   > ℹ **NOTE:** If you did not select **Use SysAdmin Settings** in Options > Advanced tab, the hostname, protocol, and proxy settings are associated with this nickname (refer to 1 in).

3. Enter your Aerobahn user name (if it does not show in the Username box) (refer to 2 in).

4. Enter your Aerobahn password (refer to 3 in).

5. Click **Log in** (refer to 4 in).

   - ▪ If there is no security banner, the Aerobahn portal opens.

   - ▪ If your site has a security banner, that security banner opens. Review it. Then, click to acknowledge it. The Aerobahn portal opens.

Figure 2-1. Startup Procedure with Aerobahn Launcher

2.1.2 Start Aerobahn in a Browser

Connect to the secure web link that supplies your Aerobahn service before you log in. If you use VPN, make the VPN connection before you connect to the web.

1. Start the web browser.
2. Enter the server IP address or the URL of your Aerobahn site. The *Login Page (Browser Access)* on the next page opens.
3. Enter your Aerobahn user name.
4. Enter your Aerobahn password.
5. Click **Log in**. If you try to log in to an account that is in use, Aerobahn tells you of a conflict. If you continue, the open session closes, and information that is not saved from that session is gone. The Aerobahn Portal opens.
6. Open a workspace (refer to *Workspace Overview* on page 3-1).

⚠ **CAUTION:** Do not close the portal until you are finished working with Aerobahn. Closing the portal ends your Aerobahn session.

Login Page (Browser Access)

The Aerobahn login page controls access to the Aerobahn Portal.

If you receive an error message after you enter your login information, enter your user name and password again. If the problem persists, contact *Customer Service on page 10-1.*

ℹ **NOTE:** Local rules specify how Aerobahn passwords are configured. Contact your system administrator for instructions.

2.1.3 Aerobahn Portal

The primary purpose of the **Aerobahn Portal** is to give you quick access to 2 workspaces (refer to *Workspace Overview* on page 3-1).

To close your Aerobahn session, return to the **Portal**, and click **Log Out**.

Figure 2-2. Aerobahn Portal

Links and Regions	Description
1	User Name
2	Login Workspace entry points. Click an icon to open a Login Workspace. You can customize each workspace. You are not restricted to real-time tools or reporting tools in the respective workspaces.
3	Icons for data feeds and functions used by Aerobahn, such as Saab Multistatic Dependent Surveillance (MDS)
4	Entry point for the **SystemAdmin** tools. Click the text link to open **SystemAdmin**.
5	To close your Aerobahn session, click **Log Out**.
6	To open the Aerobahn User Guide without starting TaxiView, OpsView, or **SystemAdmin**, Click the **Help** link.
7	Aerobahn-related news items
8	Terms of use
9	Telephone contact information and an Email link to Customer Service

2.2 Retrieve a User Name or Password

> **ℹ NOTE:** When you click **Forgot your password**, the password is reset. Aerobahn automatically sends an Email to the address for that user name. *Only one Email address is given to each user name.* All users who share the user name are shut out of Aerobahn until they use the new password. The person who receives the new password must tell other users of the shared account what the new password is. (For more information, refer to *Reset Password* on page 10-12.)

You can get a forgotten user name or password in 2 ways:

- Click "**Forgot your username?**" or "**Forgot your password?**" on the login page.

  > **ℹ NOTE**: Email must be configured, and the Aerobahn system must connect to the user network.

- Contact your System Administrator or Customer Service.

  Use this procedure if your system does not include network Email functions.

Figure 2-3. Username and Password Reminder Links

Forgot your username

1. Click **Forgot your username?**
2. Enter your Email address.
3. Click **Get Username**. Aerobahn sends your username to you.

Forgot your password

1. Click **Forgot your password?** (refer to *Reset Password* on page 10-12).
2. Enter your username.
3. Click **Get Password**. Aerobahn sends a temporary password to the account on record for that username.
4. Change the password when you log in next time (refer to *Change Passwords and User Information* on page 9-27).

ℹ **NOTE:** Local rules specify how Aerobahn passwords are configured. Contact your system administrator for instructions.

2.3 Login Help

A variety of system factors can cause a login attempt to fail. These usually occur after system software or Aerobahn software is upgraded.

If you try to log in and fail, open the login page again. Then, try this procedure.

1. Enter your username.

2. Click the **Having trouble logging in?** link. Aerobahn downloads a
   `[username].jnlp` file (refer to Figure 2-4 below) .

3. Open the `[username].jnlp` file. The **Aerobahn Client Cleanup**
   dialog box opens.

4. Click **Clear Cache** to clear the Java cache and Aerobahn cache, or click
   Cancel to close without action.

If you cannot log in after you clear the cache, contact Saab Customer Service
(refer to *Customer Service* on page 10-1).

Figure 2-4. "Having trouble logging in?" (Browser Login)
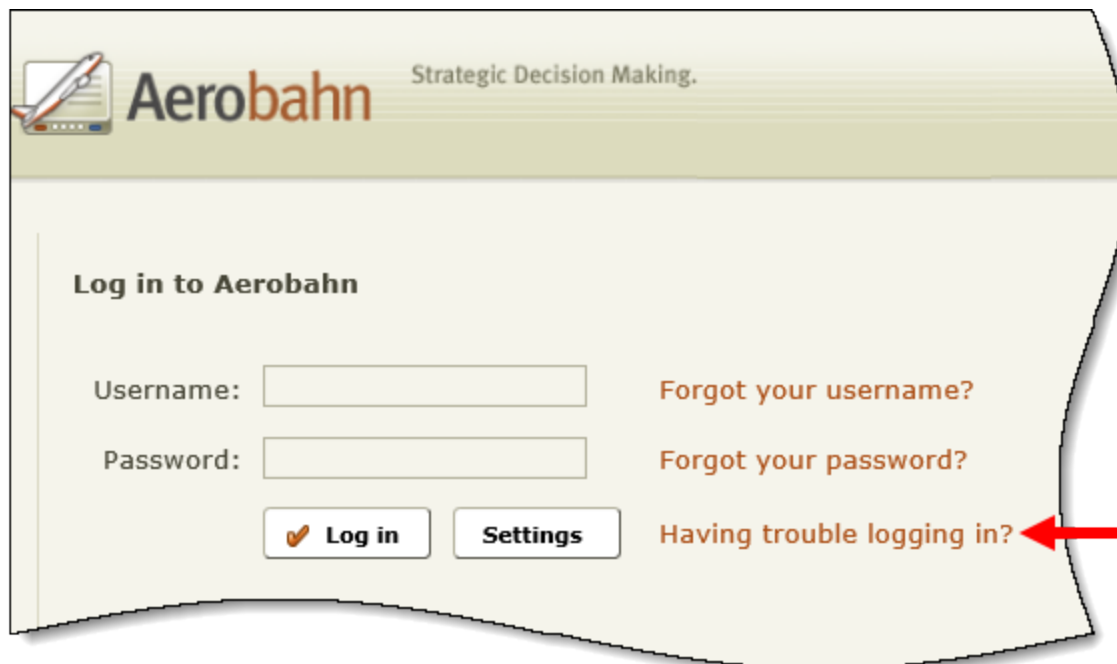
2.4 User Settings

The **User Settings** dialog box lets you configure the connection for an
Aerobahn site.

If you open Aerobahn directly from your browser, you can open the **User
Settings** dialog box from the Aerobahn Login Page (refer to Figure 2-5 on the
facing page) *after you enter your username and password.*

1. Click **Settings** . The **User Settings** dialog box opens.

2. Configure settings for the site.

3. Click **Save**. A message confirms that you have saved the settings.

Figure 2-5. Aerobahn Login Page

Table 2-1. User Settings Dialog Box

Setting	Description
Aerobahn Cache Location	To use the default location for Aerobahn cache, leave blank. To use common alternate locations, click ⑦ to open a page with location variables. Copy the necessary variable. Then, paste the variable into the Aerobahn Cache Location field. To use a custom location, enter the full path to the desired directory (e.g., C:\Users\UserName\CustomDirectory)
Aerobahn Always On Top	Click the box to enter a ✔ . This keeps Aerobahn on top of other applications on your desktop.
Date Format	Select the date format to use in Aerobahn.
Display Times in the Airport Local Time Zone	Click the box to enter a ✔ to use the airport local time zone for the site. When the box is unchecked, times are displayed in UTC.
HTTP Proxy Host	Enter HTTP host IP address when your service connects directly to an Aerobahn server over a leased line or VPN.

Table 2-1. User Settings Dialog Box (continued)

Setting	Description
HTTP Proxy Port	If using HTTP, enter HTTP Proxy Port IP address.
HTTPS Proxy Host	Enter HTTPS host IP address when your service connects to an Aerobahn server over internet (e.g., xyz.aerobahn.com).
HTTPS Proxy Port	If using HTTPS, enter HTTPS Proxy Port IP address.
Highlight Editable Fields	Click the box to enter a ✔ to emphasize fields that can be edited in tabular tools such as Selection Details or a Watch List Viewer,
Java Runtime Parameters	These settings affect the performance of the Aerobahn Java applet on the client PC.
Additional Parameters	Additional JRE Java runtime parameters (e.g., --XX:MaxPermSize=128m)
Maximum Memory	Maximum size, in megabytes, of the memory allocation pool for the Aerobahn Java applets on the client PC
Minimum Memory	Initial size, in megabytes, of the memory allocation pool for the Aerobahn Java applets on the client PC

3 Workspace Overview

An Aerobahn workspace is the "frame" in which you open Aerobahn tools. Workspaces let you configure Aerobahn for job requirements. You can save workspaces that you configure. Then, you can open a specified workspace.

Permissions, not your workspace, give access to tools.

ℹ **NOTE:** Some Aerobahn configurations give an expanded Workspace Menu Bar that includes a System menu (shown in Figure 3-1 below) (refer to *System Menu* on page 4-1 for more information).

Figure 3-1. Workspace Menu Bar
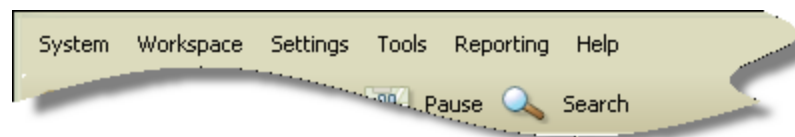
Figure 3-2. Workspace Elements (example)
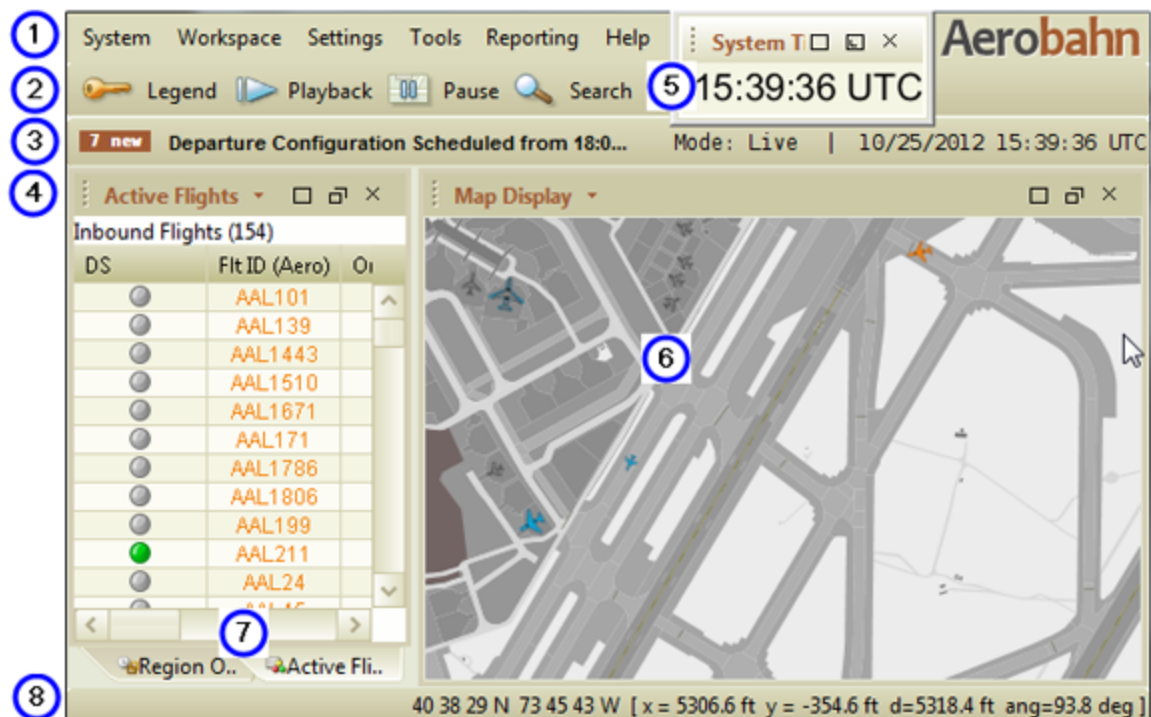
Table 3-1. Workspace Elements

Ref. No.	Description
1	Workspace Menu Bar
2	Workspace Toolbar—Show or hide through **Settings > Workspace Toolbar**.
3	Notification Bar
4	Tool Title Bar (Drag to tile and dock tools. Click buttons to resize, float, or close tools.)
5	Tool floating outside of the typical workspace frame.
6	Tool in a tile beside tabbed tools
7	Tabbed tools (The active tool's tab is highlighted.)
8	Status Bar (show or hide through **Settings > Workspace Status Bar**)

3.1 Notification Bar

The **Notification Bar** shows selected items from the Notification List. The **Notification Bar** shows at all times. Click the **Notification Bar** to open and close the **Notification List**.

The **Notification Bar** supplies this information:

- Event notifications in these categories: Airside, Landside, NAS, NOTAM (ICAO), and/or NOTAM (US)
- Mode—Live (default) or Playback
- Date—The date of the displayed data
- Time—24-hour clock (UTC or airport local time preference is set in **SystemAdmin**.)

Figure 3-3. Notification Bar

The **Notification Bar** posts events and status notifications from data feeds. Subscribe to a data feed by configuring **Notification Settings** (refer to *Configure Notification Settings* on page 6-20).

Figure 3-4. Notification List, Removing an item

Refer to *Use the Notification List* below for more information.

3.1.1 Use the Notification List

The Notification List gives event notifications in these categories: Airside, Landside, NAS, NOTAM (ICAO), and/or NOTAM (US). To access the Notification List, click the Notification Bar. A Notification List contains data items received in a time frame that you set up at the system level.

3.1.1.1 Select items to show in the Notification Bar

When the Notification List receives a notification from a data source, that notification is "new." Aerobahn puts a check mark next to the item and adds the notification to the list of notifications.

You can select (to show in the Notification Bar) and remove the check (to remove from the scrolling list) an item in the Notification List.

Click **Mark All** to show all in the scrolling display.

Click **Unmark All** to remove the check marks from all boxes. This clears the Notification Bar scrolling display until a new message arrives or until you select an item to show.

3.1.1.2 Remove items from the Notification Bar

Remove items from the scrolling display in the Notification Bar:

- Remove the check from the item in the Notification List. (Click to remove the check mark in the first column.)
- Delete a list item from the Notification List.

Aerobahn automatically deselects (unchecks) notifications of an event when an update to that event arrives in the Notification List.

3.1.1.3 Delete items from the Notification List

ℹ️ **NOTE:** Deleting a notification changes only your display.

Click an item to select a row to delete. Then, do one of the following:

- To delete that row only, click **Delete** (lower right corner).

- To delete more rows but not a block of rows, CTRL-click the rows. Then, click **Delete**.

- To delete a block of rows, move pointer to the last row in the block and SHIFT-Click. The group of rows is selected. Click **Delete**.

To delete all items in the Notification List, click **Delete All**.

3.1.1.4 Configure the Notification List

You can reconfigure the columns in the Notification list (refer to *Work with Table Data* on page 3-9 for more information).

You can show a Reference column (hidden by default) that shows selected data (such as NOTAM ID) that could be used to connect issues.

3.2 Surveillance System Status

Aerobahn shows surveillance system status in the Notification Bar. This status message can show:

- A text (no status indicator) status message with other scrolling messages in the Notification Bar (refer to *Notification Bar* on page 3-2).

- A 3-part status message when scrolling is not active.

Table 3-2. Using the Surveillance Status to Troubleshoot Aerobahn Performance

	Status	This status shows that...
🟢	Good	Surveillance is operating correctly.
🟡	Degraded	Some element of the surveillance system is operating in a degraded condition or fault state. Degraded surveillance can change Aerobahn performance.
🔴	Critical Fault	Aerobahn is not receiving the surveillance data necessary to track targets. Monitor this condition until surveillance is restored.

The subsystem status window shows "Status Good" when all subsystems have a good status. If there are problems, it shows a list of subsystems with faults or degraded status. When the surveillance system is operating on power from the uninterruptible power supply, the message is "UPS Providing System Power."

Aerobahn uses a stream of information from the surveillance (e.g., ASDE-X) system and shows only the data that it receives. A critical fault in the surveillance system (such as a loss of power to a subsystem) stops the flow of surveillance data to Aerobahn. This can cause targets to not show in **Map Display**. After surveillance is restored, Aerobahn can show the data it receives.

3.3 Set a Workspace Background

Configure a workspace with a light or a dark background ("Window Color Theme") to make the visibility better.

⚠️ **CAUTION:** Aerobahn closes active private chats or conference conversations when you change the Window Color Theme. (Chat Channels are not affected.)

1. Select **Settings > Color Settings**.
2. Select **Light** or **Dark** (select the opposite of the current state) from the Window Color Theme menu (refer to Figure 3-5 below). The Workspace background changes state.
3. Click **OK** to close *Color Preferences*.

Figure 3-5. Window Color Theme
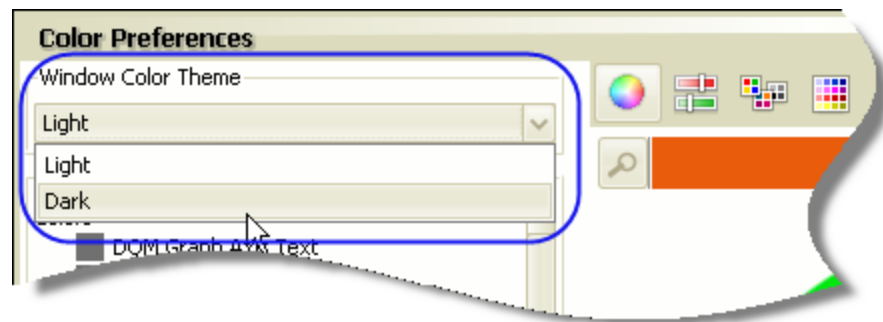
Use the controls in Color Preferences controls to set color preferences for targets and the workspace (refer to *Configure Color Settings* on page 6-2).

3.4 Configure a Workspace

1. Select **Tools > [tool name]**.
2. Position (resize, move, tab, and/or float) the tool in the Workspace.

You can save and load a workspace. A saved workspace includes settings in these locations:

- Settings menu
- Workspace layout
- Tool preferences and configurations that were current when that workspace was saved.

3.4.1 Resize a Tool

Click ⊡ to restore a tool to the size and state it had before you changed it.

Click ☐ to maximize a tool. Use the full workspace.

Drag the divider (refer to Figure 3-6 below) between docked or tabbed tools to change the sizes of the tools. Drag a side or corner to change the dimensions of a floated tool.

Figure 3-6. Docked Tools Resized with the Divider
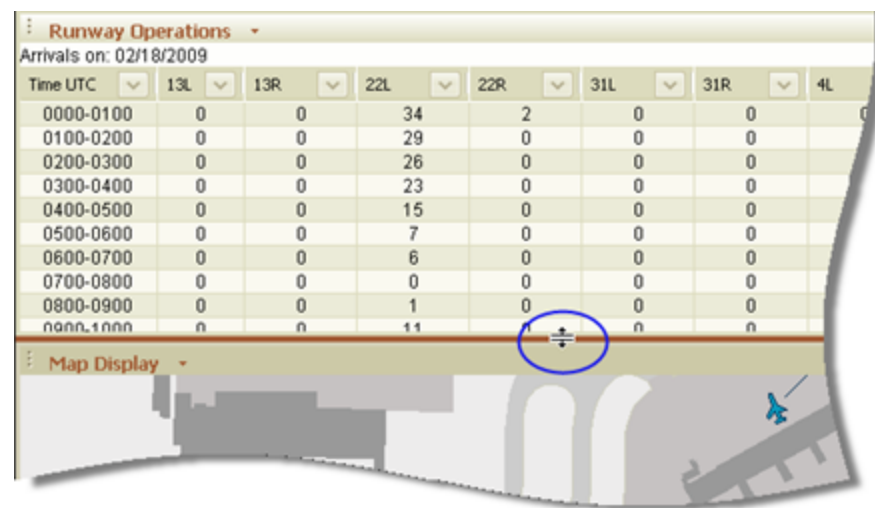
3.4.2 Move a Tool

You can move tools on the workspace and save the changed Workspace.

- To move a *tiled tool*, drag the tool handle. A rectangle shows a possible location for the tool.

 Tool Handle

If the rectangle outlines an open tool (or tabbed tools), the moved tool is added to this location and is *tabbed*.

If the rectangle dock point does not outline an open tool, a *tile* opens in the Workspace. The workspace adjusts the dimensions of the other tiles for the new tile.

- To move a *tabbed tool*, drag the tool tab (circled). A rectangle shows a possible location for the tool.
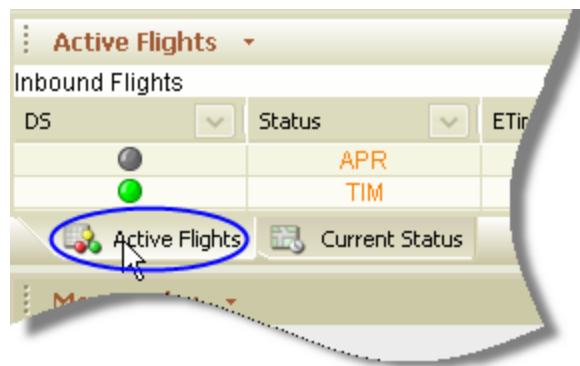
When you release the mouse button, the tool moves to the new location.

NOTE: Docking is unavailable at the cursor location.

3.4.3 Tab a Tool

To tab tools is to put a tool that is in one tile in front of another tool so that they share a single tile. Put the cursor above the menu bar of a tool and drag it over another tool (the "target" tool).

Tabbed tools overlap one another. Only one tabbed tool shows in any single tile at a time. If you need a tool that is under the top tool, click the tab for that tool.

3.4.4 Float a Tool

A toggle (located between the Maximize/Restore button and the Close button) controls float (refer to Figure 3-7 below).

- Click the toggle to float the tool. The toggle changes shape when a tool is floating.
- Click the toggle button again. The tool changes size and shape to what it was before.

When a tool "floats," it stays on top of all open tools (refer to Figure 3-8 below). You can drag it by its title bar to move it.

⚠️ **CAUTION:** A floated tool can hide important information, such as icon decorations when rules are triggered and the flashing Playback PLAY message in the notification bar.

Figure 3-7. Tool State: Tabbed/Tiled—Click to float the tool.
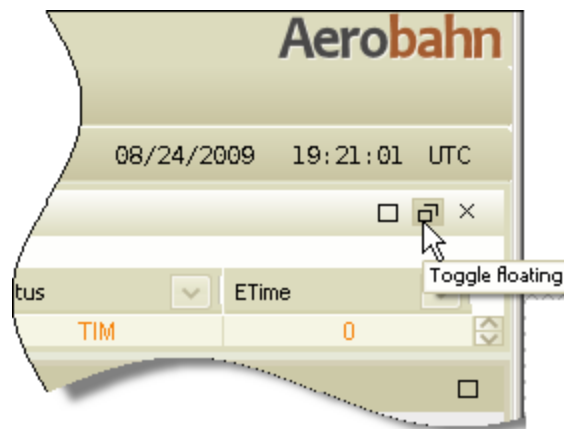
Figure 3-8. Tool State: Floating—Click to tile the tool.
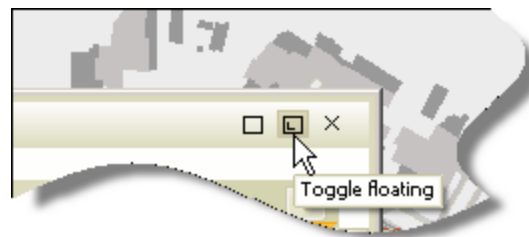
3.5 Work with Table Data

Aerobahn tables are very flexible. You can move, resize, and hide columns, and you can sort and filter data. In real-time tools, Aerobahn can change these format properties when the conditions for a rule occur:

- Color of table text
- Background behind table text in a row or a cell
- Bold character of text in cell

Move Table Columns

Drag a column *header* to move a column.

Change Width of Table Columns

1. Put the pointer on the divider between the header blocks. The pointer becomes a 2-headed arrow.
2. Drag the divider to adjust column width.

Table tools offer a "Column Resizing" feature.

Column Resizing:

- If you open a tool that has Column Resizing set to Automatic, the columns expand to fill the available space.
- If you open a tool that has Column Resizing set to Manual, the columns shrink to the data in the column. The table may not be as wide as the workspace.
- If you select **Automatic** Column Resizing and make one column gets wider, other columns get smaller.
- If you select **Manual** Column Resizing, you can adjust one column without adjusting other columns.

To open Column Resizing:

1. Select **[tool title] > Column Resizing**.
2. Select **Manual** or **Automatic**.

Figure 3-9. Column Resizing Controls
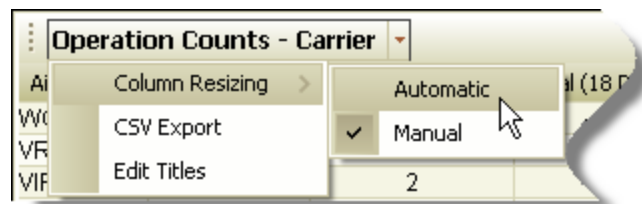
Hide and/or Show Columns

Right-click a column header to open a menu that lets you hide and show table columns.

To show hidden columns (regardless of which method you use to hide them), right-click a column header, and select **Show All Hidden Columns**.

How are **Column Chooser** and **Other Columns** different? **Column Chooser** enables you to select and/or deselect multiple column headers before you close the dialog to change the table layout. **Other Columns** hides or shows only one column at a time.

Hide One Column

1. Right-click the header of the column you wish to hide.
   A menu opens.

2. Select **Hide This Column**.
   The menu closes, and the column disappears.

Hide or Show Columns

Use this procedure to hide or show any number of columns.

1. Right-click a column header. A menu opens.

2. Select **Column Chooser**. A dialog opens offering available data fields that can be column headers.

3. Select the columns to hide and/or show:

   a. Filter choices in Available Fields.

      i. Click the chooser, and select a data field category. The list of available fields shows only those fields in the selected category.

      ii. To decrease the number of selections, click the chooser again and select a second data field category. Only those fields that fit the two categories show.

iii. To decrease the number of selections in Available Fields, enter the key terms in the search text box. This decreases the items in the list to those that contain the search text.

b. Select the field names (column headers) to show and/or hide.

■ To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

■ To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕.

■ To remove one item from **Selected Fields**, select the item. Click ⊖ or double-click. The item moves to **Available Fields**.

■ To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊖. The items move to **Available Fields**.

■ To move all items from **Available Fields** to the **Selected Fields** window, click ⊕.

■ To remove all items from **Selected Fields**, click ⊖. The items move to **Available Fields**.

■ To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⊕ or ⊕ until it is in the correct location. To move an item to the top of the list, click ⊕. To move an item to the bottom of the list, click ⊕.

4. Click **Apply** to apply settings.

5. Do steps 3 and 4 again as necessary.

6. Click **OK**. The dialog closes, and the selected columns show in the table.

Filter Data in Table Columns

ℹ️ **NOTE:** When you change data filters, you change the report structure.

Click [⌄] in a column header to open filter controls. This button shows when you move the pointer into the column header.

- (All) is the same as no filter. Select **(All)** to delete a filter.
- (Custom) lets you select a range of filter conditions. You do not see all filter conditions in each column. Filter conditions change by the type of data in a column. For example, you can use "is after" and "is before" only in a column that contains time stamps (refer to <u>Table 3-3 below</u>).
- Select an item to show rows that contain that item in that column.

When a filter is set up in a column, Aerobahn shows you this in two areas on the screen:

- **[Filtered]** shows above the table.
- A funnel icon shows that a filter is in operation.

Table 3-3. Custom Data Filters

Custom Filter Conditions	Description
is anything	Select "is anything" to show all data. It has the same effect as "All" or as no filter.
is	Select an item from Value(s) list. The table displays only the data row that contains that item. As an alternative to the "is" filter, you can select an item from the column header menu. For example, select a flight ID, and all other flights are filtered out.
doesn't equal	Select an item from Value(s) list. The table shows data rows that do not contain that item.
is after	Select a time. Aerobahn shows data rows with time stamps after the selected time.
is at	Select a time. Aerobahn shows data rows with time stamps that are equal to the selected time.
is at or after	Select a time. Aerobahn shows data rows with time stamps that are equal to or after the selected time.
is at or before	Select a time. Aerobahn shows data rows with time stamps that are equal to or before the selected time.
is before	Select a time. Aerobahn shows data rows with time stamps that are before the selected time.
is between	Aerobahn shows data rows with time stamps that are between a selected start and end time.
is in	Select checkboxes for items in the Value(s) list. The table shows the data rows that contain those items.

For example, select the checkboxes for more than one flight ID. Click **OK**. Then, click **OK** again to close the dialog. Only the rows for those flights show. |

Table 3-3. Custom Data Filters (continued)

Custom Filter Conditions	Description
isn't in	Select checkboxes for items from Value(s) list. The table shows data rows that do not contain the selected items.
is empty	Select "is empty" from Value(s) list to show only those rows that have an empty cell in that column.
is not empty	Select "is not empty" from Value(s) list to show only rows that do not have an empty cell in that column.
begins with	Select "begins with" from Value(s) list, and enter one or more characters. If a cell in the filtered column has those characters as the first characters, Aerobahn shows that row. If those characters are not the first characters in the cell, Aerobahn hides that row. NOTE: This is a case-sensitive field.
contains	Select "contains" from Value(s) list, and enter one or more characters. If a cell in the filtered column includes those characters in that sequence, Aerobahn shows that row. If those characters are not there, Aerobahn hides that row. NOTE: This is a case-sensitive field.
doesn't contain	Select "doesn't contain" from Value(s) list, and enter one or more characters. If a cell in the filtered column does not include those characters in that sequence, Aerobahn shows that row. If those characters are there, Aerobahn hides that row. NOTE: This is a case-sensitive field.
ends with	Select "ends with" from Value(s) list, and enter one or more characters. If a cell in the filtered column has those characters as the last character(s), Aerobahn shows that row. If those characters are not the last characters in the cell, Aerobahn hides that row. NOTE: This is a case-sensitive field.

Find a hidden filter

There are two methods for finding a filter.

Method 1

If you hide a column that is filtered, the filter stays active. If "[Filtered]" shows at the top of the table, information is filtered although you do not see funnel icons.

Figure 3-10. Table with Filter Active (Filtered columns do not show)

1. Right-click on the header bar for the table.

2. Click **Column Chooser**.
   The **Choose Columns to Display** dialog box opens.

3. Move data fields to show to **Selected Fields**. (For more information, refer to *How to Select and Move Data Fields below*.)

ℹ **NOTE:** Column names in red have a filter applied. Column names in green are dynamic fields. (For more information about dynamic fields, refer to *Dynamic Field Components on page 9-51*.)

How to Select and Move Data Fields

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ➡ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➡.

- To remove one item from **Selected Fields**, select the item. Click ⬅ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ➡.

- To remove all items from **Selected Fields**, click ⬅. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

Method 2

Right-click a column header, and select "Show Filtered/Sorted Columns." All columns display. A funnel icon shows that a filter is active.

This procedure changes the table configuration. To restore the initial configuration, hide the individual columns again.

Example: Set up a custom filter to show more than one Flight ID

Use this procedure to generate a list of flight IDs/call signs for a carrier. Use the "begins with" value to show data from flights with flight IDs that start with a specified letter or letters.

ℹ **NOTE:** The Region Occupancy report is an example only. You can use this procedure in a table with a "Flt ID" or "Call Sign" column.

A funnel symbol shows that a filter is on.

1. Click ⌄ in the Call Sign (or Flt ID) column, and select **(Custom...)**.

2. In the Condition list, select **begins with**.

3. Supply one (or more) letter(s) and number(s) in the Value(s) field. Entries are case-sensitive.

4. Click **OK** to put the table data through a filter to show information that starts with that character (or those characters) only.

5. Click ⌄ in the Call Sign (or Flt ID) column, and select **(Custom...)**.

6. In the Condition list, select **begins with**.

7. Supply one (or more) letter(s) and number(s) in the Value(s) field. Entries are case-sensitive.

8. Click **OK** to filter the table data so that it shows information that starts with that character (or those characters) only.

Example: Set up a custom filter for specified Flight IDs

Use this procedure to show only the table rows related to selected flights.

1. Click [⌄] in the Call Sign column, and select **(Custom...)**.

2. In the Condition list, select **is in**.

3. Expand the Value(s) menu, and select the flight ID boxes for the flights to show in the table.

4. Click **OK** to close the list.

5. Click **OK** to filter the table data.

Figure 3-11. Results of filtering

In this condition, the filter decreased the number of rows from 511 to 3. You can monitor only the data you need to monitor.

Sort Data

To change the order of table data, select a column and sort its data in ascending or descending order.

- *To sort table data, click a column heading*.
  Each click toggles the sequence: ascending, descending, default. Fields that contain a mix of letters and numerals are sorted character by character rather than by value. For example, in ascending order, A143 comes before A22, and empty cells come before populated cells.

- *To do a complex sort, CTRL-click multiple column headings*.
  The CTRL-click sequence sets the priority given to each category in the sort process (priority indicated by 1, 2, 3, etc. adjacent to the arrow that shows the ascending/descending sort) when one column has rows that contain the same contents (which includes blank cells).

  ℹ **NOTE:** CTRL-click directly to the left of the filter arrow.

Ascending Sort

Each click toggles the sequence: ascending, descending, default.

Descending Sort

Each click toggles the sequence: ascending, descending, default.

Callsign ↓	Reg. Num	Entry Time
ZYX715	N509JB	02/12/2009 20:51:56
ZYX140	N536JB	02/12/2009 18:47:10
YXZ1852	N626CZ	02/12/2009 20:50:16
XYZ3	N325AA	02/12/2009 20:37:09
	N593JB	02/12/2009 19:53:33
	N566JB	02/12/2009 20:11:20
	N624JB	02/12/2009 20:21:59
	N174DZ	02/12/2009 20:24:18
	N504JB	02/12/2009 20:31:02
		02/12/2009 20:38:47
		02/12/2009 20:46:47
	N659JB	02/12/2009 20:49:20
		02/12/2009 20:50:18
	N561JB	02/12/2009 20:50:31
	N581JB	02/12/2009 20:51:56

Complex Sort

In this complex sort, data is first sorted in a descending order by call sign. Because the callsign is different in each of the first four rows, only the callsign sort is necessary. Because the remaining rows have no callsign, the sorting goes to the secondary sorting column, which is Aircraft Type (ATC). Now the rows are sorted by the Aircraft Type (ATC) in descending order, which reverses the alphabetical progression.

Callsign ↓1	Reg. Num	Entry Time	Occ. Time	Orig	AC/Vehicle Type ↓2
ZYX81	N661JB	02/16/2009 16:45:47	00:08:29	JFK	A320
YZX4655	N857AE	02/16/2009 16:40:00	00:14:16	JFK	E135
YXZ6249	N858MJ	02/16/2009 16:45:26	00:08:51	JFK	E145
YXZ6247	N857MJ	02/16/2009 16:53:25	00:00:51	JFK	E145
	N7512A	02/16/2009 16:49:25	00:04:51		MD82
	N828MJ	02/16/2009 16:50:42	00:03:34		EMB-145LR
	N707EB	02/16/2009 16:52:52	00:01:24		E135
	N804CA	02/16/2009 16:53:34	00:00:42		CRJ1
	N58LQ	02/16/2009 16:46:52	00:07:24		C56X

Export to CSV Format

Select **[Tool Title] > CSV Export** to save (to a location of your choosing) table data in a comma-separated values file that can be opened in spreadsheet programs.

3.6 Edit Tool Titles

1. Click the title, and select **Edit Titles** from the drop-down menu. The *Edit Titles* text box opens.

2. Enter the new title(s).

    - The "Title" is at the top of the tool. When it is clicked, a menu opens.

    - The "Tab Title" shows below the tool when a tool is tabbed.

3. Click **OK**.

Figure 3-12. Edit Titles Menu Command (Map Display Example)
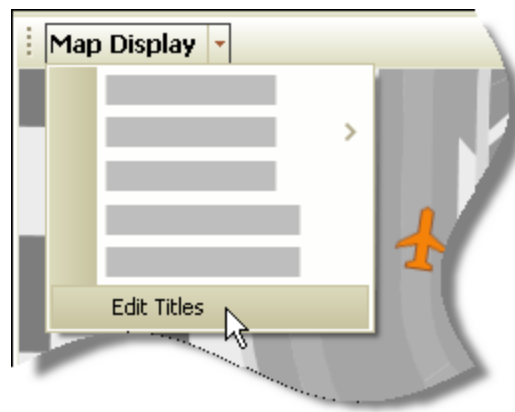
To change the color of a title:

1. Select **Settings > Color Settings**.

    Color Preferences dialog box opens.

2. Select **Tool Title** in the Custom Colors section.

Figure 3-13. Set Tool Title Color
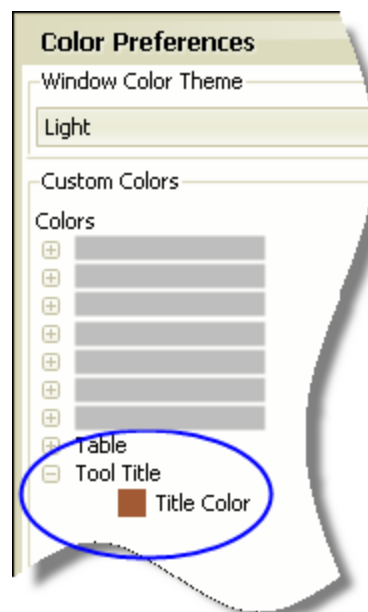
3.7 Close a Tool

To close a tool but not the full workspace, click the **X** in the top right corner.

Figure 3-14. Close a Tool
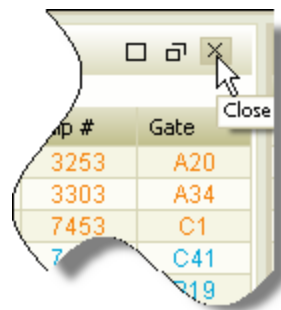
3.8 Open the Legend

The legend identifies each target type, its configured color, and (in parentheses) the current quantity of each type in the coverage area.

Click [key icon] . The legend opens.

If the [key icon] button does not show, select **Settings > Workspace Toolbar** to show the toolbar.

3.9 Replay Recorded Events

ℹ️ **NOTE:** During Playback, **Scheduled Flight Manager** is disabled.

ℹ️ **NOTE:** Flights with proprietary surveillance data do not show if you do not have the **Access Proprietary Surveillance Data** permission. For instructions to configure the permission, refer to *Access Proprietary Surveillance Data Permission* on page 9-13.

Playback mode lets you replay events in **Map Display** and show event-related data in other tools for events that have occurred 24 months earlier.

To start a Playback session:

- from a real-time tool—Click [play button icon] .
  If the Playback button does not show, select **Settings > Workspace Toolbar** to show the toolbar.

- from a report—Click time stamps in reports (refer to *Play Back Report Events* on page 8-52).

ℹ **NOTE:** After Playback starts, it shows the workspace with the Playback control window.

To stop a Playback session:

Select **Live** mode in the *Playback* window. The Data Mode bar shows the time and the change in mode.

ℹ **NOTE:** Playback does not stop when you close *Playback*.

When Playback mode is active, *all tools* are in Playback mode. The Notification Bar shows the current mode (Live or Playback) and, when in Playback, it shows the Playback speed. The Notification Bar and the **System Time** tool show the event time (refer to *Playback Controls* below).

When Playback mode is active, hotkeys operate as they do in Live mode. When you press a function key that has a "Highlight Flight" function that uses search, Aerobahn changes the color of the selected flight(s) in **Map Display**, **Watch List Viewer**, **Departure Metering**, **De-ice Manager**, and **Operations Timeline**.

While Aerobahn is in Playback mode, **Airport Configuration** shows the configuration that was active during the playback period (as opposed to actual time). To identify the configuration that was active during an event that you see in Playback, open **Airport Configuration**. For information, refer to *Airport Configuration* on page 4-30.

3.9.1 Playback Controls

ℹ **NOTE:** Playback does not stop when you close *Playback*.

Figure 3-15. Playback Controls
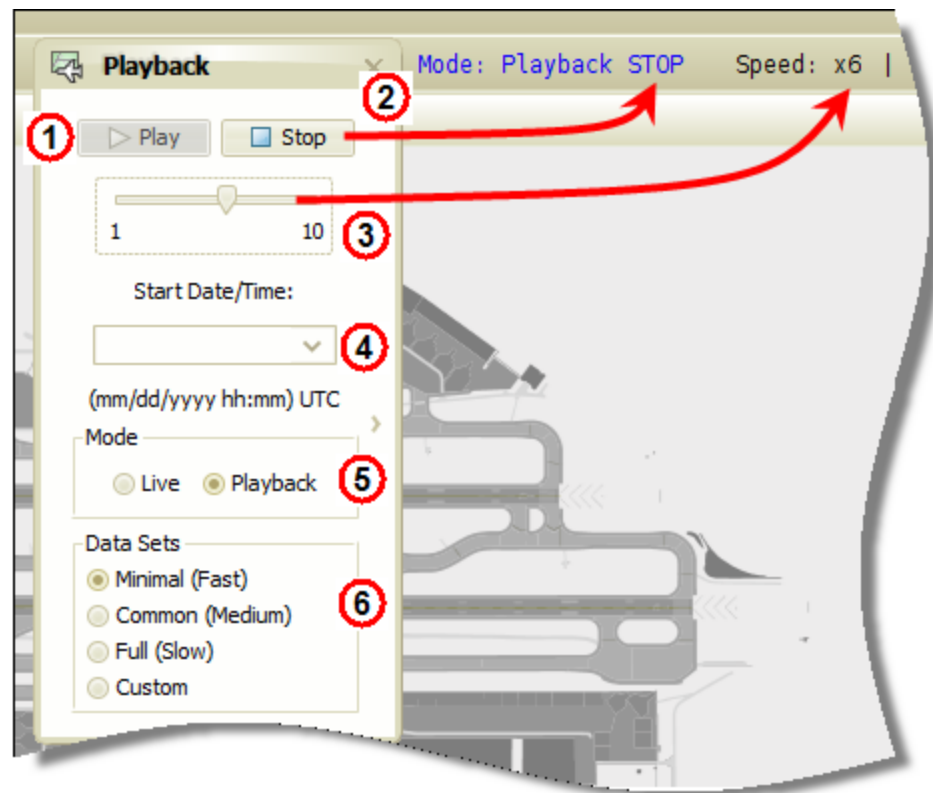
Table 3-4. Playback Functions

	Playback Controls	Action
1	Play/Pause	Click **Play** to start Playback. The status bar displays *PLAY* (flashing in the Data Mode bar). The Play button toggles state to *Pause*. Click **Pause** to stop Playback temporarily. The status bar shows *PAUSE* (flashing in the Data Mode bar). The Pause button toggles state to *Play*. When you click **Play**, Playback starts at the point at which action was paused. ℹ **NOTE:** Playback shows complete "events," such as IROPS, operational status, and regional events. That is, Playback shows events that occur—from start to finish—between the time you click **Play** and **Stop**. It does not show an event that, in real-time, is in progress when you click **Play**.

Table 3-4. Playback Functions (continued)

	Playback Controls	Action
2	Stop	Click to stop Playback. *STOP* flashes (on the status bar). Aerobahn is still in Playback mode. When you click **Play**, Playback restarts at the Start Date/Time. To restart at a different time, enter a different Start Date/Time.
3	Replay Speed	Move to adjust playback speed (maximum 10 x real time). The Notification Bar shows the playback speed. At more than 1 x playback speed, rules effects are changed more by some data types than by other data types (refer to *Playback Data Types* on the next page).
4	Start Date/Time	Enter the start date and time using the calendar tool. Playback runs from the start point to now. **ℹ NOTE:** Taxi times, the time in watch lists, current region occupancies, and dynamic rules are examples of events calculated by your computer. Playback shows complete "events" only. It is possible that an event will not show in Playback when the *full* event does not occur after the Playback start time.
5	Mode	Select to use Playback mode. The Data Mode bar shows *Playback* mode. Select **Live** to stop a playback session and to start live mode. The Data Mode bar shows *Live* mode. The time stamp shows the current time.

Table 3-4. Playback Functions (continued)

	Playback Controls	Action
6	Data Sets	Select a standard configuration, or select **Custom** to set up Playback to show only what is necessary. ℹ **NOTE:** Playback performance changes by the quantity and type of data that you include. If you delete data sources that are not necessary, you can make playback performance better. The **Custom** data set gives you the most control of playback performance. **Minimal** (default setting)—The smallest subset of available data shows in playback. You get the fastest playback performance with this setting. **Common**—A larger set of playback data sets. Playback speed is slower than it is at the "Minimal" setting. **Full**—All available playback data sets. At this setting, playback uses a lot of system processing power. This can slow playback. **Custom**—You select the data sets to show in playback. Your selections change playback performance (refer to *Playback Data Types* below).

3.9.2 Playback Data Types

When you select **Custom**, the Data Selection pane opens. Select the data type(s) to show in Playback. (A check mark shows in selected items.)

⚠ **CAUTION:** Taxi times, the length of time in watch lists, current region occupancies, and rules are examples of events calculated by your Aerobahn client computer. Playback shows complete "events." An event may not show in Playback mode when the full event does not occur following the start date / time.

At more than 1 x playback speeds, rules effects are changed more by some data types than by other data types. These data types are identified, "Can change rule effects." Playback performance is affected by the quantity of data, but some data types can require significant system resources. These are identified, "Can slow loading time."

Table 3-5. Playback Data Types

Data Category / Type	Description
Flight and Vehicle Information	
Active Surface Aircraft & Vehicles	Position, operational state, flight / vehicle information, aircraft / vehicle attributes, workflow state history, and target selection Can change rule effects
Active Extended Range Aircraft - Local	Surface surveillance data: position, operational state, flight / vehicle information, aircraft / vehicle attributes, workflow state history, and target selection Can slow loading time Can change rule effects
Active Extended Range Aircraft - Other	En route surveillance from FAA: position, operational state, flight / vehicle information, aircraft / vehicle attributes, workflow state history, and target selection Can slow loading time Can change rule effects
Persisted Aircraft & Vehicles	Position, operational state, flight / vehicle information, aircraft / vehicle attributes, workflow state history, and target selection Can slow loading time Can change rule effects
Additional Flight Information	
CDM Data	CDM flight data fields (TTOT, TSAT, etc.), CDM Alerts, and CDM Milestones data Can slow loading time Can change rule effects
Crew Data	Crew flight data fields (Crew Base, Crew Type, etc) Can slow loading time Can change rule effects
Metering Assignments	TMAT, ROBT, departure assignment priority, request-response, and metering compliance Can slow loading time Can change rule effects

Table 3-5. Playback Data Types (continued)

Data Category / Type	Description
Predictions	Predicted surface waypoints, and predicted surface times Can slow loading time Can change rule effects
Region Occupancy	Region occupancy start/end times, and region occupancy history Can slow loading time Can change rule effects
Scheduled Flights	Flight information and operational state Can slow loading time Can change rule effects
Workflows	Workflow state history Can slow loading time Can change rule effects
Operational Statistics	
De-ice	De-ice counts, throughput, queue occupancy times, and pad occupancy times for the De-ice Throughput and De-ice Management tools
Flight Delay	Arrival, departure, and metering delay for the Flight Delay Summary tool
Metering Compliance	Statistics on compliance or non-compliance of flights with departure metering times (used in the Compliance Monitoring tool)
Operation Counts	Arrival and departure counts (used in the Operation Counts tools) Can slow loading time
Runway Usage	Arrival/departure rates for the Runway Usage tool
Region Delay	Average region transit times for the Delays by Region tool Can slow loading time
Surface Congestion	Surface congestion statistics (used in the Congestion Monitor Graph tool) Can slow loading time
Taxi Time	Average inbound/outbound taxi times for the Taxi Time tool
Watch List Chart	Watch List Statistics (used in Watch List Chart tool) Can slow loading time

Table 3-5. Playback Data Types (continued)

Data Category / Type	Description
Airport Configuration	
Airport Configuration	Runway configuration, metering settings, and de-ice configuration
De-ice Configuration	
De-ice Configuration	De-ice configurations and settings (used to populate the De-icing Manager tool) Can slow loading time
Airport and NAS Information	
Airborne Holds	Can change rule effects
Airport Status Dashboard	All Airport Status Dashboard data Can slow loading time
Airport Status Delays	Airport Status Delay data (used in the Airport Status Delay tool)
Diversions	All diversion related fields and data for the Diversions tool
Flow Restrictions	Flow Restriction data (used in the Flow Restrictions tool) Can change rule effects
NOTAMs	NOTAM list & updates for the NOTAMs tool Can slow loading time
Notification Tool Bar	All Notification Bar updates Can slow loading time
Region Statuses	Region closures and warnings including start / stop times Can change rule effects
Weather	METAR and TAF

3.10 Pause Live Display

In Live mode, Aerobahn collects data during Pause. When you start streaming display, icons "jump" to their current positions.

If the Pause/Play button does not show, select **Settings > Workspace Toolbar** to show the toolbar.

Click to stop movement in **Map Display** and updates in other tools.

Click to start to show streaming data.

3.11 Search for Targets with the Workspace Search Tool

The workspace toolbar has two search tools:
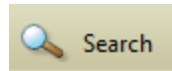
 Workspace Search

 Quick Search

Both search tools help you to find a flight in Aerobahn real-time tools.

This topic tells how to use the Workspace Search tool. For instructions on how to use the Quick Search, refer to *Use the Toolbar Quick Search* on the facing page.

Search for a specified aircraft or use the wildcard * to search for similar targets. Targets change color when identified in a search.

> **i** **NOTE:** Flights that are not under surveillance do not show in **Map Display**. Flights that are not under surveillance can, however, show in the search results and in a **Watch List Viewer**.

1. Click .

   If the search button does not show, select **Settings > Workspace Toolbar** to show the toolbar.

2. Select the search type.
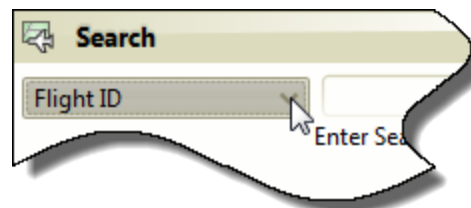
3. Enter a search string. Search strings are not case sensitive. For example, to search for all call signs that start with SEN, enter `Sen*` in the search box.

4. Click **Add** to start the search.
   Targets that agree with the search criteria change color in **Map Display** and in other tools. (Search colors are configured in **Settings > Color Preferences** in the *Custom Colors* settings start "Flight Search...".)

5. Select 1 (or more) flight(s) from Results. (SHIFT-click or CTRL-click to select more than 1 flight.)

ℹ   NOTE: Flights can be included in the Aerobahn database (and show in the Results field) but be too far from the airport to show in **Map Display**. If your search stays active, and the flights are inbound, you will see these flights as come near the airport. Zoom out to see active targets that recently departed.

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6. Press ENTER or click **Apply** . This action changes the color of the selected flights. The search dialog box closes.

Stop a Search

An active search does not stop when you close the search window. Stop a search with one of these procedures:

- Click **Clear All** to remove all listed search criteria.
- Select a search string. Then, click **Remove**.

3.12 Use the Toolbar Quick Search

The workspace toolbar has two search tools:
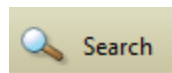
🔍 Search Workspace Search

🔍 Quick Search

Both search tools help you to find a flight in Aerobahn real-time tools.

This topic tells how to use the Quick Search. For instructions on how to use the Workspace Search tool, refer to *Search for Targets with the Workspace Search Tool* on the previous page.

Figure 3-16. Quick Search Tool location
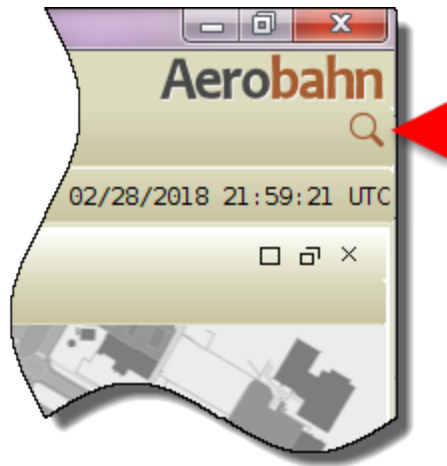
1. Click 🔍. The Quick Search Entry Window opens.

2. Enter any part of these fields:

   - Call Sign (Carrier)
   - Call Sign (Manual)
   - Call Sign (ATC)
   - Registration
   - Ship Number

   A list of possible flights shows.

3. Select the flight.

   The selected flight is highlighted in the workspace.

ℹ️ **NOTE:** Flights that are not under surveillance do not show in **Map Display**. Flights that are not under surveillance can, however, show in the search results and in a **Watch List Viewer**.

3.13 Search for Targets with Hotkeys

> **i** **NOTE:** Flights that are not under surveillance do not show in **Map Display**. Flights that are not under surveillance can, however, show in the search results and in a **Watch List Viewer**.

1. Press the function key configured to start the Highlight Flight function.

2. Enter the search criteria. As you enter search criteria, the Results field fills. Enter * to show (in Results) all flights that include the search criteria.

3. OPTIONAL—Click or TAB to **Criteria**, and configure the search criteria. The hotkey configuration controls the initial search. You can override the hotkey configuration. A change you make for an individual search does not change the hotkey configuration.

   ➡ Select **Match Flight Number Exactly** to search only the numbers in one of these fields: Call Sign Operating Carrier, Flight ID (Aerobahn), and Flight ID (Manual).

4. Select one (or more) flight(s) from Results. (SHIFT-click or CTRL-click to select more than one flight.)

   > **i** **NOTE:** Flights can be in the Aerobahn database (and show in the Results field) but be too far from the airport to show in **Map Display**.

5. Press ENTER or click **Apply** to select flights. The search dialog box closes. Targets change color when identified in a search.

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4 System Menu

You can find information on the tools opened through the **System** menu in these sections:

To exit from the Aerobahn workspace, select **System > Exit**.

4.1 Manage Region Status

You can enter information about region closures and warnings for Aerobahn to use as it predicts taxi routing.

Select **System > Region Status** to open the **Region Status** tool. Use this tool to view, schedule, edit, and remove warnings and closures associated with airport regions.

Table 4-1. Region Status Types

Type	Description
Region Closure	A region closure shows in Red (by default, unless changed in color settings) in **Map Display**. When the Aerobahn Prediction Engine generates predicted taxi routes, it avoids closed regions. Aerobahn receives region closures from external data sources. A user can also create a region closure. You can edit the regions, status type, and annotations for automatically generated Region Closures and Region Warnings received from an external data source. Automatically generated changes do not replace the changes that you make in the **Edit Auto Generated Region Status** dialog box.
Region Warning	A region warning shows in Yellow (by default, unless changed in color settings) in **Map Display**. Aerobahn receives region warnings from external data sources. A user can also create a region warning. You can edit the regions, status type, and annotations for automatically generated Region Closures and Region Warnings received from an external data source. Automatically generated changes do not replace the changes that you make in the **Edit Auto Generated Region Status** dialog box.
Annotation	Add, edit, and delete annotations through the Manage Annotation tab in the **Add/Edit Region Status** dialog box. You set display start and stop times in the same way that you set other Region Status start and end times.
Obstacle	Obstacles status types will show up as an icon at a specified location in Map Display. A user cannot create an obstacle status type.
Area	Area status types will show up as a shaded region in Map Display. A user cannot create an area status type.

Edit Region Status

You can edit several features of a selected region status. The specific features that can be edited in a generated region status is not equal to those that can be edited in a region status that is created in Aerobahn (a manual status) (refer to

Table 4-2 below for details about what features can be edited in the **Add/Edit Region Status** dialog box).

Table 4-2. Editable Features in Region Status

Feature	Manual Status	Generated Status
Change selected regions or parts of regions	✔	✔
Change the start and end times for a status	✔	✔
Add, edit, or delete an annotation for a status	✔	✔
Change the Group ID	✔	
Change the Status ID	✔	
Add notes	✔	

Refer to instructions on these pages:

- *Schedule a Region Warning* on page 4-5
- *Schedule a Region Closure* below
- *Edit a Region Status* on page 4-9
- *Edit or Delete Region Status Annotations* on page 4-12
- *Remove an Entry from the Region Status Table* on page 4-14
- *Monitor Flights in a Closed Region* on page 4-14

4.1.1 Schedule a Region Closure

Use this procedure to schedule a region closure from the Region Status tool. You can also close a region from NOTAM Viewer (refer to *Set up a Region Closure, Warning, or Gridlock from NOTAM Viewer* on page 7-294 for information).
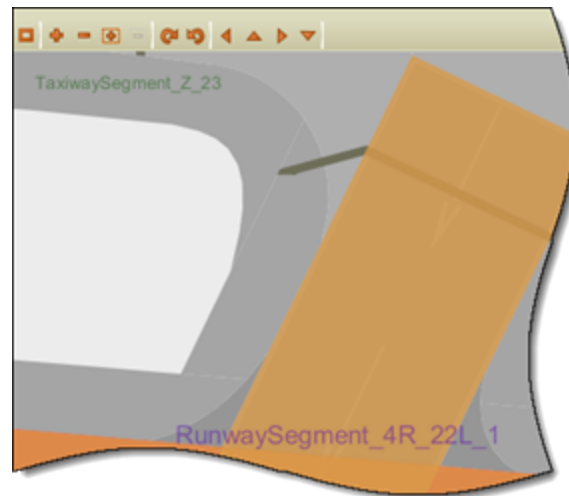
ℹ **NOTE:** When a region closure is scheduled from a NOTAM, the NOTAM number (the ICAO # or US#) shows in the NOTAM ID field in the **Add/Edit Region Status** dialog box. Also, NOTAM Effective Time goes in the Status Start field, and Expire Time goes in the Status End field.

1. Select **System > Region Status**.
2. Click **Schedule New Status**.
    The **Add/Edit Region Status** dialog box opens.
3. Enter a status (region closure) name.

4. Select the region(s) to close:

- in the list of Available Regions

    ○ Select a region group to select all regions in that group, or expand the group, and select individual items. Or, expand a group, and, then, remove the check from individual items in that group.

    ○ The closed regions show in color in the **Add/Edit Region Status** map dialog box and in **Map Display**.

- in the map

    a. If necessary, click [icon] to zoom in on an area until you can read labels (refer to Figure 4-1 on the facing page).

    b. Click in the region to be closed.
    The region changes color when it is selected. The region label shows a check in the Available Regions list.

5. Change the start and/or the stop dates and times for the region closure.

- Status Start

    a. Set the start date and time with the calendar tool.

    b. Set time zone.

- Status End—Do one of these:

    ○ Set the stop date and time with the calendar tool. Set the time zone.

    ○ Select **Until Further Notice**. ("Until Further Notice" shows as "UFN" in the *Closed Until* column.)

6. Set the Status Type to **Closed**.

7. OPTIONAL: Select **Send to TFDM**.

---

i **NOTE:** The **Send to TFDM** option is only available if the selected region(s) are non-movement area region types (e.g., gate, ramp segment, and de-ice).

---

8. Enter text notes.

9. Click **OK** to save settings and close the **Add/Edit Region Status** dialog box.
If you selected **Send to TFDM** and there is a problem processing the request, an error message shows (refer to Table 4-3 on the facing page for more information).

Figure 4-1. Region Status Tool, Region Labels on Map

Table 4-3. TFDM Region Closure Error Codes

Error Code	Description
INVALID_SCHEMA_VERSION	Provided schema version does not match TFDM schema version.
BAD_MESSAGE_FORMAT	The message has bad formatting.
INTERNAL_ERROR	There was an issue processing the message that does not have to do with an invalid message or bad message format.
INVALID_MESSAGE	The message has invalid data.
UNAUTHORIZED_USER_ ERROR	The user is not authorized to submit Non-Movement Area Closure Requests.
REFERENCE_IDENTIFIER_ MATCH_NOT_FOUND	The reference identifier match was not found.
REQUEST_NOT_EXECUTED_ DUE_TO_CLOSURE_STATE	The request was not executed due to a closure state.

4.1.2 Schedule a Region Warning

Use this procedure to schedule a region warning from the Region Status tool. You can also close a region from NOTAM Viewer (refer to *Set up a Region Closure, Warning, or Gridlock from NOTAM Viewer* on page 7-294 for information).

NOTE: When a region warning is scheduled from a NOTAM, the NOTAM number (the ICAO # or US#) shows in the Group ID field in the **Add/Edit Region Status** dialog box. Also, NOTAM Effective Time goes in the Status Start field, and Expire Time goes in the Status End field.

1. Select **System > Region Status**.

2. Click **Schedule New Status**. The **Add/Edit Region Status** dialog box opens.

3. Enter a status (warning) name.

4. Select the region(s) that the warning applies to:

   - in the list of Available Regions

     - Select a region group to select all regions in that group, or expand the group, and select individual items. Or, expand a group, and, then, remove the check from individual items in that group.

     - The regions show in color in the **Add/Edit Region Status** map dialog box and in **Map Display**.

   - in the map

     a. If necessary, click ⬛ to zoom in on an area until you can read labels (refer to).

     b. Click in the region to which the warning applies. The region changes color when it is selected. The region label shows a check in the Available Regions list.

5. Change the start and/or the stop dates and times for the warning.

   - Status Start

     a. Set the start date and time with the calendar tool.

     b. Set time zone.

   - Status End—Do one of these:

     - Set the stop date and time with the calendar tool. Set the time zone.

     - Select **Until Further Notice**. ("Until Further Notice" shows as "UFN" in the *Closed Until* column.)

6. Set the Status Type to **Warning**.

7. Enter text notes.

8. Click **OK** to save settings and close the **Add/Edit Region Status** dialog box.

Figure 4-2. Region Status Tool, Region Labels on Map
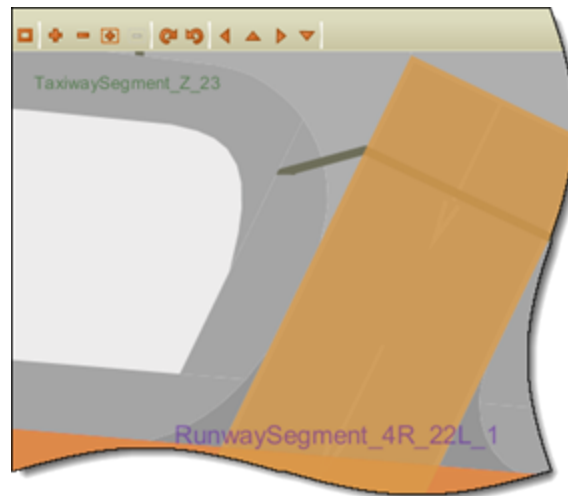
4.1.3 Supply a Gridlock Indication

Use this procedure to schedule a region gridlock from the Region Status tool. You can also schedule a region gridlock from NOTAM Viewer (refer to *Set up a Region Closure, Warning, or Gridlock from NOTAM Viewer* on page 7-294 for information).

ℹ️ **NOTE:** When a gridlock indication is scheduled from a NOTAM, the NOTAM number (the ICAO # or US#) shows in the Group ID field in the **Add/Edit Region Status** dialog box. Also, NOTAM Effective Time goes in the Status Start field, and Expire Time goes in the Status End field.

---

1. Select **System > Region Status**.

2. Click **Schedule New Status**.
    The **Add/Edit Region Status** dialog box opens.

3. Enter a status (gridlock) name.

4. Select the region(s) for which to issue the gridlock indication:

   - In the list of Available Regions

     - Select a region group to select all regions in that group, or expand the group, and select individual items. Or, expand a group, and, then, remove the check from individual items in that group.

     - The selected regions show in color in the **Add/Edit Region Status** map dialog box and in **Map Display**.

   - In the map

     a. If necessary, click [icon] to zoom in on an area until you can read labels (refer to Figure 4-3 on the facing page).

     b. Click in the region to be in gridlock.
        The region changes color when it is selected. The region label shows a check in the Available Regions list.

5. Change the start and/or the stop dates and times for the region gridlock.

   - Status Start

     a. Set the start date and time with the calendar tool.

     b. Set time zone.

   - Status End—Do one of these:

     - Set the stop date and time with the calendar tool. Set the time zone.

     - Select **Until Further Notice**. ("Until Further Notice" shows as "UFN" in the *Active Until* column.)

6. Set the Status Type to **Gridlock**.

7. OPTIONAL: Select **Send to TFDM**.

   > **i** **NOTE:** The **Send to TFDM** option is only available if the selected region(s) are non-movement area region types (e.g., gate, ramp segment, and de-ice).

8. Enter text notes.

9. Click **OK** to save settings and close the **Add/Edit Region Status** dialog box.
   If you selected **Send to TFDM** and there is a problem processing the request, an error message shows (refer to Table 4-4 on the facing page for more information).

Figure 4-3. Region Status Tool, Region Labels on Map

Table 4-4. TFDM Region Gridlock Error Codes

Error Code	Description
INVALID_SCHEMA_ VERSION	Provided schema version does not match TFDM schema version.
BAD_MESSAGE_ FORMAT	The message has bad formatting.
INTERNAL_ERROR	There was an issue processing the message that does not have to do with an invalid message or bad message format.
INVALID_MESSAGE	The message has invalid data.
UNAUTHORIZED_ USER_ERROR	The user is not authorized to submit Non-Movement Area Closure Requests.

4.1.4 Edit a Region Status

For a list of editable features, refer to *Edit Region Status* on page 4-2.

i **NOTE:** You cannot edit system-generated region statuses (refer to *View a Region Status* on page 4-15).

⚠ **CAUTION:** If you edit each field in the **Add/Edit Region Status** dialog box, you can change one closure into a different region closure with a new name, new regions, new start and stop time, and new notes. If you do this, the entry is lost. To add a new region closure without overwriting one, use **Schedule New Status** (refer to *Schedule a Region Closure* on page 4-3).

1. Select **System > Region Status**.

2. Select a "user-entered" row in the **Region Status** table.

3. Click **Edit**. The **Add/Edit Region Status** dialog box opens.

4. Configure *Available Regions*:

   ▪ in the list of Available Regions

      ▪ Select a top-level region to select (or to cancel selection of) all individual regions in that region, or expand the group, and select (or remove the check from) items in that group.

      ▪ The closed regions show in color in the **Add/Edit Region Status** map and in **Map Display**.

   ▪ in the map

      a. If necessary, click ⊡ to zoom in on an area until you can read labels.

      b. Click in the region to be closed. The region changes color when it is selected. The region label shows a check in the Available Regions list.

         ℹ Press HOME on your keyboard to set **Map Display** to the default zoom setting.

5. Change the start and/or the stop dates and times for the region closure.

   Select **Until Further Notice** for closures with indefinite stop dates. ("Until Further Notice" shows as "UFN" in the *Closed Until* column.)

6. Enter any text notes.

7. Click **OK** to save settings and close **Add/Edit Region Status**.

4.1.5 Add a Region Status Annotation

You can add, edit, and delete annotations that are related to region statuses in the Region Status tool. (For instructions on how to edit or delete annotations, refer to *Edit or Delete Region Status Annotations* on page 4-12.)

1. Select **System > Region Status**. The Region Status tool opens.

2. Select the status item to which an annotation is to be added.

   ℹ **NOTE**: The region and the start and end times for the status item define the region and start and end times for the annotation. You can edit these values.

3. Click **Edit**. The **Add/Edit Region Status** dialog box opens.

4. Select the Manage Annotation tab.
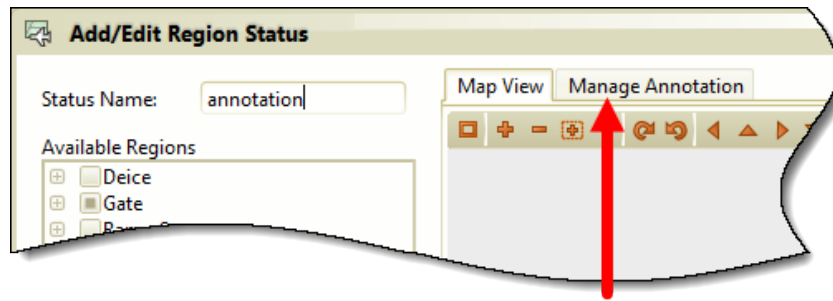
5. Click the button for the type of annotation to add.

- Text (refer to *Add a Text Annotation Element* on page 7-245 for more information, but do not open the Annotation Editor separately)

- Shape (refer to *Add a Shape Annotation Element* on page 7-244 for more information, but do not open the Annotation Editor separately)

- Line (refer to *Add a Line Annotation* on page 7-244 for more information, but do not open the Annotation Editor separately)
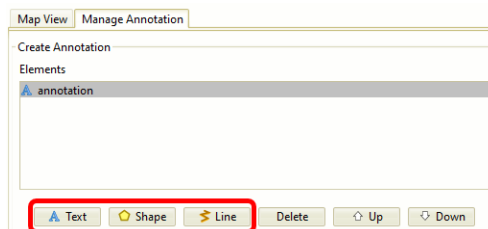
ℹ **NOTE:** All work is done in the Manage Annotation tab.

6. If necessary, edit, in the section below "Available Regions," the Status Start and/or Status End values.

7. Enter comments in the Notes field.

8. Click **OK** to apply and save changes.

4.1.6 Edit or Delete Region Status Annotations

You can add, edit, and delete annotations that are related to region statuses in the Region Status tool. (For instructions on how to add annotations, refer to *Add a Region Status Annotation* on page 4-10.)

1. Select **System > Region Status**. The Region Status tool opens.

2. Select the status item to which an annotation is to be added.

3. Click **Edit**. The **Add/Edit Region Status** dialog box opens.

4. Select the Manage Annotation tab.

5. Select the annotation to edit or delete.
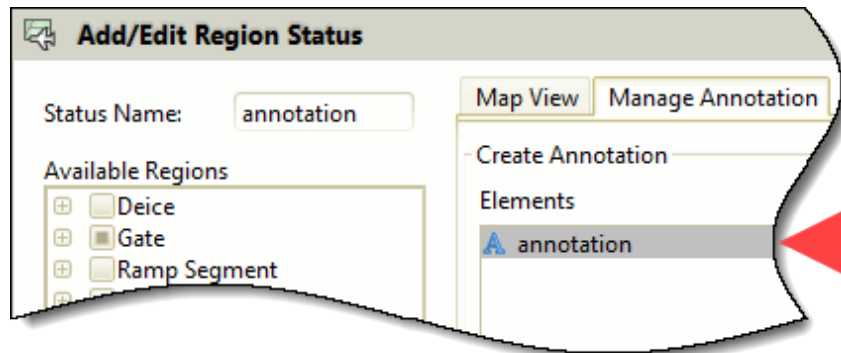
6. Change the "Element Properties," or click **Delete** to remove the annotation.

   ⚠ **CAUTION:** Deleted annotation files cannot be restored. There is no undo command.
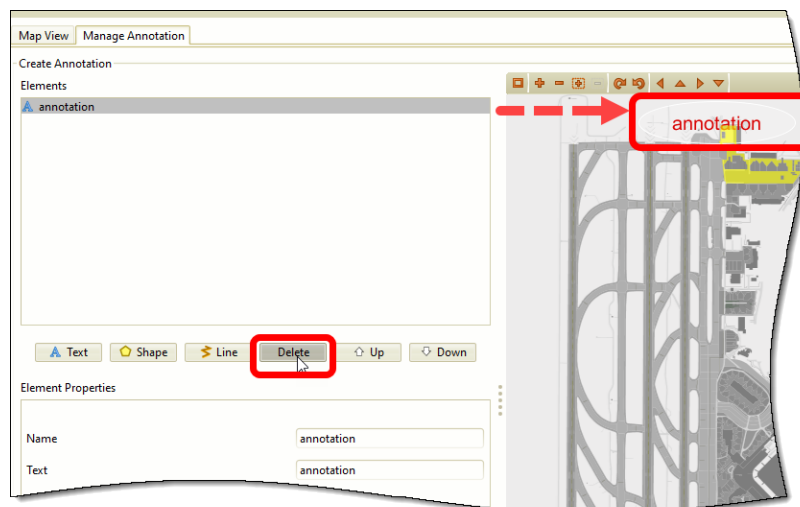
7. If necessary, edit selected regions in the "Available Regions" list.

8. If necessary, edit, in the section below "Available Regions," the Status Start and/or Status End values.

9. Enter comments in the Notes field.

10. Click **OK** to apply and save changes.

4.1.7 Remove an Entry from the Region Status Table

Remove a region warning or closure entry to show that the region is open. Aerobahn can use that region in possible taxi routes.

1. Select **System > Region Status**.

2. Select an entry in the **Region Status** table.

3. Click **Remove** to delete the entry.

4.1.8 Monitor Flights in a Closed Region

You can make a rule that identifies flights that are in or have been in a closed region. Define actions in that rule to monitor those flights.

1. Make a rule that uses "any closed region" in a statement as you set up criteria. (Start this rule with any of these terms, for example: "Has entered," "Has exited," "Is currently in," etc.)

2. Send entries to a watch list or set up a rule action that lets you monitor and report these flights.

4.1.9 View a Region Status

1. Select a row in the regions status table.
   The **View** button shows.

2. Click **View** to open the View Region Status dialog box.

View Button

If you have only the "View Region Status" permission (i.e., you do not have the "Manage Region Status" permission), the button label is always **View**.

If you have "Manage Region Status" permission, the button label shows "Edit" or "View" based on region status (i.e., the button label can change for different rows in the table):

- When an "obstacle" comes in, you can only view, and the button label is **View**.

- When a warning or closure comes in (or another type based on server configuration), you can edit, and the button label is **Edit** (refer to *Edit a Region Status* on page 4-9).

Figure 4-4. Region Status Tool, View Button
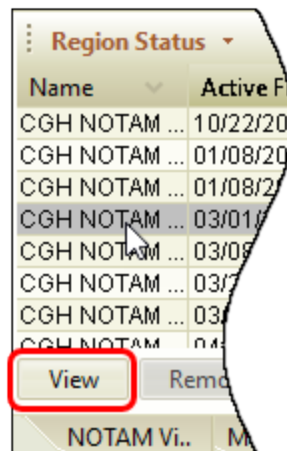
4.2 Manage Flow Restrictions

A flow restriction controls how departure fixes are used, and it controls time for the departure sequence. Flow restrictions can generate changes to recommended off block times (ROBTs) in Departure Management, or can be

used to identify targets that may need to be re-routed in the case of severe weather avoidance (SWAP) events. You can create a flow restriction manually or receive one from external sources (e.g., TFMS and TFDM).

Select **System > Flow Restrictions**:

- to schedule, edit, remove, and view flow restrictions, and
- to show data for Ground Delay Programs, Ground Stops, and Approval Requests

Refer to instructions on these pages:

- *Schedule a New Flow Restriction* below
- *Edit a Flow Restriction* on page 4-18
- *Remove a Flow Restriction* on page 4-20
- *Flow Restriction Types* on page 4-20

4.2.1 Schedule a New Flow Restriction

Use this procedure to set up and schedule the start and end of a *new* flow restriction.

> ℹ **NOTE:** You can set up a hotkey to change a flow restriction that has already been scheduled (refer to *Configure Hotkey Settings* on page 6-23).

1. Click **System > Flow Restrictions**.
2. Click **Schedule New Restriction**.
   The **Add/Edit Flow Restriction** dialog box opens.
3. Enter a name for the flow restriction in the Restriction Name field.

   > ℹ **NOTE**: The Restriction Name field is autofilled by your selection from the Restriction Criteria. You can edit the autofilled content.

4. Configure the flow restriction:

   a. Select (☑) a restriction from one of these lists:

- Exit/Departure Fixes
- Destinations
- Route Elements
- Departure Procedures (SID)
- SID Flow Groups
- Surface Regions
- Custom Flow Restriction Criteria
- Custom Dual Flow Restriction Criteria

   ℹ **NOTE:** Custom Dual Flow Restriction Criteria is available only at specific sites, and the server configuration for dual flow restriction must be enabled.

   ℹ **NOTE:** If the necessary restriction is not in a list, refer to *Manage Items in the Restriction Criteria List* on page 4-22.

   ℹ **NOTE:** If the restriction is a Route element or a Destination, and that component or destination is not in a list, enter the name in the Custom field for that category. Enter the ICAO/IATA code for the destination airport. Wildcards are accepted for destinations.

   b. Set Restriction Start by using the calendar tool.

   c. Set Restriction End.

- Select **Duration** and enter minutes,
- Select **Restriction End** and use the calendar tool, or
- Select **Until Further Notice**.

d. Set Restriction Type:

- Minutes in Trail
- Miles in Trail
- Closed
- Ramp Closed

ℹ **NOTE:** If you have selected a **Custom Dual Flow Restriction Criteria** template, you can only select **Miles in Trail** and **Minutes in Trail**.

---

e. OPTIONAL: Enter Notes.

5. In the **Publish to** box, select airports to which you want to publish the current flow restriction.

ℹ **NOTE:** The **Publish to** box shows only when the airport has been configured to share flow restrictions with other airports.

ℹ **NOTE:** After creating a flow restriction, you cannot modify the list of airports to publish the flow restriction to.

ℹ **NOTE:** The airports selected in the **Publish to** box cannot make any changes to the flow restriction.

---

6. Click **OK** to save settings and close the dialog box.

4.2.2 Edit a Flow Restriction

ℹ **NOTE:** You cannot edit a Flow Restriction received from external sources (e.g., TFDM).

Use this procedure to change the configuration of or to reschedule a flow restriction.

1. Select **System > Flow Restrictions**.
2. Select a restriction from the Flow Restrictions table.
3. Click **Edit**.
    The **Add/Edit Flow Restriction** dialog box opens. The name of the flow restriction that you selected shows in the Restriction Name field.

4. Change the flow restriction configuration:

a. Select (☑) a restriction from one of these lists:

- Exit/Departure Fixes
- Destinations
- Route Elements
- Departure Procedures (SID)
- SID Flow Groups
- Surface Regions
- Custom Flow Restriction Criteria
- Custom Dual Flow Restriction Criteria

> **NOTE:** Custom Dual Flow Restriction Criteria is available only at specific sites, and the server configuration for dual flow restriction must be enabled.

> **NOTE:** If the necessary restriction is not in a list, refer to *Manage Items in the Restriction Criteria List* on page 4-22.

> **NOTE:** If the restriction is a Route element or a Destination, and that component or destination is not in a list, enter the name in the Custom field for that category. Enter the ICAO/IATA code for the destination airport. Wildcards are accepted for destinations.

b. Set Restriction Start by using the calendar tool.

c. Set Restriction End.

- Select **Duration** and enter minutes,
- Use the calendar tool, or
- Select **Until Further Notice**.

d. Set Restriction Type:

- Minutes in Trail
- Miles in Trail
- Closed
- Ramp Closed

> ℹ **NOTE:** If you have selected a **Custom Dual Flow Restriction Criteria** template, you can only select **Miles in Trail** and **Minutes in Trail**.

e. Enter Notes (optional).

5. In the **Publish To** box, select airports to which you want to publish the current flow restriction.

> ℹ **NOTE:** You cannot modify the list of airports to publish the flow restriction to. The edited flow restriction can only be published to the airports that were chosen when it was created.

6. Click **OK** to save settings and close the dialog box.

4.2.3 Remove a Flow Restriction

> ℹ **NOTE:** Only the airport that created a flow restriction can remove it.

1. Select **System > Flow Restrictions**.
2. Select an entry in the **Flow Restrictions** table.
3. Click **Remove** to delete the entry.

4.2.4 Flow Restriction Types

You can see data for Ground Delay Programs and Ground Stops in two tools:

- Airport Status Delay (refer to *Airport Status Delay* on page 7-157)
- Flow Restrictions (refer to Table 4-5 on page 4-22)

You can see data for all other flow restriction types in the Flow Restrictions tool.

In a Ground Delay Program[1] (GDP), flights are assigned estimated departure clearance times (EDCT). Aircraft must depart within +/- 5 minutes of their EDCT to be in compliance with the GDP.

A Ground Stop[2] (GS) is like a Ground Delay Program, but it is usually shorter than a GDP and can end suddenly.

In an APREQ[3], flights are assigned Call For Release (CFR) times. Aircraft must depart within a specified tolerance of the CFR time to be in compliance.

In an SMP[4], flights are assigned a Target Movement Area Time. Aircraft must enter the movement area within a specified tolerance of the TMAT to be in compliance. Surface Metering Programs are not technically flow restrictions.

An Airspace Flow Program (AFP) is used to manage the flow of flights through areas with a Flow Constrained Area (FCA). The area can be shaped as lines, polygons, circles, or U.S. National Airspace System (NAS) elements. To implement an AFP, an air traffic controller assigns Expect Departure Clearance Times (EDCT) to flights to control their departure times.

Collaborative Trajectory Options Program (CTOP) manages demand through one or more FCAs by providing customers a Trajectory Options Set (TOS) from which to choose their preferred route and delay.

In a Miles-in-Trail (MIT), flights associated with a particular criteria (e.g., airport, fix, altitude, sector, or route specific) are separated by a specified distance to restrict flow.

In a Minutes-in-Trail (MINIT), flights associated with a particular criteria (e.g., airport, fix, altitude, sector, or route specific) are separated by a specified time to restrict flow.

---

[1]A traffic management initiative (TMI) that holds aircraft at their departure airport to manage demand at their destination. The US FAA evaluates demand vs. capacity to determine when a TMI should be created.
[2]A traffic management initiative (TMI) that prevents selected flights from taking off until the program has ended. A ground stop (GS) is often the result of a weather event and is usually shorter than a ground delay program. A GS can end suddenly.
[3]A traffic management initiative (TMI) typically issued by the Air Route Traffic Control Center to departure flights that are ascending into congested overhead stream traffic. Flights are issued release times that result in an orderly flow of departure traffic into the surrounding airspace.
[4]A restriction at an airport that holds aircraft at their departure gates beyond their earliest off block times to manage congestion in the movement area. The air traffic controllers evaluate the predicted runway queue lengths to determine when surface metering programs (SMP) need to be established.

A local STOP is issued typically to keep aircraft from departing that are associated with a particular criteria (e.g., a fix that has been closed).

A Departure Sequencing Program (DSP) assigns flights, often from different airports and departure times to achieve a specified interval between flights over a common point for departures.

A Severe Weather Avoidance Plan (SWAP) reassigns flights to alternate routes from the National Playbook when there is severe weather making it dangerous for air traffic to pass through certain areas.

Time Based Management (TBM) programs control the flow of air traffic by assigning times to flights for crossing specified points along the route.

AIRPORT programs are custom restrictions TFDM operators can enter to account for miscellaneous delays at the airport.

The tools show active NAS delay status information. You cannot edit this information in these tools.

Table 4-5. GDP and GS Data (Flow Restrictions tool)

Data Field	Description
Restriction Name	A label for the restriction
Restricted From	Date - Time
Restricted Until	Date - Time
Restriction Criteria	Logic indicating which flights are affected by the restriction
Restriction Type	GDP, GS, APREQ, SMP, AFP, CTOP, MIT, MINIT, STOP, DSP, SWAP, TBM, or AIRPORT
Restriction Value	Miles or minutes value for MIT or MINIT restrictions respectively

4.2.5 Manage Items in the Restriction Criteria List

4.2.5.1 Add an Item

1. Click **System > Flow Restrictions**.

2. Click **Schedule New Restriction** or **Edit**.
   The **Add/Edit Flow Restriction** dialog box opens.

3. Click the ➕ for the type of item to be added (Exit/Departure Fixes, Destinations, Route Elements, Departure Procedures (SID), SID Flow Groups, Surface Regions, Custom Flow Restriction Criteria, or Custom Dual Flow Restriction Criteria).
   The **Add/Edit Restriction Template** dialog box opens.

4. Enter the item name.

ℹ **NOTE:** Be sure to enter a departure fix name correctly. The "Is Flow Restricted" data field in other tools shows as "true" when a departure fix in an airborne restriction is in the flight route. However, the departure fix must agree with an entry in the route. For example, "Is Flow Restricted" is *true* if there is an airborne restriction for "DUNKS," and the flight route is "KDTW.ROD5.ROD..DUNKS..ABC.KRDU/0127." "Is Flow Restricted" is *false* if the airborne restriction is for "DUNK" (i.e., no "S").

5. Click **OK**.

6. Select the items you want to include in the restriction criteria (refer to for an example).

Figure 4-5. Restriction Items Selected (Example)

4.2.5.2 Modify the Name of an Item

1. Select **System > Flow Restrictions**.

2. Click **Schedule New Restriction** or **Edit**.
The **Add/Edit Flow Restriction** dialog box opens.

3. Put the mouse cursor over an item to modify.

4. Click the ✏ .

The **Edit Item** dialog box shows.

5. Enter a new name.

6. Click **OK**.

4.2.5.3 Remove an Item

1. Select **System > Flow Restrictions**.

2. Click **Schedule New Restriction** or **Edit**.
    The **Add/Edit Flow Restriction** dialog box opens.

3. Put the mouse cursor over an item to remove.

4. Click the ✘.

4.2.6 Add a New Flow Restriction Template

You can add or edit a Flow Restriction template when the Flow Restrictions tool is open. Flow Restriction templates show in the Restriction Criteria List.

ℹ️ **NOTE:** A Flow Restriction Template must have a result that returns "true" or "false." You can make corrections as you make the formula. You add only one element at a time to the Formula field. Elements are added to the formula at the cursor location. You can also edit the Formula field as plain text. The tool checks the validity of the formula as you make it.

1. Select **System > Flow Restrictions**.

2. Click **Schedule New Restriction** or **Edit**.
    The **Add/Edit Flow Restriction** dialog box opens.

3. Click the ➕ in the Custom Flow Restriction Criteria or Custom Dual Flow Restriction Criteria section.

    ℹ️ **NOTE:** Custom Dual Flow Restriction Criteria is available only at specific sites, and the server configuration for dual flow restriction must be enabled.

    The **Add/Edit Restriction Template** dialog box opens.

4. Enter a name for the flow restriction template in the Restriction Name field.

5. Select data fields, functions, operators, and locations in the right pane and move them to the Formula field to make a formula (refer to *Flow Restriction Data Field Components* on page 4-26 for information on formula syntax) :

- Select an item, and click **Add Selected**, or
- Double-click an item

> ℹ **NOTE:** You must have two valid criteria for a Custom Dual Flow Restriction Criteria template.

6. Select the Restriction Type.

> ℹ **NOTE:** If you have selected a **Custom Dual Flow Restriction Criteria** template, you can only select **Miles in Trail** and **Minutes in Trail**.

7. Click **Add Selected**.
8. Click **OK**.

4.2.6.1 Edit a Flow Restriction Template

You can add or edit a Flow Restriction template when the Flow Restrictions tool is open. Flow Restriction templates show in the Restriction Criteria List.

> ℹ **NOTE:** A Flow Restriction Template must have a result that returns "true" or "false." You can make corrections as you make the formula. You add only one element at a time to the Formula field. Elements are added to the formula at the cursor location. You can also edit the Formula field as plain text. The tool checks the validity of the formula as you make it.

1. Select **System > Flow Restrictions**.
2. Click **Schedule New Restriction** or **Edit**.
   The **Add/Edit Flow Restriction** dialog box opens.
3. In the Custom Flow Restriction Criteria or Custom Dual Flow Restriction Criteria section, put the mouse cursor over a template to modify.

> ℹ **NOTE:** Custom Dual Flow Restriction Criteria is available only at specific sites, and the server configuration for dual flow restriction must be enabled.

4. Click the ✏ .
   The **Add/Edit Restriction Template** dialog box opens.
5. Select data fields, functions, operators, and locations in the right pane and move them to the Formula field to make a formula (refer to *Flow Restriction Data Field Components* on the next page for information on formula syntax):

- Select an item, and click **Add Selected**, or
- Double-click an item

6. Click **Add Selected**.

7. Click **OK**.

4.2.6.2 Flow Restriction Data Field Components

A Flow Restriction Template must have a result that returns "true" or "false."

Dynamic fields generally follow the syntax rules used in spreadsheet applications, including MS Excel, OpenOffice Calc, and Google Sheets.

EXAMPLE

[AOBT (Aero)] - [SOBT (Aero)]

AND ([Is Persisted] , [EOBT (Aero)] > NOW() + 15 min)

IF(ISBLANK([AIBT (Aero)]) , "Flight has not yet arrived" , "Flight has arrived") // This is a single-line comment

Table 4-6. Arithmetic Operators

Operator	Meaning	Example	Operand Combinations
+	Addition **i NOTE:** The + and - operators have an implied 0 as the left parameter if none is provided. So, the expression "+5" is translated as "ADD (0,5)".	5+2	numeric and numeric, date-time and duration, duration and duration, duration and date-time.
-	Subtraction **NOTE**: The + and - operators have an implied 0 as the left parameter if none is supplied. So, the expression "-5" is translated as "SUBTRACT(0,5)".	5-1, -1	numeric and numeric, date-time and duration, duration and duration
*	Multiplication	5*3	numeric and numeric, duration and numeric
x = y	EQUALS		
x <= y	LESSTHANEQUALS		

Table 4-6. Arithmetic Operators (continued)

Operator	Meaning	Example	Operand Combinations
x < y	LESSTHAN		
x >= y	GREATERTHANEQUALS		
x > y	GREATERTHAN		

Table 4-7. Expressions (Examples)

Description	Example
A number expression	12
A number expression	12.6
A string. Quotes are not necessary. Space at end is deleted.	abc123
A string that contains a space. A string is enclosed by quotation marks but cannot contain a quotation mark.	"abc123 "
A field reference	[Scheduled Off Block Time (Aerobahn)]
A field reference	[SOBT (Aero)]
A Boolean value. If this is set off with quotation marks (i.e., "true"), it is a string.	true
This is null (i.e., *empty set* or *no value*. If this is set off with quotation marks (i.e., "null"), it is a string.	null
A function call that takes in arguments separated by commas in a list.	<function_name> (12, null, a string)
A duration in which hours, minutes, and seconds are separated by colons. In this example, 12 hours, 5 minutes, 0 seconds.	12:05:00 or 12:5:0
A duration spelled out.	12 hours 20 seconds
A comment. When you add a double slash (//), the rest of line becomes a comment and is ignored.	// This is a comment

Table 4-8. Functions

Function	Description	Arguments
SUM (x, y, z...)	Returns the sum of all arguments. If all numbers, you get a number. If all durations, you get a duration. If you have a date time, everything else must be a duration. If anything is a string, you get a string concatenation of all arguments.	

Table 4-8. Functions (continued)

Function	Description	Arguments
FIRSTNONEMPTY (x, y, z...)	Selects the first value that is not null from an ordered, comma-separated list of values	2 or more field names of the same type separated by commas
IF (booleanExpression, trueExpression, falseExpression, nullExpression)	Checks the Boolean expression, and returns the true, false, or null value. False and null expressions are optional. Returns null if it does not have an expression to return.	
NOT (booleanExpression)	Returns the inverse of the value of the Boolean expression (or null).	
OR (x, y, z...)	Returns true if any of the given expressions is true (or null, if any are null).	
AND (x, y, z...)	Returns true if all of the given expressions are true (or null, if any are null).	
NOW ()	Returns the current date and time.	
LEFT	Returns the specified number of characters from start of a text string.	
RIGHT	Returns the specified number of characters from end of a text string.	
MID	Returns the specified number of characters from the middle of a text string.	
FIND	Returns the starting position of one text with another text string.	
LOWER	Converts all letters in a text string to lowercase.	
UPPER	Converts all letters in a text string to uppercase.	
ISBLANK ([field name])	Returns true if its argument is null.	
startsWith()	Returns true if the first parameter starts with the second parameter.	
contains()	Returns true if the first parameter contains the second parameter.	
matches()	Returns true if the first parameter matches the second parameter. Uses regular expressions for the second parameter. Example: matches([Call sign (Aerobahn)], "DAL.*")	
endsWith()	Returns true if the first parameter ends with the second parameter.	

Table 4-8. Functions (continued)

Function	Description	Arguments
is in list()	Returns true if the first parameter is in the second list.	
floor(a)	Returns *a* rounded down to the nearest whole number. Example: ceiling(3.141) → 3	
ceiling(a)	Returns *a* rounded up to the nearest whole number. Example: ceiling(3.141) → 4	
round(a,b)	Returns *a* rounded to the *b* number of place values from the decimal point. Examples: round(123.456, 2) → 123.46 round(123.456, -1) → 120 round(123.456, -2) → 100	

Table 4-9. Advanced Notation: Functions and Operators

Function/Operator	Description
Functions	
isDeparture ( )	Returns true if the flight is a departure.
is Arrival ( )	Returns true if the flight is an arrival.
currentTime ( )	The current system time.
systemTime ( )	Alias of currentTime.
isUnderSurveillance ( )	Returns true if the target is not a look ahead.
isOutsideSurveillance ( )	Returns true if the target is a look ahead.
isParked ( )	Returns true if the target is parked (persisted).
isVehicle ( )	Returns true if the target is a vehicle (i.e., not an aircraft).
Operators	
x, y	Return the FIRSTNONEMPTY The "," and ";" operators have implied null for left and right parameters. So these expressions translate to "FIRSTNONEMPTY (Foo(x), null)": Foo(x), Foo(x) ;
x ? y	IF
x OR y	OR
x AND y	AND

4.3 Airport Configuration

> ℹ️ **NOTE:** You must have this Airport Configuration permission to open this tool: View Airport Configurations. For more information about permissions, refer to *Airport Configuration Permissions* on page 9-10.

The Airport Configuration tool gives you controls to configure runway prediction and departure metering or pre-departure sequencing settings.

An airport configuration is made up of Departure and Arrival runway rules for assigning a runway and of the parameters used to set up departure metering or pre-departure sequencing.

The Airport Configuration tool accepts data entered by a user and data from external sources. The tool can use data from both sources to set and schedule airport configurations.

Select **System > Airport Configuration** to open the Airport Configuration tool and do these actions:

- *View Airport Configurations* on the facing page
- Create and Save Airport Configurations
- *Set an Airport Configuration* on page 4-40
- *Schedule an Airport Configuration* on page 4-42
- *Modify an Active or Scheduled Airport Configuration* on page 4-43
- *Delete an Active or Scheduled Airport Configuration* on page 4-44
- *Acknowledge an Active Configuration* on page 4-33
- *Add, Edit, and Delete Airport Configuration Rules* on page 4-38

> ℹ️ **NOTE:** Open **Airport Configuration** in Playback mode to show the configuration that was active during the event period.

4.3.1 View Airport Configurations

There are two categories of airport configurations:

- Configurations that are Active or Scheduled. These configurations are used by Aerobahn prediction algorithm. You can see these in the main Airport Configuration tool dialog box.

- Configurations that are not Active or Scheduled. These configuration are not used by Aerobahn prediction algorithms. You can see and edit these configurations in the Airport Configuration Manager.

Table 4-10. Airport Configuration Interface Controls

Control	Description
Airport Configuration Menu	Contains **Edit Titles**, **Manage Airport Configurations**, **Set Title to Airport Configuration**, and **Acknowledge Active Configuration**.
Set (button)	After you select a new runway configuration, click **Set** to open the **Modify Current Configuration** dialog box. Makes a "Preview" configuration "Active" (refer to *Set an Airport Configuration* on page 4-40).
Schedule (button)	Starts the scheduling process by opening the **Schedule Configuration** dialog box (refer to *Schedule an Airport Configuration* on page 4-42
Modify (button)	Opens the **Modify Airport Configuration** dialog box, where approved users set the configuration parameters (refer to *Modify an Active or Scheduled Airport Configuration* on page 4-43.
Delete (button)	Deletes an airport configuration change(refer to *Delete an Active or Scheduled Airport Configuration* on page 4-44.
Manage Airport Configurations (button)	Starts the scheduling process by opening the **Schedule Configuration** dialog box (refer to *Schedule an Airport Configuration* on page 4-42

4.3.1.1 Set Title Bar of the Airport Configuration Tool to Show the Active Configuration

You can set up the **Airport Configuration** tool to show the active configuration name and the duration of that configuration in the tool title bar.

➡ To show the runway configuration label at all times with minimum screen requirements, adjust the size of the **Airport Configuration** tool to show only the title bar.

1. Select the **Airport Configuration** tool menu.
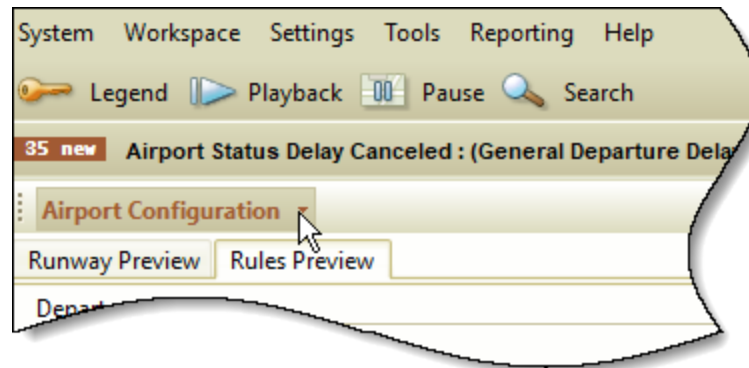
2. Select **Set Title to Airport Configuration > On**. The active runway configuration and the duration of that configuration replaces the words "Airport Configuration" in the tool title bar (refer to).
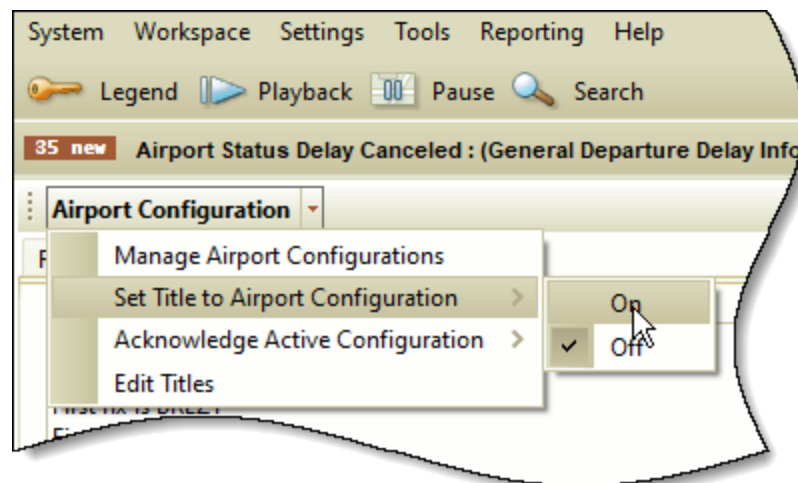
ℹ **NOTE:** Instructions for the Airport Configuration tool direct you to "Select the **Airport Configuration** tool menu." This instruction refers to all cases of the title bar menu, including those where the title bar shows the airport configuration.

Figure 4-6. Airport Configuration Title Bar: Airport Configuration Mode
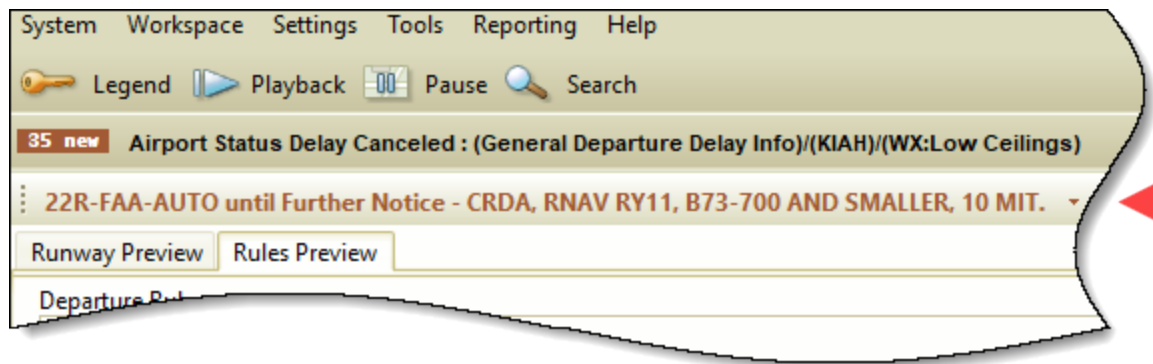
4.3.1.2 Acknowledge an Active Configuration

By default, a red indicator on the "Active" Start Time configuration parameter flashes on and off until you click it to acknowledge the changed status.

ℹ NOTE: The red background is a visual alert only. An acknowledgment is not a factor in any processing.

"Acknowledge Active Configuration" has two settings:

- On—Click the Active Start Time value when it flashes Red to stop the flashing. (Default setting)
- Off—It is not necessary to actively acknowledge the active configuration. The Active indicator does not flash.

You can switch the default behavior Off so that you do not have to acknowledge a change in the active airport configuration:

1. Select **System > Airport Configuration**.
2. Select **Airport Configuration > Acknowledge Active Configuration > Off**.

4.3.2 Use Airport Configuration Manager

Use the Airport Configuration Manager to create and save airport configurations. Configurations created in the Airport Configuration Manager are available when you do these tasks:

- *Set an Airport Configuration* on page 4-40
- *Schedule an Airport Configuration* on page 4-42

An airport configuration is made up of runway rules and airport-configuration parameters.

ℹ️ **NOTE:** Aerobahn does not allow you to edit configurations that are received from an external system (i.e., configurations that include "AUTO" in the configuration name) or configurations that are active or scheduled.

Departure and arrival runway rules are "If-Then" statements: If the rule criteria are satisfied, then the named runway is used. Rules are in priority order. A flight follows the first rule that applies to it or—if the flight satisfies no rules—the default runway.

Figure 4-7. Airport Configuration Manager User Interface
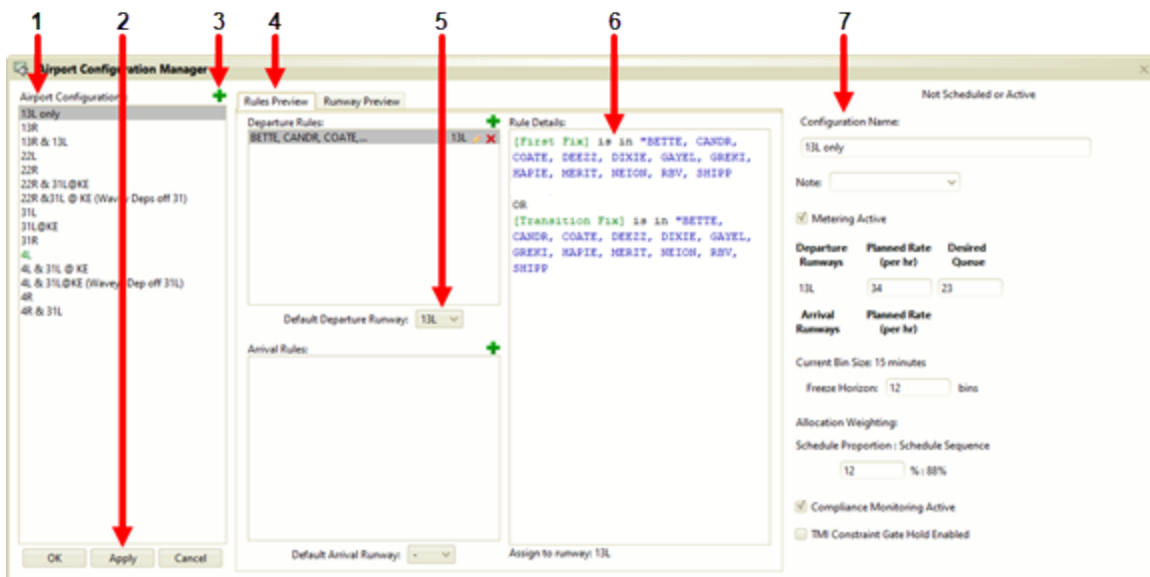
Table 4-11. Airport Configuration Manager User Interface

Item	Description
1	Airport Configuration List
	The Green configuration is active. Blue configurations are scheduled.
	To delete an airport configuration (that is not active or scheduled), position the pointer over the configuration name. Then, click ❌ to delete the configuration.
	⚠️ **CAUTION:** There is no "Undo" for this delete action.
	ℹ️ **NOTE:** You cannot modify or delete the active configurations, scheduled configurations, or configurations received from an external system.

Table 4-11. Airport Configuration Manager User Interface (continued)

Item	Description
2	Action buttons:
	OK—Save changes. Close dialog box.
	Apply—Save changes. Dialog box stays open.
	Cancel—Do not save changes. Close dialog box.
3	Button to click to add a new airport configuration.
4	List of runway rules in the selected airport configuration.
	To change priority of the runway rules, drag a rule name into a new position.
	To modify a runway rule, position the pointer over the rule name. Then, select ✏.
	To remove a runway rule, position the pointer over the rule name. Then, select ✖.
	Refer to *Add, Edit, and Delete Airport Configuration Rules* on page 4-38 for more information.
5	Default Departure and Arrival runway. If a flight satisfies none of the runway rules, then it is assigned to the default runway.
6	Preview of the selected rule
7	Airport Configuration parameters (refer to *Airport Configuration Parameters* on page 4-44) values specified in the Airport Configuration Manager are used as defaults when you do these tasks:
	▪ *Set an Airport Configuration* on page 4-40
	▪ *Schedule an Airport Configuration* on page 4-42
—	Runway Preview Tab (not shown)—Shows a preview of the runway configuration with arrows that indicate takeoff and landing directions.

4.3.2.1 Open Airport Configuration Manager

You open the **Airport Configuration Manager** from the Airport Configuration tool.

1. Select **System > Airport Configuration** to open the Airport Configuration tool.

2. Open the **Airport Configuration Manager**:

    ■ Click **Manage Airport Configurations** (bottom-left corner).

OR
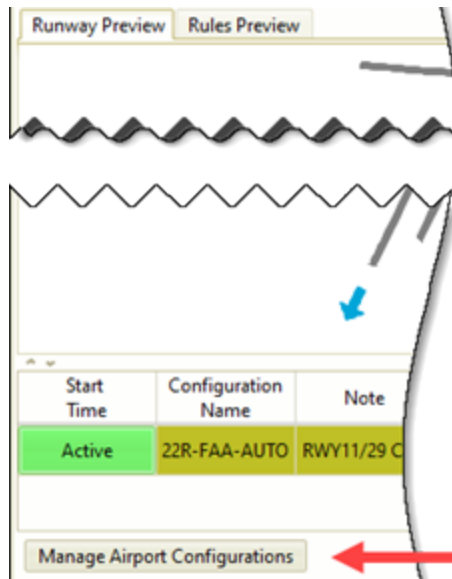
■ Select **Airport Configuration > Manage Airport Configuration**.
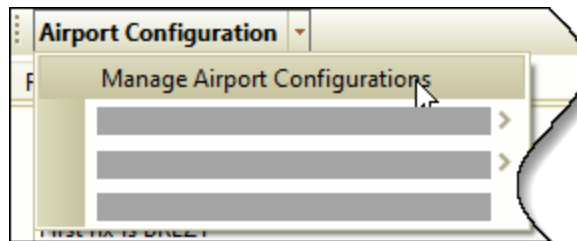
4.3.2.2 Make an Airport Configuration

1. Select **System > Airport Configuration** to open the Airport Configuration tool.

2. Open the Airport Configuration Manager (refer to *Open Airport Configuration Manager* above).

3. Click ✚. "New Configuration*" shows in the Airport Configurations list.
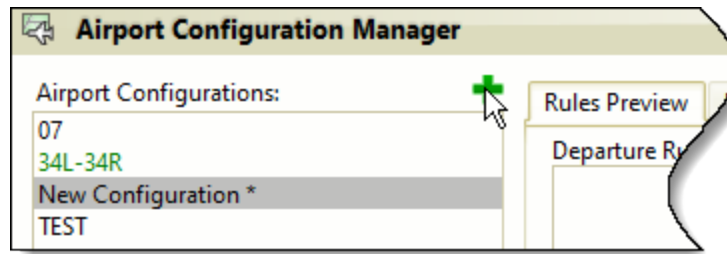
4. Set up rules for departures and arrivals.

   a. Click ✚ to open the Add/Edit Airport Configuration Rules dialog box.

   b. Enter a name for the rule.

   c. Select necessary criteria.

      ℹ **NOTE**: Some criteria open new dialog boxes.

      ➲ When you add a double slash (//) to a rule, the rest of line becomes a comment and is ignored.

5. Click **OK** when all criteria are set. This saves criteria under the rule name and closes the Add/Edit Configuration Rules dialog box.

6. Put departure and arrival rules in order of precedence (drag-and-drop process in the Airport Configuration Manager Rules Preview field).

7. Enter a name for the new airport configuration in the "Configuration Name" field.

8. OPTIONAL: Enter or select a note.

9. OPTIONAL: Change the default settings for any relevant airport configuration parameters (refer to *Airport Configuration Parameters* on page 4-44).

10. Click **OK**.

4.3.2.3 Rename an Airport Configuration

1. Select **System > Airport Configuration** to open the Airport Configuration tool.

2. Open the Airport Configuration Manager:

   ▪ Click **Manage Airport Configurations** (bottom-left corner).

   ▪ Select **Airport Configuration > Manage Airport Configuration**.

3. Select the configuration name to change in the Airport Configurations list.
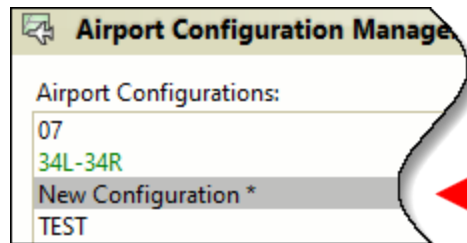
4. Enter new name in the Configuration Name field.
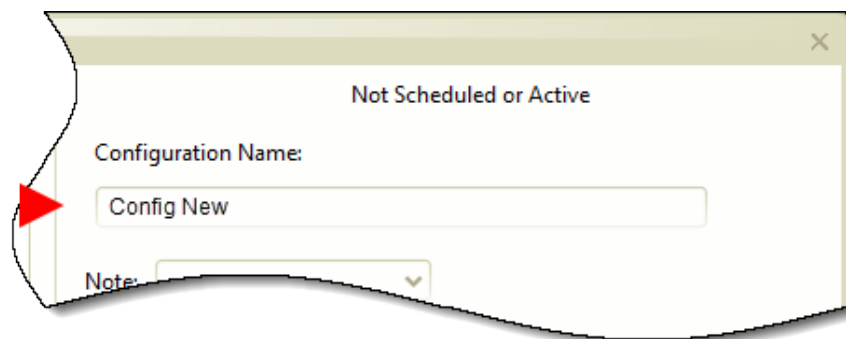
5. Click **Apply**. The configuration name in the Airport Configurations list changes to the new name.

6. Click **OK**. The **Airport Configuration Manager** closes.

4.3.2.4 Add, Edit, and Delete Airport Configuration Rules

Airport configuration rules define a runway for every departure. If the conditions for a rule are True for a flight, then that flight is assigned to a particular runway.

You have the ability to create multiple rules, prioritize the rules, and select the default runway. You can also define configuration rules for arrivals.

1. Select **System > Airport Configuration** to open the Airport Configuration tool.

2. Open the **Airport Configuration Manager**:

    ▪ Click **Manage Airport Configurations** (bottom-left corner).

    OR
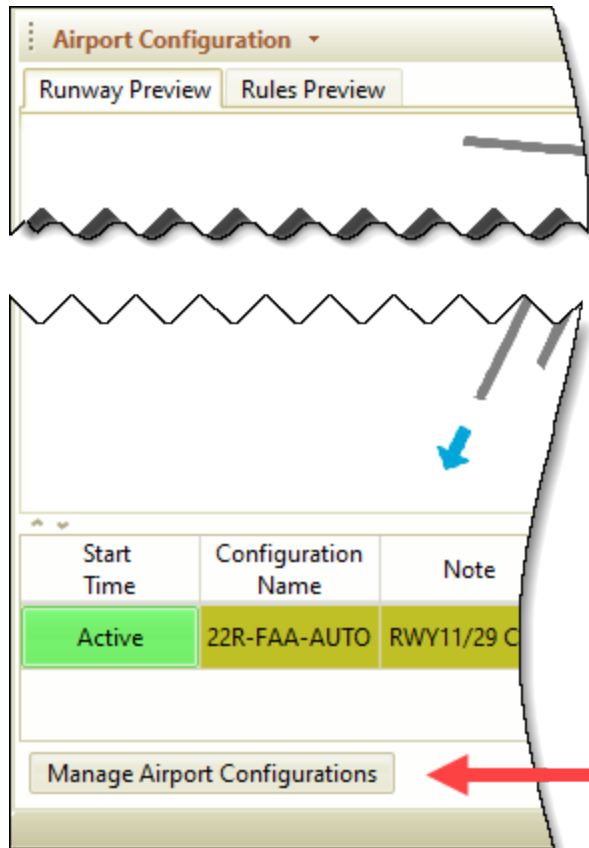
    ▪ Select **Airport Configuration > Manage Airport Configuration**.
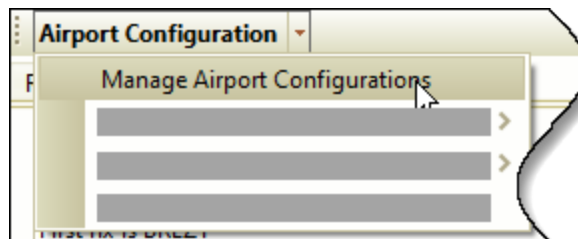
3. Select, from the Airport Configurations list, the airport configuration that is to be changed.

4. Select the Rules Preview page.

ℹ️ **NOTE**: All rules for the selected airport configuration are in sequential order from top to bottom. An aircraft "takes the test" posed by each rule until it satisfies the criteria for a rule. When it satisfies the criteria, it uses the runway specified by that rule.

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5. Add, copy, edit, or delete the rule:

   - To add a rule, click the ➕. The **Add/Edit Airport Configuration Rules** dialog box opens. Select from or add (click ➕) fixes, destinations, and other settings (optional). Click **OK**. The rule is appended to the end of the list.

   - To copy a rule, select the rule to be copied. The ✏️ and ❌ show. Right-click the selected rule. Select **Copy** from the popup menu. The **Copy Rule** dialog box opens. Rename the rule if necessary. Click **OK** to add a a copy of the rule to the list.

   - To edit a rule, select the rule to be changed. The ✏️ and ❌ show. Right-click the selected rule. Select **Edit** from the popup menu. The **Add/Edit Airport Configuration Rules** dialog box opens. Rename the rule if necessary. Make any changes in the Criteria List. Click **OK**. The edited rule moves to the end of the list.

   - To delete a rule—CAUTION: No Undo for this action— select the rule to be removed. The ✏️ and ❌ show. Right-click the selected rule. Select **Delete**. The rule is deleted.

6. Click **OK**. Changes are saved. The **Airport Configuration Manager** closes.

4.3.3 Set an Airport Configuration

ℹ️ **NOTE:** "Schedule/Modify/Delete Airport Configurations" permission is necessary for this function.

You can change an inactive "Preview" runway configuration status to Active at any time. The configuration that shows in Green in the Airport Configuration Manager is the active configuration. (In the example, 22R-FAA-AUTO is the active configuration. The 4L-FAA-AUTO configuration is not active or not scheduled.

Figure 4-8. Active Configuration
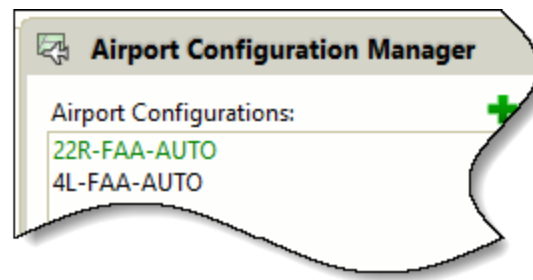
ℹ️ **NOTE:** All system users see a change in the airport configuration. When "Acknowledge Active Configuration" = On, flashing text shows a change in status.

1. Select **System > Airport Configuration**.

2. Click **Set**.

3. Select (in the **Set Airport Configuration** dialog box) a configuration from the Configuration Name menu.

4. Set up airport configuration parameters as necessary (refer to *Airport Configuration Parameters* on page 4-44).

5. OPTIONAL: Add a Note.

    a. Enter text or select a note from a list to show after the runway configuration name in the Airport Configuration title bar.

    b. Select the Airport Configuration tool menu.

6. Click **OK**. The **Set Airport Configuration** dialog box closes. A **Confirm Configuration Change** dialog box opens.

7. Confirm (click **OK**) the configuration change.
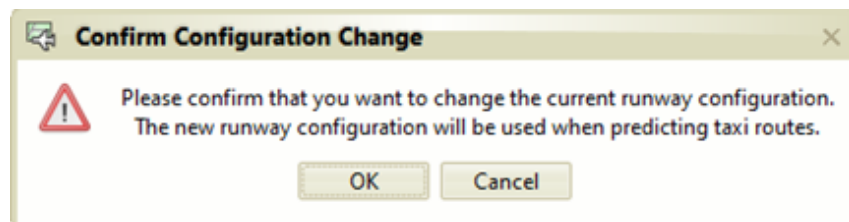
ℹ️ **NOTE**: If "Acknowledge Active Configuration" = On, the "Start Time" field for the new active configuration flashes red until you click the field.

8. Click **OK**.

4.3.4 Schedule an Airport Configuration

> ℹ **NOTE:** "Schedule/Modify/Delete Airport Configurations" permission is necessary for this function.

When you schedule a configuration change, you set a time for that departure procedure to become "Active."

1. Select **System > Airport Configuration**. Click **Schedule**. The Schedule Airport Configuration dialog box opens.
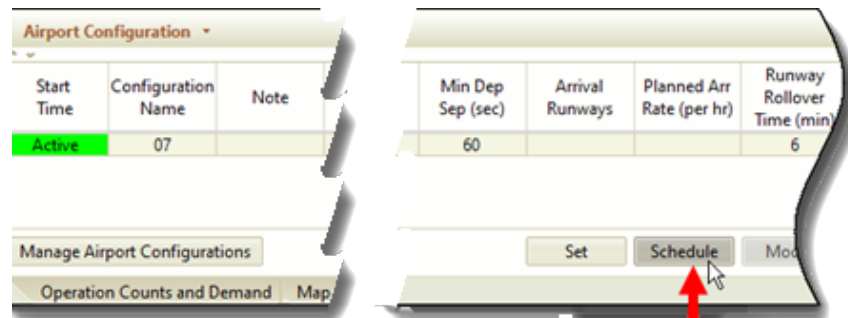
2. Select a configuration.
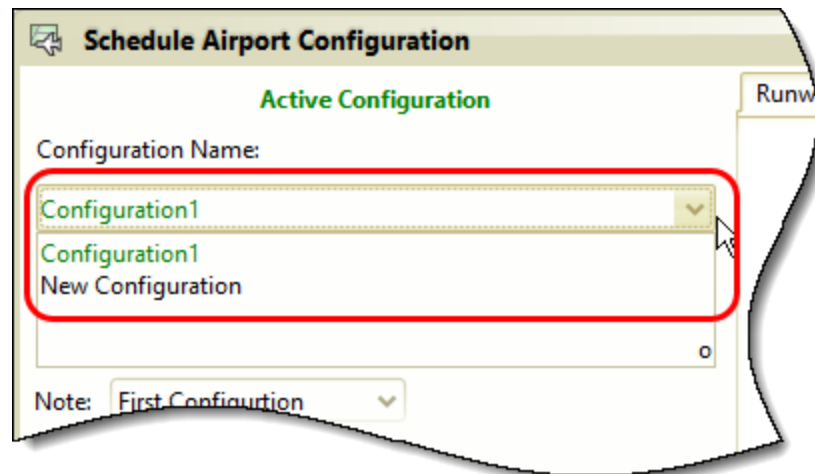
3. Set the start time.

4. Set up airport configuration parameters as necessary (refer to *Airport Configuration Parameters* on page 4-44).

5. OPTIONAL: Add a Note.

   a. Enter text or select a note from a list to show after the runway configuration name in the Airport Configuration title bar.

   b. Select the Airport Configuration tool menu.

6. Click **OK**.

4.3.5 Modify an Active or Scheduled Airport Configuration

> **NOTE:** "Airport Configuration > Schedule/Modify/Delete Airport Configurations" permission is necessary for this function.

> **NOTE:** The Modify button is not active until you select a configuration.

1. Select **System > Airport Configuration** to open the Airport Configuration tool.
2. Select the configuration to be changed (refer to).
3. Click **Modify**. The **Modify Airport Configuration** dialog box opens.
4. Change configuration parameters. A confirmation dialog box opens.
5. Click **OK** to confirm the change.
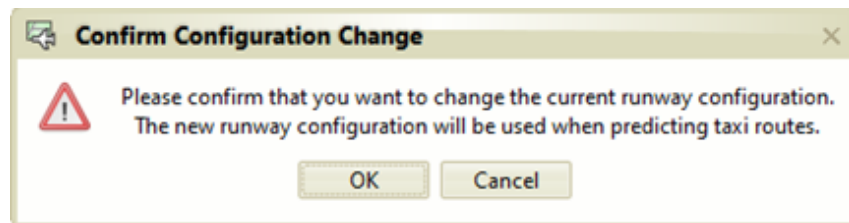
The confirmation dialog box and the **Modify Airport Configuration** dialog box close. Airport Configuration shows the updated configuration parameters.

Figure 4-9. Modify Parameters in a Scheduled or Active Configuration

4.3.6 Delete an Active or Scheduled Airport Configuration

You can remove active and scheduled configurations in the **Airport Configuration** main interface.

i NOTE: You cannot delete configurations from external sources (e.g., TFDM).

Before you remove a configuration that is active, make sure that it is OK to disable the configuration. After you select a new configuration, you can remove the configuration that was active.

1. Select **System > Airport Configuration**. The Airport Configuration tool opens.

2. Select the configuration.

3. Click **Delete**.
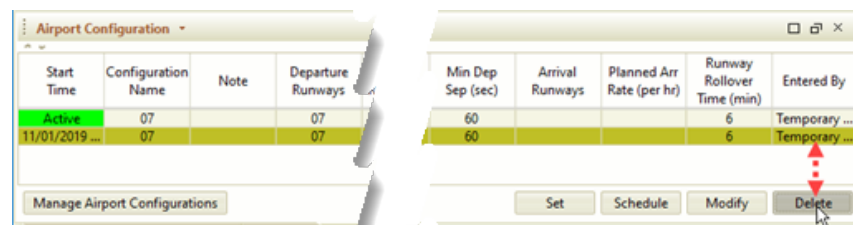
4. Confirm your decision:

   ⚠ **CAUTION:** There is no "Undo" for this action.

   - Click **OK** to delete. The selected active or scheduled configuration is removed.
   - Click **Cancel** to cancel.

4.3.7 Airport Configuration Parameters

Airport configuration parameters show in these locations:

- The panel next to the runway preview
- In the table beneath the runway preview

Configuration parameters depend on the type of departure management system in use at an airport:

- DMAN—Departure Manager
- PDS—Pre-Departure Sequencer
- Neither—Neither Departure Manager nor Pre-Departure Sequencer is in use

Table 4-12. Airport Configuration Parameters

Parameter	Description	Neither DMAN nor PDS	DMAN	PDS
Configuration Name	The name of the Airport Configuration	X	X	X
Start Time	Time the Airport Configuration is scheduled to take effect	X	X	X
Note	Free text	X	X	X
Planned Departure Rate (per hour)	The expected number of departures (per Departure Runway in the Airport Configuration)	X	X	X
Desired Queue	The desired queue length (per Departure Runway in the Airport Configuration)		X	X
Min Dep Sep (sec)	The minimum allowable separation between two departing aircraft (per Departure Runway in the Airport Configuration)			X
Planned Arrival Rate (per hr)	The expected number of arrivals (per Arrival Runway in the Airport Configuration)	X	X	X
Runway Rollover Time	The amount of time for which no flights should be sequenced after an Airport Configuration change			X
LAHSO Arrivals	Shows that Land and Hold Short (LAHSO) Arrival operations are (or are not) active. If checked, the Pre-Departure Sequencer (PDS) "assumes" that eligible Arrivals do not require the entire runway when landing.			X
Short Runway Departures	Shows that Short Runway Departure operations are (or are not) active. If checked, the PDS "assumes" that eligible Departures do not require the entire runway for take off.			X
Metering Active	Indicates whether or not Departure Metering is active		X	
Compliance Monitoring Active	Indicates whether or not the system will monitor metering compliance		X	

Table 4-12. Airport Configuration Parameters (continued)

Parameter	Description	Neither DMAN nor PDS	DMAN	PDS
TMI Gate Hold Enabled	Indicates whether or not to hold flights at the gate if their fixes are closed		X	
Freeze Horizon (bins)	Indicates the number of frozen metering bins		X	
Allocation Weights (%)	Indicates whether to allocate slots based on how many flights each carrier has scheduled during a bin, how many flights each carrier has delayed at the start of a bin, or proportional combination of both		X	
Locked	Available if system-generated airport configurations are enabled on your system. If True, the user-defined configuration cannot be replaced by a system-generated departure configuration	X	X	X
Entered By	Name of the user who last modified the scheduled/active configuration	X	X	X
Override CTOT Compliance Window	Indicates whether or not the CTOT bounds are set. If selected, the PDS will use the lower and upper bounds of the window around CTOT for ATOT. If not selected, the PDS will use the values set in the **A-CDM Parameters Configuration** tool (refer to *Use A-CDM Parameters Configuration Tools* on page 4-103).			X

4.4 Manage Annotations

1. Select **System > Annotation Management**.

2. Right-click on an item in **My Annotations**.

3. Select the action:

   - Edit—Open the Annotation Editor.

   - Copy—Make a duplicate of the annotation with a new name.

   - Share—Share your annotation with all members of a group of users (refer to *Configure Data Sharing* on page 9-23 for information on how to share annotations).

   - Delete—Remove the annotation from the list.

     ⚠️ **CAUTION:** Deleted annotation files cannot be restored. There is no undo command.

4.4.1 Copy Annotations

Use this procedure to make a duplicate of an annotation with a new name.

1. Open the **Annotation Editor**.

   - In real-time tools: Select **System > Annotation Management**.

   - In **SystemAdmin**: Select the group and the Annotations page.

2. Right-click the annotation, and select **Copy**. The **Annotation copy** dialog box opens.

3. Enter the name of the annotation.

4. Click **OK**.

4.4.2 Share Annotations

Use this procedure to share your annotation with all members of a group of users (refer to *Configure Data Sharing* on page 9-23 for information on how to share annotations).

1. Open the **Annotation Editor**.

   - In real-time tools: Select **System > Annotation Management**.

   - In **SystemAdmin**: Select the group and the Annotations page.

2. Right-click the annotation, and select **Share**. The **Share with** dialog box opens.

3. Select a group so that a check mark ☑ shows.

4. Enter the annotation name.

5. Click **OK**.

4.4.3 Export an Annotation

When you export an annotation file, you can share it for another user to import.

1. Select **System > Annotation Management**.

2. Select the **User Annotations** tab.

3. Right-click an annotation in **My Annotations**.

4. Select **Export Annotation to File**. The Save dialog box opens.

5. Navigate to the location for the file.

6. Click **Save**. A copy of the annotation saves to **My Annotations**.

4.4.4 Import an Annotation

You can import shared annotations or annotations that have been saved as XML files and are available to you.

4.4.4.1 Import a Shared Annotation

You can import and make a copy of a shared annotation that goes into your **My Annotations** list. After the annotation is in **My Annotations**, you can edit it for your own needs.

1. Select **System > Annotation Management**.

2. Select the **Shared Annotations** tab.

3. Right-click a shared annotation that is available for import.

4. Select **Import**.

5. Optional—Change rule name, and edit elements.

6. Click **Save**. A copy of the annotation saves to **My Annotations**.

4.4.4.2 Import an Annotation from a File

You can import annotation files that others have exported in xml format.

1. Select **System > Annotation Management**.

2. Click **Import From File**. The Annotation copy dialog box opens.

3. Enter a name for the annotation as it should show in **My Annotations**.

4. Click **OK**. The annotation shows in **My Annotations**.

4.5 Rules Management

Rules Management operates at sites that use Aerobahn Dynamic Rules.

The Aerobahn Dynamic Rules Engine gives you the power to set up rules that can be triggered by virtually any set of conditions for which Aerobahn can collect data. For example, you can specify aircraft or flight properties specified in Flight Data Fields as the basis for rule criteria. You can also specify airport-related criteria such as congestion statistics, operation counts, and watch list statistics, as the basis for rule criteria.

NOTE: If you try to save a rule before you define all required fields for the new criteria, an error message shows.

When conditions set in rules are met, Aerobahn can change the appearance of aircraft and vehicle icons, table data, and map features, and/or send a pop-up notification or e-mail notifications, and/or make a sound (refer to).

CAUTION: Some actions may not be applied if the rule has airport criteria *only*. When you add flight-related actions to rule to a rule that has no flight-related criteria (an "airport rule") and click **Apply**, a system message shows. If you click "Yes," you accept the fact that your rule configuration contains actions that do not "fit" the airport criteria. If you click "No," the message closes, and you can edit the rule to remove the criteria that caused the system message to show.

Figure 4-10. Dynamic Rules Actions
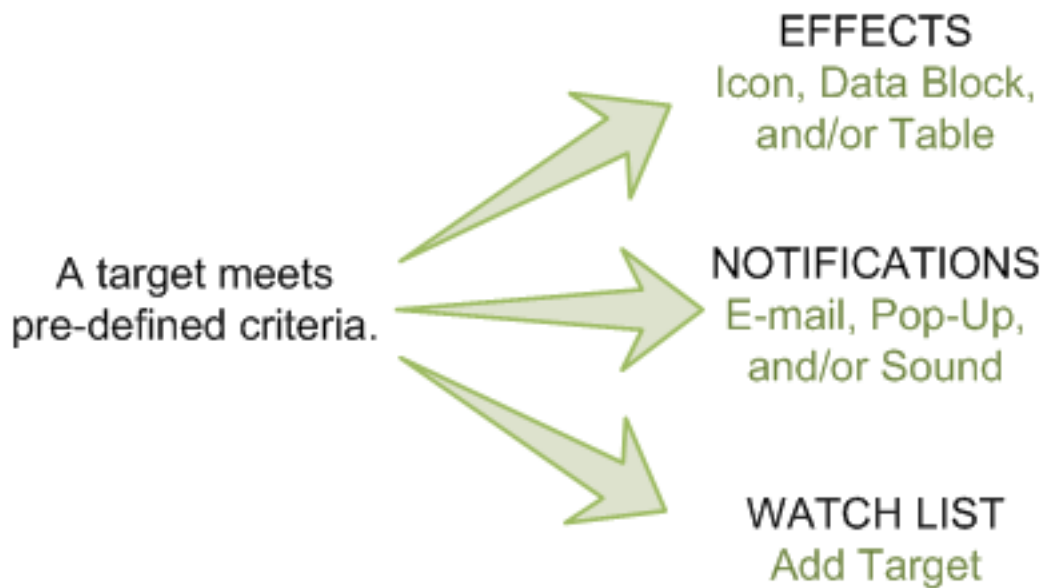
Rules Management is used for these functions:

- to make, change, and remove rules

- to change the priority of rules

- to share rules

- to set rules to on or off

- to import shared rules to your user account

ℹ️ **NOTE:** If **Rules Management** is open when changes are made in the
Group Rules Manager (a **SystemAdmin** function), click **Refresh** to
show the update.

Figure 4-11. Rules Management Tool Interface
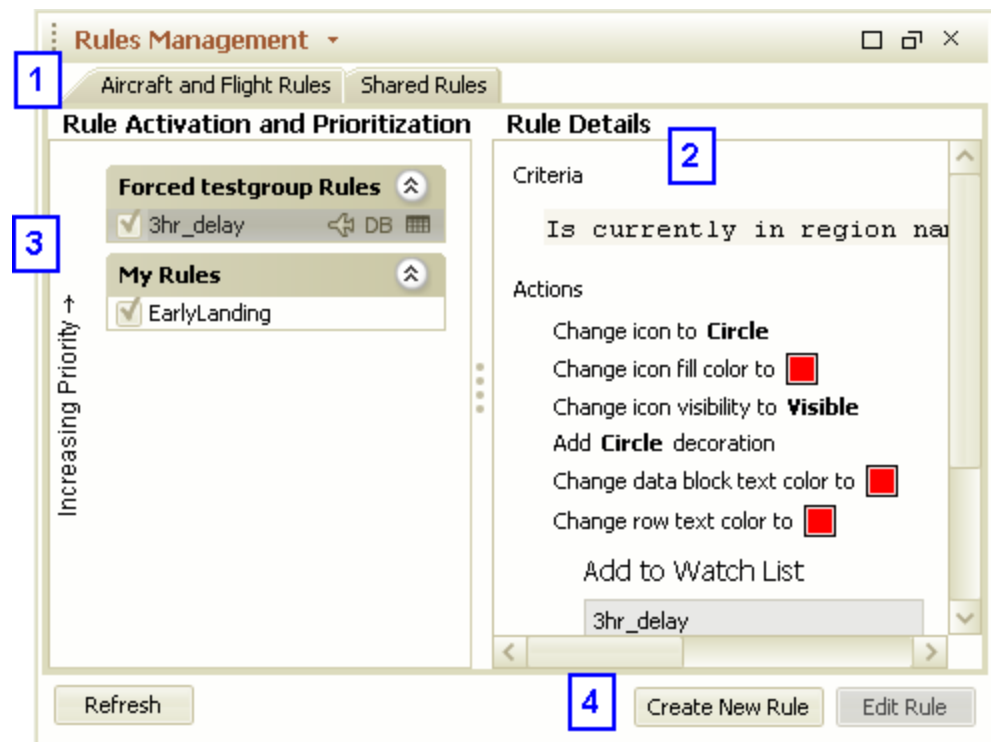
Ref. No.	Description
1	Tabbed Selectors. *Aircraft and Flight Rules* is active in this view.
2	Read-only *Rule Details* shows the rule criteria and actions for the selected rule ("3hr_delay").

Ref. No.	Description
3	Prioritized list of rules. Forced rules listed above *My Rules* are binding and active. Other group rules, when present, are listed below *My Rules* (refer to *Dynamic Rules: Rule Categories and Rule Priority on the facing page* for more information).
	Shared rules can be imported into *My Rules* (refer to *Shared Rules below*).
	Icons included in a rule show what actions have been set for that rule:
	Icon effects
	DB Data Block effects
	Table effects
	Notifications
	Watch List
	Status Lights
	If there is no icon, no effect has been set.
4	Controls that make new rules or that change rules.

Shared Rules

The *Shared Rules* tab lists two types of shared rules:

- rules written and shared by individual users in **Rules Management**
- rules written by system administrators and shared in the **SystemAdmin** application

Shared Rules shows rules only when rules are shared. For example, if a group has no shared rules, that group will not show in the list of those with rules that are available for import.

Individual rules in the Shared Rules tab are not active until they are imported.

Refer to *Import a Rule* on page 4-82 for more information.

Open Rules Management

Select **System > Rules Management**.

4.5.1 Dynamic Rules: Rule Categories and Rule Priority

Aerobahn has a configurable rule system with effects that you can see and/or hear.

You can make rules that use the properties of a flight or the airport as conditions. When the conditions that trigger a rule are met, Aerobahn responds based on the specified actions for that rule. Users and groups of users can save and share rules.

There are three categories of rules (listed from most to least dominant in the rule hierarchy):

- *Forced Group Rules on the next page*
- *My Rules on the next page*
- *Group Rules on page 4-55*

ℹ **NOTE:** The collection of group rules takes the name assigned to the group of users.

The effects of some rules override those of less important rules. As a group, forced group rules override the two other rule categories. The My Rules category overrides group rules. The rules in forced group rules and group rules categories are defined at a group level in **SystemAdmin**.

Priority within a rule category is based on the place that a rule has in the list of rules. When you create a rule, the rule name shows in My Rules in the order that it was created. The first rule created is—by default—at the top of the list and gets the highest priority. The last rule created is—by default—at the bottom of the list and gets the lowest priority.

Example: Rule Priority

In the Rule Activation and Prioritization pane, the highest priority rules are at the top. Priority decreases as you move down. As shown in *Rule Priority, My Rules on the next page*, any rule in My Rules higher priority than all System (group) Rules. In addition, Rule 1 has higher priority than Rule 2. Rule 2 has higher priority than Rule 3. And so on.

Figure 4-12. Rule Priority, My Rules
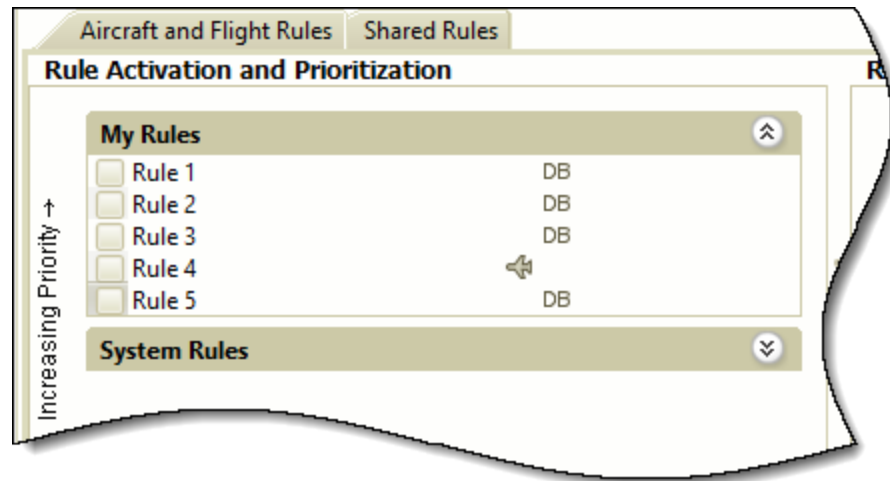
Rule priority affects the way that Text/Timer and Text/Countdown Timer shows outside (next to) a data block (refer to *Set Up Text and Timers for a Data Block on page 4-64*).

> ℹ **NOTE:** You cannot use the **Rules Management** tool to change the order of importance of "Forced Group Rules" or "Group Rules."

Forced Group Rules

Forced group rules are defined in **SystemAdmin** and apply to all members of a group. All users in the group are bound by a forced group rule. The status of a forced rule cannot be changed while it is in the forced rule state.

Users in other groups are not affected by a forced group rule.

If a forced rule and 1 or more rules compete to alert you that the conditions defined for a rule occurred, the actions defined by forced group rule apply.

A forced group rule is the strongest rule category.

My Rules

My Rules are specified, and can be disabled, in **Rules Management** (refer to *Rules Management on page 4-49*).

If a rule in My Rules competes with a rule in group rules, the actions defined by the rule listed in My Rules apply.

You can change the priority of rules in My Rules.

Group Rules

A System Administrator defines a group rule in **SystemAdmin**, from which the group rule is distributed to all members of the group. Although you cannot disable a *forced* group rule in **Rules Management**, you can disable a group rule (not forced) in **Rules Management**. Group rules are standard rules available for your use but not required.

The group rule category is the weakest rule category. Users in other groups are not affected by a group rule.

4.5.2 Set Rule Actions

Rule actions tell you when the conditions set up for a rule occur. The actions give you information or a signal.

Table 4-13. Rule Action Types

Action Type	Description
Aircraft/Vehicle	Visual features that change the appearance or content of target icon, data block, mouseover data block, or region occupied by the target. ℹ **NOTE**: Target Visibility settings set in **Preferences > Target > Settings** and rule settings can conflict. For example, a rule could hide a target that is set to show in the Target Visibility settings. When there is a show-hide conflict, the target is hidden.
Table	Visual features that change the appearance or content cells or rows in Watch List Viewer.
Notification	Pop-up messages, audible alerts, and email messages that occur when a rule is triggered.
Map	Annotations and color highlight that show when a rule is triggered.

Rule actions are set up in the Rules Management tool when you make a new rule or edit a rule. Refer to:

-
-

4.5.2.1 Set Up a Pop-up Alert

When you make a new rule or edit a rule, you can set up a pop-up alert.

1. Select **System > Rules Management**.

2. Make a new rule or edit an existing rule. You can set up a pop-up alert to show when the conditions for a rule are met. For instructions on how to set up a rule, refer to:

    - *Make a Rule* on page 4-75
    - *Edit a Rule* on page 4-78

3. Select **Notification Actions > Pop-up** tab.

4. Select **Generate local pop-up alert**.
   This allows you to enter text in the Message field and other values.

5. Enter a message. This becomes a title for the pop-up alert. (In the example shown, "2-hr Taxi" is the message.)

6. Select a time for **Fade away pop-up automatically**.

7. Select a location for the pop-up alert.

8. OPTIONAL: Click **Preview Alert** to verify the proper display of the configured alert.

9. Click **Finish**.

Figure 4-13. Pop-up Alert (Example)
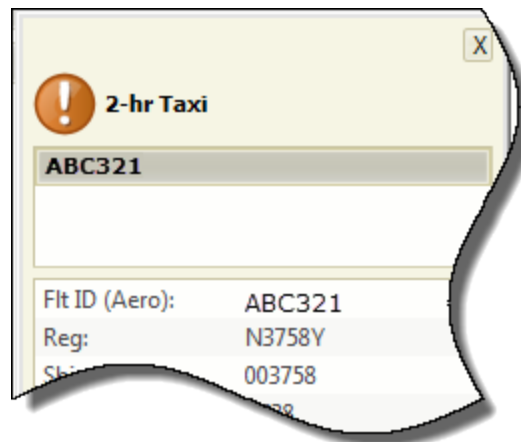
Alerts show while Aerobahn operates in the background. If more than one flight shows in the pop-up alert, click a flight ID to see information for that flight.

To close the message, click the **X** in the top right corner.

For more information on the Rule Details link, refer to *Show Rule Details* on page 4-87.

4.5.2.2 Set Up a Sound Alert

When the conditions set up for a rule occur, Aerobahn plays a sound (audible alert).

1. Select **System > Rules Management**.

2. Make a new rule or edit an existing rule. You can set up a sound alert to play when the conditions for a rule are met. For instructions on how to set up a rule, refer to:

   - *Make a Rule* on page 4-75
   - *Edit a Rule* on page 4-78

3. Select **Notification Actions > Sound** tab.

4. Select **Play sound on local speakers**, and select the sound from the menu.

5. Select the interval at which the sound plays.

6. OPTIONAL: Click **Preview Sound** to verify the proper play of the configured alert.

7. Click **Finish**.

4.5.2.3 Set up an Email Alert

Aerobahn Email alerts can give information about system conditions when a user is not logged in to Aerobahn. Set up alerts when you set up rule actions.

> ℹ **NOTE:** Aerobahn can send alerts of up to 160 characters through an SMS ("Short Message System") Gateway as text messages to your mobile device (refer to *Set Up a Text Message Alert* on the next page for information on SMS address formats for major wireless carriers).

The Email alert lets you put dynamic field code in the subject line and in the optional message. When Aerobahn sends the Email alert, it replaces the code with the value of that code.

1. Select **System > Rules Management**.

2. Make a new rule or edit an existing rule. You can set up an email alert when the conditions for a rule are met. For instructions on how to set up a rule, refer to:

   - *Make a Rule* on page 4-75
   - *Edit a Rule* on page 4-78

3. Select **Notification Actions > Email** tab.

4. Select the **Send Email** box. (A check mark shows in the box.)

5. Key in text that will not change. (This includes the email address or SMS address. Use a semicolon to separate addresses.)

6. Enter data fields, functions, and operators as necessary. (Do not key in "$$" unless you key in the data field instead of using the **Add/Edit Dynamic Field** dialog box.)

➡ When you add a double slash (//) to a rule, the rest of line becomes a comment and is ignored.

▪ To enter a data field in the subject line, click the point where you want to insert the data field.

   ℹ **NOTE**: In a rule notification email, the email subject line is limited to 1 line.

   a. Click **Add/Edit Field in Subject** to open the **Add/Edit Dynamic Field** dialog box.

   b. Select an item and click **Add Selected**, or double-click an item. The data field moves into the Formula section.

   c. Click **OK**.

▪ To enter a data field in the message area, click the point where you want to insert the data field.

   a. Click **Add/Edit Field in Message** to open the **Add/Edit Dynamic Field** dialog box.

   b. Select an item and click **Add Selected** or double-click an item. The data field moves into the Formula section.

   c. Click **OK**.

   d. Repeat as necessary to complete the message.

7. Click **Finish** when the Email action is set up. If this is a new rule, you must give the rule a name.

4.5.2.4 Set Up a Text Message Alert

Aerobahn can send messages of a maximum of 160 characters through an SMS Gateway as texts to a mobile device. These texts can give information about system conditions when a user is not logged in to Aerobahn.

This procedure is done in the Rules Management tool. For instructions on how to set up a rule, refer to:

- *Make a Rule* on page 4-75
- *Edit a Rule* on page 4-78

When you make a new rule or edit a rule, you can set up a text message alert. Use the procedure that you use to set up Email alert rule actions to set up text messages (refer to *Set up an Email Alert* on page 4-57).

Send a Text Message from Aerobahn

Enter the mobile telephone number (use the SMS Address Format) in the "To" line of the Email tab. To send the message to more than 1 telephone, use a semicolon to separate telephone numbers.

Table 4-14. SMS Gateways for Wireless Carriers

Carrier	SMS Address Format
AT&T	\<number>@txt.att.net
Sprint	\<number>@messaging.sprintpcs.com
T-Mobile	\<number>@tmomail.net
Verizon	\<number>@cvzvmg.biz

4.5.2.5 Set Up a Watch List Action

Aerobahn can connect a Watch List with a rule when you make or edit a rule. You usually make a new Watch List at the time that you make the rule that sends data to it.

When you make a new rule or edit a rule, you can set up a watch list action.

1. Select **System > Rules Management**.
2. Make a new rule or edit an existing rule. You can set up a watch list action to show when the conditions for a rule are met. For instructions on how to set up a rule, refer to:
   - *Make a Rule* on page 4-75
   - *Edit a Rule* on page 4-78
3. Select **Table Actions > Watch List** tab.
4. Select **Add flight to selected watch list(s)**.
5. Select a watch list to associate with the rule.

   If there is no watch list to connect to the rule, make the watch list.

          a.   Open **Watch List Manager**.

          b.   Create a new watch list.

          c.   Select the new watch list from the **Define Actions** dialog box.

6.   Click **Finish**.

4.5.2.6 Set Up Icon Effects

Aerobahn can change the shape, color, and other attributes of target icons when the conditions for a rule occur.

When you make a new rule or edit a rule, you can set up icon effects.

1.   Select **System > Rules Management**.

2.   Make a new rule or edit an existing rule. For instructions on how to set up a rule, refer to:

    ■   *Make a Rule* on page 4-75

    ■   *Edit a Rule* on page 4-78

3.   Select **Aircraft/Vehicle Actions > Icon Effects** tab.

4.   Select the features to show, and set configuration for each.

Decorations

Decoration sizes change proportionately with the change in icon size. Select Medium or Small decorations to get a smaller decoration:

■   Medium decoration — 75% as large as the corresponding Large decoration.

■   Small decoration — 50% as large as the corresponding Large decoration.

One of the special decorations is directional pushback arrows. Directional pushback arrows are decorations that show 8 compass directions (North, Northeast, East, Southeast, South, Southwest, West, Northwest) that can be chosen for use with rules that affect flights that are in gates. Directional arrows reorient as the map is rotated.

Figure 4-14. Directional Pushback Arrows
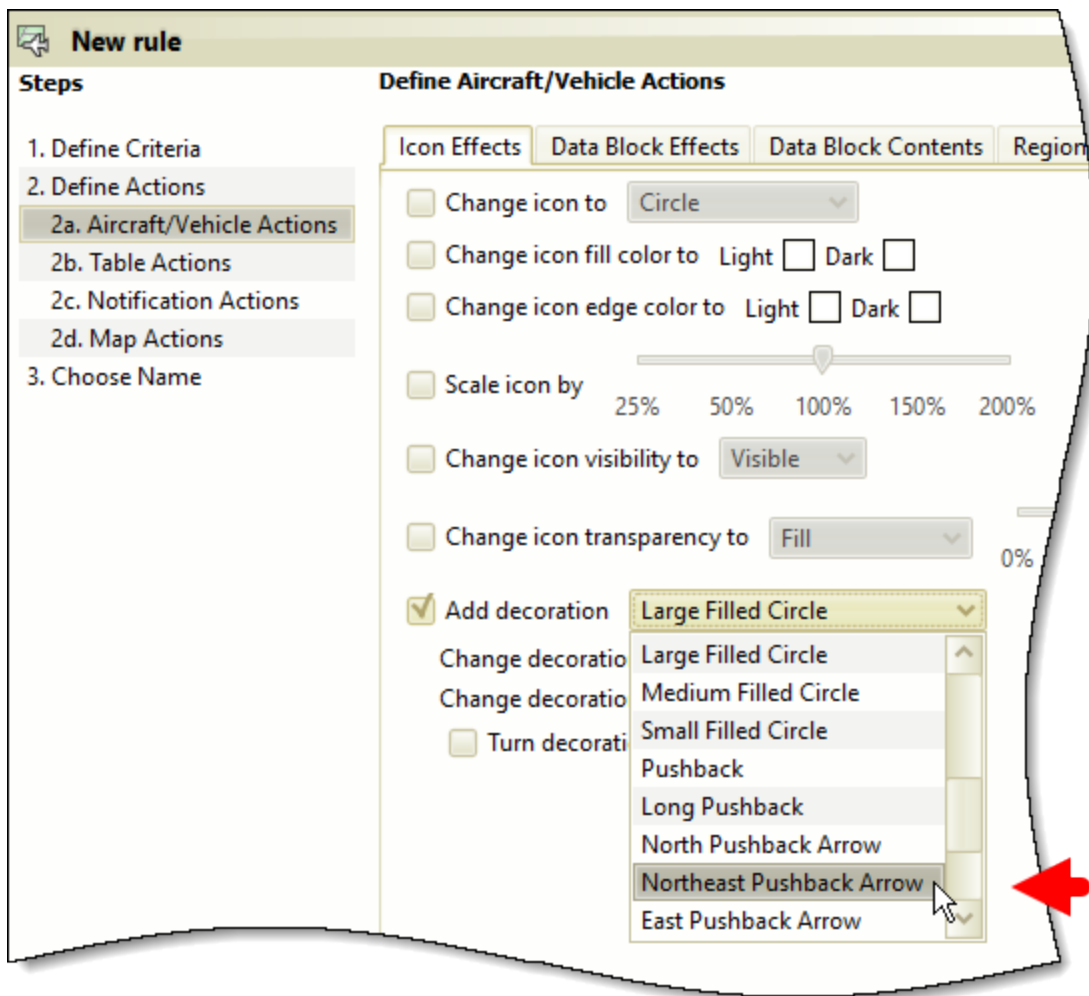
4.5.2.7 Set Up Data Block Effects

Data block effects can alert you to the presence of a flight that meets the requirements of a rule.

ℹ️ **NOTE:** Data block effects can show in Map Display and in Operations Timeline. If a specific effect is limited to one specific tool (e.g., Map Display), that tool is identified.

Figure 4-15. Indication of a Tool-Specific Data Block Effect (Border example)
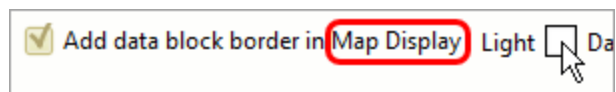
1. Select **System > Rules Management**.

2. Make a new rule or edit an existing rule. For instructions on how to set up a rule, refer to:

    - *Make a Rule* on page 4-75
    - *Edit a Rule* on page 4-78

3. Select **Aircraft/Vehicle Actions > Data Block Effects** tab.

4. Select the check box for the data block effect(s) to show.

5. Configure the selected effects.

    Most data block effects are switches or sliders. Two types of actions require additional steps:

    - Actions that change colors or add borders (refer to *Actions that change colors or add borders* below).
    - Actions that highlight data block fields in Map Display (refer to *Actions that highlight data block fields in Map Display* below).

6. Click **Finish**.

Actions that change colors or add borders

1. Click in the Light or Dark boxes to open the color selector. (Light and Dark refer to the workspace background.) For instructions on how to set colors, refer to *Color Models* on page 6-14.

2. Select a color.

3. Click **OK**.

Actions that highlight data block fields in Map Display

Before a rule can highlight data block fields, the fields must be in the data block. This procedure shows how to add the fields to the data block and how to configure those fields so that a rule can highlight them.

1. Add the fields that are necessary in the data block.

    a. Select **Aircraft/Vehicle Actions > Data Block Fields** tab.

    b. Select ☑ **Change data block fields to the following in Map Display**.

    c. Select the necessary data fields. (For more information, refer to *How to Select and Move Data Fields* on page 4-64.)

2. Select **Aircraft/Vehicle Actions > Data Block Effects** tab.

3. Select ☑ **Highlight data block field(s) in Map Display**.

4. Click **Choose Fields**. The Choose Fields dialog box opens.
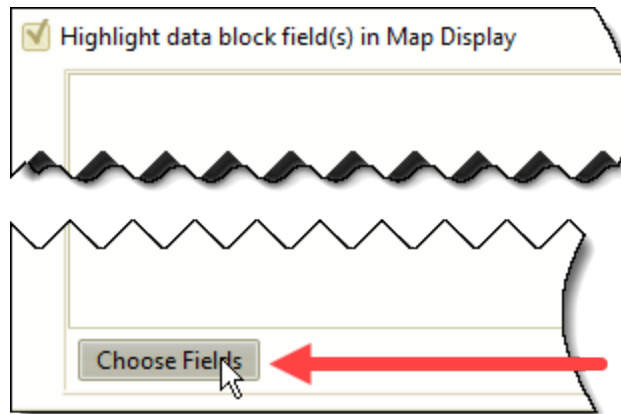
5. Select the data fields to show in the data block.

6. Select the check box for the effect(s) that should show for the selected data block fields.

7. Configure the selected effects.

How to Select and Move Data Fields

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕.

- To remove one item from **Selected Fields**, select the item. Click ⊕ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⊕ .

- To remove all items from **Selected Fields**, click ⊕. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⊕ or ⊕ until it is in the correct location. To move an item to the top of the list, click ⊕ . To move an item to the bottom of the list, click ⊕.

4.5.2.8 Set Up Text and Timers for a Data Block

Data block text and timers can provide specific information about a flight that meets the requirements of a rule.

ℹ️ **NOTE:** Combined data block *text and timer effects* show in Map Display only.

ℹ️ **NOTE:** You can add the text and timer in Map Display inside data block or "Next to" (outside) the data block. If you select **Next to data block...**, you must select the position of the text and timer when you format the text.

---

1. Select **System > Rules Management**.

2. Make a new rule or edit an existing rule.
   When you make a new rule or edit a rule, you can set up text, and text combined with timers or countdown timers, to show in or next to a data block when the conditions for a rule are met. For instructions on how to set up a rule, refer to:

- *Make a Rule* on page 4-75
- *Edit a Rule* on page 4-78

3. Select **Aircraft/Vehicle Actions > Data Block Text** tab.

4. Configure the effects.

🔹 **NOTE**: Information added by a rule is added to information data that is already inside the data block. It does not replace that information. It is possible for the added information to duplicate the information already in the data block.

- Add *text* (only) to show an event (refer to *Add Text (only)* below).
- Add *text and timer* (combined) to show a duration (refer to *Add Text and Timer Information* below).
- Add *text and countdown timer* (combined) to show the time remaining to an event (refer to *Add Text and Countdown Timer Information* on the next page).

5. Click **Finish**.

Add Text (only)

Use these instructions to add *text* (only) to show an event in a data block.

1. Select ☑ **Add text to data block**.

2. Enter the necessary text to show in the data block.

3. Click **Format**.
   The **Display Options** dialog box opens.

4. Set format options.

5. Click **OK**.
   Display Options closes.

Add Text and Timer Information

Use these instructions to add *text and timer* (combined) to show a duration. These instructions tell how to show information inside the data block and outside the data block.

Show the information *inside* the data block:

1. Select ☑ **Add text and timer to data block in Map Display**.

2. OPTIONAL: Enter a text label to show inside the data block.

3. Click **Format**.
   The **Display Options** dialog box opens.

4. Set format options.

5. Click **OK**.
   The **Display Options** dialog box closes.

Show the information *outside* (next to) the data block:

1. Select ☑ **Next to data block in Map Display add**.

2. Select the **Text and timer** radio button.

3. OPTIONAL: Enter a text to show next to the data block.

4. Click **Format**.
   The **Display Options** dialog box opens.

ℹ **NOTE**: If two rules both "claim" the same location, the higher priority rule shows. If, however, the High Priority Rule does not use certain formatting (e.g., pulse control), and the rule with lower priority has set that format, the format defined in the Low Priority Rule shows in the High Priority Rule. If both rules define a format, **Map Display** shows the settings in the High Priority Rule.

---

5. Set format options.

6. Click **OK**.
   The **Display Options** dialog box closes.

Add Text and Countdown Timer Information

Use these instructions to add *text and countdown timer* (combined) to show a duration inside the data block and outside the data block.

Show the information *inside* the data block:

1. Select ☑ **Add text and countdown timer to data block in Map Display**.

2. OPTIONAL: Enter a text label to show inside the data block.

3. In the dropdown menu next to **Countdown to**, select the event that the countdown timer uses.

4. Click **Format**.
   The **Display Options** dialog box opens.

5. Set format options.

6. Click **OK**.
   The **Display Options** dialog box closes.

Show the information *outside* (next to) the data block:

1. Select ☑ **Next to data block in Map Display**.

2. Select the **Text and countdown timer** radio button.

3. OPTIONAL: Enter a text label to show inside the data block.

4. In the dropdown menu next to **Countdown to**, select the event that the countdown timer uses.

5. Click **Format**.
   The **Display Options** dialog box opens.

   ℹ NOTE: If two rules both "claim" the same location, the higher priority rule shows. If, however, the High Priority Rule does not use certain formatting (e.g., pulse control), and the rule with lower priority has set that format, the format defined in the Low Priority Rule shows in the High Priority Rule. If both rules define a format, Map Display shows the settings in the High Priority Rule.
   ---

6. Set format options.

7. Click **OK**.
   The **Display Options** dialog box closes.

4.5.2.9 Set Up Mouseover Effects

ℹ NOTE: For basic information about mouseover, refer to *Mouseover* on page 7-230.

When the conditions of a rule are met, the contents of a mouseover can change in Map Display, Operations Timeline, and the De-icing Manager (Usage Chart). (Some content shows only in Map Display.)

1. Select **System > Rules Management**.

2. Make a new rule or edit an existing rule.

   When you make a new rule or edit a rule, you can set up text, and text combined with timers or countdown timers, to show in or next to a data block when the conditions for a rule are met. For instructions on how to set up a rule, refer to:

   - *Make a Rule* on page 4-75
   - *Edit a Rule* on page 4-78

3. Select **Aircraft/Vehicle Actions > Mouseover Contents** tab.

4. Select ☑ the check box for the content to show.

   - **Add text to Mouseover** (Shows in Map Display, Operations Timeline, and the De-icing Manager)
     Enter the necessary text.

   - **Add text and timer to Mouseover in Map Display** (Shows in Map Display only).
     Enter the necessary text. The timer shows by default.

   - **Change Mouseover fields to the following in Map Display** (Shows in Map Display only). The "Select fields" dialog box opens.

     a. Select the necessary data fields. (For more information, refer to *How to Select and Move Data Fields* on the facing page.)

     b. Optional—Add line breaks.

        i. Click **Line Break**.

        ii. Position the line break.

5. Configure **Scale Mouseover text by** to resize data blocks during a mouseover event.

   a. Select ☑ the check box.

   b. Move the slider.

      ℹ **NOTE:** The slider value functions as a multiplier for the value set in **Mouseover Data Block Scale** in **Map Display** (refer to *Configure Mouseover in Map Display on page 7-215*).

6. Click **Finish**.

How to Select and Move Data Fields

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕.

- To remove one item from **Selected Fields**, select the item. Click ⊖ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊖. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⊕.

- To remove all items from **Selected Fields**, click ⊖. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⊕ or ⊕ until it is in the correct location. To move an item to the top of the list, click ⊕. To move an item to the bottom of the list, click ⊕.

How to Use Line Breaks in Data Blocks

Use line breaks to group the information in data blocks so that it is easier to read and understand. Insert line breaks when you select and organize data block fields (refer to *Use Line Break in Data Blocks* on page 10-22).

Refer to *Use Line Break in Data Blocks* on page 10-22.

4.5.2.10 Set Up Table Row and Cell Effects

Aerobahn can change these format properties when the conditions for a rule occur:

- the color of table text
- the background behind table text in a row or a cell
- the bold character of text in cell

When you make a new rule or edit a rule, you can set up table effects. You can set up table row effects and table cell effects. If you want the effect to apply to only certain table cell(s)—rather than an entire table row—refer to *Define Actions for Table Cell Effects* on page 4-72.

ℹ **NOTE:** Table row effects and table cell effects are visual effects. If both a table row effect and a table cell effect are active in a single row, the table cell effect shows. Make sure that table cell effect contrasts with table row effect so that you can see the difference. One way to do this is to make sure that the row background color is different from the cell background color when you define actions.

Define Actions for Table Row Effects

Aerobahn can change these features in a table row when the conditions for a rule occur:

- row text color
- row background color
- font bold on/off
- row flashing

1. Select **System > Rules Management**
2. Make a new rule or edit an existing rule.

   When you make a new rule or edit a rule, you can set up table effects to show when the conditions for a rule are met. For instructions on how to set up a rule, refer to:

   - *Make a Rule* on page 4-75
   - *Edit a Rule* on page 4-78

3. Select **Table Actions > Table Row Effects** tab.

4. Select the feature to change. (A ☑ shows when the feature is selected.)

- Color Effects

    a. Select the table cell property to change.

    b. Select the tile for the Light or Dark workspace. The color selector opens.

    c. Select a color for that feature.

    d. Click **OK** to set the color and close the color selector.

- Font bolding

    Select **On** or **Off** to change the state of this feature.

- Flashing Background

    Select **On** or **Off** to change the state of this feature.

5. Select the tile for the Light or Dark workspace. The color selector opens.

6. Select a color for that feature.

7. Click **OK** to set the color and close the color selector.

8. Complete this rule:

- Click **Next** when finished with Define Actions task to enter a rule name.

- Click **Finish** if the rule already has a name and you are done making changes.

Figure 4-16. Table Effects Color Tools
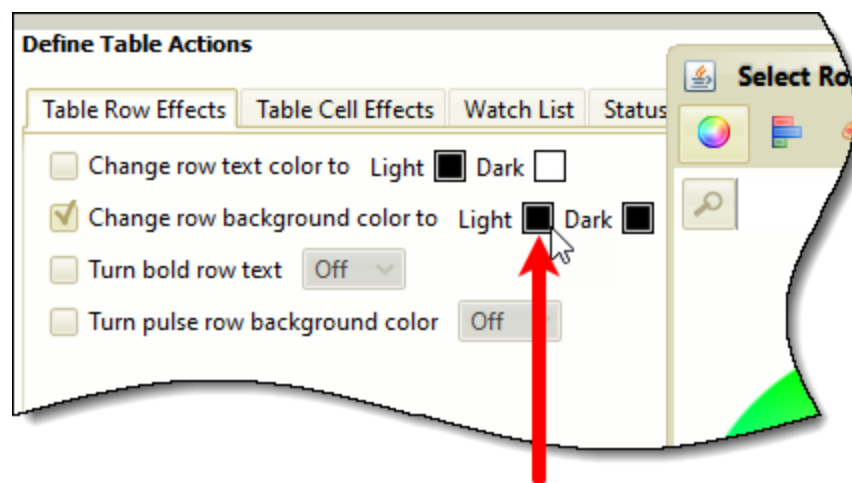
Define Actions for Table Cell Effects

Aerobahn can change these features in a table cell when the conditions for a rule occur:

- cell text color
- cell background color
- font bold on/off
- cell flashing

ℹ NOTE: When you select **Define Actions > Table Actions > Table Cell Effects** for the first time in a rule, the tab window is blank.

---

1. Select **System > Rules Management**.

2. Make a new rule or edit an existing rule.

   When you make a new rule or edit a rule, you can set up table effects to show when the conditions for a rule are met. For instructions on how to set up a rule, refer to:

   - *Make a Rule* on page 4-75
   - *Edit a Rule* on page 4-78

3. Select **Table Actions > Table Cell Effects** tab.

4. Click **Choose Fields**.
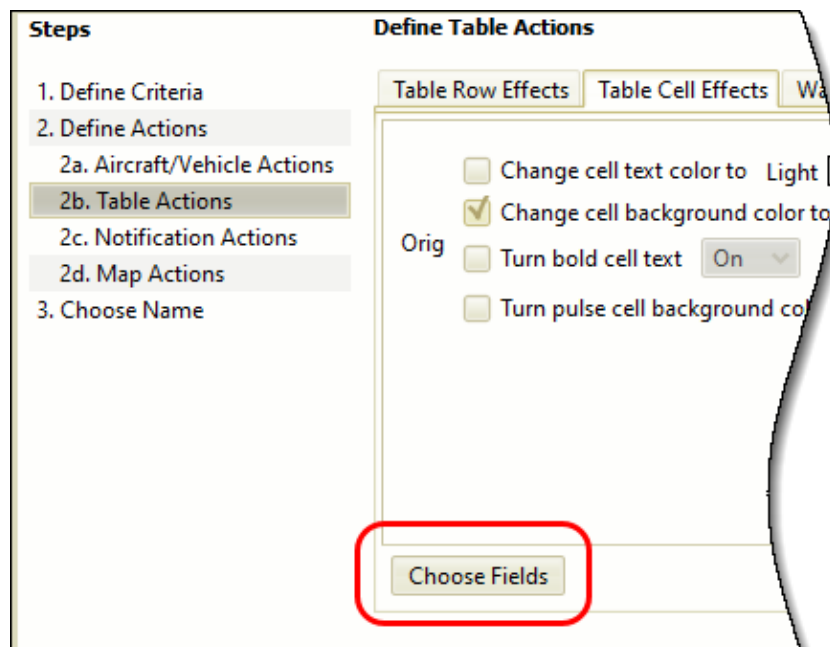
5. Set up the **Selected Fields** window to include the information that you wish to show:

    a. Filter choices in **Available Fields**.

        i. Click the Filter chooser and select a filter category. The list of available fields shows only those fields in the selected category.

        ii. Click the Filter chooser and select a second filter category to adjust the selection. Only those fields that fit the two categories show.

        iii. To decrease the items in **Available Fields**, enter key terms in the search box. This decreases the items in the **Available Fields** list to those data fields that contain the search text.

    b. Select the fields to show. (For more information, refer to *How to Select and Move Data Fields and Line Break* on the next page.)

    c. Optional—Add field labels.

    d. Click **OK**. The **Choose Fields** window closes. The field(s) with properties that can be controlled by the rule status show in the Table Cell Effects tab.

6. Select the features to change for each field. (A ☑ shows when a feature is selected.)

    ■ Color Effects

        a. Select the table cell property to change.

        b. Select the tile for the Light or Dark workspace. The color selector opens.

        c. Select a color for that feature.

        d. Click **OK** to set the color and close the color selector.

    ■ Font bolding

        Select **On** or **Off** to change the state of this feature.

    ■ Flashing Background

        Select **On** or **Off** to change the state of this feature.

7. Complete this rule:

    ■ Click **Next** when finished with Define Actions task to enter a rule name.

    ■ Click **Finish** if the rule already has a name and you are done making changes.

How to Select and Move Data Fields and Line Break

- To add 1 item to **Selected Fields**, select the item in the **Available Fields** window. Click ➡ or double-click. The item moves to **Selected Fields**.

- To add more than 1 item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➡.

- To remove 1 item from **Selected Fields**, select the item. Click ⬅ or double-click. The item moves to **Available Fields**.

- To remove more than 1 item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⬆.

- To remove all items from **Selected Fields**, click ⬇. The items move to **Available Fields**.

- To add a line break to **Selected Fields**, click the **Line Break** button below the **Selected Fields** window.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

4.5.2.11 Set Up Status Lights

When you make a new rule or edit a rule, you can set up status lights.

ℹ **NOTE:** After status lights are set up in a rule, it is necessary to set up the tools in which the status lights show. For information on how to show status lights in tools, refer to *Show Status Lights* on page 7-319.

1. Select **System > Rules Management**.

2. Make a new rule or edit an existing rule.

   When you make a new rule or edit a rule, you can set up status lights to show when the conditions for a rule are met. For instructions on how to set up a rule, refer to:

   - *Make a Rule* on the facing page
   - *Edit a Rule* on page 4-78

3. Select **Table Actions > Status Lights** tab.

4. Click **Add** to enter a new label for a status, or select a label from the menu.

5. Select a color for the status dot.

6. Select the label for the tool tip.

7. Click **Finish**.

4.5.3 Make a Rule

➡ The first term in a rule might lead to a text box that you do not know how to complete or that does not make a good rule. If this occurs, check the glossary in this User Guide to see if that term is defined as "Carrier Proprietary." "Carrier Proprietary" means that an air carrier has defined conditions for that data field. If the word is "Carrier Proprietary," try to start the rule with a similar term. That usually lets you complete the rule.

The Aerobahn Dynamic Rules Engine gives you the power to set up rules that can be triggered by virtually any set of conditions for which Aerobahn can collect data. For example, you can specify aircraft or flight properties specified in Flight Data Fields as the basis for rule criteria. You can also specify airport-related criteria such as congestion statistics, operation counts, and watch list statistics, as the basis for rule criteria.

⚠ **CAUTION:** Some actions may not be applied if the rule has airport criteria *only*. When you add flight-related actions to rule to a rule that has no flight-related criteria (an "airport rule") and click **Apply**, a system message shows. If you click "Yes," you accept the fact that your rule configuration contains actions that do not "fit" the airport criteria. If you click "No," the message closes, and you can edit the rule to remove the criteria that caused the system message to show.

If a rule uses only airport criteria, specify airport-related statistics (refer to [Figure 4-17 on the next page](#)). Then, you configure the action.

Figure 4-17. Airport Criteria Specification
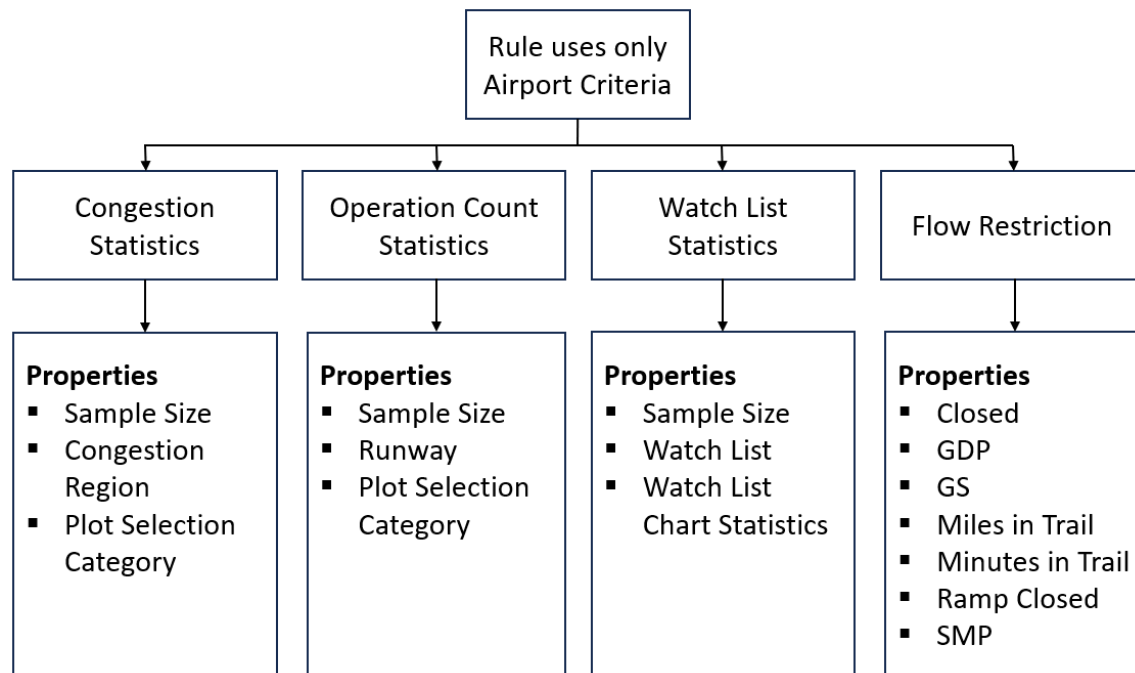
📶 **NOTE:** If two highlight actions occur at the same time on the same location—one that highlights a region (e.g., gates) of a static class and another that highlights a region that is a location for data in a data field—the data field highlight shows.

Create an Individual Rule ("My Rules")

➡ An alternative to building a new flight rule is to copy a flight rule and then change the copy (refer to).

➡ Name a new rule before you click **Finish**.

1. Select **System > Rules Management**.
2. Select the Aircraft and Flight Rules tab.
3. Click **Create New Rule**.
4. Click **Define Criteria**.
   - Click Add Airport Criteria to add airport-specific criteria.
   - Click Add Flight Criteria to add flight-related criteria.

5. Follow prompts—work from left to right—to set up rule criteria. Options on the right change based on selections made.

When you select a region type and "**one of the following**" (regions), the Rules Manager wizard gives an expandable tree diagram that lets you select all regions (All Values) or select more than one—but not all—regions of a type. You can also select regions from more than one type. Several field types let you select more than one value.

ℹ️ **NOTE**: "Will Enter" and "Will Not Enter" criteria depend on the predicted route (refer to *Predictive Technology* on page 10-16).

---

6. When complete, click **OK**. The *Define Criteria* area shows the completed rule statement.

7. Click **Define Actions**. It is not necessary to set up all types of actions for each rule. The requirements vary (refer to instructions for the type of action).

8. Click **Choose Name**, and enter a meaningful name in the Rule Name field.

9. Click **Finish**.

Create a Group Rule

The Group Rules Manager is in **SystemAdmin**. Look for group ("System") rules under the user group that uses them. Forced group rules are labeled "Forced System Rules."

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. Select **User Administration > settings and permissions**.
3. Select, from the *Users and Groups* list, the group to which the rule(s) will be applied.
4. Select the **Rules** tab.
5. Click **New Rule**.
6. Set up the rule criteria.
7. Click **Define Actions**, and select the tabs to set visual effects, to set up notifications, and to use the rule to populate a Watch List.
8. Click **Choose Name**, and enter a meaningful name in the Rule Name field.
9. Click **Finish**. The new rule is added to the group rules.

4 System Menu

Create a Forced Rule

You create a forced rule from System Rules in the Group Rules Manager. The Group Rules Manager is in **SystemAdmin**. Look for group ("System") rules under the user group that uses them. Forced group rules are labeled "Forced System Rules."

Forced Rules are created by moving *System Rules* into the *Forced System Rules* list.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. Select **User Administration > settings and permissions**.
3. Select, from the *Users and Groups* list, the group to which the rule(s) will be applied.
4. Select the **Rules** tab.
5. Select a rule in the (lower) *System Rules* list.
6. Drag it into the *Forced System Rules* list.
7. Release the mouse button to drop the rule in the *Forced System Rules* list.

4.5.3.1 Share a Rule

When you share a rule with a group, members of that group can import the rule to their "My Rules" list (refer to *Import a Rule* on page 4-82).

Refer to *Rules Permissions* on page 9-9 for sharing requirements.

1. Select **System > Rules Management**.
2. Select the **Aircraft and Flight Rules** tab.
3. Right-click the rule to be shared.
4. Select **Share** from the menu. (If your user account is not configured for data-sharing with any user groups, "Share" is inactive. As noted above, the assignment of user groups is required.)
5. Select the group(s) with which the rule will be shared.
6. Click **OK**.

4.5.4 Edit a Rule

You can change the criteria, actions, or name for a rule. You can also copy a rule and change it to make a new rule (refer to *Copy a Rule* on page 4-85).

⚠️ **CAUTION:** When you add flight-related actions to rule to an "airport rule" (which has no flight-related criteria) and click **Apply**, a system message tells you that the results can be different than what you expect. You can click "Yes" to accept that your rule configuration is not standard. You can also edit the rule to remove the criteria that caused the system message to show.

1. Open the rule editor:

   ▪ In real-time tools:

      a. Select **System > Rules Management**.

      b. Select the **Aircraft and Flight Rules** tab.

      c. Select the rule.

      d. Click **Edit Rule**. The **Rules Editor** opens.

   ▪ In **SystemAdmin**:

      a. Select **User Administration > settings and permissions**.

      b. Select, from the *Users and Groups* list, the group to which the rule(s) will be applied.

      c. Select the **Rules** tab. The Rules Editor opens.

2. Change the rule:

- Criteria

    a. Add or change criteria:

        - Click **Add Airport Criteria**.

        - Click **Add Flight Criteria**.

        - Select the statement in the "Define Criteria" window. Click **Modify**.

        - Select the statement in the "Define Criteria" window. Click **Remove**. The selected criterion is deleted.

    b. Click **OK** to close the **Define New Criteria** dialog box.

    c. Repeat as necessary.

    d. Click **Finish**.

- Actions

    a. Select the statement of the criteria.

    b. Select the type of action to add or edit. This opens tabbed collections of controls for actions that indicate that the criteria have been met.

    c. Change settings in the tabbed section.

    d. Select fields.

    e. Load a data block template:

        i. In the Data Block Templates section, click **Load**.

        ii. Select the template for this rule from User Templates or from Available Templates.

        iii. Click **Load**.

    f. If a new name is necessary, click **Next** (to change **Rule Name**). To use the same rule name, click **Finish**.

- Rule Name

    a. Click **Choose Name**.

    b. Enter the new name in the Rule Name field.

    c. Click **Finish**.

4.5.5 Change Rule Priority

The position of a rule in the *Rule Activation and Prioritization* list is important. For example, the visual properties of higher priority rules override the visual properties of subordinate rules. You can enable, disable, and change the priority order of rules.

For more information, refer to these topics:

4.5.5.1 Change Priority of Group Rules

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select the **Rules** tab.

4. Drag a rule in "Forced System Rules" to promote or demote into a new location.

5. Release the mouse button to move the selected rule.

4.5.5.2 Change Rule Priority in My Rules

Priority within a rule category is based on the place that a rule has in the list of rules. When you create a rule, the rule name shows in My Rules in the order that it was created. The first rule created is—by default—at the top of the list and gets the highest priority. The last rule created is—by default—at the bottom of the list and gets the lowest priority.

ℹ️ **NOTE:** Rule priority affects the way that Text/Timer and Text/Countdown Timer shows outside (next to) a data block (refer to *Set Up Text and Timers for a Data Block* on page 4-64).

You can change the default order (and priority) of rules. This is a drag-drop procedure in My Rules.

1. Select **System > Rules Management**.

2. Select the **Aircraft and Flight Rules** tab.

3. Select the rule name that will change position in the list. The rule shows as selected.

4. Move the pointer:

- Move up the list to give the rule more priority. A dark line shows above the shaded rule.

- Move down the list to give the rule less priority. A dark line shows below the shaded rule.
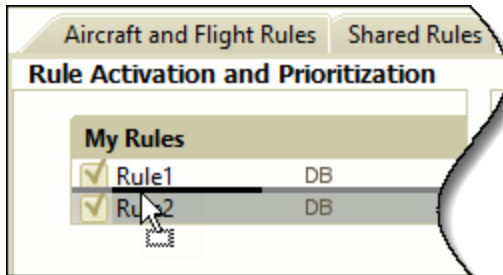
5. Release the button on the pointing device when the dark line is in position.
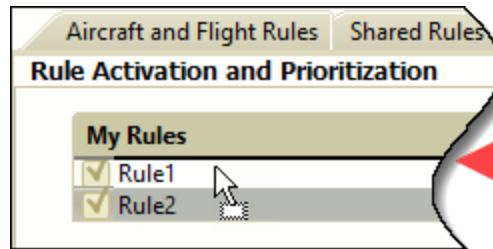
The rule drops into the new position and has new priority.
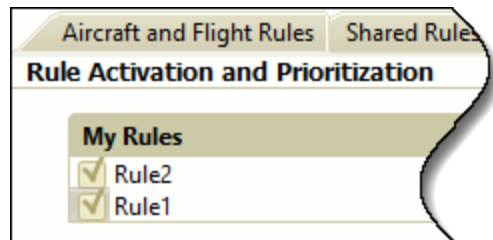
4.5.6 Import a Rule

You can import a *shared* rule in the **Rules Management** tool (**System > Rules Management**, "My Rules") and a rule from a file in **SystemAdmin** (Group Rules Manager) or in the **Rules Management** tool (**System > Rules Management**.

Individual rules in the Shared Rules tab are not active until they are imported.

ℹ️ **NOTE:** If you use two or more Aerobahn systems, you can export a rule from one system to a file. Then, you can import the exported file into the second system. You can also import that file at a group level in **SystemAdmin** to share it with a group. If you use only one Aerobahn system, there is not much need to import or export rules.

➲ You do not need to import a Group Rule to use it. Click the box in the Aircraft and Flight Rules tab (refer to *Disable or Enable a Rule* on the next page). If you will change a Group Rule, right-click the rule, select **Import**, change the rule, and save the rule in My Rules.

Import a shared rule in Rules Management

1. Select **System > Rules Management**.
2. Select the Shared Rules tab.
3. Select a rule for import (two methods):
   - Select a rule in the *Shared Rules Available for Import* field, and click **Import Rule**. The Rule wizard opens.
   - Right-click a rule in the *Shared Rules Available for Import* field, and select **Import**. The Rule wizard opens.
4. Make necessary changes.
5. Click **Finish** to complete the import.

ℹ️ **NOTE:** Only the copy in your "My Rules" list is changed. The original shared rule is unchanged.

ℹ️ **NOTE:** If you import a rule that includes an action that adds a target to a watch list to which you do not have access, that part of the rule is removed from the rule.

Import a rule from a file

1. Click **Import Rule from File...**
2. Select the file (from the location where you saved the exported rule file).
3. Click **OK**. The rule shows in your "My Rules" list.

Refer to *Export a Rule* on the next page for information on how to export a rule.

4.5.7 Export a Rule

> **ⓘ NOTE:** If you use two or more Aerobahn systems, you can export a rule from one system to a file. Then, you can import the exported file into the second system. You can also import that file at a group level in **SystemAdmin** to share it with a group. If you use only one Aerobahn system, there is not much need to import or export rules.

You can do this procedure in the Rules Management tool (**System > Rules Management**, "My Rules") and in **SystemAdmin** (Group Rules Manager).

1. Right-click a rule in the *Aircraft and Flight Rules* pane, and select **Export Rule to File**. The **Save** dialog box opens.
2. Select a location for the file.
3. Name the file.
4. Click **Save** to complete the export.

Refer to *Import a Rule* on page 4-82 for instructions on how to import this file.

4.5.8 Disable or Enable a Rule

You can enable and disable non-forced system rules and the rules in My Rules. You cannot disable a Forced System Rule through **Rules Management**.

- Remove the check from a rule to disable it. A rule is disabled when no check mark shows in the check box (refer to Figure 4-18 on the facing page).
- Select the check box before the name of the rule (put a check mark in the box) to enable that rule.

Figure 4-18. Disabling a Rule

4.5.8.1 Disable a Forced Group Rule

Although you cannot disable a forced group rule directly, if you have permission to manage group rules, you can move the forced rule into the group rule window and disable it there.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select the **Rules** tab.

4. Drag the forced group rule into the group rule window. The rule is no longer forced.

   - Remove the check from the rule to remove it from the list of available rules. If you will remove this rule from others who have previously selected it, click **Yes** to propagate your change to others in your group and those users in subgroups.

   - Leave the check in the box to keep this rule active for others in your group and those users in subgroups.

4.5.9 Copy a Rule

If you copy a rule, save it with a unique name, and make changes in that copy, you can make variations of a rule (refer to *Edit a Rule* on page 4-78 for instructions on how to change a rule).

1. Select **System > Rules Management**.

2. Select the **Aircraft and Flight Rules** tab.

3. Right-click the rule to be changed.

4. Select **Copy**.

5. Enter a name for the rule.

6. Click **OK**.

4.5.10 Delete a Rule

⚠️ **CAUTION:** If you delete a rule, you must recreate it. You can disable a rule without deleting it (refer to *Disable or Enable a Rule* on page 4-84).

1. Open the list of rules:

    ■ In real-time tools:

        a. Select **System > Rules Management**.

        b. Select the **Aircraft and Flight Rules** tab. (You can delete rules in "My Rules" list.)

    ■ In SystemAdmin: **Select User Administration > settings and permissions**.

        a. Select, from the Users and Groups list, the group to which the rule(s) will be applied.

        b. Select the Rules tab.

2. Right-click the rule to be deleted.

3. Select **Delete**. The rule is deleted.

4.5.11 Hide / Show Rule Actions

You can suppress—on your workstation—the visual action or sound that results when flight-related rule criteria are met. "Hide Rule Actions" is available only when a rule is in operation for the selected target.

Your "Hide Rule Actions" override is canceled after two conditions change:

■ The target no longer fills the requirements for that rule.

■ The target again fills the requirements for the rule. When this happens, the target shows the visual effects set in the "actions" tab.

Hide Rule Actions

1. Right-click a target or the row in a table that represents a target or a flight. A menu opens.

2. Select **Hide Rule Actions**. The menu shows *active rules*.

3. Select (☑) the rules that have actions you will suppress.

4. Click **OK** to suppress action or sound for those rules in step 3.

Figure 4-19. Hide Rule Actions Process
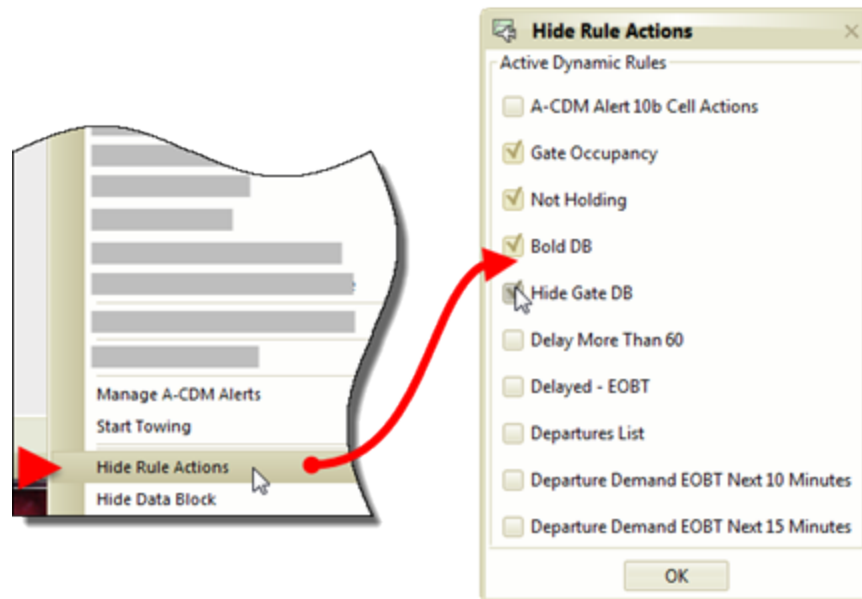
Show Rule Actions

If a visual action or sound was suppressed on your workstation, this procedure restores that action or sound.

1. Right-click a target or the row in a table that represents a target or a flight.
2. Select **Hide Rule Actions** from the menu. The Hide Rule Actions menu opens.
3. Remove the check (✓) from rule(s) with suppressed actions or sounds.
4. Click **OK** to restore that action or sound for those rules in step 3.

Show Rule Details

To learn more about how a rule popup is built, click **Rule Details** (refer to .

In this example, the rule shows a message about departure congestion when the requirements of the rule are met.

Figure 4-20. Rule Details for an Airport Rule
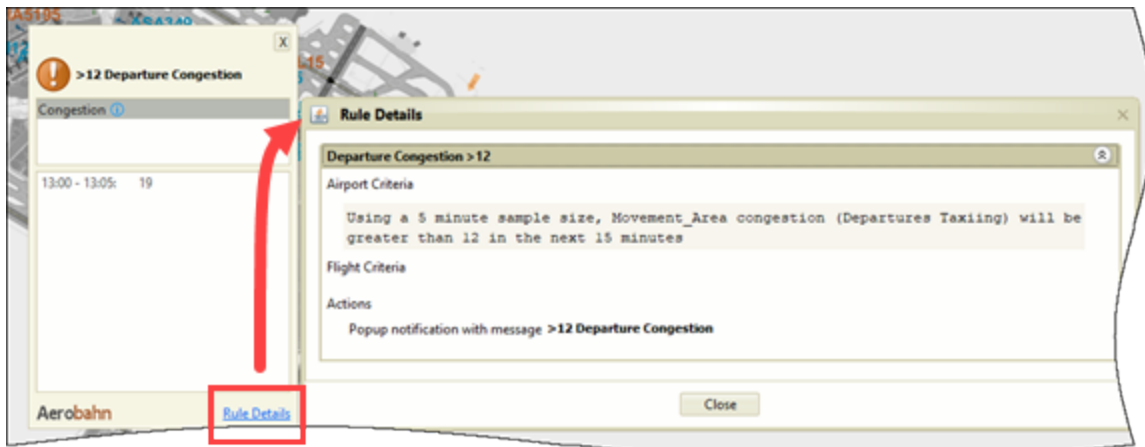
4.6 Watch List Management

Sites that use Aerobahn Dynamic Rules (refer to) use **Watch List Management** to keep a list of Watch Lists. Usually, you will add a Watch List to *My Watch Lists*.

Permission is necessary to make and change Group Watch Lists.

Select **System > Watch List Management** to open Watch List Manager.

Click **Close** or **X** to close Watch List Manager.

4.6.1 Create a Watch List

Because Watch Lists are populated by rule criteria that you define, you will most often make Watch Lists when you make rules (refer to *Create a Watch List That is Associated With a Rule* below). You can, however, make a Watch List simply by naming it. You can associate it with rules at another time (refer to *Create a Watch List Without Associating a Rule* on the facing page).

4.6.1.1 Create a Watch List That is Associated With a Rule

This procedure associates a Watch List with a rule when you make a new rule.

1. Select **System > Rules Management**, and start to make a rule.

2. At the point at which you must define actions, specifically for sending flights to a Watch List, select the **Add flight to selected watch list(s)** checkbox.

3. Click **Open Watch List Manager**.

4. Enter a name for the Watch List (for example, "3hrDelay").

5. Click **New**.

Figure 4-21. New Watch List
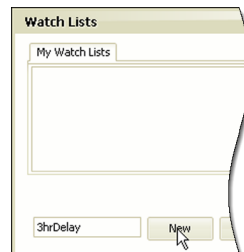
6. Click **Close**.

7. Select the Watch List Name.

8. Click **Choose Name**, and enter a name in the Rule Name field.

9. Click **Finish**.

4.6.1.2 Create a Watch List Without Associating a Rule

1. Enter the new Watch List name.

2. Click **New** to add the new Watch List's name to *My Watch Lists*.

You must make a Watch List before you can show flights in *Watch List Viewer*. To add flights to a Watch List, you must set up rules using the *Rules Management* tool.

4.6.2 Rename a Watch List

The Watch List Name is linked to its associated rule and to **Watch List Viewer**. When you rename a Watch List, the Watch List action in Rules Management and the selected source name in **Watch List Viewer** update automatically. The link between the data source and **Watch List Viewer** is maintained.

1. Select **System > Watch List Management**.

2. Select a Watch List from *My Watch Lists*.

3. Click **Rename**.

4. Enter the new name for the selected Watch List in the name field (refer to).

5. Click **OK**.

4.6.3 Delete a Watch List

⚠️ **CAUTION:** When you delete a Watch List, you delete any related Watch List actions set in **Rules Management**.

1. Select a Watch List from *My Watch Lists*.
2. Click **Delete**.
   A prompt shows.
3. Enter `DELETE` to delete the Watch List. Text entry is case-sensitive.
4. Click **OK**. The selected Watch List is deleted.

4.6.4 View a Watch List History

The **Watch List History** supplies a record of changes to rules related to a Watch List.

1. Select a Watch List from *My Watch Lists*.
2. Click **View History**. A new window displays a list of rules related to that Watch List and the dates and time (GMT/Zulu ["Z"]) when each rule was created, changed, or deleted.

Click **OK** to close the **Watch List History**.

4.7 Use Scheduled Flight Management

The Scheduled Flight Management tool plays an important function in departure metering.

ℹ️ **NOTE:** To use Scheduled Flight Maintenance, you need this permission: **System Administration > Scheduled Flight Management**. Other permissions are necessary for some actions, such as canceling a flight.

The Scheduled Flight Management tool lets you to change values related to the identity, origination (SOBT and STOT), and destination (SLDT, SIBT, Gate, and Fix) for a selected flight. You can also cancel a selected flight, add a new flight for management, and correct a linked flight.

ℹ️ **NOTE:** During Playback, **Scheduled Flight Manager** is disabled.

Configure the Scheduled Flights table

Show Cancelled Flights Only

Select **Cancelled Flights Only** from the dropdown menu in the date-time information bar.
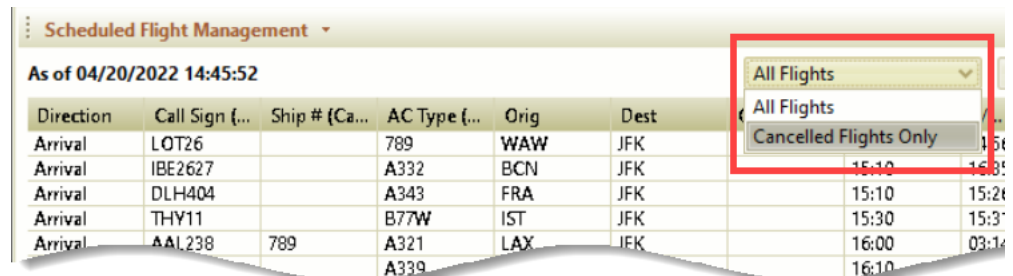
Automatically Refresh the Table

Select **Auto Refresh On (15 min)** from the dropdown menu in the date-time information bar.
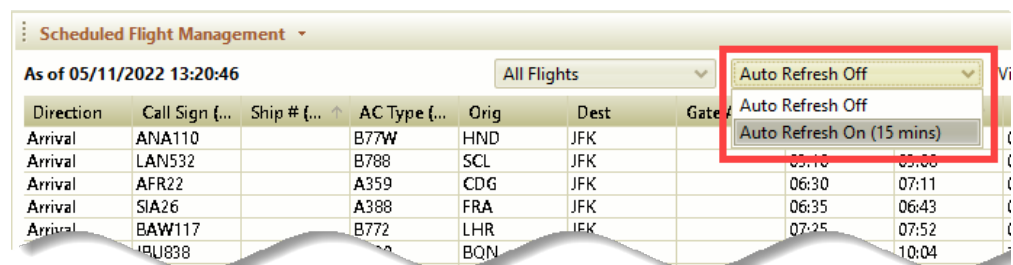
Show/Hide Strikethrough on Cancelled Flights

1. Select **Scheduled Flight Management > Cancelled Flight Option**.
2. Select **Strikethrough On** or **Strikethrough Off**.

Modify a flight schedule

You can change identity, origination, and destination values for a flight that you select from the list of flights in the Scheduled Flight Management tool.

1. Select **System > Scheduled Flight Management**.
2. From the View flights scheduled for dropdown menu, select the time period..
3. Click **Refresh**.
4. Select a flight in the flight list.
5. Click **Edit Flight**. The Edit Scheduled (Arrival or Departure) Flight dialog box opens.

6. Change, delete, and/or add information as necessary.

   ➲ Use IATA abbreviations (e.g., JFK, ATL, ORD) for airports.

   - Change individual values by keying over data or by selecting new values. Note necessary fields. Changed values display red.

   - Click **Undo** to clear the most recently added or changed data. Then, enter and select new values.

   - Click **X** before you save changes to close the window without saving changes.

7. Click **OK** to write the new entries to the data base.

8. Click **Refresh**. The Scheduled Flights table updates.

Cancel a scheduled flight

Cancelled flights show "True" in the "Is Cancelled?" data field/column. Additionally, you can put a strikethrough on cancelled flights (refer to *Configure the Scheduled Flights table* on the previous page):

| ~~Departure~~ | ~~SAAB123~~ | ~~SAA~~ | ~~N123AB~~ |

1. Select **System > Scheduled Flight Management**.

2. From the View flights scheduled for dropdown menu, select the time period.

3. Click the flight or CTRL-click the flights to cancel.

4. Click **Cancel Flight**.

   ℹ **NOTE:** "Is Cancelled?" must be "False" in order to cancel a flight.

5. Confirm the cancellation.

6. Click **Refresh**.
   The flight shows with a strikethrough if configured.
   "Is Cancelled?" is "True".
   The flight is removed from Aerobahn.

Restore (Uncancel) a cancelled flight

1. Select **System > Scheduled Flight Management**.

2. From the View flights scheduled for dropdown menu, select the time period.

3. Click the flight or CTRL-click the flights to restore.

4. Click **Uncancel Flight**.

> ℹ️ **NOTE:** "Is Cancelled?" must be "True" in order to uncancel a flight.

5. Confirm the action.
6. Click **Refresh**.
    The flight shows without a strikethrough.
    "Is Cancelled?" is "False".
    The flight is restored to active status in Aerobahn.

Add a flight to the Scheduled Flights table

Use this procedure to add a flight that is not automatically scheduled.

1. Select **System > Scheduled Flight Management**.
2. Click **Add Arrival** or **Add Departure** based on the direction of the flight to be added. The Add Scheduled (Arrival or Departure) Flight dialog box opens.
3. Enter data in all system-required fields and in fields that you wish to populate.
4. Click **OK**. The dialog box closes.
5. Click **Refresh**. The Scheduled Flights table updates.

> ℹ️ **NOTE:** Refer to *Work with Table Data* on page 3-9 for instructions on how to change column layouts, how to use filters, and how to sort and export table data.

Make a correction to a flight link

Usually Aerobahn correctly attaches an outbound flight to its inbound flight. If it is necessary, you can make a change to inbound-outbound link.

1. Select a flight.
2. Click **Correct Linked Flight**. The Linked Flight Correction dialog box opens.

> ℹ️ **NOTE**: "Automatically Linked Flight" data may not show for the selected flight. The state of these fields may not always show the correct link state.

3. Select the correct flight from the Linked Flight Candidates.
4. Click **Override Flight Link**.

To keep the link shown in **Automatically Linked Flight**, click **Make No Change**.

4.8 Use De-ice Configuration

De-ice Configuration lets authorized users to associate a de-ice management group (an entity responsible for de-icing) with pad group configurations and event type configurations. A collection of de-ice management groups and their respective related pad groups is a "De-ice Group Configuration."

ℹ NOTE: Permissions and other settings in **SystemAdmin** control what you see in **De-ice Configuration**. Most users see only controls for their own management group in "Management Group Settings." In **SystemAdmin**, "De-ice Management Groups" settings show which de-ice management groups a user can see. An * shows that a user can see all groups. "Manage De-ice Management Groups" permissions must be selected for a user to add, edit, and remove de-ice management groups in **SystemAdmin** (and which show as tab headings in the **De-ice Configuration** dialog box).

Aerobahn uses de-ice configuration settings, together with aircraft fuselage length and wingspan data, to make predictions:

- the de-icing pad for the flight
- the quantity of time necessary for de-icing

You can set the default de-icing mode for each de-icing management group of which you are a member. The selected de-ice mode is used to calculate the de-ice mode for each flight in the management group. When you select On Demand, Aerobahn sets the de-ice mode of each flight in the management group to Not De-icing. That mode changes to De-icing when the flight is in a de-ice region for a quantity of time (configured when the system was set up).

ℹ NOTE: Before you set up a De-ice Group Configuration, an approved user must set up the de-ice management group in **SystemAdmin** (refer to *Create a De-ice Management Group* on page 9-48.

To set up a pad group configuration, identify these elements:

- de-icing locations
- carrier groups and their departure gate(s)
- runways used

Each de-ice bay (or slot) at an airport is a unique Aerobahn de-ice region. A pad group connects a set of carrier groups and gates to possible de-ice regions (in the case of remote de-icing) or to "At Gate" or "On Ramp." If runways are a factor in selecting the de-icing location, the pad group can also include one or more departure runways.

1. Open the **De-ice Configuration** tool:

   - Select **System > De-ice Configuration**, or

   - From **De-icing Manager**, select **De-icing Manager > Manage De-ice Configuration**

2. Do one of the following:

   - Select a de-ice configuration from the **Group Configurations** list, and click **Edit**. The **De-ice Group Configuration** dialog box opens.

   - Click **Add**. The **De-ice Group Configuration** dialog box opens.

3. Select a management group to associate with this configuration.

4. Configure the pad group. These are the necessary elements: a name, a de-icing location, carrier group(s), aircraft model(s), and runway(s).

   a. Select the **Pad Group Configuration** tab.

   b. Select a pad group configuration name.

      ℹ NOTE: If there are no names, or if a new pad group name is necessary, click **Add**. Enter a name, and click **OK**. This puts a pad group name in the list. Select and configure that pad group.

      ---

   c. Select the de-icing location type—**At Gate**, **On Ramp**, or **Remote Pad(s)**—for that pad group location. Each configuration is limited to a single type.

      If **Remote Pads** was selected, select specific de-ice locations. You can change colors in the **Pad Occupancy** chart.

d. Select a carrier group in one of the following ways:

- Select the carrier group name to select all gates and operating carriers, if the carrier group includes them.

  ℹ **NOTE:** The capability to show operating carriers is a configured option.

- Click the + to expand a top-level gate region. Then, select individual departure gates.
- Click the + to expand the "Operating Carrier(s)" section (if configured), and select individual carriers.

e. Select aircraft models if they control the selection of a de-icing pad. Otherwise, select **All**.

  ℹ **NOTE**: Select **Other** to include aircraft models not identified by the list.

f. Select runways if they control the selection of a de-icing pad. Otherwise, select **All**.

5. Configure de-icing event types.

a. Select the **Event Type Configuration** tab.

b. Click **Add Event Type**.

c. Enter a name for the de-icing event, and click **OK**.

d. Configure de-ice (DI) durations for each aircraft design group, or accept the default settings. (Durations are measured in minutes.)

  ℹ **NOTE:** Design Group classifications are from USA Federal Aviation Administration (FAA) Aircraft Design Group (ADG).

6. Do steps 4 and 5 as necessary.

7. Click **Save**. The validation process runs.

4.8.1 Rename a Pad Group Configuration

1. Open the De-ice Configuration tool:

- Select **System > De-ice Configuration**, or
- From **De-icing Manager**, select **De-icing Manager > Manage De-ice Configuration**

2. Select a de-ice configuration (from the **Group Configurations** list), and click **Edit**. The **De-ice Group Configuration** dialog box opens.

3. If more than one management group shows, select one.

4. Select the Pad Group Configuration tab.

5. Select the name of the pad group configuration.

6. Click **Rename**. A dialog box opens.

7. Enter the new name.

8. Click **OK** to replace the name.

9. Click **Save**. The validation process runs.

4.8.2 Remove a Pad Group Configuration

1. Open the **De-ice Configuration** tool:

   ▪ Select **System > De-ice Configuration**, or

   ▪ From **De-icing Manager**, select **De-icing Manager > Manage De-ice Configuration**

2. Select a de-ice configuration (from the **Group Configurations** list).

3. Click **Edit**. The **De-ice Group Configuration** dialog box opens.

4. If more than one management group shows, select one.

5. Select the pad group name in the Pad Group Configuration tab.

6. Click **Remove**.

7. Confirm removal to delete the configuration.

8. Click **Save**.

4.8.3 Rename a De-ice Event Type

1. Open the De-ice Configuration tool:

   ▪ Select **System > De-ice Configuration**, or

   ▪ From **De-icing Manager**, select **De-icing Manager > Manage De-ice Configuration**

2. Select a de-ice configuration (from the **Group Configurations** list).

3. Click **Edit**. The **De-ice Group Configuration** dialog box opens.

4. If more than one management group shows, select one.

5. Select the **Event Type Configuration** tab.

6. Click **Rename Event Type**. The **Rename Event Type** dialog box opens.

7. Change the labels for event types.

8. Click **OK**.

9. Click **Save**.

Figure 4-22. Names of De-ice Event Types

4.8.4 Remove a De-ice Event Type

This procedure removes a de-icing event type from the Event Type Configuration tab in the **De-ice Configuration** dialog box.

1. Open the **De-ice Configuration** tool:

   ■ Select **System > De-ice Configuration**, or

   ■ From **De-icing Manager**, select **De-icing Manager > Manage De-ice Configuration**

2. Select a de-ice configuration (from the **Group Configurations** list).

3. Click **Edit**. The **De-ice Group Configuration** dialog box opens.

4. Select the management group.

5. Select the **Event Type Configuration** tab.

6. Click **Remove Event Type**.

7. Select (check) the event type(s) to be deleted from the **Event Type Configuration** tab.

8. Click **OK** to delete the event column(s). Click **Cancel** to close the dialog box without making a change.

9. Click **Save**.

4.8.5 Test a De-ice Configuration

1. Open the **De-ice Configuration** tool:

   ■ Select **System > De-ice Configuration**, or

   ■ From **De-icing Manager**, select **De-icing Manager > Manage De-ice Configuration**

2. Click **Validate** or **Save**.

A satisfactory de-ice configuration allows Aerobahn to predict where a flight will de-ice. If the configuration is unsatisfactory, Aerobahn may choose the wrong de-ice location or assume that the flight is not de-icing. A built-in test process supplies you with information that you can use to make sure that you set up an satisfactory de-ice configuration.

Messages are grouped in three priority classes:

- Red - highest priority
- Yellow - moderate priority
- Black or White - normal priority

In each group, messages are listed in order from most to least important. Review these messages for information about the status of configurations that you make or edit.

Messages give information only. They do not affect the configurations.

4.8.6 Save a De-ice Configuration or Event Type

1. Open the **De-ice Configuration** tool:
   - Select **System > De-ice Configuration**, or
   - From **De-icing Manager**, select **De-icing Manager > Manage De-ice Configuration**
2. Add, rename, or remove de-ice configurations or event types.
3. Click **Save**.

The validation report opens when you click **Save**. You can use the information in the validation report to edit the de-ice configuration.

4.8.7 Activate a De-ice Configuration

⚠️ **CAUTION:** When you change the active de-ice group configuration, Aerobahn resets all predicted de-ice locations and estimated de-ice durations.

1. Select **System > De-ice Configuration**.
2. Select a de-ice configuration to activate.
3. Click **Make Active**. A check mark beside the configuration name shows that the configuration is active.

Figure 4-23. Make a De-ice Configuration Active
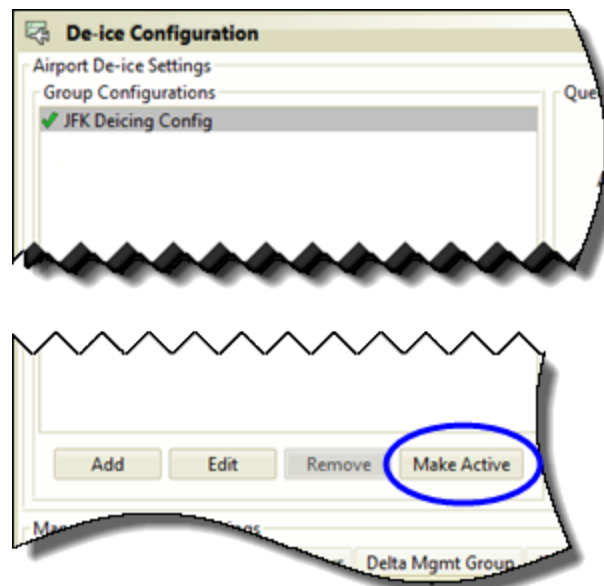
4.8.8 Configure De-ice Queue Length and Queue Wait Time

> 🛈 **NOTE:** To configure de-ice queue length and de-ice wait time, "Modify Airport De-ice Settings" permission is necessary. If "Queue Preferences" show when you open **De-ice Configuration**, you have this permission.

The maximum number of aircraft in a de-ice queue and the maximum number of minutes set for a de-ice pad change the assignment of flights to de-ice pads.

1. Select **System > De-ice Configuration**.
2. Configure the Maximum Queue Length (number of aircraft) for each pad.
3. Configure the Maximum Queue Wait Time (in minutes) for each pad.
4. Click **OK**.

4.8.9 Set up the Event Types and Default De-icing Mode

De-ice Configuration lets you set a default de-icing mode by de-ice management group. You can override this setting for individual flights (refer to *Enter Data in the Manage Flight Dialog Box* on page 7-224).

> ⚠ **CAUTION:** You can change the default de-icing mode of management groups in the active group configuration only!

1. Open the **De-ice Configuration** tool:
   - Select **System > De-ice Configuration**, or
   - From **De-icing Manager**, select **De-icing Manager > Manage De-ice Configuration**

2. Select a de-ice configuration (from the **Group Configurations** list), and click **Edit**. The **De-ice Group Configuration** dialog box opens.

3. If more than one management group shows, select one.

4. Select the **Event Type Configuration** tab.

5. Click **Rename Event Type**. The **Rename Event Type** dialog box opens.

6. Change the labels for event types.

7. Click **OK**.

8. Click **Save**. The name of the event type is changed. (Continue to change the default de-icing mode.)

9. Select a de-ice configuration from the **Group Configurations** list, and click **Edit**. The De-ice Group Configuration dialog box opens.

10. Select the management group for which you must set the default de-icing mode.

11. Select the Event Type Configuration tab.

12. Review the configuration of event types, and make necessary changes.
    - Click **Cancel** if making no changes. Click **OK** to confirm.
    - Click **Save** and follow prompts if changing configuration.

13. Select, under "Management Group Settings," the tab for the management group that you configured.

    > ℹ️ **NOTE:** The selected group configuration must be active (checked) when you set the default de-icing mode and default event type for a management group. If the Event Type menu is blank, there is a problem.

14. Select **De-icing**, **Not De-icing**, or **On Demand**.

15. Select the event type.

16. Click **OK**. The default de-icing mode is updated.

If a flight is tagged for de-icing because the de-ice management group is de-icing or because that individual flight has been tagged for de-icing through the **Manage Flights** tool, and that flight takes off in the Not De-iced state, Aerobahn changes the de-ice state to "Departed without De-icing."

4.8.10 Change Default De-icing Mode

The de-ice mode selected in **De-ice Configuration** is used to control the default de-ice mode for each flight in a management group.

> **ℹ NOTE:** A manual de-ice mode setting for an individual flight overrides default de-ice mode settings.

1. Open the **De-ice Configuration** tool:
   - Select **System > De-ice Configuration**, or
   - From **De-icing Manager**, select **De-icing Manager > Manage De-ice Configuration**
2. In Management Group Settings, select the tab for the management group.
3. Set the default de-icing mode.

   > **ℹ NOTE**: When you select **On Demand**, Aerobahn sets the de-ice mode of each flight in the management group to Not De-icing. When the flight is in a de-ice region for a configured length of time, the mode changes to De-icing.

4. Click **OK**.

Figure 4-24. Default De-ice Mode
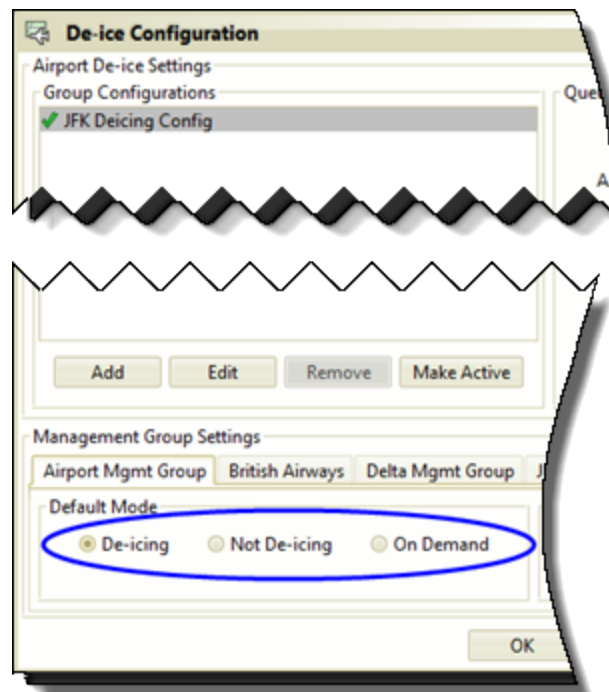
4.9 Use A-CDM Parameters Configuration Tools

Use these instructions to set A-CDM parameter values. These settings impact A-CDM and Pre-Departure Sequencer (PDS) functions.

1. Select **System > A-CDM Parameters Configuration**. A menu of parameter sets opens (refer to).

2. Select the set of parameters that has the parameter to be changed.

3. Change values of parameters:

    ▪ Enter a new value in the window, or

    ▪ Click ⌄ to change the value.

4. Click **OK** to save the new value(s) and close the dialog box. (Click **Cancel** to close without saving.)

Table 4-15. Parameters Sets

Parameters Sets	Description
A-CDM and Pre-Departure Sequencer	A-CDM parameters and PDS parameters. Includes LAHSO Arrival criteria and Short Runway Departure criteria.

Table 4-15. Parameters Sets (continued)

Parameters Sets	Description
A-CDM Alert	Alert settings related to A-CDM parameters.
A-CDM Accuracy	Pass/Fail requirements (window size in seconds) and window start times. As the window gets larger, the "Pass" score can become better.
A-CDM Key Performance Indicator	Pass/Fail requirements (window size in seconds or minutes). As the window gets larger, the "Pass" score can become better.
A-CDM Timeliness	Pass/Fail requirements (window size in seconds or minutes). As the window gets larger, the "Pass" score can become better.

4.10 Use IATA ICAO Mapping Management

ℹ **NOTE:** You must have certain Access REST API permissions to use this tool. Contact your system administrator for more information.

Use the **IATA ICAO Mapping Management** tool to add airport or airline IATA-ICAO code pairs to the system. Aerobahn sets up mappings to be two-way or one-way (refer to).

Add a Mapping

1. Select **System > IATA ICAO Mapping Management**.
2. Select the Airport or Airline tab.
3. Enter the new IATA and ICAO codes in the two fields below the list.

Tab	IATA (characters required)	ICAO (characters required)
Airport	3	4
Airline	2	3

ℹ **NOTE:** When you enter the correct number of characters, ✚ changes to ✚.

4. Click ![plus] to add the mapping to the list and the system. A record of the change shows on the History tab.
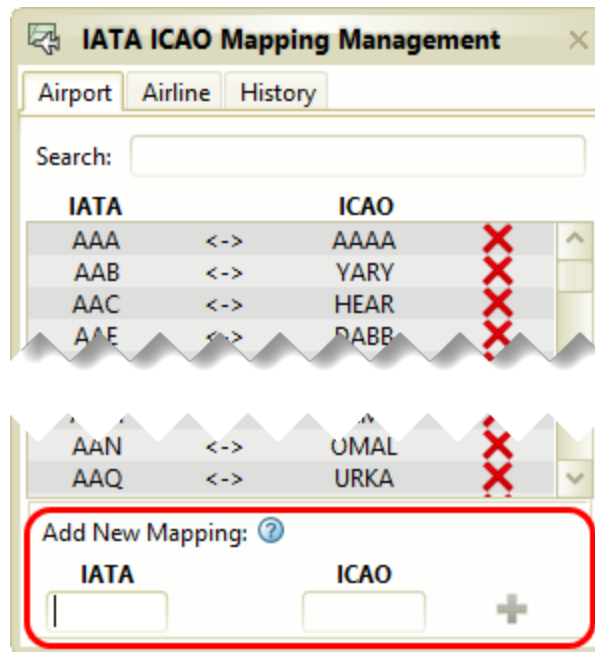
Table 4-16. IATA ICAO Mapping Types

Mapping Type	Symbol	Description
Two-way (bidirectional)	<->	Aerobahn uses this mapping for both ways. This IATA code translates to this ICAO code and vice versa.
One-way (directional) from ICAO to IATA	<-	Aerobahn uses this mapping only one way. This ICAO code translates to this IATA code, but the IATA code *does not* translate to the ICAO code.
One-way (directional) from IATA to ICAO	->	Aerobahn uses this mapping only one way. This IATA code translates to this ICAO code, but the ICAO code *does not* translate to the IATA code.

Delete a Mapping

⚠️ **CAUTION:** No confirmation is required to remove a mapping. If you accidentally remove a mapping, add it back into the list (refer to *Add a Mapping* on the previous page).

1. Select **System > IATA ICAO Mapping Management**.

2. Select the Airport or the Airline tab.

3. Click ✖ next to a mapping to remove it from the list and from the system. A record of the change shows on the History tab.
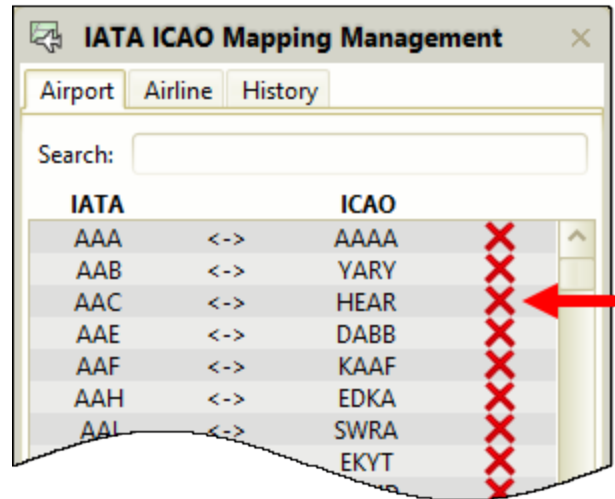
History Tab

The History tab shows a record of changes you make during the current login session on your workstation.

Figure 4-25. IATA ICAO Mapping Management Tool, History tab
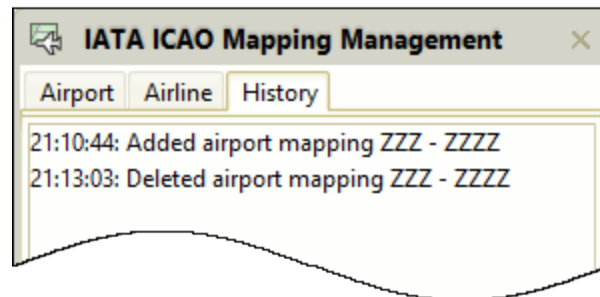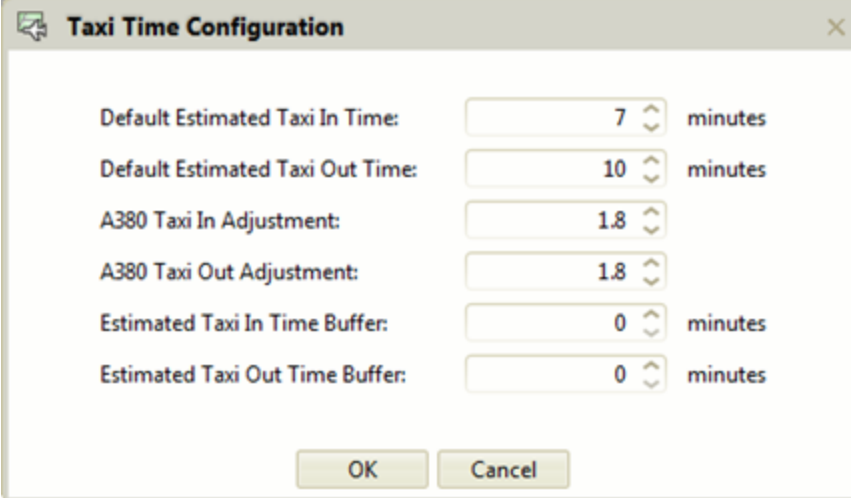
4.11 Use Taxi Time Configuration

In most cases, the Flight Prediction Engine provides accurate taxi times because it dynamically adapts taxi times for each individual flight. In cases where data (such as the gate or stand) is missing, the **Aerobahn Surface Manager** uses the taxi time setting configured in the **Taxi Time Configuration** tool.

The **Taxi Time Configuration** tool lets you set basic taxi times that are applied to all inbound and outbound aircraft. These settings allow the **Aerobahn Surface Manager** to calculate Estimated In Block Times and Estimated/Target Take Off Times.

Select **System > Taxi Time Configuration** to open the **Taxi Time Configuration** tool.

Figure 4-26. Taxi Time Configuration Tool

You can also add a buffer value to the default taxi times when airport conditions cause delays. You can set buffers and keep the default taxi time settings unchanged.

The **Taxi Time Configuration** tool also lets you configure a taxi time adjustment for A380 aircraft, which often taxis slower than other aircraft. (For example, Figure 4-26 above shows that these times are multiplied by 1.8 to give the taxi times for an A380.)

4.12 Configure Gate Restrictions

Use the **Gate Restriction Configuration** tool to configure gates that are overlapping or that can be blocked by aircraft in another gate. There are two types of configurations:

- Overlapping Gate Parameters
- Adjacency Restrictions

To open the Gate Restriction Configuration tool, select **System > Gate Restriction Configuration**.

Figure 4-27. Open the Gate Restriction Configuration Tool
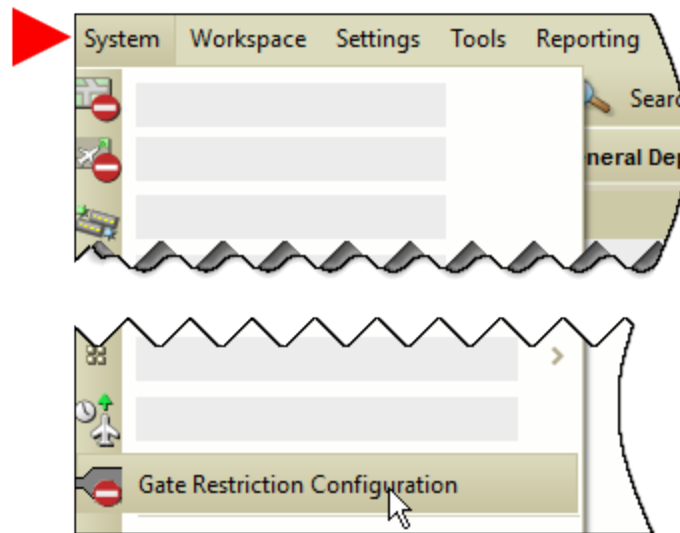
Select the gate you want to configure from the "For Gate" menu.

To find a gate, enter part of the gate number in the "For Gate" field.

Enter an asterisk in the "For Gate" window to find gates that have been configured. A gate that has an existing configuration shows an asterisk (*). Gates that do not show an asterisk (*) do not have gate restriction configurations.

4.12.1 Set Up Overlapping Gate Parameters

You can configure Overlapping Gate Parameters only for gate regions that cover more than one gate region. Overlapping Gate Parameters are used to determine the region occupancy of a flight that occupies more than one gate region.

Click the icons in the **Gate Restriction Configuration** tool to set up, add, and delete rules for overlapping gates (refer to Table 4-17 on page 4-110).

Example

Figure 4-28 on the facing page shows that Gate_A12 is an overlapping gate in respect to Gate_A12A and Gate_A12B. Gate A12 is configured to accept all aircraft types only when those aircraft types are not allowed in gate A12A or A12B (refer to Figure 4-29 on the facing page).The aircraft types that are not allowed in gate Gate_A12A or Gate_A12B are defined in the Overlapping Gate Parameters section of their gate restriction configurations.

Figure 4-28. Overlapping Gate Regions (Example)
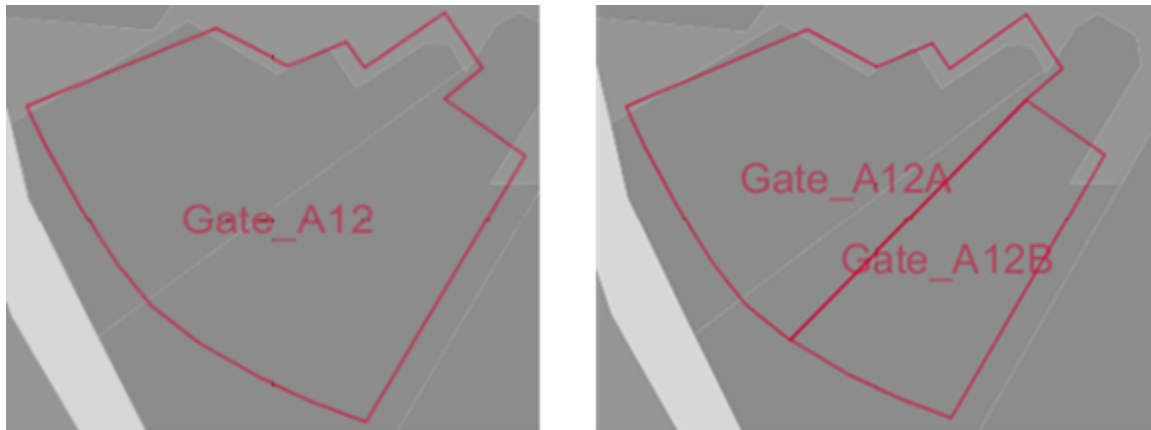
Figure 4-29. Gate Restrictions for Gate A12 (Example)

For example, gates A12A and A12B are configured to accept specific aircraft types (refer to *Add Gate Restriction Criteria* on page 4-113 for information on how to set up custom gate restrictions criteria).

Figure 4-30. Gate Restrictions for Gate A12A (Example)

Figure 4-31. Gate Restrictions for Gate A12B (Example)

Aerobahn uses the three overlapping gate parameters (Gate_A12, Gate_A12A, and Gate_A12B) to determine gate occupancy:

Because the gate regions overlap, every time an airplane enters one of the gate regions, it actually enters *two* overlapping gate regions. If a CRJ7 enters Gate A12A, it also enters Gate A12. Aerobahn determines (and reports) that the aircraft is in Gate A12A. Aerobahn does this because the CRJ7 is an allowed aircraft type for A12A, and aircraft are only allowed to occupy A12 if they cannot occupy A12A. The process works similarly if a CRJ7 enters Gate A12B.

On the other hand, if a B737 enters Gate A12A, it also enters Gate A12 because the gate regions overlap. In this case, Aerobahn determines (and reports) that the aircraft is in Gate A12. Aerobahn does this because the B737 is not an allowed aircraft type for A12A. All aircraft types are allowed to occupy A12 if they cannot occupy A12A. The process works similarly if a B737 enters A12B.

Table 4-17. Gate Restriction Configuration Tool Controls

Button / Icon	Description
🖍	Click 🖍 to select aircraft types or a gate. It depends on the context.
➕	Click to add a new rule.
✖	Click to delete a rule.

4.12.2 Set Up Adjacency Restrictions

You can configure adjacency restrictions for any gate region. Adjacency restrictions are used to determine the status of a gate based on the occupancy of another gate. Click the icons in the **Gate Restriction Configuration** tool to set up rules, add rules, and delete rules (refer to Table 4-17 on the previous page).

You can configure two types of adjacency restrictions:

- unidirectional
- bidirectional

If you configure a bidirectional adjacency restriction for one gate, Aerobahn automatically sets up the corresponding adjacency restriction for the affected gate.

Example

Gate_24 and Gate_26 are adjacent gates (refer to Figure 4-33 on the next page). Add a bidirectional adjacency restriction to Gate_24: An A388 in Gate_26 prevents a B788 from using Gate_24 (refer to Figure 4-33 on the next page). Because the adjacency restriction is bidirectional, Aerobahn automatically adds the corresponding bidirectional adjacency restriction for Gate_26 (refer to Figure 4-34 on page 4-113).

Figure 4-32. Adjacent Gate Regions

> **ℹ NOTE:** Adjacency restrictions affect gate status only. They do not change gate occupancy. If an A388 occupies Gate 24 and an inbound B788 is assigned to Gate 26, the status of Gate 26 (for the B788) is Blocked. It is possible, however, for the B788 to occupy Gate 26 if Aerobahn receives surveillance that indicates the target has entered the region.

Figure 4-33. Adjacency Restrictions, Gate 24 (Example)

Figure 4-34. Adjacency Restrictions, Gate 26 (Example)

4.12.3 Add Gate Restriction Criteria

You can add criteria for use with the **Gate Restriction Configuration** tool.

1. Open the **Gate Restriction Configuration** tool (refer to *Configure Gate Restrictions* on page 4-107).

2. Click ✏ in the Overlapping Gate Parameters or in the Adjacency Restrictions section.
   The **Gate Restriction Criteria** dialog box opens.

3. Select data fields, functions, operators, and aircraft types in the right pane and move them to the Formula field to make a formula (refer to Figure 4-35 on the next page for an example):

   ■ Select an item, and click **Add Selected**, or

   ■ Double-click an item

      ℹ **NOTE:** The aircraft types shown in the Aircraft Types tab are pre-configured.

4. Click **Apply**.

5. When all criteria are configured, click **OK** to close the dialog.

Figure 4-35. Gate Restriction by Aircraft Type (Example)

5 Workspace Menu

An Aerobahn workspace is the "frame" in which you open Aerobahn tools. Workspaces let you configure Aerobahn for job requirements. You can save workspaces that you configure. Then, you can open a specified workspace.

You can find instructions for using the controls in the **Workspace** menu in these sections:

Table 5-1. Workspace Menu Options

Menu Options	Description
New	Replace the workspace with a new "empty" workspace with a default configuration.
Save	Save the workspace (arrangement of tools, color settings, general settings). You can load a saved workspace.
Load	Replace the workspace with the selected saved workspace.
Delete	Delete a saved workspace.
Select TaxiView Login Workspace	Identify a saved workspace as the one to load automatically when you open TaxiView.
Select OpsView Login Workspace	Identify a saved workspace as the one to load automatically when you open OpsView.
Lockdown Layout	Prevent opening, resizing, tabbing, or tiling tools in an open workspaces. To unlock the locked workspace layout, remove the check from **Lockdown Layout**.
Record Workspace	Open a tool that you use to make an AVI recording.

Table 5-1. Workspace Menu Options (continued)

Menu Options	Description
Clear Tool Cache	Eliminate the custom settings in *closed* tools.

5.1 Save and Share a Workspace

Share a workspace and related tool preferences and configurations when you save that workspace.

Set up Data Sharing in **SystemAdmin**. Data Sharing lets you share workspaces and reports with members of selected groups.

For more information, refer to .

1. Configure the Workspace layout.

2. Select **Workspace > Save**. The name of the active workspace is highlighted.
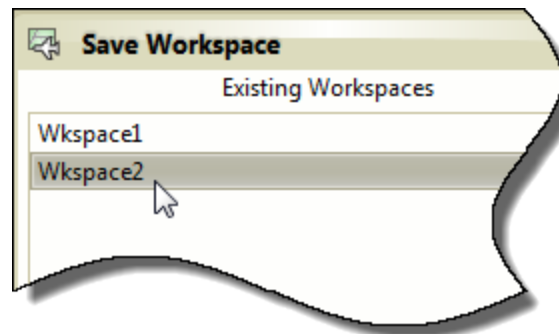
3. Enter a new workspace name, or keep the name of the active workspace if you just want to change the design of that workspace.

4. Share (optional) this workspace to let others make a copy of this workspace layout with its tool preferences and configurations.

    a. Select **Share this workspace**. The **Save Workspace** dialog box expands.

    b. Select the checkbox for group(s) that can use the workspace.

5. Click **Save**. Aerobahn saves the workspace by your user name.

Aerobahn adds the workspace to *My Workspaces* when you save it.

5.2 Load a Workspace

When an Aerobahn user shares a workspace with your user group, you can load that workspace and its related tool preferences and configurations. You can also set up and save workspaces to load when necessary (refer to *Save and Share a Workspace* on the previous page).

Select workspaces from the **Load Workspace** dialog box.

1. Select **Workspace > Load**. (The **Load Workspace** dialog box opens.)
2. Select a workspace type.
   - Select the **My Workspaces** tab to load workspaces that you made.
   - Select the **Other Workspaces** tab to load shared workspaces.
3. Select a workspace. (Shared workspaces are grouped by the user name of the user who added the workspace.)
4. Click **Load**. The selected workspace loads.

5.3 Clear a Workspace

> ℹ **NOTE:** A workspace is not deleted when you clear it from the workspace.

You can replace the current workspace with a new "empty" workspace in which default tool configurations are used: Select **Workspace > New**. Aerobahn closes all tools. You can build and save a new workspace.

5.4 Delete a Workspace

> ⚠ **CAUTION:** When you delete a workspace, you delete its configurations. Delete only those workspaces that you will not use again. You can clear a workspace without deleting it (refer to *Clear a Workspace* above).

You can delete a custom workspace that is no longer necessary.

1. Select **Workspace > Delete**.
2. Select a workspace.
3. Click **Delete**.

5.5 Select a Login Workspace

Aerobahn stores the Workspace configuration that was active when you last closed TaxiView and OpsView. By default, the Workspace that opens when you open TaxiView and OpsView is this "Automatically Saved Workspace."

You can select a "Login Workspace" as an alternative to this default.

ℹ NOTE: TaxiView and OpsView have different login workspaces.

1. [Configure the Workspace layout](#).
2. Save the Workspace.
3. Select TaxiView or OpsView:

    - For TaxiView: Select **Workspace > Select TaxiView Login Workspace**.
    - For OpsView: Select **Workspace > Select OpsView Login Workspace**.

4. Select a Workspace.
5. Click **Select**.

5.6 Lock Down a Workspace Layout

When you enable **Lockdown Layout**, you cannot do these:

- Opening a tool.

    ℹ NOTE: The Tools menu does not show until you disable **Lockdown Layout**.

- Floating or docking an open tool (refer to *Float a Tool* on page 3-8).
- Resizing a tool (refer to *Resize a Tool* on page 3-6).
- Rearranging tool tabs (refer to *Move a Tool* on page 3-7).

You can still do these:

- Dragging a floating tool to a new location.
- Closing a floating tool that was opened while the workspace is locked down (for example, a Watch List Viewer that is opened by clicking the count in the Watch List Count Tool).

To lock the workspace layout, select **Workspace > Lockdown Layout** to put a check mark (refer to).

Figure 5-1. Workspace Lockdown Layout Command (Active)
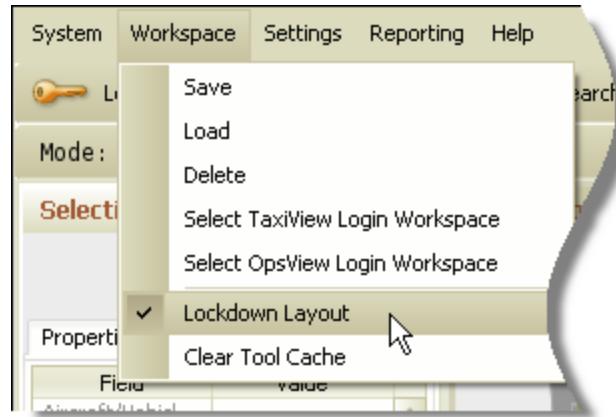
To unlock the workspace layout, select **Workspace > Lockdown Layout** to remove the check. The Tools menu shows in the Workspace menu bar. Buttons that let you resize, float, or close a tool become active.

5.7 Export Workspace

You can export the current workspace to a file.

1. Select **Workspace > Export Workspace to File..**.
   The Save window opens.

2. Enter a file name.

3. Click **Save**.

5.8 Import Workspace

You can import saved workspace settings from a file.

1. Select **Workspace > Import Workspace from File..**.
   The Open window opens.

2. Select a saved workspace file.

3. Click **Open**.

5.9 Record Workspace

You can record **Workspace** action in live and playback modes and save the recording in Windows Media Video (WMV) format.

1. Zoom and pan to get the best view for recording. The recording tool records all that you see.

2. Select **Workspace > Record Workspace**.
   The Record Workspace window opens.

3. From the Audio Source dropdown menu, select an audio source.

4. Click **Start Recording** to start recording.

   The Save window opens.

5. Enter a file name.

6. Click **Save**.

7. Click **Stop Recording** to stop.

8. Click **Close** to exit.

5.10 Clear the Tool Cache

When you close a tool, Aerobahn saves settings until the next time you open that tool.

Select **Workspace > Clear Tool Cache** to erase the settings in *all closed tools*.

ℹ **NOTE: Workspace > Clear Tool Cache** does not erase the settings of open tools.

6 Settings Menu

You can find information on the tools that are opened through the **Settings** menu in these sections:
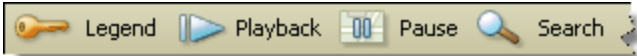
Refer to Table 6-1 below for information on tools that you can open through the **Settings** menu.

Table 6-1. Settings Menu Options

Menu Item	Action	Note
Color Settings	Open the Color Control Panel	Use to configure colors used in tools.
General Settings	Open dialog box for setting selected parameters for Workspace tools	Use to change Units of Measurement used in status bar, Coast Time (seconds), and Flight Context-Menu Preferences. At some sites the General Settings menu contains is used to set up Alerts (regions and rules). ℹ️ **NOTE:** At sites that use Aerobahn Dynamic Rules, alerts are set up through Dynamic Rules. Alert parameters do not show in the General Settings menu.
Context Menu Settings on page 6-19	Open dialog box for configuring menu options that are available in a context menu.	These are context-sensitive workspace options that show when you right-click a target. A tool-specific context menu configuration overrides the workspace configuration.
Notification Settings	Open dialog box for configuring Notification Bar and Notification List	Use to subscribe to data sources and to configure the display of messages in the Notification Bar and the display and sound of new-notification alerts.

Table 6-1. Settings Menu Options (continued)

Menu Item	Action	Note
Tow Management Settings on page 7-276	Open dialog box for configuring the Tow Management tool.	Use to configure preferences for the Tow Management tool, including aircraft identifier, whether to estimate the end of a tow by duration or by a specific time, data fields to show, and tow regions to include in searches.
Request Response Settings	Open dialog box for configuring notifications related to departure metering requests	Use to configure notifications from the Request Response Manager related to departure metering requests.
Hotkey Settings	Open dialog box for configuring function keys (F1–F12)	Use to map the function keys that open Search, Workflow Transition, Remove Workflow, and Data Entry functions.
Data Change Highlighting Settings	Open dialog box for configuring color change and font bolding in selected conditions.	Use to change the color of table cells and table text when the data in those cells changes.
Workspace Toolbar	Show/Hide the toolbar	Legend Playback Pause Search
Workspace Status Bar	Show/Hide the status bar	0 37 31 N 73 45 57 W [x=4243.6 ft y=-6734.4 ft d=7959.9 ft

6.1 Configure Color Settings

You can set target display colors (edge and fill) for inbound, outbound, and unknown icons and the colors used in charts and tables.

1. Select **Settings > Color Settings**.

2. Select a color model (refer to *Color Models* on page 6-14).

3. Select (from the "Custom Colors" list) the item that will get a new color.

   > **ℹ NOTE**: To change the color of aircraft or other vehicles, select **Aircraft & Vehicles**. Expand an item (Coasted, Inbound, Mouse Over, Outbound...) to see its color options. Change Fill and Edge colors to change the basic color scheme for an icon.

4. Choose a color for the item selected in step 3 (refer to descriptions of the color models for notes on how to choose colors).

5. Click **Apply**.

6. When satisfied with all settings, click **OK** to apply changes and close the **Color Settings** dialog box.

Click **Reset to Defaults** to return custom color settings to default settings.

Color Preferences controls are also used to set a light or dark Workspace background (refer to *Set a Workspace Background* on page 3-5).

6.1.1 Configure Data Block Color

You can change the background and text color for data blocks and mouseovers through the **Color Preferences** dialog box.

1. Select **Settings > Color Settings**.

2. Select a color model.

3. Click **Aircraft & Vehicles** to expand the list.

4. Select the category in which you will reconfigure colors:

    ■ Data blocks for aircraft are configured according to an aircraft's state: Inbound, Outbound, Persisted, etc.

    ■ Mouseover data blocks are configured in the Mouseover category.

    ■ Vehicles are configured in the Vehicle category.

5. Select colors: Data Block Background and Data Block Text.

6. Click **Apply**.

7. Make sure that new colors are easily distinguished.

8. When all settings are complete, click **OK** to apply changes and close the **Color Settings** dialog box.

Refer to *Configure Data Blocks in Map Display* on page 7-205 for instructions on configuring the content in data blocks.

🛈 **NOTE:** When you configure the data blocks or mouseovers in one tool, the data block configuration does not change in other tools.

6.1.2 Configure Mouseover Colors

🛈 **NOTE:** For basic information about mouseover, refer to *Mouseover* on page 7-230.

You can configure colors related to Mouseover.

> ℹ **NOTE:** You can change the background color for unformatted mouseovers only.

1. Select **Settings > Color Settings**.

2. In the Custom Colors list, open the *Aircraft & Vehicles* group.

3. Open the *Mouse Over* group.

4. Change colors for the variables related to Mouseover:

   - Data Block Background

   - Data Block Text

   - Fill (icon color)

   - Edge (icon outline)

Refer to *Configure Color Settings* on page 6-2 for information on changing colors.

6.1.3 Configure Search and Selection Highlight Colors

Selection and Search highlighting can use different colors. You can configure Aerobahn to show a color difference in targets that you select manually and those that are identified by a search.

> ℹ **NOTE:** Refer to *Configure Color Settings* on page 6-2 for general instructions on how to change colors.

1. Select **Settings > Color Settings**.

2. Select a color model.

3. Click ⊞ to expand Aircraft & Vehicles.

4. Adjust "Search Highlight" and/or "Selection Highlight" colors.

   - To change the "Search Highlight" color, click ⊞ to open **Search** color settings. Change color settings.

   - To change the "Selection Highlight" color, click ⊞ to open **Selected** color settings. Change color settings.

5. Click **Apply**.

6. When settings are complete, click **OK** to apply changes and close the **Color Settings** dialog box.

Figure 6-1. Search and Selection Highlight Colors
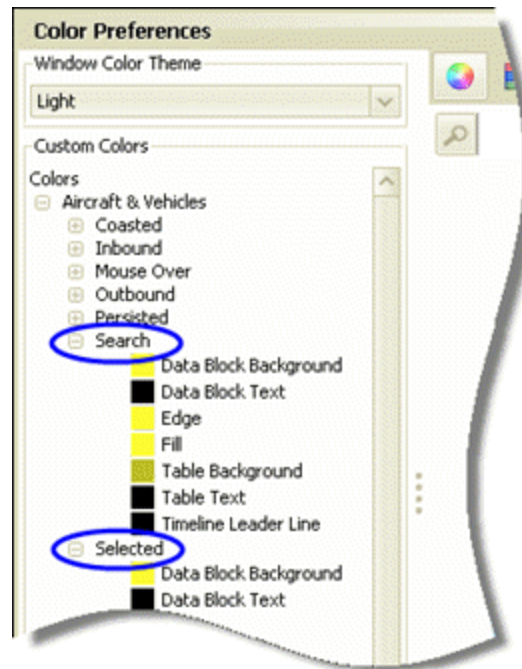
6.1.4 Configure Table Text Color

Region Occupancy Monitor table text is identified by color. You can configure table text colors through the *Color Preferences* window under "Aircraft & Vehicles" (refer to).

ℹ NOTE: Refer to *Configure Color Settings* for more information on configuring colors.

1. Select **Settings > Color Settings**.

2. Expand **Aircraft & Vehicles**.

3. Expand the aircraft state or select Vehicle. Inbound, Outbound, Unknown, etc.—all have separate Table Text settings.

4. Click **Table Text**.

5. Select the color model and the color for the table text.

6. Click **Apply**.

7. Make sure that new colors look right and are easily distinguished.

8. When satisfied with all settings, click **OK** to apply changes and close the Color Settings dialog box.

Figure 6-2. Table Text Color Preference Setting
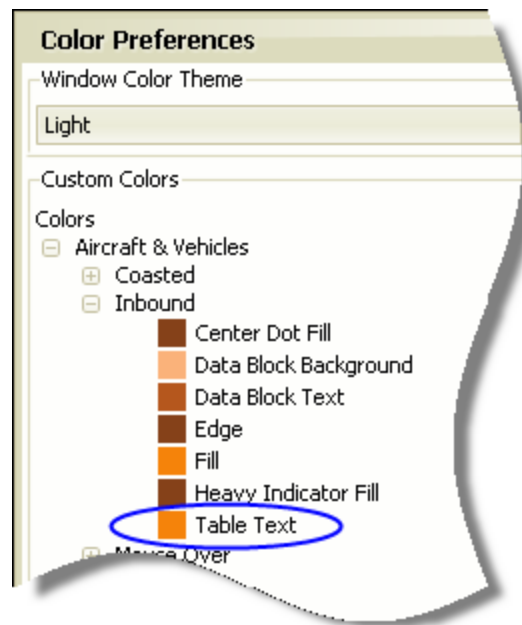
6.1.4.1 Show Data Changes

You can set up Aerobahn to change the color of table cells and table text when the data in those cells changes.

1. Select **Settings > Data Change Highlighting Settings**. The Data Change Highlighting dialog box opens (refer to).

2. Set up the cell text highlight color and cell background highlight color (refer to and to *Color Models*).

3. Set the text to bold or leave it at normal text weight.

4. Set the number of seconds for these changes to be active.

5. Select the data fields that will show these changes. (After you select these fields, the field names show in this dialog box.)

   - To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

   - To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕.

   - To remove one item from **Selected Fields**, select the item. Click ⊖ or double-click. The item moves to **Available Fields**.

   - To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊖. The items move to **Available Fields**.

   - To move all items from **Available Fields** to the **Selected Fields** window, click ⊕.

   - To remove all items from **Selected Fields**, click ⊕. The items move to **Available Fields**.

   - To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⊕ or ⊕ until it is in the correct location. To move an item to the top of the list, click ⊕. To move an item to the bottom of the list, click ⊕.

6. Click **OK** to save changes and close the dialog box. Click **Cancel** to close the dialog box without saving changes.

Figure 6-3. Data Change Highlighting Dialog Box
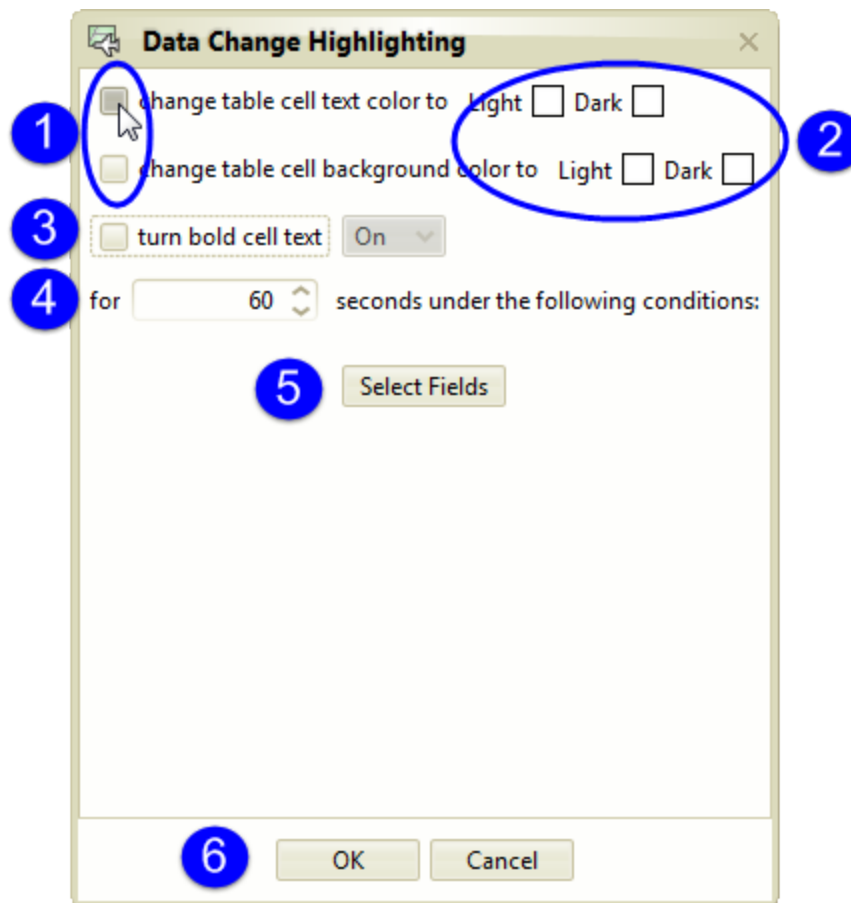
Table 6-2. Data Change Highlighting Controls

Control	Description
1	Click in these boxes to make the color selector active for table cell text or table cell background.
2	Click in these boxes to open the color selector (refer to Figure 6-4 on the facing page).
3	Click in this box to let you set the text weight to bold.
4	Set the number of seconds that all highlighting controls in this dialog box are effective after they become active.
5	Select the data fields that will show in the way that you configure them in this dialog box. After you select data fields, those data fields are listed in this dialog box.
6	Click **OK** to save changes and close the dialog box. Click **Cancel** to close the dialog box without saving changes.

Figure 6-4. Color Selector
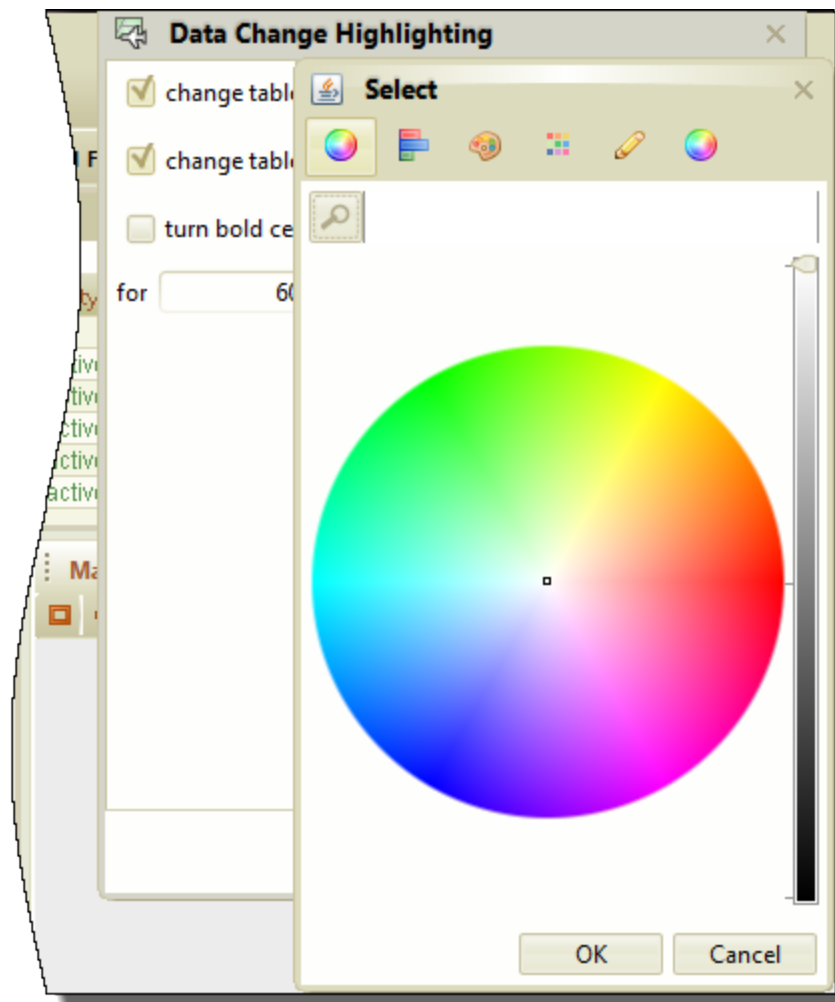
6.1.5 Configure Color of Taxi Waypoints

> ℹ️ **NOTE:** Refer to *Configure Color Settings* on page 6-2 for more information on configuring colors.

1. Select **Settings > Color Settings**.

2. Expand **Regions**.

3. Click the item to configure:

    - **Highlighted Manual Region**: This is the color of taxi waypoint regions added in the **Add Taxi Waypoints** tool.

    - **Highlighted Predicted Region**: This is the color of the individual regions that make up the predicted routing.

    - **Region Closure**: This is the color of a closed region.

    - **Highlighted Region**: This is the color of the regions that the target went through.

4. Click **Apply**.

5. Make sure that the new colors are correct.

6. When satisfied with all settings, click **OK** to apply changes and close the Color Settings dialog box.

i **NOTE:** To change the color of region labels, change the color of a region type. For example, to change the color of labels on taxiways, change the Taxiway region color.

Figure 6-5. Color Preference Settings—Taxi Waypoints and routing
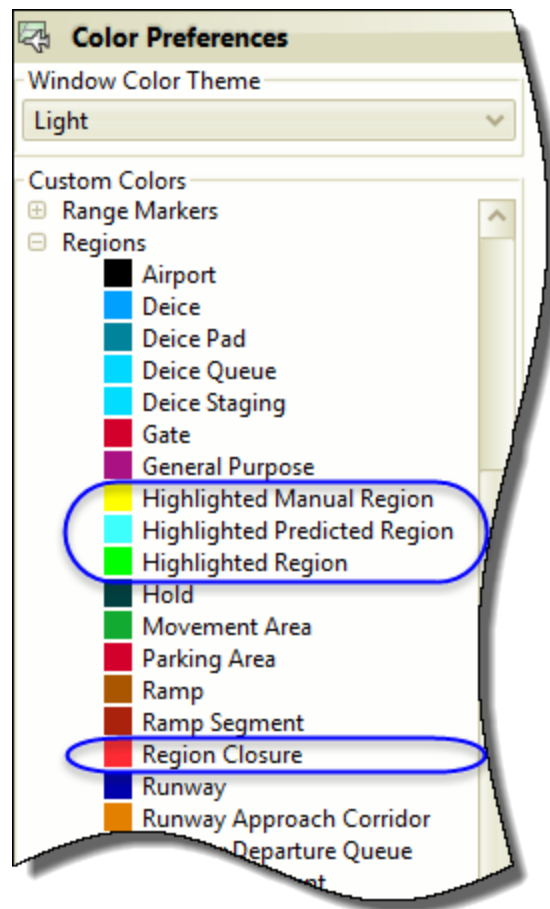
6.1.6 Configure Region Status Color

Map Display and Operations Timeline use color to show region status.

Map Display uses color to show active region warnings and region closures. You can configure region status colors through the *Color Preferences* window under "Regions."

1. Select **Settings > Color Settings**.

2. Expand **Region Status** to see region status colors in Map Display.

   i **NOTE**: Status options are configured on the server based on site-specific needs. The options that you see are based on your Aerobahn configuration and may be different from those that show in .

ℹ️   a. Select the color square for a status to configure.

b. Select the color model.

c. Select the color.

d. Click **Apply**. The new settings show in Map Display if the status is active.

3. Expand **Timeline** to set colors in Operations Timeline.

a. Select the color square to configure (refer to) :

- Region Closure Data Block Background
- Region Closure Leader Line
- Region Closure Text
- Region Warning Data Block Background
- Region Warning Leader Line
- Region Warning Text

b. Select the color model.

c. Select the color.

d. Click **Apply**. The new settings show in Operations Timeline if the status is active.

4. Make sure that new colors look correct and are easily distinguished.

5. Click **OK** to apply changes and close the **Color Preferences** dialog box.

Figure 6-6. Region Status Color Settings (examples)
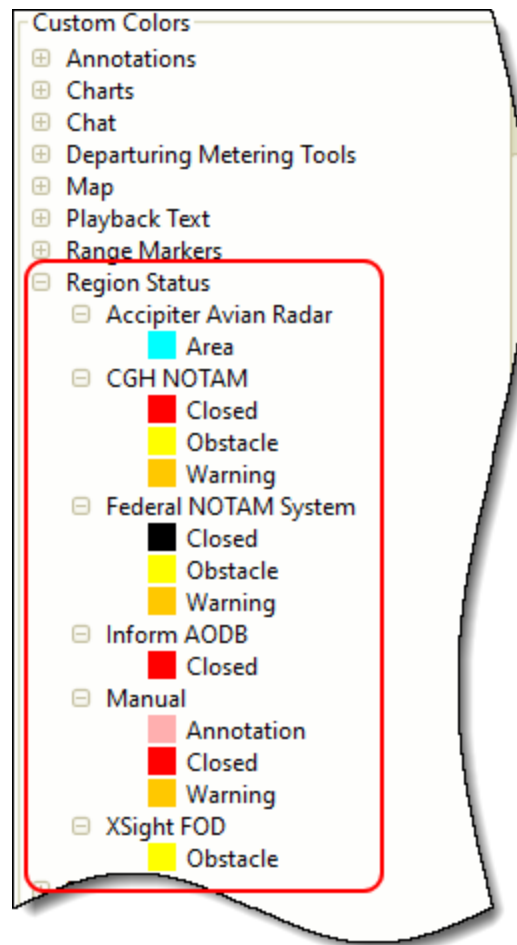
Figure 6-7. Operations Timeline Region Closure and Region Warning Color Settings (examples)
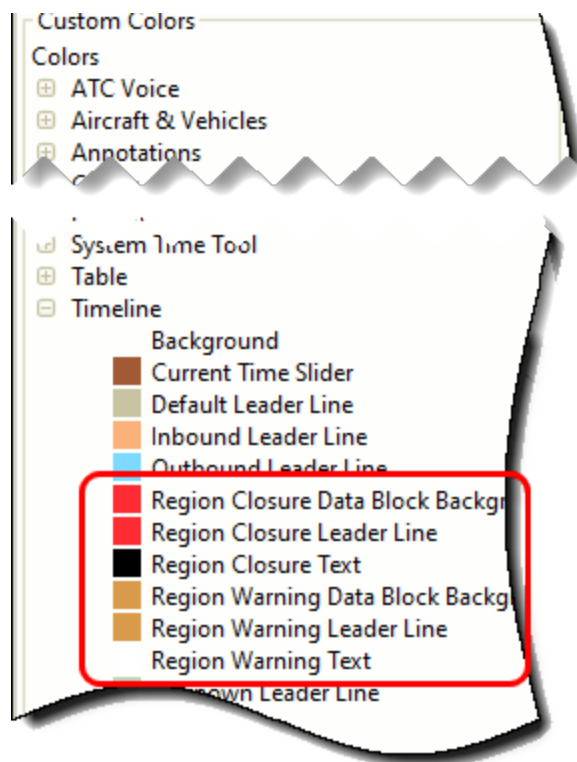
6.1.7 Color Models

Color Model	How to Choose Colors
	Color Wheel—Select a color by clicking in the circle. The selected color is applied to the selected target feature. ➡ If the color wheel shows black or very dark, slide the brightness slider toward the top of the bar.
	RGB Sliders—Enter values or move sliders. RGB (Red, Green, Blue) gives each shade of each color a value from 0 to 255. For example, RGB black is defined as "0 0 0" (0 units of Red, 0 units of Green, and 0 units of Blue), and RGB white is defined as "255 255 255" (255 units of Red, 255 units of Green, and 255 units of Blue). The RGB model represents more than 16 million colors.

Color Model	How to Choose Colors
	Palettes—Select a palette from the menu. Then, select a color from the palette. The selected color is applied to the selected object.
	Swatches—Select a color from those available. The selected color is applied to the selected object.
	Crayons—Select a color from those available. The selected color is applied to the selected object.
	Xoetrope Color Wheel—Select a color segment from the wheel, or enter values as numerals to populate hexadecimal and HSB (hue, saturation, and brightness) values. HSB controls represent each color with a 3-digit numeral. The first digit controls hue, with each degree (1 to 360) representing a distinct color. The second digit controls saturation, from 0% color to 100% color. The third digit controls brightness: 100 is maximum brightness. Hexadecimal values are often used by web designers.

6.2 General Settings

> ℹ️ **NOTE:** At sites that use Aerobahn Dynamic Rules, alerts are set up through Dynamic Rules. Alert parameters do not show in General Settings.

The **General Settings** dialog box gives you controls over a range of controls and is divided onto these tabs:

- Preferences
- Tool Preferences
- Workspace Preferences

The Tool Preferences and Workspace Preferences tabs contain font-size controls for various tool types and workspace features.

Preferences

The Preferences tab contains these controls:

- Controls that set <u>units of measurement</u> and <u>the coasting duration</u> used in **Map Display** (shown in the status bar)

- A check box that lets you control scrolling when you attempt to change workflow priority in Watch List Viewer or another table tool.
    - If "Use Drag and Drop to Scroll" is checked, scrolling occurs when you drag and drop.
    - If "Use Drag and Drop to Scroll" is not checked, scrolling does not occur when you drag and drop.

- Flight Context-Menu Preferences—Adjustments for the spacing and font size used menus that open when you right-click (refer to *Set Context Menu Preferences* on page 6-19).

Tool Preferences

Settings in this tab change font sizes for various features of Aerobahn tools.

Table 6-3. Tool Preferences

Preferences Setting	Description
Tabular Tool	Adjusts the way data shows in tools that display data in a table (e.g., Watch List Viewer, Selection Details). You can change two settings: - Font Size - Row Padding (the amount of space above and below the line of information)
Chart Tool	Adjusts font size in the Watch List Chart, De-ice Chart, and Ops Counts & Demand Tool. You see the change in the axis titles and labels for check boxes.
Tool Title	Adjusts font size for the name of a tool (upper left of tool) and for menu items that open through that title.
Tabbed Tool Title	Adjusts font size for the tool names that show on tabs when tools overlap.

Workspace Preferences

Settings in this tab change the font sizes of the Aerobahn workspace, the "frame" in which you open Aerobahn tools (refer to Figure 3-2 on page 3-1 for a guide to workspace elements) .

Table 6-4. Workspace Preferences

Preferences Setting	Description
Tool Bar	Adjusts font size in the the toolbar that shows the Legend, Playback, Pause, and Search buttons. ℹ **NOTE:** Results show only when **Settings > Workspace Toolbar** is enabled.
Status Bar	Adjusts font size in the status bar that shows the connection status at the bottom of the workspace. ℹ **NOTE:** Results show only when **Settings > Workspace Status Bar** is enabled.
System Menu	Adjusts font size for the menus at the top of the workspace: System, Workspace, Settings, Tools, Reporting, and Help.
Notification Bar	Adjusts font size for the notification bar and system time.

6.2.1 Configure Region Alerts

You can set up a rule to give a visual signal or other notification for aircraft that spend too much time in a selected region. Use "Is currently in region XYZ for more than…" criteria to set up this rule (refer to *Make a Rule* on page 4-75 for more information).

6.2.2 Configure Coast Time

A target that was moving but for which Aerobahn no longer receives updates from the surveillance system is referred to as a "coasting target."

To configure Coast Time so a target does not show in **Map Display** when Aerobahn stops receiving surveillance data related to that target, set Coast Time to "0."

1. Select **Settings > General Settings**.

2. Set "Coast Time" in seconds.

3. Click **Apply** to apply the new setting.

4. Click **OK** to confirm changes and to close the *Preferences* window.

A © replaces the icon for a coasting target at the last known location of the active target (refer to) . This coast symbol disappears if no data is received before the Coast Time expires. If surveillance data is received from the target in the Coast Time period, the target icon replaces the ©.

Figure 6-8. Coasting Target Icon

6.2.3 Configure Units Settings

Sets the unit of measurement used in **Map Display**. The selected unit of measurement is used in the Status Bar.

> ℹ **NOTE:** This setting is independent of the units setting in the controls for range rings.

1. Select **Settings > General Settings** in the Workspace Menu bar.

2. Open the *Preferences* tab.

3. Select the unit of measurement (feet, nautical miles, meters, or kilometers).

4. Click **Apply** to apply new settings.

5. When all preferences are set, click **OK** to confirm changes and close the General Settings controls.

6.2.4 Set Context Menu Preferences

You can adjust the spacing and font size for the context menus in the General Settings dialog box. The primary purpose of these adjustments is to improve visibility on some displays (refer to *Context Menu Settings* below and *Configure Context Menu Settings* on page 7-323 for how to configure the context menu).

1. Select **Settings > General Settings**.
2. Click **Preferences**.
3. Set preferences under "Flight Context (Right Click) Menu Preferences":
   - Adjust the spacing between items by moving the slider control for *Additional Vertical Space*.
   - Adjust the font size by moving the slider control for *Font Size*.
4. Apply changes.
   - Click **Apply** to apply the new setting without closing the window.
   - Click **OK** to confirm changes and close the Preferences window.

6.3 Context Menu Settings

When you right-click on a target, a context menu gives a predefined set of shortcuts for workflows, actions, or both.

ℹ **NOTE:** Context Menu Settings do not affect the menu that shows when you right-click the map.

You can configure the context menu contents for:

- Workspace
- Tools
  - Departure Metering
  - Active Flights
  - Operations Timeline
  - Region Occupancy Monitor
  - Gate Monitor
  - Watch List Viewer
  - De-icing Manager
  - Map Display
  - Extended Range Map Display

i **NOTE:** Workspace context menu settings are used to configure the context menu when tool-specific settings are not configured. In other words, tool-specific context menu settings override the workspace context menu settings when configured.

For more information on how to set up tool-specific context menus, refer to .

6.4 Configure Notification Settings

The **Notification Bar** posts events and status notifications based on subscriptions to data feeds. To subscribe to a data feed, use **Notification Settings**. You also use **Notification Settings** to set up how messages show in the **Notification Bar** and how alerts for new notifications sound and show (refer to).

Configure Subscriptions

1. Select **Settings > Notification Settings**.
2. Select the **Subscriptions** category.
3. Select the data sources (put a check in the box).
4. Optional—Select "Sound" and/or "Pop-up" boxes for more alerts when a notification comes. Then, select the Alert Settings category to configure sound and/or text alert settings.
5. Click **OK** to confirm settings and close **Notification Settings**. The **Notification Bar** displays information as data becomes available from the sources to which you subscribed.

Configure Bar Settings

Bar settings control the message display in the Notification Bar.

1. Select **Settings > Notification Settings**.

2. Select **Bar Settings**.

3. Select **Cycle through...** to show messages. (The **Notification Bar** does not show messages if "Cycle through..." is not checked.)

4. Configure the volume and length of messages in the message cycle.

5. Click **Apply** to test settings.

6. Click **OK** to confirm and close the dialog box.

Configure Alert Settings

You can associate a sound and a text alert with a new notification.

1. Select **Settings > Notification Settings**.

2. Select the **Alert Settings** category.

3. Configure the "Fade away..." time for the text message.

4. Configure the location for the text message.

5. Choose a sound.

6. Click **Apply** to test settings.

7. Click **OK** to confirm and close the dialog box.

6.5 Flight Data Settings

Aerobahn receives flight data from the surveillance system and other information sources. Where flight-data filtering is available through the **Flight Data Settings** tool, you can choose to receive all flight data to your Aerobahn client or to filter flight data to your Aerobahn client.

⚠️ **CAUTION:** Because the **Flight Data Settings** tool on your Aerobahn client prevents filtered data from reaching your Aerobahn client only, Aerobahn clients that use different **Flight Data Settings** may show different results for the same workspace or dynamic rules.

Flight-data filtering can be used to reduce unnecessary demand for bandwidth and memory on some Aerobahn client machines.

> **i** **NOTE:** For **Flight Data Settings** to be available in the Settings menu, there must be the Flight Data Filters defined for the site and the user must have permission to use the tool.
> Only Saab, Inc. can define Flight Data Filters.

---

1. Select **Settings > Flight Data Settings**. The **Flight Data Settings** dialog box opens.

2. Configure the flight data source:

    - Select **All Flight Data** to permit all flight data sources to feed the Aerobahn client.

    - Select **Filtered Flight Data** to limit flight data sources that feed the Aerobahn client.

        - Select specific filter(s).

            Available filters are based on site settings. A ☑ shows when a filter is selected.

3. Click **OK**.

6.6 Configure Request Response Settings

Configuring Request Response Settings affects one way that you can learn of requests made through the **Departure Metering** tool (refer to *Use Departure Metering* on page 7-64). You can configure alerts to be triggered by requests made for any carrier group or for your carrier group only.

Optional pop up messages can tell controllers when requests have been made. Messages can also tell what action the departure coordinator made in response to a request for a change in metering compliance or in metering allocations.

1. Select **Settings > Request Response Settings**.

2. Select the condition that defines the "Show answered pop-ups" condition. If you do not wish to show messages, select **never**, and go to step 7.

3. Select to make messages "Fade away... never" (remain on the screen until you close it) or to "Fade away ... after" a selected number of seconds.

4. Select the location for messages.

5. Select the condition that defines the "Show new request pop-ups" condition. If you do not wish to show messages, select **never**, and go to step 7.

6. Select the type (visual and/or audio) of notification.

7. Click **Preview Alert** to test settings.

8. Click **OK** to confirm settings and close.

You can also monitor the status of requests in the Status column in the Request Response Manager (refer to *Use the Request Response Manager on page 7-74*) .

6.7 Configure Hotkey Settings

When you set up function keys (F1 through F12) to start search, manual data entry, or workflow configuration, you can streamline these functions. You can use a hotkey to do one or more tasks.

ℹ **NOTE:** The Criteria button in **Hotkey Settings** dialog box is active only when you select an action (refer to step 2) that has a search function.

ℹ **NOTE:** User permissions set up the selections in the **Hotkey Settings** dialog box.

1. Select **Settings > Hotkey Settings**.

2. Select (from the dropdown menu) the action to be mapped to that function key (refer to *Hotkey Actions on the next page*).

3. Add to or end the function of the hotkey (Figure 6-9 on page 6-28) :
   - Select **and then** from the "period" dropdown. A new row shows below the current row so that you can configure the added function.
   - Select the period (default setting). This shows the end of the function for the hotkey.

4. Remove check from "Feedback Pop-up" if you *do not* want a system notification following a hotkey action.

5. Click **Criteria** to open the **Search Criteria** dialog box (refer to *Configure Hotkey Search Criteria on page 6-29*).

   ℹ **NOTE**: The same Search Criteria are used for all functions of one hotkey.

6. Select the search criteria (refer to *Improve Hotkey Searches on page 6-29*).

7. Click **OK**.

➡ Select **Match Flight Number Exactly** to search only the numbers in one of these fields: Call Sign Operating Carrier, Flight ID (Aerobahn), and Flight ID (Manual).

Hotkey Actions

Table 6-5. Hotkey Actions

Highlight Flight	This sets up a function key to highlight one or more targets (refer to *Search for Targets with Hotkeys* on page 3-33).
Workflow Transition	Select the "transition to" state (refer to *Workflows and Workflow State Sets* on page 9-28).
Remove Workflow	Select the state from which you will transition the selected flight(s) (refer to *Workflows and Workflow State Sets* on page 9-28).
Set/Clear Workflow	If you select this option for a hotkey, "Set/Clear Workflow" must be the first and only action for that hotkey. Aerobahn prompts you to select a workflow state that completes the command. When a workflow state is set, use this hotkey to clear the state. When the workflow state is not set for the selected flight, use this hotkey to set the workflow state. The button label in the Hotkey Dashboard or on the hotkey button in a table shows "Set" or "Clear" depending on the state of the workflow state for the selected flight.
Data Entry	Select the manual data-entry field to open. Each function key can open only one manual data-entry field. Three actions are available: ■ Enter Value—You can enter a value in the dialog box that opens for the data field assigned to that hotkey. ■ Set Value—The current time is set as a value in the dialog box that opens for the data field assigned to that hotkey. ■ Clear Value—This action removes the value set for the data field assigned to that hotkey.

Table 6-5. Hotkey Actions (continued)

Set/Clear Data Field	If you select this option for a hotkey, "Set/Clear Data Field" must be the first and only action for that hotkey. You must select a data field, and Aerobahn responds with either a dialog box that gives you options from which you select, or it provides a system response to the data field that you selected. For example, if you select "Metering Compliance Status, Aerobahn gives you the Set Value dialog box. Then you select a compliance override that is applied if there was no value when you invoked the hotkey. If there was a value in that data field, it would be cleared when you invoked the "Set/Clear Metering Compliance Status" hotkey.
	For another example, if you selected a data field such as "Aircraft Cabin Door Closed," Aerobahn sets a "True" value if there was no value when you invoked the hotkey. If there was already some data in that field (True or False), Aerobahn would clear that value.
	The button label in the Hotkey Dashboard or on the hotkey button in a table shows "Set" or "Clear" depending on the state of the data field for the selected flight.
Activate Menu Option	Select a menu option to activate by pressing a function key. This can offer a shortcut through nested menus.
Schedule Flow Restriction	Use this setting to assign a hotkey the power to apply a named flow restriction to a selected flight. A flow restriction controls how departure fixes are used, and it controls time for the departure sequence. For more information on flow restrictions, refer to *Manage Flow Restrictions* on page 4-15.
	When you select this hotkey for a selected flight, the assigned flow restriction is applied to the flight.
Remove Flow Restriction	Use this setting to assign a hotkey the power to remove any flow restriction from a selected flight.
Clear A-CDM Milestones	⚠ **CAUTION:** When you clear A-CDM milestones, Aerobahn takes a flight out of the departure sequence.
	Use this setting to assign a hotkey to open the **Clear A-CDM Milestones** search dialog box (refer to *Use a Hotkey to Clear A-CDM Milestones* on page 7-145.
Set Airport Configuration	To use this feature, you must have a saved airport configuration (refer to *Set an Airport Configuration* on page 4-40). An airport configuration is made up of Departure and Arrival runway rules for assigning a flight's runway and parameters for configuring departure metering or pre-departure sequencing.
	Use this setting to assign a hotkey the power to apply a selected (saved) airport configuration.

Table 6-5. Hotkey Actions (continued)

Add Taxi Waypoints	**ℹ NOTE:** If you configure and use a hotkey for **Add Taxi Waypoints**, it is possible to change the taxi routing for multiple flights. For example, you could select multiple flights, press the hotkey for **Add Taxi Waypoints**, and change the routing for all of those flights at one time. Use this setting to assign a hotkey to open the **Add Taxi Waypoints** dialog box (refer to *Add Taxi Waypoints* on page 7-278 ["Method 3: No Flight Selected" or "Method 4: Multiple Flights Selected"]).
View A-CDM Alerts	Use this setting to assign a hotkey to open the **A-CDM Alerts Viewer** when a flight is selected or to open the **View A-CDM Alerts** dialog box opens if you select no flights or more than one flight (refer to *Manage A-CDM Alerts* on page 7-132).
Tow Management	Use this setting to select from three options: ■ Start/Schedule/Edit Tow—Opens the Tow Management dialog box (refer to *Manage Towing* on page 7-268). ■ Complete Tow (refer to hotkey instructions in *Complete a Tow* on page 7-272) ■ Remove Tow (refer to hotkey instructions in *Remove Tow* on page 7-273
Unfreeze All TSATs	This hotkey feature is for A-CDM sites that use the Pre-Departure Sequencer (PDS) (refer to *Unfreeze all TSATs* on page 7-139).
Reset De-icing	Use this setting to assign a hotkey to clear several de-icing fields for a selected flight (refer to *Flight Progress* on page 7-165 for a list of these de-icing fields and instructions).
Set De-icing Configuration	Use this setting to open the **Set De-ice Configuration** dialog box. If you select one flight or multiple flights and press the hotkey, the changes that you make in the **Set De-ice Configuration** dialog box apply to the selected flight (s) only. If no flights are selected, the **Set De-ice Configuration** dialog box, opens with a search tool. Use the **Set De-ice Configuration** dialog box to configure de-ice mode, location, duration and to select de-ice trucks.
Set Metering Configuration	Use this setting to open the **Set Metering Configuration** dialog box. 1. Select a metering location (Metering Point (Manual)[1] data field). 2. Enter the number of minutes that the selected flight will be at that location (Metering Point Duration (Manual)[2] data field).

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[1]User-entered taxiway segment designated for metering.

[2]The user-entered amount of time that an aircraft is expected to wait at the assigned metering point.

Table 6-5. Hotkey Actions (continued)

Update Dynamic Cameras	Use this setting to do these: ■ Open **Dynamic Camera Viewer** (if it is not already opened) ■ Update video stream tabs
Static Camera Viewer Tool	Use this setting to do these: ■ Open **Static Camera Viewer** (if it is not already opened) ■ Apply a new layout
Add Arrival/Departure	Use this setting to open the **Add Scheduled Arrival Flight** / **Add Scheduled Departure Flight** dialog box (refer to *Add a flight to the Scheduled Flights table* on page 4-93).

Set/Clear Data Fields

Table 6-6. Set/Clear Data Fields: Actions

Data Field "for field" Selection	Set/Clear Actions
Flight Priority (ATC)	■ Select a flight that has "Flight Priority (ATC)" set to "Inactive" or "Inactive (M)." Press the hotkey to set the flight data field to "Active (M)." ■ Select a flight that has "Flight Priority (ATC)" set to "Active" or "Active (M)." Press the hotkey to set the flight data field to "Inactive (M)."
Flight Priority (Carrier)	■ Select a flight that has "Flight Priority (Carrier)" set to "Inactive" or "Inactive (M)." Press the hotkey to set the flight data field to "Active (M)." ■ Select a flight that has "Flight Priority (Carrier)" set to "Active" or "Active (M)." Press the hotkey to set the flight data field to "Inactive (M)."
datetime data field (e.g., Target Off Block Time, Target Startup Approval Time)	■ Select a flight that has an empty datetime data field. Press the hotkey to set the datetime data field to the current time. ■ Select a flight that has a datetime data field that is not empty. Press the hotkey to clear (empty) the datetime data field.

Table 6-6. Set/Clear Data Fields: Actions (continued)

Data Field "for field" Selection	Set/Clear Actions
Metering Compliance Status	■ Select a flight that has a Metering Compliance Status of "No Compliance Status." Press the hotkey to set the flight data field to the configured compliance status value. ■ Select a flight that has a Metering Compliance Status that is *not* "No Compliance Status." Press the hotkey to clear the flight data field to "No Compliance Status."
enumeration (e.g., passenger count), duration (e.g., de-ice duration, minimum turn-around time), or text (e.g., scratchpad) data fields	■ Select a flight that has a flight data field configured for enumeration, duration, or text, and the value for this configured data field is empty. Press the hotkey to set the flight data field to the configured value. ■ Select a flight that has a flight data field configured for enumeration, duration, or text, and the configured flight data field is *not empty*. Press the hotkey to clear the configured flight data field.

Figure 6-9. Hotkey Configuration, Multiple Functions
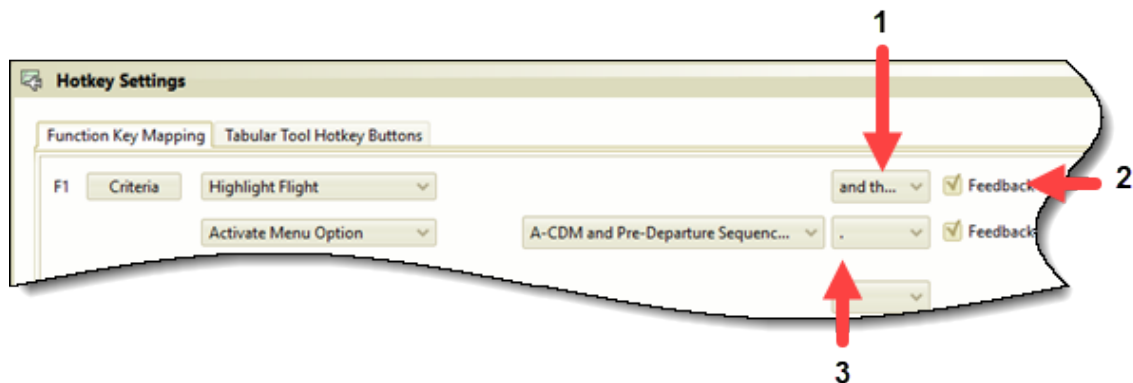
Table 6-7. Hotkey Configuration, Multiple Functions

Item	Description
1	Select "and then" to add a function to a hotkey action.
2	Select feedback pop-up action for each function.
3	Select the period for the final function of a hotkey configuration.

Improve Hotkey Searches

When you select the features to include in hotkey search criteria, include only those Operation States and Carrier Groups that you will include in your searches.

For example, limit the selection of flights to those flights...

- under or to not under surveillance
- inbound or outbound
- with specified data fields
- in specified operational states (More than 1 item can be added at one time. Entries must be separated by a comma.)
- in specified carrier groups (More than 1 item can be added at one time. Entries must be separated by a comma.)

As you decrease the selected options from "All," you decrease the number of flights that show when you start a search from a hotkey.

6.7.1 Configure Hotkey Search Criteria

Hotkey actions can work through a search, or you can select targets and press a hotkey to do one or more tasks.

Aerobahn uses selected targets before it uses the Search dialog box. If you have not selected flights when you press a hotkey, the Search function starts.

ℹ NOTE: The Criteria button in **Hotkey Settings** dialog box is active only when you select an action (refer to step 2) that has a search function.

1. Select **Settings > Hotkey Settings**.
2. Select (from the dropdown menu) the action to be mapped to that hotkey (refer to *Configure Hotkey Settings* on page 6-23 for information on actions).
3. Click **Criteria** to open the **Search Criteria** dialog box.
4. Select the items to include in your search criteria. Select only those Operation States and Carrier Groups to include in your searches in the Selected window.

For example, limit the selection of flights to those flights...

- under or not under surveillance ("Flights" section)
- inbound or outbound ("Direction" section)
- with specified data fields ("Search Fields" section)
- in specified operational states (More than 1 item can be added at one time. Entries must be separated by a comma.)
- in specified carrier groups (More than 1 item can be added at one time. Isolate entries with a comma.)

As you decrease the selected items from "All," you decrease the number of flights that show when you start a search from a hotkey.

5. Click **OK**.

Select **Match Flight Number Exactly** to search only the numbers in one of these fields: Call Sign Operating Carrier, Flight ID (Aerobahn), and Flight ID (Manual).

6.8 Status Bar

The status bar displays coordinates and parameters related to the cursor location:

- latitude and longitude of pointer in degrees
- x-axis, y-axis, and radial distance from the system center (refer to *Configure Units Settings* on page 6-18 for instructions on how to select units of measurement).
- angle from the system center in degrees

Show or hide the Status Bar through **Settings > Workspace Status Bar**.

7 Real-Time Tools

Real-time tools let you examine airport operations in live (streaming data) mode. Workspace tools show real- and near-real-time information. (Some tools report after a 5-minute delay.) Information is stored.

In live and playback modes, real-time tools use situational information to assemble a full picture of airside operations. Compare data to see how operations change with time.

Click a tool in the *Tools* menu to open it in the Workspace. User permissions control access to tools.

For a description of each real-time tool, refer to *Tool Set Summary* on the next page.

You can find instructions for using real-time tools in these sections:

Tool Set Summary

Most real-time tools are collected in groups of similar tools in the Tools menu.

Table 7-1. Real-Time Tools (Alphabetical Listing)

Tool	Tool Group	Tool Description
Active Flights	Flights and Watch Lists	Identifies current inbound and outbound flights along with delay status, origination/destination airport, Estimated Time of Arrival/Estimated Time of Departure (ETA/ETD), Status[1], and Elapsed Time in a table tool (refer to *Use the Active Flights Tool* on page 7-77).
Airport Demand	Airport Statistics	Shows scheduled and predicted arrival and departure demand in bar charts (refer to *Use the Airport Demand Tool* on page 7-6).
Airport Status Dashboard	—	Supplies status summaries and information related to the operations your airport (refer to *Use the Airport Status Dashboard* on page 7-146).
Airport Status Delay	—	Shows active NAS delay status information in the USA (refer to *Airport Status Delay* on page 7-157).
ATC Voice Channels	—	Supplies audio from a selected channel (refer to *Use ATC Voice Channels* on page 7-157).
Chat	—	Lets you send and receive text messages to and from selected Aerobahn users or "Chat Channel" groups (refer to *Use the Chat Tool* on page 7-158).
Compliance Monitor	Departure Metering	Supplies a report of departure metering compliance for each carrier group and flight-specific information for non-compliant flights (refer to *Use Compliance Monitor* on page 7-62.
Congestion Monitor Graph	Airport Statistics	Shows a configurable bar chart of congestion data for defined region area over a defined time period (refer to *Use Congestion Monitor Graph* on page 7-11).

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[1]The calculated state of a target displayed in a data block or mouseover: "UNK" (unknown), "INB" (inbound), "OUT" (outbound), or "PER" (persisted). In Diverted Flights Viewer, various flight status information provided by a third-party source.

Table 7-1. Real-Time Tools (Alphabetical Listing) (continued)

Tool	Tool Group	Tool Description
Congestion Statistics	Airport Statistics	shows the largest number of aircraft that Aerobahn predicts will be in a selected region and the time that the congestion is predicted to happen or a countdown to the time that the congestion is predicted to happen (refer to *Use Congestion Statistics* on page 7-8.
Current Runway Usage	Airport Statistics	Supplies current runway operation statistics (refer to *Use the Current Runway Usage Tool* on page 7-18).
De-icing Manager	—	Helps you to look for specific flights, to start de-icing workflows, to change de-icing status for individual flights, to examine de-icing queue lengths and occupancy times, and to record de-icing process milestones (refer to *Use the De-icing Manager* on page 7-164).
De-icing Throughput	Airport Statistics	Shows throughput and current occupancy statistics collected for a time period. Refer to *Use the De-icing Throughput Tool* on page 7-19.
Delays by Region	Airport Statistics	Gives notice of delays by region. You can configure the short- and long-delay signals (refer to *Use the Delays by Region Tool* on page 7-21).
Departure Metering	Departure Metering	Lets you see and change carrier-group allocations (refer to *Use Departure Metering* on page 7-64).
Diverted Flights Viewer	Flights and Watch Lists	Identifies active diverted flights and related recovery flights (refer to *Use the Diverted Flights Viewer* on page 7-80).
Extended Range Map Display	—	Provides an image of aircraft positions based on en route surveillance data (refer to *Use the Extended Range Map Display Tool* on page 7-187).
Flight Delay Summary	Airport Statistics	Supplies Average Flight Delay and Delayed Flight Counts graphs (refer to *Use the Flight Delay Summary Tool* on page 7-23).
Gate Monitor	Flights and Watch Lists	Shows gate status in a table format (refer to *Use Gate Monitor* on page 7-100).
Hourly Operation Counts Gauge	Airport Statistics	Shows the number of completed and forecasted operations over a 1-hour window in a graphical representation of a gauge (refer to *Use the Hourly Operation Counts Gauge* on page 7-25*Use the Hourly Operation Counts Gauge* on page 7-25
Hourly Operation Counts Graph	Airport Statistics	Shows the number of actual and predicted operations in a stacked bar graph (refer to *Use the Hourly Operation Counts Graph* on page 7-28).

Table 7-1. Real-Time Tools (Alphabetical Listing) (continued)

Tool	Tool Group	Tool Description
Map Display	—	Shows the airport surface and the movement area. Icons representing aircraft and vehicles move across a map of the airport. You can open more than 1 **Map Display** to show more than 1 view of an airport (refer to *Use the Map Display Tool on page 7-195*).
METAR report	Meteorology	Supplies an hourly aviation weather report (refer to *Use Meteorology Tools on page 7-130*).
NOTAM Viewer	—	Lists all active Notices to Airmen that are related to your Aerobahn site (refer to *Use the NOTAM Viewer on page 7-293*).
Operation Counts - Airport	Airport Statistics	Gives statistics for ground operations in a bar chart (refer to *Use the Operation Counts - Airport Tool on page 7-38*).
Operation Counts - Carrier	Airport Statistics	Gives ground operation statistics for each airline for the previous day and one week ago (refer to *Use the Operation Counts - Carrier Tool on page 7-39*).
Operation Counts - Runway	Airport Statistics	Gives hourly statistics for the past 24 hours of arrivals and departures for the list of runways (refer to *Use the Operation Counts - Runway Tool on page 7-39*).
Operations Timeline	Flights and Watch Lists	Predicts operations for a single runway or for the airport (refer to *Use the Operations Timeline Tool on page 7-82*).
Region Occupancy Monitor	Flights and Watch Lists	Supplies information on aircraft or vehicles in a selected region. You can run up to 6 sessions at a time (refer to *Use the Region Occupancy Monitor on page 7-100*).
Request Response Manager	Departure Metering	Controllers use the **Request Response Manager** to see requests and coordinator responses and to cancel their own requests. Departure coordinators use the **Request Response Manager** to identify and to respond to requests for allocations or to change the compliance status of a flight (refer to *Use the Request Response Manager on page 7-74*).
Selection Details	—	Supplies information about a target selected from any tool. You select which data fields to show and how to sequence them (refer to *Use the Selection Details Tool on page 7-298*).
System Time	—	Supplies a system clock (refer to *Use the System Time Tool on page 7-311*).
TAF Report	Meteorology	Supplies an aviation-related weather forecast (refer to *Use Meteorology Tools on page 7-130*).

Table 7-1. Real-Time Tools (Alphabetical Listing) (continued)

Tool	Tool Group	Tool Description
Taxi Time	Airport Statistics	Shows (bar chart) average, minimum, and maximum taxi times for individual runways and for the airport (refer to *Use the Taxi Time Tool* on page 7-46).
Watch List Chart	Flights and Watch Lists	Plots data about Watch List activity (refer to *Watch List Chart* on page 7-111 and *Use the Watch List Chart Tool* on page 7-115.
Watch List Count	Flights and Watch Lists	Shows the number of flights in a selected watch list or the number of flights selected by one or more rules (refer to *Use Watch List Count* on page 7-108).
Watch List Statistics	Flights and Watch Lists	Shows a selected statistic (count, occupancy time, or rate) for a selected watch list (refer to *Use Watch List Statistics* on page 7-110).
Watch List Viewer	Flights and Watch Lists	Supplies a tabular display of target data for All Flights, data generated by a rule, or data that populates a Watch List (refer to *Use the Watch List Viewer* on page 7-120).

7.1 Imported Tool

You can export the current settings of a real-time tool and restore the previously saved settings.

7.1.1 Export Tool Settings

1. Select **<*TOOL NAME*> > Export Tool Settings** (refer to Figure 7-1 below for an example).
   The Save window opens.

Figure 7-1. Export Tool Settings Menu Command (Example)
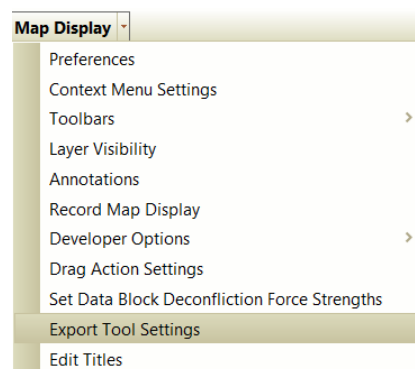
2. Enter a file name.

3. Click **Save**.

7.1.2 Import Tool Settings

1. Select **Tools > Imported Tool**.
   The Open window opens.

2. Select a saved tool settings file.

3. Click **Open**.

7.2 Airport Statistics Tools

Aerobahn Airport Statistics tools give real-time data to help you to control airport operations.

7.2.1 Use the Airport Demand Tool

Airport Demand compares scheduled and predicted arrival and departure requirements in a bar chart.

Compare scheduled and predicted arrivals or departures

1. Select **Tools > Airport Statistics > Airport Demand** to open the **Airport Demand** tool.

2. Select **Airport Demand > Flight Direction > [Arrivals / Departures]**.

3. Select **Airport Demand > Select Source of Estimates > [Aerobahn / ATC]**. The display updates.

   - If the *Source of Estimates* is "ATC," only "Airport" is available in the Runway menu. ATC estimates are not given to runways.

   - If the *Source of Estimates* is "Aerobahn," individual runways are available as menu selections.

     Scheduled counts are not given to an individual runway or to runway regions. If an individual runway or a runway region is selected, the chart becomes a single-bar series group that shows estimated counts only.

4. Select **Airport Demand > Runway >** [select a runway or **Airport**]. The display updates immediately.

Data are given in four 30-minute increments starting with the current half-hour time bin. For example, if the current time is 19:04, the first time bin is 19:00 to 19:30. If the current time is 19:46, the first time bin is 19:30 to 20:00.

The bar value shows above each bar. The sum of scheduled operations and the sum of estimated (predicted) operations in the 2-hour period show above the bar chart.

ℹ NOTE: Except for Edit Titles, for all functions opened through the Airport Demand, this permission is necessary: **Modify Airport Demand Settings**. If you can see Airport Demand but do not have **Modify Airport Demand Settings** permission, Aerobahn shows only Edit Titles in the **Airport Demand** menu.

Show/Hide Contents

You can toggle display of Capacity, Bar Values, and the Legend:

- Capacity (refer to 1 in the figure)—Select **Airport Demand > Show/Hide Capacity**. Then, select **Show** or **Hide**.
- Bar Values (refer to 2 in the figure)—Select **Airport Demand > Show/Hide Bar Values**. Then, select **Show** or **Hide**.
- Legend (refer to 3 in the figure)—Select **Airport Demand > Show/Hide Legend**. Then, select **Show** or **Hide**.

  ℹ NOTE: The source of estimates [Aerobahn or ATC] is shown between parentheses.

Figure 7-2. Bar Chart Features
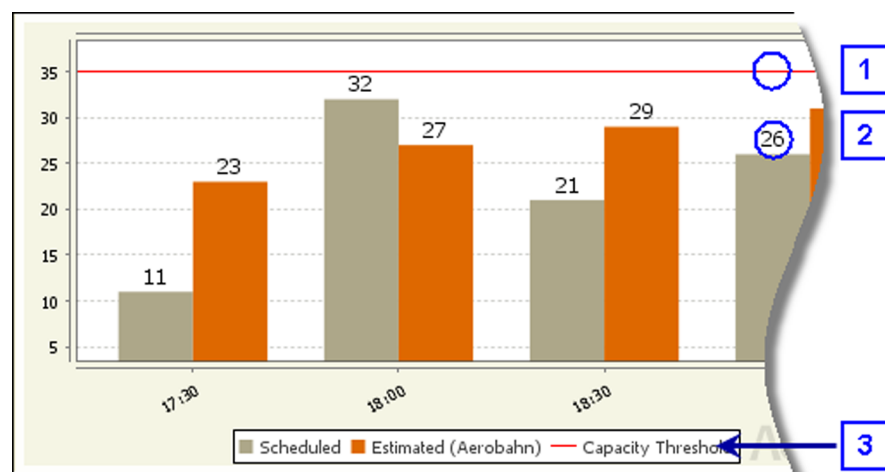
Configure Capacity Threshold

⚠️ **CAUTION:** Changing the configured threshold value affects all **Airport Demand** displays at a site.

1. Select **Airport Demand > Capacity Configuration**.
2. Enter a value for the airport and/or for any runway.
3. Click **OK** to apply all configuration changes and to close the control window.

Select **Airport Demand > Show/Hide Capacity** to show the capacity threshold as a line across the bar chart.

Use Zoom Controls

You can zoom in and out on the "Range"/"Y" (vertical) axis only.

Use these procedures to control zoom view:

- Right-click to open a menu, and choose the zoom option.
- Press the scrolling wheel on a scrolling mouse and select a portion of the bar chart. The selected part of **Map Display** fills the tool window.

To return a bar chart to its default zoom settings, right-click in the tool, and select **Auto Range > Range Axis**.

Use Screen Captures

Refer to for information on how to make, save, and print screen captures.

7.2.2 Use Congestion Statistics

Congestion Statistics shows...

- the largest number of aircraft that Aerobahn predicts will be in a selected region and
- the time that the congestion is predicted to happen or a countdown to the time that the congestion is predicted to happen

The count is a future value that can extend past a "look-ahead" value that is configured on the server (typically 2 hours). This limit shows in the **Congestion Monitor Graph**.

1. Select **Tools > Airport Statistics > Congestion Statistics**. The tool opens.
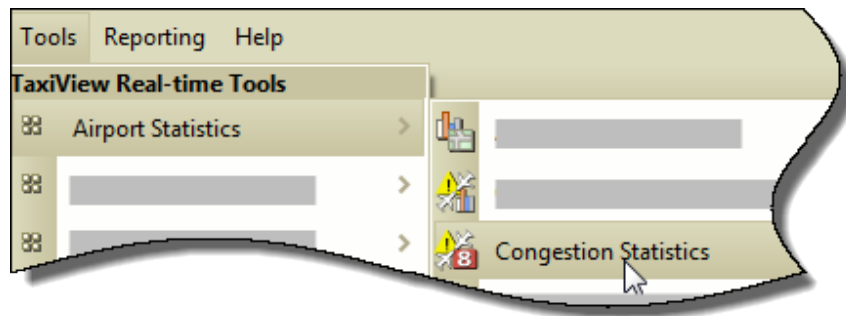
2. Select a congestion area:

   ℹ NOTE: Congestion areas are defined region areas on the Aerobahn server. To show the region (congestion area) in **Map Display**, look in the Layer Visibility dialog box. Most of the congestion areas are organized in the General Purpose section.

   ---

   a. Select **Congestion Statistics > Select Congestion Area**.

   b. Select a congestion area from the menu.

   c. Click **OK**.

3. Select **Congestion Statistics > Display Options** to configure the tool display (refer to *Configure the Congestion Statistics Tool* below for more information).

7.2.2.1 Configure the Congestion Statistics Tool

Configure the **Congestion Statistics** tool appearance through the **Display Options** dialog box and by setting thresholds.

1. Select **Congestion Statistics > Display Options**. The **Display Options** dialog box opens.

   a. Set the Content Options, Count Indicator, and Count Label.

      - Content Options—Make sure that a check mark shows in "Display Time of Peak Congestion" if you want to show the time or the countdown marker.

      - Count Indicator—Key over the size, or click to increase or decrease it. Click in the color square to open the color selector dialog box.

      - Count Label—Enter new label text. Key over the size, or click to increase or decrease it. Click in the color square to open the color selector dialog box (refer to *Color Models* on page 6-14 for more information).

   b. Save settings:

      - Click **Apply** to save settings and keep the dialog box open.

      - Click **OK** to save settings and close the dialog box.

2. Set thresholds that change the color of the number and background when the count is greater than or less than a set value.

   a. Select **Congestion Statistics > Thresholds**. The **Thresholds** dialog box opens.

   b. Select **Greater Than** or **Less Than**.

   c. Click **Add Threshold**. The **Add Thresholds** dialog box opens.

   d. Enter a value for the threshold.

   e. Click in the color square to open the color selector dialog box. ("Light" and "Dark" refer to the color theme (refer to *Set a Workspace Background* on page 3-5 and to *Color Models* on page 6-14 for more information on the color selector dialog box).

   f. Click **OK**. When the threshold value is met, the colors change as configured.

Figure 7-3. Congestion Statistics Tool Display Options
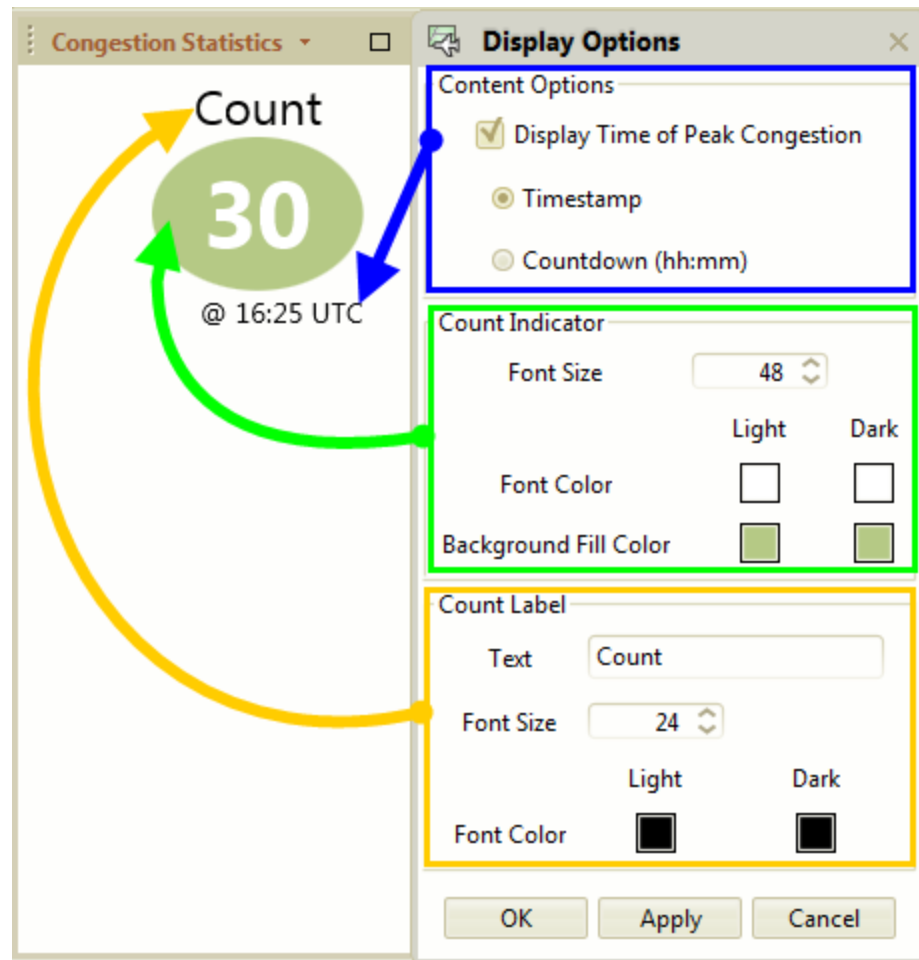
7.2.3 Use Congestion Monitor Graph

1. Open **Congestion Monitor Graph** (two methods):

   - Select **Tools > Airport Statistics > Congestion Monitor Graph**.
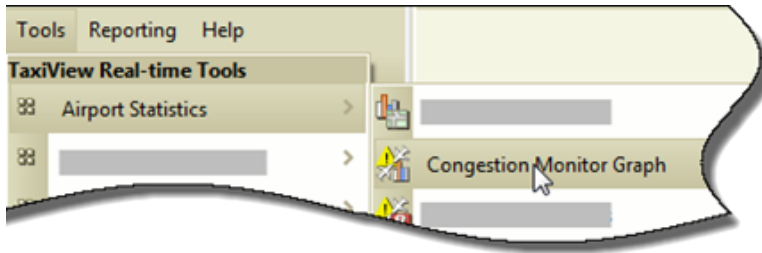
   - From **Congestion Statistics**, select **Congestion Statistics > Launch Congestion Graph Tool**.
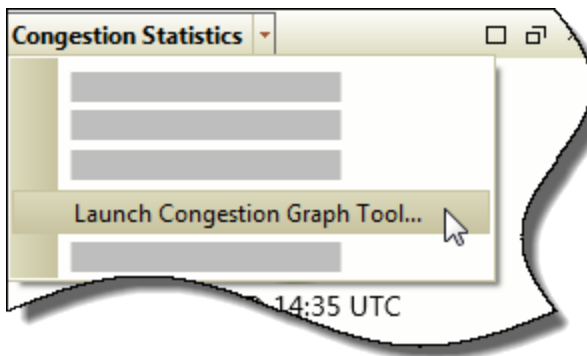
2. Select **Congestion Monitor Graph > Select Congestion Area**.

   ℹ **NOTE**: Congestion areas are defined region areas on the Aerobahn server. To show the region (congestion area) in **Map Display**, look in the Layer Visibility dialog box. Most of the congestion areas are organized in the General Purpose section.

   a. Select **Congestion Statistics > Select Congestion Area**.

   b. Select a congestion area from the menu.

   c. Click **OK**.

This sets up a basic **Congestion Monitor Graph**. You can configure the range (y-axis), the title, the time scale, the plots that show, the position and color of a threshold marker, and show or hide grid lines and the legend (refer to *Configure the Congestion Monitor Graph* on the facing page).

7.2.3.1 Configure the Congestion Monitor Graph

You can configure the congestion area, the range (y-axis), the title, the time scale, the plots that show, the position and color of a threshold marker. You can show or hide grid lines and the legend.

Figure 7-4. Configuration Monitor Graph, Configurable Features
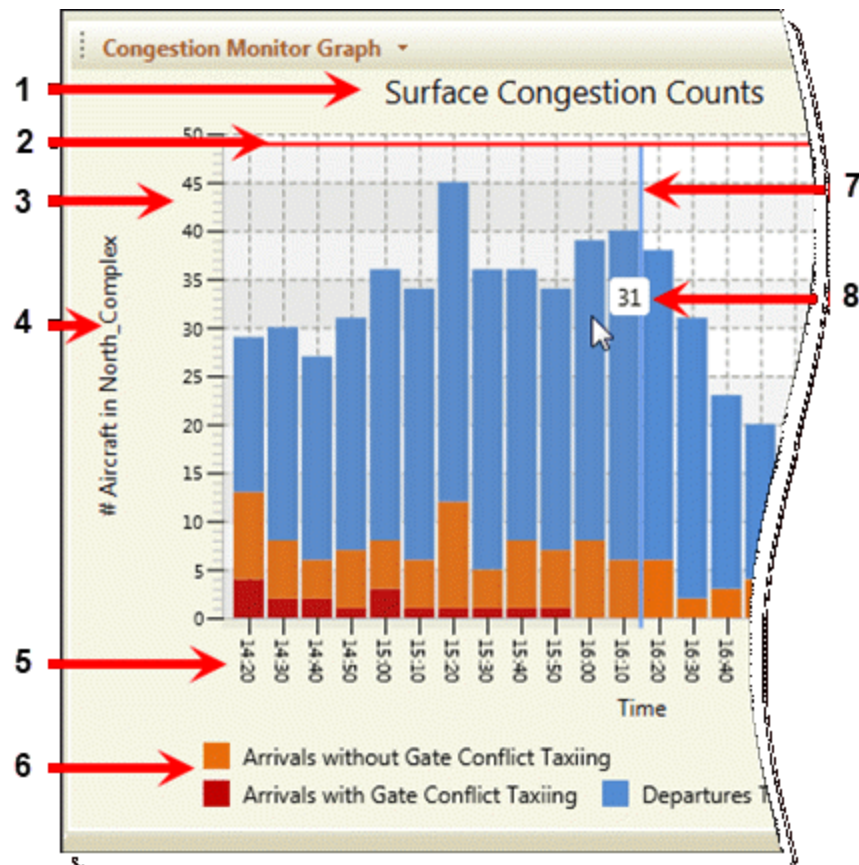
Table 7-2. Configuration Monitor Graph, Configurable Features

Item	Reference
1	Title—Enter the title text in the Options dialog box. *Set up Congestion Graph Options* on page 7-15
2	Threshold marker—*Set a Congestion Graph Threshold* on page 7-16
3	Axis—*Set the Axis Range in the Congestion Graph* on page 7-16
4	Congestion Area label—*Select Congestion Area* on page 7-15
5	Time Scale—*Set up Congestion Graph Options* on page 7-15

Table 7-2. Configuration Monitor Graph, Configurable Features (continued)

Item	Reference
6	Legend *Show or Hide the Grid Lines: Congestion Monitor Graph* on page 7-17 *Reset Custom Colors or Labels: Congestion Monitor Graph* on page 7-17 *Edit Legend Labels: Congestion Monitor Graph* on page 7-17
7	Current time marker divides past (left side) from future (right side)
8	The count for the bar chart segment below the pointer

You get to the configuration controls through the title menu.

Figure 7-5. Congestion Monitor Graph, Title Menu
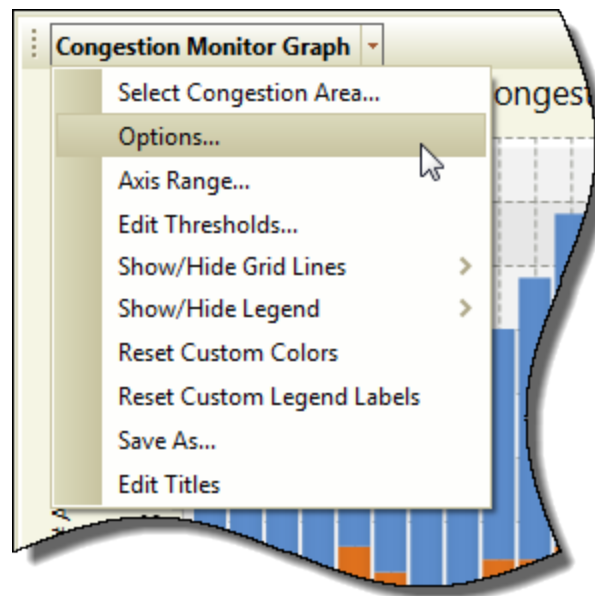
ℹ️ **NOTE:** To show outbound "Aircraft at Gate" or "Aircraft Probably at Gate," select the entire airport as the congestion area.

7.2.3.1.1 Select Congestion Area

1. Select **Congestion Monitor Graph > Select Congestion Area**. The **Select Congestion Area** dialog box opens.
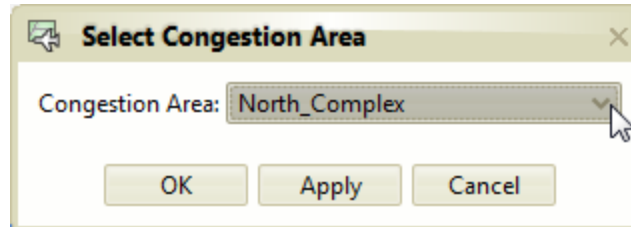
2. Select a congestion area from the menu.

   ℹ **NOTE**: Congestion areas are defined region areas on the Aerobahn server. To show the region (congestion area) in **Map Display**, look in the **Layer Visibility** dialog box. Most of the congestion areas are organized in the General Purpose section.

3. Save settings:
   - Click **Apply** to save settings and keep the dialog box open.
   - Click **OK** to save settings and close the dialog box.

   ℹ **NOTE:** The Congestion Area (region) that you select can limit the plots that are available in the Options dialog box (refer to *Set up Congestion Graph Options below*).

7.2.3.1.2 Set up Congestion Graph Options

ℹ **NOTE:** The Congestion Area (region) that you select can limit the plots that are available in the Options dialog box.

1. Select **Congestion Monitor Graph > Options**. The **Congestion Graph Options** dialog box opens.

2. Set the title, time scale, and plots.
   - Title—Enter the title text.
   - Time Scale—Select a sample size, a future range, and a past range from the menus.
   - Include Plots—Make sure that a check mark shows for the plots that will show in the graph. Gray plots are not active for the active congestion area.

3. Save settings:

- Click **Apply** to save settings and keep the dialog box open.

- Click **OK** to save settings and close the dialog box.

7.2.3.1.3 Set the Axis Range in the Congestion Graph

The axis range settings define the markings on the y-axis (vertical axis) of the graph. This shows how many aircraft are predicted at a given time.

1. Select **Congestion Monitor Graph > Axis Range**. The **Axis Range** dialog box opens.

2. Select the range type:

- Auto Range—The tool adjusts the scale to fit the data.

- Fixed Range—You enter the lower and upper bounds for the data and the major marks on the scale.

3. Click **OK** to save settings and close the dialog box.

7.2.3.1.4 Set a Congestion Graph Threshold

A threshold marker is a horizontal rule set at a number value so that you can see at a glance when congestion reaches a value. You can set more than 1 threshold and configure the color of each threshold marker.

You can add and edit the position (value) and color of thresholds, remove threshold markers, and show or hide threshold markers.

1. Select **Congestion Monitor Graph > Edit Thresholds**. The **Thresholds** dialog box opens.

- Click **Add** to add a new threshold marker.

  a. Key over the size, or click to increase or decrease it.

  b. Click in the color square to open the color selector dialog box (refer to *Color Models* on page 6-14 for more information).

- Click **Remove**, to remove a threshold marker from the graph.

- To show a threshold on the graph, make sure that a check mark shows in the row that defines the threshold marker. When you remove the check mark, the threshold marker does not show.

2. Save settings:

- Click **Apply** to save settings and keep the dialog box open.

- Click **OK** to save settings and close the dialog box.

7.2.3.1.5 Reset Custom Colors or Labels: Congestion Monitor Graph

Select **Congestion Monitor Graph > Reset Custom Colors** to restore the default colors in the **Congestion Monitor Graph**.

Select **Congestion Monitor Graph > Reset Custom Legend Labels** to restore the default text in the **Congestion Monitor Graph** legend.

7.2.3.1.6 Edit Legend Labels: Congestion Monitor Graph

1. Click a label. The **Enter New Label** dialog box opens.

2. Enter new text.

3. Click **OK**.

To restore the default label text, select **Congestion Monitor Graph > Reset Custom Legend Labels**.

7.2.3.1.7 Show or Hide the Grid Lines: Congestion Monitor Graph

Grid lines show on the graph background.

1. Select **Congestion Monitor Graph > Show/Hide Grid Lines**.

2. Select **Show** or **Hide** to change the state.

Figure 7-6. Show Grid Lines
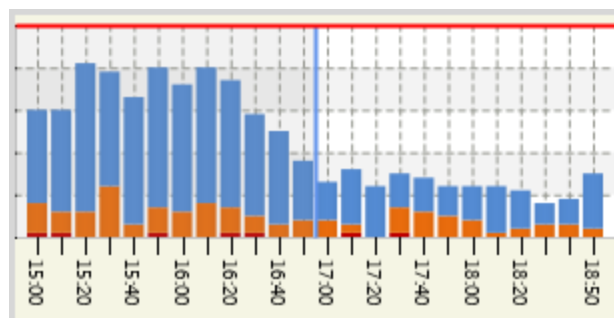
Figure 7-7. Hide Grid Lines
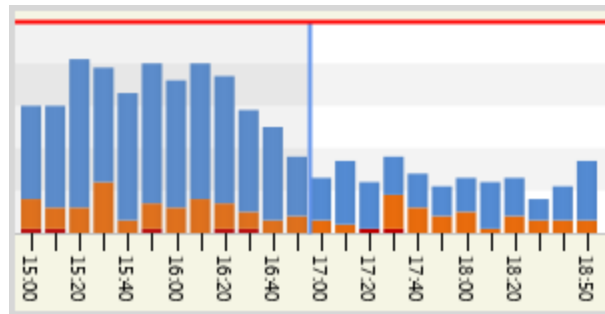
7.2.3.1.8 Show or Hide the Legend: Congestion Monitor Graph

The legend shows below the graph.

1. Select **Congestion Monitor Graph > Show/Hide Legend**.

2. Select **Show** or **Hide** to change the state.

7.2.3.2 Make a Screen Capture of a Congestion Monitor Graph

You can copy and paste a screen print of a graph or chart into an open document.

1. Right-click in the graph/chart.

2. Select **Copy**.

3. Paste the information into a document.

7.2.4 Use the Current Runway Usage Tool

Current Runway Usage shows each runway's arrivals and departures for the past 15 minutes.

Select **Tools > Airport Statistics > Current Runway Usage** to open Current Runway Usage.

Trend arrows (circled in figure) show that operations are increasing or decreasing. If no arrow shows, the trend is unchanged.

Figure 7-8. Current Runway Usage Tool with Trend Indicators

ℹ️ **NOTE:** Refer to *Work with Table Data* on page 3-9 for instructions on how to change column layouts, how to use filters, and how to sort and export table data.

7.2.4.1 Highlight a Runway in Map Display

1. Open **Map Display** and **Current Runway Usage**.

2. Select a runway in **Current Runway Usage**.

    If **Map Display** is open, the selected region shows in color. To remove highlighting, click anywhere in **Map Display**.

Configure a Highlight Color for a Region

Select one region at a time.

1. Select **Settings > Color Settings**.

2. Select color through **Regions > Selected Region**.

3. Click **OK**.

7.2.5 Use the De-icing Throughput Tool

The **De-icing Throughput** tool shows the number of aircraft that pass through de-ice operations and current de-ice pad information. Statistics are collected in a selectable time period (refer to *De-icing Status Data Fields* on page 7-21 for more information).

1. Select **Tools > Airport Statistics > De-icing Throughput** to open the tool.

2. Set up the **De-icing Throughput** tool.

    - Select **De-icing Throughput > Preferences**.

    - Select a sample period (Time Range).

    - Select or remove the check from **Show Trends**.

3. Click **OK**.

> ℹ️ **NOTE:** Refer to *Work with Table Data* on page 3-9 for instructions on how to change column layouts, how to use filters, and how to sort and export table data.

Aerobahn uses 10-minute De-ice data updates. These are collected in a selected sample period.

A trend ignores the selected sample *period*. To calculate a trend, Aerobahn compares the value of the last 10-minute sample to the value of the sample that came before it.

Interpret Trends

When trend indicators are in use,

- Arrow points down—Shows that the most recent value *decreased* from the value gotten from the previous update.
- Arrow points up—Shows that the most recent value *increased* from the value gotten from the previous update.
- No arrow—Both values are the same.

1. Open **Map Display** and **De-icing Throughput**.
2. Select a de-ice pad in the **De-icing Throughput** tool.

   If **Map Display** is open, the selected region shows in color. To remove highlighting, click anywhere in **Map Display**.

7.2.5.1 Highlight a De-ice Pad

Use this procedure to show (in **Map Display**) the location of a de-ice pad that you select in the **De-icing Throughput** tool.

1. Open **Map Display** and **De-icing Throughput**.
2. Select a de-ice pad in the **De-icing Throughput** tool.

   If **Map Display** is open, the selected region shows in color. To remove highlighting, click anywhere in **Map Display**.

Configure a Highlight Color for a Region

Select one region at a time.

1. Select **Settings > Color Settings**.
2. Select color through **Regions > Selected Region**.
3. Click **OK**.

7.2.5.2 De-icing Status Data Fields

These data fields are specific to the De-icing Throughput Tool (refer to *Use the De-icing Throughput Tool* on page 7-19).

Table 7-3. De-icing Status Column Headings

Column	Description
De-icing Pad	The de-ice pad label. De-ice pads can include more than one de-ice bay.
Occupancy Aircraft	Number (if any) of targets in the bays that make up the de-ice pad. If only one target is in the de-ice pad, Aerobahn shows the call sign of the flight.
Curr Queue Size	Number of targets en route to, or waiting to enter, that de-ice pad.
Throughput	The number of complete de-ice region occupancy periods in the identified time period.
Min Occ Time	The shortest occupancy time in the set sample period.
Avg Occ Time	The sum of all complete occupancy times in the sample period divided by the Throughput value.
Max Occ Time	The longest occupancy time in the sample period.
Min Wait Time	The shortest time in the queue during the sample period.
Avg Wait Time	The sum of time in the queue for all aircraft that move across the de-ice pad divided by the Throughput value.
Max Wait Time	The longest time in the queue during the sample period.

7.2.6 Use the Delays by Region Tool

The **Delays by Region** tool can help you to find the regions in which the delays are longest. Two columns—Alert and Excess Transit Time—give notice of delays.

1. Select **Tools > Airport Statistics > Delays by Region** to open **Delays by Region**.

2. Select **Delays by Region > Set Sample Period > [time period]**.

You can collect delay data from a range of time periods (from 15 minutes to 6 hours). To calculate "Excess Transit Time," add up all "delays" that occurred in a region in the selected Aggregate Time Window. Then, divide that sum by the number of delays.

Refer to *Delays by Region Data Fields* below for descriptions of column headings.

> **ℹ NOTE:** Refer to *Work with Table Data* on page 3-9 for instructions on how to change column layouts, how to use filters, and how to sort and export table data.

> **ℹ NOTE:** Refer to *Configure Region Alerts* on page 6-17 for instructions on how to set up alerts in **Map Display**. The delay thresholds you configure in the **Delays by Region** tool do not change the Alert thresholds set in **Map Display**.

7.2.6.1 Configure Delay-Status Thresholds

Use the **Edit Thresholds** controls to set delay status.

> **ℹ NOTE:** Thresholds must be whole numbers. If you set a threshold value to "0", no status indicator for that state/location is applied. When a threshold is set to "0," the associated status indicator displays as a gray circle.

1. Select **Delays by Region > Thresholds**.
2. Enter thresholds (in minutes).
3. Click **OK** to set thresholds, and close the **Edit Thresholds** dialog box.

> **ℹ NOTE:** Refer to *Configure Region Alerts* on page 6-17 for instructions on how to set up alerts in **Map Display**. The thresholds you set up in the **Delays by Region** tool do not change region alerts set up in **Map Display**.

7.2.6.2 Delays by Region Data Fields

These data fields are used in the **Delays by Region** tool (refer to *Use the Delays by Region Tool* on the previous page for more information).

Table 7-4. Delays by Region Column Headings

Data	Description
Alert	An alert shows transit times (delays) that are more than than a set threshold. Alerts are green, yellow, or red based on transit time. If an alert is gray, no threshold has been set for that location (refer to *Configure Delay-Status Thresholds* on the previous page for information on how to set delay-status thresholds).
Region Name	This list shows a region if it had one or more delays.
Type	The category of region.
Excess Transit Time	"Excess Transit Time" gives a value that represents delays in a region. The "unimpeded transit time" is the shortest time recorded for a flight to move through one taxi routing in a region. A "delay" is the quantity of time by which an aircraft exceeded that "unimpeded transit time" during its taxi. Because a given region can have more than one taxi route, it also has more than one "unimpeded transit time" and more than one "delay." "Excess Transit Time" is an average of all "delays" in a region during a time period (Aggregate Time Window).

7.2.7 Use the Flight Delay Summary Tool

Flight Delay Summary shows a graph of the average flight delay and of the number of delays at each sample time. The Average Flight Delay graph shows how long, on average, flights waited after the scheduled departure time. The Delayed Flights Count graph shows the number of flights delayed after their scheduled departure times.

You can set up the tool to pull data from Carrier Group, Marketing Carrier Code, or Terminal. You select the source of estimates. The current time shows on the timeline.

Put the pointer above data points in the two graphs to show more data:

- Put the pointer above an Average Flight Delay (line chart) data point to see average, minimum, and maximum values.
- Put the pointer above a bar in the Delayed Flight Counts (bar chart) to see the numeric values for that bar.

Three Average Flight Delay plot types are available:

- Arrival Schedule Delay—"Delayed Flight Counts" has a timeline that shows the number of flights whose *Scheduled In-Block Time is in the past.* The bar chart also shows delay categories.
- Departure Schedule Delay—"Delayed Flight Counts" has a timeline that shows the number of flights whose *Scheduled Off-Block Time is in the past*. The bar chart also shows delay categories.
- Departure Metering Delay—"Delayed Flight Counts" has a timeline that shows the number of flights with a *Recommended Off-Block Time that is later than the Scheduled Off-Block Time*. The bar chart also shows delay categories.

The plot type is identified in the top left of the tool, below the tool title. The Average Flight Delay line chart shows the average total delay.

7.2.7.1 Configure Flight Delay Summary

Plot Type

The plot type is identified above the plot and below the tool title. Change the plot type:

1. Select **Flight Delay Summary > Plot Type**.
2. Select the plot type. The tool display changes instantly.

Flight Set

Select a flight set:

1. Select **Flight Delay Summary > Flight Set**. The Flight Set dialog box opens.
2. Select the Carrier Group, Marketing Carrier Code, or Terminal from which to pull flight-delay data.
3. Click **OK**. The tool display changes instantly.

Data Sources

Select the data sources:

1. Select **Flight Delay Summary > Source of Estimates**.

2. Select the source. The tool display changes instantly.

Sample Period

The sample period sets the time interval shown on the graph. Select the sample period:

1. Select **Flight Delay Summary > Sample Period**.

2. Select the unit of time. The tool display changes.

Time Indicator

Show or hide the current time indicator:

1. Select **Flight Delay Summary > Show/Hide Current Time**.

2. Select the unchecked option to change display status. The tool display changes instantly.

7.2.8 Use the Hourly Operation Counts Gauge

Hourly Operation Counts Gauge shows the number of completed and forecasted operations over a 1-hour window. "Completed operations" are arrivals and departures that have occurred within the hourly window. "Forecasted operations" are the total operations planned for that hourly window.

NOTE: Flights marked "Exempt" are excluded from the statistics that supply the Hourly Operations Counts Gauge, Hourly Operations Counts Graph, and Hourly Operations Counts List. For more detail on "Exempt" flights, refer to Exempt from Hourly Count (Aerobahn)[1], Exempt from Hourly Count (ATC)[2], and Exempt from Hourly Count (Manual)[3].

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[1]Roll up value of Exempt (Manual) and Exempt (ATC). If "True," the flight is not counted in the Hourly Operations Count statistic.

[2]Marked "True" (i.e., flight is exempt) when the Reason for Special Handling (ATC) contains an STS code from a configurable list. A flight marked "False" is not exempt.

[3]User-provided field to indicate that a flight is exempt from (i.e., is not counted in) the Hourly Operations Count statistic. "True" indicates the flight is exempt.

Select **Tools > Airport Statistics > Hourly Operation Counts Gauge** to open the tool.
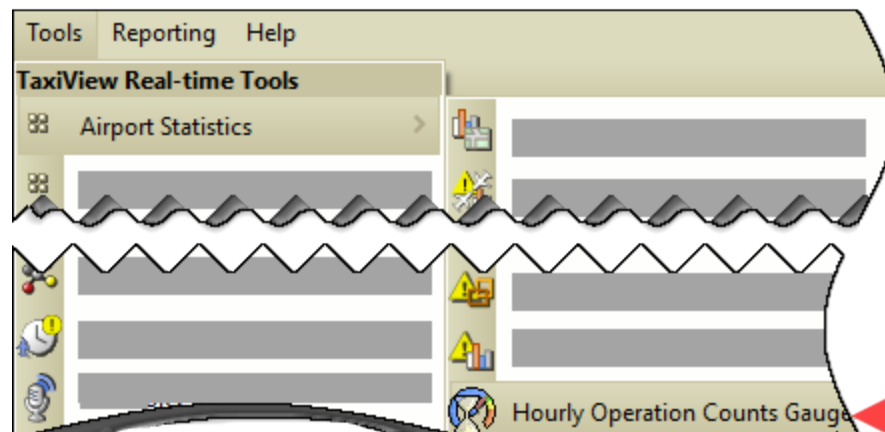
You can open a list (table) of the flights that make up each hourly count from the Hourly Operation Counts Graph and the Hourly Operation Counts Gauge (refer to *Use the Hourly Operation Counts List* on page 7-36) . Click the gauge to open the Hourly Operation Counts List for the hour shown by the gauge (refer to *Use the Hourly Operation Counts List* on page 7-36).

You can set the hourly window start time:

- current time
- 15 minutes in the past
- 30 minutes in the past
- 45 minutes in the past
- 60 minutes in the past, and use the first completed quarter hour prior to that time as the actual hourly window start time

For example, if it is 16:24 and the user selects "30 minutes in the past" as the hourly window start time, the hour window is 15:45 until 16:45.

All configuration of this tool is done through the **Options** dialog box. If you make changes in the **Options** dialog box, click **OK** to save them and close the dialog box.

Figure 7-9. Hourly Operation Counts Gauge (Open the Options dialog box)
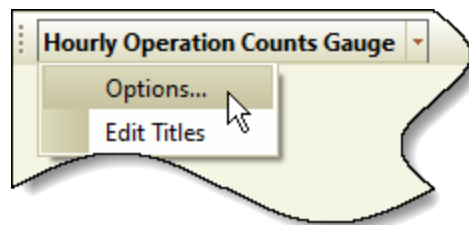
Figure 7-10. Hourly Operation Counts Gauge and Configuration Controls

Table 7-5. Operation Count Gauge Options

Reference	Description
1	OPTIONAL—Enter a title that shows above the gauge.
2	Select the start time from the drop down menu.
3	Click the color square to configure colors for the "needle" that indicates the forecasted value and the "post." Light" refers to "Light" workspaces. "Dark" refers to dark workspaces (refer to *Color Models* on page 6-14).

Table 7-5. Operation Count Gauge Options (continued)

Reference	Description
4	Click the color square to configure colors. ("Font" refers to the numeral and text in the center of the gauge. Fill refers to the gauge "bar.") Light" refers to "Light" workspaces. "Dark" refers to dark workspaces (refer to *Color Models* on page 6-14).
5	Threshold values set the point at which colors change in the gauge. Enter new values directly, or click the counter to change the values. Click the color square to configure colors. ("Font" refers to the numeral and text in the center of the gauge. Fill refers to the gauge "bar.") Light" refers to "Light" workspaces. "Dark" refers to dark workspaces (refer to *Color Models* on page 6-14). Click **Add Threshold** to add a threshold range. Click **Remove** next to a threshold to delete a threshold range.
OK	Click **OK** to save changes and close the dialog box.

NOTE: In some circumstances, the number of flights in the Hourly Operation Counts List is not equal to the number of flights in the Hourly Operation Counts Gauge. This is an artifact of the way Aerobahn manages older flights to make sure that the count is accurate. In some cases, one or more of these older flights is removed from the workspace. When this happens, the Hourly Operation Count List shows fewer flights than the Hourly Operation Counts Gauge.

7.2.9 Use the Hourly Operation Counts Graph

NOTE: Flights marked "Exempt" are excluded from the statistics that supply the Hourly Operations Counts Gauge, Hourly Operations Counts Graph, and Hourly Operations Counts List. For more detail on "Exempt" flights, refer to Exempt from Hourly Count (Aerobahn)[1], Exempt from Hourly Count (ATC)[2], and Exempt from Hourly Count (Manual)[3].

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[1]Roll up value of Exempt (Manual) and Exempt (ATC). If "True," the flight is not counted in the Hourly Operations Count statistic.
[2]Marked "True" (i.e., flight is exempt) when the Reason for Special Handling (ATC) contains an STS code from a configurable list. A flight marked "False" is not exempt.
[3]User-provided field to indicate that a flight is exempt from (i.e., is not counted in) the Hourly Operations Count statistic. "True" indicates the flight is exempt.

Select **Tools > Airport Statistics > Hourly Operation Counts Graph** to open the tool.
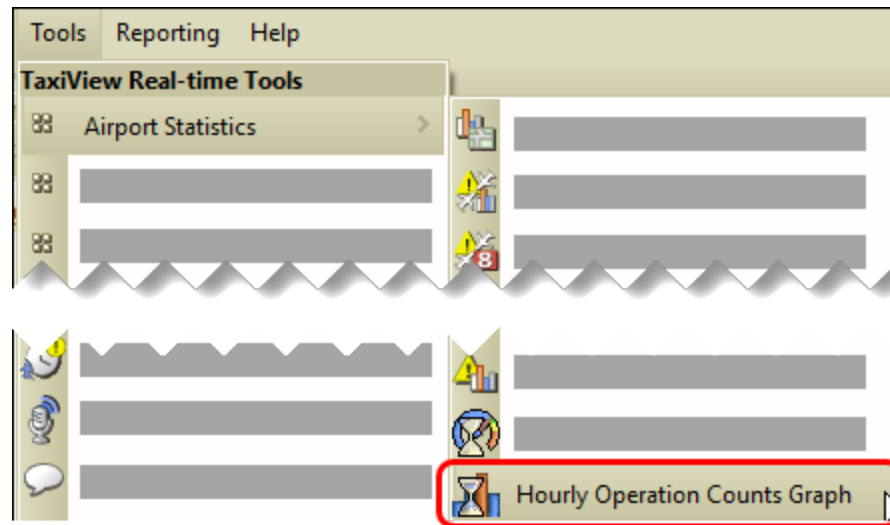
The Hourly Operation Counts Graph is a stacked bar graph that shows the number of actual and predicted operations for 6 hourly windows:

- start time – 60 minutes until the start time
- start time - 45 minutes until start time + 15 minutes
- start time - 30 minutes until start time + 30 minutes
- start time - 15 minutes until start time + 45 minutes
- start time until start time + 60 minutes
- start time + 15 minutes until start time + 75 minutes

Start time begins at the last completed quarter hour (i.e., if current time = 16:24, start time = 16:15).

Figure 7-11. Hourly Operation Counts Graph
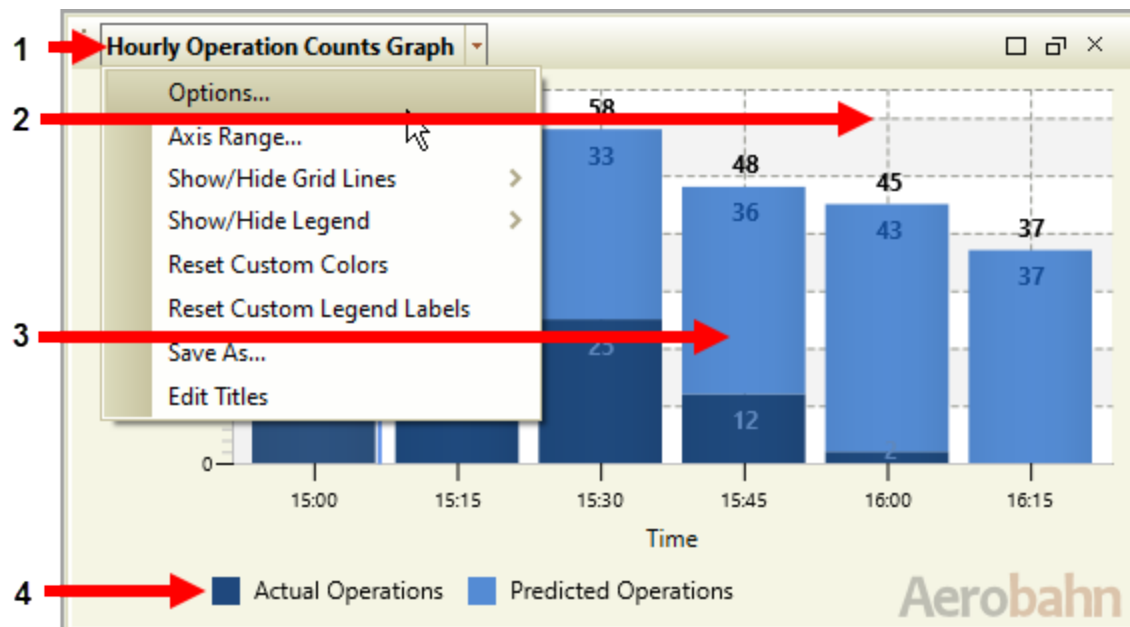
Table 7-6. Hourly Operation Counts Graph Tool

Reference	Description
1	Tool menu
2	Grid lines
3	Stacked bars show operations. Click to open list.
4	Legend

You can open a list (table) of the flights that make up each hourly count from the Hourly Operation Counts Graph and the Hourly Operation Counts Gauge (refer to *Use the Hourly Operation Counts List* on page 7-36) . Click a bar in the chart to open a table that shows these details (defaults) for that hour:

- Flight ID
- Direction
- Estimated/Actual Runway Time (E/A Rwy Time[1])

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[1]Estimated/Actual Runway Time. If inbound flights, this is rollup of ALDT (Aero), ALDT (ATC), and ELDT (Pred) where a flight is a "forecasted operation" if its E/A Runway time is an estimated time and a "completed operation" if its E/A Runway Time is an actual time. If an outbound flight, this is a rollup of ATOT (Aero), ATOT (ATC), and ETOT (Pred), where a flight is a "forecasted operation" if its E/A Runway time is an estimated time, and a "completed operation" if its E/A Runway Time is an actual time.

7.2.9.1 Add a Title to the Bar Chart

This procedure centers a title above the bar chart.

1. Select **Hourly Operation Counts Graph > Options**. The options dialog box opens.
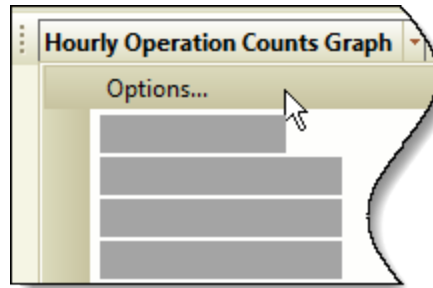
2. Enter the title for the bar chart in the **Title** field.

3. Click **OK** to save changes and close the dialog box.

7.2.9.2 Add Thresholds

You can add a threshold marker (a horizontal rule) that makes it easy to see when actual operations reach a certain point in any hour.

1. Select **Hourly Operation Counts Graph > Options**.
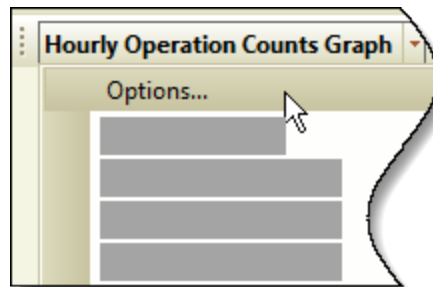
2. Click **Add Threshold**. A threshold value window, light/dark color value windows, and a Remove button show.

3. Set the threshold value.

4. Click in the **Light** box to open a color selector.

5. Select the color for the threshold line when the light workspace is in use.

6. Click in the **Dark** box to open a color selector.

7. Select the color for the threshold line when the dark workspace is in use.

8. Click **Apply** to make sure that everything looks correct.

9. Repeat above steps to add thresholds.

10. Click **OK** to save settings and close the dialog box.

7.2.9.3 Set up the Axis Range

1. Select **Hourly Operation Counts Graph > Axis Range**. The **Axis Range** dialog box opens.
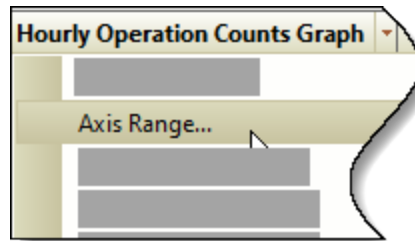
2. Select **Auto Range** or **Fixed Range**:

   ▪ **Auto Range**: Aerobahn sets the upper bound, lower bound, and the major units in the scale.

   ▪ **Fixed Range**: Enter values for the upper bound, lower bound, and the major units in the scale.

3. Click **OK** to save settings and close the dialog box.

7.2.9.4 Show or Hide the Grid Lines

Grid lines are dashed lines that show the major units in the scale.

Select **Hourly Operation Counts Graph > Show/Hide Grid Lines > <Show / Hide>**. The grid lines (refer to Figure 7-12 below) show or disappear.

Figure 7-12. Hourly Operation Counts Graph > Show/Hide Grid Lines
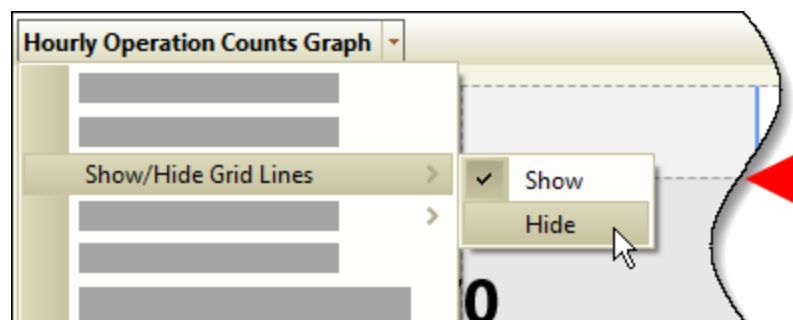
7.2.9.5 Use the Legend

The legend gives a reminder of the colors used to show actual operations and predicted operations. You can use the legend and the tool menu to do these tasks:

- show or hide the legend
- set graph colors
- set custom labels for the legend
- revert to the default colors and labels set for the bar chart

7.2.9.6 Show or Hide the Legend

Select **Hourly Operation Counts Graph > Show/Hide Legend > <Show / Hide>**. The legend shows in the lower left corner of the bar chart or it disappears (refer to Figure 7-13 below).

Figure 7-13. Hourly Operation Counts Graph > Show/Hide Legend
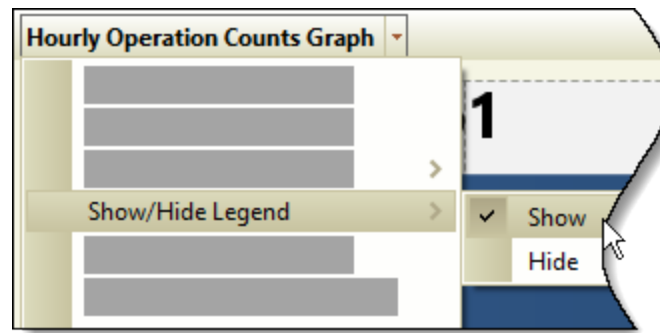
7.2.9.7 Change or Reset Legend Labels

You set legend labels through the legend. You reset the labels to use the default labels through the tool menu.

To change a label:

1. Click a legend label. The **Enter New Label** dialog box opens.
2. Enter the new label in the text box.
3. Click **OK** to save the new label and close the dialog box.

To reset the graph to use a default color:

Select **Hourly Operation Counts Graph > Reset Custom Legend Labels**. Labels revert to the default settings.

Figure 7-14. Hourly Operation Counts Graph > Reset Legend Labels
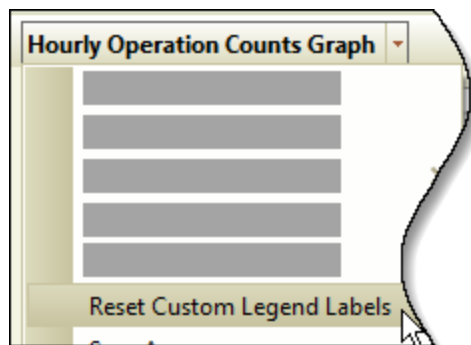
7.2.9.8 Change or Reset Graph Colors

You set custom graph colors through the legend. You reset the graph to use the default colors through the tool menu.

To change a default color:

1. Click the color square in the legend. The color selector opens (refer to *Color Models* on page 6-14).

2. Select the color.

3. Click **OK**. The color selector closes. The bar changes color.

To reset the graph to use a default color:

Select **Hourly Operation Counts Graph > Reset Custom Colors**. All colors revert to the default settings.

Figure 7-15. Hourly Operation Counts Graph > Reset Custom Colors
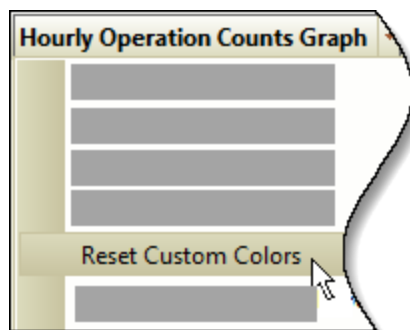
7.2.9.9 Save the Hourly Operation Counts Graph

You can save the displayed bar chart as an image file (PNG format), or copy an image to clipboard.

Save the Bar Chart as an Image File

1. Select **Hourly Operation Counts Graph > Save As**. The **Save** dialog box opens.
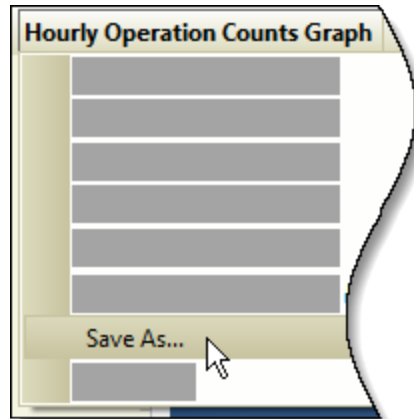
2. Choose a folder and enter a file name for the PNG file.

3. Click **Save**.

Copy a Bar Chart Image to Clipboard

1. Right-click in the chart background. The **Copy** button shows.
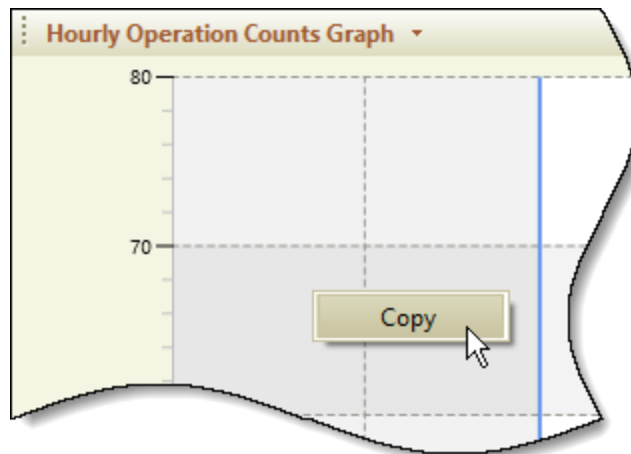
2. Click **Copy**.

3. Open the document that needs the bar chart image.

4. Paste the image.

7.2.10 Use the Hourly Operation Counts List

You can open a list (table) of the flights that make up each hourly count from the Hourly Operation Counts Graph and the Hourly Operation Counts Gauge (refer to *Use the Hourly Operation Counts List* above) .

The Hourly Operation Counts List lets you edit Flight IDs, manage flights, and export the data in the table.

> **ℹ NOTE:** Flights marked "Exempt" are excluded from the statistics that supply the Hourly Operations Counts Gauge, Hourly Operations Counts Graph, and Hourly Operations Counts List. For more detail on "Exempt" flights, refer to Exempt from Hourly Count (Aerobahn)[1], Exempt from Hourly Count (ATC)[2], and Exempt from Hourly Count (Manual)[3].

> **ℹ NOTE:** In some circumstances, the number of flights in the Hourly Operation Counts List is not equal to the number of flights in the Hourly Operation Counts Gauge. This is an artifact of the way Aerobahn manages older flights to make sure that the count is accurate. In some cases, one or more of these older flights is removed from the workspace. When this happens, the Hourly Operation Count List shows fewer flights than the Hourly Operation Counts Gauge.

---

[1]Roll up value of Exempt (Manual) and Exempt (ATC). If "True," the flight is not counted in the Hourly Operations Count statistic.
[2]Marked "True" (i.e., flight is exempt) when the Reason for Special Handling (ATC) contains an STS code from a configurable list. A flight marked "False" is not exempt.
[3]User-provided field to indicate that a flight is exempt from (i.e., is not counted in) the Hourly Operations Count statistic. "True" indicates the flight is exempt.

7.2.10.1 Modify the Graph List

1. Right-click any column heading.

2. Select **Column Chooser**. The **Column Chooser** dialog box opens.

    ▪ Add 1 item to **Selected Fields**

        a. Select the item in the Available Fields window.

        b. Click ⊕ or double-click. The item moves to Selected Fields.

    ▪ Add more than 1 item to **Selected Fields**

        a. Select with CTRL-click or SHIFT-click in the Available Fields window.

        b. Click ⊕.

3. Click **OK**. The **Column Chooser** dialog box closes.

7.2.10.2 Edit a Flight ID

1. Click a flight ID. The flight ID becomes editable.

2. Enter the new flight ID.

3. Click ✔ to save the new flight ID and close the edit feature.

7.2.10.3 Manage Inbound and Outbound Flights

Right-click on any row in the Hourly Operation Counts Graph List to open a menu of operations. Outbound flights and inbound flights give different options.

For more information on the operations available in those menus, search the *Aerobahn User Guide*.

7.2.10.4 Export Hourly Operation Counts Data

1. Select **Hourly Operation Counts Graph List > CSV Export**. The Save dialog box opens.
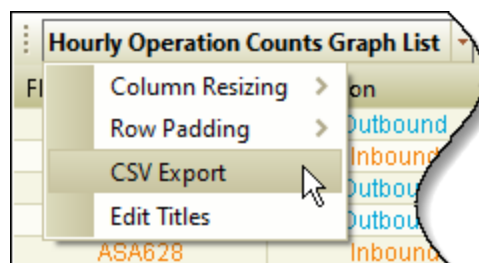
2. Choose a folder and enter a File Name for the CSV file.

3. Click **Save**.

7.2.11 Use the Operation Counts - Airport Tool

Operation Counts - Airport shows a summary of hourly operations (arrivals and departures) for the last 24 hours in a bar chart.

Select **Tools > Airport Statistics > Operation Counts - Airport** to open **Operation Counts - Airport**.

The most recent data shows at the right side of the scale. Data for an hour shows arrivals and departures from the start until the last minute of that hour (for example, 1=1:00–1:59).

i NOTE: Put the pointer above a bar (mouseover) to see these data: (type of operation, X-axis value)= y-axis value.

Figure 7-16. Operation Counts - Airport Data
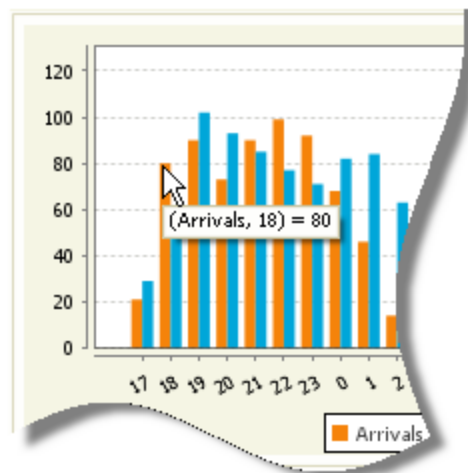
Zooming In and Out

Use zoom as follows:

- Right-click in a graph, and select from the context menu.
    - "Domain" = X (horizontal) axis
    - "Range" = Y (vertical) axis
- Push the scrolling wheel on a scrolling mouse and select a part of a graph. The selected content fills the graph window.

To go back to the initial zoom setup, right-click in the tool, and select **Auto Range > Range Axis**.

Use Screen Captures

Refer to *Use Aerobahn Screen Captures in other Documents* on page 10-25 for information on how to make, save, and print screen captures.

7.2.12 Use the Operation Counts - Carrier Tool

Operation Counts - Carrier compares—for each airline—arrivals, departures, and total operations from yesterday with those from one week before yesterday.

Select **Tools > Airport Statistics > Operation Counts - Carrier** to open **Operation Counts - Carrier**.

Airlines are identified by their 3-character International Civil Aviation Organization (ICAO) designations.

The "UNK" (unknown) row supplies a summary value for aircraft that are not identified as part of an airline.

ℹ **NOTE:** Refer to *Work with Table Data* on page 3-9 for instructions on how to change column layouts, how to use filters, and how to sort and export table data.

7.2.13 Use the Operation Counts - Runway Tool

Operation Counts - Runway shows an hourly count of arrivals or departures on each runway for the current day.

1. Select **Tools > Airport Statistics > Operation Counts - Runway**.
2. Select a flight direction from the **Operation Counts - Runway > Flight Direction** menu.

Figure 7-17. Operation Counts - Runway "Flight Direction" Setting
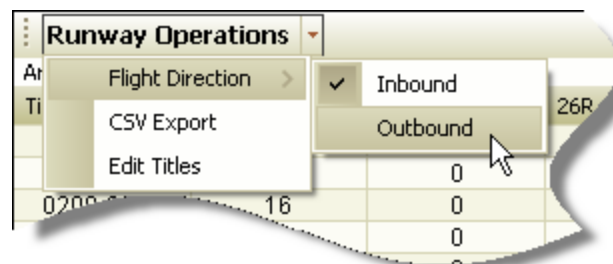
🛈 **NOTE:** The Total column shows the total *reported* operations.

🛈 **NOTE:** Refer to *Work with Table Data* on page 3-9 for instructions on how to change column layouts, how to use filters, and how to sort and export table data.

7.2.14 Use the Operation Counts and Demand Tool

Operations Counts and Demand summarizes scheduled, actual, and predicted arrival and departure rates in a bar chart.

1. Select **Tools > Airport Statistics > Operation Counts and Demand** to open **Operation Counts and Demand**.

2. Select **Operation Counts and Demand > Select Runway**.

    ▪ Select **Airport** from the Runway menu to show data for the entire airport.

    ▪ Select a runway pair to show data only for that runway pair.

3. Select **Operation Counts and Demand > Options...** to configure chart options:

    a. Enter a chart title.

    b. Set the sample size (refer to *How does the Sample Size control work?* on the facing page).

    c. Set time scale:

        ▪ Current Day Operations (Starts at 3:00AM local one day – 3:00AM of the following day)

        ▪ Relative to Current Time (Select value from menu)

d. Select plots to show. (A check mark shows that a plot is selected.)

- **Planned Departure Capacity Line** (If Airport is selected, this line marks the combined planned departure capacity for all runways as defined in the [Airport Configuration](#) tool. If an individual runway is selected, the planned departure capacity is the sum of the rates defined in the Airport Configuration tool for both directional ends.)

- **Planned Arrival Capacity Line** (If Airport is selected, this line marks the combined planned arrival capacity for all runways as defined in the [Airport Configuration](#) tool. If an individual runway is selected, the planned arrival capacity is the sum of the rates defined in the Airport Configuration tool for both directional ends.)

- **Scheduled Departures** (Select bar chart or line chart presentation.)

- **Actual/Predicted Departures**

- **Scheduled Arrivals** (Select bar chart or line chart presentation.)

- **Actual/Predicted Arrivals**

4. Click **Apply** to save changes and keep the dialog box open.

5. OPTIONAL: Make adjustments.

6. Click **OK** to save changes and close the **Operation Counts/Demand Options** dialog box.

This procedure sets up a basic **Operation Counts and Demand** tool. You can do more to configure the range (axis that shows the number of aircraft), the title, the time scale, the plots that show, and show or hide grid lines and the legend (refer to .

How does the Sample Size control work?

The sample size control lets you configure how "granular" your view of the data will be. If you set the sample size to 5 minutes, you get "finer grained" operations counts than you get if you set the sample size to 30 minutes. The sample size setting changes the timeline markings at the bottom of the bar chart, and the time scale shifts when you change the sample size.

Typically, you will see an increase in the number of aircraft for a given time as you increase the sample size for that point in time.

7.2.14.1 Configure the Operation Counts and Demand Tool

You can configure the runways, range (y-axis), the title, the time scale, the plots that show, the colors used to represent data in the chart, and show or hide grid lines and the legend.

Figure 7-18. Operation Counts and Demand Tool: Configurable Features

Item	Reference
1	Title—Configured in the Options dialog box (refer to *Use the Operation Counts and Demand Tool* on page 7-40).
2	Current Time Marker (not configurable)—Data in the "Past Time Range" shows to the left of the current time marker.
3	Axis—Configured through the tool menu (refer to *Set the Axis Range in the Operation Counts and Demand Tool* below).
4	Planned Departure Capacity Line—Set up in the Options dialog box (refer to *Use the Operation Counts and Demand Tool* on page 7-40).
5	Time Scale—Configured in the Options dialog box (refer to *Use the Operation Counts and Demand Tool* on page 7-40).
6	Legend—Configured when you select plots to include. You show or hide the legend through the tool menu. *Show or Hide the Grid Lines or the Legend in Operation Counts and Demand* on page 7-45 *Reset Custom Colors or Labels in Operation Counts and Demand* on the next page *Edit Legend Labels: Operation Counts and Demand* on the next page

You get to most configuration controls through the title menu.

7.2.14.1.1 Set the Axis Range in the Operation Counts and Demand Tool

The axis range settings define the markings on the y-axis (vertical axis) of the graph. This shows how many aircraft are predicted at a given time.

1. Select **Operation Counts and Demand > Axis Range**. The **Axis Range** dialog box opens.
2. Select the range type:
   - Auto Range—The tool adjusts the scale to fit the data.
   - Fixed Range—You enter the lower and upper bounds for the data and the major marks on the scale.
3. Click **OK** to save settings and close the dialog box.

The label for the vertical axis is automatically assigned when you choose the runway.

1. Select **Operation Counts and Demand > Select Runway**. The Select Runway dialog box opens.
2. Select the runway (or select Airport) from the menu.
3. Click **OK** to save settings and close the dialog box.

7.2.14.1.2 Set Bar Color in Operation Counts and Demand Tool

You can change the default colors in the **Operation Counts and Demand** bar chart.

1. Select **Operation Counts and Demand > Show/Hide Legend**.
2. Click a color block in the legend. The color selector opens.
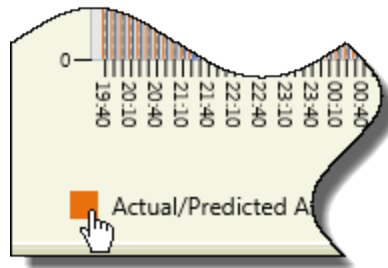
3. Select a color.
4. Click **OK**. The bar for the selected legend item changes color. To undo the change, refer to *Restore Default Colors* below.

Restore Default Colors

Select **Operation Counts and Demand > Reset Custom Colors** to restore the default colors in the **Operation Counts and Demand**.

7.2.14.1.3 Reset Custom Colors or Labels in Operation Counts and Demand

Restore Default Colors

Select **Operation Counts and Demand > Reset Custom Colors** to restore the default colors in the **Operation Counts and Demand**.

Restore Default Text for Legend

Select **Operation Counts and Demand > Reset Custom Legend Labels** to restore the default text in the **Operation Counts and Demand** legend.

7.2.14.1.4 Edit Legend Labels: Operation Counts and Demand

1. Click a label. The **Enter New Label** dialog box opens.
2. Enter new text.
3. Click **OK**.

To restore the default label text, select **Operation Counts and Demand > Reset Custom Legend Labels**.

7.2.14.1.5 Show or Hide the Grid Lines or the Legend in Operation Counts and Demand

Select **Operation Counts and Demand > Show/Hide Grid Lines** to show or hide grid lines on the graph background. Select **Show** or **Hide** to change the state.

Select **Operation Counts and Demand > Show/Hide Legend** to show or hide the legend that can be below the graph. Select **Show** or **Hide** to change the state.

Figure 7-19. Show Grid Lines
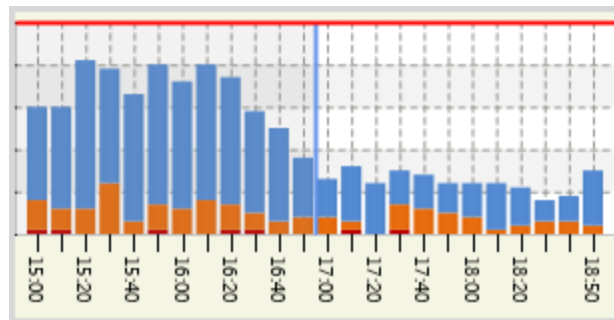
Figure 7-20. Hide Grid Lines
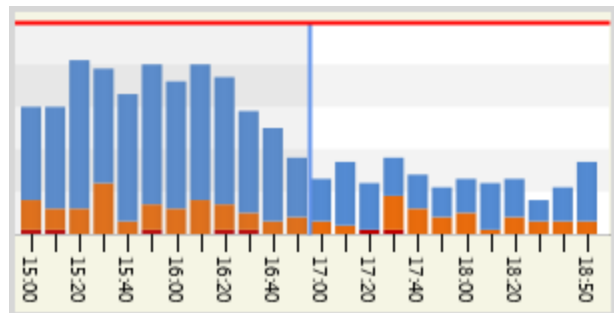
7.2.14.2 Make a Screen Capture of an Operation Counts and Demand Chart

You can copy and paste a screen print of a graph or chart into an open document.

1. Right-click in the graph/chart.

2. Select **Copy**.

3. Paste the information into a document.

7.2.15 Use the Taxi Time Tool

Taxi Time shows average, minimum, and maximum taxi times in a bar chart. Taxi times are compared to the 14-day average for that selected view ("Average Taxi Time Window").

You can open more than 1 Taxi Time window:

- an arrival and a departure view for each runway
- an arrival and a departure view for the full airport

Statistics above each bar chart show the runway, flight direction, and the number of aircraft of that status. Aerobahn refreshes Taxi Time statistics after a 5-minute hold to include all related data.

Interpret Trends

When trend indicators are in use,

- Arrow points down—Shows that the most recent value *decreased* from the value gotten from the previous update.
- Arrow points up—Shows that the most recent value *increased* from the value gotten from the previous update.
- No arrow—Both values are the same.

(Refer to Figure 7-21 below.)

Figure 7-21. Trend Arrow in Taxi Time
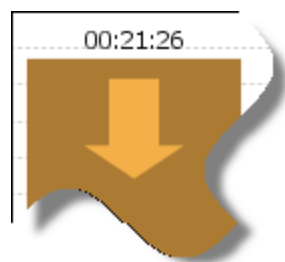
To make a copy of the Taxi Time bar chart for a report or an Email, make a screen capture.

Use Screen Captures

Refer to *Use Aerobahn Screen Captures in other Documents* on page 10-25 for information on how to make, save, and print screen captures.

7.2.15.1 Set up the Taxi Time Graph

1. Select **Tools > Airport Statistics > Taxi Time**.

2. Select **Taxi Time > Select Flights**.

    a. For "Direction," select **Inbound** to show taxi-in data or **Outbound** to show taxi-out data.

    b. For "Runways," select a runway or, for summary data for the full airport, select **Airport**.

       Select **Airport** to get these data for the Average Taxi Time Window period:

       - the average taxi time (in the selected flight direction) for all aircraft on the airport surface
       - the shortest taxi time for an aircraft
       - the longest taxi time for an aircraft

    c. For "De-icing," select **Non De-iced Flights** to include flights that did not de-ice.

       Select **De-iced Flights** to select all pads or select individual de-ice pads to see taxi time statistics for all the flights having used selected de-ice pads. If a flight de-iced more than 1 time, **Taxi Time** uses the time from the most recent de-ice pad.

3. Show or close the legend and bar values (refer to *Show/Hide* on the next page).

4. Select **Taxi Time > Set Taxi Time Source**.

    - Carrier: Carrier-supplied Taxi Time data is calculated as follows:
       - Arrivals = Actual In Block Time (Carrier) – Actual Landing Time (Carrier) and
       - Departures = Actual Take Off Time (Carrier) – Actual Off Block Time (Carrier)

    - Aerobahn: Aerobahn Taxi Time data is calculated as follows:
       - Arrivals = Actual In Block Time (Aerobahn) – Actual Landing Time (Aerobahn) and
       - Departures = Actual Take Off Time (Aerobahn) – Actual Off Block Time (Aerobahn)

- Aerobahn—No Partial Taxis: Select to not use taxi time values from the Taxi Time (Aerobahn) field when the Surveillance Initialization Time is used.

Aerobahn uses the Surveillance Initialization Time when 2 conditions occur:

- There is no available data for the Actual Off Block Time.
- The aircraft is not in the gate.

Aerobahn uses the current time when there is no available data for the Actual In Block Time or Actual Take Off Time.

NOTE: "Aerobahn Taxi Time Without Partial Taxis" uses Aerobahn Taxi Time data but does not use data when inconsistent transponder compliance would give inconsistent Taxi Time statistics.

Show/Hide

You can toggle these items on/off through the title menu (refer to):

- Bar Values (refer to 1 in the figure).
- Legend (refer to 2 in the figure).

Figure 7-22. Taxi Time Features
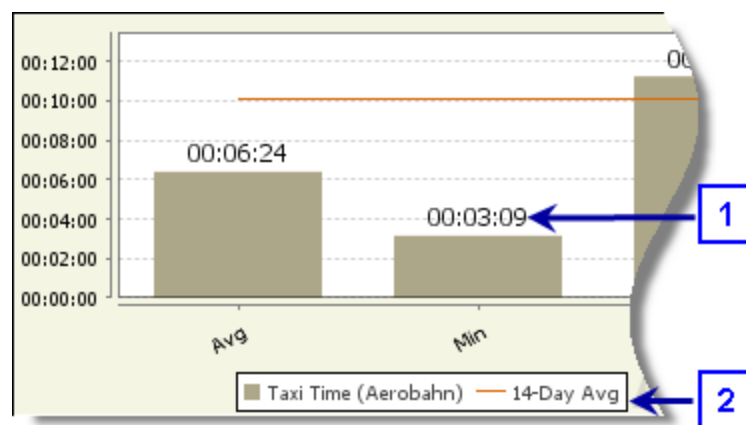
7.2.16 Use Utilization Graph

1. Open **Utilization Graph** (two methods):

   ▪ Select **Tools > Airport Statistics > Utilization Graph**.

   ▪
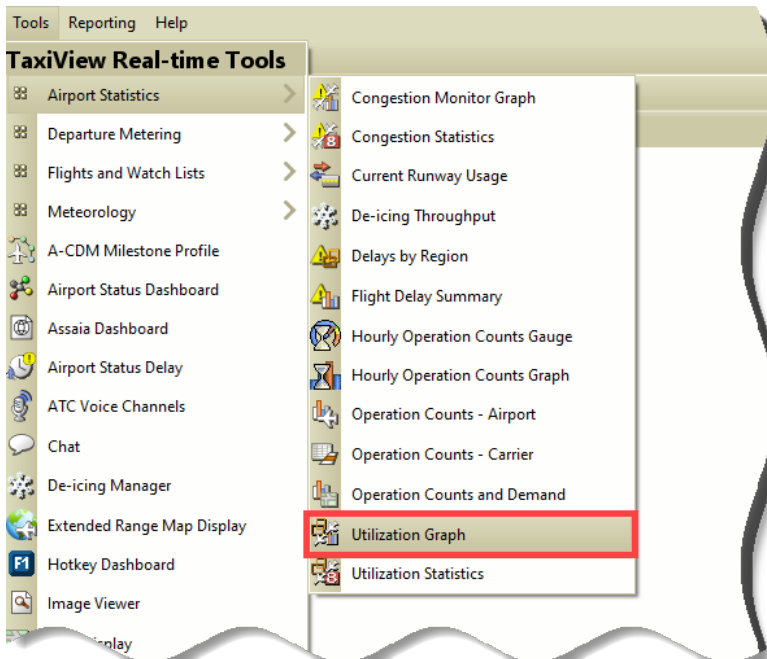
   ▪ From **Utilization Statistics**, select **Utilization Statistics > Launch Utilization Graph Tool**.
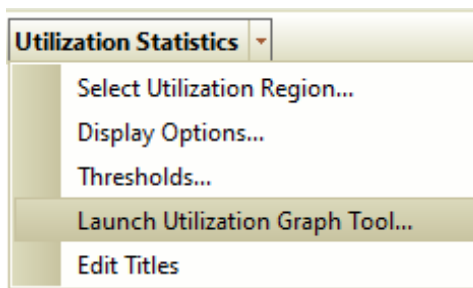
2. Select **Utilization Graph > Select Utilization Region**.

   NOTE: Utilization regions are defined on the Aerobahn server.

   NOTE: Any region can be defined as a utilization region except for a gate region.

   a. Select a utilization region from the drop-down menu.
   b. Click **OK**.

This sets up a basic **Utilization Graph**. You can configure the range (y-axis), the title, the time scale, the count type, the plots that show, the position and color of a threshold marker, and show or hide grid lines and the legend (refer to *Configure the Utilization Graph below*).

7.2.16.1 Configure the Utilization Graph

You can configure the utilization region, the range (y-axis), the title, the time scale, the count type, the plots that show, the position and color of a threshold marker. You can show or hide grid lines and the legend.

Figure 7-23. Utilization Graph—Configurable Features
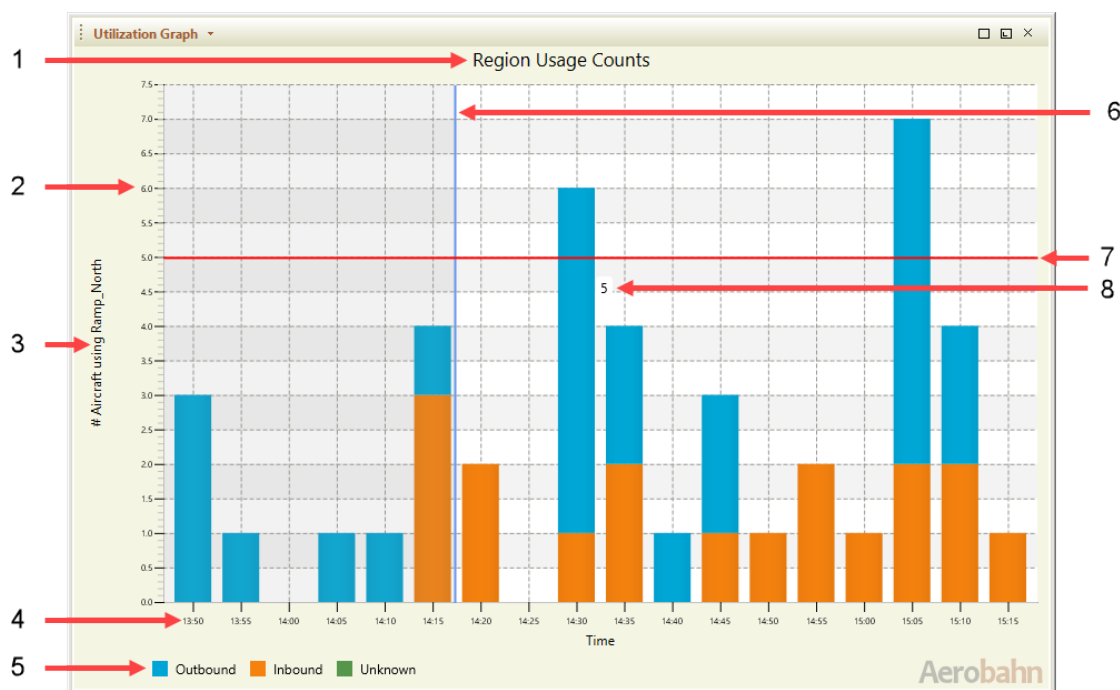
Table 7-7. Utilization Graph—Configurable Features

Item	Reference
1	Title (refer to *Set up Utilization Graph Options* on page 7-52)
2	Axis (refer to *Set the Axis Range in the Utilization Graph* on page 7-52)
3	Utilization Region label (refer to *Select Utilization Region* on the facing page)
4	Time Scale (refer to *Set up Utilization Graph Options* on page 7-52)
5	Legend (refer to *Show or Hide the Legend: Utilization Graph* on page 7-55, *Reset Custom Colors or Labels: Utilization Graph* on page 7-54, and *Edit Legend Labels: Utilization Graph* on page 7-54)

Table 7-7. Utilization Graph—Configurable Features (continued)

Item	Reference
6	Current time marker dividing past (left side) from future (right side)
7	Threshold marker (refer to *Set a Utilization Graph Threshold* on page 7-53)
8	The count for the bar chart segment below the pointer

You get to the configuration controls through the title menu.

Figure 7-24. Utilization Graph—Title Menu
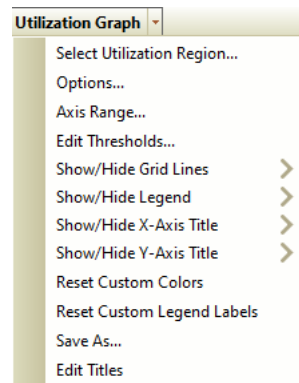
7.2.16.1.1 Select Utilization Region

1. Select **Utilization Graph > Select Utilization Region**.
   The **Select Utilization Region** dialog box opens.
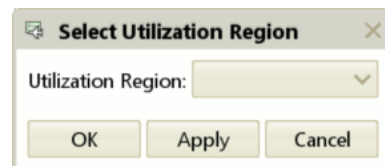
2. Select a utilization region from the drop-down menu.

   ℹ **NOTE**: Utilization regions are defined on the Aerobahn server.

   ℹ **NOTE**: Any region can be defined as a utilization region except for a gate region.

3. Save settings:
   - Click **Apply** to save settings and keep the dialog box open.
   - Click **OK** to save settings and close the dialog box.

7.2.16.1.2 Set up Utilization Graph Options

1. Select **Utilization Graph > Options**.
   The **Utilization Graph Options** dialog box opens.

2. Set the title, time scale, count type, and plots.

   - Title—Enter the title text.

   - Time Scale—Select a sample size, a future range, and a past range from the menus.

   - Count Type

     ○ Peak utilization during sample: The highest count of aircraft that use the selected region in a single five-minute sub-sample within the overall sample. For example, if you set the Sample Size to be 15 minutes, with two, three, and five aircraft in respective five-minutes sub-samples, the count for the 15-minute sample will be five because it is the highest count within the overall sample.

     ○ Total utilization during sample: The total count of aircraft that use the selected region in all sub-samples within the overall sample. In the example above, the count for the 15-minute sample will be 10 because it is the sum of all sub-samples within the overall sample.

   - Include Plots—Make sure that a check mark shows for the plots that will show in the graph.

3. Save settings:

   - Click **Apply** to save settings and keep the dialog box open.

   - Click **OK** to save settings and close the dialog box.

7.2.16.1.3 Set the Axis Range in the Utilization Graph

The axis range settings define the markings on the y-axis (vertical axis) of the graph. This shows how many aircraft are predicted at a given time.

1. Select **Utilization Graph > Axis Range**.
   The **Axis Range** dialog box opens.

2. Select the range type:

   - Auto Range—The tool adjusts the scale to fit the data.

   - Fixed Range—You enter the lower and upper bounds for the data and the major marks on the scale.

3. Click **OK** to save settings and close the dialog box.

7.2.16.1.4 Set a Utilization Graph Threshold

A threshold marker is a horizontal rule set at a number value so that you can see at a glance when utilization reaches a value. You can set more than one threshold and configure the color of each threshold marker.

You can add and edit the position (value) and color of thresholds, remove threshold markers, and show or hide threshold markers.

1. Select **Utilization Graph > Edit Thresholds**.
    The **Thresholds** dialog box opens.

    - Click **Add** to add a new threshold marker.

        a. Enter the size, or click to increase or decrease it.

        b. Click in the color square to open the color selector dialog box (refer to *Color Models* on page 6-14 for more information).

    - Click **Remove** to remove a threshold marker from the graph.

    - To show a threshold on the graph, make sure that a check mark shows in the row that defines the threshold marker. When you remove the check mark, the threshold marker does not show.

2. Save settings:

    - Click **Apply** to save settings and keep the dialog box open.

    - Click **OK** to save settings and close the dialog box.

7.2.16.1.5 Edit Custom Colors: Utilization Graph

You can configure custom colors in two ways:

- Using the legend
- Using the Settings menu

Using the legend

1. Click a color square in the legend.
    The **Choose New Series Color** dialog box opens.

2. Select a color from the color wheel.

3. Click **OK**.

To restore the default colors, refer to *Reset Custom Colors or Labels: Utilization Graph on the next page*.

Using the Settings Menu

1. Select **Settings > Color Settings > Charts > Utilization Graph**.

2. Expand **Utilization Graph**.

3. Select a graph type (e.g., Inbound, Outbound, and Unknown).

4. Select a color from the color wheel.

5. Click **OK**.

ℹ NOTE: You cannot reset colors that were configured through the **Settings** menu using **Reset Custom Colors**.

7.2.16.1.6 Reset Custom Colors or Labels: Utilization Graph

Select **Utilization Graph > Reset Custom Colors** to restore the default colors in the **Utilization Graph**.

ℹ NOTE: You cannot reset colors that were configured through the **Settings** menu using **Reset Custom Colors**.

Select **Utilization Graph > Reset Custom Legend Labels** to restore the default text in the **Utilization Graph** legend.

7.2.16.1.7 Edit Legend Labels: Utilization Graph

1. Click a label.
   The **Enter New Label** dialog box opens.

2. Enter new text.

3. Click **OK**.

To restore the default label text, select **Utilization Graph > Reset Custom Legend Labels**.

7.2.16.1.8 Show or Hide the Grid Lines: Utilization Graph

Grid lines show on the graph background.

1. Select **Utilization Graph > Show/Hide Grid Lines**.

2. Select **Show** or **Hide** to change the state.

Figure 7-25. Show Grid Lines
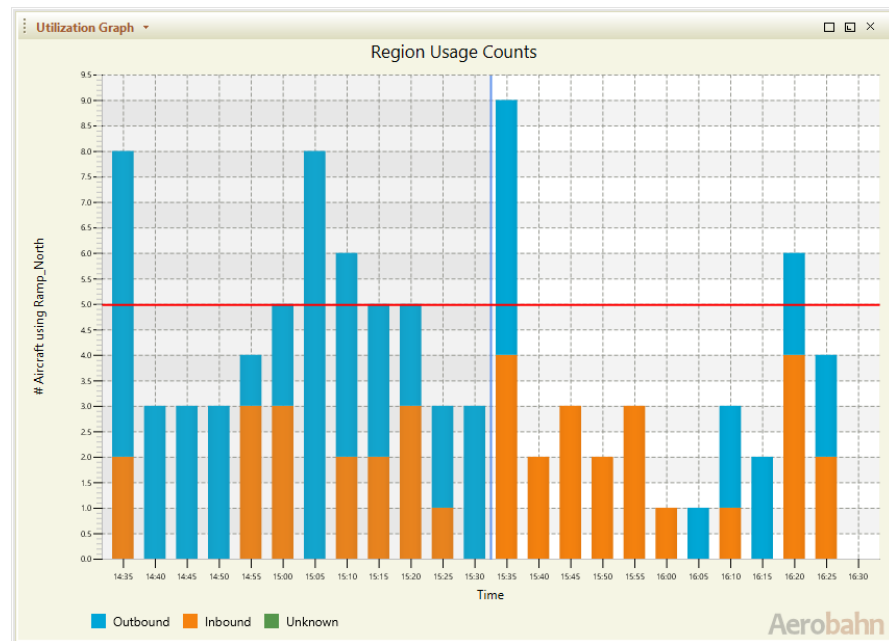
Figure 7-26. Hide Grid Lines
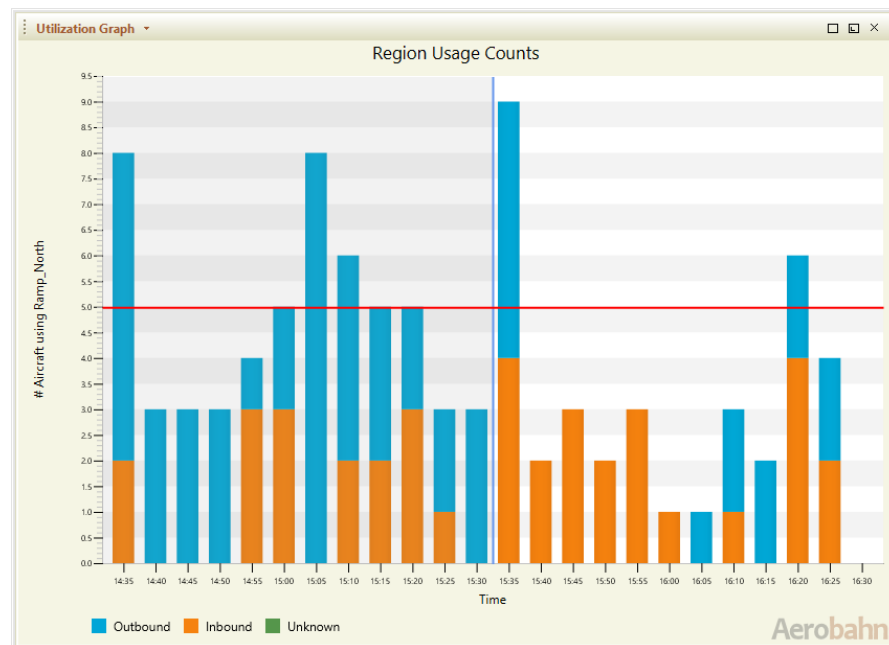
7.2.16.1.9 Show or Hide the Legend: Utilization Graph

The legend shows below the graph.

1. Select **Utilization Graph > Show/Hide Legend**.

2. Select **Show** or **Hide** to change the state.

7.2.16.2 Make a Screen Capture of a Utilization Graph

You can copy and paste a screen print of a graph or chart into an open document.

1. Right-click in the graph/chart.

2. Select **Copy**.

3. Paste the information into a document.

7.2.17 Use Utilization Statistics

The **Utilization Statistics** dialog shows:

- the largest number of aircraft that Aerobahn predicts will be in a selected utilization region

- the time that the utilization is predicted to happen or a countdown to the time that the utilization is predicted to happen

1. Select **Tools > Airport Statistics > Utilization Statistics**. The tool opens.

2. Select a utilization region:

   ℹ **NOTE**: Utilization regions are defined on the Aerobahn server.

NOTE: Any region can be defined as a utilization region except for a gate region.

---

    a. Select **Utilization Statistics > Select Utilization Region**.

    b. Select a utilization region from the menu.

    c. Click **OK**.

3. Select **Utilization Statistics > Display Options** to configure the tool display (refer to *Configure the Utilization Statistics Tool* below for more information).

7.2.17.1 Configure the Utilization Statistics Tool

Configure the **Utilization Statistics** tool appearance through the **Display Options** dialog box and by setting thresholds.

1. Select **Utilization Statistics > Display Options**.
   The **Display Options** dialog box opens.

    a. Set the Content Options, Count Indicator, and Count Label.

        ■ Content Options—Make sure that a check mark shows in "Display Time of Peak Congestion" if you want to show the time or the countdown marker.

        ■ Count Indicator—Enter the size, or click to increase or decrease it. Click in the color square to open the color selector dialog box.

        ■ Count Label—Enter new label text. Enter the size, or click to increase or decrease it. Click in the color square to open the color selector dialog box (refer to *Color Models* on page 6-14 for more information).

    b. Save settings:

        ■ Click **Apply** to save settings and keep the dialog box open.

        ■ Click **OK** to save settings and close the dialog box.

2. Set thresholds that change the color of the number and background when the count is greater than or less than a set value.

    a. Select **Utilization Statistics > Thresholds**.
   The **Thresholds** dialog box opens.

    b. Select **Greater Than** or **Less Than**.

    c. Click **Add Threshold**.
   The **Add Thresholds** dialog box opens.

    d. Enter a value for the threshold.

e. Click in the color square to open the color selector dialog box. ("Light" and "Dark" refer to the color theme (refer to *Set a Workspace Background* on page 3-5 and to *Color Models* on page 6-14 for more information on the color selector dialog box).

f. Click **OK**. When the threshold value is met, the colors change as configured.

ℹ **NOTE:** When you configure multiple thresholds, Aerobahn will use the most extreme threshold exceeded. For example, if you configure the "<20", "<10", and "<5" thresholds, and the count is 7, Aerobahn will apply the font and background fill colors set for the "<10" threshold, even if the count also meets the "<20" threshold.

Figure 7-27. Utilization Statistics Tool Display Options
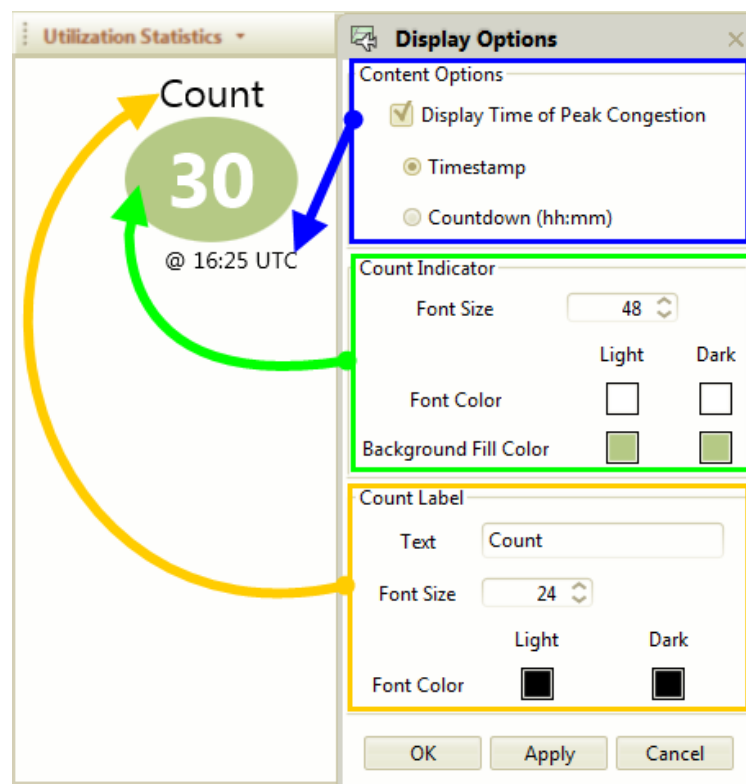
7.3 Departure Management Overview

Sites at which Aerobahn Departure Management (DMAN) plans are enabled use one of these options:

- Departure Management (DMAN)—Can set departure rates, queue length, runway rollover time, and schedules for runway configuration changes
- Pre Departure Sequencer (PDS)—Can set departure rates, departure separation, queue length, and runway rollover time
- Neither—Can set departure rates

The Departure Management plan enabled at your site determines the options that show in your Airport Configuration tool (refer to *Airport Configuration* on page 4-30).

7.3.1 Departure Management (DMAN)

The Aerobahn **DMAN** system does 3 functions:

- Rationing
- Flight Assignment
- Evaluation

DMAN does these at regular intervals and makes updates as new information enters the system. Metering coordinators monitor conditions at the airport and make sure that the departure metering configuration is correct.

The cycle of rationing, flight assignment, and evaluation continues during the departure metering period. Bin assignments continue to update until the bin turns static. When the bin turns static, the departure coordinator can adjust allocations and assignments. Ramp controllers read the Recommended Off Block Time[1] (ROBT) from the system and push a flight at the correct time for its Target Movement Area Time (TMAT). This helps the rate that aircraft to flow (at near the take-off rate) into the movement area.

As a component of a ground-management program, departure metering sends departure volumes toward runway capacity and decreases traffic on taxiways.

Select **Tools > Departure Metering** to access metering tools.

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[1]ROBT is based on the average time-to-spot from each gate and on the Target Movement Area Time (TMAT)

If the client PC loses its connection with the server, Aerobahn saves metering-bin allocations and assigned flights data to a time-stamped *.CSV file on the client PC and supplies a hyperlink for the saved file.

Changes made in the **Airport Configuration** tool change departure metering.

Rationing

The rationing function automatically calculates runway capacity and flight allocation. Each day, the flight schedule supplies information on departures and on the current status of all flights to the rationer. The Aerobahn system supplies the flight schedule to the rationer.

Departure coordinators supply information that makes rationing work:

- Current and predicted runway configurations (describing the runways that are and will be used for the various first departure fixes)
- departure rates
- queue length for each runway (that is, the number of flights on the movement area heading for that runway)

The Aerobahn rationing process does 2 tasks:

- It calculates the number of aircraft that can take off from each runway during a period of time (determines the number of allocations).
- It gives those "slots" (i.e., "allocations") to the carrier groups.

When the rationer has made allocations in each time-runway bin to carrier groups, the second departure metering function, Flight Assignment, starts.

Flight Assignment

In the flight-assignment process, flights are selected from the schedule of each carrier group to fill the available slots. Assignment usually starts at the top of the schedule and takes one flight after another, down the list.

To be assigned to a time bin, a flight must be ready to taxi onto the movement area during that bin. Each bin is associated with a TMAT. Each flight assigned to a bin must be ready to taxi at the TMAT plus or minus some tolerance. Therefore, the assigner examines the scheduled off-block time (SOBT) of each flight and calculates whether the flight will hit the TMAT. If not, the assigner pushes the flight to a later time bin.

"Unassigned flights" are scheduled to depart before the departure metering horizon but are not in a bin when all slots are filled. As slots open, unassigned flights are the first flights identified for assignment.

At any time during the process, approved users, such as a coordinator or carrier group ramp controller, can change flight assignments. Although the schedule supplies the default priorities for assignment, ramp controllers can change flight placement in their own carrier group schedule, *changing the flight's priority for assignment but not its scheduled departure time*. For example, if a delayed flight must vacate a gate to make room for an inbound, it can be moved up in priority over another delayed flight whose gate will not be soon used.

Delays caused by airline maintenance, late servicing, or passenger issues can change availability for assignment. To show this type of delay, ramp controllers can enter a Target Off Block Time (TOBT) to calculate the bin assignment. (The automatic process uses the Scheduled Off Block Time [SOBT] to calculate bin assignment.)

Assignments change as often as the allocations do, but assignment updates stop in a Static Horizon (e.g., 30 minutes from the current time), giving a carrier time to tell passengers and to finalize flight logistics.

Coordinators have other controls for static time-runway bins. First, in the rationing process, they can create or remove allocations in a static bin to override decisions. Because static bins do not update automatically, the coordinator can change allocations to account for recent changes in the airport configuration or metering progress. Also, the coordinator can change the owner of a slot in a static bin to reassign a flight from a different carrier group to that bin. The coordinator can reassign one carrier group's unneeded slot to another carrier group with a departure.

After the assigner aligns a flight to a bin, it shows the TMAT and a recommended off-block time to tell the ramp controller when to push the flights to get the best chance to hit the TMAT.

Evaluation

Evaluation measures compliance with departure metering and calculates statistics on slot use. A flight is compliant if it arrives at its spot or de-ice pad, or if it leaves its Metering Point[1] (if it has one), in less than a given tolerance of the TMAT. (If a flight is assigned a metering point *and* a de-ice pad, then the metering point is the compliance point.) A flight is "compliant" when it does not go to the spot queue region too late or go from the spot queue region too soon.

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[1]A single region or a group of contiguous regions that is used to determine metering compliance based on the time at which a flight enters and exits that region or group of regions

Aerobahn gives compliance statistics for all carrier groups and the list of individual flights. It tells if flights were compliant and tells the degree by which they did not make the TMAT tolerance.

The evaluation process also calculates slot-usage statistics. The slot counts specified during rationing help to set the number of aircraft that get to the movement area. This helps to make sure that runways are used at the predicted capacity. If a carrier group fails to use an allocated slot, too few flights use the runway, and airport operations are inefficient.

7.3.2 Use Compliance Monitor

Compliance Monitor is part of the **Departure Metering** suite of tools. It supplies the following information for each carrier group and individual airline:

- Number of used allocations
- Number of unused allocations
- Percentage of allocations that are used
- Number of compliant flights
- Number of non-compliant flights
- Percentage of all flights that are compliant

Compliance Monitor also supplies flight-specific information for non-compliant flights based on the flight occupying a specified location—Spot[1], de-ice pad, or Metering Point[2]—within a specified time. Based on a gate assignment, Aerobahn gives an estimated taxi time between the gate and that specified location.

ℹ **NOTE:** Compliance Monitor shows compliance statistics only for airlines or flights with carrier codes specified by your "Carrier List for Metering Compliance Data Access" permission.

Select **Tools > Departure Metering > Compliance Monitor**.

- Click the Summary tab to view overall departure activity.
- Click the Non-Compliant Flights tab to view a list of individual non-compliant flights and the causes for non-compliance: early, late, or not allocated ("No Assignment").

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[1]The location where aircraft ground control transitions from one authority to another authority.
[2]A single region or a group of contiguous regions that is used to determine metering compliance based on the time at which a flight enters and exits that region or group of regions

When a flight's arrival and departure from the spot queue is within a configurable "compliance window" that includes the Target Movement Area Time (TMAT), the flight complies with the metering scheme. Specifically, a flight must not enter the spot queue later than TMAT + a configurable buffer, and it must not leave the spot queue earlier than TMAT – a configurable buffer. A flight is "compliant" when it does not go to the spot queue region too late or go from the spot queue region too soon.

> **ℹ️ NOTE:** "No Assignment" refers to a flight that passes through metering without having been assigned a departure allocation. Such flights do not have a TMAT.

7.3.2.1 Configure the Scope of Data Displayed

You can restrict the amount of data that Compliance Monitor displays through Tool Options.

1. Select **Compliance Monitor > Tool Options**.
2. Select the time option you prefer:
    - "For number of hours before current time" gives a sliding window of a fixed duration.
    - "Since time of day" gives data back to that time in the current day, or, if you pick a time that is after today's current time, Tool Options shows data starting at that time on the previous day.
3. Click **OK**.

7.3.2.2 Export Non-Compliant Flights Data

You can export the current non-compliant flight list to a CSV file, including all display (non-filtered) fields, a header, and a timestamp indicating the time of export.

1. Select **Tools > Departure Metering > Compliance Monitor**.
2. Select the tool title. The title menu opens.
3. Select **CSV Export NC Flight List**. The Save dialog box opens.
4. Choose a folder and enter a File Name for the CSV file.
5. Click **Save**.

7.3.2.3 TMAT Deviation

While metering is active, Aerobahn records the TMAT and TMAT Deviation for each departure.

TMAT Deviation is displayed in HH:MM:SS format and defined as follows:

- If the flight leaves the spot before the start of the compliance window, TMAT deviation is the difference between the AMAT and start of the compliance window.

- If the flight enters the spot queue after the compliance window closes, the TMAT deviation is the difference between the time the flight entered the spot queue and the time that the compliance window closed.

7.3.3 Use Departure Metering

The **Departure Metering** tool lets you see and adjust carrier-group allocations.

Select **Tools > Departure Metering** to open **Departure Metering**.

Departure Metering collects flight allocations into bins (refer to *Departure Metering Tool Structure* on page 7-67). Flight allocations can be grouped to show by Bin or by Bin Type.

- Group Flights by Bin—Flights are put in time "bins" arranged—from top down—in chronological order. The top bin shows the most recent past time bin and is called the "expired bin."

- Group Flights by Bin Type—Flights are organized into 4 categories: past flights, static flights, dynamic flights, and overflow flights.

Select **Departure Metering > Show Bins** to group by bin or by bin type.

Departure Metering also allows you to do the following:

- Put flights in new allocations and/or new time bins. Drag flights into position. Carrier Group Operators cannot change flight assignments when they see "All Carrier Groups" (refer to *Change Priority of Flights in Departure Metering* on page 7-72).

- Add Scratch Pad Text (refer to *Add Scratch Pad Text* on page 7-227).

- Open the Manage Flight dialog box (refer to *Enter Data in the Manage Flight Dialog Box* on page 7-224).

    - Enter a Target Off Block Time (TOBT) value to tell **Departure Metering** that there has been a flight delay.

    - Change the de-ice mode to "De-icing" and add a de-ice location and duration to tell **Departure Metering** that a flight is scheduled to de-ice.

- Cancel a flight—Tells the Aerobahn system that a flight is canceled. The carrier code of the flight must be in the Carrier List for Proprietary Data Access permission for that carrier.

- Remove a flight—Removes a flight from the system. The carrier code of the flight must be in the Carrier List for Proprietary Data Access for the user.

- Select Carrier Group (title menu)—Filters the view. Carrier Group Operators can move flight assignments when they see only their own flights. That is, when they see All Carrier Groups, Carrier Group Operators cannot change flight assignments.

- Show Bins (title menu)—Toggles off/on the collect by time bins action.

- Disable/Enable Dynamic Rule Actions (title menu)—Toggles off/on the visual effects of dynamic rules in this tool.

- Request Allocation—Requests an allocation from the Metering Coordinator. You can monitor responses in the **Request Response Manager** (refer to *Request a New Metering Allocation* on page 7-70).

- Override Metering Compliance Status—Coordinator Access only—Changes the automatically assigned compliance status for flights that went through departure metering (flights with an AMAT).

(continued from previous page)

- Add Allocation—Coordinator Access only—Makes a new departure allocation in a static bin.

- Remove an Unused Allocation—Coordinator Access only—Erases unfilled allocations of the carrier group from a static bin.

- Change the Owner of an Allocation—Coordinator Access only—Changes the carrier group associated with an allocation.

- Reallocate and Reassign Flights for this Bin—Coordinator Access only— May be used to start rationing in a static bin.

- Open New Runway Bin—Coordinator Access only—Adds a new runway bin after a static time bin when the needed runway bin was not automatically added.

- Remove Unused Allocation—Select to delete the allocation. Shows in 2 situations:

  - when a coordinator right-clicks on an empty allocation row in a static bin

  - when a controller clicks on an empty allocation assigned the same carrier group that the controller is in.

- Remove All Unused Allocations—Coordinator Access only

  - If Show Bins is enabled, this shows when the coordinator right-clicks an empty allocation row or a runway header row in a static bin. Click **Remove All Unused Allocations** to delete empty allocations that share the runway assignment of the empty allocation that you right-clicked.

  - If Show Bins is disabled, this shows when the coordinator right-clicks the "Static flights" header. Click **Remove All Unused Allocations** to remove all empty allocations for all static bins on all runways.

- Change a field value through a menu (refer to *Change a field value through a menu* on the facing page).

Refer to *Use Departure Metering: Coordinator Actions* on page 7-72 for information about actions marked "Coordinator Access only."

ℹ NOTE: You can do most table-management functions (refer to *Work with Table Data* on page 3-9) in **Departure Metering**, but table sorting and filtering functions are not available.

Change a field value through a menu

If the <data field> (Manual) or <data field> (Aerobahn) column is not already included in the table, add it before you start this procedure (refer to *Work with Table Data* on page 3-9).

1. Find the flight for which you will set the <data field> (Manual).

2. Double-click the <data field> (Manual) or <data field> (Aerobahn). The edit/set tool opens.

3. Click to open the drop-down menu.

The available field values show.
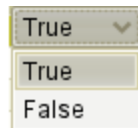
4. Select the correct value.

7.3.3.1 Departure Metering Tool Structure

"Older" bins are at the top of the **Departure Metering** tool. The top bin is the "expired bin." The bottom of the **Departure Metering** tool contains bins that are in the future.

The numbers in a **Departure Metering** bin header show (from left to right):

- the runway ID (for runway-specific bins)
- the number of flights assigned
- the number of allocations defined for that bin

At the far right (not shown) is the bin time.

Figure 7-28. Departure Metering Tool Structure (example)

Table 7-8. Departure Metering Tool Structure

Item	Description
1	Data summary. Airport configuration information is available in a window (refer to Figure 7-29 on page 7-72). ℹ️ **NOTE:** All data in this instance of **Departure Metering** is for airport configuration 13R. Departure metering is active.
2	"Expired" static bin
3	*Static* summary bin The summary bin contains only one runway. The data in the darker blue header matches that in the lighter blue Runway header. The number of the "live" summary static bins is referred to as "the freeze horizon." As in other tables, text color is associated with flight status. Here, gray text shows that a target is persisted.
4	Expanded static bin Symbols in the left column give notifications (including the compliance status) for a flight. The subsequent static bins are minimized. Click ⊞ to expand a bin.
5	Right-click in the header of an expanded static bin to request or add an allocation. Responses are tracked in the **Request Response Manager**.
6	Dynamic time bin The summary bin contains only 1 runway. The data in the darker green header matches that in the lighter green Runway header. This dynamic bin follows the static bin identified by (3) by 30 minutes (two bins).
7	Expanded dynamic bin

Organization of Dynamic Bins

Departure Metering supports bins to 4 hours in the future. **Departure Metering** shows a minimum of 2 hours of bins. If there are bins with allocations that are 4 hours in the future, it shows those bins. Allocations that are more than 4 hours in the future are collected in one bin.

7.3.3.2 Metering Notifications

Notifications supply more information about a flight and its status related to departure metering.

Aerobahn does not include flights with "Unknown" compliance status or flights with "Unknown (Late Transponder)" compliance status when it calculates compliance statistics.

NOTE: Departure Metering supports the Status Lights function, which is not the same as the notifications discussed here. For more information about Status Lights, refer to *Show Status Lights* on page 7-319.

Table 7-9. Notifications

Icon	Status Description
✖	Flight went through departure metering (reached the spot, de-ice pad, or left the metering location). Not compliant. **NOTE:** ✖ is used in other columns to show "False" state.
✔	Flight went through departure metering. Compliant. **NOTE:** ✔ is used in other columns to show "True" state.
❗	Flight is in a bin where it does not fit, or had a flight-information (e.g., predicted runway) change while in the static bin. Flight moves toward a different (predicted) runway than that associated with the bin, or the SOBT or TOBT will not let the flight depart in time to be compliant with the TMAT.
↓	Flight is assigned by the system to a later bin based on a user-entered TOBT. This does not show an error. It shows only that the bin has been assigned out of priority.
?	Departure metering compliance status is "Unknown" or "Unknown (Late Transponder)." Aerobahn assigns these statuses under these conditions: ▪ to departures in the movement area on system start ▪ when it detects a departure in the movement area with no history of having moved from the ramp to the movement area Such flights include those that depart the gate and enter the movement area before they switch their transponders to on, and those that are not detected by surveillance when they enter the movement area.

7.3.3.3 Request a New Metering Allocation

You can ask for a new departure metering allocation in the "Show Bins" and "Bin Type" (that is, Show Bins is deselected) views.

Request Allocation when Show Bins is Checked—Procedure 1

ℹ️ **NOTE:** This procedure makes an allocation for a specific flight.

1. Drag a flight into a static bin header. The **Request Allocation** dialog box opens.
2. Select the runway.
3. Enter the TMAT time.
4. Click **OK**.

Request Allocation when Show Bins is Checked—Procedure 2

ℹ️ **NOTE:** This procedure makes an allocation for a carrier group.

1. Right-click in a runway bin header row at the time you want an allocation.
2. Select **Request Allocation**. The **Request Allocation** dialog box opens.
3. Make necessary changes in runway or TMAT time.
4. Click **OK**.

Request Allocation when Show Bins is Not Checked

ℹ️ **NOTE:** This procedure makes an allocation for a carrier group.

1. Right-click the Static flights header.
2. Select **Request Allocation**. The **Request Allocation** dialog box opens.
3. Make any changes necessary in runway or TMAT time.
4. Click **OK**.

7.3.3.4 Request a Compliance Override

1. Right-click the flight (in a static bin or other real-time tool) that has an assigned status you change.
2. Select **Request Compliance Override**.
3. Select the cause from the menu, or replace a supplied cause.
4. Click **OK**.

The status indicator in **Departure Metering** shows compliance status, and the indicator changes if the compliance status changes. You can also monitor responses to requests in **Request Response Manager** (refer to *Use the Request Response Manager* on page 7-74).

7.3.3.5 Show Airport Configuration Settings

To show Queue Length and Planned Rate data, put the pointer above the "Departing on..." message in the upper right of the Data Summary section of the **Departure Metering** tool.

Figure 7-29. Airport Configuration Settings in Departure Metering Tool
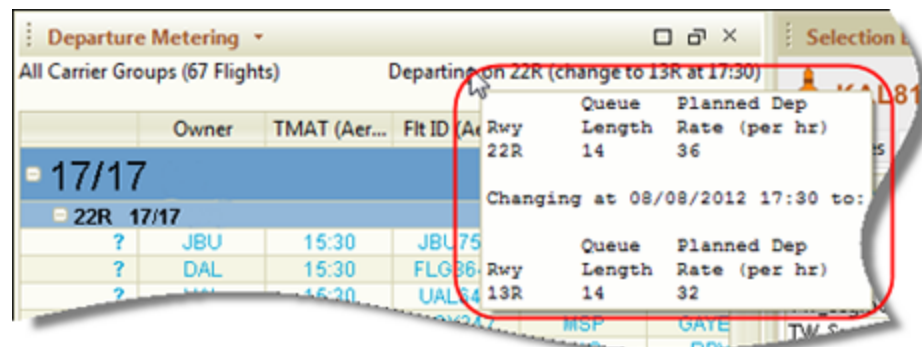
7.3.3.6 Change Priority of Flights in Departure Metering

i **NOTE:** When the display shows All Carrier Groups, the Carrier Group Controllers cannot change flight assignments. Controllers from one carrier group cannot change flight assignments for a different carrier group.

Departure Metering lets you drag flights into new allocations and/or new time bins to change the priority of selected flights.

1. Drag the flight row to a new location. If that flight cannot move there, Aerobahn prevents the change.

2. Release the flight.

3. Select (from the menu): **Swap... with...** or **Insert ... before....** Aerobahn adjusts flight priorities.

For more information on using **Departure Metering**, refer to *Use Departure Metering* on page 7-64.

7.3.3.7 Use Departure Metering: Coordinator Actions

Refer to *Use Departure Metering* on page 7-64 for general information about **Departure Metering**. Usually, Departure Coordinators control changes in static bins.

Refer to *Departure Manager: Metering Coordinator Permissions* on page 9-11 for System Administration information.

7.3.3.7.1 Set Metering Compliance Status

Use to set the compliance status of a flight with an Actual Movement Area Time (AMAT).

1. Right-click an allocation.

2. Select **Override Metering Compliance Status**.

3. Select the override. The notification icon changes to show compliance status.

   - Compliant (manual override)

   - Non-Compliant (manual override)

   - No Compliance Status (manual override)

7.3.3.7.2 Add Allocation

Use to make a new departure allocation in a static bin.

1. Right-click in the header of an expanded static bin to request an allocation.

2. Select **Add Allocation**.

3. Select the carrier group.

7.3.3.7.3 Remove an Allocation

Use to remove empty allocations from a static bin.

1. Right-click an empty allocation in a static bin.

2. Select **Remove Unused Allocation**.

3. Select the carrier group.

7.3.3.7.4 Change the Owner of an Allocation

Use to change the carrier group connected to an allocation.

1. Right-click an empty allocation in a static bin.

2. Select **Change Allocation Owner**.

3. Select the carrier group.

7.3.3.7.5 Start Rationing in a Static Bin

⚠️ **CAUTION:** If you use *Reallocate and Reassign Flights for this Bin*, you can replace flight assignments that carrier groups use in flight-allocation plans.

1. Right-click the header for a static bin.
2. Select **Reallocate and Reassign Flights for this Bin**.
3. Confirm action.

7.3.3.7.6 Move a Flight into a New Allocation

Aerobahn automatically gives approval and records new allocation requests in **Request Response**. The Metering Coordinator has approval authority.

7.3.3.7.7 Set a TMI Constraint Gate Hold

ℹ️ **NOTE:** The TMI Constraint Gate Hold feature in **Airport Configuration** operates on systems that are in DMAN mode when metering is active for the selected configuration. The TMI Constraint Gate Hold feature is for Metering Coordinator access only.

A metering coordinator can enable a TMI Constraint: Gate Hold when a first departure fix region is closed.

When TMI Constraint Gate Hold is enabled, the metering function holds flights subject to closed departure fixes or other TMI constraints at the gate. By holding flights, the metering function avoids filling the movement area with flights that cannot depart. When the fix reopens, **Departure Metering** reassigns the flight that has a closed first departure fix to the earliest possible dynamic departure allocation for that carrier group.

1. In the **Airport Configuration** tool, click **Modify** to open the **Modify Airport Configuration** dialog box.
2. Select **TMI Constraint Gate Hold Enabled**. Flights are reallocated automatically.

7.3.4 Use the Request Response Manager

Controllers use the **Request Response Manager** to see requests and coordinator responses and to cancel their own requests.

Departure coordinators use the **Request Response Manager** to examine and to accept or deny controller requests to add allocations or to change the compliance status of a flight.

Status indicators in the **Request Response Manager** give information on requests. Put the pointer on the status indicator to see information.

ℹ️ **NOTE:** In addition to status indicators in the **Request Response Manager**, Aerobahn gives visual and audio notifications (refer to *Configure Request Response Settings* on page 6-22).

Open the Request Response Manager

Select **Tools > Departure Metering > Request Response Manager**.

ℹ️ **NOTE:** Refer to *Work with Table Data* on page 3-9 for instructions on how to change column layouts, how to use filters, and how to sort and export table data.

7.3.4.1 Cancel Allocation Requests

Use the **Request Response Manager** to cancel your own requests for allocations made in **Departure Metering**. You can cancel requests in your carrier group only.

1. Select **Tools > Departure Metering > Request Response Manager**.
2. Select 1 or more requests.
3. Click **Cancel Request**. The Status column shows the request status.

7.3.4.2 Hide Completed Requests

You can show all requests or only active requests (refer to Figure 7-30 on the next page).

To show all requests: Select **Request Response > Hide Completed Requests > No**.

To show active requests only: Select **Request Response > Hide Completed Requests > Yes**.

Figure 7-30. Hide Requests
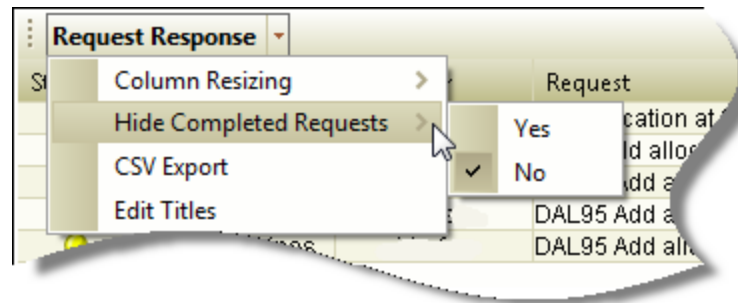
7.3.4.3 Accept or Deny Requests

> ℹ️ **NOTE:** This feature requires Departure Coordinator access.

When a departure coordinator accepts a request for a new allocation in the **Request Response Manager**, Aerobahn moves the requested flight to a new allocation and removes the allocation that you moved the flight from.

A departure coordinator can use the **Request Response Manager** to deny a request for a change in the compliance status of a flight. This can be done for one request or for more than one request.

One Request

1. Select the request.
2. Act on the request:
    a. Right-click the request and/or click the applicable button at the bottom of the **Request Response Manager**.
    b. When the dialog box opens, complete and/or confirm the supplied data.
        ▪ If the request must be changed, adjust the time.
        ▪ If the request is denied, select the reason.
3. Click **OK**.

More than One Request

A departure coordinator can select more than one request at a time and accept or deny those requests as a group.

> ℹ️ **NOTE:** You cannot adjust time settings for a group of requests.

1. Press CTRL and select requests.

2. Accept or deny the requests:

   - Click **Accept** to accept allocation requests for all selected flights.

   - Click **Deny** to reject allocation requests for all selected flights.

3. Click **OK**.

7.4 Flights and Watch Lists Tools

Flights and Watch Lists tools focus attention on the status of flights based on their location on the airport surface, the activity with an airport region, the predicted sequence of operations on a specified runway or for the airport, or the generated results of a flight rule or of rules.

7.4.1 Use the Active Flights Tool

Active Flights shows monitored inbound and outbound flights. The tool shows a green, yellow, or red delay status (DS) for the current state of an aircraft. If a status is gray, no delay status threshold is set for that state.

ℹ **NOTE: Active Flights** alerts change when an aircraft moves from one state to a different state. **Active Flights** alerts do not give a summary of inbound or outbound statuses.

1. Select **Tools > Flights and Watch Lists > Active Flights** to open **Active Flights**.

2. Select **Active Flights > Flight Direction > [Inbound/Outbound]**.
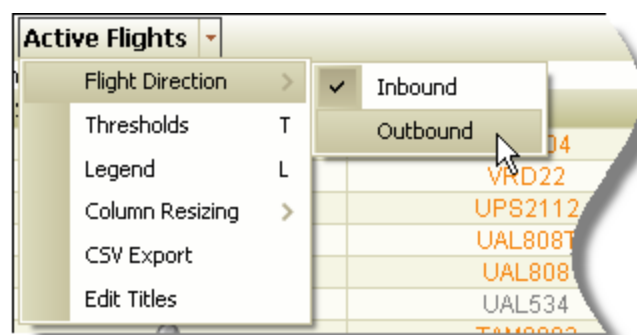
3. Select **Active Flights > Thresholds** to open configuration controls for delay status (DS).

4. Enter the value (in minutes) for the threshold(s).

5. Click **OK**.

➡ Select **Active Flights > Legend** for a key to operational states ("Op State" column).

ℹ **NOTE:** Refer to *Work with Table Data* on page 3-9 for instructions on how to change column layouts, how to use filters, and how to sort and export table data.

Refer to *Active Flights Data Fields* on the facing page for more information.

7.4.1.1 Set up Delay-Status Threshold Controls

Use the **Edit Thresholds** controls to set delay status.

ℹ **NOTE:** Thresholds must be whole numbers. If you set a threshold value to "0", no status indicator for that state/location is applied. When a threshold is set to "0," the associated status indicator displays as a gray circle.

1. Select **Active Flights > Thresholds**.
2. Enter delay thresholds (in minutes).
3. Click **OK** to set thresholds.
4. Close the **Edit Thresholds** dialog box.

Figure 7-31. Active Flight Delay-Status Threshold Settings

📶 **NOTE:** Refer to *Configure Region Alerts* on page 6-17 for instructions on how to set up alerts in **Map Display**. The delay thresholds you configure in the **Active Flights** tool do not affect the alert thresholds set in **Map Display**.

7.4.1.2 Active Flights Data Fields

These data fields are specific to the **Active Flights** tool (refer to *Use the Active Flights Tool* on page 7-77 for instructions on using the tool).

➡ Select **Active Flights > Legend** for a key to operational states ("Op State" column).

Table 7-10. Active Flights Column Headings

Type of Data	Description
DS	Delay Status—color-coded dots show an aircraft's delay status (based on configured thresholds). Select **Active Flights > Legend** for definitions. (The Active Flight Legend and the Map Display Legend are different.) For example, if the low-level "short delay" threshold is set to 30 minutes late, and the higher level "long delay" threshold is set to 60 minutes, the DS indicator shows green until 29 minutes, yellow between 30–59 minutes, and red if the delay is 60 minutes or longer. Set a threshold value to "0" to disable the status indicator for a state. Disabled indicators display as gray dots (refer to *Set up Delay-Status Threshold Controls* on page 7-78 for information on how to set delay-status thresholds).
Flt ID	Flight ID—Shows ICAO[1] carrier code, Registration, *or* Mode S[2] identification.
Orig / Dest	Shows airport IATA[3] code.
ETOT /ELDT	For outbound flights, Estimated Take Off Time (FAA) For inbound flights, Estimated Landing Time (FAA)
Op State	Select **Active Flights > Legend** for definitions. (The Active Flight Legend and the Map Display Legend are different.)
ETime	Operational State Elapsed Time[4]
Under Surv	Under Surveillance[5]

7.4.2 Use the Diverted Flights Viewer

ℹ️ NOTE: Set **Diverted Flights Viewer** permissions in **SystemAdmin** Settings and Permissions (**Applications > Launch TaxiView > Tools > Use Diverted Flights Viewer**).

Diverted Flights Viewer shows diverted flights and their related recovery flights in the National Airspace System (NAS). You can filter diverted flights by age (refer to *Use the Diverted Flights Viewer* above) or by airport code (refer to *Use the Diverted Flights Viewer* above).

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[1] International Civil Aviation Organization

[2] Mode S is a discrete selective interrogation rather than a general broadcast. Mode S transponders ignore interrogations not addressed with their unique identity code, reducing channel congestion.

[3] International Air Transport Association

[4] Amount of time the aircraft has been in the current operational state

[5] True for two types of targets: targets for which Aerobahn is receiving surveillance and targets that have persisted

When used in combination with Aerobahn dynamic rules, Aerobahn can send notifications to key stakeholders of diverted flights and recovery flights:

- Flights that divert to an Aerobahn airport from an airport that does not use Aerobahn

- Flights that are diverted from an Aerobahn airport to an airport that does not use Aerobahn

To tell stakeholders (this includes stakeholders at an airport that does not have Aerobahn), add their Email addresses to notification lists when you set up a rule related to diverted flights.
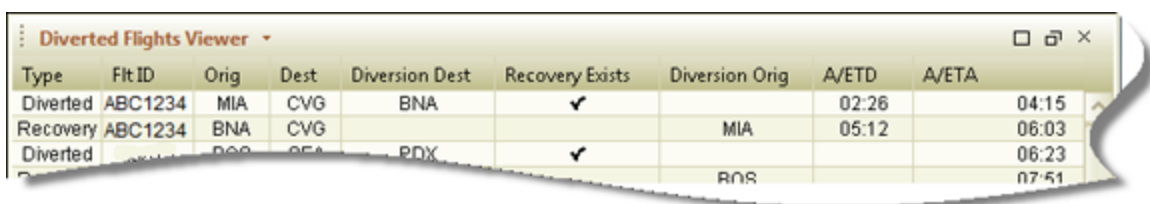
Select **Tools > Flights and Watch Lists > Diverted Flights Viewer** to open the **Diverted Flights Viewer**.

ℹ️ **NOTE:** When you select a flight in **Diverted Flights Viewer**, it is not selected in other real-time tools.

What does Aerobahn show about the status of Flight ABC1234 in Figure 7-32 below?

- ABC1234 departed Miami International (MIA) for Cincinnati/Northern Kentucky International (CVG) at 02:26 but was diverted to Nashville International (BNA), where it arrived at 04:15.

- A recovery flight from BNA to CVG was scheduled (shown by the check mark), and ABC1234 departed at 05:12.

- ABC1234 arrived at CVG at 06:03.

Figure 7-32. Diverted Flights Viewer

Type	Flt ID	Orig	Dest	Diversion Dest	Recovery Exists	Diversion Orig	A/ETD	A/ETA	
Diverted	ABC1234	MIA	CVG	BNA	✓		02:26	04:15	
Recovery	ABC1234	BNA	CVG			MIA	05:12	06:03	
Diverted		BOS	SEA	PDX	✓			06:23	
						BOS		07:51	

Diverted Flights Viewer gives A/ETA (Actual/Estimated Time of Arrival) and A/ETD (Actual/Estimated Time of Departure) to let you show actual and estimated data in a single column. Estimated values are expressed in parentheses.

To show Actual or Estimated data only columns, right-click the column heading, and select **Other Columns** or **Column Chooser**. Then, pick **ATA, ETA, ATD**, and/or **ETD**.

7.4.2.1 Hide Old Diversions

The tool is set to automatically remove all flights after a set number of hours. You can decrease the quantity of data that shows.

1. Select **Diverted Flights Viewer > Hide Diversions older than...**

2. Enter a value for the number of hours.

3. Click **OK**.

7.4.2.2 Modify Airport

You can filter data to show data related only to diverted flights that have a 3-character IATA airport code that matches the Origination Airport, Destination Airport, Diverted Destination Airport, or Diverted Origination Airport.

Use **Modify Airport** to limit the flights that show in **Diverted Flights Viewer** to the following:

- diverted flights that started at a specified airport
- diverted flights for which a specified airport was the scheduled destination
- flights that were diverted to a specified airport
- flights that took off from a specified airport after they were diverted

1. Select **Diverted Flights Viewer > Modify Airport**. The **Modify Airport** dialog box opens.

2. Select a view option.
    - Select **View All Flights** to display all diverted flights.
    - Select **View Only Flights Associated with a Single Airport** to filter the display by airport code. Enter the 3-letter IATA code for the airport to hide all but the flights associated with that airport code.

3. Click **OK**.

7.4.3 Use the Operations Timeline Tool

Operations Timeline shows data blocks in a predicted sequence of operations for a single runway or for the airport. **Operations Timeline** can also be set to show region closures (refer to).

1. Select **Tools > Flights and Watch Lists > Operations Timeline** to show **Operations Timeline**.

1. Adjust the display:

   - Adjust the timeline. The amount of data that you see in the timeline changes with the height of the tool window. To move the timeline scale up or down, press the middle mouse button (typically the scroll wheel), and drag.

   - Roll the scroll wheel to zoom in/out. At some zoom levels, data blocks for a given time do not show beside the time value. The lines to the data blocks extend beyond the limits of the window.

   - Press the **Home** key to restore **Operations Timeline** to its default display in the window.

Figure 7-33. Basic Timeline Structure
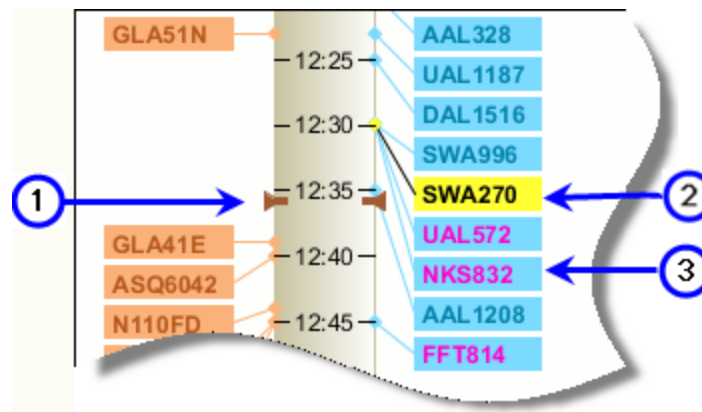
1	A bar shows the current time unless the bar obscures the time stamp (as it would in this illustration). If the bar obscures the time, it breaks as shown.
2	A selected flight. The connection point to the timeline (in this case at 12:30) changes color.
3	A flight for which a rule changes the data block text display. You can enable and disable this feature through **Operations Timeline > Preferences**.

Figure 7-34. Timeline showing De-ice Region Closure
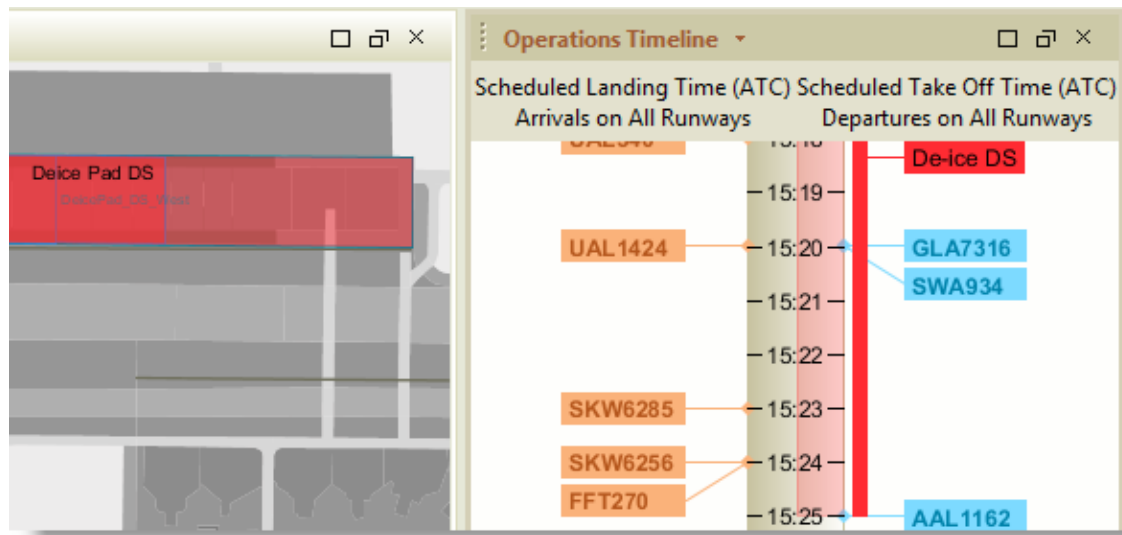
For more information, refer to *Set up the Operations Timeline Tool below*.

➡ Press the **HOME** key to restore the default **Operations Timeline** display. This action refreshes **Operations Timeline** when the tool does not zoom in or out or when you cannot change the size of the tool window.

➡ Click a data block (click-and-release) to select a target. Right-click to select a target and open a context menu (refer to *Context-Menu Controls in Map Display and Extended Range Map Display on page 7-254*).

7.4.3.1 Set up the Operations Timeline Tool

Select **Operations Timeline > Preferences** (refer to *Table 7-11 on the facing page*) to configure **Operations Timeline** (refer to *Configure Color Settings on page 6-2* for a guide to color settings).

Table 7-11. Operation Timeline Preferences

Category	Instructions
Display: Plot Selection (Set up left and right sides independently.)	Select "Enabled" to display data on the left and/or right side(s). Data shows only when "Enabled" is selected. Refer to *Set up the Operations Timeline Tool on the previous page* and/or *Set up the Operations Timeline Tool on the previous page* for more information.
	Use selections under "Flight List," and "Plot Time(s)" for the basic set up of each side of the timeline.
	To set the timeline to make a plot of flights that are in a selected watch list and/or that meet a rule, select that option and follow the "Select Source" prompt. Select 1 or a combination of Watch Lists and rules.
	Select the Plot Time element to use in positioning flights on the timeline.
	If you check **Label** and select **Default** under "Include," the terms in "Flight List," and "Plot Time(s)" are used as timeline labels. If you select **Custom**, enter label text.
	Select **Region Closures** and/or **Region Warnings**, and select the region type(s) to show. When closures or warnings are set, the timeline shows the span of time during which the selected closure or warning is active. (For more information on region closures and region warnings, refer to *Manage Region Status on page 4-1*.)
Display: Display Settings	Adjust the "Font Settings" slider to change the size of data block and mouseover text.
	Adjust the "Zoom Settings" slider to change the zoom performance of the mouse wheel.
	For "Time Progression," select **Upwards** to show future times at the top of the window. Select **Downwards** to show past times at the top of the window.
	Select **Show Dynamic Rules Effects** to make data block effects active in **Operations Timeline**.
Data: Data Block	Data blocks always show in **Operations Timeline**. Use the Preferences dialog box to show/hide data block backgrounds. The color settings for data blocks in **Operations Timeline** are defined in the **Color Settings** dialog box ("Aircraft & Vehicles" set). If you are using both sides of the timeline, set up the left and right sides independently.
Data: Mouseover	Select **Enable** to use the mouseover feature. You can set up the left and right sides to show different data fields. Field labels are available.

The timeline shows the current time (refer to .

7.4.3.1.1 Set Up a Single-sided Timeline

1. Select **Operations Timeline > Preferences**.

2. Select **Display > Plot Selection**.

3. Select the side of the timeline that will show data blocks, and be sure that only that side is enabled.

   - ☑ Enabled Show data blocks on this side.

   - ☐ Enabled Hide data blocks on this side.

     For information on how to set up data blocks, refer to *Configure Data Blocks in Operations Timeline* on page 7-89.

4. Select, for the "Enabled" side, the set of flights to include:

   - Flights for a selected runway

     a. Select one of the following:

        - **All Flights**

        - **Arrivals**

        - **Departures**

     b. Select the runway.

   - Flights for all runways

     a. Select one of the following:

        - **All Flights**

        - **Arrivals**

        - **Departures**

     b. Select **All Runways**.

   - Flights from a programmed Watch List

     a. Select **Flights in Watch List or Meeting Rule**.

     b. Click **Select Source**. (The Watch List and Rule Selection chooser opens. If there are no active Watch Lists, Aerobahn tells you that none are available.)

     c. Select the Watch List(s) and/or rules that will supply data to **Operations Timeline**.

     d. Select a relevant time factor in respect to the chosen Watch List.

5. Select, for the "Enabled" side, the time element to use in positioning flights on the timeline.

ℹ️ When you select "Estimated Region Entry Time," two additional menus open: One shows Region/Region Type. The other identifies all Regions and Region Types. You must select from these menus if you select "Estimated Region Entry Time."

---

6. Click **Apply**.
   The heading for the "Enabled" side shows the selections you made in Step 4 and 5.

7. OPTIONAL: Do these to show a custom heading:

   a. Select **Custom**.

   b. Enter the custom heading in the text box.

8. Select **Display > Display Settings**.

9. Set font size.

10. Set "Time Progression":

   - Select **Upwards** to put future times at the top of the timeline.
   - Select **Downwards** to put past times at the top of the timeline.

11. Click **OK** to save settings and close the **Preferences** window.

7.4.3.1.2 Set Up a Double-sided Timeline

1. Select **Operations Timeline > Preferences**.

2. Select **Display > Plot Selection**.

3. Make sure that the right side and left side are enabled (✅ Enabled).

4. Select, for each side, the set of flights to include (for example, Arrivals on the left and Departures on the right), and choose to show data for a selected runway or all runways.

- Flights for a selected runway

    a. Select one of the following:

        ○ **All Flights**

        ○ **Arrivals**

        ○ **Departures**

    b. Select the runway.

- Flights for all runways

    a. Select one of the following:

        ○ **All Flights**

        ○ **Arrivals**

        ○ **Departures**

    b. Select **All Runways**.

- Flights from a programmed Watch List

    a. Select **Flights in Watch List or Meeting Rule**.

    b. Click **Select Source**. (The Watch List and Rule Selection chooser opens. If there are no active Watch Lists, Aerobahn tells you that none are available.)

    c. Select the Watch List(s) and/or rules that will supply data to **Operations Timeline**.

    d. Select a relevant time factor in respect to the chosen Watch List.

5. Select, for each side, the time element to use in positioning flights on the timeline.

    > **i** **NOTE:** When you select "Estimated Region Entry Time," two additional menus open: One shows Region/Region Type. The other identifies all Regions and Region Types.

6. Click **Apply**.
   The headings show the selections you made in Step 4 and 5.

7. OPTIONAL: Do these to show a custom heading:

    a. Select the side.

    b. Select **Custom**.

    c. Enter the custom heading in the text box.

8. Select **Display > Display Settings**.

9. Set font size.

10. Set "Time Progression":

- Select **Upwards** to show future times at the top of the window.

- Select **Downwards** to show past times at the top of the window.

11. Click **OK** to save settings and close the Preferences window.

7.4.3.1.3 Configure Data Blocks in Operations Timeline

Data blocks show information about aircraft and other targets that Aerobahn receives from the surveillance system and other information sources. You can set up the sequence and spacing of that information.

1. Select **Operations Timeline > Preferences**.
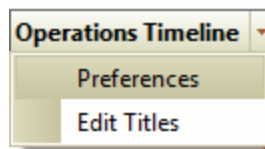
2. Select the **Data: Data Block** page.
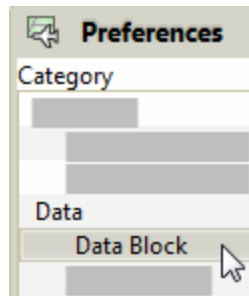
3. Hide or show the data block background.

4. Select the side (Left or Right) on which the data fields will go.

5. Select data fields:

- Load a data block template, or

- Set up the **Selected Fields** window to include the information that you wish to show:

    a. Click the **Filter** chooser.

    b. Select a filter category.
       The list of available fields shows only those fields in the selected category.

    c. If necessary, repeat Steps a and b to narrow down the selections. Only those fields that fit the selected categories show.

    d. Enter key search terms in the **Search** field.
       Only those fields that contain the search text show.

    e. Select the fields to show and/or hide (or load a data block template).

6. OPTIONAL: Change the sequence of fields.

7. OPTIONAL: Apply formatting to the data blocks:

- Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

- Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

8. Click **Apply**.

9. Make sure that the data block appearance is correct.

- If correct, click **OK**.

- If not correct, go to step 5, or click **Cancel**.

Colors are configured separately (refer to *Configure Color Settings for Operations Timeline* on page 7-92).

7.4.3.1.4 Configure Mouseover in Operations Timeline

ℹ **NOTE:** You can configure a mouseover by using a data block template.

1. Select **Operations Timeline > Preferences**.
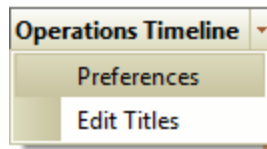
2. Select the **Data: Mouseover** page.
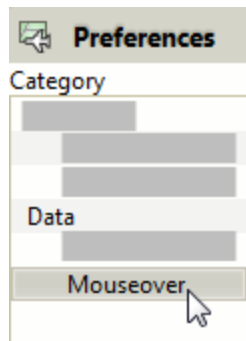
3. **Enable** (place check mark in the box) mouseover, or remove the check mark from the **Enable** check box to make mouseover inactive.

4. Select a style:

   - Unformatted—All data fields are optional, and the default display is a running (not a vertical) list. You can select line breaks and field labels (refer to *Use Line Break in Data Blocks* on page 10-22.

   - Formatted—The mouseover shows the Flight ID as a heading. The value for each selected data field is preceded by a label and shows on its own line (vertical list) in the mouseover data block.

5. Select the side (Left or Right) on which the data fields will go.

6. Select data fields:

   - Load a data block template, or

   - Set up the **Selected Fields** window to include the information that you wish to show:

        a. Click the **Filter** chooser.

        b. Select a filter category.
           The list of available fields shows only those fields in the selected category.

        c. If necessary, repeat Steps a and b to narrow down the selections. Only those fields that fit the selected categories show.

        d. Enter key search terms in the **Search** field.
           Only those fields that contain the search text show.

        e. Select the fields to show and/or hide (or load a data block template).

7. OPTIONAL: Change the sequence of fields.

8. OPTIONAL: Apply formatting to the data blocks:

   - Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

   - Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

9. Click **Apply**.

10. Make sure that the data block appearance is correct.

    - If correct, click **OK**.

    - If not correct, go to step 5, or click **Cancel**.

Colors are configured separately (refer to *Configure Color Settings for Operations Timeline* below).

7.4.3.1.5 Configure Color Settings for Operations Timeline

To open color settings for **Operations Timeline** data blocks and mouseover, select **Settings > Color Settings**.

⚠ **CAUTION:** Color changes for data blocks and mouseover affect **Map Display** and **Operations Timeline**.

Table 7-12. Colors in Operations Timeline

Timeline Feature	Settings in Color Preferences Dialog
Mouseovers for all flights	**Aircraft & Vehicles > Mouse Over > Data Block Background**
	Aircraft & Vehicles > Mouse Over > Data Block Text
	Aircraft & Vehicles > Inbound > Data Block Background
	Aircraft & Vehicles > Inbound > Data Block Text
	Aircraft & Vehicles > Outbound > Data Block Background
	Aircraft & Vehicles > Outbound > Data Block Text
Data blocks for *persisted targets*	**Persisted > Data Block Background**
	Persisted > Data Block Text
Mouseover leader line	**Aircraft & Vehicles > Mouse Over > Timeline Leader Line**
Leader Line	**Timeline > Default Leader Line**
Region Closure (all attributes)	**Timeline > Region Closure Data Block Background**
	Timeline > Region Closure Leader Line
	Timeline > Region Closure Text
Current Time	**Timeline > Current Time Slider**

7.4.3.1.6 Make a Data Block Template in Operations Timeline

Use these instructions to make a data block template in real-time tools that use data blocks.

1. Select **Operations Timeline > Preferences**.

2. Select the **Data: Data Block** page.

3. In the Data Block Templates section, click **Manage**.

4. Select the **User Templates** page.

5. Click **Create**.

6. Enter a template name.

7. OPTIONAL: Select (☑) Share Template to allow other team members in your group tree to see and use your template in their "Available Templates" tab. Other team members can see your shared template in "Available Templates" in the Data Block Template Manager (similar to **Map Display > Preferences**). Your template also shows in the SystemAdmin "Available Templates" tab.

> ℹ **NOTE**: "Share Templates" permission is necessary for you to share a data block template. (This permission is set in the **System Administration: Data Block Templates** group.)

8. Set up the **Selected Fields** window to include the information that you wish to show:

   a. Click the **Filter** chooser.

   b. Select a filter category.
      The list of available fields shows only those fields in the selected category.

   c. If necessary, repeat Steps a and b to narrow down the selections.
      Only those fields that fit the selected categories show.

   d. Enter key search terms in the **Search** field.
      Only those fields that contain the search text show.

e. Select the fields to show and/or hide.

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕.

- To remove one item from **Selected Fields**, select the item. Click ⊖ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊖. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⊕.

- To remove all items from **Selected Fields**, click ⊖. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

9. OPTIONAL: Apply formatting to the data blocks:

- Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

- Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

10. Click **OK** to save the template and close the **Create Data Block Template** dialog box.

11. Click ✕ to close the **Manage Data Block Templates** dialog box.

Figure 7-35. Create Data Block Template Dialog Box (Procedure steps)
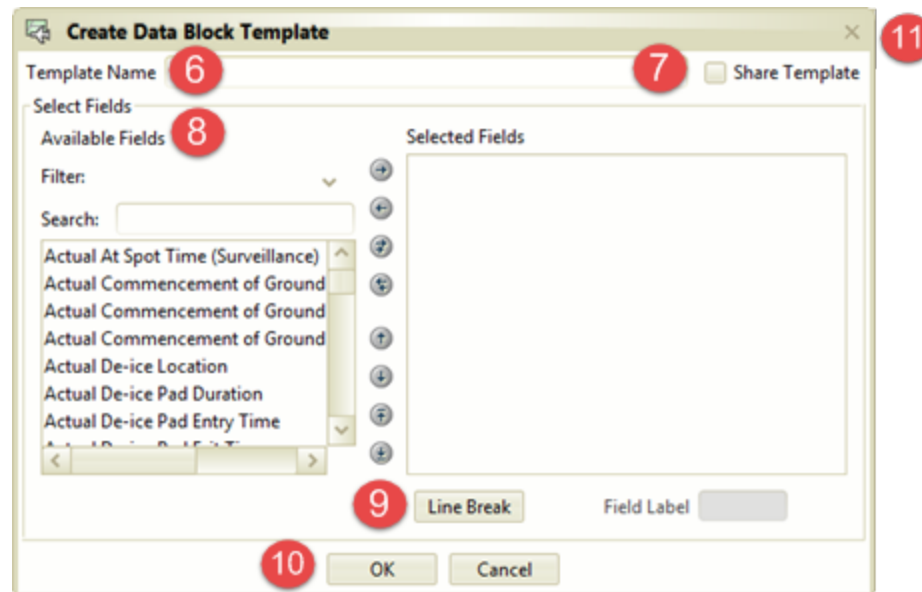
7.4.3.1.7 Load a Data Block Template in Operations Timeline

Before you can use a data block template, you must load it. You can load data block templates that are in the Available Templates, and you can load templates that you copied to your local Aerobahn account.

1. Select **Operations Timeline > Preferences**.

2. Select the **Data: Data Block** page.

3. Select the side (Left or Right) on which the data fields will go.

   ⚠ **CAUTION:** Aerobahn replaces the "Selected Fields" with the data fields in the data block template that you load. If you load the wrong data fields, click **Cancel** to restore the data fields that were there before you click **Load**.

4. In the Data Block Templates section, click **Load** to replace the data fields in the Selected Fields window.

5. Optional: Add, delete, or move data fields or field labels.

6. Click **Apply**.

7. Make sure that the data block appearance is correct.

   ▪ If correct, click **OK**.

   ▪ If not correct, go to step 5, or click **Cancel**.

7.4.3.1.8 Edit a Data Block Template in Operations Timeline

1. Select **Operations Timeline > Preferences**.

2. Select the **Data: Data Block** page.

3. In the Data Block Templates section, click **Manage**.

4. Select the **User Templates** page.

5. Select a template.

6. Click **Edit**. The **Edit Data Block Template** dialog box opens.

7. Make the necessary changes:

    a. Enter a template name.

    b. Click **Edit**. The **Edit Data Block Template** dialog box opens.

    c. Enter a template name.

    d. Optional: Select (☑) Share Template to allow other team members in your group tree to see and use your template in their "Available Templates" tab. Other team members can see your shared template in "Available Templates" in the Data Block Template Manager (similar to **Map Display > Preferences**). Your template also shows in the SystemAdmin "Available Templates" tab.

    e. Set up the **Selected Fields** window to include the information that you wish to show:

        i. Click the **Filter** chooser.

        ii. Select a filter category.
        The list of available fields shows only those fields in the selected category.

        iii. If necessary, repeat Steps a and b to narrow down the selections. Only those fields that fit the selected categories show.

        iv. Enter key search terms in the **Search** field.
        Only those fields that contain the search text show.

          v.   Select the fields to show and/or hide.

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕ .

- To remove one item from **Selected Fields**, select the item. Click ⊕ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⊕ .

- To remove all items from **Selected Fields**, click ⊕. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⊕ or ⊕ until it is in the correct location. To move an item to the top of the list, click ⊕. To move an item to the bottom of the list, click ⊕.

     f.   OPTIONAL: Apply formatting to the data blocks:

- Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

- Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

8. Click **OK** to save the template and close the **Create Data Block Template** dialog box.

9. Click ✖ to close the **Manage Data Block Templates** dialog box.

7.4.3.1.9 Import a Data Block Template from Operations Timeline

1. Select **Operations Timeline > Preferences**.

2. Select the **Data > Data Block** page.

3. In the Data Block Templates section, click **Manage**. The **Manage Data Block Templates** opens.

4. Select the **User Templates** page.

5. Click **Import**. The **Open** dialog box opens.

6. Select the template file to import. Make sure that the file name shows in the **File Name** window.

7. Click **Open**.

7.4.3.1.10 Export a Data Block Template from Operations Timeline

1. Select **Operations Timeline > Preferences**.
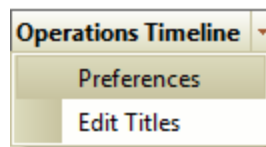
2. Select the **Data: Data Block** page.

3. In the Data Block Templates section, click **Manage**. The **Manage Data Block Templates** tool opens.

4. Select the **User Templates** page.

5. Select a template.

6. Click **Export**.
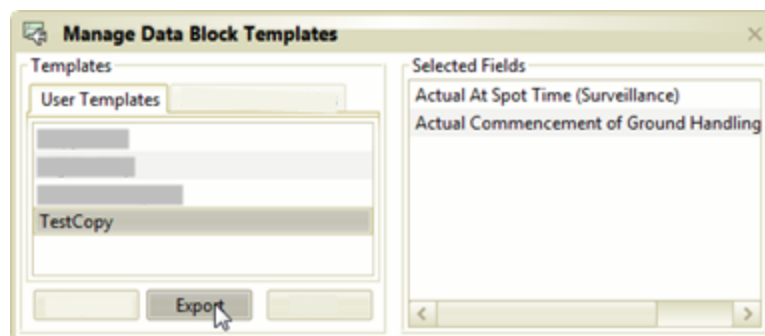
7. Select a disk or network location.

8. Click **Save**.

7.4.4 Use the Region Occupancy Monitor

Region Occupancy Monitor tells you about current activity in a single region.

1. Select **Tools > Flights and Watch Lists > Region Occupancy Monitor**.
2. Click **Region Occupancy Monitor**.
3. Select **Select Region > [Region Type] > [Region]**.

   If **Map Display** is open, the selected region shows in color. To remove highlighting, click anywhere in **Map Display**.

To see more than one region, open a **Region Occupancy Monitor** for each region. You can have up to six **Region Occupancy Monitor** sessions (each monitoring a different region) open at any time.

Each time you select a new region to monitor, that new region is highlighted in **Map Display**. You can set the color used to highlight the selected region.

By default, **Region Occupancy Monitor** data is put in order by occupancy time. To put data in a different order, select the column heading that will control the order, and click to set the order.

ℹ️ **NOTE:** Refer to *Work with Table Data* on page 3-9 for instructions on how to change column layouts, how to use filters, and how to sort and export table data.

Configure a Highlight Color for a Region

Select one region at a time.

1. Select **Settings > Color Settings**.
2. Select color through **Regions > Selected Region**.
3. Click **OK**.

7.4.5 Use Gate Monitor

Gate Monitor gives real-time status of gates at the airport. Gate Monitor alerts you to possible gate conflicts before a flight lands so that you can avoid ground congestion.

Gate status indicators show availability for adjacent "dual-use" gates that can accommodate two airplanes of certain types or just one airplane. Aerobahn uses aircraft type, gate-region definitions, and EIBT to define status (refer to [Table 7-13 below](#)).

Open the Gate Monitor Tool

Select **Tools > Flights and Watch Lists > Gate Monitor**. The Gate Monitor opens.

> ℹ️ **NOTE: Gate Monitor** status indicators show the results of data provided by the Gate Restriction Configuration tool. Sometimes a wing tip from an aircraft could be in two adjacent regions. In this case, Aerobahn can show the current flight in two gates.

Table 7-13. Gate Status Indicators

Status	Gate Description	Conditions that caused this status	Right-Click to...
🟢	Open	The gate region status is NOT "Gate Closed", "Gate Conflict," "Gate Occupied," "Gate Constrained," or "Gate Blocked."	▪ Add a persisted aircraft in the gate ▪ Close the gate
🔴	Conflict	A flight is expected to enter this gate before the flight that is in the gate is expected to depart from the gate.	▪ Remove a persisted aircraft from the gate ▪ Close the gate
🟡	Constrained	Some flights are blocked from using this gate.	▪ Add a persisted aircraft in the gate ▪ Close the gate
🔵	Occupied or Blocked	No aircraft types are allowed in the gate.	▪ Remove a persisted aircraft from the gate ▪ Close the gate
⚪	Closed	The gate region is closed in the Region Closures tool.	▪ Add a persisted aircraft in the gate ▪ Open the gate

Figure 7-36. Gate Monitor: Column Areas

Ref.	Column Area
1	Current Aircraft In Gate
2	Next Aircraft In Gate

Four columns show all the time in Gate Monitor:

- Gate
- Status
- Curr Flt ID (Aero)
- Next Flt ID (Aero)

Other than those columns, you can show and hide columns. You can filter and sort data in the columns (refer to *Gate Monitor: Sort by Gate Status* on page 7-105

Highlight a Gate on Map Display

Select the gate number in **Gate Monitor**. The gate shows in the selected highlight color in **Map Display**.

Figure 7-37. Select a Gate
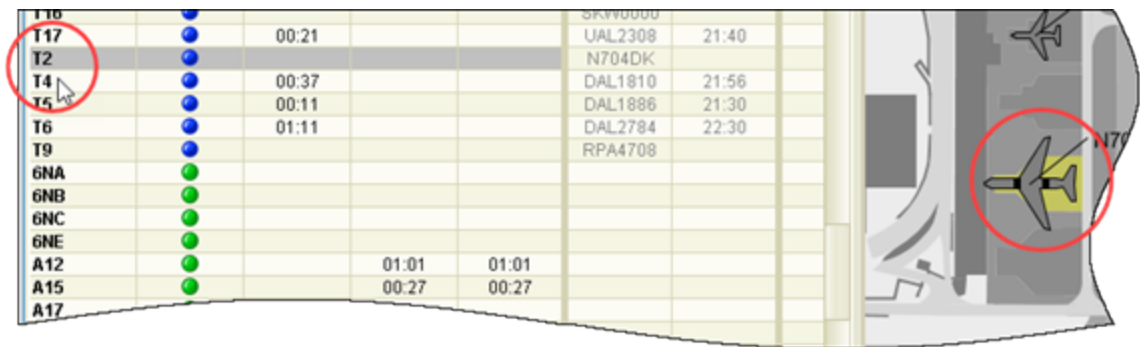
Highlight a Flight on Map Display

You can select a flight that is already in a gate (*Select a Flight: Current Flight ID* below), and you can select a flight that will next occupy a gate (*Select a Flight: Next Flight ID* on the next page). Select Curr Flt ID (Flight ID) in **Gate Monitor**. The flight shows in the selected highlight color in **Map Display** (and in other tools).

If you select a flight that shows in a gate in **Map Display**, you can see that flight highlighted in **Gate Monitor**.

Figure 7-38. Select a Flight: Current Flight ID
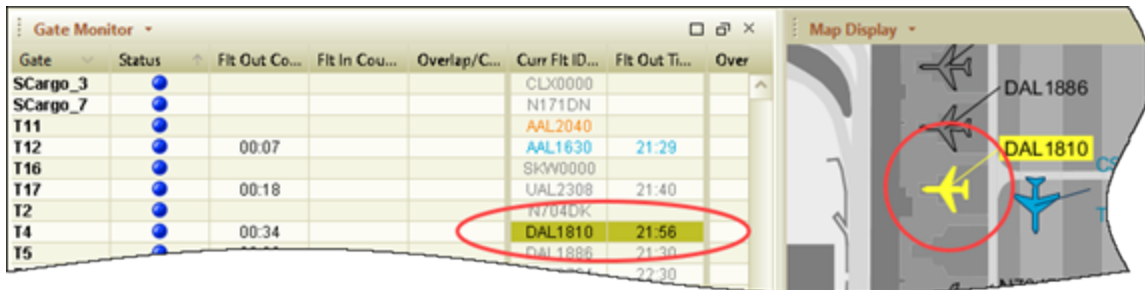
Figure 7-39. Select a Flight: Next Flight ID
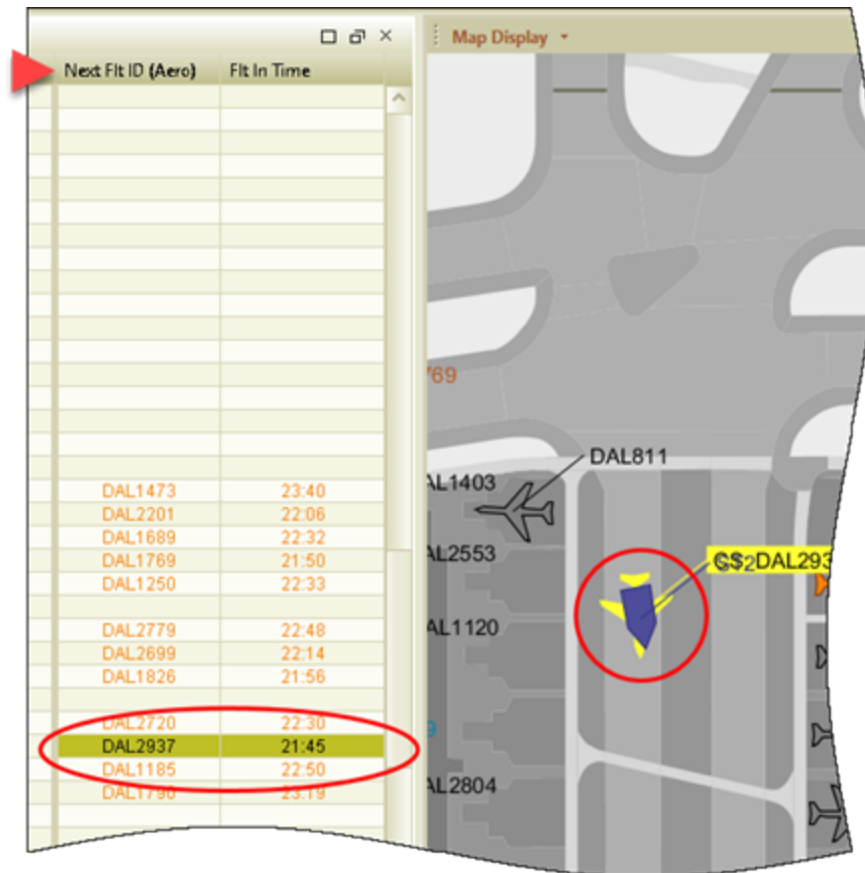
Change a field value through a menu

If the <data field> (Manual) or <data field> (Aerobahn) column is not already included in the table, add it before you start this procedure (refer to *Work with Table Data* on page 3-9. "Hide or Show Columns" tells how to add a column).

1. Find the flight for which you will set the <data field> (Manual).
2. Double-click the <data field> (Manual) or <data field> (Aerobahn). The edit/set tool opens.
3. Click to open the drop-down menu.

The available field values show.

4. Select the correct value.

7.4.5.1 Gate Monitor: Sort by Gate Status

By default, **Gate Monitor** shows flights in order by gate number. You can set up the **Gate Monitor** to show data by gate status in one table (*Gate Monitor: Use Single-Table Method to Sort* below) or in more than one table (*Gate Monitor: Use Multi-Table Method to Sort* on page 7-107).

ℹ️ **NOTE:** One advantage of the multi-table method is that you can arrange the filtered gate monitors in your workspace.

Figure 7-40. Gates Sorted by Gate Number

7.4.5.1.1 Gate Monitor: Use Single-Table Method to Sort

1. Click **Status** column heading. The status indicators collect into their categories: Open Now, Occupied, Closed, and Gate Conflict. (You may not have 4 active categories.)
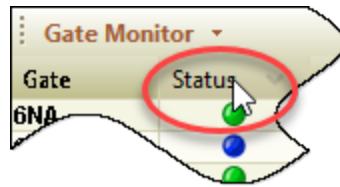
2. Click **Status** again to change the order.
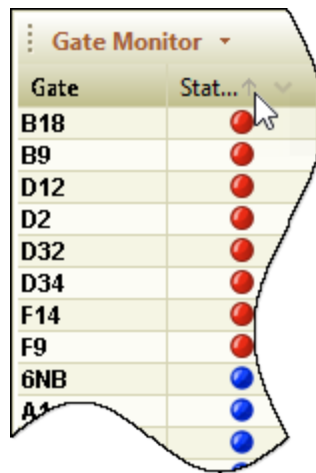
3. Select gates of interest.

4. To select multiple gates, select the tool title > Select Gates to open the Gate Chooser.
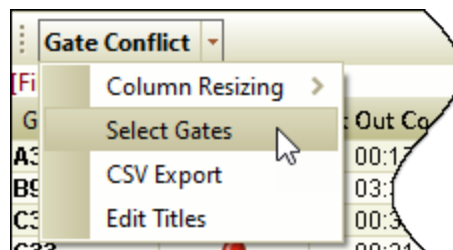
5. To select a single gate, click the Gate menu dropdown. (This is the ∨ symbol at the top of the list of gates. In the image, the word "Gates" does not show.")
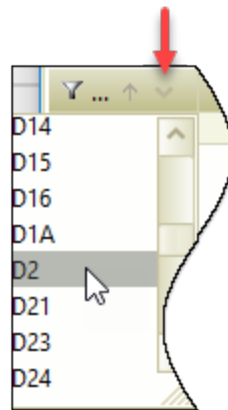
6. Select the gate to show in the table. The menu closes. The one gate that you selected shows when data is available. If no data is available, the table is empty. To show data, repeat step 1, and select **(All)**.

7.4.5.1.2 Gate Monitor: Use Multi-Table Method to Sort

ℹ **NOTE:** One advantage of this method is that you can arrange the filtered gate monitors in your workspace.

1. Open one **Gate Monitor** for each gate-status categories that you will monitor: Open Now, Occupied, Closed, and Gate Conflict.

2. Edit the title and tab title to show the gate-status category (e.g., "Open Gates," "Gate Conflicts"; refer to *Edit Tool Titles* on page 3-20).

3. Select the gate-status category to show in the table: Open Now, Occupied, Closed, or Gate Conflict.

4. Gate Conflict (Example)

5. Select gates of interest.

6. To select multiple gates, select the tool title > Select Gates to open the Gate Chooser.
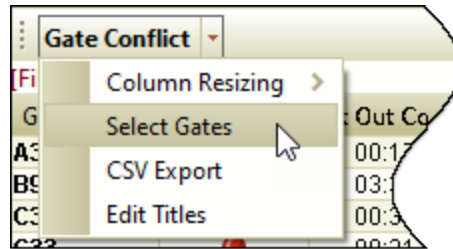
7. To select a single gate, click the Gate menu dropdown. (This is the ∨ symbol at the top of the list of gates. In the image, the word "Gates" does not show.")
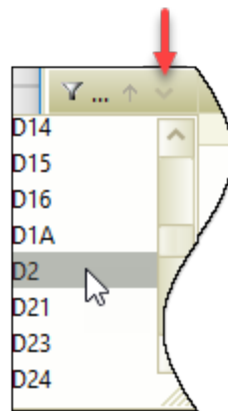
8. Select the gate to show in the table. The menu closes. The one gate that you selected shows when data is available. If no data is available, the table is empty. To show data, repeat step 1, and select **(All)**.

7.4.6 Use Watch List Count

Watch List Count shows the number of flights in a selected watch list or the number of flights selected by one or more rules.

➡ **Watch List Count** shows data in a rectangle with rounded corners.
Watch List Statistics shows data in a oval.

You must select a source of data before the **Watch List Count** tool can show a value. You can use more than 1 rule and/or watch list.

To open a Watch List Viewer from Watch List Count, click the count.

In addition, you can set the tool to tell you when the value is greater than threshold values. You can set thresholds by value and by length of time. When a value is less than or greater than a threshold value, Aerobahn applies the color settings. If more than 1 threshold is exceeded, Aerobahn applies the settings for the most extreme threshold that was exceeded.

➡ Open multiple instances of the **Watch List Count** tool, each set to supply a different value (for example, to show tarmac delays). Set the tool and tab title (refer to) and the data label to help you identify these individual count tools.

Set up Watch List Count

1. Open **Watch List Count**.
2. Select **Watch List Count > Select Source**.
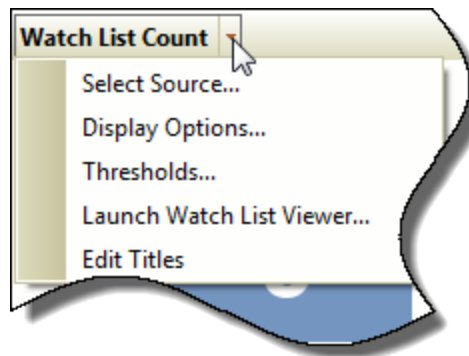
3. Click the boxes preceding the watch list name(s) and rule(s) that will push data to your watch list count tool. If watch lists and rules are *not* available, select **All Flights**.
4. After you make your selections, click **OK**.
5. Optional—Change current display options.
    a. Select **Watch List Count > Display Options**.
    b. In the **Count Indicator** section, select the font size, color, and background for the number.
    c. In the **Count Label** section, select the label text.

        ℹ️ If you select the same font color and background fill color, you will not be able to see the Count Indicator (number).

d. Set the font size, font color, and location for the label.

e. Click **OK**. If the selected rule(s) have been triggered and/or watch list(s) contain data, Watch List Count displays a value.

The color of the number and its background can be static (as set in this instruction), or you can set it to change when a threshold value is met for a given length of time. You can set up more than one threshold value so that the display changes as threshold values change or as time progresses.

Set up Watch List Count Thresholds

To set **Watch List Count** so that the color of the number and its background change based on a threshold value, configure **Watch List Count** thresholds.

> You can configure a series of thresholds to show growing severity of an issue (for example, tarmac delays) by creating a number of similar **Watch List Count** tools with different thresholds and different color schemes.

1. Open **Watch List Count**.

2. Select **Watch List Count > Thresholds**.

3. Select **Greater Than** or **Less Than**.

4. Click **Add**. The **Add Threshold** dialog box opens.

5. Set the threshold.

6. Click the **Font Color** box, and select a font color.

7. Click the **Fill Color** box, and select a fill color.

> If you select the same font color and fill color, you will not be able to see the Count Indicator (number).

8. Click **OK**.

9. Check a box to activate an associated threshold setting.

10. Click **OK**.

7.4.7 Use Watch List Statistics

Watch List Statistics shows a selected statistic (count, occupancy time, or rate) for a selected watch list.

> **Watch List Statistics** shows data in a oval. **Watch List Count** shows data in a rectangle with rounded corners.

1. Open the **Watch List Statistics** tool.

2. Select **Watch List Statistics > Select Source**.

   a. Select the watch list that gives the necessary count, average count, or rate.

   b. Click **OK**.

3. Select **Watch List Statistics > Metric Options**.

   a. Set the sample size, metric type, and flight type.

   b. Click **OK**.

4. Select **Watch List Statistics > Display Options**.

   a. Make necessary changes in the "Indicator" section.

   b. Select "Show Units" to show the unit of measure for the value that the watch list sends.

   c. Make necessary changes in the label for the statistics.

5. Select **Watch List Statistics > Thresholds**.

   a. Set up alert thresholds.

      i. Select **Greater Than** or **Less Than**.

      ii. Click **Add**.

      iii. Enter the threshold value and, if necessary, a duration value.

      iv. Click in the font color and fill color checkboxes, and select the colors.

   b. Click **OK**.

7.4.8 Watch List Chart

Watch List Chart plots data about Watch List activity. There are three general use cases:

- Show counts (How many flights were in the watch list?)

- Show durations (How long was a flight in the watch list?)

- Show rates (How many flights enter or exit the watch list per minute?)

Chart Types

Table 7-14. Chart Types

Chart	Application
Line	Use to show a trend. You can show six or seven lines before a chart is not easy to use. To show individual values, select **Show** for **Show/Hide Markers**. Put the pointer above a point to see its value.

Table 7-14. Chart Types (continued)

Chart	Application
Bar	Use to show data that you can count (e.g., number of flights that entered a flight list at a point in time). Bar charts do not show changes that occur in time and line charts that show them.
Stacked Bar	Use to show the sum of countable data at a point in time. The total vertical area shows the full value. Click in a segment to see the value of that segment.
Area	As line charts do, area charts show trends. You can use two or three area charts that overlap to compare data. *Do not use more than three elements in area charts*. It is not easy to use an area chart with more than three elements. To see the value of a point on the line that defines the area, select **Show** for **Show/Hide Markers**. Put the pointer over these points to see the value of these points.
Stacked Area	As stacked bar charts do, stacked area charts show part-to-whole relationships. Stacked area charts show data changes in time. In the stacked area chart, the total vertical area shows the whole value and how that changes with time. To see the value of a point on the line that defines the area, select **Show** for **Show/Hide Markers**. Put the pointer over these points to see the value of these points.

Graph and Chart Examples

Figure 7-41. Line Graph (Example, two watch lists)
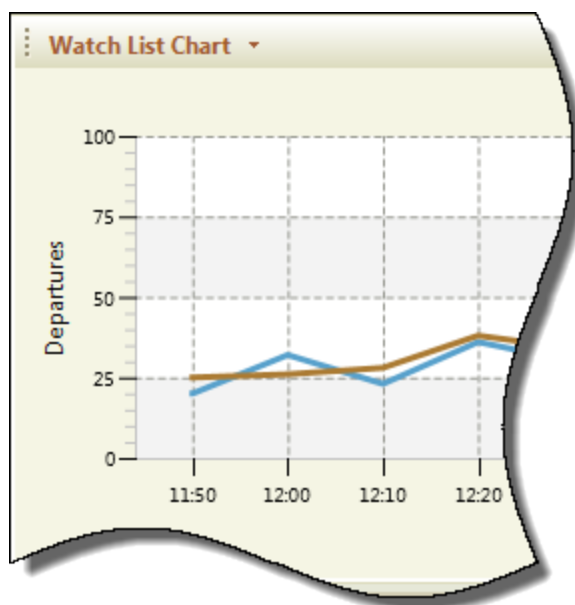
Figure 7-42. Bar Chart (Example, two watch lists)
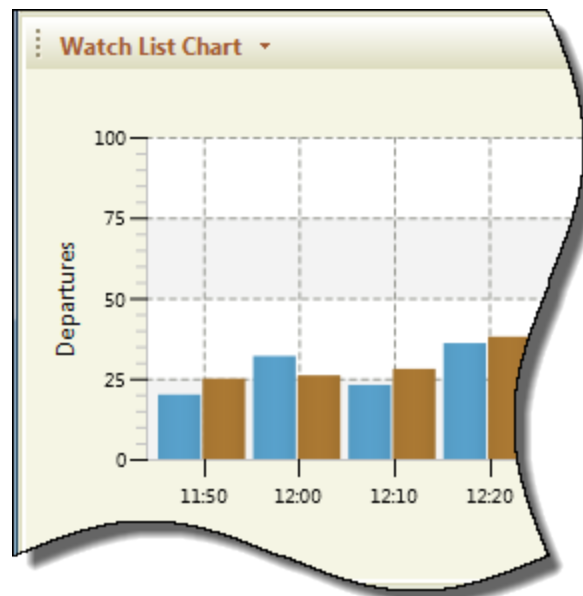
Figure 7-43. Stacked Bar Chart (Example, two watch lists)
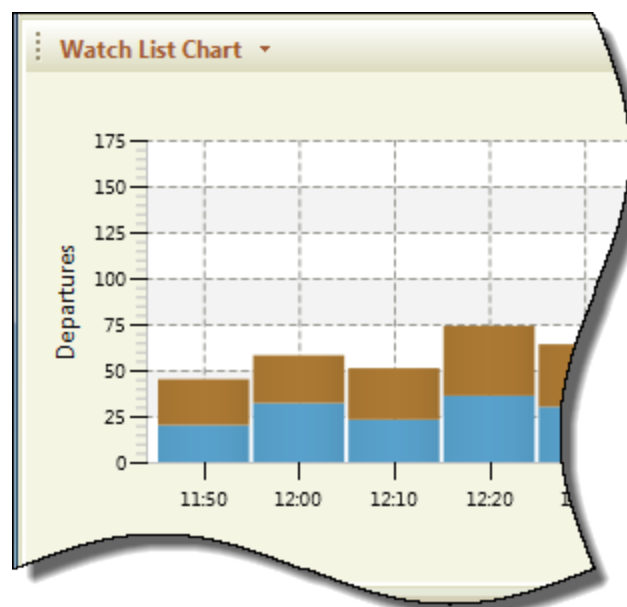
Figure 7-44. Area Chart (Example, two watch lists)
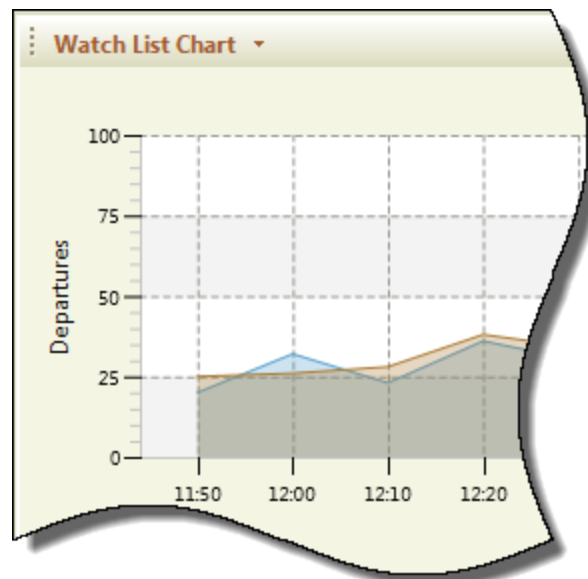
The shared area is gray.

Figure 7-45. Stacked Area Chart (Example, two watch lists)
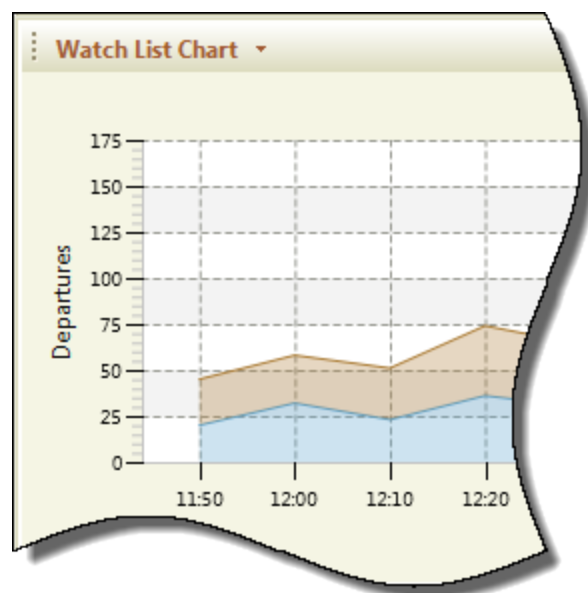
7.4.8.1 Use the Watch List Chart Tool

There are two tasks that you must do before you can chart the data in *Watch List Chart*:

■ Set up rules (with the *Rules Management* tool) that add flights to a Watch List.

■ Make a Watch List.

1. Open the **Watch List Chart** tool.

2. Select the Watch List(s) to show in the chart.

    a. Select **Watch List Chart > Select Watch Lists**. A dialog box with the available watch lists (System Watch Lists and My Watch Lists) opens.

    b. Click to make a check show for watch lists to include in the chart.

    c. Click **OK** to close the **Select Watch Lists** dialog box.

3. Set up chart options.

    a. Select **Watch List Chart > Options**. The Options dialog box opens.

    b. OPTIONAL—Enter a title for the chart.

    c. Select a sample size. (The sample size defines the points on the time axis.)

    d. Select a time range. (The time range defines how much data shows on the time axis.)

    e. Set up the data plot. You can plot data along a primary (left side) axis and along a secondary (right side) axis.

    f. Select the chart type.

    g. OPTIONAL—Enter a label.

    h. Select the metric type.

    i. Select the metric to show in the chart.

    > ℹ For "Occupancy Time" metric—When you select **Occupancy Time**, you have three options: **hh:mm:ss** (the default), **Minutes**, and **Seconds**

    j. Click **Apply** to save the settings. The **Chart Options** dialog box stays open.

k. OPTIONAL—Click the **Secondary Axis** tab, and set up the secondary axis.

l. Click **OK**. The Chart Options dialog box closes.

4. Set Axis Range (**Watch List Chart > Axis Range**).

- The default setting is "Auto Range." This lets the tool adjust the primary axis (and the secondary axis, if you use it) to the data in the watch list.

- Select **Fixed Range** to set a fixed scale for the primary axis (and the secondary axis, if you use it). If you set "Fixed" axis range values, open the Axis Range dialog box to be sure that the axis range shows the correct level of detail.

5. OPTIONAL—Show or hide grid lines.

6. Show or hide the legend.

> **Watch List Chart** sets colors that will help to prevent data sets from covering up another data set, but you can change colors. Click a color square in the legend to open the color configuration tool. Click a label in the legend to change text (refer to *Change Chart Colors* on the facing page or to *Change Legend Labels* on page 7-118.

7. Show or hide lines.

8. Show or hide markers at the vertices of a line chart or area chart.

9. Click **Save As** to save an image of the chart as a PNG file.

a. Select a location for the file.

b. Enter a file name.

c. Click **Save**.

10. Click **Edit Titles** to change the chart title.

The chart displays data as the watch list(s) are populated.

You can configure two axes in the **Watch List Chart**. This lets you compare different sets of data, such as airport averages and individual runway counts. Select from chart types to show how your operation is working.

Figure 7-46. Watch List Chart (example)
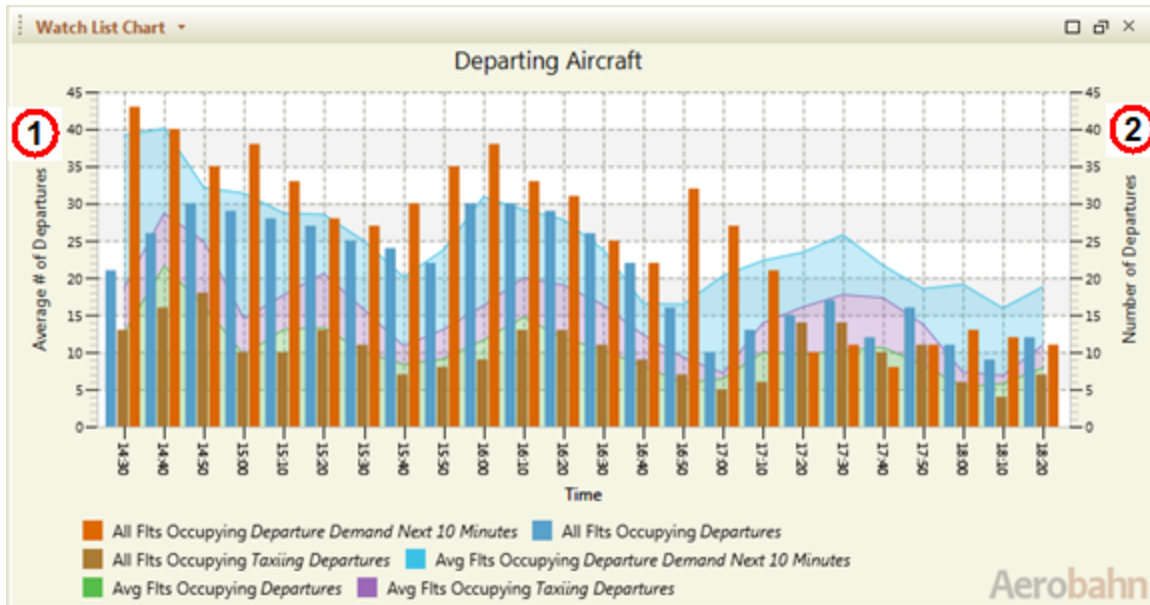
Reference	Description
1	Primary axis scale and label.
2	Secondary axis scale and label

Change Chart Colors

Watch List Chart sets colors that will help to prevent data sets from covering up another data set, but you can change colors.

1. Click a color square in the legend to open the color configuration tool.
2. Select a new color for that data series.
3. Click **OK**.

To change all colors back to their default settings, select **Watch List Chart > Reset Custom Colors**.

Figure 7-47. Watch List Chart, Reset Custom Colors command
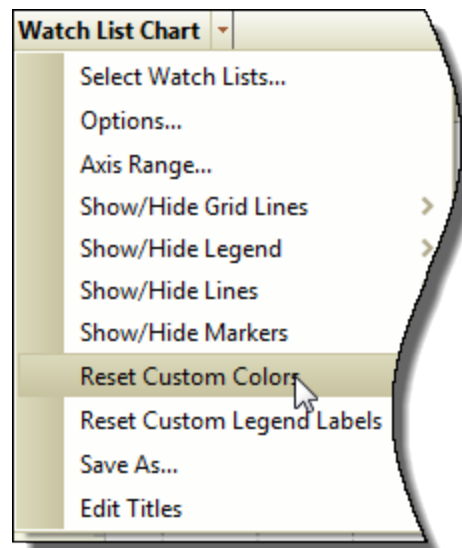
Change Legend Labels

Watch List Chart default legend labels are a combination of watch list labels and metric selections. You can change these labels.

1. Click a data series label in the legend to open the label editing dialog box.

2. Replace the label text.

3. Click **OK**.

To change *all* labels back to their default settings, select **Watch List Chart > Reset Custom Legend Labels**.

Figure 7-48. Watch List Chart, Reset Custom Labels command
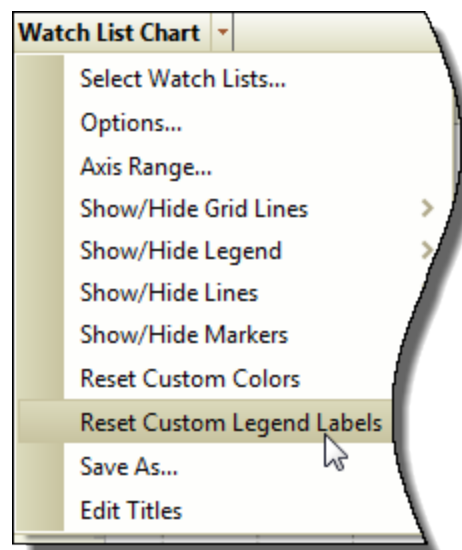
7.4.8.2 Watch List Metrics

Watch List Charts and Watch List Statistics uses these metric types.

Table 7-15. Count Metric Type

Data Set	Description
All Flights in Sample (Average)	The average instantaneous count of flights during the time sample.
All Flights in Sample (Total)	The count of flights that were in the watch list at any time during the time sample. It is not necessary for a flight to be in the watch list during the full time span of the sample.
Flights Entering during Sample	The count of flights added to the watch list during the time sample.
Flights Exiting during Sample	The count of flights removed from the watch list during the time sample.
Flights in Sample at Sample End	The count of flights in the watch list at the end of the time sample.

Table 7-16. Occupancy Time Metric Type

Data Set	Description
All Flights in Sample (Average)	The average time spent in the watch list for all flights present in the watch list during the time sample.
All Flights in Sample (Total)	Total (combined) time spent in the watch list for all flights present in the watch list during the time sample.
Flights Exiting during the Sample (Average)	Average time spent in the watch list for flights that were removed from the watch list during the time sample.
Flights Exiting during the Sample (Total)	Total (combined) time spent in the watch list for all flights that were removed from the watch list during the time sample.

Table 7-17. Rate Metric Type

Data Set	Description
Entry (per min) or Entry (per hour)	The average number of flights that entered the watch list per selected unit of time during the time sample
Exit (per min) or Exit (per hour)	The average number of flights that exited the watch list per selected unit of time during the time sample

Table 7-17. Rate Metric Type (continued)

Data Set	Description
Flights at Sample End (per min) or Flights at Sample End (per hour)	The count of flights in the watch list at the end of the time sample extrapolated (or normalized) to the selected unit of time (hour or minute).

7.4.9 Use the Watch List Viewer

Use the **Watch List Viewer** to show data from the following sources:

- All Flights (all active flights in the surveillance area)
- Watch Lists (virtual list of flights)
- Only Flights that have been identified by selected "Flight Rule" criteria

You make watch lists in **Watch List Manager** (refer to *Create a Watch List* on page 4-88). You can see the data from a watch list in these ways:

- Use the **Watch List Viewer**
- Make a report that is based on the "Watch List Entries" data set.

You can make your own watch lists and open them in "My Watch Lists," or use the shared watch lists in "System Watch Lists."

ℹ️ **NOTE:** Refer to *Work with Table Data* on page 3-9 for instructions on how to change column layouts, how to use filters, and how to sort and export table data.

1. Open **Watch List Viewer**:
   - Select **Tools > Flights and Watch Lists > Watch List Viewer**.
   - Click the count in **Watch List Count**.
   - From **Watch List Count**: Select **Watch List Count > Launch Watch List Viewer**.
2. Select **Watch List Viewer > Select Source**. The Watch List Viewer and Rule Selection dialog box opens.
3. Select at least 1 source of data:
   - You can use more than 1 rule or watch list (refer to Figure 7-49 on page 7-122).
   - If watch lists and rules are *not* available, select **All Flights**.
4. Click **OK**.

5. Show or hide selected data sources in the **Watch List Viewer** status bar: Select **Watch List Viewer > Show/Hide Source List**.

- **Show All**—Click to show all data sources that supply the **Watch List Viewer**.

- **Show First Line**—Click to show only those data sources that will fit on one line (defined by the width of the tool frame).

- **Hide All**—Click to hide the names of data sources in the **Watch List Viewer**.

ℹ️ **NOTE**: **Show All**, **Show First Line**, and **Hide All** control the display (in the **Watch List Viewer**) of the names of the rules and the watch lists that supply data to the **Watch List Viewer**. If you select a rule as a data source, it can supply data when you "Hide All."

6. Optional—Add columns to the Watch List.

ℹ️ **NOTE**: Use this step to add Status Lights (refer to *Show Status Lights* on page 7-319.

a. Right-click any column heading in the Watch List.

b. Select **Column Chooser**.

c. Select data fields:

- Load a data block template, or

- Set up the **Selected Fields** window to include the information that you wish to show:

  i. Click the **Filter** chooser.

  ii. Select a filter category.
  The list of available fields shows only those fields in the selected category.

  iii. If necessary, repeat Steps a and b to narrow down the selections. Only those fields that fit the selected categories show.

  iv. Enter key search terms in the **Search** field.
  Only those fields that contain the search text show.

  v. Select the fields to show (in **Selected Fields**) and/or hide (in **Available Fields**).

7. Click **OK**.

Figure 7-49. Watch List Viewer "No Flights" Default Screen
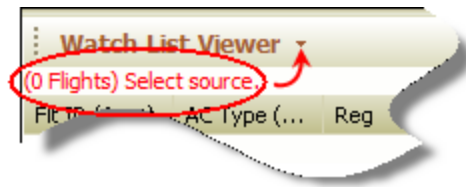
After you select the data sources, your choice stays active until you change it or until the Flight Rule or Watch List that you selected is no longer active. If a Flight Rule or Watch List that you selected is inactive, the **Watch List Viewer** opens in its default state (no data source selected), and "Select source" shows.

Watch List Viewer shows true-false states with icons.

Table 7-18. Icon Descriptions

Icon	Description
✔	"True" state
✘	"False" state

Use the Context-Menu Controls in Watch List Viewer

Right-click in the **Watch List Viewer** to open a menu of controls. Use these controls for these tasks:

- to add scratch pad text and manual flight ID
- to adjust factors that influence the Aerobahn Prediction Engine
- to select workflows and workflow states

Indicate De-ice Decision—(Outbound targets only) This control is used to override the airport de-icing preferences set in **Map Display** (refer to *Use the Map Display Tool* on page 7-195).

> **NOTE:** Except for Edit Titles, all functions opened through the **Watch List Viewer** (tool title) menu need the following permission: Modify Watch List Viewer Settings. If you can see **Watch List Viewer** but do not have "Modify Watch List Viewer Settings" permission, only Edit Titles shows in the **Watch List Viewer** menu.

Use Associated Workflow State

After you have set up a workflow and its workflow states, you can set up **Watch List Viewer** to use Associated Workflow State (refer to *Set Workflow States in Watch List Viewer* on page 9-40).

Select a Flight

Click a row in the **Watch List Viewer** to select a flight.

Click a blank area to remove the selection.

7.4.9.1 Edit Watch List Viewer Columns with Data Block Template Fields

> ℹ **NOTE:** Unlike other real-time tools that use the Data Block Template controls, **Watch List Viewer** does not show data blocks. In **Watch List Viewer**, a data block template is used as a collection of headings for data columns. **Watch List Viewer** does not load line breaks or labels in a selected data block template when it loads the data fields.

1. Select **Watch List Viewer > Column Chooser**.

   > ⚠ **CAUTION:** Aerobahn replaces the "Selected Fields" with the data fields in the template that you load. If you load the wrong data fields, click **Cancel** to restore the fields before you click **Load**.

2. In the Data Block Templates section, click **Load**. This replaces the data fields in the Selected Fields window. These field names become column headings in **Watch List Viewer**.

3. Optional: Add, delete, or move data fields. Line breaks and field labels are not used by **Watch List Viewer**.

4. Click **Apply**.

5. Make sure that the data block appearance is correct.

   - If correct, click **OK**.

   - If not correct, go to step 3, or click **Cancel**.

7.4.9.2 Enable or Disable Lockdown Sorting

You can enable **Lockdown Sorting** to keep the current sorting order. Enabling this feature prevents changes to the current sorting order when you click a column heading.

- Select **Watch List Viewer > Lockdown Sorting** to toggle this feature. A check mark shows in front of the menu item when enabled.

7.4.9.3 Make a Data Block Template in Watch List Viewer

> ℹ️ **NOTE:** Unlike other real-time tools that use the Data Block Template controls, **Watch List Viewer** does not show data blocks. In **Watch List Viewer**, a data block template is used as a collection of headings for data columns. **Watch List Viewer** does not load line breaks or labels in a selected data block template when it loads the data fields.

1. Select **Watch List Viewer > Column Chooser**.

2. In the Data Block Templates section, click **Manage**.

3. Select the **User Templates** page.

4. Click **Create**.
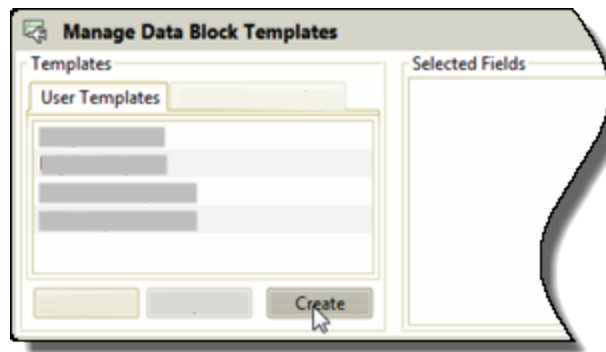
5. Enter a template name.

6. Optional: Select (☑) Share Template to allow other team members in your group tree to see and use your template in their "Available Templates" tab. Other team members can see your shared template in "Available Templates" in the Data Block Template Manager (similar to **Map Display > Preferences**). Your template also shows in the SystemAdmin "Available Templates" tab.

   > ℹ️ **NOTE**: "Share Templates" permission is necessary for you to share a data block template. (This permission is set in the **System Administration: Data Block Templates** group.)

7. Set up the **Selected Fields** window to include the information that you wish to show:

   a. Click the **Filter** chooser.

   b. Select a filter category.
      The list of available fields shows only those fields in the selected category.

       c. If necessary, repeat Steps a and b to narrow down the selections. Only those fields that fit the selected categories show.

       d. Enter key search terms in the **Search** field.
Only those fields that contain the search text show.

       e. Select the fields to show and/or hide.

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ➜ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➜.

- To remove one item from **Selected Fields**, select the item. Click ⬅ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⬆.

- To remove all items from **Selected Fields**, click ⬇. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

8. Optional: Apply formatting to the data blocks:

- Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

- Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

9. Click **OK** to save the template and close the **Create Data Block Template** dialog box.

10. Click ✖ to close the **Manage Data Block Templates** dialog box.

Figure 7-50. Create Data Block Template Dialog Box (Procedure steps)
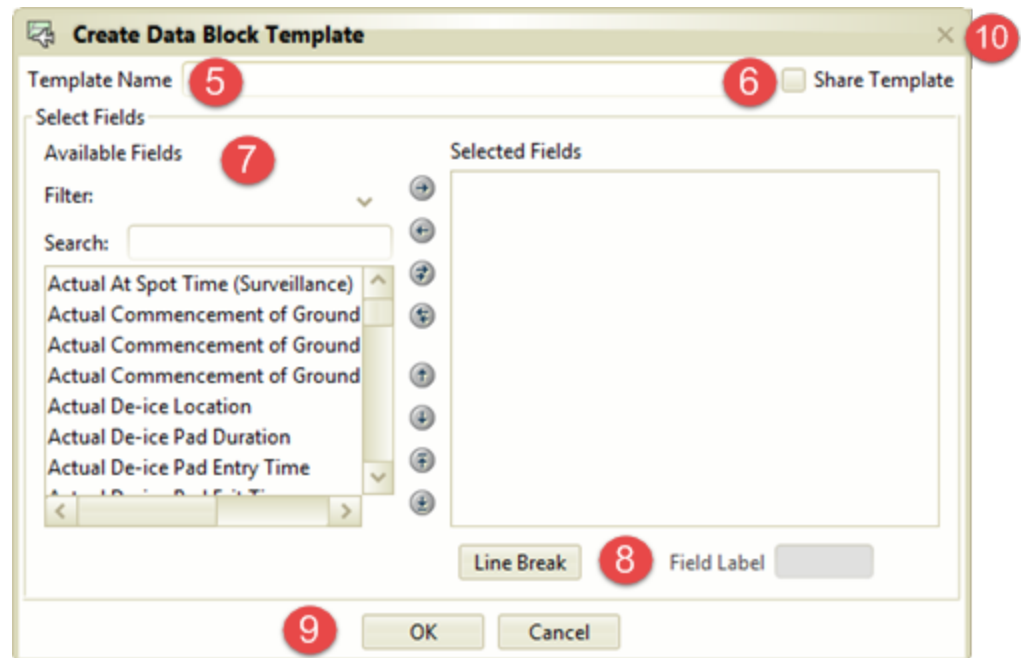
7.4.9.4 Edit a Data Block Template in Watch List Viewer

> **i** **NOTE:** Unlike other real-time tools that use the Data Block Template controls, **Watch List Viewer** does not show data blocks. In **Watch List Viewer**, a data block template is used as a collection of headings for data columns. **Watch List Viewer** does not load line breaks or labels in a selected data block template when it loads the data fields.

> **i** **NOTE:** If you are sharing a data block template that can be used in more than 1 real-time tool, you can include line breaks and labels (which do not show in **Watch List Viewer**).

1. Select **Watch List Viewer > Column Chooser**.
2. In the Data Block Templates section, click **Manage**.
3. Select the **User Templates** page.
4. Select a template.
5. Click **Edit**. The **Edit Data Block Template** dialog box opens.

6. Make the necessary changes:

   a. Enter a template name.

   b. Click **Edit**. The **Edit Data Block Template** dialog box opens.

   c. Optional: Select (⍓) Share Template to allow other team members in your group tree to see and use your template in their "Available Templates" tab. Other team members can see your shared template in "Available Templates" in the Data Block Template Manager (similar to **Map Display > Preferences**). Your template also shows in the SystemAdmin "Available Templates" tab.

   d. Set up the **Selected Fields** window to include the information that you wish to show:

      i.   Click the **Filter** chooser.

      ii. Select a filter category.
           The list of available fields shows only those fields in the selected category.

      iii. If necessary, repeat Steps a and b to narrow down the selections. Only those fields that fit the selected categories show.

      iv. Enter key search terms in the **Search** field.
           Only those fields that contain the search text show.

v. Select the fields to show and/or hide.

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕ .

- To remove one item from **Selected Fields**, select the item. Click ⊖ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊖. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⊕ .

- To remove all items from **Selected Fields**, click ⊖ . The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

e. Optional: Apply formatting to the data blocks:

- Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

- Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

7. Click **OK** to save the template and close the **Edit Data Block Template** dialog box.

8. Click ✖ to close the **Manage Data Block Templates** dialog box.

7.4.9.5 Import a Data Block Template from Watch List Viewer

1. Select **Watch List Viewer > Column Chooser**.

2. In the Data Block Templates section, click **Manage**. The **Manage Data Block Templates** tool opens.

3. Select the **User Templates** page.

4. Click **Import**. The **Open** dialog box opens.

5. Select the template file to import. Make sure that the file name shows in the **File Name** window.

6. Click **Open**.

7.4.9.6 Export a Data Block Template from Watch List Viewer

1. Select **Watch List Viewer > Column Chooser**.

2. In the Data Block Templates section, click **Manage**. The **Manage Data Block Templates** tool opens.

3. Select the **User Templates** page.

4. Select a template.

5. Click **Export**.
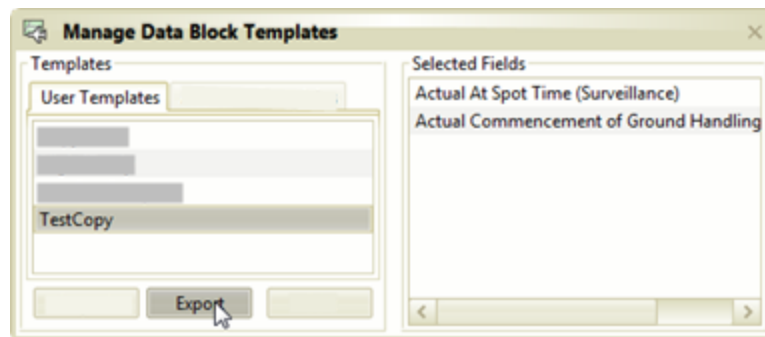
6. Select a disk or network location.

7. Click **Save**.

7.4.9.7 Remove a Placeholder

You can remove a placeholder in Watch List Viewer.

ℹ NOTE: A placeholder that you do not remove is purged after 6 hours (default setting for a server-configurable time).

1. Right-click the placeholder in Watch List Viewer.

2. Select **Remove Placeholder**. The **Remove Placeholder** dialog box opens.

3. Click **OK** to remove the selected placeholder.

7.5 Use Meteorology Tools

Aerobahn gives two weather reports:

- METAR Report, an aviation weather report (actual data, usually hourly, sometimes with intermediate updates)
- TAF Report, an aviation-related weather forecast that applies for 5 statute miles from the identified center point of the airport

The two reports use the same basic format. Raw report data is shown immediately below the tool title. The remaining part of the report is in a table format. You can show one or two sections.

1. Select **Tools > Meteorology > [Name of Report]** to open the METAR or TAF report.

2. Select sections for display—Select **[Name of Report in Tool Title Bar] > Show Raw Report** and/or **Show Formatted Fields**:
   - Raw Report (1 in <u>Figure 7-51 below</u>)
   - Formatted Fields—table data (2)

Figure 7-51. METAR Report Display Format
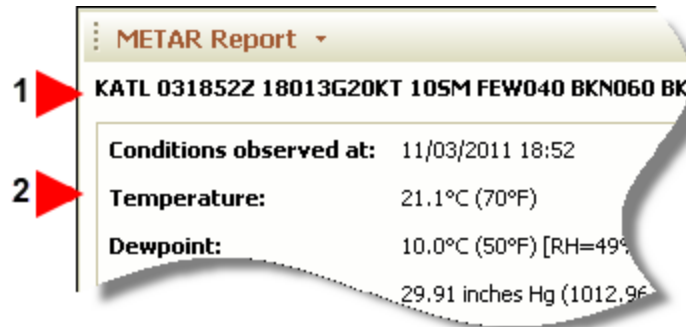
7.6 A-CDM Milestone Profile

The **A-CDM Milestone Profile** shows the status of each Airport Collaborative Decision Making (A-CDM) milestone for a selected flight. The **A-CDM Milestone Profile** tool also shows flight information and A-CDM alerts. (For an example, refer to <u>Figure 7-52 on the facing page</u>. Milestones 1 through 8 and 10 are complete. Milestone 9 is not complete. The red triangle points to notifications.)

Figure 7-52. Completed A-CDM Milestones
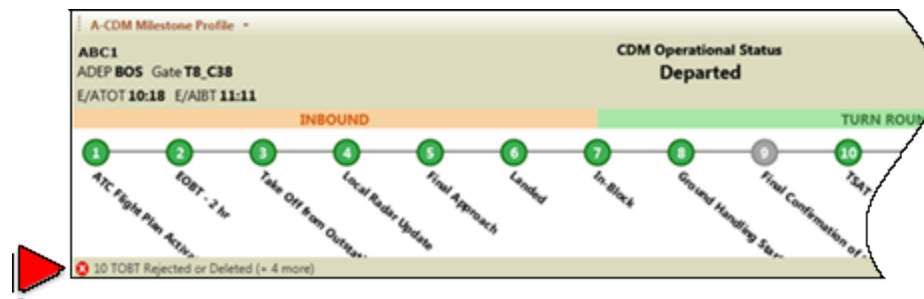
1. Select **Tools > A-CDM Milestone Profile**. The **A-CDM Milestone Profile** tool opens.

2. Select—in a real-time tool—a flight.

   - **A-CDM Milestone Profile** shows the status of each A-CDM milestone for that flight.

     - Gray—A milestone is not complete.

     - Green—A milestone is complete.

   - The notifications show below the milestones.

   - The last completed milestone sets the CDM operational status (refer to Table 7-19 below).

3. Click ⊗ to open the **A-CDM Alerts Viewer** (refer to *Manage A-CDM Alerts* on the next page for more information).

4. Click an item in the **A-CDM Alerts Viewer** for information about that alert.

5. Click **Close** to close the dialog box. You must close the **A-CDM Alerts Viewer** before you can select a different flight.

Table 7-19. A-CDM Milestones and Operational Status

Milestone	Phase	A-CDM Operational Status
1	Inbound	Initiated
2	Inbound	Regulated
3	Inbound	Airborne
4	Inbound	FIR
5	Inbound	Final
6	Inbound	Landed

Table 7-19. A-CDM Milestones and Operational Status (continued)

Milestone	Phase	A-CDM Operational Status
7	Inbound / Turn-round	In-block
8	Turn-round	—
9	Turn-round	—
10	Turn-round	Sequenced
11	Turn-round	Boarding
12	Turn-round	Ready
13	Turn-round	—
14	Turn-round / Outbound	—
15	Outbound	Off-block
16	Outbound	Departed

7.6.1 Manage A-CDM Alerts

The **A-CDM Alerts Viewer** shows active alerts for the selected flight.

NOTE: A-CDM Parameters are configurable (refer to *Use A-CDM Parameters Configuration Tools* on page 4-103).

1. Use these procedures to open **A-CDM Alerts Viewer**:

   - Click the alert notification in the lower left of the **A-CDM Milestone Profile** tool.

   - Right-click a flight, and select **View A-CDM Alerts** from the menu that opens.

   - Select a flight. Then, press the hotkey that is configured to open **View A-CDM Alerts**.

     NOTE: If more than 1 flight is selected when you press the hotkey that is configured to open **View A-CDM Alerts**, the search dialog box opens.

   - Click data in the "CDM Alerts" data field in the **Selection Details** tool or the **Watch List Viewer** tool.

2. Click an alert for more information.

3. Click **Close** when you are done.

Table 7-20. Alert Impact and Status

Active Alert	Impact Level
❌	Blocker
⚠️	Violation
❗	Deviation

7.6.2 Set Extended Startup Time

When there is a startup delay, you can set the Extended Startup Time to add time to the predicted taxi time.

Set Extended Startup Time through the Manage Flight Dialog Box
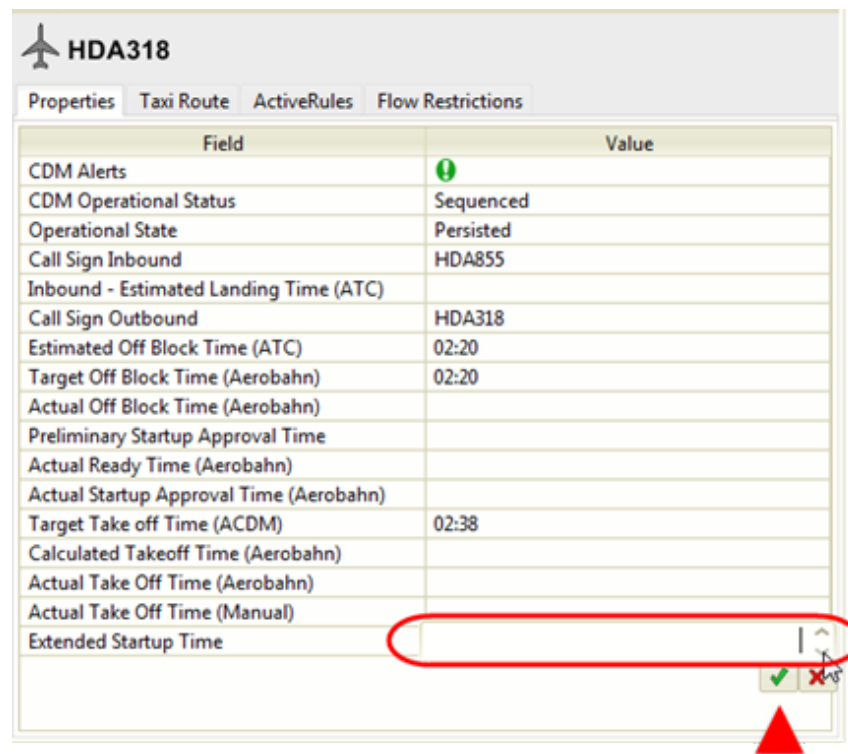
1. Right-click the target.
2. Select **Manage Flight**.
3. Make sure that the correct Flight ID displays in the **Manage Flight** title bar.
4. Select **Extended Startup Time** (in the "Route" group). A ☑ shows.
5. Optional—Adjust the number of minutes.
6. Click **OK**.

You can make a rule (refer to) that adds a flight to a Watch List when an Extended Startup Time is set.

Set Extended Startup Time in Selection Details

ℹ️ **NOTE:** If you do not see Extended Startup Time in your **Selection Details** tool, add it through the tool preferences (refer to *Configure Selection Details* on page 7-306).

1. Select the flight.

2. Click in the Value cell for Extended Startup Time. The edit/set tool opens.

3. Enter an integer for the additional number of minutes, or click the ^ to increase the number of minutes.

4. Click ✔ to add these minutes to the startup time. Click ✖ to cancel your entry without saving.

Change Extended Startup Time in Watch List Viewer

> ℹ️ **NOTE:** If you do not see Extended Startup Time in your **Watch List Viewer** tool, you can add it through the tool preferences (**Watch List Viewer > Preferences**).

1. Select the flight.

2. Click in the table cell for Extended Startup Time. The edit/set tool opens.
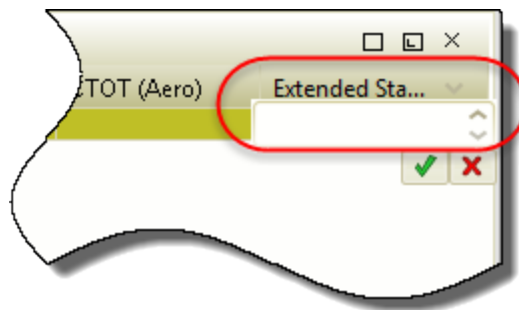
3. Enter an integer for the additional number of minutes, or click the ^ to increase the number of minutes.

4. Click ✔ to add minutes to the startup time. Click ✘ to cancel your entry without saving.

Change Extended Startup Time with Hotkeys

When you press the hotkey that is configured to search for a data field, Aerobahn opens a dialog box that you use to set the new value.

Configure Hotkey Settings for Extended Startup Time

1. Select **Settings > Hotkey Settings**. The Hotkey Settings dialog box opens.

2. Select the hotkey to use when you want to change Extended Startup Time.

   ℹ **NOTE**: It is not necessary to configure Criteria in this procedure.

3. Select the **Data Entry** hotkey action. A menu of data fields opens.
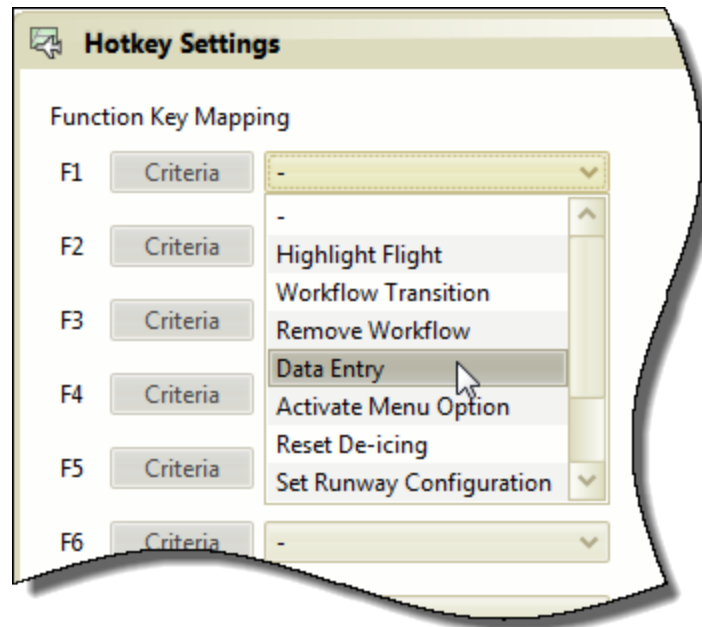
4. Select the data field that the hotkey search will open.

5. Click **OK** to apply changes. Click **Cancel** to close without saving.

Change or Edit Extended Startup Time

1. Select the flight that needs an **Extended Startup Time**.

2. Press the hotkey assigned to **Extended Startup Time**. An **Extended Startup Time** dialog box opens.

3. Enter the number of minutes that Aerobahn needs to add to the estimated taxi time.

4. Click **Apply** to apply changes. Click **Cancel** to close without saving.

7.6.3 Set Target Startup Approval Time

In most cases, the Aerobahn system sets a Preliminary Target Startup Approval Time[1] (PSAT). This PSAT becomes the Target Startup Approval Time[2] (TSAT) at a defined "TSAT Issue Time" that is set in the A-CDM

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[1]Aerobahn calculates this value (PSAT) under these conditions: The flight plan for the flight is made active. The TOBT is null. And, the POBT is not null. When the flight is assigned a Target Startup Approval Time (TSAT), PSAT status is cleared.
[2]Aerobahn calculates this value (PSAT) under these conditions: The flight plan for the flight is made active. The TOBT is null. And, the POBT is not null. When the flight is assigned a Target Startup Approval Time (TSAT), PSAT status is cleared.

Configuration parameters (in System Menu).

It is possible for ATC to override a TSAT. When the TSAT is manually provided, the PSAT becomes a TSAT and the system no longer calculates the TSAT (it uses the entered value).

You can change the PSAT to a Target Startup Approval Time (Manual)[1] in **Selection Details**, **Watch List Viewer**, and with a hotkey.

ℹ NOTE: A suspended flight plan is de-suspended when a manual TOBT, TSAT, or CTOT is entered for the flight.

Set TSAT (Manual) in Selection Details

Add a new TSAT

1. Add (if it is not already there) a TSAT (Manual) to **Selection Details**.
2. Select the flight for which you will set or change the TSAT (Manual).
3. Click in the TSAT (Manual) Value cell. The edit/set tool opens.
4. Use one of these procedures to enter the TSAT (hh:mm):
   - Enter TSAT in the edit/set tool. Then, click ✔ .
   - Set time in the calendar tool.

      a. Click to open the calendar tool.

      b. Select the date and time.
      c. Click **OK**.

ℹ NOTE: If you make a mistake when you enter a date / time, click ✖ to delete an entry that you have not saved.

Change a TSAT

1. Select the time to be changed.
2. Enter the new time. If the date is changing, enter a new date.
3. Click ✔ . The new entry replaces the old one.

---

[1]The startup / push back approval time that is typically provided by ATC (manual input) to override the Pre Departure Sequencer (PDS).

Delete a TSAT (Manual)

1. Double-click the time to be deleted. The edit/set tool opens.
2. Press DELETE.

Set TSAT (Manual) in a Watch List Viewer

Add a new TSAT with the calendar tool

1. Add (if it is not already there) a TSAT (Manual) column to the Watch List (refer to *Work with Table Data* on page 3-9. "Hide or Show Columns" tells how to add a column).
2. Find the flight for which you will set or change the TSAT (Manual).
3. Double-click the TSAT (Manual) table cell for that flight. The edit/set tool opens.
4. Click to open the calendar tool.

5. Select the date and time.
6. Click **OK**. The time shows in the Watch List Viewer.

Add a new TSAT directly

1. Double-click the TSAT (Manual) table cell for that flight. The edit/set tool opens.
2. Enter the date (mm/dd/yyyy) and time (hh:mm) in the text field of the edit/set tool.
3. Click to accept the entry.

Change a time

1. Select the time to be changed.
2. Enter the new time. If the date is changing, enter a new date.
3. Click ✔ . The new entry replaces the old one.

Delete a time

1. Double-click the time to be deleted. The edit/set tool opens.

2. Press DELETE.

Set TSAT (Manual) with a Hotkey action

You can use a hotkey to update the TSAT for a selected flight. If no flight is selected, the hotkey opens a search. If a flight is selected, the hotkey opens a window that lets you change or remove the TSAT.

1. Set up a hotkey for TSAT. (This is a Data Entry hotkey operation.)

2. Use one of these procedures to select a flight:

   ■ Select a flight in a real-time tool (that is, click that flight).

   ■ Select a flight from the TSAT Hotkey Search.

      a. Press the hotkey.

      b. Enter search criteria (refer to *Configure Hotkey Search Criteria* on page 6-29).

      c. Select the flight in the Results window.

3. Change or remove the TSAT.

4. Click **Apply**.

Unfreeze all TSATs

ℹ️ **NOTE:** This feature requires "Unfreeze all TSATs" permission.

In systems that use the Pre-Departure Sequencer (PDS), this is a hotkey function that lets a controller who finds that several flights look out of place "Unfreeze all TSATs." This action lets the PDS regenerate the departure sequence.

1. Configure a hotkey to "Unfreeze all TSATs" (refer to *Configure Hotkey Settings* on page 6-23).

2. Press the "Unfreeze all TSATs" hotkey to regenerate Target Startup Approval Times.

7.6.4 Set Actual Take Off Time

If the wheels-up time changes, you can change the value of Actual Take Off Time (Manual)[1] / ATOT (Manual) or an Actual Take Off Time (Aerobahn) / ATOT (Aerobahn). You can change this value in **Selection Details**, **Watch List Viewer**, or with a hotkey.

Set ATOT in Selection Details

Add a new ATOT

1. Add (if it is not already there) an ATOT (Manual) field to **Selection Details**.

2. Select the flight that will have the ATOT (Manual) set.

3. Click in the ATOT (Manual) Value cell. The edit/set tool opens.

4. Use one of these procedures to enter the ATOT (hh:mm):

   - Enter the ATOT in the edit/set tool. Then, click ✔.

   - Set time in the calendar tool.

     a. Click to open the calendar tool.

     b. Select the date and time.

     c. Click **OK**.

   ℹ️ **NOTE:** If you make a mistake when you enter a date / time, click ✖ to delete an entry that you have not saved.

Change an ATOT

Use this procedure to change an ATOT (Manual) or ATOT (Aerobahn).

1. Select the time to be changed.

2. Enter the new time. If the date is changing, enter a new date.

3. Click ✔. The new entry replaces the old one.

---

[1]User-entered wheels-up time

Delete an ATOT

1. Double-click the time to be deleted. The edit/set tool opens.

2. Press DELETE.

Set ATOT in a Watch List Viewer

Add a new ATOT with the calendar tool

1. Add (if it is not already there) an ATOT (Manual) column to the Watch List (refer to *Work with Table Data* on page 3-9. "Hide or Show Columns" tells how to add a column).

2. Find the flight for which you will set or change the ATOT (Manual).

3. Double-click the ATOT (Manual) table cell for that flight. The edit/set tool opens.

4. Click to open the calendar tool.

5. Select the date and time.

6. Click **OK**. The time shows in the Watch List Viewer.

Add a new ATOT directly

1. Double-click the ATOT (Manual) table cell for that flight. The edit/set tool opens.

2. Enter the date (mm/dd/yyyy) and time (hh:mm) in the text box of the edit/set tool.

3. Click to accept the entry.

Change an ATOT

Use this procedure to change an ATOT (Manual) or ATOT (Aerobahn).

1. Select the time to be changed.

2. Enter the new time. If the date is changing, enter a new date.

3. Click ✔. The new entry replaces the old one.

Delete an ATOT

1. Double-click the time to be deleted. The edit/set tool opens.

2. Press DELETE.

Set ATOT (Manual) with a Hotkey action

You can use a hotkey to update the ATOT for a selected flight. If no flight is selected, the hotkey opens a search. If a flight is selected, the hotkey opens a window that lets you change or remove the ATOT.

1. Set up a hotkey for Actual Take Off Time. (This is a Data Entry hotkey operation.)

2. Use one of these procedures to select a flight:

   - Select a flight in a real-time tool (that is, click that flight).

   - Select a flight from the ATOT Hotkey Search.

     a. Press the hotkey.

     b. Enter search criteria (refer to *Configure Hotkey Search Criteria* on page 6-29).

     c. Select the flight in the Results window.

3. Change or remove the ATOT.

4. Click **Apply**.

7.6.5 Set Actual Movement Area Time

Aerobahn gets the Actual Movement Area Time (Manual)[1]/ AMAT (Manual) from surveillance data or from data that is entered by a user.

You can enter the AMAT in **Selection Details**, **Watch List Viewer**, or with a hotkey.

---

[1]Time at which a departure reaches the movement area. Derived from user-entered data.

Set AMAT in Selection Details

Add a new AMAT

1. Add (if it is not already there) an AMAT (Manual) field to **Selection Details**.

2. Select the flight.

3. Click in the table cell for AMAT (Manual). The edit/set tool opens.

4. Use one of these procedures to enter the AMAT (hh:mm):

    -   Enter the AMAT in the edit/set tool. Then, click ✔.

    -   Set time in the calendar tool.

        a. Click to open the calendar tool.

        b. Select the date and time.

        c. Click **OK**. The time shows in the Watch List Viewer.

ℹ **NOTE:** If you make a mistake when you enter a date / time, click ✖ to delete an entry that you have not saved.

Change an AMAT

Use this procedure to change an AMAT (Manual) or AMAT (Aerobahn).

1. Select the time to be changed.

2. Enter the new time. If the date is changing, enter a new date.

3. Click ✔. The new entry replaces the old one.

Delete an AMAT

1. Double-click the time to be deleted. The edit/set tool opens.

2. Press DELETE.

Set AMAT in a Watch List Viewer

Add a new AMAT with the calendar tool

1. Add (if it is not already there) an AMAT (Manual) column to the Watch List (refer to *Work with Table Data* on page 3-9. "Hide or Show Columns" tells how to add a column).

2. Find the flight that will have the AMAT (Manual) set.

3. Double-click the AMAT (Manual) table cell for that flight. The edit/set tool opens.

4. Click to open the calendar tool.

5. Select the date and time.

6. Click **OK**. The time shows in the Watch List Viewer.

Add a new AMAT directly

1. Double-click the AMAT (Manual) table cell for that flight. The edit/set tool opens.

2. Enter the date (mm/dd/yyyy) and time (hh:mm) in the text box of the edit/set tool.

3. Click to accept the entry.

Change an AMAT

Use this procedure to change an AMAT (Manual) or AMAT (Aerobahn).

1. Select the time to be changed.
2. Enter the new time. If the date is changing, enter a new date.
3. Click ✔. The new entry replaces the old one.

Delete an AMAT

1. Double-click the time to be deleted. The edit/set tool opens.
2. Press DELETE.

Set AMAT (Manual) with a Hotkey action

You can use a hotkey to update the AMAT for a selected flight. If no flight is selected, the hotkey opens a search feature. If a flight is selected, the hotkey opens a window that lets you change or remove the AMAT.

1. Set up a hotkey for AMAT. (This is a Data Entry hotkey operation.)

2. Use one of these procedures to select a flight:

   ■ Select a flight in a real-time tool (that is, click that flight).

   ■ Select a flight from the AMAT Hotkey Search.

      a. Press the hotkey.

      b. Enter search criteria (refer to *Configure Hotkey Search Criteria* on page 6-29).

      c. Select the flight in the Results window.

3. Change or remove the AMAT.

4. Click **Apply**.

7.6.6 Clear A-CDM Milestones

⚠ **CAUTION:** When you clear A-CDM milestones, Aerobahn takes a flight out of the departure sequence.

When Aerobahn receives a new TOBT for the flight, Aerobahn puts the flight back into a new departure sequence.

Use a Mouse to Clear A-CDM Milestones

1. Right-click a flight.

2. Select **Clear Milestones**.

3. Verify the action:

   ■ Click **Yes** to clear A-CDM milestones

      ℹ **NOTE**: If you selected an outbound flight, this action removes the flight from the departure sequence.

   ■ Click **No** to cancel the action.

Use a Hotkey to Clear A-CDM Milestones

Before you do this procedure, configure a hotkey to clear A-CDM milestones (refer to *Configure Hotkey Settings* on page 6-23).

1. Press the hotkey configured to clear the A-CDM milestones.

2. Enter the search criteria. As you enter criteria, the Results field populates.

3. OPTIONAL—Click or TAB to **Criteria**, and configure search options to restrict search. The initial "Quick Search" is controlled by the hotkey configuration. You can restrict individual searches (override the hotkey configuration). Any change you make for an individual search does not affect the hotkey configuration.

4. Select the flight from the Results.

5. Press ENTER or click **Apply**.

Figure 7-53. Clear A-CDM Milestones (Hotkey Steps)
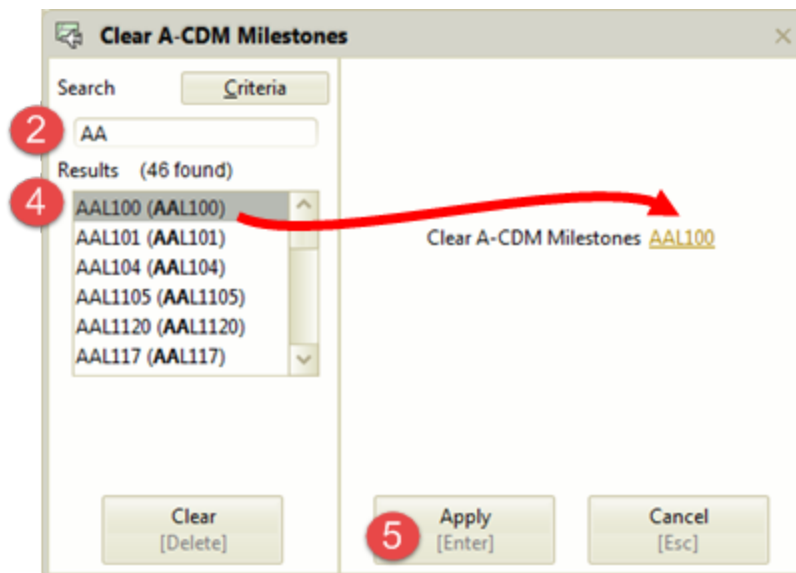
7.7 Use the Airport Status Dashboard

The **Airport Status Dashboard** supplies tools from which you can get status summaries and information about operations at your airport.

The status summaries include these (and other) types of information:

- runway operations
- airfield and fix closures
- message boards with attached documents
- text messages received from an external information source

ℹ NOTE: The de-icing status summary shows if de-icing is in operation for a minimum of one management group at the airport.

The **Airport Status Dashboard** also gives links to web sites and has a viewer for web pages.

ℹ NOTE: You can look at **Airport Status Dashboard** data from a web browser. This browser-based tool is the **Aerobahn Airport Dashboard**.

The **Airport Status Dashboard** tool is set up for your airport.

The **Airport Status Dashboard** has two sections:

- A tabbed section gives access to status information on specified airport operations
- Status Highlights

ℹ NOTE: Changes made to the contents in the **Airport Status Dashboard** push notifications that can show in the Notification Bar and in the **Aerobahn Airport Dashboard**, through which Saab supplies airport status information (airside and landside). Select **Settings > Notification Settings** to set up subscriptions in Notification Settings.

ASD Tabs

The section of the ASD with tabs has 2 types of information: system-supplied and user-entered information. The Aerobahn database supplies the system-supplied information.

Users with the correct permission can set status, post messages, attach documents, and add web links. Users with permission to enter or change information see "+NEW POST," "ADD," or "EDIT," in the top right corner of an item.

Select a tab to open a page.

Click a link to open a file in a program that can open that file format. Aerobahn does not close when you click a web link. Aerobahn tells you to save a file if the file cannot be opened.

Figure 7-54. Airport Status Dashboard Tabs
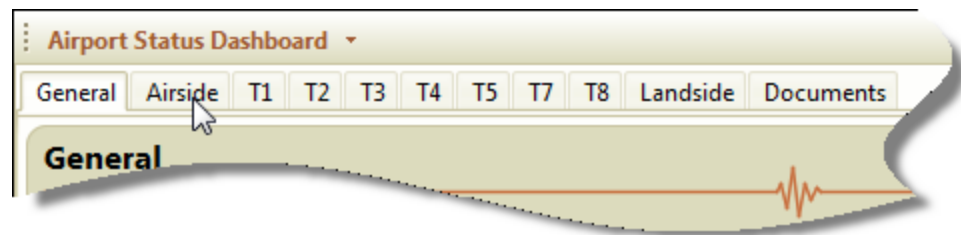
Status Highlights

Status Highlights shows status information for a configured set of conditions. **Status Highlights** gives two types of information: system-supplied and user-entered.

To hide **Status Highlights**, select **Airport Status Dashboard > Show/Hide Information > Hide Status Highlights**.

To show **Status Highlights**, select **Airport Status Dashboard > Show/Hide Information > Show Status Highlights**.

Tab names

To hide a long tab, select **Airport Status Dashboard > Show/Hide Information > Hide Long Tab Names**.

To show a long tab that is hidden, select **Airport Status Dashboard > Show/Hide Information > Show Long Tab Names**.

Figure 7-55. Airport Status Dashboard Tabs (Short and Long)
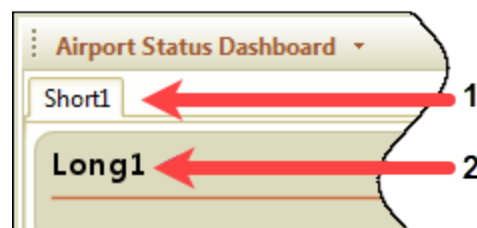
1	"Short" tab
2	"Long" tab. You can hide or show this element.

7.7.1 Edit the Airport Status Dashboard

The **Airport Status Dashboard** has two sections:

- A tabbed section gives access to status information on specified airport operations
- Status Highlights

Users with the correct permission can set status, post messages, attach documents, and add web links. Users with permission to enter or change information see "+NEW POST," "ADD," or "EDIT," in the top right corner of an item.

Each item shows who made the update and the date and time of the update.

7.7.1.1 Bulletins

A bulletin can include a variety of information: text, web links, and document links. Use this instruction to post a new bulletin to one of the labeled areas that says **+NEW POST** in the top right corner.

---

i **NOTE:** You need this permission to post or edit bulletins: **Applications > Launch TaxiView > Tools > Use Airport Status Dashboard > Edit Airport Status Bulletins**.

Post a new bulletin

1. Click **+NEW POST**.
2. Replace the "New Title" and "New Text" fields (refer to Figure 7-56 on the next page for an example that contains only these fields).
3. OPTIONAL—Add a link or an attachment.
    - Add a web link (refer to Figure 7-57 on the next page for an example).
        a. Click **Add Web Link**.
        b. Replace "Enter Display String Here" with the link text. (This is the label for the link.)
        c. Replace "Enter Web Link Here" with the URL. (This shows as a tool tip.)
    - Add an attachment (such as a document, spreadsheet, or image file).
        a. Click **Attach File**.
        b. Select the file in the dialog box that opens.
        c. Click **Attach File**.
4. Click **Save**.

Figure 7-56. ASD Bulletin with text only

Figure 7-57. ASD Bulletin with Web Links

Edit a bulletin

1. Click **EDIT**.
2. If necessary, change the title and text fields.
3. Add or remove links or attachments.
    - OPTIONAL—Add a web link or an attachment.
        - Add a web link.
            a. Click **Add Web Link**.
            b. Replace "Enter Display String Here" with the link text. (This is the text that shows.)
            c. Replace "Enter Web Link Here" with the URL. (This shows as a tool tip.)
        - Add an attachment (such as a document, spreadsheet, or image file).
            a. Click **Attach File**.
            b. Select the file in the dialog box that opens.
            c. Click **Attach File**.
    - OPTIONAL—Remove a link or attachment (but not the entire bulletin).

        ⚠ **CAUTION:** Be sure to select the correct item before you click. This action does not need a second step. If you do remove a link or attachment in error, click **Cancel** to exit without saving.

        Click **Remove**. The link or attachment is deleted. The text labels show. To remove the labels, remove the bulletin.
4. Click **Save**.

Remove a bulletin

Follow this instruction to remove a bulletin. The "container" for bulletins of a category remains after you remove a bulletin.

1. Click **Remove**.
2. Click **Yes** to confirm.

In this example, the "NOAA Center and TRACON Weather Page" bulletin is removed. The "Winter Operations" area remains, and you can post a new bulletin there (refer to).

Figure 7-58. ASD Bulletin
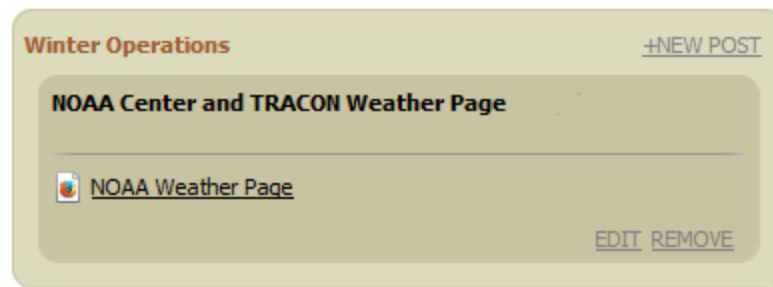
7.7.1.2 Web Links and Embedded Web Pages

The ASD features elements that supply web links and embedded web pages.

ℹ NOTE: The ASD automatically refreshes embedded web pages every 15 minutes. To change this setting, select **Airport Status Dashboard > Configure Dashboard Widgets > Embedded Web Page** from the Widget Type dropdown menu. Then enter a value for **Web Page Refresh Time Minutes**.

Web link elements show **EDIT ADD DELETE** in the top right corner.

Edit a web link

If you see **EDIT ADD DELETE** in the top right corner, follow this instruction to edit a link:

1. Click **EDIT**.
2. Replace the text (display string and/or URL).
3. Click **OK**.

Add a web link

If you see **EDIT ADD DELETE** in the top right of the box, follow this instruction to add a link:

1. Click **ADD**.
2. Replace "Enter Display String Here" with the link text. (This text shows.)
3. Replace "Enter Web Link Here" with the URL. (This does not show.)
4. Click **OK**.

Delete a web link

If you see **EDIT ADD DELETE** in the top right of the box, follow this instruction to <u>delete</u> a link:

1. Click **DELETE**. The Delete Data menu opens.
2. Select the item(s) to delete.
3. Click **Delete**.
4. Click **Yes** to confirm.

7.7.1.3 Status Elements

ASD has two types of status elements:

- Elements that give status data by color-coding key status words ("Routine," "Suspended," "Major Delays")
- Elements that use a colored dot to show status

A user who has permission to edit the status bulletin keeps the information up to date by changing the statuses.

NOTE: To change status information and related text in the Bulletin Board or in Status Highlights requires the following permission: **Applications > Launch TaxiView > Tools > Use Airport Status Dashboard > Edit Airport Status Bulletins > Modify Airport Status Dashboard Manual Data**. Only users with permission to change a manual setting see EDIT as an option. (Colors are configured when the bulletin is set up.)

Edit status text elements

Status elements that look like the one in step 1 give status with color-coded key words (e.g., "Routine," "Suspended," "Major Delays"). You select some of the data from menus. You enter other data (e.g., "Flooding," "Electrical Outage," "Damage to Tracks") as text.

1. Click **EDIT**.
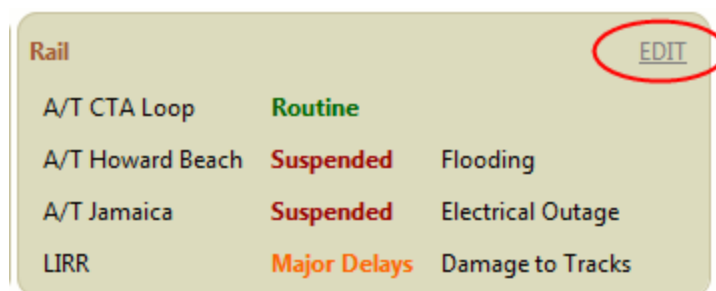
2. Select the status for the item.
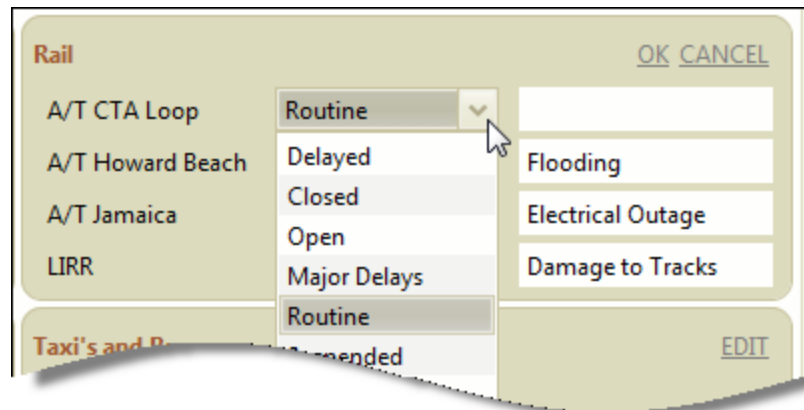
3. Add or change text to tell more about the status.

4. Click **OK**.

Edit status icon elements

Some status boxes change menu choices into status icons. You enter labels as plain text.

Figure 7-59. Status Display with Indicator and text (Finished view)
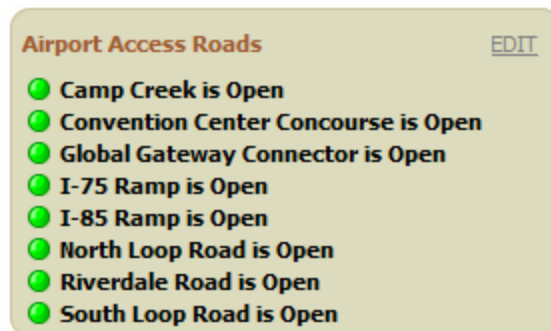
Follow these instructions to edit a bulletin that has a status icon and text:
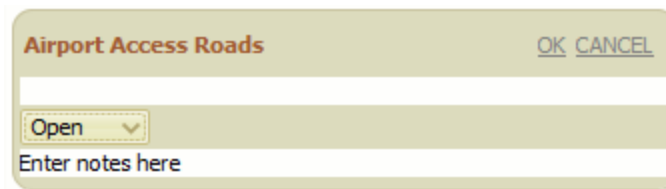
1. Click **EDIT**.

2. OPTIONAL—Change or add a text label above the menu (refer to).

3. Select the status description from the menu. (Although you select a word, the word is converted to a colored circle when you save your changes.)

> ℹ️ **NOTE:** Status text is added to the text label. That is, if you select "Open" as a status, the phrase "is Open" shows in the upper line of the edit box.

4. OPTIONAL—Change notes.

5. Click **OK**.

Figure 7-60. Status Display with Indicator and text (Edit view)

7.7.1.4 Text Elements

Some ASD items supply reference information (such as car rental information) but do not give status information. These text boxes are set up as a single free-text window or with rows that have 2 text windows so that the final product seems to be formatted in columns.

Edit text

1. Click **EDIT**.

2. Replace or add text.

3. Click **OK**.

Add text

This procedure works on text boxes that seem to be formatted in columns. Use this to add a new row.

> ℹ️ **NOTE:** The text box on the left allows only a single line of text. The text box on the right allows more than 1 line of text.

1. Click **ADD**.

2. Replace "Enter Key Here" with text for the left column.

3. Enter text for the right column in the blank text box.

4. Click **OK**.

Delete text

1. Click **DELETE**. The Delete Data menu opens.

2. Select the item(s) to delete.

3. Click **Delete**.

4. Click **Yes** to confirm.

To delete text from a text element that has only an **EDIT** button, follow these instructions:

1. Click **EDIT**.

2. Select text to be deleted.

3. Press DELETE on your keyboard.

4. Click **OK**.

7.7.1.5 Status Highlights

> ℹ **NOTE:** To change those Status Highlight statuses that need manual intervention requires the following permission: **Applications > Launch TaxiView > Tools > Use Airport Status Dashboard > Modify Airport Status Dashboard Manual Data**. Only users with permission to change a manual setting see **EDIT** as an option.

Update the tools in the Status Highlights pane as you did the tools in the Bulletin Board. The Status Highlights pane is set up so that it always shows.

Click **EDIT** to open the **Status Highlights** pane. You are not be able to edit all of the contents in Status Highlights.

Click **OK** when updates are complete.

7.7.2 Pin ASD Bulletins

You can select messages to pin to the top of the Airport Status Dashboard list of bulletins. Pinned messages are listed before unpinned messages.

Click **PIN TO TOP** to pin a message. If no other messages are pinned, it will become the first message. If there is already a pinned message, the message is added before the unpinned messages and in relation to the other pinned message(s) based on the date and time that it was created or changed.

Click **REMOVE PIN** to put a pinned message back into the list of unpinned messages.

7.8 Airport Status Delay

Airport Status Delay shows active NAS delay status information. **Airport Status Delay** is a viewer only.

Select **Tools >** **Airport Status Delay** to open the tool.

Delays are described in the following common data fields:

- Delay Type
- Airport
- Reason
- End Time (Delay start and end times depend on the delay type and are not always available.)

Other information can be configured for your site.

In addition, **Airport Status Delay** shows when Ground Delay Programs and Ground Stops are active.

Table 7-21. Restriction / Delay Type Indicators

Program	Indicator
Ground Delay Program	🟡
Ground Stop	🔴

7.9 Use ATC Voice Channels

ATC Voice Channels supplies streaming audio. You can listen to recorded audio in Playback mode.

Set up **ATC Voice Channels**:

1. Select **ATC Voice Channels > Displayed Channels**. The **Select Displayed Channels** dialog box opens.
2. Select channels to show as buttons in **ATC Voice Channels**.
3. Click **OK**.

To listen to a voice transmission, click a channel button.

7.10 Use the Chat Tool

The **Chat** tool lets you send and receive text messages and Aerobahn targets to and from selected Aerobahn users at different sites.

There are three types of channels:

- Public Channels
- Private Channels
- Direct Messages

Chat usernames are in the *<username>@<site>* format.

To see which of your Private Channel/Direct Message members is online, click ☺ next to the channel name. A green circle identifies that the Chat tool is open for the user and the user is available. A gray circle identifies that the Chat tool is closed for the user and the user is not available (refer to Figure 7-61 below for an example).

Figure 7-61. Chat Availability (Example)

Public Channels

Only Admin can create Public Channels. Any user can join any available Public Channels. Users can hide or leave a Public Channel.

ℹ **NOTE:** Any user can view messages in a Public Channel at any Aerobahn site.

Join a Public Channel

1. Select **Tools > Chat** to open the **Chat** tool.
2. Click ✚ next to **Public Channels**.
   The **Join Public Channel** dialog box opens.

3. In the dropdown menu, select a Public Channel to join.

4. Click **OK**.
    The Public Channel you have joined shows under **Public Channels**.

Hide/Leave a Public Channel

1. Move the mouse pointer over a Public Channel to hide/leave.
    ✖ shows.

2. Click ✖ .
    The **Hide or Leave Channel** dialog box opens.

3. In the dropdown menu, select an action:

    - Hide Channel Temporarily: The channel shows again when you receive a new message in the channel.

    - Leave Channel Permanently: The channel will not show again until you re-join the channel.

4. Click **OK**.
    The Public Channel disappears.

Private Channels

You can create, edit, and close a Private Channel. A Private Channel can only be edited or closed by the user who created the channel. If a user is invited to a Private Channel, the channel will automatically show for the user.

ℹ **NOTE:** "Manage Private Chat" permission is necessary for you to create, edit, or close a Private Channel.

Create a Private Channel

1. Select **Tools > Chat > Create Private Channel**.
    The **Create Private Channel** dialog box opens.

2. In the Channel Name field, enter a channel name.

    ℹ **NOTE:** The Private Channel names must be unique across all Private Channels for all users.

    ℹ **NOTE:** If you create a Private Channel with the same name of a Private Channel you previously closed, the closed channel will open again.

3. Move users you want to invite from the **Available** field to the **Selected** field.

> **NOTE:** You can use the filter to limit users to a specific site.

4. Click **OK**.
    The Private Channel you just created shows under **Private Channels**.

> **NOTE:** You cannot leave a private channel that you created.

Edit a Private Channel

1. Select **Tools > Chat > Edit Private Channel**.
    The **Edit Private Channel** dialog box opens.
2. Edit channel properties.
3. Click **OK** to apply changes.

Close a Private Channel

1. Select **Tools > Chat > Close Private Channel**.
    A list of the existing Private Channels shows.
2. Click a Private Channel to close.

Hide/Leave a Private Channel

1. Move the mouse pointer over a Private Channel to hide/leave.
    ✖ shows.
2. Click ✖ .
    The **Hide or Leave Channel** dialog box opens.
3. In the dropdown menu, select an action:
    - Hide Channel Temporarily: The channel shows again if you receive a new message in the channel (refer to *Show a Hidden Private Channel* below to show it back).
    - Leave Channel Permanently: The channel will not show again even if a new message arrives in the channel. You can re-join the channel only when you are re-invited by the channel owner.
4. Click **OK**.
    The Private Channel disappears.

Show a Hidden Private Channel

If you hid a Private Channel, you can show the channel back in the list of visible **Private Channels**.

1. Click ✚ next to **Private Channels**.

2. Select a channel to show back.

3. Click **OK**.

Direct Messages

Any user can create and hide Direct Messages.

Create a Direct Message

1. Select **Tools > Chat** to open the **Chat** tool.

2. Click ✚ next to **Direct Messages**.
   The **Choose Participants** dialog box opens.

3. Move users you want to invite from the **Available** field to the **Selected** field.

4. Click **OK**.
   The Direct Message you created hows under **Direct Messages**.

ℹ️ **NOTE:** You can create only one Direct Message with the same participants. If you create a Direct Message with the same participants as a previous Direct Message, the previous Direct Message will be continued.

Hide a Direct Message

1. Move the mouse pointer over a Direct Message to hide.
   ✖ shows.

2. Click ✖ .

ℹ️ **NOTE:** If you receive a news message in the hidden Direct Message, the Direct Message shows again.

Drag a Target into the Chat Window

When Aerobahn is in Live mode (that is, *not in Playback*), you can drag a flight or vehicle from **Map Display** or from a tabular tool into the **Chat** window ( ).

When in the **Chat** window, the flight or vehicle shows as an icon. When a participant in the conversation selects the icon in the **Chat** window, that flight or vehicle is selected in that participant's open tools.

ℹ️ **NOTE:** You can also drag and drop a flight from a previous date or from a different site.

Figure 7-62. Dragging a Target into a Chat Window (Example)
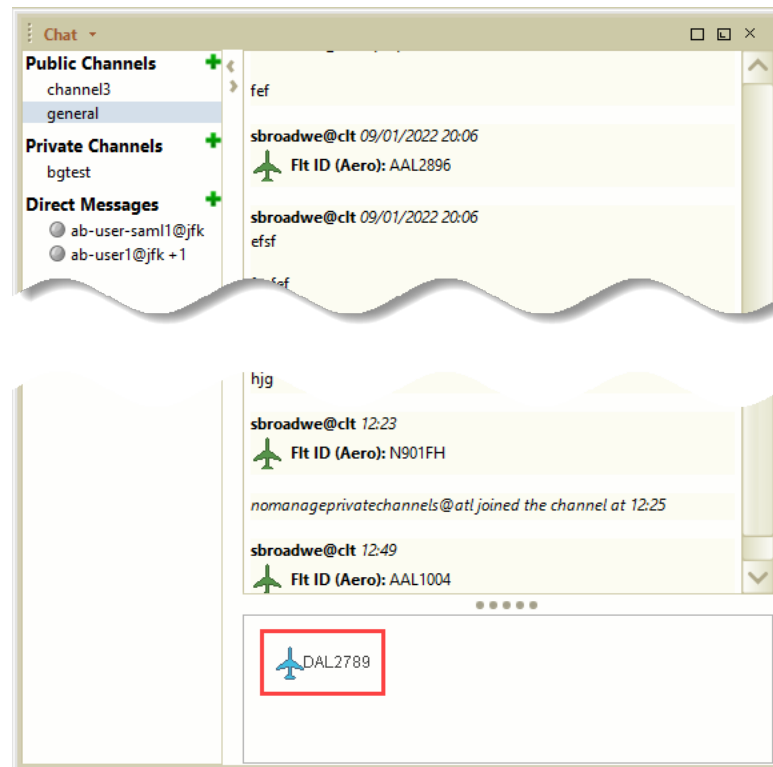
Enable Notifications for New Messages

When you receive a new chat message, Aerobahn can give you these notifications:

- Status bar message
- Popup notification
- Sound notification

You can configure notifications differently for the chat channel you are not currently viewing and for any chat channels.

1. Select **Chat > Notification Settings**.
    The **Notification Settings** window opens.
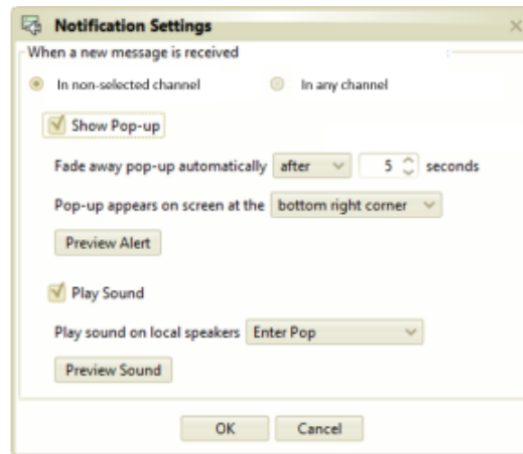
2. Select the channel type to apply notification settings.

    ■   **In non-selected channel**: Notification settings apply to the chat
        channels you are not currently viewing.

    ■   **In any channel**: Notification settings apply to all chat channels.

3. Put a check mark to **Show Pop-up** and/or **Play Sound**.

    ℹ **NOTE:** A status bar message always shows when a new message
    arrives.

4. Select the notification options.

5. Click **OK**.

7.10.1 Get a Conversation History

A Conversation History supplies transcripts of the conversations in which you
engaged.

1. Select **Chat > Conversation History**.
    The **Conversation History Configuration** window opens.

2. In the dropdown menu next to Channel or Conversation, select a channel
    or conversation to retrieve.

3. Set the start and the stop points of the transcription time period.

4. Click **OK**.
    The conversation history shows in the **Conversation History** window.

ℹ **NOTE:** You cannot get a conversation history from a Public Channel or a
Private Channel that is closed.

7.11 Use the De-icing Manager

De-icing Manager uses airport surface surveillance data and flight data to help you control de-icing activity. **De-icing Manager** helps you to do the following:

- find flights
- start de-icing workflows
- change de-icing status for individual flights
- monitor de-icing queue lengths and occupancy times
- record de-icing process milestones

De-icing Manager has a Flight Progress bar and a De-icing Activity panel. The Flight Progress bar identifies an individual flight. You can change de-icing status for that flight and start de-icing workflows. The De-icing Activity panel looks at movement in a de-ice pad group or group of de-ice bays shown on a tab.

Task	Reference
Search for a flight Configure the search criteria Add de-icing remarks (comments) Change de-icing properties Assign a de-ice truck Reset de-icing	*Flight Progress* on the facing page
Change the priority of flights in the Assigned Table Configure data blocks in the Usage Chart Set up and manage tabs in the De-ice Pad Activity section	*De-ice Pad Activity* on page 7-168

ℹ️ **NOTE:** The letter "Z" in data fields such as TZQT, AZET, and EZXT replaces "de-ice" (refer to the glossary for definitions).

About Automatic Scheduling of De-ice Locations

Aerobahn uses the departure schedule, de-ice pad locations, nominal de-ice times, and event types to make a de-ice schedule. As it makes this schedule, Aerobahn tries to balance pad operation and keep queues to specified

lengths. When it schedules de-ice locations for each flight, Aerobahn identifies limits for each de-ice pad. Limits include wingspan and fuselage dimensions. Limits also include the risk that some de-ice pads cause a blockage at the entrance or exit of other de-ice pads. Then, Aerobahn gives each flight a Target De-ice Queue Entry Time (TZQT) and a Recommended Off Block Time (ROBT).

> ℹ **NOTE:** You can open the **De-ice Configuration** dialog box through the De-icing Manager. (Select **De-icing Manager > Manage De-ice Configuration**.)

> ℹ **NOTE:** Refer to *Use De-ice Configuration* on page 4-94 for instructions. **De-ice Configuration** allows approved users to associate a de-ice management group (entity responsible for de-icing) with pad group configurations and event type configurations. A collection of de-ice management groups and their related pad groups is a "De-ice Group Configuration."

7.11.1 Flight Progress

The **Flight Progress** bar gives information about an individual flight. When you select a flight in the Assigned table, for example, Aerobahn shows information about that flight in the **Flight Progress** bar, and you can make manual changes, including de-icing workflow state changes.

Use the **Flight Progress** bar to perform the following tasks:

- *Flight Progress above*
- *Flight Progress above*
- *Manage a De-icing Workflow* on page 7-177
- *Flight Progress above*

7.11.1.1 Use Flight Search in De-icing Manager

1. Click 🔍 .

2. Enter letters and/or numbers. As you enter letters and/or numbers that fit in the flight search criteria (refer to *Configure Flight Search Criteria* on the next page), a list of possible matches shows.

3. Select the flight to show it in the **Flight Progress** dialog box.

You can make manual changes to predicted de-icing status, location, and length of time.

Configure Flight Search Criteria

1. Select **De-icing Manager > Configure Flight Search Criteria**.

2. Select (check) data fields to include in your search.

3. Move the operational states of flights that are to be included into the **Selected** window.

4. Move the carrier groups of flights that are to be included into the **Selected** window.

5. Click **OK**.

7.11.1.2 Add De-icing Remarks

De-icing Remarks are comments related to de-icing operations (for example, "did not call tower after de-icing"). You can add or edit them in these ways:

- Use the De-icing Manager Flight Progress Bar
- Use the Flight Manager dialog box
- Use hotkeys

Click in the De-icing Remarks text box, and enter text. Remarks are stored in the database. Because it is a data field, you can show De-icing Remarks in reports.

7.11.1.3 Change De-icing Properties

You can override the default settings for the following de-icing properties for a single flight in the Flight Progress bar:

- DI Pred (Manual)[1]
- Pred DI Loc (Manual)[2]
- Estimated De-ice Pad Duration
- Target Off Block Time (TOBT)

The entered values become part of the database. They are used in reports, and Aerobahn uses the new values when it calculates scheduled de-icing times and locations.

> ℹ **NOTE:** You can reset de-icing data when secondary de-icing is necessary (refer to *Change De-icing Properties* above).

---

[1]See "De-ice Predicted (Manual)"
[2]See "Predicted De-ice Location (Manual)"

1. Click 🔍 .

2. Enter letters and/or numbers. As you enter letters and/or numbers that fit in the flight search criteria (refer to *Change De-icing Properties* on the previous page), a list of possible matches shows.

3. Select the flight to show in the **Flight Progress** dialog box.

4. Change de-icing properties:
   - DI Pred (Manual)—Select de-icing mode.
   - DI Loc (Manual)—Select pad location.
   - Est DI Dur—Change de-icing duration time in minutes.

5. Add any remarks.

7.11.1.4 Assign a De-ice Truck to a Flight

1. Select a flight.

2. In the Flight Progress bar, click **Select** for De-ice Truck(s).

3. Select the truck number(s) to assign to that flight.

4. Click **OK**.

7.11.1.5 Set the De-icing Fluid Type

1. Select a flight.

2. In the Flight Progress bar, open the De-ice Fluid Type menu.

3. Select the fluid type.

7.11.1.6 Reset De-icing

When secondary de-icing is required, you can reset de-icing for a selected flight. When you reset de-icing, Aerobahn resets these values:

- De-ice state
- Predicted/Actual De-ice Location
- Target/Actual De-ice Queue Entry Time
- Estimated/Actual De-ice Pad Entry Times
- Estimated/Actual De-ice Pad Exit Times
- Estimated/Actual De-ice Pad Duration
- ROBT

Reset De-icing in De-icing Manager

Click **Reset De-icing** to reset these values from the **De-icing Manager**. Click **Reset** to make sure. You can also right-click a target or use a hotkey to reset de-icing.

Reset De-icing from a Target

1. Right-click the flight that will go to secondary de-icing.

2. Select **Reset De-icing**.

3. Click **Reset** to confirm.

Reset De-icing with Hotkeys

Two methods:

- by using the hotkey search function. This allows you to reset de-icing for one or more targets.

- by selecting a target in a real-time tool and then pressing a pre-configured hotkey. This resets de-icing for only one target at a time.

To reset de-icing using the hotkey search function:

1. Assign a hotkey to "Reset De-icing" (refer to *Configure Hotkey Settings on page 6-23*).

2. Press the hotkey that triggers the Reset De-icing function.

3. Search for the flight(s) to be reset.

4. Select the flight.

5. Click **Apply**.

6. Click **Reset** to confirm.

To reset de-icing for a selected target:

1. Assign a hotkey to "Reset De-icing" (refer to *Configure Hotkey Settings on page 6-23*).

2. Select the flight for which you will reset de-icing.

3. Press the hotkey that triggers the Reset De-icing function.

4. Click **Reset** to confirm.

7.11.2 De-ice Pad Activity

The De-ice Pad Activity panel of the **De-icing Manager** is the tabbed part of the tool. Each tab shows 1 pad group or a selected grouping of pads and bays. To show or hide tabs, and to change the sequence of tabs, select **De-icing**

Manager > Configure Tabs.

A tab is divided into collapsible sections:

- **Usage** charts show de-icing pad occupancy and de-icing pad throughput.
- An **On Pad** table identifies flights associated with that pad group or—on custom tabs—with selected pads and are currently in the "On Pad" de-ice state.
- A **Queued** or an **Enroute To Pad** table (based on site configuration) identifies flights associated with that pad group or—on custom tabs—with selected pads. *If the Gate-to-Enroute setting on the server is set to True,* the Enroute to Pad table shows. The Enroute to Pad table shows flights that are in the Queued or the Assigned (Taxi) state. *If the Gate-to-Enroute setting on the server is set to False*, the Queued table shows. The Queued table shows flights in the Queued state only.
- An **Assigned** table identifies flights associated with that pad group or— on custom tabs—with selected pads and that are in the Assigned (Gate) de-ice state. If Gate-to-Enroute is a setting on the server, and this setting is set to False, flights in the Assigned (Taxi) state also show in the **Assigned** table.

7.11.2.1 Usage Charts

Pad Occupancy shows on a timeline the periods that each de-ice region has been, is currently, or is predicted to be occupied. The current time is in the middle of the timeline. Usage is color-coded as set up in the **De-ice Configuration** utility (refer to *Use De-ice Configuration* on page 4-94) .

Each de-icing is shown as a color bar ("puck") on the timeline. Color bars that cover 2 de-ice region lines show flights that fill more than one de-ice bay. The length of a color bar tells the length of time in the de-ice bay.

Pad Occupancy also shows the time periods each de-ice region in the pad group was closed, is closed, or is scheduled, according to the **Region Closures** tool, to be closed.

You will see the Usage Chart Data Block when you put the pointer above a color bar in the **Pad Occupancy** chart. A **Pad Occupancy** chart shows a de-icing pad occupancy during a configurable time period for all de-icing pads for a single de-icing management group (one or more pad groups).

🛈 **NOTE:** If you click the color bar, you select the flight. Information for the selected flight shows in **Selection Details** and other real-time tools.

To see more information for a flight, put the pointer above the colored bar: a data block opens to identify the specific flight (refer to Figure 7-64 on the facing page). Select **De-icing Manager > Configure Usage Chart Data Blocks** to configure these mouseovers (refer to *Configure Data Blocks in De-icing Manager* on page 7-178).

Drag the divider bar that is between the Usage charts and the On Pad table up or down to change the number of labels shown in the Usage charts. Also, the Pad Occupancy chart scale shows only those pads that are selected in the **De-ice Configuration** dialog box "De-icing Locations" configuration.

Drag the vertical divider that is between the two charts to the left or to the right to change the width of the **Pad Occupancy** and the **Throughput** charts. To show or hide a chart, click the Expand/Collapse button between the two charts (refer to Figure 7-65 on the facing page).

Select **Set Throughput Chart > Sample Size** to set a time increment for sampling in the Throughput table.

Figure 7-63. Pad Occupancy Timeline
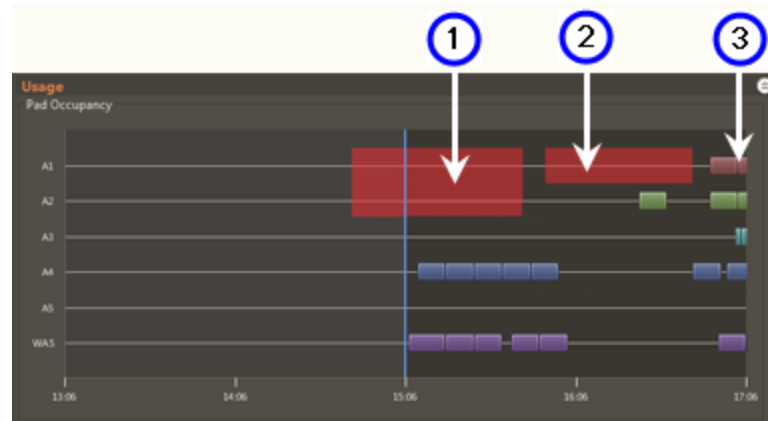
1	The closure indicator spans de-ice regions.
2	This closure indicator covers only one region.
3	These flights are predicted to go to an open de-ice region.

Figure 7-64. Pad Occupancy Chart with Data Block
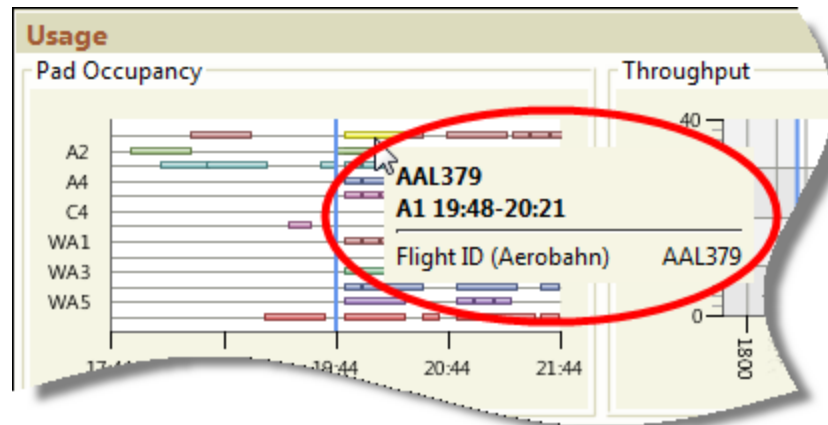
Figure 7-65. Expand/Collapse Buttons

Throughput shows:

- the total number of flights that have used de-ice pads during the time covered by the timeline
- the number of flights that are predicted to use de-ice pads in the selected pad group during the time covered by the timeline

The De-icing Manager counts actual pad occupancies and predicted occupancies for a time period that you choose (**De-icing Manager > Set Throughput Chart Sample Size**) based on exit time. For example, if you select a Throughput Chart Sample Size of 30 minutes, pad occupancies that start at 10:38 and stop with a yellow X at 11:03 (whether predicted or actual) are counted for the 11:30 time sample. The current time is shown by a divider line.

7.11.2.2 Assigned

When listed in this table, the flight is at the gate or taxiing and assigned to a de-ice bay. It has not de-iced, and it does not occupy the corresponding de-ice queue.

You can change the priority of your carrier group's flights in the Assigned table (refer to *Change the priority of flights in the Assigned Table* on the next page.

➡ Aerobahn has two "Assigned" de-ice states: Assigned (Gate) and Assigned (Taxi). The two states are put together in the Assigned table. If you will divide table data by these two de-icing states, add De-ice State as a table column. Then, sort table data based on that column For more information on how to sort table data, refer to *Work with Table Data* on page 3-9.

Specifically the Assigned table includes two kinds of flights: Queued and Assigned (Taxi) when the Gate-to-Enroute setting (on server) is set to False.

ℹ **NOTE:** Approved users can change the departure priority (and override the Scheduled Off Block Time) of a flight relative to flights in the same carrier group. The priority of all other flights will remain the same. Making this change affects the system.

7.11.2.2.1 Change the priority of flights in the Assigned Table

In the Assigned table, you can drag a flight in your carrier group to a location with an earlier Target De-ice Queue Entry Time (TZQT) or Estimated De-ice Pad Entry Time (EZET).

The basic rules are as follows:

- You can move **flights** in your own carrier group only.
- You cannot change the overall order of carrier group **slots** in the de-ice queue (refer to Figure 7-66 on the facing page for an illustration of how individual flights adjust to preserve the carrier group slots).

Figure 7-66. Changing the Priority of Flights in the Assigned Table
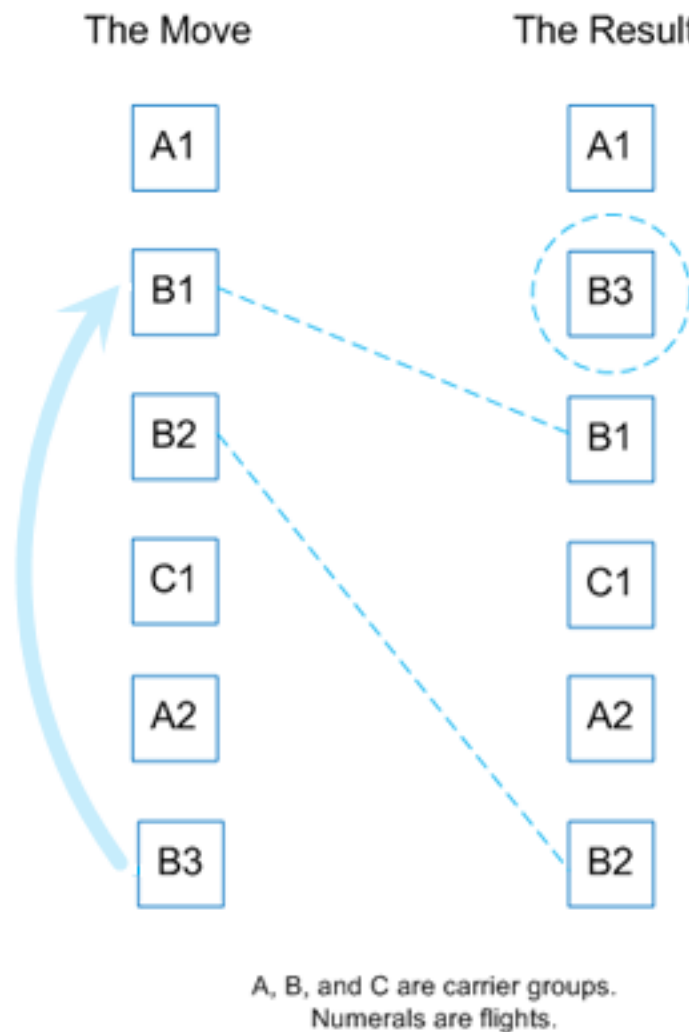
To set new priorities for flights, drag the flight that you wish to "move up" to the new location ("slot") and release it. Aerobahn processes the new priorities and moves flights into their new de-icing slots.

7.11.2.3 Queued

> ℹ **NOTE:** The Queued table *or* the Enroute To Pad table, not both, can show in the **De-icing Manager**. The server configuration sets up the display.

When listed in this table, the flight has entered the queue connected with its assigned de-ice bay or has been in a different queue for an extended period.

The Queued table includes flights in the Queued de-icing state. If no queue regions are set up on the server, a flight enters the queued state immediately after it goes out of the gate.

7.11.2.4 Enroute To Pad

> ℹ **NOTE:** The Queued table *or* the Enroute To Pad table, not both, can show in the **De-icing Manager**. The server configuration sets up the display.

When listed in this table, the flight left the gate but has not yet entered the de-ice pad. The Enroute To Pad table can include flights in the Queued and Assigned (Taxi) de-ice states.

7.11.2.5 On Pad

When identified in this table, the flight occupies a de-ice bay.

A flight must stay in the On Pad state for a certain amount of time before it changes—when it leaves the pad—to the De-iced state. If it doesn't stay on the pad for a sufficient time, the flight returns to the Assigned (Taxi) de-ice state when it leaves the On Pad state. Your site engineer can set this time (typically to 4 or 5 minutes) for your site.

7.11.2.6 Configure Tabs in De-ice Pad Activity Panel

The De-icing Activity panel of the **De-icing Manager** focuses on activity in a de-ice pad group or on a selected group of de-ice bays shown on a custom tab.

Figure 7-67. De-ice Pad Group Tabs
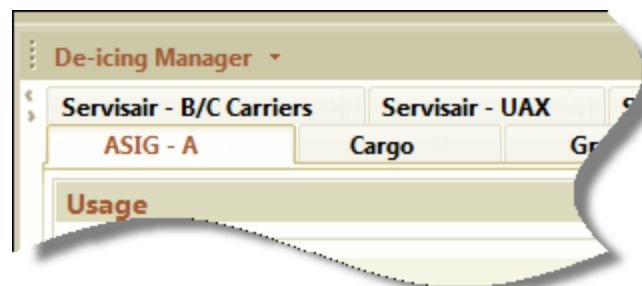
➡ To see activity in more than one de-ice pad group or custom tab, open more than one instance of **De-icing Manager**, and select a different tab in each.

This topic gives instructions for these tasks:

- *Show a tab* below
- *Remove a tab without deleting it* below
- *Change Tab Order* below
- *Configure Custom Tabs* on the next page
- *Set Tab Layouts to Look Alike* on the next page

Show a tab

Your permissions control which de-ice pad groups you can see.

1. Select **De-icing Manager > Tab Configuration**.
2. Double-click an available tab to move it to "Selected." When a tab is "Selected," it shows in **De-icing Manager**.

Remove a tab without deleting it

Select **De-icing Manager > Configure Tabs**. Then, select—in the "Selected" window—the tab(s) to be removed.

- Click ⊕ or double-click to move one tab into the "Available" window.
- Click ⊕ to move more than one tab into the Available window. Click **OK**.

The tab does not show in **De-icing Manager**. You have not deleted this tab. You can move the tab from "Available" to "Selected" when you need to. For instructions on how to delete (remove) a tab, refer to *Configure Custom Tabs on the next page*.

Change Tab Order

You can change the order (right to left) of tabs in **De-icing Manager** through the Tab Configuration controls.

1. Select **De-icing Manager > Configure Tabs**.
2. Select a tab in the "Selected" window.
3. Click ⬆ to move the selected tab one step to the left. Click ⬇ to move the selected tab one step to the right.
4. Click **OK**.

Configure Custom Tabs

You can add tabs, edit the grouping of pads and bays shown on a tab, or remove a tab from the De-icing Activity panel. The default list contains pad groups that are available to you.

1. Select **De-icing Manager > Configure Tabs**.
2. Select and/or remove the check from items in the "Pad Group Tabs" section.
3. Configure custom tabs that show data for selected de-ice bays.
   - Click **Add Tab** to add a custom tab. The **Add Custom Tab** dialog box opens.
     a. Enter the tab name.
     b. Select the de-ice bays to include.
     c. Click **OK**.
   - Click **Edit Custom Tab** to change elements in 1 or more custom tabs.
     a. Select the tab name.
     b. Click **OK**. The **Edit Custom Tab** dialog box opens.
     c. Select and/or remove the check from elements.
     d. Click **OK**.
   - Click **Remove Tab** to delete 1 (or more) custom tab(s). The **Remove Custom Tab** dialog box opens.
     a. Select the tab(s) to remove from the bank of tabs.
     b. Click **OK** in the **Remove Custom Tab** dialog box.
4. Click **OK** in the **Configure De-icing Manager Tabs** dialog box when you complete configuring the tabs.

Set Tab Layouts to Look Alike

You can set up all tabs in **De-icing Manager** to use the same format as a selected tab.

1. Select a tab.
2. Change the height of the tables and charts.
3. Change the selection, width, and sequence of table columns.
4. Select **De-icing Manager > Synchronize Tab Layouts**. All tabs in **De-icing Manager** are formatted to the format you set in the active tab.

7.11.3 Manage a De-icing Workflow

You can manage workflows through rules and automatic workflow-state changes. You can also set the time of workflow state changes.

Refer to *Automate a Workflow State Transition* on page 9-31 for instructions that you can use to set up automatic transitions between de-ice workflow states.
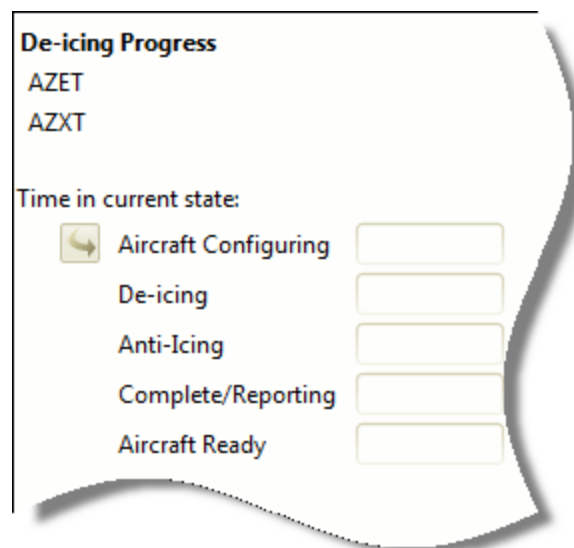
Aerobahn has three on-pad de-ice states:

- On Pad (Tentative)—The flight is in "De-icing" mode. It has spent less time on the de-ice pad than a threshold time set on the server.

- On Pad (Confirmed)—The flight is in "De-icing" mode. It has spent at least as much time on the de-ice pad as a threshold time set on the server.

- On Pad (Already De-iced)—The flight is in "De-icing" mode. It is in a de-ice region and is set to the De-iced state.

i **NOTE:** These states help with workflow management for flights that move from de-ice pad to de-ice pad.

7.11.3.1 Make a Manual De-ice Workflow Transition

1. Open **De-icing Manager**.

2. Select **De-icing Manager > Select De-ice Workflow**. The De-icing Progress dialog box opens.

3. Select the flight that you wish to manage.

> ➡ **Selection Details** has a Workflow State History tab. Use this tab together with **De-icing Manager** to see how manual settings in **De-icing Manager** affect workflows and workflow transitions.

▶ ↪ At Gate	Shows the active (current) workflow state that you can change from.
↪ Configuring	Click the arrow icon to change to the named workflow state.
	ℹ **NOTE:** Arrows show only beside workflow states that include the current workflow state among their prerequisites.

7.11.3.2 Update Workflow State Transition Time

You can correct a workflow state entry time. (You cannot enter a future time, and Aerobahn cautions you if the time you enter is more than 15 minutes earlier than the old time.) When you update a change time, Aerobahn makes these changes:

- updates the manual exit time of the prior state
- updates the manual entry time of the subsequent state if...
- the original (automatic) exit time of the prior state is the same as the original (automatic) entry time of the subsequent state.

1. Select the time to be changed in the **De-icing Progress** list.
2. Enter the new time.
3. Press ENTER. An * (asterisk) shows beside the time field to show that the time has been manually entered.

7.11.4 Configure Data Blocks in De-icing Manager

Data blocks show information about aircraft and other targets that Aerobahn receives from the surveillance system and other information sources. You can set up the sequence and spacing of that information. Data blocks show in the Pad Occupancy side of the Usage Chart. Configure the Usage Chart for each tab.

Figure 7-68. Data Block in De-icing Manager Usage Chart

1. Select **De-icing Manager > Configure Usage Chart Data Block**.
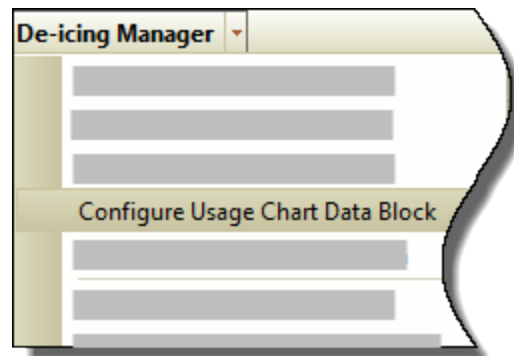
2. Select data fields:

- Load a data block template, or

- Set up the **Selected Fields** window to include the information that you wish to show:

    a. Click the **Filter** chooser.

    b. Select a filter category.
        The list of available fields shows only those fields in the selected category.

    c. If necessary, repeat Steps a and b to narrow down the selections. Only those fields that fit the selected categories show.

    d. Enter key search terms in the **Search** field.
        Only those fields that contain the search text show.

e. Select the fields to show and/or hide:

- To add 1 item to **Selected Fields**, select the item in the **Available Fields** window. Click ➡ or double-click. The item moves to **Selected Fields**.

- To add more than 1 item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➡.

- To remove 1 item from **Selected Fields**, select the item. Click ⬅ or double-click. The item moves to **Available Fields**.

- To remove more than 1 item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⏩.

- To erase all items from **Selected Fields**, click ⏪. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⏫. To move an item to the bottom of the list, click ⏬.

3. Optional: Apply formatting to the data blocks:

- Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

- Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

4. Click **Apply**.

5. Make sure that the data block appearance is correct.

- If correct, click **OK**.

- If not correct, go to step 2, or click **Cancel**.

7.11.4.1 Make a Data Block Template in De-icing Manager

Use these instructions to make a data block template in real-time tools that use data blocks.

1. Select **De-icing Manager > Configure Usage Chart Data Block**.
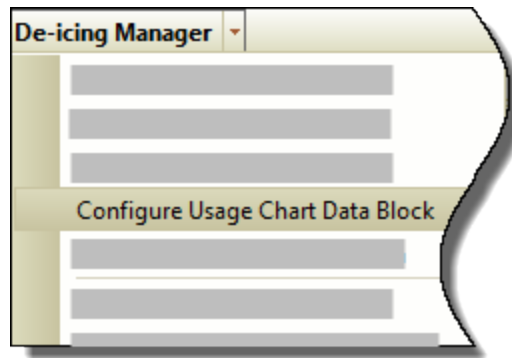
2. In the Data Block Templates section, click **Manage**.

3. Click **Create**.
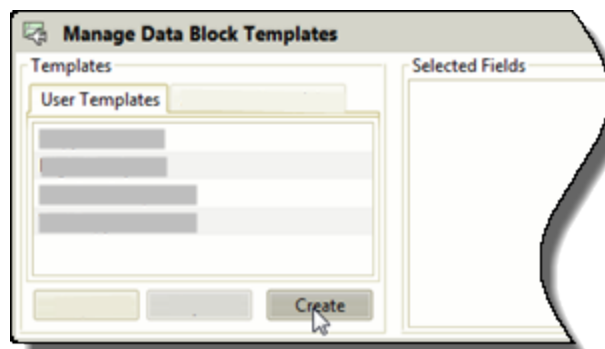
4. Enter a template name.

5. Optional: Select (✔) Share Template to allow other group members see and use your template in their "Available Templates" tab. Other team members can see your shared template in "Available Templates" in the Data Block Template Manager (similar to **Map Display > Preferences**). Your template also shows in the SystemAdmin "Available Templates" tab.

   ℹ **NOTE**: "Share Templates" permission is necessary for you to share a data block template. (This permission is set in the **System Administration: Data Block Templates** group.)

6. Set up **Selected Fields** to include the necessary information:

    a. Filter choices in **Available Fields**.

    - Click the Filter chooser and select a filter category. The list of available fields shows only those fields in the selected category.

    - Click the Filter chooser and select a second filter category to adjust the selection. Only those fields that fit the 2 categories show.

    - To decrease the items in Available Fields, enter key terms in the search box. This decreases the items in the **Available Fields** list to those data fields that contain the search text.

    b. Select the fields to show and/or hide.

    - To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

    - To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕ .

    - To remove one item from **Selected Fields**, select the item. Click ⊕ or double-click. The item moves to **Available Fields**.

    - To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕. The items move to **Available Fields**.

    - To move all items from **Available Fields** to the **Selected Fields** window, click ⊕ .

    - To remove all items from **Selected Fields**, click ⊕ . The items move to **Available Fields**.

    - To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⊕ or ⊕ until it is in the correct location. To move an item to the top of the list, click ⊕ . To move an item to the bottom of the list, click ⊕ .

7. Optional: Apply formatting to the data blocks:

    - Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

    - Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

8. Click **OK** to save the template and close the **Create Data Block Template** dialog box.

9. Click ✕ to close the **Manage Data Block Templates** dialog box.

Figure 7-69. Create Data Block Template Dialog Box (Procedure steps)
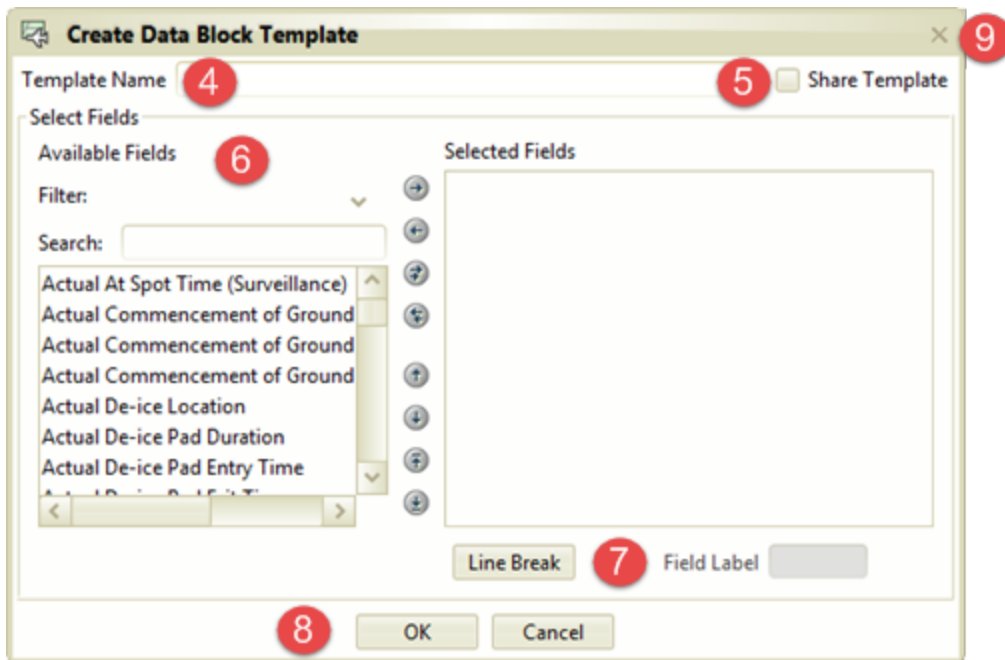
7.11.4.2 Load a Data Block Template in De-icing Manager

1. Select **De-icing Manager > Configure Usage Chart Data Block**.

   ⚠ **CAUTION:** Aerobahn replaces the "Selected Fields" with the data fields in the data block template that you load. If you load the wrong data fields, click **Cancel** to restore the data fields that were there before you click **Load**.

2. In the Data Block Templates section, click **Load**. This replaces the data fields in the Selected Fields window.

3. Optional: Add, delete, or move data fields or field labels.

4. Click **Apply**.

5. Make sure that the data block appearance is correct.

   ▪ If correct, click **OK**.

   ▪ If not correct, go to step 3, or click **Cancel**.

7.11.4.3 Edit a Data Block Template in De-icing Manager

Use these instructions to change the details in a data block template in real-time tools that use data blocks. If you change the template name, you can create a new data block template with these instructions.

1. Select **De-icing Manager > Configure Usage Chart Data Block**.

2. In the Data Block Templates section, click **Manage**.

3. Select the **User Templates** page.

4. Select a template.

5. Click **Edit**. The **Edit Data Block Template** dialog box opens.

6. Make the necessary changes:

   a. Enter a template name.

   b. Click **Edit**. The **Edit Data Block Template** dialog box opens.

   c. Optional: Select () Share Template to add this template to **SystemAdmin** system templates so that other team members can use it.

   d. Set up the **Selected Fields** window to include the information that you wish to show:

      i. Click the **Filter** chooser.

      ii. Select a filter category.
      The list of available fields shows only those fields in the selected category.

      iii. If necessary, repeat Steps a and b to narrow down the selections. Only those fields that fit the selected categories show.

      iv. Enter key search terms in the **Search** field.
      Only those fields that contain the search text show.

          v. Select the fields to show and/or hide.

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ➔ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➔.

- To remove one item from **Selected Fields**, select the item. Click ⬅ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ➔.

- To remove all items from **Selected Fields**, click ⬅. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

    e. Optional: Apply formatting to the data blocks:

- Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

- Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

7. Click **OK** to save the template and close the **Edit Data Block Template** dialog box.

8. Click ✖ to close the **Manage Data Block Templates** dialog box.

7.11.4.4 Import a Data Block Template from De-icing Manager

1. Select **De-icing Manager > Configure Usage Chart Data Block**.
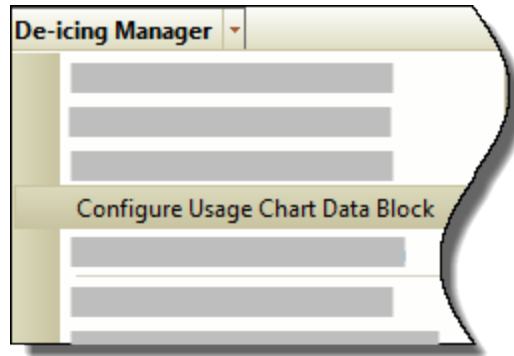
2. In the Data Block Templates section, click **Manage**. The **Manage Data Block Templates** opens.

3. Select the **User Templates** page.

4. Click **Import**. The **Open** dialog box opens.

5. Select the template file to import. Make sure that the file name shows in the **File Name** window.

6. Click **Open**.

7.11.4.5 Export a Data Block Template from De-icing Manager

1. Select **De-icing Manager > Configure Usage Chart Data Block**.
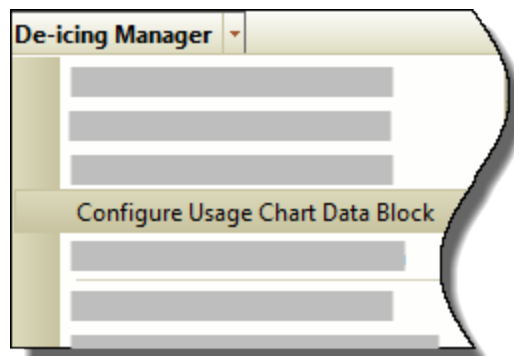
2. In the Data Block Templates section, click **Manage**. The **Manage Data Block Templates** tool opens.

3. Select the **User Templates** page.

4. Select a template.

5. Click **Export**.
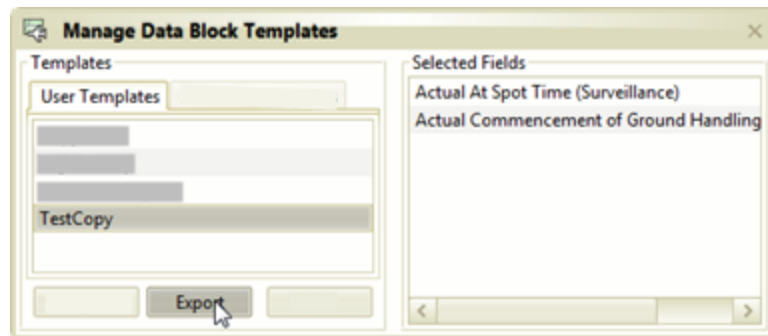
6. Select a disk or network location.

7. Click **Save**.

7.12 Use the Extended Range Map Display Tool

The Extended Range Map Display provides an image of aircraft positions based on en route surveillance data.

1. Select **Tools > Extended Range Map Display** to open the tool.

2. Select **Extended Range Map Display > Preferences > [Display/Target]** to configure **Extended Range Map Display** (refer to *Extended Range Map Display: Preference Controls on the next page*).

Display Controls on the Extended Range Map Display are identical to Display controls in Map Display (refer to *Use Display Controls on page 7-240* for descriptions of buttons and keyboard shortcuts that let you to adjust your view of the airspace).

You can record Extended Range Map Display action in live and playback modes and save the recording in Audio Video Interleave (AVI) format exactly as you record action in Map Display. For instructions, refer to *Record Activity in Map Display and Extended Range Map Display on page 7-253*.

Edit Tool Titles works as it works in other tools (refer to *Edit Tool Titles on page 3-20*).

ℹ **NOTE:** The "tags" attached to aircraft icons that show Flight IDs are "data blocks." You can configure these data blocks to show more flight data. Use "mouseover" to show flight data only when the pointer is above a target icon. The Selection Details tool (refer to *Use the Selection Details Tool* on page 7-298) also gives information about a selected flight. You can use mouseover or **Selection Details** to decrease the information in data blocks and decrease clutter in Extended Range Map Display.

ℹ **NOTE:** You can right-click the targets in Extended Range Map Display to do a variety of actions (refer to *Context-Menu Controls in Map Display and Extended Range Map Display* on page 7-254).

ℹ **NOTE:** Flights with proprietary surveillance data do not show if you do not have the **Access Proprietary Surveillance Data** permission. For instructions to configure the permission, refer to *Access Proprietary Surveillance Data Permission* on page 9-13.

7.12.1 Extended Range Map Display: Preference Controls

You can set up many **Extended Range Map Display** features (including data blocks and mouseover) through **Extended Range Map Display Preferences**.

Select **Extended Range Map Display > Preferences** to open **Extended Range Map Display Preferences** controls.

Each **Extended Range Map Display** and **Map Display** operates independently. That is, preferences set up in one does not change preferences set up in another.

Features are active (or show) when the check box is selected: ☑.

Table 7-22. **Map Display Preference Controls**

Category	Click	To change settings for...
Display	Settings	Pan
		Zoom
		Rotate
		Center Point Controls
		Target Search and Selection

Table 7-22. Map Display Preference Controls (continued)

Category	Click	To change settings for...
Target	Data Block	Text Scale
		Data Block Repositioning
		Data Block Background
		Data Block Fields
	Mouseover	Enable/Disable Mouseover
		Formatted/Unformatted Style
		Mouseover Fields
	Settings	Icon Type
		Target Size and Scale
		Target Visibility (refer to *Target Visibility and Associated Operational States* below for definitions)
		History Trails

> ℹ️ **NOTE:** Target Visibility settings set in **Preferences > Target > Settings** and rule settings can conflict. For example, a rule could hide a target that is set to show in the Target Visibility settings. When there is a show-hide conflict, the target is hidden.

Table 7-23. Target Visibility and Associated Operational States

Target Visibility	Operational States
Aircraft Airborne	Approach (APR)
	Arrived (ARV)
	Departed (DEP)
	En Route Inbound (ENI)
	En Route Outbound (ENO)
	En Route (ENR)
	Extended Range Inbound (EXI)
	Extended Range Outbound (EXO),
Aircraft Airborne Unknown	En Route (ENR)
	Extended Range Unknown (EXU)

7.12.2 Extended Range Map Display: Layer Visibility

Map Display lets you "call out" areas of the airport (refer to *Region of Interest on page 7-252*) and show or hide visual attributes.

Select **Extended Range Map Display > Layer Visibility**. The map is assembled in layers.

Click ⊞/⊟ or double-click **Airport Map Layers** to open or close the list of layers.

Select a layer to show its elements in **Extended Range Map Display**. Remove the check from a layer to hide its elements.

7.13 Use the Hotkey Dashboard

Use the Hotkey Dashboard to set up buttons that make some actions automatic and that give alternatives to function keys that you have set up as hotkeys.

Add a Button to the Dashboard

1. Select **Tools > Hotkey Dashboard** to open the tool.

2. Select **Hotkey Dashboard > Configure Dashboard Buttons**. The Configure Dashboard Buttons dialog box opens.
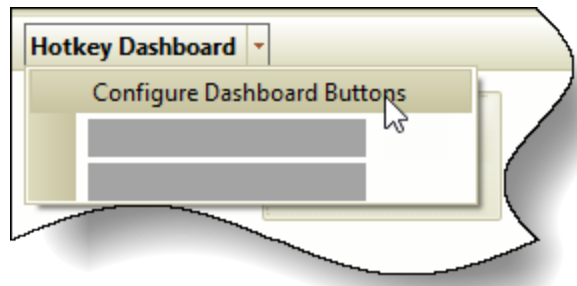
3. Click **Add New Button** (refer to Figure 7-70 on the facing page).

4. Enter the button label in the Name field.

5. Click **Display**. The Display Options dialog box opens.

   a. Set the font size, color, and background fill color.

   b. Click **OK**.

6. Select an Action.

- Some actions (e.g., Highlight Flight, Workflow Transition, Reset De-icing) include a search function. When you select an action that has a search function, the Criteria button is active. Click **Criteria** to set up search filters.

- Some actions include pop-up messages. Remove the check mark from "Feedback Pop-up" if you do not want to show pop-up messages.

7. OPTIONAL: To move a button to a new location, drag the handle.
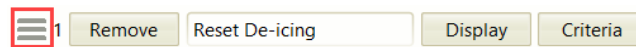
8. Save changes.

- Click **Apply** to save changes without closing the Configure Dashboard Buttons dialog box.

- Click **OK** to save changes and close the Configure Dashboard Buttons dialog box.

Figure 7-70. Add New Button
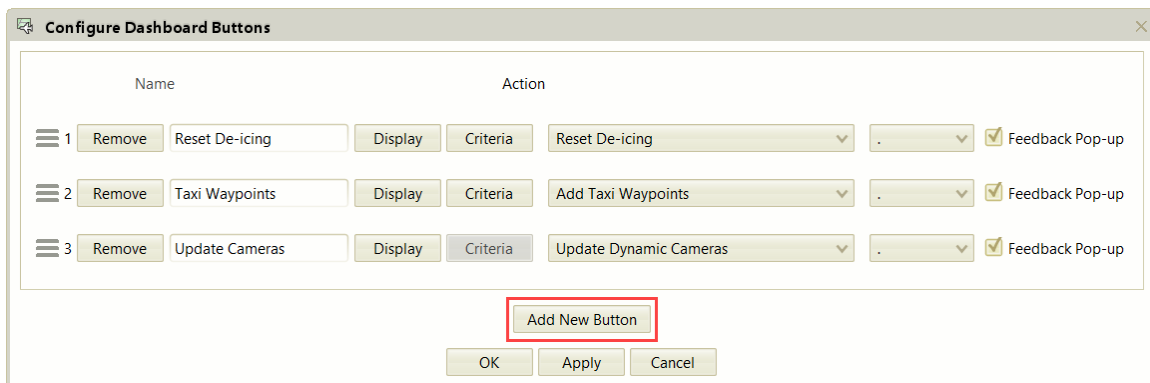
Configure Button Size

This procedure controls the dimensions of all buttons in the Hotkey Dashboard. The button and the text on the button are controlled separately.

Set up buttons—especially the font size for labels—before you configure the button size so that you will make buttons large enough for the labels.

1. Select **Tools > Map Display** to open the tool.

2. Select **Hotkey Dashboard > Configure Button Size**. The Configure Button Size dialog box opens.

3. Move the slider or enter a number value in the box.

4. Click **Apply**.

5. Look at the results in the Hotkey Dashboard.

6. When the buttons look as they should, click **OK** in the Configure Button Size dialog box.

7.14 Use Image Viewer

Use **Image Viewer** tool to show these types of files: * .GIF, *.JPG, and * .PNG.

Select Image

Use **Select Image** to open an image file on your workspace only. **Select Image** gives you access to an image file that you can navigate to from your workstation.

1. Select **Tools > Image Viewer**.

2. Select **Image Viewer > Select Image**.
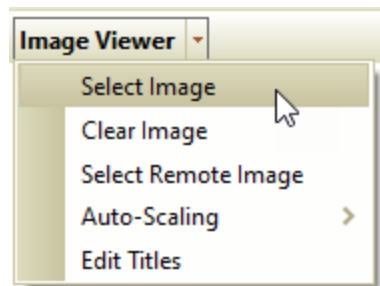
3. Navigate to the image.

4. Select the file.

5. Click **Open**. The picture shows in **Image Viewer**.

You can open more than one **Image Viewer** window.

Select Remote Image

A "remote image" is shared across the system to all users who have access to the **Image Viewer**. The image could be a static image or an image that is updated as remote servers provide new image data.

ℹ **NOTE:** Select Remote Image works only in Live (not Playback) mode.

1. Select **Tools > Image Viewer**.

2. Select **Image Viewer > Select Remote Image**. The Select Remote Image dialog box opens.
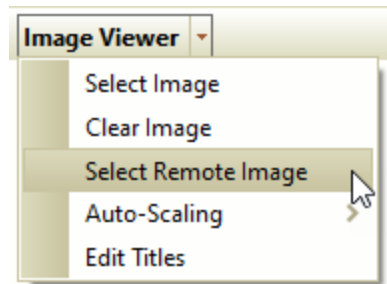
3. Select the image.

4. Click **OK**. The picture shows in **Image Viewer**.

Clear Image

To remove a picture from the **Image Viewer**, select **Image Viewer > Clear Image**.

Auto-Scaling

If you disable Auto-Scaling, a picture opens in its initial dimensions (height and width). The dimensions of the picture do not adjust to the dimensions of the **Image Viewer** "frame."

If you enable the Auto-Scaling control, the **Image Viewer** adjusts the dimensions of the picture as the dimensions of the **Image Viewer** "frame" change.

Edit Titles

1. Click the title, and select **Edit Titles** from the drop-down menu. The *Edit Titles* text box opens.

2. Enter the new title(s).

   - The "Title" is at the top of the tool. When it is clicked, a menu opens.

   - The "Tab Title" shows below the tool when a tool is tabbed.

3. Click **OK**.

Figure 7-71. Edit Titles Menu Command (Map Display Example)
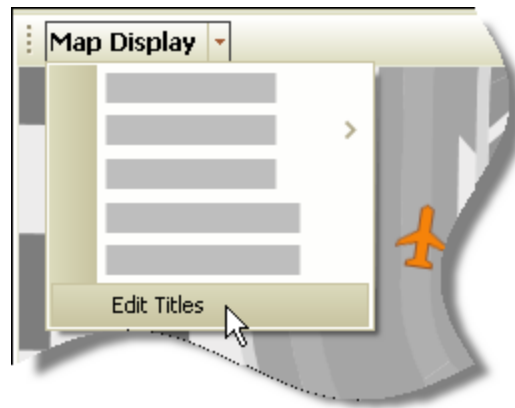
To change the color of a title:

1. Select **Settings > Color Settings**.
    Color Preferences dialog box opens.

2. Select **Tool Title** in the Custom Colors section.

Figure 7-72. Set Tool Title Color
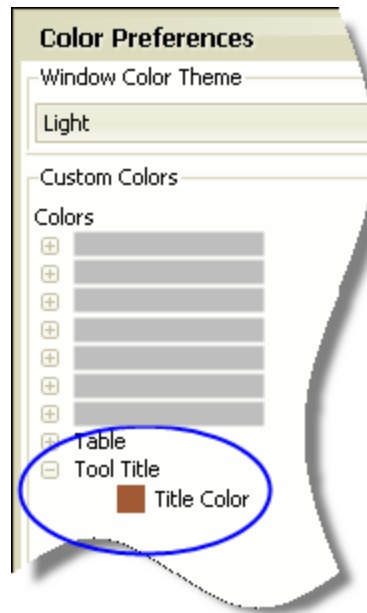
7.15 Use the Map Display Tool

Map Display is a virtual window on the airport surface and the movement area.

1. Select **Tools > Map Display** to open the tool.
2. Select **Map Display > Preferences > [Display/Target]** to configure **Map Display** (refer to *Map Display Preference Controls* on the next page).

Refer to *Use Display Controls* on page 7-240 for descriptions of buttons and keyboard shortcuts that let you to adjust your view of the airport map .

ℹ NOTE: The "tags" attached to aircraft icons that show Flight IDs are "data blocks." You can configure these data blocks to show more flight data. Use "mouseover" to show flight data only when the pointer is above a target icon. The **Selection Details** tool (refer to *Use the Selection Details Tool* on page 7-298) also gives information about a selected flight. You can use mouseover or **Selection Details** to decrease the information in data blocks and decrease clutter in **Map Display**.

ℹ NOTE: You can right-click the map surface and targets in **Map Display** to do different actions (refer to *Context-Menu Controls in Map Display and Extended Range Map Display* on page 7-254).

ℹ NOTE: Flights with proprietary surveillance data do not show if you do not have the **Access Proprietary Surveillance Data** permission. For instructions to configure the permission, refer to *Access Proprietary Surveillance Data Permission* on page 9-13.

7.15.1 Map Display: Preference Controls

You can set up many **Map Display** features (including data blocks and mouseover) through **Map Display Preferences**.

Select **Map Display > Preferences** to open **Map Display Preferences** controls.

Each **Map Display** operates independently. That is, preferences set up in one **Map Display** do not change preferences set up in a different **Map Display**.

Features are active (or show) when the check box is selected: ☑.

Table 7-24. Map Display Preference Controls

Category	Click	To change settings for...
Display	Settings	[Pan](#) [Zoom](#) [Rotate](#) [Center Point Controls](#) [Target Search and Selection](#) [Runway Usage Display](#)
	Region Statuses	ℹ️ **NOTE:** The list below is a sample. Region statuses are defined in the region status server configuration. Inform AODB CGH NOTAM Federal NOTAM System Accipiter Avian Radar Manual XSight FOD
	Camera Icons	Camera Display Settings ℹ️ **NOTE:** Refer to *Show Camera Icons in Map Display* on page 7-204 for more information.
Target	[Data Block](#)	Text Scale Data Block Repositioning Data Block Background Data Block Fields
	[Mouseover](#)	Enabling Mouseover: Active/Persisted Targets Formatted/Unformatted Style Mouseover Fields
	[Settings](#)	Icon Type Target Size and Scale Target Visibility (refer to *Target Visibility and Associated Operational States* on the facing page for definitions) History Trails

NOTE: Target Visibility settings set in **Preferences > Target > Settings** and rule settings can conflict. For example, a rule could hide a target that is set to show in the Target Visibility settings. When there is a show-hide conflict, the target is hidden.

Table 7-25. Target Visibility and Associated Operational States

Target Visibility	Operational States
Aircraft at Gate	Taxi In Gate (GTI)
	Taxi Out Gate (GTO)
Aircraft on Ramp/Movement Area	Approach (APR)
	Arrived (ARV)
	Departed (DEP)
	Taxi in Movement Area (TIM)
	Taxi in Ramp (TIR)
	Taxi Out Movement Area (TOM)
	Taxi Out Ramp (TOR)
	Taxi Out Unknown (TOU)
Aircraft Airborne	Approach (APR)
	Arrived (ARV)
	Departed (DEP)
	En Route Inbound (ENI)
	En Route Outbound (ENO)
	En Route (ENR)
	Extended Range Inbound (EXI)
	Extended Range Outbound (EXO),
Aircraft Airborne Unknown	En Route (ENR)
	Extended Range Unknown (EXU)
Aircraft Persisted	Persisted (PER)
Vehicles	"Is a Vehicle?" = True
	"Target Type" = True
	"Persisted State" = Not Persisted
Vehicles Persisted	"Is a Vehicle?" = True
	"Target Type" = True
	"Persisted State" = Persisted
Unidentified Targets	"Target Type" = Unknown

7.15.1.1 Set up Display Preferences for Map Display

1. Select **Map Display > Preferences**.

2. Double-click **Display**.

3. Select **Settings**.

4. Change any or all of the following settings:

    - pan (*Set Pan Controls* below)

    - zoom (*Set Zoom Controls* below)

    - rotate *Set Rotation Control* on the facing page

    - center point and range rings (*Show Center Point and Range Rings on the facing page*)

    - target search and selection highlight (*Set up Target Search and Selection Highlight Settings* on page 7-200)

    - runway usage display (*Set up Runway Usage Display* on page 7-202)

    - region closures (*Manage Region Status* on page 4-1)

5. Click **Apply** to apply settings. The *Preferences* window stays open. You can test and adjust settings.

6. Click **OK** when done. This applies the changes, and closes the Preferences window.

7.15.1.1.1 Set Pan Controls

Sets the amount of shift in the selected direction when pan controls are used.

1. Select **Map Display > Preferences**.

2. Select **Display > Settings**.

3. Adjust Pan settings.

4. Click **Apply**. The *Preferences* dialog box stays open.

5. When all preferences are configured, click **OK** to close the *Preferences* dialog box.

7.15.1.1.2 Set Zoom Controls

These adjustments set up the zoom-in and -out rate when zooming controls (including the scrolling mouse) are used in **Map Display**.

ℹ **NOTE:** When Target > Data Block Preferences are configured so that Text Scale is set to Auto Scale, **Map Display** zoom controls do not change the size of the text in data blocks.

---

1. Open **Map Display > Preferences**.

2. Select **Display > Settings**.

3. Adjust Zoom settings.

   - Zoom Speed changes how far "in" or "out" the zoom control changes with each click of Aerobahn Display Controls or the mouse wheel.

   - You can use the "diameter at which surface filtering begins" setting to show only the following elements after you zoom out to that diameter: Runway Displaced Area, Runway Element, and Runway Intersections. The filter removes targets with "Approach ...", "Departure ...", or any "en route..." operational state. When you zoom in, "Approach ...", "Departure ...", or any "en route..." operational states show.

4. Click **Apply** to apply settings. The *Preferences* dialog box stays open.

5. When all preferences are set up, click **OK** to close the *Preferences* dialog box.

7.15.1.1.3 Set Rotation Control

Controls how far the map turns in a selected direction.

1. Select **Map Display > Preferences**.

2. Select category: **Display > Settings**.

3. Adjust *Rotate* settings.

4. Click **Apply** to apply settings. The *Preferences* window stays open.

5. When all preferences are set up, click **OK** to close the *Preferences* window.

7.15.1.1.4 Show Center Point and Range Rings

The center point sets the point of reference for measuring distance with range rings.

1. Select **Map Display > Preferences**.

2. Open **Display > Settings**.

3. Select data to show:

   - **Show Center Point** to show the *center point only* or

   - **Show Range Rings & Center Point** to show *range rings and the center point*

4. Set the maximum range (distance from center point to outermost ring).

5. Set the number of rings.

ℹ NOTE: The spacing between rings = maximum range divided by the number of rings.

---

6. Select **Units**.

7. Click **Apply** to apply settings. The *Preferences* window stays open.

8. When all preferences are set, click **OK** to close the *Preferences* window.

➡ To set up a perimeter around an airplane, vehicle, or location, drag the center point to that location and release. Set the maximum range, and select **Units**. Set the number of rings to **1**. Click **Apply** or **OK**. The perimeter shows around the location.

7.15.1.1.5 Set up Target Search and Selection Highlight Settings

1. Select **Map Display > Preferences**.

2. Select **Display > Settings**.

3. Adjust "Target Search and Selection Highlight Settings":

   - In Highlight Action, select **Pulse** or **Color**.

   - In Highlight Components, select **Target Icon**, **Data Block**, or **Target Icon and Data Block**.

4. Click **Apply** to apply settings. The *Preferences* dialog box stays open.

5. When you have made all settings, click **OK** to close the *Preferences* dialog box.

Refer to *Configure Search and Selection Highlight Colors* on page 6-4 for instructions on how to set up a highlight color.

7.15.1.1.6 Runway Usage Display

You can set up **Map Display**—through Display Preferences— to show the "operational status" of each runway. A runway is "active" when there is a minimum of 1 arrival and/or departure during the past 10 minutes. If there is not 1 or more arrival and/or departure during the past 10 minutes, the operational status is "inactive" (refer to Figure 7-73 on the facing page and Figure 7-74 on the facing page for examples of Operation Indicators and Statistics).

Usage statistics (in the arrows) are in terms of hourly rates. For example, if there have been 7 arrivals in the past 10 minutes, the runway usage rate displays as 42 Arr/Hr.

Refer to *Set up Runway Usage Display* on the next page for configuration instructions.

Table 7-26. Runway Operational Status Criteria

Operational Status	During the past 10 minutes...
Active Arrival	1 or more arrivals, 0 departures (refer to Figure 7-73 below
Active Departure	1 or more departures, 0 arrivals (refer to Figure 7-74 below)
Active Arrival *and* Departure	1 or more arrivals *and* 1 or more departures
Inactive	0 arrivals or departures (refer to Figure 7-75 on the next page)

Figure 7-73. Runway Usage—Active Arrival

Figure 7-74. Runway Usage—Active Departure

NOTE: Bars on an aircraft icon (as shown in Figure 7-74 above) show a Heavy aircraft.

Figure 7-75. Runway Usage—Inactive
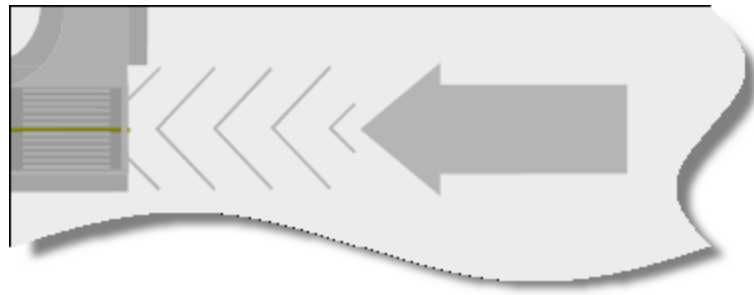
7.15.1.1.6.1 Set up Runway Usage Display

Refer to for more information on this feature.

1. Select **Map Display > Preferences**.
2. Select **Display > Settings**.
3. Select the checkboxes to use **Runway Usage Display** features:
   - Show Operation Indicators (Arrows)
     - Active Arrival—Inbound target color points toward runway and gives arrival rate in operations per hour.
     - Active Departure—Outbound target color points away from runway and gives departure rate in operations per hour.
     - Active Direction and Departure—Arrows on the runway ends show direction and use corresponding colors.
     - Inactive—Gray Arrow shows the direction of the most recent activity (more than 10 minutes ago). The inactive indicator shows until the status of the runway changes (e.g., when an aircraft lands).
   - Show Statistics—Controls whether statistics show in the Operation Indicators. (If the Operation Indicators feature is deselected, Show Statistics is unavailable.)
4. When all preferences are set, click **OK** to close the *Preferences* window.

Runway Operation Indicator colors are the same as corresponding flights:

- The Runway Operation Indicator (arrow) color corresponds to the inbound/outbound Aircraft "Fill" color setting. For example, if you change the "Fill" color of inbound aircraft icons, the inbound Runway Operation arrow changes to match.

- The Statistics (text) color in the Runway Operation Indicator corresponds to the inbound/outbound Aircraft "Data Block Text" color setting. For example, if you change the color of text in data blocks for inbound aircraft icons, the color of the statistics in the inbound Runway Operation arrow changes to match.

The size of the Runway Operation Indicator (arrow) is not configurable. The size is related to the zoom value of **Map Display**.

➡ At zoom levels that make it hard to read usage statistics, statistics do not show (even though Display Preferences has been configured to "Show Statistics"). To show statistics, zoom in.

7.15.1.1.7 Show Region Status

You can show or hide region closures and warnings and obstacle closures and warnings in Map Display. (Obstacles show as a triangle.)

➡ Select **Settings > Color Settings** to select the highlight color for Region Closure and warning colors. The Region Closure color is in the Regions group. The region color settings determine both the region color display and the obstacle color display.

1. Select **Map Display > Preferences**.
2. Select **Display > Region Status**.
3. Select ☑ one or more status (in the Region Statuses section) to show in Map Display:
   - **Show Region Closures**
   - **Show Region Warnings**
   - **Show Obstacle Closures**
   - **Show Obstacle Warnings**
4. Click **Apply** to apply adjustment. The *Preferences* dialog box stays open.
5. After you set all preferences, click **OK** to close the *Preferences* dialog box.

7.15.1.1.7.1 Runway Closure

A runway in Aerobahn is made up of segments that can be closed or open. When more than 50% of the segments that make up that runway are closed in **Region Closures**, that runway is closed in Aerobahn.

When more than 50% of the runway segments are closed, Aerobahn automatically marks—with a yellow X—the ends of the runway in **Map Display**. The **Airport Status Dashboard** also shows that the runway is closed.

Figure 7-76. Closed Runway Indicators

7.15.1.1.8 Show Camera Icons in Map Display

You can show or hide camera icons in Map Display.

1. Select **Tools > Map Display**.
2. Select **Map Display > Preferences**.
   The **Preferences** dialog box opens.
3. Click **Camera Icons** in the left pane.
4. In the **Camera Icon Display Settings** box in the right pane, put a check mark to camera icons you want to show in **Map Display**.

   - **Show camera icons for selected target's**: A camera icon shows in **Map Display** for any camera that shows the region associated with the selected flight.
   - **Show camera icons for selected gate in Gate Monitor Tool**: A camera icon shows in **Map Display** for any camera that shows the gate selected in **Gate Monitor**.
   - **Show the following camera icons**: A camera icon always shows in **Map Display** for any camera that is selected in the below box.

     ℹ️ **NOTE:** When you select **Show the following camera icons**, the preview pane shows all camera icons in grey. Selected camera icons turn orange.

     ℹ️ **NOTE:** Clicking a camera icon in the preview pane shows the Aerobahn Map regions associated with the camera.

5. Click **OK** to apply the new setting and close the dialog box.

7.15.1.2　Configure Map Display Target Preferences

Map Display > Preferences provides settings for display and targets (except for color, which is controlled through **Settings > Color Settings**).

1. Double-click **Targets**.

2. Click the category.

3. Change settings.

4. Click **Apply** to apply settings without closing the *Preferences* window.

5. When satisfied with the setting(s), click **OK**. This applies the change and closes the *Preferences* window.

Table 7-27.　Target Preferences

Category	Description
Data Block	A data block supplies information about targets:
	■ Text Scale lets users to select the text scaling options. Auto Scale sets the Data Block text size to scale itself proportional with the display size (which depends on the zoom setting). As an alternative, select a fixed text size.
	■ Automatic Data Block Repositioning, used to minimize target overlap, is *disabled* by default.
	■ Data Block Background settings let users to show or hide *(default setting)* the background rectangle on which the text displays and to change transparency of data.
	■ Contents can be configured based on inbound, outbound, unknown, or persisted state. You can show data blocks for all or for a set of carriers.
Mouseover	Mouseover lets Aerobahn show selected target information when the pointer is put on a target or its data block.
Settings	Settings for what target information is displayed.

7.15.1.2.1　Configure Data Blocks in Map Display

Data blocks show information about aircraft and other targets that Aerobahn receives from the surveillance system and other information sources. You can set up the sequence and spacing of that information.

You can use a data block template to help you to configure a data block. A data block template is a collection of data fields that can be distributed to all

users in a system so that everyone sees the same information in a data block. (Refer *Make a Data Block Template in Map Display* on page 7-209 and to *Export a Data Block Template from Map Display* on page 7-214.)

1. Select **Map Display > Preferences**.

2. Select **Target > Data Block**.

3. Set up Data Block preferences.

   - Text Scale

     ○ Select **Auto Scale** to have text size sync with zoom.

     ○ Remove the check from **Auto Scale** to set a fixed text size.

       a. Move the slider.

       b. Click **Apply**. (Adjust and repeat as necessary.)

   - Automatic Data Block Repositioning

     ○ Select **Enable** to use Automatic Data Block Repositioning. Move slider to change the repositioning speed. Automatic repositioning helps to keep the data block in view.

     ○ Remove the check from **Enable** to disable automatic repositioning.

       NOTE: If **Center data blocks over their targets** is enabled, this setting will not be applied.

- Data Block Background
  - ○ The default (deselected) value shows the data block text with no background or frame. That is, you see the text against the **Map Display** background.
  - ○ Select **Display**, and move the slider to create a background behind data block text.
- Select a state (Inbound, Outbound, Persisted, or Unknown) and set up preferences.

  ℹ **NOTE:** Set the data block for vehicles in the "Unknown" tab.

  - ○ **Only display ... data blocks for carriers**: Only shows data blocks for selected carriers.Select the check box and enter the carrier ICAO ID. Separate multiple IDs with commas.
  - ○ **Center data blocks over their targets**: Places data blocks over the midpoint of their targets.

    ℹ **NOTE:** If a centered data block is dragged, the target will be dragged along with it.

  - ○ **Orient data blocks with targets in gates and de-ice regions:** Aligns data blocks in the same direction as their targets when in a gate or de-ice region.

4. Select data fields:

- Load a data block template, or
- Set up the **Selected Fields** window to include the information that you wish to show:
  a. Click the **Filter** chooser.
  b. Select a filter category.
     The list of available fields shows only those fields in the selected category.
  c. If necessary, repeat Steps a and b to narrow down the selections. Only those fields that fit the selected categories show.
  d. Enter key search terms in the **Search** field.
     Only those fields that contain the search text show.
  e. Select the fields to show and/or hide (refer to Table 7-28 on the next page).

5. Optional: Apply formatting to the data blocks:

- Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

- Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

6. Click **Apply**.

7. Make sure that the data block appearance is correct.

8. Repeat steps 4–7 to set up data blocks on the other side of the timeline.

9. When all preferences are set up, click **OK**. The *Preferences* window closes.

ℹ NOTE: When you configure the data blocks or mouseovers in one tool, the data block configuration does not change in other tools.

Each **Map Display** operates independently. A change that you make in settings for one **Map Display** does not change the settings for another **Map Display** (refer to *Manage More than One Map Display* on page 7-281).

Refer to *Configure Data Block Color* on page 6-3 for instructions on configuring the colors of background and text color for data blocks and mouseovers.

Table 7-28. Data Block Setup

Objective	Do this...
Add 1 item to **Selected Fields**.	Select the item in the **Available Fields** window. Click ➡ or double-click. The item moves to **Selected Fields**.
Add more than 1 item to **Selected Fields**.	Select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➡.
Remove 1 item from **Selected Fields**.	Select the item. Click ⬅ or double-click. The item moves to **Available Fields**.
Remove more than 1 item from **Selected Fields**.	Select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.
Move all items from **Available Fields** to the **Selected Fields** window.	Click ⏩.
Erase all items from **Selected Fields**.	Click ⏪. The items move to **Available Fields**·

Table 7-28. Data Block Setup (continued)

Objective	Do this...
Change sequence of the **Selected Fields** list.	Drag an item to its new location. As an alternative, select an item and click ⊕ or ⊕ until it is in the correct location. To move an item to the top of the list, click ⊕. To move an item to the bottom of the list, click ⊕.

7.15.1.2.1.1 Make a Data Block Template in Map Display

Use these instructions to make a data block template in real-time tools that use data blocks.

1. Select **Map Display > Preferences**.

2. Select the **Target > Data Block** page.

3. In the Data Block Templates section, click **Manage**.

4. Select the **User Templates** page.

5. Click **Create**.

6. Enter a template name.

7. Optional: Select (☑) Share Template to allow other team members in your group tree to see and use your template in their "Available Templates" tab. Other team members can see your shared template in

"Available Templates" in the Data Block Template Manager (similar to **Map Display > Preferences**). Your template also shows in the SystemAdmin "Available Templates" tab.

ℹ **NOTE**: "Share Templates" permission is necessary for you to share a data block template. (This permission is set in the **System Administration: Data Block Templates** group.)

---

8. Set up the **Selected Fields** window to include the information that you wish to show:

    a. Click the **Filter** chooser.

    b. Select a filter category.
        The list of available fields shows only those fields in the selected category.

    c. If necessary, repeat Steps a and b to narrow down the selections. Only those fields that fit the selected categories show.

    d. Enter key search terms in the **Search** field.
        Only those fields that contain the search text show.

    e. Select the fields to show and/or hide.

        ▪ To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

        ▪ To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕ .

        ▪ To remove one item from **Selected Fields**, select the item. Click ⊖ or double-click. The item moves to **Available Fields**.

        ▪ To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊖ . The items move to **Available Fields**.

        ▪ To move all items from **Available Fields** to the **Selected Fields** window, click ⊕ .

        ▪ To remove all items from **Selected Fields**, click ⊖ . The items move to **Available Fields**.

        ▪ To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆ . To move an item to the bottom of the list, click ⬇ .

9. Optional: Apply formatting to the data blocks:

- Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

- Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

10. Click **OK** to save the template and close the **Create Data Block Template** dialog box.

11. Click ✖ to close the **Manage Data Block Templates** dialog box.

Figure 7-77. Create Data Block Template Dialog Box (Procedure steps)
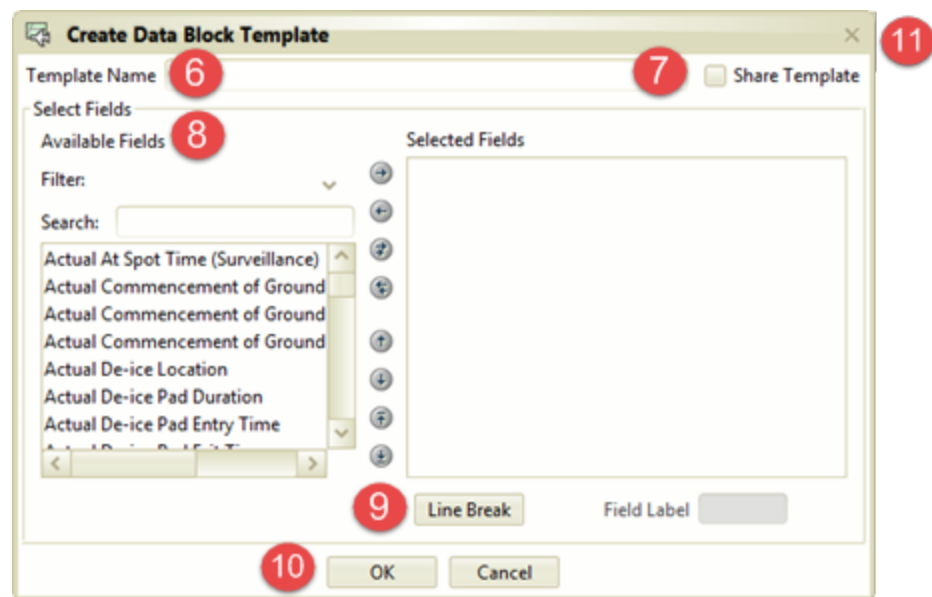
7.15.1.2.1.2 Load a Data Block Template in Map Display

1. Select **Map Display > Preferences**.

2. Select the **Target > Data Block** page.

3. Select the state (Inbound, Outbound, Unknown, or Persisted) that will get the data fields in the template.

⚠ **CAUTION:** Aerobahn replaces the "Selected Fields" for the selected state with the data fields in the data block template that you load. If you load the wrong data fields, click **Cancel** to restore the data fields that were there before you click **Load**.

4. In the Data Block Templates section, click **Load** to replace the data fields in the Selected Fields window.

5. Optional: Add, delete, or move data fields or field labels.

6. Click **Apply**.

7. Make sure that the data block appearance is correct.

    - If correct, click **OK**.

    - If not correct, go to step 5, or click **Cancel**.

Repeat these instructions (start at step 3) to load a data block template to other states.

7.15.1.2.1.3 Edit a Data Block Template in Map Display

1. Select **Map Display > Preferences**.

2. In the Data Block Templates section, click **Manage**.

3. Select the **User Templates** page.

4. Select a template.

5. Click **Edit**. The **Edit Data Block Template** dialog box opens.

6. Make the necessary changes:

    a. Enter a template name.

    b. Optional: Select (☑) Share Template to allow other team members in your group tree to see and use your template in their "Available Templates" tab. Other team members can see your shared template in "Available Templates" in the Data Block Template Manager (similar to **Map Display > Preferences**). Your template also shows in the "Available Templates" tab.

    c. Set up the **Selected Fields** window to include the necessary information:

        i.   Click the **Filter** chooser.

        ii. Select a filter category.
             The list of available fields shows only those fields in the selected category.

        iii. If necessary, repeat Steps a and b to narrow down the selections. Only those fields that fit the selected categories show.

        iv. Enter key search terms in the **Search** field.
             Only those fields that contain the search text show.

v. Select the fields to show and/or hide.

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ➡ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➡ .

- To remove one item from **Selected Fields**, select the item. Click ⬅ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⬆ .

- To remove all items from **Selected Fields**, click ⬇. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

d. Optional: Apply formatting to the data blocks:

- Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

- Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

7. Click **OK** to save the template and close the **Edit Data Block Template** dialog box.

8. Click ✖ to close the **Manage Data Block Templates** dialog box.

7.15.1.2.1.4 Import a Data Block Template from Map Display
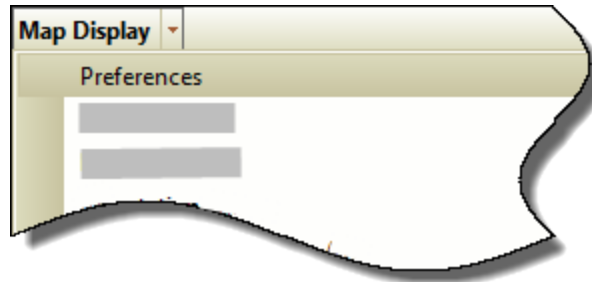
1. Select **Map Display > Preferences**.

2. Select the **Target > Data Block** page.

3. In the Data Block Templates section, click **Manage**. The **Manage Data Block Templates** opens.

4. Select the **User Templates** page.

5. Click **Import**. The **Open** dialog box opens.

6. Select the template file to import. Make sure that the file name shows in the **File Name** window.

7. Click **Open**.

7.15.1.2.1.5 Export a Data Block Template from Map Display
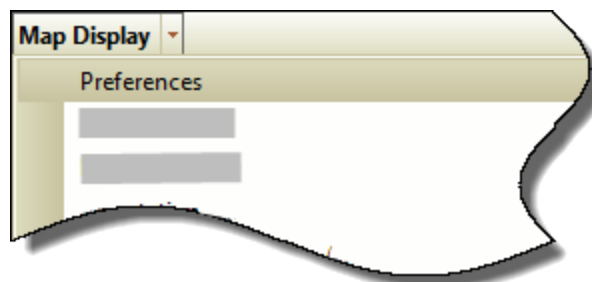
1. Select **Map Display > Preferences**.

2. Select the **Target > Data Block** page.

3. In the Data Block Templates section, click **Manage**. The **Manage Data Block Templates** opens.

4. Select the **User Templates** page.

5. Select a template.

6. Click **Export**.
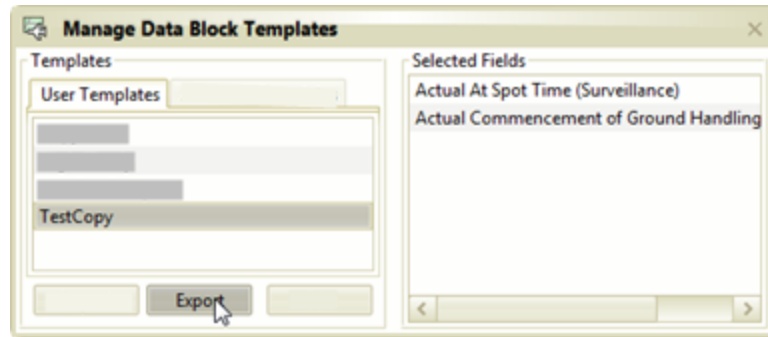
7. Select a disk or network location.

8. Click **Save**.

7.15.1.2.2 Configure Mouseover in Map Display

The mouseover feature shows selected target information when the pointer is put on a target or its data block.

You can choose from 2 mouseover styles: unformatted or formatted. Table 7-29 below shows how the 2 mouseover styles show the same data.

> ℹ️ **NOTE:** You can change the background color for unformatted mouseovers only.

> ℹ️ **NOTE:** When the conditions of a rule are met, the contents of a mouseover can change in Map Display, Operations Timeline, and the De-icing Manager (Usage Chart). (Some content shows only in Map Display.) For information on how to set up mouseover effects in a rule, refer to *Set Up Mouseover Effects* on page 4-67.

Table 7-29. Mouseover Styles
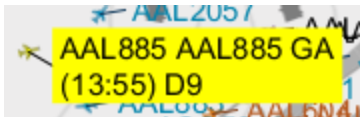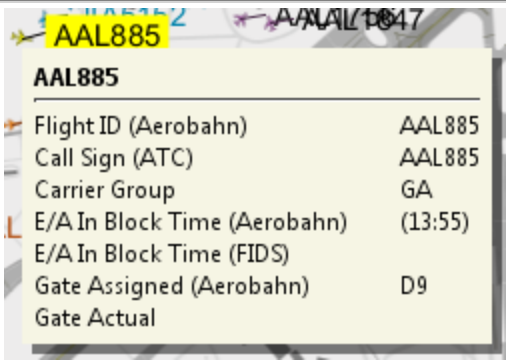
Mouseover Style	Example
Unformatted	

Table 7-29. Mouseover Styles (continued)

Mouseover Style	Example
Formatted	

1. Select **Map Display > Preferences**.

2. Select **Target > Mouseover**.

3. Select **Enabled** for "Active Targets" and/or "Persisted Targets." (You must enable mouseover for selected data to show.)

4. Select **Unformatted** or **Formatted** for "Mouseover Style."

5. Setup "Mouseover Data Block Scale" to resize data blocks during a mouseover event.

    ▪ Select **Auto Scale** to have data block size sync with zoom.

    ▪ Remove the check from **Auto Scale** to set a fixed text size.

        a. Move the slider.

        b. Click **Apply**.

6. Select a state tab: Inbound, Outbound, Persisted, or Unknown. (Set up mouseover separately in each tab.)

7. Set up the *Selected Fields* window to include the information to show:

    a. Filter choices in Available Fields.

        i.   Click the Filter chooser and select a filter category. The list of available fields shows only those fields in the selected category.

        ii. Click the Filter chooser and select a second filter category to adjust the selection. Only those fields that fit the 2 categories show.

        iii. To decrease the items in Available Fields, enter key terms in the search box. This decreases the items in the Available Fields list to those data fields that contain the search text.

    b. Select the fields for the mouseover. Green buttons are active. Grey buttons are inactive—Nothing is selected in the field from which items must be moved. (For more information, refer to *How to Select*

When line breaks are included, the fields are set so that they show on the same lines of a data block. Without line breaks, you get efficient "packing" of information. It can be difficult to see how data values align with fields.

8. Click **Apply** to apply settings.

9. Repeat steps 5 and 6 to set other states: Inbound, Outbound, Persisted, and Unknown.

10. When all preferences are set, click **OK** to close the Preferences window.

Refer to for instructions on how to set the colors for mouseover attributes.

Each **Map Display** operates independently. A change that you make in settings for one **Map Display** does not change the settings for another **Map Display** (refer to).

How to Select and Move Data Fields

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ➡ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➡.

- To remove one item from **Selected Fields**, select the item. Click ⬅ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⮆.

- To remove all items from **Selected Fields**, click ⮄. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

How to Use Line Breaks in Data Blocks

Use line breaks to group the information in data blocks so that it is easier to read and understand. Insert line breaks when you select and organize data block fields (refer to *Use Line Break in Data Blocks* on page 10-22).

7.15.1.2.3 Disable Mouseover

Refer to *Configure Mouseover in Map Display* on page 7-215 for related configuration instructions.

1. Select **Map Display > Preferences**.
2. Select **Target > Mouseover**.
3. Select **Disabled** for "Active Targets" and/or "Persisted Targets."
4. Click **Apply**.
5. When all preferences are configured, click **OK** to close the *Preferences* window.

7.15.1.2.4 Flight ID (Aerobahn)

Flight ID (Aero) shows 1 of these aircraft IDs: Operating Carrier Call Sign, Registration (Aerobahn)[1], or Mode S[2] ID:

Table 7-30. Data Availability and Flight ID

Available Data			Flight ID (Aero) Shows
Operating Carrier Call Sign	Registration Number	Mode S ID	
Yes	Yes or No	Yes or No	Operating Carrier Call Sign
No	Yes	Yes or No	Registration Number
No	No	Yes	Mode S ID

ℹ **NOTE:** A Manual Flight ID overrides the Flight ID (Aero) for a target while that target keeps that Flight ID.

---

[1]Unique, alphanumeric string that identifies an aircraft. Because aircraft have historically displayed their registration on or in the area of the aircraft tail, the registration is often referred to as the "tail number." In the USA, the registration number is also referred to as an "N-number" because it starts with "N". In Aerobahn, the registration can be derived from Mode S (MLAT/ASDE-X) using conversion or OAG lookup, or it can be provided directly from A-SMGCS.
[2]Mode S is a discrete selective interrogation rather than a general broadcast. Mode S transponders ignore interrogations not addressed with their unique identity code, reducing channel congestion.

7.15.1.2.5 Configure Target Settings

Set variables in the "Settings" dialog box to adjust the size and shape of icons representing aircraft and to show or hide aircraft and/or surface vehicles in **Map Display**.

1. Select **Map Display > Preferences**.

2. Select **Target > Settings**.

3. Adjust settings:

   - *Aircraft Icon*

     - The "nose" of the airplane icon shows the direction of movement or the direction in which the airplane had been moving before it stopped and its transponder was turned off.

     - The square icon does not show direction of movement.

   - *Target Size and Scale*

     - Select **Uniform Sizing** to keep all target icons at the same size, regardless of the relative sizes of the objects they represent. Select **Proportional Sizing** to allow icons to vary in size according to the fuselage length and wingspan of the aircraft represented.

     - Select a target scale value. This adjusts the dimension of the target icons independently of each other and of the display zoom setting. Select **Auto Scale** to let icon dimensions change with the zoom value. (A ☑ shows in the Auto Scale box when it is selected.)

- *Target Visibility*
    - Select target type(s) to show in **Map Display** (A ☑ shows when a target type is selected.):
        - Aircraft at Gate (operational states GTI, GTO)
        - Aircraft on Ramp/Movement Area (operational states ARV, TIM, TIR, TOM, TOR, TOU)
        - Aircraft Airborne (operational states APR, DEP, ENR, ENI, ENO, EXI, EXO, EXU)
        - Aircraft Persisted (operational state PER)
        - Vehicles
        - Vehicles Persisted
        - Unidentified Targets

        ℹ️ **NOTE**: Target Visibility settings set in **Preferences > Target > Settings** and rule settings can conflict. For example, a rule could hide a target that is set to show in the Target Visibility settings. When there is a show-hide conflict, the target is hidden.

- *History Trails*
    - Select the target types that will show a history trail: aircraft (inbound and/or outbound) and vehicles. (A ☑ shows when a target type is selected.)
    - Set the Trail Length. For example, if you set the Trail Length to "10 Mins," Aerobahn shows the history trail for the past 10 minutes. Set the aircraft and vehicle trail lengths separately.
    - Set the Minimum and Maximum Range to Show History Trails. Enter the values (in nautical miles) in the boxes at the ends of the scale, or move the sliders to control of where Aerobahn starts and ends History Trails. Distances are measured from the system center (often the air traffic control tower at an airport).

Figure 7-78. Set the History Trails Range
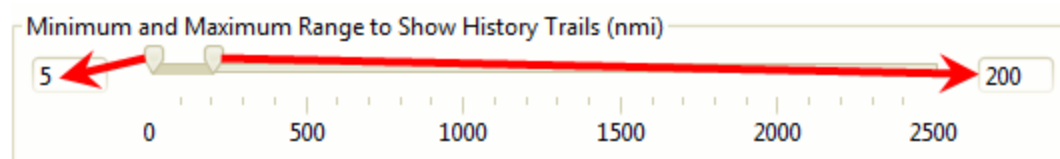
> ℹ **NOTE:** You can configure the color of history trails (refer to *Configure Color Settings* on page 6-2).

4. Click **Apply**.

5. When all preferences are configured, click **OK** to close the *Preferences* window.

Each **Map Display** operates independently. A change that you make in settings for one **Map Display** does not change the settings for another **Map Display** (refer to *Manage More than One Map Display* on page 7-281).

For more information about using more than one Map Display at any time, refer to *Manage More than One Map Display* on page 7-281.

7.15.1.2.5.1 Show or Hide Targets in Map Display

Use the **Map Display Preference** dialog box to show or hide specified types of targets in **Map Display**. For example, you can hide vehicles ("Unidentified" or "Unknown" target types) that Aerobahn "sees" only because of radar surveillance.

> ℹ **NOTE:** Only the **Map Display** in which preferences are set is changed by these settings.

1. Select **Map Display > Preferences**.
2. Select **Target > Settings**.
3. Select target types in the Target Visibility area.
   - Select (check) target types to show in **Map Display**.
   - Clear the check mark from the target types that will not show.
4. Click **Apply**. Changes show in **Map Display**.
5. Click **OK** when all preferences are set.

Refer to *Hide or Show Persisted Aircraft and/or Vehicles* on page 7-238 for more information on how to hide and show persisted targets.

7.15.1.2.6 Extended Targets

Extended targets (also referred to in Aerobahn as "Extended Range Aircraft") are those targets that are shown on **Map Display** but are out of range for surveillance systems that supply an Aerobahn system. (The aircraft that are in range of the surveillance system are referred to in the **Preferences** dialog box as "Surface Surveillance Aircraft.")

Aerobahn uses FAA data to get the locations of extended targets for airports in the United States of America. For inbound targets, surveillance positions become available for a target that was shown before only because FAA data was available. When surveillance data is available, Aerobahn "switches over" to the surveillance data. For outbound targets, the opposite occurs: Aerobahn "switches over" from surveillance data to FAA data.

FAA data is available for targets far from an airport, and you must zoom out to see some Extended Targets. It can help to use 2 Map Display views. One **Map Display** focuses on the surveillance area around the airport and hides extended range aircraft. One **Map Display** shows targets far from the airport with larger scale target icons for Extended Range Aircraft (refer to *Show or Hide Extended Targets in Map Display* below and to *Set Zoom Controls* on page 7-198).

7.15.1.2.6.1 Show or Hide Extended Targets in Map Display

> ℹ️ **NOTE:** The Extended Range Map Display tool (introduced in Aerobahn 10.4.0) is dedicated to en route flight display and does this function (refer to *Use the Extended Range Map Display Tool* on page 7-187). This procedure tells how *Map Display* can be used to show or hide extended range targets.

1. Select **Map Display > Preferences**.
2. Select **Target > Settings**.
3. Select, in the Target Visibility section, **Show** to show (or **Hide** to hide) Extended Range Aircraft.
4. Click **Apply**.

Change the Target Scale

You can increase the scale of extended range aircraft when **Map Display** is zoomed out.

1. Select **Map Display > Preferences**.
2. Select **Target > Settings**.
3. Adjust, in the Target Scale section, the value for Extended Range Aircraft.
4. Click **Apply**.
5. Click **OK** to close the *Preferences* window.

7.15.2 Gate Snapping

When Aerobahn receives a target position update for an aircraft that is in a gate region configured for Gate Snapping, the target "snaps" into the gate assigned. The target gets the snap-position heading of the gate region.

Gate regions are configured for Gate Snapping during system configuration.

7.15.2.1 Proximity Gate Correction

There are two types of Proximity Gate Correction:

- Target Proximity Gate Correction
- Gate Proximity Gate Correction

Target Proximity Gate Correction

Aerobahn changes the position of a target icon to the snap-position heading of the assigned gate when these conditions are true:

- Aerobahn receives a target position that is in a Gate or Parking Area region, and
- the target position is within a specified distance from the assigned gate snap position of the flight represented by that target.

Target Proximity Gate Correction applies only to flight targets in one of a specified set of target states. These target states include TIR, GTI, GTO, and/or PER.

Aerobahn applies Target Proximity Gate Correction only to flights with these characteristics:

- operating or marketing carrier code that has been configured on the server
- gate assignment that has been identified for Target Proximity Gate Correction

Figure 7-79. Target Proximity Gate Correction
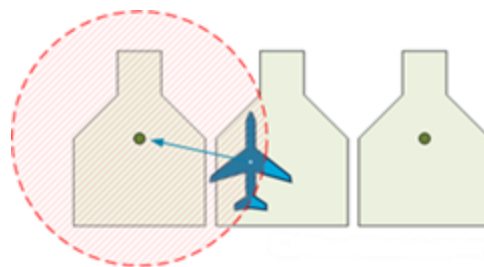
Gate Proximity Gate Correction

Aerobahn moves a target into the snap position for the assigned gate when these conditions are true:

- Aerobahn gets a target position update inside a gate region.
- That gate region is within a specified distance from the snap position of the assigned gate for the flight.
- The assigned gate is included in a set of gates that is configured on the server for Gate Proximity Gate Correction.

Figure 7-80. Gate Proximity Gate Correction

7.15.3 Enter Data in the Manage Flight Dialog Box

Aerobahn is configured to supply dynamic data for a target. Manually entered data overrides that dynamic data.

i **NOTE:** You must have permission to enter, edit, and delete data. These permissions are set in **System Administration > Settings and Permissions** related to the variable that is entered or edited. Permissions for flight-management variables are set individually. You can use **Manage Flight** to manage flights in the Carrier List for Proprietary Data Access.

You can enter this "manual data" in these ways:

- Right-click a target to open the **Manage Flight** dialog box or to select a command (such as **Cancel Flight**).
- Right-click a row in a table tool, such as Selection Details or a Watch List Viewer, that contains manual data for a flight. You can change data values in the table (refer to *Change the Data in the Manage Flight Dialog Box* on the facing page).
- Use a hotkey to open the **Quick Search** dialog in data entry mode (refer to *Use Function Keys to Set Manual Values* on page 10-24).

The values you enter in the **Manage Flight** dialog are added to flight information. They show in **Selection Details** or in a data block or mouseover. These "manual" values can change Aerobahn predictions, workflows, and workflow states.

In **Selection Details**, such values (except for de-icing data) show adjacent to a heading that includes "(Manual)" such as, "Boarding Time (Manual)." This shows that the value was set in the **Manage Flight** dialog box. The value did not come from a standard data feed (for more information on **Selection Details**, refer to *Use the Selection Details Tool* on page 7-298).

Refer to *Edit Manual Data Fields* on page 10-21 for instructions on how to work with data in **Manage Flight**, **Selection Details**, and **Watch List Viewer**.

For information on managing permissions for the entry of manual data, refer to *Manual Data Entry Permissions* on page 9-8.

Enter Manual Values for a Target in Map Display

1. Right-click the target in Map Display.

2. Select **Manage Flight**.

3. Make sure that the correct Flight ID displays in the **Manage Flight** title bar.

4. Enter (such as with a manual Flight ID) or select values.

5. Click **OK**.

6. Make sure that the "Action" is "Added" and that the entered value is correct.

7. Click **OK**. The manual value shows in the data block, the mouseover, or **Selection Details** when those are set to show that manual field.

7.15.3.1 Change the Data in the Manage Flight Dialog Box

ℹ **NOTE: Manage Flight** must be configured for the context menu in the Context Menu Settings (refer to *Context Menu Settings* on page 6-19).

1. Right-click the target.

2. Select **Manage Flight**.

3. Make sure that the correct flight ID shows in the **Manage Flight** title bar.

4. Edit or delete items in the **Manage Flight** dialog box. You can change dates and times, text, and list items.

- Dates and Times: To delete an item that has a date or time, click the box with the check mark in it to remove the check mark. To change a date or time for an item that has a check mark, open the calendar tool. Then, set the new date and time. Click **OK** to close the calendar tool.

- True/False data: Select the value from the dropdown. It is not necessary to click ✔ to confirm a change from False to True or from True to False.

- Text: To delete a text item, select the text, and press DELETE. To change text, key over the text in the text box.

5. Click **OK**.

6. Make sure that the value changes.

7. Click **OK**. This updates or clears the manual value in data blocks, mouseover, and **Selection Details** that show the field.

7.15.3.2 Set MTTT in Manage Flight

Use these instructions to set the MTTT for an individual flight (to override a default MTTT setting). (For general advice on **Manage Flight**, refer to *Enter Data in the Manage Flight Dialog Box* on page 7-224.)

1. Right-click a flight. A menu opens.

2. Select **Manage Flight**.

3. Make sure that the correct flight shows in the title bar.

4. Change the setting for MTTT (in the "Turn Actuals" section).

5. Click **OK**.

Refer to *Change MTTT based on Aircraft Type, Destination, and Airline Code* on page 9-44 to set up a minimum turn-round time (MTTT) that overrides the default MTTT when one of these target parameters is the same as the flight information:

- aircraft type
- destination
- airline code

7.15.4 Add Scratch Pad Text

You can add a note to a data block and/or to a mouseover by enabling Scratch Pad Text in the data block and/or mouseover preferences. You have 2 options:

- Scratch Pad Text: Visible only to those with permission to view it
- Scratch Pad Text (Public): Visible to all users at an Aerobahn site

The 2 types of scratch pad text become part of the flight information. All users will see scratch pad text that is entered in the Scratch Pad Text (Public) dialog box. Only those with "Scratch Pad Text" permission see proprietary information.

Figure 7-81. Scratch Pad Text (example)

7.15.4.1 Add Scratch Pad Text: Right-Click Method

1. Set up the data block so that *Scratch Pad Text* shows in *Selected Fields* (refer to *Configure Data Blocks in Map Display* on page 7-205. Preferences must be set for each "state".

2. Click **Apply** to apply new settings.

3. When all preferences are set, click **OK** to confirm changes and close the Preferences dialog box.

4. Right-click a target (not its data block) or the row in a table that represents a target or a flight, and select **Add Scratch Pad Text** or **Add Scratch Pad Text (Public)**.

   ℹ️ **NOTE**: If you do not have permission to add proprietary text, **Add Scratch Pad Text** does not show in the menu.

Figure 7-82. Add Scratch Pad Text (Menu)
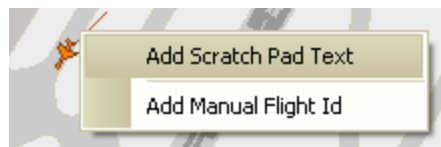
5. Enter text in the *Scratch Pad Text* window, and click **OK**. The text shows in the data block and/or mouseover.

Figure 7-83. Enter Scratch Pad Text (Entry Window)

7.15.4.2 Add Scratch Pad Text: Hotkey Method

You can use two hotkey procedures to add Scratch Pad Text:

- Use a hotkey after selecting a target in a real-time tool
- Search for flights in the hotkey dialog

Set function keys for "Data Entry" for the "Scratch Pad Text" and "Scratch Pad Text (Public)" fields to use these Hotkey methods to enter text.

Use a hotkey after selecting a target in a real-time tool

1. Select target(s).

2. Press the function key that is set to open the Scratch Pad Text (or Scratch Pad Text (Public) search dialog box.

    ℹ **NOTE**: If you select multiple targets, and you can add proprietary Scratch Pad text to some of those flights but not others, the "Update" field of the **Scratch Pad Text** dialog box shows only those flights that you can add data to. You cannot add text for other selected flights.

3. Enter text in the *Scratch Pad Text* window.

4. Click **Apply**. The text shows in the data block and mouseover.

Search for flights in the Hotkey dialog

1. Press the function key that is set to open the Scratch Pad Text (or Scratch Pad Text (Public) search dialog box.

2. Enter the search criteria. As you enter search criteria, the Results field fills. For detailed instructions, refer to *Search for Targets with Hotkeys* on page 3-33.

   > **NOTE**: The Hotkey search dialog shows only those flights that you can add data to.

3. Enter text in the *Scratch Pad Text* window.

4. Click **Apply**. The text shows in the data block and mouseover.

7.15.4.3 Edit or Delete Scratch Pad Text

After a manual data field has been added to a flight, the context menu replaces "Add" with "Edit" and "Delete."

7.15.5 Show, Hide, and Move Data Blocks in Map Display

Data Blocks supply target information.

> **NOTE:** Data blocks for targets with active alerts show at all times. There is no show/hide toggle for these data blocks.

Show/Hide Data Blocks

You can show data blocks for only your airline and hide data blocks for all other carriers. Configure **Map Display > Preferences** to show data blocks only for selected carriers (refer to *Configure Data Blocks in Map Display* on page 7-205).

You can also...

- Press CTRL+D on the keyboard to show/hide all data blocks.

- Right-click a target. Select **Hide Data Block** (or **Stop Hiding Data Block**). Click the map surface (off the target). The data block for that target toggles to the chosen show/hide state.

- Make a rule that hides data blocks (configured in the "Data Block Effects" tab) when certain conditions are fulfilled.

Move a Data Block

You can drag an individual data block to a new position relative to a target.

A re-positioned data block remains in this new relationship to the target unless Automatic Data Block Repositioning is enabled (refer to *Configure Data Blocks in Map Display* on page 7-205 for instructions on enabling and disabling Automatic Data Block Repositioning).

➡ Click a data block (click-and-release) to select a target. Right-click to select a target and open a context menu (refer to *Context-Menu Controls in Map Display and Extended Range Map Display* on page 7-254).

7.15.6 Mouseover

Mouseover shows target information when the pointer is above a target icon in **Map Display**. Use mouseover to decrease data block information and screen clutter.

Select **Map Display > Preferences > Target** to configure mouseover and start it.

Choose from 2 mouseover styles: unformatted or formatted (refer to *Configure Mouseover in Map Display* on page 7-215.

ℹ **NOTE:** When the conditions of a rule are met, the contents of a mouseover can change in Map Display, Operations Timeline, and the De-icing Manager (Usage Chart). (Some content shows only in Map Display.) For information on how to set up mouseover effects in a rule, refer to *Set Up Mouseover Effects* on page 4-67.

Figure 7-84. Mouseover (Unformatted Style) and Data Blocks (examples)
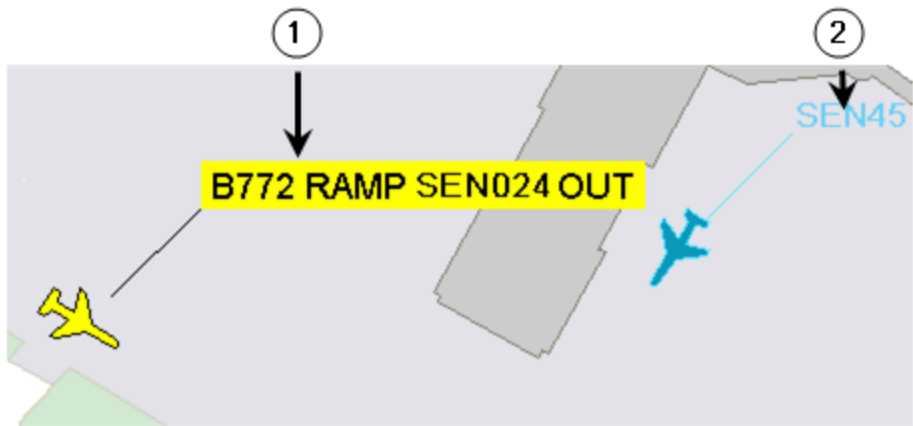
Ref.	Description
1	Mouseover is active, and the pointer is above the target. Color shows the inbound or outbound status (refer to *Configure Mouseover in Map Display* on page 7-215 for more information).
2	Default data block configuration. Color shows the inbound or outbound status (refer to *Configure Data Blocks in Map Display* on page 7-205 for more information).

7.15.7 Target Persistence

What is "target persistence"? Target persistence simulates the presence of an aircraft in a "persistence region" (often a gate, parking area, or ramp) when surveillance data is no longer received for an aircraft. Aerobahn does not receive surveillance data, for example, when the transponder is no longer active. While in the persisted state, the data block for the target continues to show new data.

ℹ️ **NOTE:** Table tools show the operational state of a persisted target with the abbreviation PER.

Persistence regions are set up when the airport map is made. Region properties for a site can be set to enable a flight to persist only when that flight has a "stationary state." A stationary state can be "Stationary" or "Moving" (refer to *Stationary State and Persistence* on the next page for more information on these states).

Targets in persistence regions show for a set time, after which they disappear. If a live target goes into a space that filled a "persisted" target, the live target replaces that persisted target. Aerobahn removes a persisted target from **Map Display** when the target is on a taxiway segment or runway, and surveillance has not detected targets in the movement area for a number of minutes.

In designated persistence regions, only "Stationary" targets persist. Moving targets coast as if the region was not a persistence region. This "keeps the clock running," for targets that have shut down while holding in the movement area. As a result, you can better manage the time that these targets spend on the airport surface.

If your Aerobahn system uses persistence regions, you can toggle the visibility of persisted targets through **Map Display > Preferences**.

Like other target icons, "persisted" target icons show something about the flight that they represent. A regular "persisted" target icon typically (default setting) shows in gray at its last known location. "Manually moved" or "added" persisted targets do have different fill and edge colors.

ℹ️ **NOTE:** You can see if a persisted aircraft has been manually added or moved by studying **Selection Details** for an aircraft. Notations are added to the "Persisted State" entry.

7.15.7.1 Stationary State and Persistence

A target persists in a persistence region when it is in the right stationary state. For more information on how persistence works, refer to *Target Persistence* on the previous page.

A target can have one of three stationary states: "Stationary," "Moving," or "Parked." Aerobahn says that a target is "Stationary" when the average velocity of the target drops below a set value for a set time period.

In designated persistence regions, only "Stationary" targets persist. Moving targets coast as if the region was not a persistence region. This "keeps the clock running," for targets that have shut down while holding in the movement area. As a result, you can better manage the time that these targets spend on the airport surface.

Targets are also given an operational state. The operational state is identified by a 3-letter code. The operational state tells you the target status or where the target is (refer to the Glossary for definitions of codes for operational states).

Targets in the following operational states are always "Parked": GTI and GTO.

Targets in an operational state of PER are "Stationary" when not at a gate. If they are at a gate, they are "Parked."

Targets in these operational states are always "Moving":

- APR
- DEP
- ENI
- ENO
- ENR
- EXI
- EXO
- EXU
- OIN
- OUT

Targets in these operational states are "Stationary" or "Moving" depending on target speed:

- ARV
- ONM
- ONR
- TIM
- TIR
- TOM
- TOR
- TOU

7.15.7.2 Add a Persisted Target to Map Display

⚠️ **CAUTION:** When you add, move, remove, or purge a persisted aircraft, all displays in the Aerobahn system show the change.

You can add a persisted aircraft to a persistence region (to show, for example, an aircraft that has been moved from a hangar into a gate). If you try to add a persisted target with a registration that identifies an active or persisted aircraft, Aerobahn tells you. You are asked to confirm before Aerobahn moves a (persisted) target to the persisted location.

ℹ️ **NOTE:** Aerobahn cannot change an active flight to a persisted flight.

ℹ **NOTE:** You can see locations for "dropping" persisted aircraft icons that you move if you make gate and parking regions visible. Make these changes in the Region Layer (refer to *Layer Visibility* on page 7-250 for more information).

Add a persisted target when you do not know the registration (N) number

1. Right-click in a persistence region of **Map Display** (but not on a target icon).
2. Select **Add Persisted Aircraft**. An aircraft icon shows.
3. Move the aircraft icon into a region, and click.
4. Turn the icon around its axis, and click to set the heading. (Do this if the target is in a persistence region that does not have a snap positioning enabled.) The **Quick Search** dialog box opens.

   When snap positioning is enabled in a region, the snap-position heading for that region overrides the heading set in the *Relocate Persisted Aircraft* control.

   ℹ **NOTE**: When opened from **Add Persisted Aircraft**, search criteria are set (by default) to look for outbound flights only and to search by Flight ID and Ship Number. Any characters that you enter in the search field will pull data that has been filtered through these categories. You can add other fields.

5. Select **Add Persisted Aircraft**.
6. Start to enter the Flight ID in the Search field. As you enter characters, possible Flight IDs show in the Results field.
7. Select the Flight ID for the persisted flight.
8. Click **Apply.** Aerobahn checks the selected Flight ID against its database.
   - If the selected flight is not persisted, then a persisted icon (with the selected Flight ID) is added to the region.
   - If the registration number refers to an existing persisted aircraft, a system message shows.
     - Click **OK** to move the existing persisted target to the new location.
     - Click **Cancel** to cancel the add operation.

Add a persisted target when you know the registration (N) number

1. Right-click in a persistence region of **Map Display** (but not on a target icon).

2. Select **Add Persisted Aircraft**. An aircraft icon shows.

3. Move the aircraft icon into a region, and click.

4. Turn the icon around its axis, and click to set the heading. (Do this if the target is in a persistence region that does not have a snap positioning enabled.) The **Quick Search** dialog box opens.

   When snap positioning is enabled in a region, the snap-position heading for that region overrides the heading set in the *Relocate Persisted Aircraft* control.

   ℹ NOTE:When opened from **Add Persisted Aircraft**, search criteria are set (by default) to look for outbound flights only and to search by Flight ID and Ship Number. Any characters that you enter in the search field will pull data that has been filtered through these categories. You can add other fields.

   ---

5. Click in the text box next to "Add Aircraft with Registration/N-Number," and enter the flight registration number (N-number).

6. Click **Apply.** Aerobahn checks the entered registration number against its database.

   - If the registration number refers to a real aircraft that is not under surveillance and not persisted, then a persisted icon (with the specified registration) is added to the region.

   - If the registration number refers to an active aircraft or if there is no aircraft with that registration number, a system message informs you that no aircraft with that registration can be persisted. Click **OK** to close the system message.

   - If the registration number refers to an existing persisted aircraft, a system message shows.

     - Click **OK** to move the existing persisted target to the new location.

     - Click **Cancel** to cancel the add operation.

7.15.7.3 Move a Persisted Target (Mouse)

⚠️ **CAUTION:** When you add, move, remove, or purge a persisted aircraft, all displays in the Aerobahn system show the change.

You can move a persisted aircraft from one persistence region to another. Aerobahn notes that a persisted aircraft has been manually moved and stores the location, the time of the move, and the aircraft registration or Mode S ID.

ℹ️ **NOTE:** You can see locations for "dropping" persisted aircraft icons that you move if you make gate and parking regions visible. Make these changes in the Region Layer (refer to *Layer Visibility* on page 7-250 for more information).

ℹ️ **NOTE:** If, during a move, a target changes state so that it is no longer persisted, the move is canceled. Aerobahn tells you of the change of state and that the move was canceled.

1. Right-click the persisted aircraft to be moved.
2. Select **Move Persisted Target** from the menu.
   If **Move Persisted Target** is not available as a menu choice, you do not have permission to move persisted aircraft. (Also, make sure that you selected a persisted aircraft in step 1.)
3. Click the destination location—must be a persistence region—for the target that you intend to move. Note that a line stretches from the persisted target to the destination as you move the pointer. The *Relocate Persisted Aircraft* control opens. Aerobahn tells you if a selected location will not accept a persisted aircraft.
4. Adjust the heading if moving the target into a persistence region that does not have a preset heading.

   When snap positioning is enabled in a region, the snap-position heading for that region overrides the heading set in the *Relocate Persisted Aircraft* control.

5. Finish or cancel this task:

- Click **OK** to move the persisted aircraft into the new location at the set heading.

  - If snap positioning is enabled for the persistence region, the icon moves into position using the preset heading for that region.

  - If snap positioning is not enabled, the icon is moved using the heading that you set for the target.
    The persisted aircraft icon changes color to show that it has been moved.

- Click **Cancel** to cancel the operation. The move is canceled.

7.15.7.4 Move a Persisted Target (Touchscreen)

ℹ **NOTE:** Refer to *Touchscreen Basics* on page 10-28 for basic touchscreen commands.

ℹ **NOTE:** When you move a target, Aerobahn asks, "Are you sure you would like to move this target?" You can tap, "Do not show this message again." This choice applies to all users who share the account.

Drag the target into the new location. Do not worry about target heading.

When the target icon is in its new location, a "heading handle" (dot) shows between two arrows. Use the "heading handle" to turn the target icon around its axis until it points in the correct direction. Then, tap.

Table 7-31. Move a Target
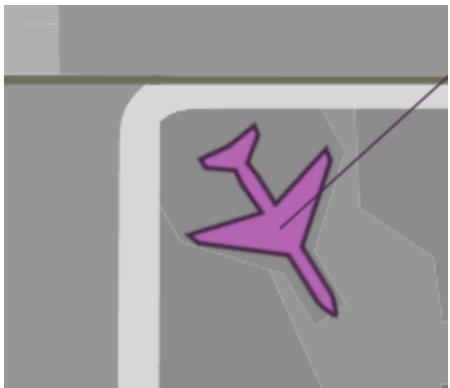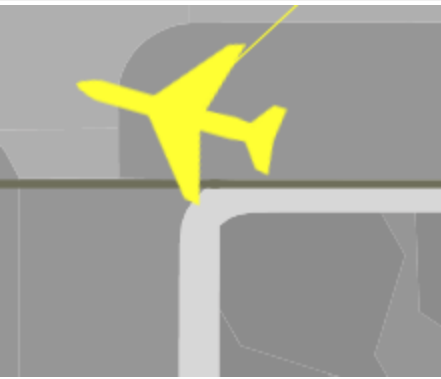
Step		
1		Drag the persisted target from the gate to the pad (apron).

Table 7-31. Move a Target (continued)

Step		
2		Release the target when it is in the new location. The target icon shows in the old location *and* in its new location. Touch the "heading handle" (dot) between the two arrows. Turn the target icon until the icon points in the direction of travel.
3		Release to stop adjustment of the heading. Tap the airport surface to remove highlight.

7.15.7.5 Hide or Show Persisted Aircraft and/or Vehicles

If your Aerobahn system uses persistence regions, you can toggle the visibility of persisted targets and vehicles.

Refer to . Select or clear the check marks from "Aircraft Persisted" and/or "Vehicles Persisted."

Figure 7-85. Target Persistence Display
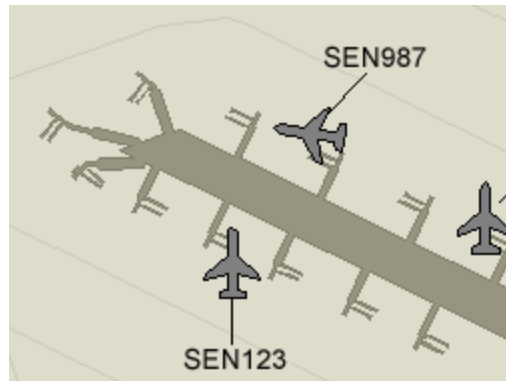
Select **Settings > Color Settings** to see a key to color configurations for persisted aircraft. Expand **Aircraft & Vehicles > Persisted** to see (and to reconfigure) the color key.

7.15.7.6 Remove Persisted Targets from Map Display

You can remove selected persisted aircraft one at a time or remove (purge) all persisted targets at 1 time.

⚠️ **CAUTION:** When someone removes a persisted target and/or purges all persisted targets from a site, targets are removed from all displays in the Aerobahn system.

7.15.7.6.1 Remove a Selected Persisted Target

1. Right-click the target icon.
2. Select **Remove Persisted Target**.

7.15.7.6.2 Purge All Persisted Targets

1. Right-click **Map Display** but not on a target icon.
2. Select **Purge All Persisted Targets**. The *Purge Persisted Targets Confirmation* window opens.
3. Confirm:
    - Click **No** to cancel the purge operation.
    - Click **Yes** to purge all persisted targets.

7.15.8 Select Targets in Real-Time Tools

When you select a target in a real-time tool, that target is automatically selected in other open real-time tools. A selected target changes color to show that it is selected.

Target selection is always enabled:

- Click an individual flight or select more than one flight using CTRL-click or SHIFT-click to select. (Select IDs in a table or the **Map Display** target icons—not the data blocks.)
- Click off the target to cancel a selection. The selection color is removed from that flight in open tools.

You can configure these items:

- selection color
- flash or no flash
- the object that changes color: target only or the target and its data block

For more information, refer to *Set up Target Search and Selection Highlight Settings* on page 7-200.

7.15.9 Use Display Controls

Map Display lets you adjust your view of the map through the Display Control Toolbar, Keyboard Commands, and with a scrolling mouse. Users with touchscreens can use gestures to zoom and pan but not to turn the site map.

Select **Map Display > Toolbars > Display Control** to open the Display Control toolbar (Figure 7-86 below) .

Figure 7-86. Display Control Toolbar

ℹ **NOTE:** Press HOME on your keyboard to set **Map Display** to the default zoom setting.

1. Click anywhere in **Map Display** (to set focus) before using the keyboard shortcuts or scroll zooming.

2. Click the Display Control button or press the keyboard shortcut to control view of **Map Display**.

ℹ️ **NOTE:** Keyboard shortcuts—except Z and B—and scrolling mouse zoom controls are available in Location History plots.

Display Controls and Keyboard Shortcuts

Button	Key	Control Name and Function
Zoom Tools		
	HOME	Home—Centers **Map Display** in the computer monitor display.
	+ num. keypad	Zoom In (Close-up View)
	- num. keypad	Zoom Out (Wide View)
	Z	Zoom To—Shows a cross-hair cursor to define a selection area. Click to set a starting point, and drag to make a rectangular "zoom to" area. Release the mouse button to expand the selected area to occupy the full **Map Display**.
	B	Zoom Back—Returns **Map Display** to its previous zoom value. This can step back through all entered Zoom To selections.
Rotation Tools		
	PGDN	Rotate Clockwise—Rotates the map clockwise.
	PGUP	Rotate Counterclockwise—Rotates the map counterclockwise.
Pan Tools		
	Left arrow	Pans the field of view left.
	Up arrow	Pans the field of view up.
	Right arrow	Pans the field of view right.
	Down arrow	Pans the field of view down.

Scrolling Mouse Controls

Zoom Control—Turn the scroll wheel to zoom in and out. If you zoom very much, set the data block text to a fixed size in Target Display Preferences.

Pan Control—Press the wheel button and drag the map to pan with the mouse.

7.15.10 Create Annotations

You make annotations in the **Annotation Editor**. After you make annotations, you can show them in **Map Display** (refer to *Show / Hide Annotations* on page 7-248).

ℹ️ NOTE: You can add and manage annotations that are linked to Region Statuses (refer to *Add a Region Status Annotation* on page 4-10 and to *Edit or Delete Region Status Annotations* on page 4-12).

Use the **Annotation Editor** to add three types of information (annotations) to a map:

- Text—Add labels for temporary situations (such as closed runways and taxiways) or permanent structures (such as gate, spot, or taxiway identification). All keyboard characters are permitted.
- Shape—Draw a polygon with dimension and position properties for an area not shown on the map (such as a construction zone).
- Line—Make a line segment or a line that has more than one segment.
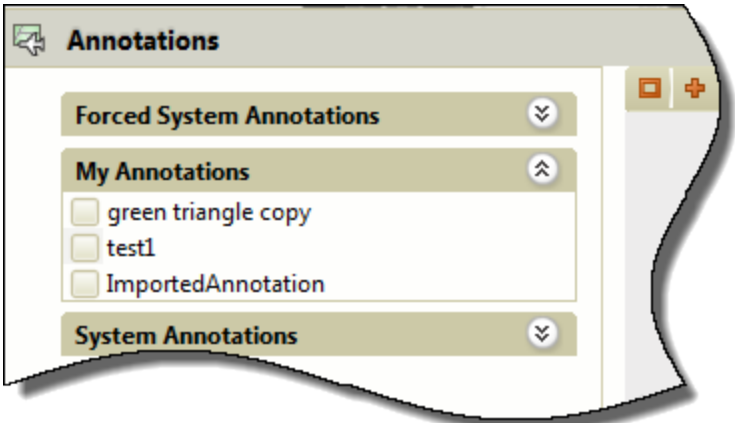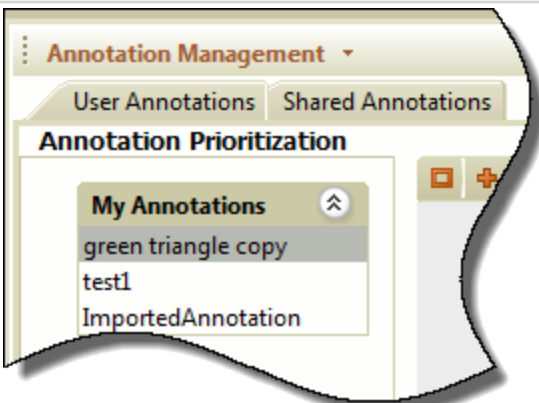
Instructions

1. Select **System > Annotation Management**.
2. Click **Create**.
3. Enter a name for the annotation layer.
4. Enter annotation elements.
5. Click **Up** or **Down** to change the order of elements to change the priority of each element. The annotation elements are "stacked" on top of each other just as they appear in the **Annotation Editor**.
6. Click **Save** when finished.

7.15.10.1 Manage My Annotations

The controls that you use to manage annotations in Annotation Management (from the System menu) and the Annotations editor in Map Display look similar, but they do not give you access to the same controls.

Table 7-32. Annotation Control Interfaces

Annotations List in Map Display	
Annotations Management in System Menu	

1. Select **System > Annotation Management**.

2. Right-click on an item in **My Annotations**.

3. Select the action:

   - Edit—Open the Annotation Editor.

   - Copy—Make a duplicate of the annotation with a new name.

   - Share—Share your annotation with all members of a group of users (refer to *Configure Data Sharing* on page 9-23 for information on how to share annotations).

   - Delete—Remove the annotation from the list.

     ⚠ **CAUTION:** Deleted annotation files cannot be restored. There is no undo command.

7.15.10.2 Add a Line Annotation

Use the line annotation tool to make one line segment or a line with more than one segment that share endpoints.

1. Open the Annotation Editor.
   - In real-time tools: Select **System> Annotation Management**.
   - In **SystemAdmin**: Select the group. Then, select the Annotations page.
2. Right-click the annotation, and select **Edit**.
3. Select the layer to which you will add a line (if there is already an annotation).
4. Below "Elements," click **Line**.
5. Move the pointer from **Annotation Editor** into the preview pane. A start dot shows.
6. Click to start the line. Click again to add a point to the line for a corner.
7. Right-click to stop the line.
8. OPTIONAL—Change *Element Properties*: Name, Line Color, Line Transparency, Line Width, and Maintain Line Width When Zooming.
9. Click **Save**.

7.15.10.3 Add a Shape Annotation Element

Make a polygon for an area (such as a construction area) to show on **Map Display**.

1. Open the Annotation Editor.
   - In real-time tools: Select **System> Annotation Management**.
   - In **SystemAdmin**: Select the group. Then, select the Annotations page.
2. Right-click the annotation, and select **Edit**.
3. Select the layer to which you will add a polygon (if there is already an annotation).
4. Below "Elements," click **Shape**. "Shape #" (where # is a numeral) shows.
5. Move the pointer from **Annotation Editor** into the preview pane. A corner dot shows.
6. Click to set each corner.
7. Right-click to close the shape.
8. Select the shape name, or click the drawing to select it.

9. OPTIONAL—Change *Element Properties*: Name (replace Shape #), Fill Color, Fill Transparency, Line Color, Line Transparency, Line Width, and Maintain Line Width When Zooming.

10. Click **Save**.

➡ To add a text label to a shape, make a text annotation on the same layer as a shape, and a text annotation in the shape (refer to *Add a Text Annotation Element* below).

7.15.10.4 Add a Text Annotation Element

Use for temporary labels (such as closed runways and taxiways) or permanent labels (such as gate, spot, or taxiway identification). All keyboard characters are permitted.

1. Open the Annotation Editor.

    ▪ In real-time tools: Select **System> Annotation Management**.

    ▪ In **SystemAdmin**: Select the group. Then, select the Annotations page.

2. Right-click the annotation, and select **Edit**.

3. Select the layer to which you will add text (if there are already annotations).

4. Below Elements, click **Text**.

5. Move the pointer from **Annotation Editor** into the preview pane. "Enter Text" displays at the location where the text will show.

6. Enter the annotation text in the *Text* field.

7. OPTIONAL—In the **Annotation Editor** in the Element Properties field, add a name in the *Name* field for the text annotation.

8. OPTIONAL—Click the **Text Color** box to open the color dialog box, and set text color. Click **OK** to confirm the color choice and to close the color dialog box.

9. OPTIONAL—Click **Text Background Transparency** to put a translucent or an opaque background behind the text annotation. The default text background transparency is 100% so that text shows directly on the map background. To add a background, reduce the value of the background transparency.

10. OPTIONAL—Click the **Text Background Color** box to open the color dialog box, and set the background color. Click **OK** to confirm the color choice and close the color dialog box.

11. Set Text Size.

Automatic text-size is related to the zoom properties in **Map Display**. If you add an annotation to a layer that already contains annotations, and the new annotation uses the same text size as the old annotations, make sure of the text size of the old annotations before you add the new annotation. Then, when you create a new annotation, replace the default text size with the size value used in the old annotations.

12. Select (check) the **Maintain Size while Zooming** box to disconnect the text size from the zoom controls. When this box is checked, the text size remains at the set value, regardless of **Map Display** zoom properties.

13. Select (check) the **Maintain Orientation when Rotating** box to release an annotation from the map orientation. When this box is not checked, the annotation rotates as the map rotates.

> **ℹ NOTE:** Maintain Orientation when Rotating is sometimes used for text annotations such as runway and taxiway IDs. If you select **Maintain Orientation when Rotating**, the text annotation stays on top of other items in the layer.

14. Select (check) the **Rotation in Degrees** box to move (rotate) the text annotation with the map.

15. Click **Save**.

7.15.10.5 Move an Annotation

You can move individual or grouped annotation elements in respect to map features or in respect to other annotation elements.

Move annotation elements in respect to *map features* as follows:

1. Select **Map Display > Annotation Editor**.

2. Select the annotation layer (in *My Annotations*) with the elements to be moved.

3. In **Map Display**, select and drag an element to move it on a layer. (Control-click more than 1 element to select a group of elements that can be moved as a group.)

4. Click **Save**.

5. Click **X** to close **Annotation Editor**.

The *Elements* section of the **Annotation Editor** shows all annotation elements in a selected layer. As elements are added to a layer, they are put on top (in **Map Display**) of the previously added annotation element. You can re-arrange overlapping annotation elements in respect to *other annotation elements* as follows:

1. Select **Map Display > Annotation Editor**.
2. Select (in *My Annotations*) the annotation layer that has the elements to be moved.
3. Select the label for one element in the **Annotation Editor**, or select the element in **Map Display**.

   ℹ️ **NOTE:** *Element Properties* shows selected element and its properties.

4. In the **Annotation Editor** *Element* control section, click **Up** or **Down** to move elements into the foreground or background.
5. Click **Save**.
6. Click **X** to close **Annotation Editor**.

7.15.10.6 Change Annotation Dimensions

1. Select **Map Display > Annotation Editor**.
2. Select the annotation layer (in *My Annotations*) with the elements to be changed.

3. In **Map Display**, select the shape or line. The "handle dots" show.

■ Drag a "handle" to change dimensions.
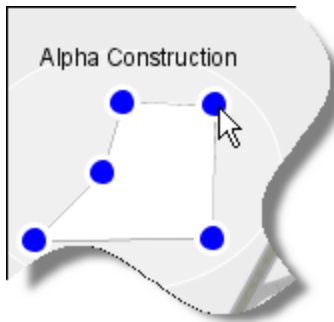
■ Right-click a handle, and select the change action.
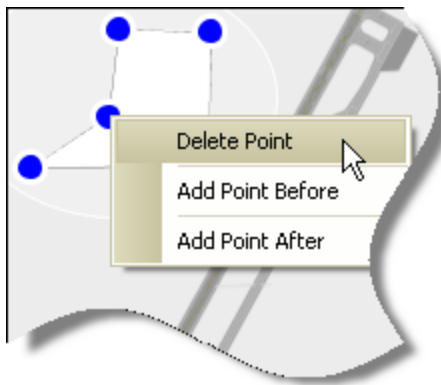
4. Click **Save**.

5. Click **X** to close **Annotation Editor**.

7.15.10.7 Show / Hide Annotations

After you make annotations, you can show them when they are useful. Use this procedure to show or hide annotations in the **My Annotations** and **System Annotations** lists.

ℹ️ **NOTE:** You can not hide Forced System Annotations.

7.15.10.7.1 Show Annotations

1. Select **Map Display > Annotations**. The Annotations tool opens.

2. Open the **My Annotations** and **System Annotations** lists to show the individual annotations.

3. Select annotation(s). A check mark ☑ shows the annotation(s) that should show in **Map Display**.

4. Optional—Click **Apply** to show the change in the **Map Display** window while the Annotations tool stays open.

5. Click **OK** to make the change in **Map Display** and close the Annotations tool.

7.15.10.7.2 Hide Annotations

1. Select **Map Display > Annotations**. The Annotations tool opens.

2. Open the **My Annotations** and **System Annotations** lists to show the individual annotations.

3. Remove the check mark from the annotation(s) that should not show in **Map Display**.

4. Optional—Click **Apply** to show the change in the window while the **Annotations** tool stays open. The annotation(s) that you selected should not show.

5. Click **OK** to make the change in **Map Display** and close the Annotations tool.

7.15.10.8 Delete an Annotation Element

Use this procedure to delete text, shapes, and lines added as annotation elements.

⚠️ **CAUTION:** There is no "undo" command.

1. Select **Map Display > Annotation Editor**.

2. Select the annotation layer (in *My Annotations*) with the elements to be edited.

3. Select the label for an element in the **Annotation Editor**, or select the element itself in **Map Display**.
   Element Properties shows selected element and its properties.

4. In the **Annotation Editor** under the *Element* control section, click **Delete**.

5. Click **Save**.

6. Click **X** to close **Annotation Editor**.

7.15.11 Edit Annotations

Use this procedure to add, delete, or change annotation elements and to make a duplicate of an annotation with a new name.

1. Open the **Annotation Management** tool or the **Group Annotation Manager** (in **SystemAdmin**).

    - In real-time tools: Select **System > Annotation Management**.

    - In **SystemAdmin**: Select the group and the Annotations page.

2. Open the **Annotation Editor**.

    - Right-click the annotation *name*, and select **Edit**. The **Annotation Editor** dialog box opens.

    - Click the **Edit** button (bottom-right).

3. Make changes. Refer to these topics for more information:

    - *Add a Line Annotation* on page 7-244

    - *Add a Shape Annotation Element* on page 7-244

    - *Add a Text Annotation Element* on page 7-245

    - *Move an Annotation* on page 7-246

    - *Change Annotation Dimensions* on page 7-247

4. OPTIONAL—Change the Annotation Name.

5. Click **Save**.

7.15.12 Layer Visibility

Map Display lets you "call out" areas of the airport (refer to *Region of Interest* on page 7-252) and show or hide visual attributes.

Select **Map Display > Layer Visibility**. There are 3 sets of information: Airport Map Layers, Region Outlines, Region Labels. Click ⊞/⊟ or double-click a group name to open or close a group.

- The airport map is assembled in layers. Select a layer to show its elements in **Map Display**. Remove the check from a layer to hide its elements.

- The Region Outlines layer gives colored edges to Aerobahn regions. Entry and exit times change for each region occupancy measurement when an aircraft moves across these lines. To change region colors, look in the Regions section of the Color Preferences window (refer to *Configure Color Settings* on page 6-2).

- The Region Labels layer can show the Aerobahn region labels in **Map Display**.

Figure 7-87. Region Layer Visibility: Labels and Outlines
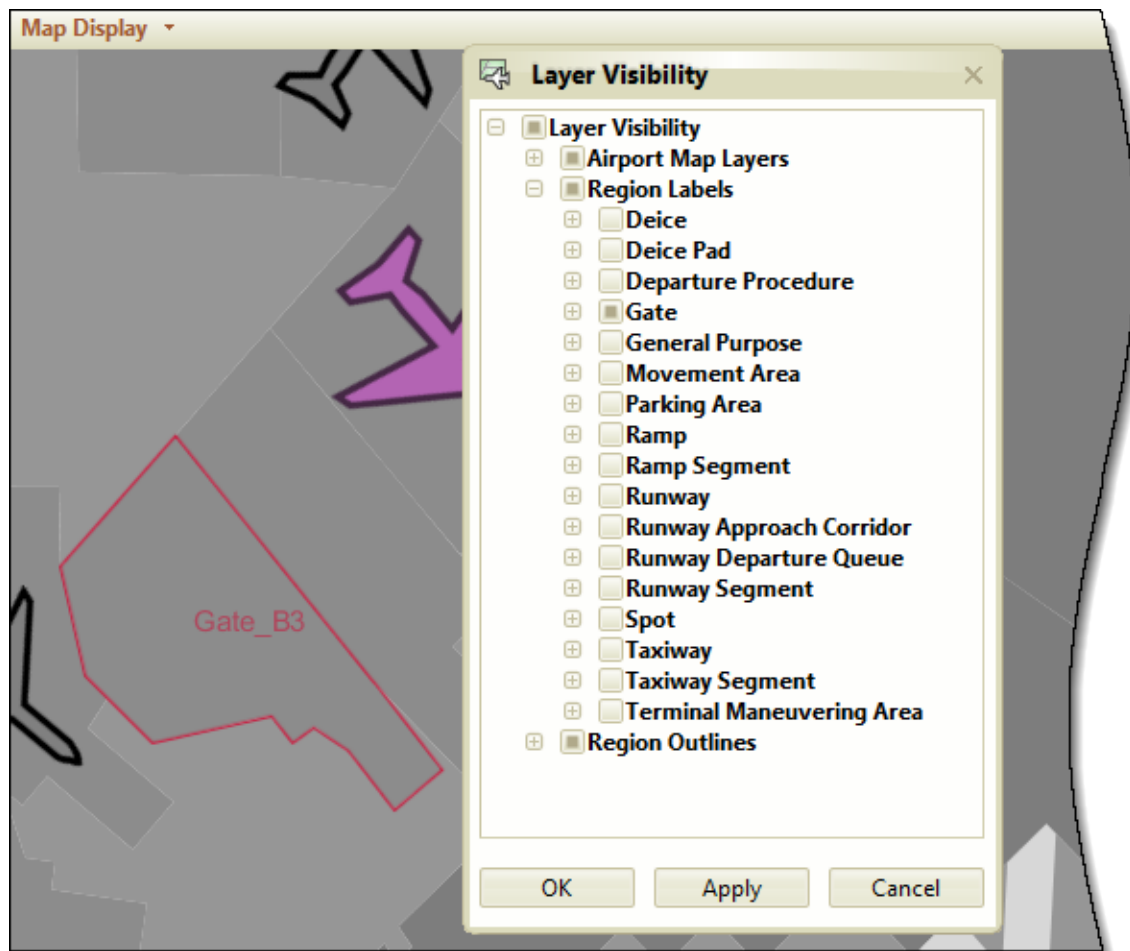
7.15.12.1 Show Map Layers

Map Display lets you "call out" areas of the airport (refer to *Region of Interest on the next page*) and show or hide visual attributes.

Show 1 layer

1. Select **Map Display > Layer Visibility**.

2. Expand the group that contains the layer to be shown.

3. Click in the box for the layer.

4. Click **Apply**.

   - If selecting from Regions, a border line shows around the selected layer.

   - If selecting from Annotations, the selected annotation layer displays.

5. When Map Layer Visibility settings are satisfactory, click **OK** to close the Preferences dialog box.

Show more than 1 layer (but not a full group)

1. Select **Map Display > Layer Visibility**.

2. Expand the group that contains the layers to be shown.

3. Select the boxes for the layers to be shown.
   ALTERNATE PROCEDURE: Select the box for a group. A check shows in the box for the group and for each of its subgroups and layers. Then, click each box that you will not show. This removes the check.

4. Click **Apply**.

   - If selecting from Regions, border lines show around the selected layers.

   - If selecting from Annotations, the selected annotation layers display.

5. When Map Layer Visibility settings are satisfactory, click **OK** to close the Preferences dialog box.

Show a group of layers

Use this instruction to show a collection of layers (such as all de-ice regions).

1. Select **Map Display > Layer Visibility**.

2. Select the box for the group. A check shows in the box for the group and for each of its subgroups and layers.

3. Click **Apply**.

   - If selecting from Regions, all of its group border lines show.

   - If selecting from Annotations, all annotation layers display.

4. When Map Layer Visibility settings are satisfactory, click **OK** to close the Preferences controls.

7.15.12.2 Region of Interest

"Regions of Interest" (often referred to as "regions") are specified areas on an airport surface: movement area, runways, runway queues, ramps, gates, spots, taxiways, etc. Each region is specified so Aerobahn can calculate (through "target processing") the location of a target as it moves across the airport surface.

You can show region outlines and/or labels in **Map Display**.

➡ Zoom in to read region labels.

7.15.13 Record Activity in Map Display and Extended Range Map Display

You can record **Map Display** and **Extended Range Map Display** action in live and playback modes and save the recording in Windows Media Video (WMV) format.

1. Zoom and pan to get the best view for recording. The recording tool records all that you see.

2. Select **[Map Display/Extended Range Map Display] > [Record Map Display/Extended Range Map Display]**. The Record Map Display window opens.

3. From the Audio Source dropdown menu, select an audio source.

4. Click **Start Recording** to start recording.
   The Save window opens.

5. Enter a file name.

6. Click **Save**.

7. Click **Stop Recording** to stop.

8. Click **Close** to exit.

7.15.14 Context-Menu Controls in Map Display and Extended Range Map Display

You can do many tasks if you right-click the map surface or target icons in **Map Display** and right-click target icons in **Extended Range Map Display**. When you right-click these areas, a menu opens.

> **ℹ NOTE:** These menus are configurable. Some menu items do not show in your Aerobahn configuration. Some menu items (e.g., Start/Schedule/Edit Tow) may not be useful in **Extended Range Map Display**.

After a manual data field has been added to a flight, the context menu replaces "Add" with "Edit" and "Delete."

Table 7-33. Map Display Context-Menu Options

Menu Item	Description	Right-click on...				
		Map	**Inbound Target**	**Outbound Target**	**Persisted Target***	**Vehicle**
<workflow state>	Workflow and Workflow States are site-specific controls. A workflow state describes conditions that can trigger a rule (refer to *Workflows and Workflow State Sets* on page 9-28.		X	X	X	
Purge All Persisted Targets	Removes all persisted targets from active Aerobahn tools and from playback data at the corresponding time of removal. This action removes all persisted targets from the system (refer to *Remove Persisted Targets from Map Display* on page 7-239.	X				
Add Persisted Aircraft	Puts a persisted target in any persistence region (refer to *Add a Persisted Target to Map Display* on page 7-233).	X				

Table 7-33. Map Display Context-Menu Options (continued)

Menu Item	Description	Right-click on...				
		Map	Inbound Target	Outbound Target	Persisted Target*	Vehicle
Add Placeholder	Makes a placeholder that can be managed in the Tow Management tool. ℹ️ **NOTE:** A placeholder does not show on Map Display. It shows only in Watch List Viewer and in Selection Details.	X				
Add Scratch Pad Text	If Scratch Pad Text is configured in the data block or mouseover, enter text to be displayed. A site can have "Scratch Pad Text (Public)" and "Scratch Pad Text" (refer to *Add Scratch Pad Text* on page 7-227).		X	X	X	
Clear Milestones	When you clear A-CDM milestones, Aerobahn takes a flight out of the departure sequence (refer to *Clear A-CDM Milestones* on page 7-145).		X	X	X	
Manage Flight	The values you enter in the **Manage Flight** dialog box become part of a flight's information and can show in **Selection Details** or in a data block or mouseover. These "manual" values affect Aerobahn predictions, workflows, and workflow states (refer to *Enter Data in the Manage Flight Dialog Box* on page 7-224).		X	X	X	

Table 7-33. Map Display Context-Menu Options (continued)

Menu Item	Description	Right-click on...				
		Map	Inbound Target	Outbound Target	Persisted Target*	Vehicle
Reset De-icing	Resets the de-ice state and the recorded de-ice locations and times (refer to *Flight Progress* on page 7-165			X	X	
Hide/Stop Hiding Data Block	Toggles display of the data block for a selected target (refer to *Show, Hide, and Move Data Blocks in Map Display* on page 7-229).		X	X	X	
Hide Rule Actions	Overrides the effects triggered by a rule. Shows in the menu only when a rule is active for a selected target.		X	X	X	
Move Persisted Target	Use to drag a selected persisted target from one persistence region to a different persistence region (e.g., gate to parking area). This action is useful when you know that a persisted target has moved to a region (refer to *Move a Persisted Target (Mouse)* on page 7-236.				X	
Remove Persisted Target	Delete a persisted target from a region. Use when it is known that a persisted target has gone from the persistence region (refer to *Remove Persisted Targets from Map Display* on page 7-239).				X	

Table 7-33. Map Display Context-Menu Options (continued)

Menu Item	Description	Right-click on...				
		Map	Inbound Target	Outbound Target	Persisted Target*	Vehicle
Cancel Flight	Tells the Aerobahn system that a flight (with a carrier code that is listed in the Carrier List to which you have access) has been canceled (refer to *Enter Data in the Manage Flight Dialog Box* on page 7-224).		X	X	X	
Remove Flight	Removes a flight (with a carrier code that is listed in the Carrier List to which you have access) from the system (refer to *Remove a Flight* on page 7-265.		X	X	X	
Correct Flight ID	This advanced feature lets you to give a flight ID that overrides the flight ID that Aerobahn gave to a target (refer to *Correct a Flight ID* on page 7-261.		X	X	X	
Correct Linked Flight	Usually Aerobahn correctly attaches an outbound flight to its inbound flight. If it is necessary, you can make a change to inbound-outbound link (refer to *Make a Correction to a Flight Link* on page 7-262.		X	X	X	

Table 7-33. Map Display Context-Menu Options (continued)

Menu Item	Description	Right-click on...				
		Map	Inbound Target	Outbound Target	Persisted Target*	Vehicle
Request Compliance Override	The status indicator in **Departure Metering** shows compliance status, and changes if the compliance status changes. You can monitor responses in **Request Response Manager** (refer to *Request a Compliance Override* on page 7-71.			X		
Override Metering Compliance Status	Sets the compliance status of any flight with an Actual Movement Area Time (AMAT) (refer to *Set Metering Compliance Status* on page 7-73.			X	X	
Add Manual AMAT	Opens the Add Manual AMAT dialog box. Use to add a manual AMAT if surveillance did not "see" the target when the target entered the movement area (refer to *Set Actual Movement Area Time* on page 7-142).			X	X	
Add Manual ATOT	Opens the Add Manual ATOT dialog box. Use to add a value for ATOT (Manual) when you must set the value of the wheels up time (refer to *Set Actual Take Off Time* on page 7-140).			X	X	
Add Manual TSAT	Opens the Add Manual TSAT dialog box. Enter a value that overrides the PSAT (refer to *Set Target Startup Approval Time* on page 7-136).			X	X	

Table 7-33. Map Display Context-Menu Options (continued)

Menu Item	Description	Right-click on...				
		Map	Inbound Target	Outbound Target	Persisted Target*	Vehicle
Set Flight Priority (ATC) to Active / Inactive	Select Flight Priority (ATC) **Active** to have Aerobahn re-evaluate the position of that flight in the departure sequence so that the selected flight can occupy an earlier slot in the sequence than flights with an "Inactive" Flight Priority (ATC) (refer to *Use the Context Menu to Set Flight Priority* on page 7-266.			X	X	
Set Flight Priority (Carrier) to Active / Inactive	Select Flight Priority (Carrier) **Active**, to have Aerobahn re-evaluate the position of that flight in the departure sequence so that the selected flight will occupy an earlier slot in the sequence than flights from the same carrier group with an "Inactive" Flight Priority (Carrier) (refer to *Use the Context Menu to Set Flight Priority* on page 7-266).			X	X	
Suspend Flight Plan / De-suspend Flight Plan	When Aerobahn is in Pre Departure Sequencer (PDS) mode, you can suspend the flight plan for an outbound flight (refer to *Suspend a Flight Plan* on page 7-266).			X	X	

Table 7-33. Map Display Context-Menu Options (continued)

Menu Item	Description	Right-click on...				
		Map	Inbound Target	Outbound Target	Persisted Target*	Vehicle
Add Taxi Waypoints	The **Add Taxi Waypoints** and the **Edit Taxi Waypoints** tools let you change the Aerobahn-predicted taxi route and predicted taxi time (including the ETOT or EIBT) (refer to *Edit Taxi Waypoints* on page 7-281.		X	X	X	
Start/Schedule/Edit Tow	Select **Start/Schedule/Edit Tow** to open the **Tow Management** tool (refer to *Manage Towing* on page 7-268).	X	X	X	X	
Remove Tow	Right-click a scheduled tow. Then, select **Remove Tow** (refer to *Remove Tow* on page 7-273).		X	X	X	
Complete Tow	Right-click a scheduled tow. Then, select **Complete Tow** (refer to *Complete a Tow* on page 7-272		X	X	X	

Table 7-33. Map Display Context-Menu Options (continued)

Menu Item	Description	Right-click on...				
		Map	Inbound Target	Outbound Target	Persisted Target*	Vehicle
Unfreeze TSAT	When the carrier code of a selected flight shows in your Carrier List for Proprietary Data Access, you can generate a new Target Startup Approval Time for that flight (refer to *Set Target Startup Approval Time* on page 7-136) . **NOTE:** After the "Unfreeze" command is made, the newly generated TSAT is frozen.			X		
Mark/Unmark as Tow Vehicle	Marks/unmarks a vehicle as a tow vehicle (refer to *Manage Link Between Tow Vehicle and Aircraft* on page 7-277) .					X
Link/Unlink Tow Vehicle to Aircraft	Links a tow vehicle to aircraft/Unlinks a tow vehicle from aircraft (refer to *Manage Link Between Tow Vehicle and Aircraft* on page 7-277) . * Persisted targets show in Map Display only.					X

7.15.14.1 Correct a Flight ID

⚠️ **CAUTION:** Use **Correct Flight ID** only to correct an incorrect flight ID of a selected flight.

ℹ️ **NOTE: Correct Flight ID** allows you to assign a new flight ID that overrides the flight ID that Aerobahn gave to a target. To use it, you must have "Correct Flight ID" permission. Permission is enabled in **System Administration > Settings and Permissions**. **Correct Flight ID** is in the **Launch TaxiView > Tools** group.

If the flight ID of a target is incorrect:

1. Right-click the target or the row in a table that represents the target or flight, and select **Correct Flight ID**. (**Correct Flight ID** is available only if you have permission to use it.) The **Manage Flight Correction** dialog box opens. The (incorrect) flight ID associated with the selected target is in parentheses.

2. Select a new flight correlation:

   - If you find the correct flight ID in the list of flights, select it.

   - If you do not find the correct flight, select **Automatically choose flight for this target.**

     > **ℹ NOTE**: This "automatic" selection is made from available flight IDs. The search does not include the assigned, but incorrect, flight ID.

3. Click **OK**. If flight IDs are displayed, the new flight ID displays.

Monitoring Corrections

You can create a rule that identifies flights that have been corrected through the **Manage Flight Correction** dialog box.

1. Create a rule (refer to) that uses the following statement: "Is a Manually Corrected Flight is true."

2. Define actions (e.g., send entries to a **Watch List**) that enable you to monitor and report on flights that have been changed.

7.15.14.2 Make a Correction to a Flight Link

> **ℹ NOTE:** You can also correct a flight link in **Scheduled Flight Management** (refer to *Use Scheduled Flight Management* on page 4-90).

Usually Aerobahn correctly attaches an outbound flight to its inbound flight. If it is necessary, you can make a change to inbound-outbound link.

1. Right-click a flight in **Map Display** or **Watch List Viewer**, or **Scheduled Flight Management**.

2. Select **Correct Linked Flight**. The Linked Flight Correction dialog box opens.

   > **ℹ NOTE**: "Automatically Linked Flight" data may not show for the selected flight. The state of these fields may not show the correct link state.

3. Select the correct flight from the **Linked Flight Candidates**.

4. Click **Override Flight Link**.

To keep the link shown in **Automatically Linked Flight**, click **Make No Change**.

7.15.14.3 Apply or Change a Workflow Transition

You can use workflows and workflow transitions to help collaborative decision making and to control operations.

You set up and access workflows and workflow transitions in **SystemAdmin**. You can apply a workflow condition only after a workflow has been set up and you have access (refer to *Make a Workflow Accessible in the Workspace* on page 9-37).

If you have access to workflow functions, you see workflow transition selections when you right-click targets in real-time tools. You also see Workflow Transition selections when you set up function keys (**Settings > Hotkey Settings**).

To apply a workflow,

- *Set a Workflow Transition with Right-Click* below
- *Set a Workflow Transition with a Hotkey* on the next page

7.15.14.3.1 Set a Workflow Transition with Right-Click

> **ℹ NOTE:** This procedure transitions only one flight at a time.

1. Right-click the flight target that requires a workflow transition. A menu opens.

2. Select the workflow condition to which the flight target should transition. The workflow condition changes immediately, or a dialog box opens through which you make a change (e.g., TMA Release Time).

You can also set workflow states with this method:

7.15.14.3.2 Set a Workflow Transition with a Hotkey

You can press a hotkey to change one flight or more than one flight from one workflow condition to a different condition (refer to *Configure Hotkey Settings on page 6-23*).

You can also set workflow states with this method:

Apply or Change a Workflow Transition: Start with the Hotkey Search

1. Set up a hotkey for a workflow condition.
2. Press the hotkey assigned to the workflow change. The Search dialog box opens.
3. Enter search criteria.
4. Select the flight(s) to transitioned in the Results pane. The dialog box will identify the number of flights that transition to the new workflow condition.
5. Click **Apply**, or press ENTER to assign the new workflow condition.

Apply or Change a Workflow Transition: Start with a Selected Target

This procedure lets you select one target or more than one target in a real-time tool. You then press a key to start the workflow transition.

> **NOTE:** This procedure works in a real-time tool where individual targets can be selected.

1. Set up a hotkey for a workflow condition.
2. Select the target(s) to which you will apply the workflow transition.
3. Press the hotkey to make the workflow transition.

➡ For some transitions, you set up two hotkeys. For example, in a Hold, you set up one key for Hold and one key for Release/Push.

7.15.14.4 Cancel a Flight

Cancel Flight keeps the flight in the schedule but in the canceled state. This is the same as if you have canceled a flight in **Scheduled Flight Management** (refer to *Use Scheduled Flight Management* on page 4-90).

1. Right-click the target or the row in a table that represents a target or a flight.
2. Select **Cancel Flight**.
3. Click **Yes** to confirm.

7.15.14.5 Remove a Flight

You can remove a flight (with a carrier code that is listed in the Carrier List to which you have access) from the system. When you *remove* a flight from the system, the flight record is erased. When you *cancel* a flight, Aerobahn keeps a record of the flight.

1. Right-click the target.
2. Select **Remove Flight**.
3. Click **Yes** to remove the flight and erase the flight record.

7.15.14.6 Set Flight Priority

You can manually override the priority status assigned to an outbound flight with the Flight Priority control. You can change the flight priority to Active from a context menu or with a hotkey action.

When you select Flight Priority (ATC) **Active**, Aerobahn evaluates the position of that flight in the departure sequence. Aerobahn then assigns the selected flight to an earlier slot in the sequence than flights with an "Inactive" Flight Priority (ATC).

When you select Flight Priority (Carrier) **Active**, Aerobahn evaluates the position of that flight in the departure sequence. Aerobahn then assigns the selected flight to an earlier slot in the sequence than flights from the same carrier group with an "Inactive" Flight Priority (Carrier).

7.15.14.6.1 Use the Context Menu to Set Flight Priority

1. Right-click an outbound flight in a real-time tool to open the context menu.

2. Select **Set Flight Priority... to Active**. This change is made.

   ℹ **NOTE**: The priority status toggles from "Active" to "Inactive" so that you can change your decision.

7.15.14.6.2 Use a Hotkey to Set Flight Priority

1. Configure a hotkey (refer to *Configure Hotkey Settings* on page 6-23).

   ℹ **NOTE**: Flight Priority (ATC) and Flight Priority (Carrier) are in the Data Entry group.

2. Press the function key configured to start the Set Flight Priority function. The Flight Priority (ATC) dialog box opens.

3. Enter part of the Flight ID in the Search field to put options in the Results field.

4. Select the correct flight in the Results field.

5. Select **Active** in the Flight Priority (ATC) menu to make the flight active.

6. Click **Apply**.

7.15.14.7 Suspend a Flight Plan

ℹ **NOTE:** You can suspend and de-suspend a flight plan only when Aerobahn uses the Pre Departure Sequencer (i.e., Aerobahn is in PDS mode).

Right-click Method

1. Right-click an outbound flight.

2. Select **Suspend the Flight Plan**. A dialog box informs you that a generated TSAT or TTOT is cleared when you suspend the flight plan.

3. Click **Yes** to suspend the flight plan (or **No** to cancel the action).

When you suspend the flight plan, the "Has Suspended Flight Plan" data field for that flight shows ✔.

Hotkey Method

⊕ **IMPORTANT**: Before you use the hotkey method, define the hotkey for "Has Suspended Flight Plan" (in the **Data Entry** group). Set Criteria so that direction is "Outbound Only" and set other filters as needed (refer to *Configure Hotkey Settings* on page 6-23).

1. Press the hotkey assigned to "Has Suspended Flight Plan."
2. Enter terms in the Search window.
3. Select the flight in the Results window.
4. Click **Apply**. A dialog box informs you that a generated TSAT or TTOT is cleared when you suspend the flight plan.
5. Click **Yes** to suspend the flight plan (or **No** to cancel the action).

When you suspend the flight plan, the "Has Suspended Flight Plan" data field for that flight shows ✔.

When all of the following conditions are satisfied, the Aerobahn Pre Departure Sequencer (PDS) can generate a Preliminary Startup Approval Time (PSAT), a Target Startup Approval Time (TSAT), and a Target Take Off Time (TTOT):

- **Flight Plan Status (ATC)** is "SCHEDULED," "FILED," "CANCELLED," or "ACTIVE."
- **Preliminary Off Block Time (POBT)** or **Target Off Block Time (TOBT)** is available.
- **Has Suspended Flight Plan** data field for the flight shows ✖ (refer to *De-suspend a Flight Plan* below).

De-suspend a Flight Plan

Refer to *De-suspend a Flight Plan* below for instructions on how to de-suspend a flight plan.

ℹ **NOTE:** A suspended flight plan is de-suspended when a manual TOBT, TSAT, or CTOT is entered for the flight.

7.15.14.8 De-suspend a Flight Plan

ℹ **NOTE:** You can suspend and de-suspend a flight plan only when Aerobahn uses the Pre Departure Sequencer (i.e., Aerobahn is in PDS mode).

Refer to *Suspend a Flight Plan* on page 7-266 for instructions on how to suspend a flight plan.

When you de-suspend the flight the flight plan, the "Has Suspended Flight Plan" data field for that flight shows ✖ .

1. Right-click a departing flight.

2. Select **De-suspend**.

3. Click **Yes** to de-suspend (that is, to restore) the flight plan (or **No** to cancel the action).

ℹ **NOTE:** A suspended flight plan is de-suspended when a manual TOBT, TSAT, or CTOT is entered for the flight.

7.15.14.9 Manage Towing

You can open **Tow Management** from these real-time tools:

- Map Display (refer to *Open Tow Management in Map Display* on the facing page).
- Watch List Viewer (refer to *Open Tow Management in Watch List Viewer* on the facing page).
- Operations Timeline (refer to *Open Tow Management in Operations Timeline* on page 7-270).

You can configure a hotkey to open **Tow Management** from these tools.

Figure 7-88. Hotkey Configuration, Start Towing
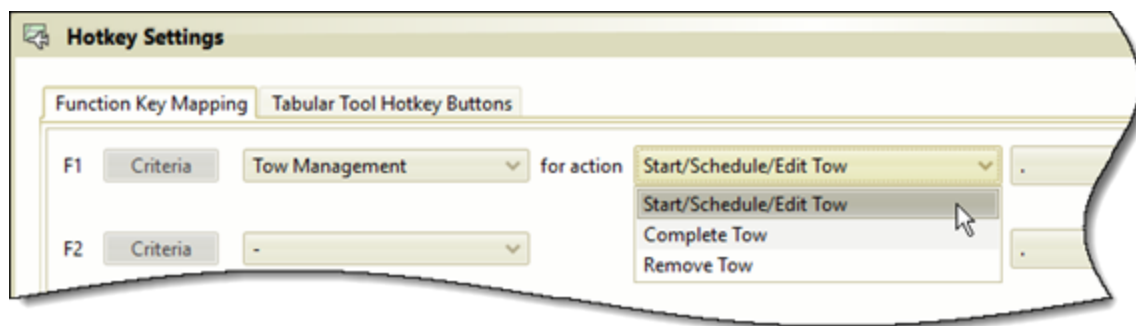
For information on how to use **Tow Management**, refer to *Start a Tow* on page 7-270.

ℹ **NOTE:** If an aircraft takes off while the target is still in a towing state, Aerobahn ends the tow.

7.15.14.9.1 Open Tow Management in Map Display

Procedure 1: Right-click on Target

1. Right-click a target icon or target data block.

2. Select **Start/Schedule/Edit Tow**. The **Tow Management** dialog box opens. The Tow Start Location is the location of the flight when you select it.

Procedure 2: Right-click on Map

1. Right-click the map.

2. Select **Start/Schedule/Edit Tow**. The **Tow Management** dialog box opens.

3. Optional—Change the search criteria.

   a. Click **Criteria**.

   b. Select filters.

   c. Click **OK**.

4. Enter a search term in the Search field.

5. Select the flight in the Results field. The Tow Start Location is the location of the flight when you select it.

Procedure 3: Hotkey

1. Select a target icon.

2. Press the hotkey configured for **Start/Schedule/Edit Tow**. The **Tow Management** dialog box opens. The Tow Start Location is the location of the flight when you select it.

7.15.14.9.2 Open Tow Management in Watch List Viewer

Procedure 1: Right-click on Target

1. Right-click the row in a table that represents a target or a flight.

2. Select **Start/Schedule/Edit Tow**. The **Tow Management** dialog box opens. The Tow Start Location is the location of the flight when you selected the target row in Watch List Viewer.

Procedure 2: Hotkey

1. Select a flight.
2. Press the hotkey configured for **Start/Schedule/Edit Tow**. The **Tow Management** dialog box opens (refer to *Start a Tow* below).

7.15.14.9.3 Open Tow Management in Operations Timeline

Procedure 1: Right-click

1. Right-click a target data block.
2. Select **Start/Schedule/Edit Tow**. The **Tow Management** dialog box opens. The Tow Start Location that shows was the location of the flight when you selected the target data block.

Procedure 2: Hotkey

1. Select a flight.
2. Press the hotkey configured for **Start/Schedule/Edit Tow**. The **Tow Management** dialog box opens. The Tow Start Location was the location of the flight when you selected the target data block.

7.15.14.9.4 Start a Tow

You can start a tow at the current time or set a time for the tow to start. When Tow Management opens, the Estimated Tow Start Time shows the current time. You can set a future value in the Estimated Tow Start Time (Manual)[1] field.

ℹ **NOTE:** After a tow starts, you can complete or remove a tow (refer to *Complete a Tow* on page 7-272 and to *Remove Tow* on page 7-273).

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[1]User-entered estimate (must be in the future) of the date and time that a tow will begin

1. Open the **Tow Management** dialog box (refer to *Manage Towing* on page 7-268).

2. Set up the tow start location with one of these methods (If the tow start location shows in Tow Management, you can proceed to step 3.):

   - Select the start location on the map in Tow Management:

     a. Zoom in on the map in the Tow Management dialog box (refer to *Use Display Controls* on page 7-240)

     b. Right-click the location where you want the tow to start on the map (refer to Figure 7-89 on the next page).

   - Select the start location from the drop down list.

3. Set up the tow end location with one of these methods:

   - Select the end location on the map in Tow Management

     a. Zoom in on the map in the **Tow Management** dialog box (refer to *Use Display Controls* on page 7-240).

     b. Click (left button) the location where you want the tow to end on the map (refer to Figure 7-89 on the next page).

   - Select the end location from the drop down list.

     ➡ Enter part or all of the destination name to speed up selection.

4. Set the Estimated Tow Start Time:

   - Use the current time (default setting)
   - Change the value for the Estimated Tow Start Time (Manual) field

5. Set the approximate time that the tow will reach its destination or duration of tow:

   ℹ **NOTE**: After a tow starts, it proceeds to the end based on the estimated end time or tow duration set in the Tow Management tool, or you can move it to the tow end location with the Complete Tow command (refer to *Complete a Tow* on the next page).

   - Select the **Estimated End Time** radio button. Then, use the calendar tool to set an estimated time.
   - Select the **Estimated Duration** radio button. Then, enter the number of minutes that the tow will be active (tow duration). When you enter a duration, the duration is added to the Actual Tow Start Time to give the Estimated Tow End Time.

6. Click **OK** to save settings and close the **Tow Management** dialog box.

ℹ️ **NOTE:** When towing status for a *persisted target* or an *outbound target without surveillance* changes to Completed, the target is moved to the specified tow end location. Only those two types of targets move.

Figure 7-89. Tow Start and End Points, Map View

Table 7-34. Tow Management, Start and End Points

1	Tow Start	Click *right* mouse button to define tow start point.
2	Tow End	Click *left* mouse button to define tow end point.

7.15.14.9.4.1 Edit a Tow

You can edit these settings in **Tow Management**:

- Estimated Tow Start Time
- Tow End Location
- Estimated Tow End Time or Duration

1. Open the **Tow Management** dialog box (refer to *Manage Towing* on page 7-268).
2. Make necessary changes (for detailed instructions, refer to *Start a Tow* on page 7-270).
3. Click **OK** to save settings and close the **Tow Management** dialog box.

7.15.14.9.4.2 Complete a Tow

After a tow starts, it proceeds to the end based on the estimated end time or tow duration set in the Tow Management tool, or you can move it to the tow end location with the Complete Tow command. Complete Tow moves the target immediately to the tow end location.

ℹ️ **NOTE: Complete Tow** works only for targets in a tow state.

1. Right-click a target that is in the tow state.

2. Select **Complete Tow**.

3. Click **OK** to confirm that you want to complete the current tow. The target moves to the tow end location specified when the tow was set up.

7.15.14.9.4.3 Remove Tow

Use **Remove Tow** to cancel a **Start Tow** command. When you *remove* a tow, Aerobahn resets data field values for the manual and surveillance tow fields.

🔲 **NOTE:** Aerobahn lets you manually remove only active tows. If there are no tows, a system message shows that Aerobahn can not remove any tows.

You can remove a tow in these ways:

- Right-click a target that is in a tow state, and select **Remove Tow**. Confirm the action.

- Right-click on Map Display (anywhere).
    - The Remove Tow dialog box opens with a list of all targets that are in tow (refer to Figure 7-90 on the next page).
    - Select a target. Then, click **Remove Tow**. Confirm the action.

- Use a Hotkey set up to remove a tow (refer to Figure 7-91 on the next page for configuration information).
    - Click a target to select it. Then, press the hotkey defined for **Remove Tow**.
    - Click anywhere on Map Display. Then, press the hotkey defined for **Remove Tow**. Select the tow to remove.

Figure 7-90. Remove Tow Dialog Box (Right-click on Map)

Figure 7-91. Hotkey Setting for Remove Tow
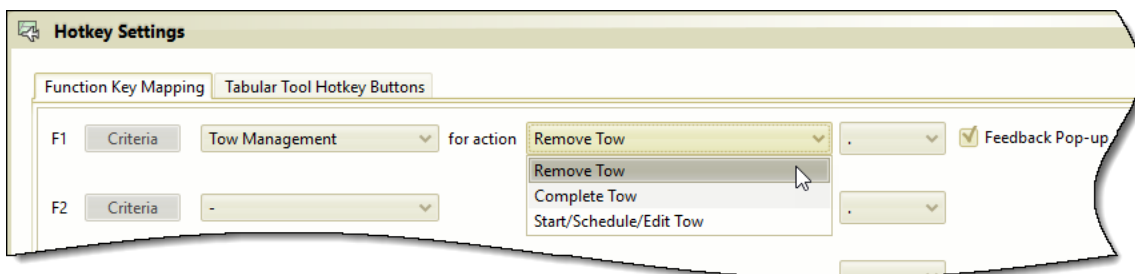
7.15.14.9.5 Add a Placeholder in Tow Management

> ℹ️ **NOTE:** A placeholder does not show on Map Display. It shows only in Watch List Viewer.

You can create a placeholder for an aircraft that is not in a watch list and that you cannot normally create a flight strip for. A placeholder lets the controller make a flight strip, put it in the proper sequence, and move it through the flight strip management system as the aircraft moves around the airport.

> ℹ️ **NOTE:** Tow Management can be configured to meet specific user needs (refer to *Tow Management Settings* on page 7-276).

1. Open Tow Management. (Refer to *Manage Towing* on page 7-268.)

2. OPTIONAL: Enter a unique identifier.

3. OPTIONAL: Select a Tow Start Location.

4. Select a Tow End Location.

5. Enter an Estimated Tow Start Time.

> ℹ **NOTE**: By default, Tow Start Time uses UTC. If you have "Display Times in the Airport Local Time Zone" selected in SystemAdmin, the Estimated Start Time uses your local time zone.

6. Enter the estimated tow duration or estimated tow end time. (One of these types was configured for use by Tow Management in Tow Management Settings.)

7. Click **OK**. Clear the warning if you want to create the placeholder with the registration that you entered.

Figure 7-92. Tow Management, Placeholder Configuration
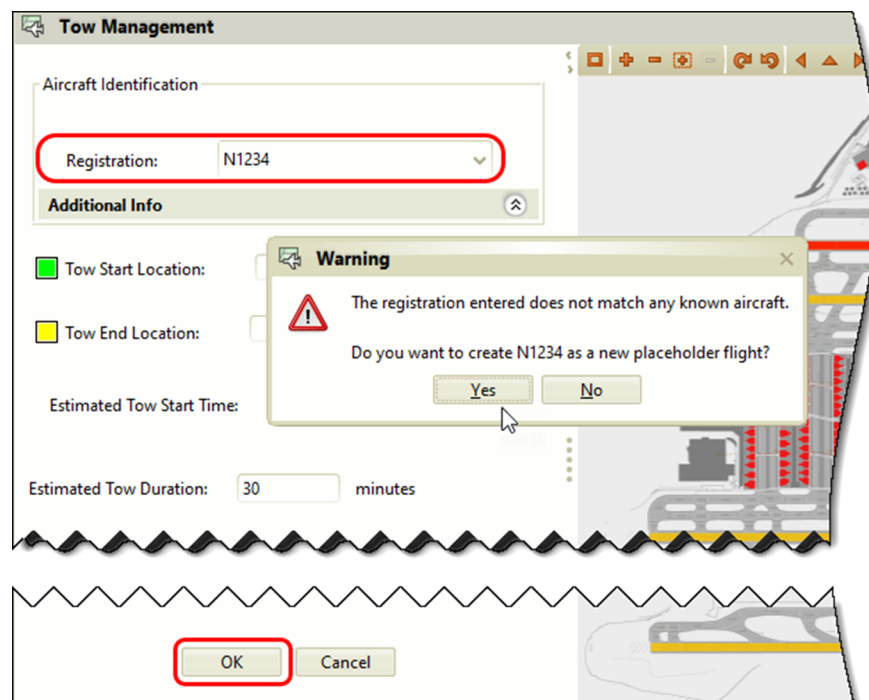
7.15.14.9.5.1 Add a Placeholder in Map Display

> ℹ **NOTE:** A placeholder does not show on Map Display. It shows only in Watch List Viewer.

You can create a placeholder for an aircraft that is not in a watch list and that you cannot normally create a flight strip for. A placeholder lets the controller make a flight strip, put it in the proper sequence, and move it through the flight strip management system as the aircraft moves around the airport.

1. Right-click on the map. A context menu opens.

2. Select **Add Placeholder**. The Add Placeholder dialog box opens.

3. Enter a unique flight identifier or registration.

4. Click **OK**. The placeholder identifier shows as Flight ID and as Registration in a Watch List Viewer that is set up to show All Flights or any Watch List that shows placeholders. If the Placeholder column is open in that Watch List, a check mark shows in that column.

🛈 **NOTE:** The operational state for a placeholder topic is "Placeholder" (PHD).

7.15.14.9.6 Tow Management Settings

Use the Tow Management Settings dialog box to configure the Tow Management Tool. The Tow Management Settings dialog box lets you identify preferences for these options:

- Aircraft Identifier
- Estimated Tow End Entry Type (Duration or End Time)
- Data fields to include in the "Additional Info" section of Tow Management
- Tow regions to include in searches

Instructions

1. Select **Settings > Tow Management Settings**. The **Tow Management Settings** dialog box opens.

2. Select the Aircraft Identifier Type.

3. Select the Estimated Tow End Entry Type.

4. Select the Additional Information Fields to show in the Tow Management tool.

5. Select the Tow Regions that should be included in searches done in the Tow Management tool.

6. Click **OK** to save settings and close **Tow Management Settings**.

7.15.14.10 Hide Rule Actions

The "Hide Rule Actions" command shows in a menu that opens when you right-click a target. It is available only when a rule is in operation for the selected target. You can override the visual effects triggered by a rule through the "Hide Rule Actions" command.

1. Right-click a target.

2. Select **Hide Rule Actions**. A list of active rules opens.

3. Select the rule(s) with actions that you will suppress for the selected target. Only the actions for selected rules are suppressed.

Your "Hide Rule Actions" override is canceled after two conditions change:

- The target no longer fills the requirements for that rule.

- The target again fills the requirements for the rule. When this happens, the target shows the visual effects set in the "actions" tab for the rule.

Refer to *Map Display Context-Menu Options* on page 7-254 for more information on context controls in **Map Display**.

7.15.14.11 Manage Link Between Tow Vehicle and Aircraft

NOTE: Aerobahn automatically attempts to create links between tow vehicles and aircraft based on their positions and states. However, you can manually create or remove a link.

Create a Link

1. Right-click a vehicle.

2. Select **Mark as Tow Vehicle**.

3. Right-click the tow vehicle.

4. Select **Link Tow Vehicle to Aircraft**.
   A cross-hair cursor shows.

5. Select aircraft to link to the tow vehicle.
   The aircraft icon moves with the tow vehicle icon.

Remove a Link

1. Right-click a tow vehicle.

2. Select **Remove Link to Tow Aircraft**.
   The aircraft icon moves back to its original position.

Unmark as Tow Vehicle

1. Right-click a tow vehicle.

2. Select **Unmark as Tow Vehicle**.
   If there is a linked aircraft, its icon moves back to its original position.

7.15.15 Add Taxi Waypoints

The **Add Taxi Waypoints** and the **Edit Taxi Waypoints** tools let you change the Aerobahn-predicted taxi route and predicted taxi time (including the ETOT or EIBT). The Aerobahn Prediction Engine (APE) calculates new taxi routes from the changes that you make in these utilities.

> ℹ **NOTE:** If you use the hotkey for **Add Taxi Waypoints**, it is possible to change the taxi routing for multiple flights. For example, you could select multiple flights, press the hotkey for **Add Taxi Waypoints**, and change the routing for all of those flights at one time.

1. Open the **Add Taxi Waypoints** tool.

   - Method 1: Right-click a target or the row in a table that represents the target or a flight

     a. Right-click an arrival or departure target or the row in a table that represents the target or flight.

     b. Select **Add Taxi Waypoints**. The tool opens.

   - Method 2: Single Flight Selected

     a. Select an arrival or departure target.

     b. Press the hotkey assigned to start **Add Taxi Waypoints**. The tool opens. The Flight ID for the selected flight shows in the Flight field.

   - Method 3: No Flight Selected (Hotkey Method)

     a. With no target selected, press the hotkey assigned to start **Add Taxi Waypoints**. A search tool opens.

     b. Enter part or all of the Flight ID of the target.

     c. Select the Flight ID in the Results List.

     d. Click **Apply**. The **Add Taxi Waypoints** tool opens. The predicted taxi path shows in one color. The taxi path that the flight has already traveled shows in a different color.

   - Method 4: Multiple Flights Selected

     - Select multiple flights in a real-time tool, such as a **Watch List Viewer**.

     - Press the hotkey that starts **Add Taxi Waypoints**. The tool opens. It tells the number of flights selected, and gives as many Flight IDs as can show in one row.

2. Click regions to set new taxi waypoints and make a new predicted routing. Click in the sequence that the target will travel. The taxi waypoints that you add are given a number to show their order in the sequence (refer to).

   ℹ️ **NOTE**: It is not necessary to click each segment in the new predicted routing. For example, in some taxiways, you can select a segment after an intersection and a segment before the next intersection. Click **Apply**. Let Aerobahn predict the routing between those 2 points. If Aerobahn does not predict the correct routing, add taxi waypoints—in the correct sequence—until Aerobahn predicts it.

3. Change sequence of taxi waypoints or delete taxi waypoints as necessary:

    a. Select a waypoint in the list.

    b. Click the buttons on the left side of the new taxi waypoints to move or delete a taxi waypoint. The sequence changes automatically.

        ℹ NOTE: Before you save a configuration, you can click a new waypoint to delete it. The sequence changes automatically.

4. Save the changes.

    ▪ Click **Apply** to make the new routing active and keep the tool open. You can make more changes.

    ▪ Click **OK** to make the new routing active and close the **Add Taxi Waypoints** tool.

Figure 7-93. New Taxi Waypoints
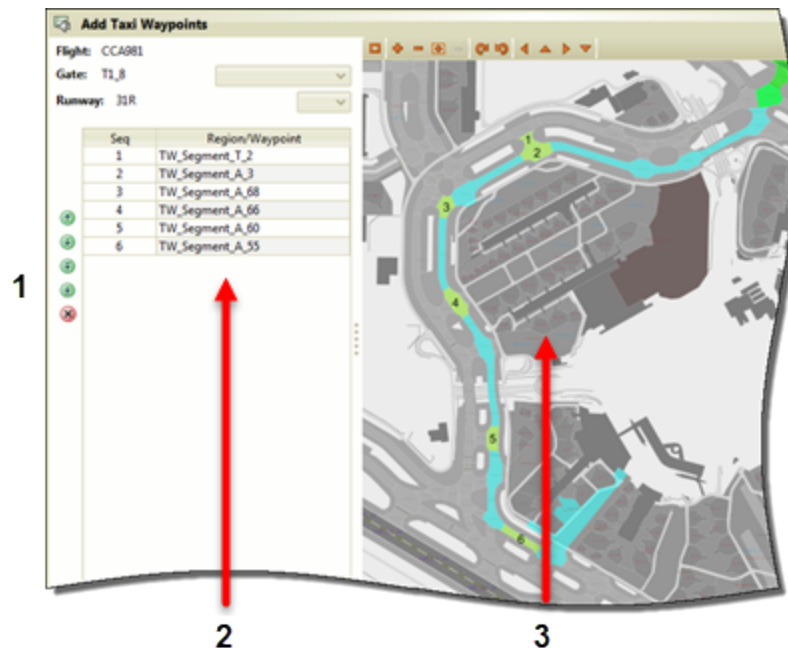
Table 7-35. Add Taxi Waypoints

Ref.	Description
1	Controls for moving and deleting new waypoints
2	New taxi waypoints. Change the sequence of taxi waypoints or delete taxi waypoints in this field.

Table 7-35. Add Taxi Waypoints (continued)

Ref.	Description
3	Click on taxiway region segments to add new taxi waypoints. Numbers show the sequence in which segments are added.

7.15.15.1 Edit Taxi Waypoints

The **Add Taxi Waypoints** and the **Edit Taxi Waypoints** tools let you change the Aerobahn-predicted taxi route and predicted taxi time (including the ETOT or EIBT). The Aerobahn Prediction Engine (APE) calculates new taxi routes from the changes that you make in these utilities.

Use **Edit Taxi Waypoints** to change waypoints set with the **Add Taxi Waypoints** utility. **Edit Taxi Waypoints** is only active after you have used **Add Taxi Waypoints** (refer to *Add Taxi Waypoints* on page 7-278).

1. Change sequence of taxi waypoints or delete taxi waypoints as necessary:

   a. Select a waypoint in the list.

   b. Click the buttons on the left side of the new taxi waypoints to move or delete a taxi waypoint. The sequence changes automatically.

      > **NOTE**: Before you save a configuration, you can click a new waypoint to delete it. The sequence changes automatically.

2. Save the changes.

   - Click **Apply** to make the new routing active and keep the tool open. You can make more changes.

   - Click **OK** to make the new routing active and close the **Add Taxi Waypoints** tool.

7.15.16 Manage More than One Map Display

You can open more than one **Map Display** to show different views of airport operations. You can configure these views differently.

Each **Map Display** operates independently. A change that you make in settings for one **Map Display** does not change the settings for another **Map Display** (refer to *Manage More than One Map Display* above).

If you make and then close more than one **Map Display** configuration, **Map Display** reopens in the order that these **Map Display** instances were closed. For example:

Assume that you open and customize—in the following order—three **Map Display** configurations: MD-A, MD-B, and MD-C. You then close each **Map Display**:

1. Close MD-C.

2. Close MD-B.

3. Close MD-A.

When you next open **Map Display**, the first **Map Display** configuration that opens is the first one you closed: MD-C. The second **Map Display** configuration that opens is the second one you closed: MD-B. The third **Map Display** configuration that opens is the third one you closed: MD-A.

If you work with two monitors at one location and later access Aerobahn using a single monitor, you can "lose" an Aerobahn workspace or floating tool. If you have one monitor at this time, and you had two monitors for your last session, how you closed that last session determines what you see. If a workspace was open on the second monitor when the session closed, that workspace can be hidden when you work on one monitor. You can move the "missing" workspace back to your monitor (refer to *Move a Workspace into View* on page 10-14).

7.15.17 Use Widgets

You can use Watch List Count and Dynamic Text widgets in Map Display.

Watch List Count widget do these:

- Show the Watch List Count
- Let you configure thresholds
- Modify the display of the count according to the thresholds

Dynamic Text Widget do these:

- Show text that you entered
- Show live information of a target

7.15.17.1 Use Watch List Count Widget

Add a Watch List Count Widget

1. Right-click in a persistence region of Map Display (but not on a target).

2. Select **Add Watch List Count Widget**.

   Count

   0 shows.

Select Source

1. Right-click a Watch List Count widget.

2. Select **Select Source**.
   The **Watch List and Rule Selection** dialog box opens.

3. Select one or a combination of Watch Lists and rules.

Configure Display Options

1. Right-click on a Watch List Count Widget.

2. Select **Display Options**.

3. Set display options.

4. Click **OK**.

Add a Threshold

1. Right-click on a Watch List Count Widget.

2. Select **Thresholds**.
   The **Thresholds**dialog box opens,

3. Select **Greater Than** or **Less Than**.

4. Click **Add Threshold**.
   The **Add Threshold** dialog box opens.

5. Enter a value for the threshold.

6. Select a time unit from the drop down menu.

7. Click in the color square to open the color selector dialog box. ("Light" and "Dark" refer to the color theme (refer to *Set a Workspace Background* on page 3-5 and to *Color Models* on page 6-14 for more information on the color selector dialog box).

> ℹ️ **NOTE:** If multiple thresholds are enabled, the text and background colors will reflect the most extreme threshold exceeded.

8. Click **OK**.
   The Thresholds dialog box opens.
   A check mark ☑ shows in front of the threshold you just added.

9. Click **OK**.

Manage Existing Thresholds

1. Right-click on a Watch List Count Widget.

2. Select **Thresholds**.
   The **Thresholds** dialog box opens.

3. Manage a threshold.

   - To disable a threshold, remove a check mark ☑ in front of the threshold you want to disable.

   - To edit a threshold, click **Edit** next to the threshold you want to edit.

   - To remove a threshold, click **Remove** next to the threshold you want to remove.

4. Click **OK**.

Configure a Visible Condition

1. Right-click on a Watch List Count Widget.

2. Select **Set Visible Condition**.
   The **Set Visible Condition** dialog box opens.

3. Select data fields, functions, and operators in the right pane and move them to the Formula field to make an Aeroscript formula (refer to *Dynamic Field Components* on page 9-51):

   - Select an item, and click Add Selected, or

   - Double-click an item

4. Click **OK**.

Position a Widget

1. Right-click a widget or in a persistence region of Map Display (but not on a target).

2. Select **Unlock Widgets**.
   ✛ shows in widgets.

3. Right-click a widget.

4. Select an anchor mode.

- Anchor to Window: This positions the widget relative to the window borders. Thus, the widget does not move along the map.

- Anchor to Map: This positions the widget relative to the map. Thus, the widget moves along with the map.

> **i NOTE:** These modes function as toggles. The context menu shows only the alternative to the current anchoring mode.

5. Adjust the positioning of a widget.

- To move, drag a widget to a new location.

- To rotate,

    a. Right-click a widget to rotate.

    b. Select **Anchor to Map** if the widget is in the Anchor to Window mode.

       ↙ ● ↘ shows above the text box.

    c. Drag ↙ ● ↘ left or right.

6. Right-click a widget or in a persistence region of Map Display (but not on a target).

7. Select **Lock Widgets**.

Remove a Widget

1. Right-click a widget or in a persistence region of Map Display (but not on a target).

2. Select **Unlock Widgets**.
   ✛ shows in widgets.

3. Right-click a widget to remove.

4. Select **Remove Widget**.

5. Right-click a widget or in a persistence region of Map Display (but not on a target).

6. Select **Lock Widgets**.

7.15.17.2 Use Dynamic Text Widget

Add a Dynamic Text Widget

1. Right-click in a persistence region of Map Display (but not on a target).

2. Select **Add Dynamic Text Widget**.

   Widget Text shows.

3. Right-click a Dynamic Text widget.

4. Select **Set Dynamic Text**.
   The **Dynamic Text** dialog box shows.

5. Enter text.

6. OPTIONAL—Add dynamic text.

   a. Click **Add AeroScript**.
      The **Add/Edit Dynamic Field** dialog box shows (refer to *Add a Dynamic Field* on page 9-49).

   b. Select data fields, functions, and operators in the right pane and move them to the Formula field to make an Aeroscript formula (refer to Figure 7-94 below for an example; *Dynamic Field Components* on page 9-51 for instructions):

      - Select an item, and click **Add Selected**, or
      - Double-click an item

   c. Click **OK**.

Figure 7-94. Dynamic Text (Example)
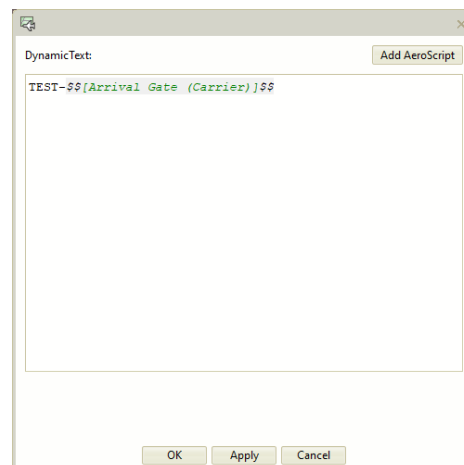
7. Click **OK**.

8. Select a target.

    The information associated with the target shows in the Dynamic Text widget (refer to Figure 7-95 below).

Figure 7-95. Dynamic Text Widget (Example)

Configure Display Options

1. Right-click on a Dynamic Text Widget.

2. Select **Display Options**.

3. Set display options.

4. Click **OK**.

Configure a Visible Condition

1. Right-click on a Dynamic Text Widget.

2. Select **Set Visible Condition**.

    The **Set Visible Condition** dialog box opens.

3. Select data fields, functions, and operators in the right pane and move them to the Formula field to make an Aeroscript formula (refer to *Dynamic Field Components* on page 9-51):

    ■ Select an item, and click Add Selected, or

    ■ Double-click an item

4. Click **OK**.

Position a Widget

1. Right-click a widget or in a persistence region of Map Display (but not on a target).

2. Select **Unlock Widgets**.

    ⬍ shows in widgets.

3. Right-click a widget.

4. Select an anchor mode.

   - Anchor to Window: This positions the widget relative to the window borders. Thus, the widget does not move along the map.

   - Anchor to Map: This positions the widget relative to the map. Thus, the widget moves along with the map.

     > **ℹ NOTE:** These modes function as toggles. The context menu shows only the alternative to the current anchoring mode.

5. Adjust the positioning of a widget.

   - To move, drag a widget to a new location.

   - To rotate,

     a. Right-click a widget to rotate.

     b. Select **Anchor to Map** if the widget is in the Anchor to Window mode.

        ↰ ● ↱ shows above the text box.

     c. Drag ↰ ● ↱ left or right.

6. Right-click a widget or in a persistence region of Map Display (but not on a target).

7. Select **Lock Widgets**.

Remove a Widget

1. Right-click a widget or in a persistence region of Map Display (but not on a target).

2. Select **Unlock Widgets**.
   ⬍ shows in widgets.

3. Right-click a widget to remove.

4. Select **Remove Widget**.

5. Right-click a widget or in a persistence region of Map Display (but not on a target).

6. Select **Lock Widgets**.

7.16 Milestone Viewer

For a selected flight, the **Milestone Viewer** shows these (Figure 7-96 on the facing page):

- workflow state milestones
- status of milestones
- favorite flight data fields

The **Milestone Viewer** lets you configure these:

- workflow state milestones
- favorite flight data fields

Figure 7-96. Milestone Viewer (Example)

Table 7-36. Milestone Viewer

Item	Description
1	Workflow state milestones and status ■ Grey: The flight has not entered the workflow state. ■ Yellow: The flight has entered, but not exited the state. ■ Green: The flight has entered and exited the state. **i** **NOTE:** You can change these default colors (refer to *Change Status Colors* on the next page).
2	Favorite flight data fields

7.16.1 Configure Milestones

1. Select **Milestone Viewer > Milestone Manager**.
   The **Milestone Manager** opens.

2. Click **Add Milestone**.

   Milestone configuration fields show.

3. OPTIONAL: Enter the milestone name in the field.

4. From the Workflow dropdown menu, select a workflow.

   > ℹ️ **NOTE:** Available workflows depend on the user permission (refer to *Make a Workflow Accessible in the Workspace* on page 9-37).

5. From the Workflow State dropdown menu, select a workflow state.

   > ℹ️ **NOTE:** To select individual workflow states within a workflow, make the workflow independent states (refer to *Make a Workflow* on page 9-29).

6. Repeat Steps 3 through 5 as necessary.

7. OPTIONAL: To move a milestone to a new location, drag the milestone handle.
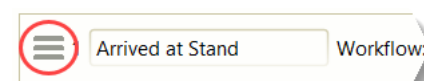
8. Click **OK**.

7.16.1.1 Change Status Colors

You can change the default status colors.

1. Select **Settings > Color Settings**.

2. Expand **Milestone Viewer** to see status colors in **Milestone Viewer**.

3. Expand a state:

   - Entered State

   - Exited State

   - No State

4. Select the color square:

   - Edge

   - Fill

   - Milestone Number

5. Select the color model.

6. Select the color.

7. Click **Apply**.

8. Repeat Steps 3 through 7 as necessary.

9. Make sure that new colors look correct and are easily distinguished.

10. Click **OK** to apply changes and close the **Color Preferences** dialog box.

7.16.2   Configure Favorite Fields

You can configure favorite data fields to show on either or both sides of the tool title bar.

1. Select **Milestone Viewer > [Left/Right] Favorite Fields**.
   The **[Left/Right] Favorite Fields** dialog box opens.

2. Set up the **Selected Fields** window to include the information that you wish to show:

   a. Click the **Filter** chooser.

   b. Select a filter category.
      The list of available fields shows only those fields in the selected category.

   c. If necessary, repeat Steps a and b to narrow down the selections.
      Only those fields that fit the selected categories show.

   d. Enter key search terms in the **Search** field.
      Only those fields that contain the search text show.

e. Select the fields to show and/or hide.

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ➡ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➡ .

- To remove one item from **Selected Fields**, select the item. Click ⬅ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⬆ .

- To remove all items from **Selected Fields**, click ⬆. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

f. OPTIONAL: Click **Line Break** to add a line of text in the Favorite Fields area.

ℹ **NOTE:** You can choose to show up to three lines of data fields. Any additional lines are ignored.

g. OPTIONAL: Enter your own labels for selected data fields.

i. From **Selected Fields**, select a data field you wish to add a label.

ii. Enter text in the **Field Label** box.

iii. Click **Apply** or select another data field to apply the label you entered.

ℹ **NOTE:** When you remove a data field from **Selected Fields**, the label you entered is removed.

3. Click **OK**.

7.17 Use the NOTAM Viewer

The NOTAM Viewer shows all Notices to Airmen that are related to your Aerobahn site.

ℹ️ **NOTE:** Refer to *Work with Table Data* on page 3-9 for instructions on how to change column layouts, how to use filters, and how to sort and export table data.

To open the NOTAM Viewer, select **Tools > NOTAM Viewer**.

Select a Source

- To choose US or ICAO NOTAMs, select **NOTAM Viewer > US/ICAO > [NOTAM type]**.

- To connect to the USA Federal Aviation Administration NOTAM System (FNS) from Aerobahn, select **NOTAM Viewer > Browse to Federal NOTAM System**.

Hide NOTAMs

You can hide NOTAMs to control the volume of data in your NOTAM Viewer.

- All NOTAMs Exceeding the Set Time Frame

    1. Select **NOTAM Viewer > Hide NOTAMs older than...**

    2. Set the number of days to keep NOTAMs.

    3. Click **OK**.
        All NOTAMs that exceed the time frame disappear regardless of their status.

- Canceled NOTAMs

    1. Select **NOTAM Viewer > Hide NOTAMs X hours after cancellation**.

    2. Set the number of hours to keep NOTAMs.

    3. Click **OK**.
        Canceled NOTAMs that exceed the time frame disappear.

Show/Hide Strikethrough on Canceled NOTAMs

1. Select **NOTAM Viewer > Canceled NOTAM Option**.

2. Select **Strikethrough On** or **Strikethrough Off**.

7.17.1 Set up a Region Closure, Warning, or Gridlock from NOTAM Viewer

You can open the **Add/Edit Region Status** dialog box and schedule a region closure, warning, or gridlock from the NOTAM Viewer. When you do this, links are made between the NOTAM, the region listing in the Region Status viewer, and Map Display. As a result, you get these benefits:

- When you select a status in Region Status, the related NOTAM and the region in Map Display show as selected.
- When you select a NOTAM that has been linked to a region status, the related row in Region Status and the region in Map Display show as selected.

To change or remove selections, just click something else. That removes the current selection.

ℹ NOTE: When a region closure, warning, or gridlock is scheduled from a NOTAM, the ICAO # or US# in the NOTAM fills the Group ID field in the Add/Edit Region Status dialog box. Also in that dialog, the NOTAM Effective Time and the Expire Time fill the Status Start and the Status End fields.

1. Select **Tools > NOTAM Viewer**.
2. Right-click the NOTAM that is driving the closure, warning, or gridlock indication.
   A context menu with **Schedule New Status** and **Clear Regions** opens.

   ℹ NOTE: You can only schedule a new status for active or scheduled NOTAMs. If you right-click a canceled NOTAM, no options will show.
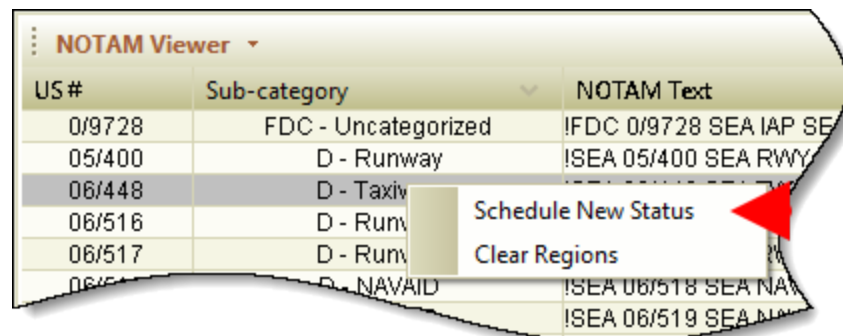
3. Select **Schedule New Status**.

    The **Add/Edit Region Status** dialog box opens.

    - The NOTAM Effective Time and Expire time fill the Status Start and Status End times.

    - The NOTAM US# or ICAO# fills the Group ID.

4. Enter a name for the status in the Status Name field.

5. Select the region(s) that the closure or warning applies to:

- in the list of Available Regions

    ○ Select a region group to select all regions in that group, or
      expand the group, and select individual items. Or, expand a
      group, and, then, remove the check from individual items in
      that group.

    ○ The selected regions are highlighted in the **Add/Edit
      Region Status** map dialog box and in **Map Display**. The
      example below shows that the Taxiway Segment is
      selected.
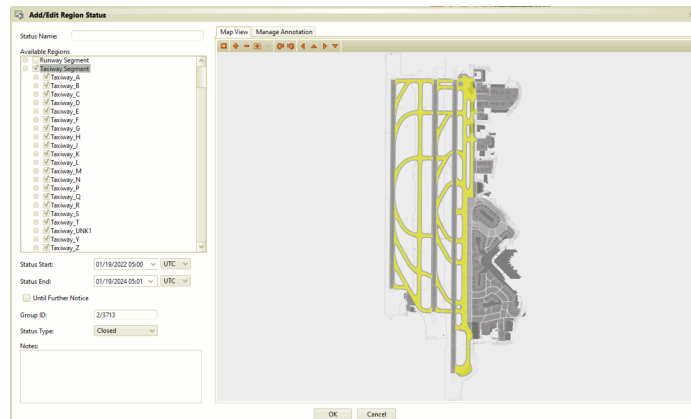
- in the map

    ○ If necessary, click to zoom in on an area until you can
      read labels.

    ○ Click in the region to which the closure, warning, or gridlock
      applies. The region changes color when it is selected. The
      region label shows a check in the Available Regions list.
      The example below shows that some taxiway segments
      and ramps are selected from the map.
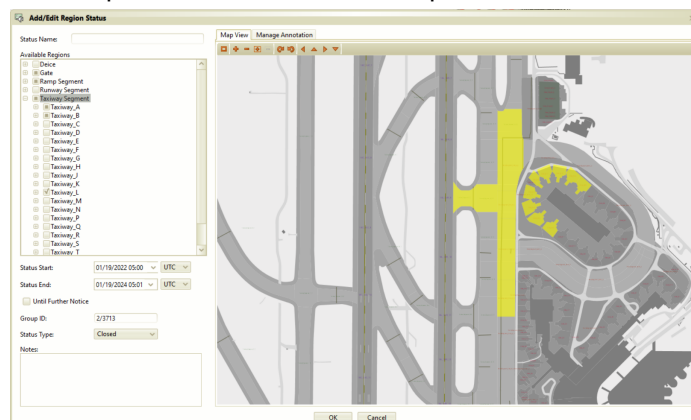
6. Select the Status Type.

7. OPTIONAL: Select **Send to TFDM** if you selected Closed or Gridlock in Step 6.

> **ℹ NOTE:** The **Send to TFDM** option is only available if the selected region(s) are non-movement area region types (e.g., gate, ramp segment, and de-ice).

8. Enter text notes.

9. Click **OK** to save settings and close the **Add/Edit Region Status** dialog box.

    If you selected **Send to TFDM** and there is a problem processing the request, an error message shows.

    ◦ If you selected **Closed** for the Status Type, refer to Table 4-3 on page 4-5 for explanations regarding an error code.

    ◦ If you selected **Gridlock** for the Status Type, refer to Table 4-4 on page 4-9 for explanations regarding an error code.

7.17.2 Clear Regions from a NOTAM

You can use these methods to disable or remove a region that is associated with a NOTAM:

- Edit the region status associated with the NOTAM (refer to *Edit a Region Status* on page 4-9).

- Clear Regions from a selected NOTAM. This option clears selected regions and any annotations from the status associated with that NOTAM.

> **ℹ NOTE:** There is no "undo" for **Clear Regions**. You can edit regions associated with a NOTAM if you need to add regions back.

1. Right-click the NOTAM row in NOTAM Viewer.
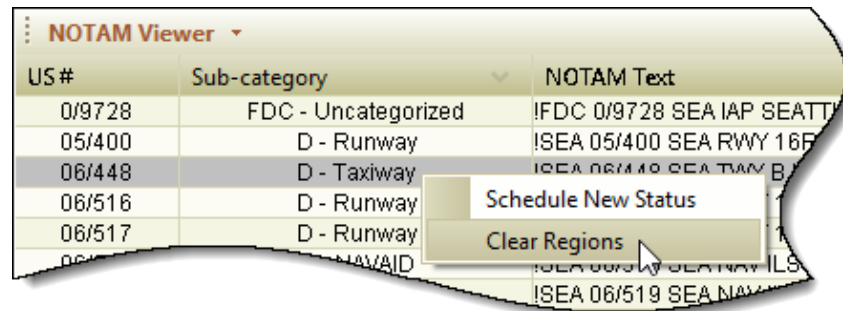
2. Select **Clear Regions**.

    Any associated regions are cleared.

7.18 Use the Selection Details Tool

When you select a target in one tool, that target is selected in all open tools. **Selection Details** supplies information about a target that you select.

> ℹ️ **NOTE:** You can select one target at a time.

1. Select **Tools > Selection Details**. The **Selection Details** window opens.
2. Select a tabbed page.
3. Click or right-click a target or its data block in a real-time tool. (If you right-click, you select the target and open a menu.)
    Selection Details shows the Auto Flight ID and supplies the available target data in table format.

The target that is selected changes color in all open tools according to the color settings. (To change colors, including the header text color in the **Selection Details** tool, refer to *Configure Search and Selection Highlight Colors* on page 6-4.)

To cancel target selection, click the airport map, or select a different target. When you cancel target selection, Aerobahn removes or changes the information in the **Selection Details** tool.

Selection Details gives tabbed access to different types of information about a target. (The tabs that you see depend on permissions set in **SystemAdmin** in **tools > Use Selection Details tool**.) **Selection Details** shows the information that Aerobahn receives through the surveillance system and other sources.

Figure 7-97. Active and Inactive Tabs in Selection Details
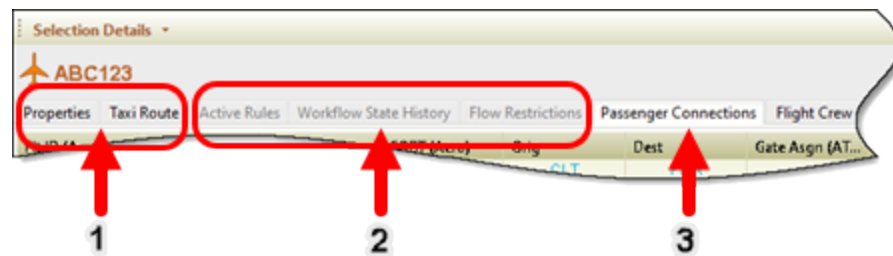
1	Tabs that have data but are not open.
2	Tabs that do not have data (are inactive at this time for this target).
3	The active (open) tab.

You can select which data fields to show and their sequence (refer to *Configure Selection Details* on page 7-306). You can also select "favorite fields" to show adjacent to the Flight ID of the selected flight (refer to *Use Favorite Fields* on page 7-307; refer to the *Aerobahn User Guide* "Glossary" for information about data fields).

> ℹ **NOTE:** Some users can set or change the value of "Manual" data and "Aerobahn" fields in **Watch List Viewer** and **Selection Details** tools (refer to *Edit Manual Data Fields* on page 10-21).

Table 7-37. Selection Details Data Pages

Tabbed Pages	Description
Properties	Properties of the flight and of the aircraft used for that flight.
Taxi Route	Regions through which the flight moved and is predicted to move. Includes the entry time, exit time, and occupancy time for each region. Rows for regions set in the **Add Taxi Waypoints** tool are identified with color.
	Click **Show Route on Map** to toggle display of the routing for the selected flight (refer to *Show Taxi Route on Map* on the next page).
Active Rules	Rules with criteria met by the selected target.
Workflow State History	Workflow state, date and time of entry into the workflow state, date and time of exit from the workflow state, the duration of the workflow state, the user ID of the user who transitioned the flight into the workflow state (Enter User), and the user ID of the user who transitioned the flight out of the workflow state (Exit User).

Table 7-37. Selection Details Data Pages (continued)

Tabbed Pages	Description
Flow Restrictions	The name, start time, and end time for active NAS delay programs at the airport.
Passenger Connections	Data related to passenger connections Connections and related connection information for the passengers and the crew of the flight (supplied by carrier).
Flight Crew	Crew members on the selected flight. Data for each crew member includes crew type, position, whether the crew member is operating or deadheading, restriction times, and upline/downline flight linkages.
Turn Events	A time-stamped record of each turn event associated with the flight.

Selection Details shows true-false states with icons.

Table 7-38.   Icon Descriptions

Icon	Description
✔	"True" state
✘	"False" state

Show Taxi Route on Map

Click **Show Route on Map** in the Taxi Route tab of **Selection Details** to toggle the display of predicted taxi routing and the flight taxi. Routing is identified by color, which you can set (refer to *Configure Taxi Route Colors* on the facing page).

The **Show Route on Map** function toggles when you click the button. For example, if Show Route... is active, the predicted routing and the flight taxi for the target show each time you select a new target. To stop showing routing each time you select a new target, click **Show Route on Map** to toggle the function off.

🛈 **NOTE:** On the map, taxi waypoints (regions) that you set in the **Add Taxi Waypoints** tool show in a different color than the other sections of the routing (refer to *Add Taxi Waypoints* on page 7-278).

Configure Taxi Route Colors

Set up route colors as follows:

1. Select **Settings > Color Settings** (refer to Color Models for more information on choosing colors).

    -   Set color of the predicted routing through **Regions > Highlighted Predicted Region**.

    -   Set color of the route traveled through **Regions > Highlighted Region**.

    -   Set color of the waypoints set in **Add Taxi Waypoints** in **Regions > Highlighted Manual Region**.

2. Click **OK**.

7.18.1 Use Selection Details to Select a Region in Map Display

1. Open **Selection Details**.

2. Select a target in a real-time tool.

3. Select the **Taxi Route** tab to display the list of regions through which the target goes.

4. Select a region in the Taxi Route list.

    If **Map Display** is open, the selected region shows in color. To remove highlighting, click anywhere in **Map Display**.

ℹ **NOTE:** When you cancel the selection of a highlighted region, you also cancel the selection of the target.

Configure a Highlight Color for a Region

Select one region at a time.

1. Select **Settings > Color Settings**.

2. Select color through **Regions > Selected Region**.

3. Click **OK**.

7.18.2 Use Flight Crew to Show Crew Status

> **ℹ NOTE:** Data is available on the flight crew tab for select flights only.

1. Open **Selection Details**.
2. Select a target in a real-time tool.
3. Select the **Flight Crew** tab.

The Flight Crew tab in **Selection Details** is a **Watch List Viewer** that shows flight crew data.

You can set up the Flight Crew table to show data from these data field sets:

- Crew
- Downline Flight
- Upline Flight

The Crew and Downline Flight column choosers give you default fields. You can add fields to or remove fields from these defaults.

The Upline Flight column chooser does not give you default fields. You can add or remove data fields to make a set of Upline Flight data fields.

The Crew Column Chooser shows these selected default data fields:

- Crew Position
- Operating or Deadheading
- Connection Time
- Flight Time Mandatory Off Time ("FTMOT")
- Duty Period Mandatory Off Time ("DPMOT")
- Duty Time Remaining for FA ["DTR (minutes)" for Flight Attendants]

The Downline Flight Column Chooser shows these selected default data fields:

- Downline Flight ID—These values are provided by the Flight ID (Aerobahn) if available. If Flight ID (Aerobahn) is not available, the crew data feed provides the call sign for this field.
- Flight Origination Date (Carrier)
- E/AOBT (Carrier)
- Departure Gate

You can add and remove data columns from the Flight Crew table (refer to *Add or Remove Data Columns in the Flight Crew Tab* on page 7-309).

7.18.3 Use Passenger Connections to Show Connection Information

1. Open **Selection Details**.

2. Select a target in a real-time tool.

3. Select the **Passenger Connections** tab.

Figure 7-98. Passenger Connections

The Passenger Connections tab is a **Watch List Viewer** that shows flight connections. Passenger Connections shows these default data fields:

- Flight ID (Aerobahn)—This is a flight that 1 or more passengers is scheduled for.

- C-Direction (Connection Direction)

  - Upline—Identifies the flight as the previous flight in relation to the selected flight

  - Downline—Identifies the flight as next flight in relation to the selected flight

- C-Count (Connection Count)—The number of passengers on the selected flight who are assigned to a connecting flight

- Flight Origin

- Destination for Connecting Flights

- Gate Assignment

- Scheduled In Block Time (Aero)

7.18.4 Change the Data in Watch List Viewer and Selection Details

If you have the correct permission, you can set or change the value of "Manual" data fields in **Watch List Viewer** and **Selection Details** tools (and in other table-based tools such as Gate Monitor and Departure Metering). You can change the value of "Aerobahn" data fields that get their values from those "Manual" fields in **Watch List Viewer** and **Selection Details** tools.

ℹ **NOTE:** Permission to edit "Manual" data fields is set in **SystemAdmin Settings and Permissions > Data Fields > Modify Manual Fields**. Users that have permission to edit a "Manual" field can also edit the "Aerobahn" version of that data field.

You can set Aerobahn to identify manual data fields with color ([Figure 7-99 below](#)).

ℹ **NOTE:** Data field names show in color only when "Highlight Editable Fields" setting is enabled in SystemAdmin.

Figure 7-99. Manual Data Field names in Selection Details

ℹ **NOTE:** If a <data field> (Manual) rolls up into a <data field> (Aerobahn) value (defined per the glossary), AND you have permission to edit <data field> (Manual), you can use the same procedures that you use to change <data field> (Manual) values to change the <data field> (Aerobahn) values.

Add/change a date-time with the calendar tool

If the the <data field> (Manual) or <data field> (Aerobahn) column is not already included in the table, add it before you start this procedure (refer to *Work with Table Data* on page 3-9. "Hide or Show Columns" tells how to add a column.

1. Find the flight for which you will set the <data field> (Manual).

2. Double-click the <data field> (Manual) table cell for that flight. The edit/set tool opens.

3. Click to open the calendar tool.

4. Select the date and time.

5. Click **OK**. The time and date shows.

Add/change a date-time directly

If the the <data field> (Manual) or <data field> (Aerobahn) column is not already included in the table, add it before you start this procedure (refer to *Work with Table Data* on page 3-9). "Hide or Show Columns" tells how to add a column.

1. Find the flight for which you will set the <data field> (Manual).

2. Double-click the <data field> (Manual) for a flight. The edit/set tool opens.

3. Enter the date (mm/dd/yyyy) and time (hh:mm) in the text field of the edit/set tool.

4. Click ✔ to accept the entry.

Change a field value through a menu

If the <data field> (Manual) or <data field> (Aerobahn) column is not already included in the table, add it before you start this procedure (refer to *Work with Table Data* on page 3-9). "Hide or Show Columns" tells how to add a column.

1. Find the flight for which you will set the <data field> (Manual).

2. Double-click the <data field> (Manual) or <data field> (Aerobahn). The edit/set tool opens.

3. Click to open the drop-down menu.

The available field values show.

4. Select the correct value.

To delete a manual value

Use this procedure to remove data from the "Value" column for a "Manual" field in Selection Details or Watch List Viewer. There is no Undo command for this action.

1. Select the value to delete.

2. Delete the value.

3. Confirm or cancel the change:

   - Click ✔ to confirm. The value is deleted.

   - Click ✘ to cancel the deletion.

7.18.5 Configure Selection Details

Use this procedure to select fields for the Properties tab and to decrease the amount of data that shows in the Taxi Route tab.

1. Select **Tools > Selection Details**.

2. Select **Selection Details > Preferences**. The Preferences dialog box opens.

3. OPTIONAL: Select filter(s).

4. OPTIONAL: Load a data block template.

5. Set up the Properties tab.

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ➡ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➡.

- To remove one item from **Selected Fields**, select the item. Click ⬅ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⮞.

- To remove all items from **Selected Fields**, click ⮜. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

6. Select "Show only gates, ramps, de-ice pads, taxiways, and runways" to set the Taxi Route tab to show only those regions in the table.

7. Click **OK**.

7.18.5.1 Use Favorite Fields

Favorite Fields is available in the **Selection Details** tool. Favorite Fields lets you show flight data that you select adjacent to the Flight ID of the selected flight. You can set up the sequence of fields as necessary.

Figure 7-100. Favorite Fields Location
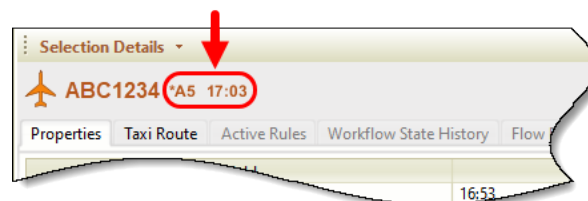
1. Select **Tools > Selection Details**.

2. Select **Selection Details > Favorite Fields**. The Favorite Fields dialog box opens.

3. Select the flight state tab: **Inbound, Outbound, Unknown, Persisted**.

4. OPTIONAL: Select filter(s).

5. OPTIONAL: Load a data block template.

6. Select the fields to show adjacent to the Flight ID of the selected flight:

   - To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ➡ or double-click. The item moves to **Selected Fields**.

   - To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➡.

   - To remove one item from **Selected Fields**, select the item. Click ⬅ or double-click. The item moves to **Available Fields**.

   - To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.

   - To move all items from **Available Fields** to the **Selected Fields** window, click ⏩.

   - To remove all items from **Selected Fields**, click ⏪. The items move to **Available Fields**.

   - To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⏫. To move an item to the bottom of the list, click ⏬.

7. OPTIONAL: Click **Line Break** to show a second line of text in the Favorite Fields area.

8. OPTIONAL: Enter your own labels for selected data fields.

9. Click **OK**. If available, the flight data that you selected shows adjacent to the Flight ID of a selected flight.

Configure Favorite Fields

A line break can help you to make 2 shorter lines of data fields in the Favorite Fields area.

Move LINE BREAK as you would move any data field.

Figure 7-101. Favorite Fields Line Break Control
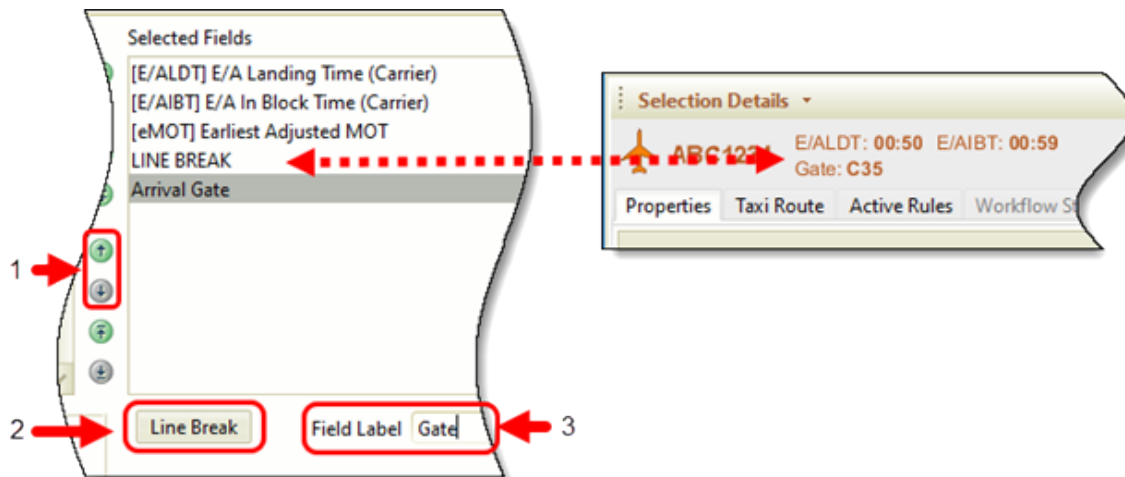
Table 7-39. Favorite Fields Line Break Control

Item	Description
1	Use these controls to change the sequence of fields.
2	Click to insert a line break between 2 fields.
3	Enter label text for a selected field. In this example, "Gate" (shown in Selection Details) is the Field Label for the Selected Field "Arrival Gate."

7.18.5.2 Add or Remove Data Columns in the Flight Crew Tab

1. Open a column chooser: **Crew Column Chooser**, **Upline Flight Column Chooser**, or **Downline Flight Column Chooser**.

   NOTE: Examples show **Crew Column Chooser**. Use the same instructions for other column choosers.

■ (a) Right-click the table header row. (b) Select a column chooser.
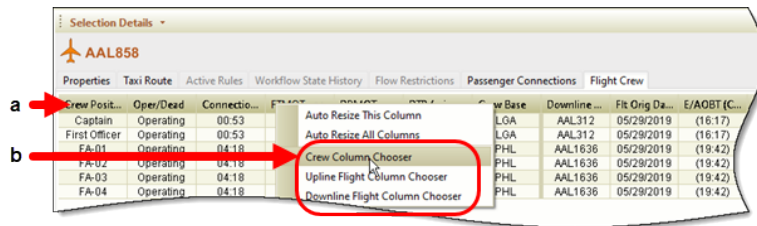
OR

■ Select **Selection Details > Flight Crew Fields > <Column Chooser>**.
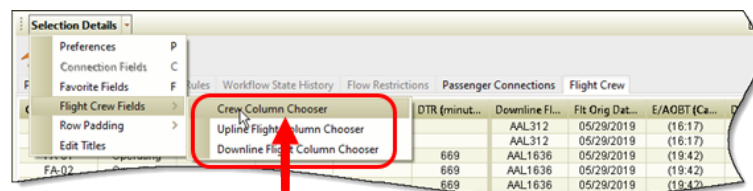
ℹ **NOTE**: The Upline Flight Column Chooser does not show default data fields in the **Selected Fields**.

2. Add or remove data field(s):

- To add 1 item to **Selected Fields**, select the item in the **Available Fields** window. Click ➔ or double-click. The item moves to **Selected Fields**.

- To add more than 1 item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➔.

- To remove 1 item from **Selected Fields**, select the item. Click ← or double-click. The item moves to **Available Fields**.

- To remove more than 1 item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ←. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ➔.

- To remove all items from **Selected Fields**, click ←. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ↓ or ↑ until it is in the correct location. To move an item to the top of the list, click ⤒. To move an item to the bottom of the list, click ⤓.

3. Click **OK** to add or remove the column(s) from the table.

7.19 Use the System Time Tool

System Time supplies a system clock that you can dock or float. You can open as many as 25 System Time tools.

ℹ️ **NOTE:** When Aerobahn is in Playback mode, **System Time** shows the playback event time.

1. Select **Tools>System Time**.

2. Select **System Time > Select Time Zone > [UTC or Local]**.

Figure 7-102. System Time Tool, Time Zone Setting
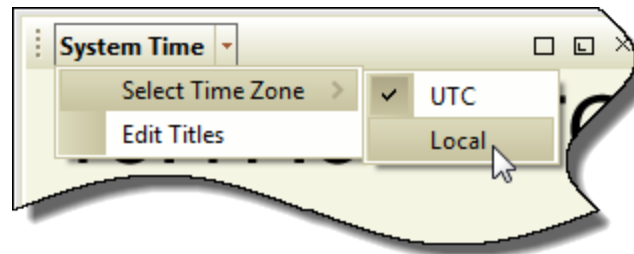
System Time can show the time in a different format than the format used in the Notification Bar (refer to *Notification Bar* on page 3-2).

When the **System Time** tool is "floating," drag a corner to change the dimension of the clock.

⚠ **CAUTION:** A floated tool can hide important information, such as icon decorations when rules are triggered and the flashing Playback PLAY message in the notification bar.

Figure 7-103. Change the dimension of the System Time Display
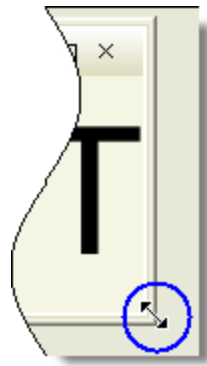
7.20 Use the Static Camera Viewer Tool

The **Static Camera Viewer** can show video streams from multiple cameras. Use this procedure to show multiple video streams.

ℹ **NOTE:** The default setting lets you show up to eight video streams at once. You can change this setting in **System Administration > Settings and Permissions > Maximum Concurrent Video Streams**.

1. Select **Tools > Static Camera Viewer**.

2. Add or remove a video stream window.

   ■ To add a window, select **Static Camera Viewer > Add Camera**.

   ■ To remove a window, click ☒ in the top-right corner of a video window.

3. Select a camera.

   a. Click the camera icon in the top-right corner of a video window. The **Select Camera** dialog box opens.

   b. Select a camera from the dropdown menu.

   c. Click **OK**.

   d. Repeat Steps a through c for all video windows.

4. OPTIONAL: Adjust the size or position of stream windows.

   ■ To resize the adjacent windows, drag the divider.

   ■ To reposition a video window, drag the title bar of the window.

   ■ To create a tabbed window with multiple cameras, drag a video window onto another window. You can realign tabs by dragging a tab onto another tab.

   ■ To separate a tab from a tabbed window, drag the tab out of the window.

5. OPTIONAL: Save the current layout.

   a. Select **Static Camera Viewer > Save Layout**.

   b. Enter a layout name.

   c. Click **OK**.

6. OPTIONAL: Load a saved layout.

   a. Select **Static Camera Viewer > Load Layout**.

   b. Select a layout from the dropdown menu.

   c. Click **OK**.

7. OPTIONAL: Delete a saved layout.

   a. Select **Static Camera Viewer > Delete Layout**.

   b. Select a layout to delete.

   c. Click **Delete**.

7.21 Use the Dynamic Camera Viewer Tool

The **Dynamic Camera Viewer** shows video streams based on camera icons selected in **Map Display** and/or based on a flight or gate selected in a table tool. Use this procedure to select a camera icon, flight, or gate.

1. Select **Tools > Dynamic Camera Viewer**.
    The **Dynamic Camera Viewer** opens.

2. Use **Map Display** or a table tool to show a video stream.

    - Map Display

        a. Configure **Map Display** to show camera icons (refer to
            Show Camera Icons in Map Display on page 7-204).

        b. Click a camera icon in **Map Display**.
            The associated video stream opens in **Dynamic Camera Viewer** in a tab labeled "Map Display - <camera name>".

            > ℹ️ **NOTE:** The "Map Display - <camera name>" tab is updated automatically when you select a different camera icon.

    - Table Tool

        a. Select **Dynamic Camera Viewer > Source Selection**.
            The **Dynamic Camera Viewer Source Selection** dialog box opens.

        b. Select a flight data field to associate a flight with a camera.

        c. Select a flight in any table tool or a gate in **Gate Monitor**.

        d. Select **Dynamic Camera Viewer > Update Cameras**.

7.22 Use Web Page Viewer

Use **Web Page Viewer** to select and show a web site.

1. Select **Tools > Web Page Viewer**.

2. Select **Web Page Viewer > Browse To...**.
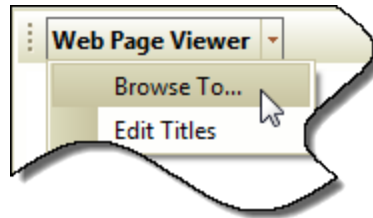
3. Select a web site.

4. Click **OK**. The web page shows in **Web Page Viewer**.

Refer to these topics for instructions on how to move and to change the dimensions of a tool in the workspace:

- *Move a Tool* on page 3-7
- *Resize a Tool* on page 3-6
- *Tab a Tool* on page 3-7
- *Float a Tool* on page 3-8

7.23 Use TFDM Substitution Manager

Use **TFDM Substitution Manager** to do these:

- Identify flights affected by a TFDM Surface Metering Program (SMP), but do not have an Actual Take Off Time (ATOT).

- Substitute Target Movement Area Times (TMATs) of flights within the same carrier group (refer to *Make a Substitution* on the facing page).

  ◦ **Swap**: Switches TMATs of two flights. TMATs of other flights do not change.

  ◦ **Insert**: Move a flight up or down in the TMAT timeline causing all flights in between the dragged flight's original position and its final position to take a later TMAT. For example, dragging a flight with a TMAT of 10:30 and inserting it before a flight with a TMAT of 8:10 will assign the 8:10 to the dragged flight, 10:30 to the flight just above the original position of the dragged flight, the TMAT of that flight to the flight just above it, and so on.

    > **NOTE:** You can only do "Swap" and "Insert" with flights in the same carrier group, that are affected by the same SMP, and do not have an Actual Movement Area Time (AMAT).

    > **NOTE:** If you insert the flight in front of one or more flights with an AMAT, it will be inserted in front of the next flight down in the TMAT sequence that does not have an AMAT.

- Identify active runways that are configured in **Airport Configuration** (refer to *Set an Airport Configuration* on page 4-40).

  ◦ An icon for an active runway not affected by a TFDM SMP shows in black and white (e.g.,).

  ◦ An icon for an active runway affected by a TFDM SMP is colored with light blue (e.g.,).
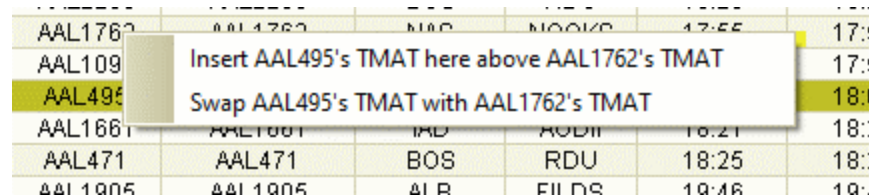
To open the TFDM Substitution Manger, select **Tools > TFDM Substitution Manger**.

Make a Substitution

1. Drag a flight onto another flight in the same carrier group, affected by the same SMP, and without an AMAT.

   A context menu with "Insert" and "Swap" options shows (see Figure 7-104 below for an example).

Figure 7-104. TFDM Substitution Manager - "Insert" or "Swap" TMATs of Flights (example)

2. Select **Insert...** or **Swap...**.

   A confirmation dialog opens.
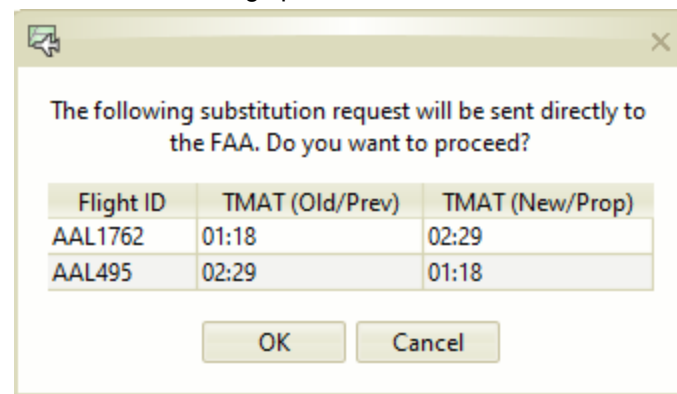
3. Confirm the change:

   - Click **OK** to send the change to the FAA.

     If there is a problem processing the change, an error message shows (refer to Table 7-40 below for more information).

   - Click **Cancel** to discard the change.

Table 7-40. TMAT Substitution Error Codes

Error Code	Description
INVALID_SCHEMA_ VERSION	Provided schema version does not match TFDM schema version.
BAD_MESSAGE_FORMAT	The message has bad formatting.
INTERNAL_ERROR	There was an issue processing the message that does not have to do with an invalid message or bad message format.

Table 7-40. TMAT Substitution Error Codes (continued)

Error Code	Description
INVALID_MESSAGE	The message has invalid data.
UNAUTHORIZED_USER_ ERROR	The user is not authorized to make substitutions for the carrier.
TMATS_IN_DIFFERENT_ SMPS	The TMATs specified are in different SMPs.
FLIGHT_PASSED_ METERING_CONTROL_ POINT	The flight already passed the metering control point.
FLIGHT_EXEMPT_FROM_ RATIONING	The flight is exempt from rationing.
INVALID_SUBSTITUTION_ TIMES	The substitution times specified are invalid.
SERVICE_DISABLED	The TFDM facility does not support Flight Substitution requests.

7.24 Combine Flights

Aerobahn gets flight data from more than one source. In normal situations, Aerobahn combines that data to make a complete data file for each flight. In some situations, Aerobahn cannot combine the data from the separate data sources.

When Aerobahn cannot automatically combine data, use **Combine Flights** to combine flight records for a flight.

The Combine Flights menu item shows in the right-click menu only when *all* of these conditions are true:

- The user has permission for this feature (applications/taxiView/tools/combineFlights)
- The flight has either—but not both—ATC data or Carrier data
- The flight is inbound or outbound compared to the local airport
- The user has proprietary data access to the target

Instructions

1. Right-click on a flight in a table tool.

   ▪ The flight has either ATC data or Carrier data, but not both.

   ▪ The flight is inbound or outbound compared to the local airport.

2. Select **Combine Flights**.

3. Select flight from the list of **Flight Combination Candidates**.

4. Click **Combine Flights**. To reject all items in the list, click **Make No Change**.

7.25 Show Status Lights

When you make a rule (refer to *Make a Rule* on page 4-75), you can set up "Status Lights," a color dot that shows when a flight completes rule requirements. You can configure the color of the status light and the tool tip text.

You must configure tools to show the Status Lights data field.

Status light fields show in these tools:

▪ Selection Details

▪ Watch List Viewer

▪ Departure Metering

▪ De-icing Manager

7.25.1 Selection Details: Show Status Lights

1. Open the Column Chooser dialog box.

   ▪ Select **Selection Details > Connection Fields**.

   ▪ Right-click on a column heading, and select **Column Chooser**.

2. Click the Filter button (refer to Figure 7-105 on the next page).

3. Select **Status Lights** from the "Other Filters" list.

4. Move the necessary Status Light field(s) from Available Fields to Selected Fields.

5. Click **OK**.

Figure 7-105. Filter button

7.25.2 Watch List Viewer: Show Status Lights

1. Open the Column Chooser dialog box.
   - Select **[tool name] > Column Chooser**.
   - Right-click on a column heading, and select **Column Chooser**.
2. Click the Filter button.
3. Select **Status Lights** from the "Other Filters" list.
4. Move the necessary Status Light field(s) from Available Fields to Selected Fields.
5. Click **OK**.

7.25.3 Departure Metering: Show Status Lights

1. Open the Column Chooser dialog box.
   - Select **[tool name] > Column Chooser**.
   - Right-click on a column heading, and select **Column Chooser**.
2. Click the Filter button.
3. Select **Status Lights** from the "Other Filters" list.
4. Move the necessary Status Light field(s) from Available Fields to Selected Fields.
5. Click **OK**.

7.25.4 De-icing Manager: Show Status Lights

1. Right-click on a column heading.
2. Select **Column Chooser**. The Column Chooser dialog box opens.
3. Click the Filter button (refer to 7.25.4 above).
4. Select **Status Lights** from the "Other Filters" list.
5. Move the necessary Status Light field(s) from Available Fields to Selected Fields.
6. Click **OK**.

7.26 Use Drag Actions

If you have the correct permission (refer to *Enable Drag Actions on the next page*), you can drag a target to do these actions:

- Move Persisted Target
- Set Assigned Spot (Manual)
- Set Gate Assigned (Manual)
- Set Runway Assigned (Manual)
- Set Predicted De-ice location (Manual)

7.26.1 Control Drag Actions

You can drag a target to do an action. To control drag actions:

1. Select **Map Display > Drag Action Settings**.
2. Put a check mark to drag actions to enable.
3. OPTIONAL: To enable a pop-up notification, put a check mark to **Feedback Pop-up** next to the enabled drag action (refer to Figure 7-106 below for an example).
4. Click **OK**.

Figure 7-106. Drag Action — Feedback Pop-up (Example)
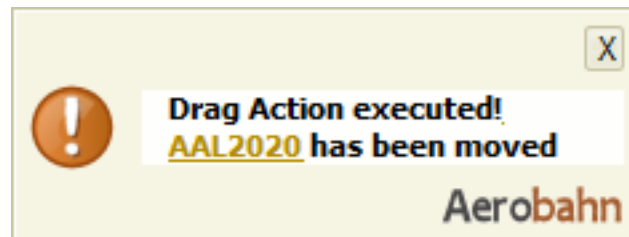
7.26.2 Select a Drag Action

If you drag a target, an action pop-up with selections shows.

For example, if you try to drag a persisted target to a region where both the "move" and "set" drag actions are enabled, Figure 7-107 on the next page shows.

Figure 7-107. Drag Action Selection — Multiple Actions (Example)
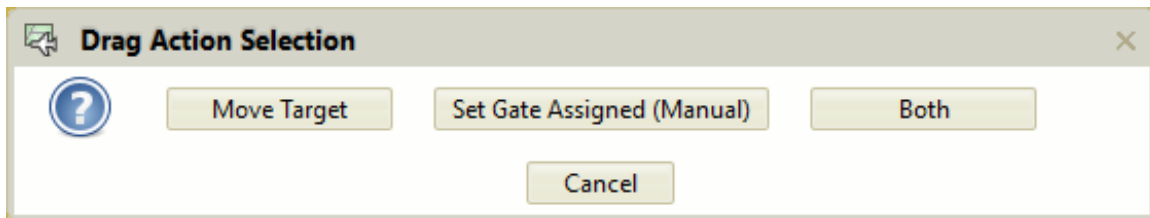
If you try to drag a target to a region with only one drag action enabled, Figure 7-108 below shows.

Figure 7-108. Drag Action Selection — Single Action
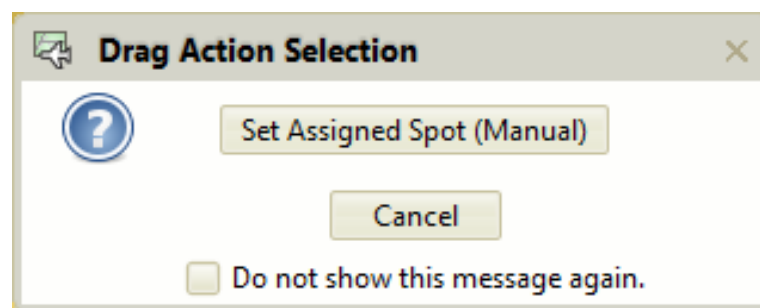
If you try to drag a target to a region without any available drag actions, 🚫 will show. If you drop the target, the error message shows (refer to Figure 7-109 below).

Figure 7-109. Invalid Drag Action
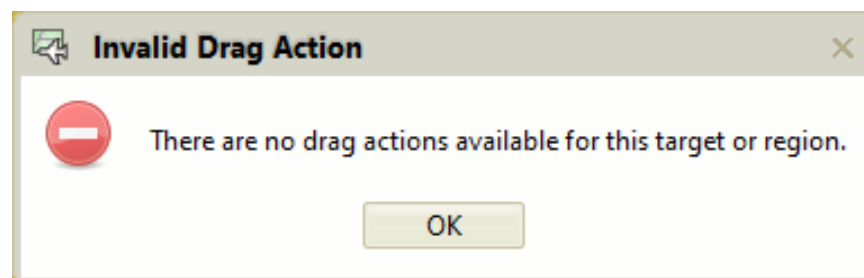
7.26.3 Enable Drag Actions

ℹ **NOTE:** A use with the correct permissions must enable these features so that others can use them.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. Select **User Administration > settings and permissions**.
3. Select the **Settings and Permissions** tab.

4. Under **Advanced User Settings**, click **Select** next to **Carrier List for Proprietary Data Access (GNV = General Aviation)**.

5. Move the carrier code(s) of the targets which should have drag actions available to the **Available Carrier Codes** window.

6. Select (put a check in the box) **Launch TaxiView > Tools > Use Map Display Tool > Modify Map Display Settings > Toggle Drag Actions**.

7. OPTIONAL: Select (put a check in the box) these items:

   - **Data Fields > Assigned Spot (Manual)**
   - **Data Fields > Gate Assigned (Manual)**
   - **Modify Manual Fields > Manual Flight De-ice Settings**
   - **Modify Manual Fields > Runway Assigned**
   - **Launch TaxiView > Tools > Use Map Display Tool > Add/Move/Remove Persisted Targets**

     i **NOTE:** You must have the permission corresponding to a drag action.

7.27 Configure Context Menu Settings

Use this procedure to configure context (right-click) menu settings in Map Display and in Extended Range Map Display. (Figures in this topic show Map Display examples.)

i **NOTE:** Tool-specific context menu settings override the workspace context menu settings.

Except for step 1, refer to for item(s) corresponding to each step.

1. Select **[Map Display / Extended Range Map Display] > Context Menu Settings**.

   i **NOTE:** To access the settings dialog box, you must have permission to edit the settings in a tool.
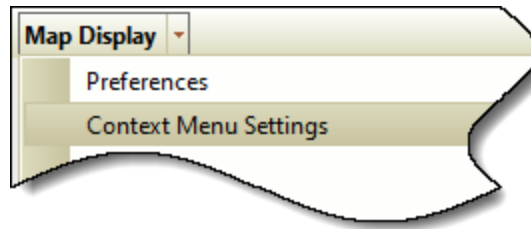
2. Select (check) to configure tool-specific workflows.
   This shows a dialog box where you can select workflows to show in the context menu.

3. Optional: Select (check) to make a nested menu (refer to for an example of nested and not nested menus).

Figure 7-110. Workflow Menu—Nested vs. Not Nested

4. If you selected **Customize for this tool** in step 2, select one of these option:

   ■ Show All Workflows: Shows all available workflows in the context menu

   ■ Show Selected Workflows: Lets you select workflows to show in the context menu.
   Selecting this option shows the workflows selection box.

5. If you selected **Show Selected Workflows** in step 4, do these to add, remove, and/or arrange the workflows:

- To add one item to **Selected Workflows**, select the item in the **Available Workflows** window. Click ➡ or double-click. The item moves to **Selected Workflows**.

- To add more than one item to **Selected Workflows**, select with CTRL-click or SHIFT-click in the **Available Workflows** window. Click ➡ .

- To remove one item from **Selected Workflows**, select the item. Click ⬅ or double-click. The item moves to **Available Workflows**.

- To remove more than one item from **Selected Workflows**, select with CTRL-click or SHIFT-click in the **Available Workflows** window. Click ⬅ . The items move to **Available Workflows**.

- To move all items from **Available Workflows** to the **Selected Workflows** window, click ⤇ .

- To remove all items from **Selected Workflows**, click ⤆ . The items move to **Available Workflows**.

- To change sequence of the **Selected Workflows** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⤒ . To move an item to the bottom of the list, click ⤓ .

ℹ️ **NOTE:** The available workflows vary depending on your permission level.

6. Select (check) to configure tool-specific actions.

7. If you selected **Customize for this tool** in step 6, select the flight state (Inbound, Outbound, Unknown, or Persisted) for which selected actions show in the context menu. Different actions can be shown in the context menu depending on the flight state of a target.

8. Do these to add, remove, and/or arrange the actions:

- To add one item to **Selected Actions**, select the item in the **Available Actions** window. Click ⊕ or double-click. The item moves to **Selected Actions**.

- To add more than one item to **Selected Actions**, select with CTRL-click or SHIFT-click in the **Available Actions** window. Click ⊕.

- To remove one item from **Selected Actions**, select the item. Click ⊖ or double-click. The item moves to **Available Actions**.

- To remove more than one item from **Selected Actions**, select with CTRL-click or SHIFT-click in the **Available Actions** window. Click ⊖. The items move to **Available Actions**.

- To move all items from **Available Actions** to the **Selected Actions** window, click ⊕.

- To remove all items from **Selected Actions**, click ⊖. The items move to **Available Actions**.

- To change sequence of the **Selected Actions** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

ℹ **NOTE:** The available actions vary depending on your permission level.

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9. Optional: Add separator(s).

    a. Click **Separator**.

    b. Click ⬆ or ⬇ to move the separator to the correct location.

10. Click **OK** to apply changes.

Figure 7-111. Tool-Specific Context Menu Settings (Procedure steps)
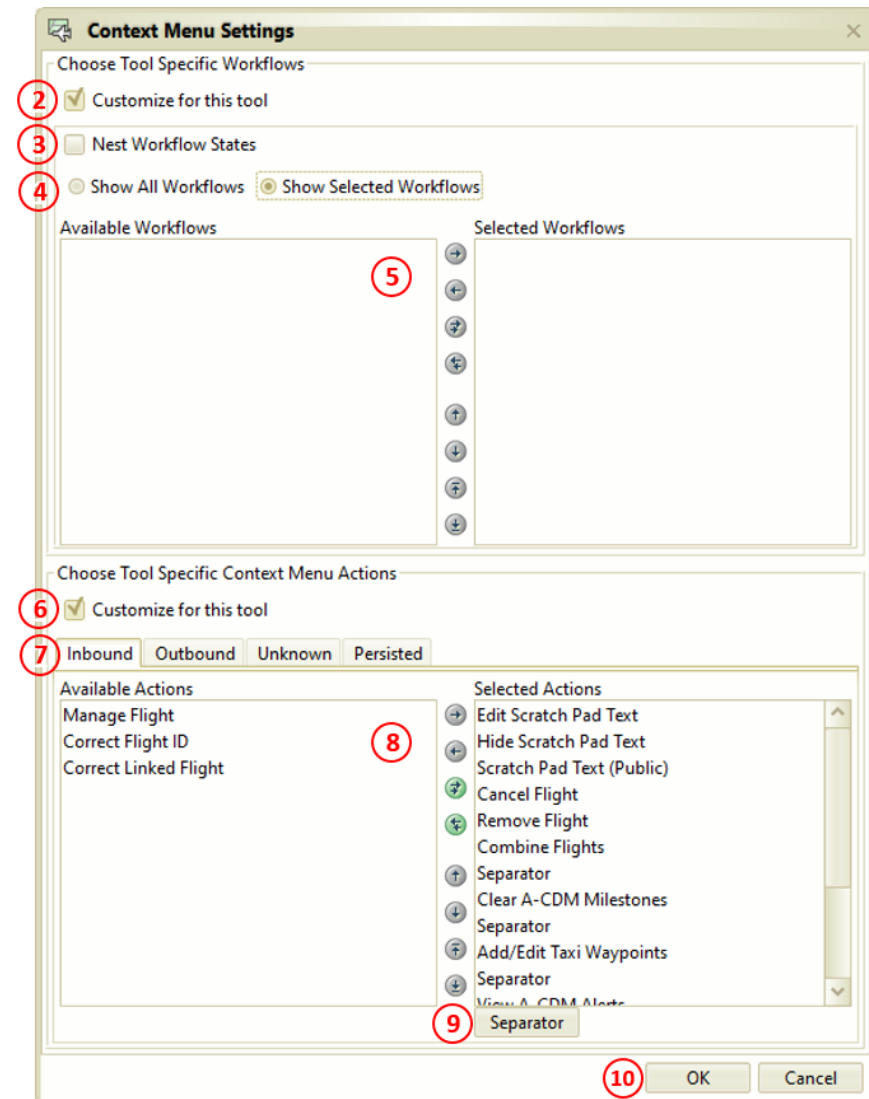
Refer to *Set Context Menu Preferences* on page 6-19 for instructions on how to adjust the spacing and font size in the context menu.

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8 OpsView Reporting Tools

OpsView reporting tools allow you to perform post-operation analysis and reporting, to quickly replay events, and to examine metrics.

You can access all OpsView tools from the Workspace **Reporting** menu (refer to Table 8-1 below) . Click a tool in the menu to use it in the Workspace (refer to *Settings and Permissions* on page 9-4).

Table 8-1. OpsView Reporting Tools and Functions

Tool	Summary of Functions
New Report	Gives the starting point for you to run a report and to change report parameters. Allows you to select from standard, pre-formatted options or to create a custom report.
Quick Reports	Gives quick access to report queries that can be run without modification. To run, repeatedly, reports on the usage of a region in a 3-hour period, save a quick report.
Report Management	Opens the **Report Management** tool. You can choose to manage Reports (the report documents themselves), Report Types (saved sets of report parameters that, in the case of relative time intervals, gives results based on the time at which they are activated), Quick Reports (links to Report Types that can be run As Is), and Schedules (for scheduled reports). You will use the **Report Management** tool to delete reports that you no longer need, to rename reports, to share reports, etc. Right-click an entry in a list to see the available options (refer to *Report Management* on page 8-66 for a quick reference guide to all options). **Report Management** also supplies a **New Report** button that functions as **Reporting > New Report** does (refer to *Create a New Report* on the next page for instructions).

Refer to the glossary for definitions of data fields used in reports.

You can find instructions for using reporting functions in these sections:

8.1 Create a New Report

You can create a new report in two ways:

- Select **Reporting > New Report** in a Workspace.
- Clicking **New Report** in the OpsView *Report Management* tool (refer to).

Figure 8-1. New Report Button
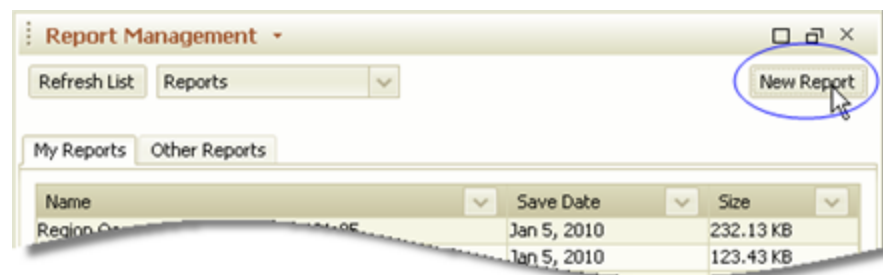
Both approaches open a *Report Parameters* window, from which you can run a standard report or set up a new, custom report.

You can create custom reports in the following ways:

- Modify and/or add data sets to standard reports (refer to).
- Select **Custom** in *Standard Reports* or *My Report Types* to design a report from the provided data set types (refer to for more information).

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See the following instructions for creating specific reports:

- *Run an Arrival Departure Summary Report on page 8-5*
- *Run a De-ice Activity Report on page 8-7*
- *Run a Gate Occupancy Report on page 8-8*
- *Run a Region Occupancy Report on page 8-12*
- *Run a Runway Occupancy Report on page 8-14*
- *Run a Runway Operations Daily by Hour Report on page 8-14*
- *Run a Runway Operations Hourly Window Report on page 8-16*
- *Run a Taxi Time Report on page 8-17*
- *Run a Wheels Up/Wheels Down Report on page 8-18*

8.2 OpsView Standard Report Types

ℹ️ **NOTE:** Aerobahn reports can be large and require substantial computing resources. The available memory in a PC determines its ability to process the data in a given report .

ℹ️ **NOTE:** When you try to run a report that is larger than a set size, Aerobahn tells you to export the data set to a comma-separated values (CSV) file. The threshold for this protection, the *OpsView Dataset Limit*, is set in *Advanced User Settings* in **SystemAdmin**. The *OpsView Dataset Limit* makes sure that your computer can manage the initial data set. When Aerobahn exports to a CSV file, it exports the data set—not the data in a pivot table.

ℹ️ **NOTE:** You can continue to work during an export of report data.

Each report type references a data set (refer to *Report Types on the next page*). Usually, a report displays a subset of the data in the data set in one or more "elements": bar chart, history plot, line chart, pie chart, pivot table and/or table (refer to for more information on data sets).

ℹ️ **NOTE:** You can customize standard reports by changing the default column arrangement. If, for example, you do not use some columns in your reports, you can eliminate those (refer to *Customize Data Fields on page 8-28* for guidance on using the **Report Column Chooser**).

Table 8-2. Report Types

Report Type	Data Set Type	Description
Arrival Departure Summary: - by Airline - by Gate - by Model - by Parking Area	Arrival Departure Binned Count	Facilitates review of hourly operations. The 4 Arrival Departure Summary reports are pre-designed pivot tables that have filtered and grouped data (refer to *Run an Arrival Departure Summary Report* on the facing page for more information).
De-ice Activity	Uses a compound data set: De-ice Queue Depth and Flight Details	Supplies a comprehensive look at de-icing operations: queue times, queue depths, de-icing time, and throughput. Data is presented in tabular and graphical formats (refer to *Run a De-ice Activity Report* on page 8-7 for more information).
Gate Occupancy	Gate Occupancy	Supplies gate occupancy data in three tables: Gate Occupancy Details (aircraft-referenced arrival and departure data), Gate Occupancy Time Summary (collected gate times), and Gate Occupancy Count Summary (collected gate-usage counts). A gate occupancy chart is also available (refer to *Run a Gate Occupancy Report* on page 8-8 for more information).
Region Occupancy	Region Occupancy	Supplies entry and exit time stamps and the amount of time each target remained in each region. Inbound, outbound, unknown, and summary target data are maintained on separate sheets. Click the Summary tab to open the "Region Occupancy - Summary" that includes the minimum, maximum, and average occupancy time values (refer to *Run a Region Occupancy Report* on page 8-12 for more information).
Runway Occupancy	Flight Details	Supplies the times at which an airplane enters and exits a runway as well as the amount of time on the runway (refer to *Run a Runway Occupancy Report* on page 8-14 for more information). ℹ NOTE: This is a special adaptation of Region Occupancy report that reveals throughput and schedule peaking on runways.
Runway Operations Daily by Hour	Arrival Departure Binned Count	Supplies the hourly count of arrivals and departures by runway and a total of all hourly operations (refer to *Run a Runway Operations Daily by Hour Report* on page 8-14 for more information).

Table 8-2. Report Types (continued)

Report Type	Data Set Type	Description
Runway Operations by Hourly Window	Arrival Departure Sliding Window Counts	Reports the number of targets that occupied a specific runway, minute-by-minute, in one-hour periods (refer to *Run a Runway Operations Hourly Window Report* on page 8-16 for more information).
Taxi Time	Flight Details	Supplies positional and flight information that helps you to measure how much time an aircraft spends on the ground, from the time it lands until it is in the gate or from the time it pushes back until it takes off. Date/time links start Playback. The Summary sheet supplies average, maximum, and minimum occupancy times for the Movement area, Ramp area, and Runways. It also summarizes the total taxi time for the report period (refer to *Run a Taxi Time Report* on page 8-17 for more information).
Wheels Up / Wheels Down	Flight Details	Supplies surveillance-based validation of ACARS data and validates when an aircraft was on the airport surface (refer to *Run a Wheels Up/Wheels Down Report* on page 8-18 for more information).

Time Preferences in OpsView Reports

OpsView uses the *Display Time Preference* setting in **SystemAdmin** to populate the default time zone of data sets, so whatever setting you have chosen in **SystemAdmin** serves as the default time zone for *custom* reports. OpsView standard reports were created using UTC.

The time zone saved in the report type overrides the default time zone saved in **SystemAdmin**. This provides consistency and helps to avoid confusion when the same report type is used by more than one person, possibly in situations with different time references.

You can change the time zone for data sets before running a report, and you can change the time zone of individual columns after a report is run.

Refer to *Select Time Preference* on page 9-22 for more information on setting the default in **SystemAdmin**.

8.2.1 Run an Arrival Departure Summary Report

There are four standard *Arrival Departure Summary* reports, each of which filters ("groups") data.

> ℹ️ **NOTE:** When you try to run a report that is larger than a set size, Aerobahn tells you to export the data set to a comma-separated values (CSV) file. The threshold for this protection, the *OpsView Dataset Limit*, is set in *Advanced User Settings* in **SystemAdmin**. The *OpsView Dataset Limit* makes sure that your computer can manage the initial data set. When Aerobahn exports to a CSV file, it exports the data set—not the data in a pivot table.

> ➡️ Select the time zone before the "Interval." If you set an "Absolute" time interval and later change the time zone, you must reset the interval.

1. Select **Reporting > New Report**, or click **New Report** in the *Report Management* tool.

2. Select the **Standard Report Types** tab.

3. Select **Arrival Departure Summary Grouped by [Airline, Gate, Model, or Parking Area]**. Your choice here affects the radio button settings in the "Group By" section of this window. These are fixed settings.

4. Set the time zone.

5. Select the Interval.

   ▪ If Relative, choose a Time Range.

   ▪ If Absolute, set the start and stop time.

6. Click **Run Report**.

The standard Arrival Departure Summary report references the *Arrival Departure Binned Count* data set type. The *Arrival Departure Binned Count* data set offers a fifth "Runway" grouping, which is used to create the *Runway Operations Daily by Hour* report.

> ℹ️ **NOTE:** *What is the "Empty" Parking Area?* When an aircraft turns off its transponder before it enters a gate stand or other parking location, Aerobahn records it in the *Empty* column. These "Empty" entries cause all arrivals and departures to add up to the total operations for that hour.

Refer to *Report Menu Bar* on page 8-31 for information on the options in these menus: Report, Data, and Insert.

8.2.2 Run a De-ice Activity Report

The De-ice Activity report contains tabular *and* graphical data in a tabbed report (refer to Table 8-3 on the next page) .

ℹ NOTE: When you try to run a report that is larger than a set size, Aerobahn tells you to export the data set to a comma-separated values (CSV) file. The threshold for this protection, the *OpsView Dataset Limit*, is set in *Advanced User Settings* in **SystemAdmin**. The *OpsView Dataset Limit* makes sure that your computer can manage the initial data set. When Aerobahn exports to a CSV file, it exports the data set—not the data in a pivot table.

ℹ NOTE: Because the De-ice Activity report uses a compound data set (De-ice Queue Depth and Flight Details), you must configure the two data sets to use the same Interval, Time Range, and Time Zone settings.

ℹ NOTE: You can change the Java Run Time memory setting in **SystemAdmin**. Select **settings and permissions > Java Runtime Environment Parameters > Maximum Memory**, and increase the value.

1. Select **Reporting > New Report**, or click **New Report** in the *Report Management* tool.

2. Select the **Standard Report Types** tab.

3. Select **De-Ice Activity**.

4. Set the time zone for the two data sets.

5. Select the Interval for the two data sets. (The maximum report query length is 31 days.)

   - If Relative, choose the same Time Range for the two data sets.
   - If Absolute, set the same start and stop time for the two data sets.

6. Click **Run Report**.

Table 8-3. De-Ice Activity Report Tabs

Report Tab	Description
Summary	The summary tab offers three pivot tables: De-ice Pad Occupancy Times gives minimum, average, and maximum de-icing times for active de-icing pads during active de-icing periods. De-ice Queue Times gives minimum, average, and maximum amount of time in de-icing queues for active de-icing pads. De-ice Queue Depth gives the average number of flights (based on the percentage of time departures spend in a queue) in each de-icing queue during the sample time period. (Note that this value changes when you change the Time Interval setting in Bucket Dates and Times.)
Average Pad Occupancy	Average Pad Occupancy supplies a pivot table *and* graph. It identifies the average de-icing event time during a time period.
Average Queue Occupancy	Average Queue Occupancy supplies a pivot table *and* graph. It identifies the average amount of time that a departures spent en route to de-icing during a time period.
Average Queue Depth	Average Queue Depth supplies a pivot table (same as De-ice Queue Depth) *and* depth graph that show the average number of flights (based on the percentage of time departures spend in a queue) in each de-icing queue during the sample time period.
Average Throughput	Average Throughput shows the average number of flights that have passed through a de-ice pad during a specified time period. This report offers data that is similar to real time data offered in the De-icing Throughput tool (refer to *Use the De-icing Throughput Tool* on page 7-19).

8.2.3 Run a Gate Occupancy Report

The Gate Occupancy report provides the times at which an aircraft enters and exits a gate as well as the amount of time on the gate.

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i **NOTE:** When you try to run a report that is larger than a set size, Aerobahn tells you to export the data set to a comma-separated values (CSV) file. The threshold for this protection, the *OpsView Dataset Limit*, is set in *Advanced User Settings* in **SystemAdmin**. The *OpsView Dataset Limit* makes sure that your computer can manage the initial data set. When Aerobahn exports to a CSV file, it exports the data set—not the data in a pivot table.

Select the time zone before the "Interval." If you set an "Absolute" time interval and later change the time zone, you must reset the interval.

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1. Select **Reporting > New Report**, or click **New Report** in the *Report Management* tool.

2. Select the **Standard Report Types** tab.

3. Select Gate Occupancy.

4. Set the time zone.

5. Select the Interval. (The demand for client PC resources increases with an increase in time interval.)

   - If Relative, choose a Time Range.
   - If Absolute, set the start and stop time.

6. Click **Run Report**.

The standard Gate Occupancy report references the *Gate Occupancy* data set type. If a cell in a summary pivot table is blank, Aerobahn did not receive an Operating Carrier Code for the aircraft.

Refer to *Work with Table Data* on page 3-9 for more information on how to work with the data in this report.

Refer to *Report Menu Bar* on page 8-31 for information on the options in these menus: Report, Data, and Insert.

8.2.3.1 Insert a Gate Occupancy Chart

In addition to the standard tables, Gate Occupancy report offers a graphical view of gate occupancy. Based on the data collected in a specified Gate Occupancy report, the Gate Occupancy chart provides a timeline that shows the periods during which a gate is occupied.

Insert a Gate Occupancy chart as follows:

1. Select **Insert > Sheet**.

2. With the blank sheet displayed, select **Insert > Gate Occupancy Chart**.

Removing insignificant data from the Gate Occupancy Chart

Like other charts, Gate Occupancy Chart contents are dynamically linked to the contents of the table it references. In this case, it references the Gate Occupancy Details table and pulls its data from the Gate Occupancy Time column. Anomalies in gate-surveillance data can be manifested in the Gate Occupancy Chart.

An easy way to clean up the chart is to filter data in the Gate Occupancy Time column of the Gate Occupancy Details table so that it shows only those gate occupancies that exceed five minutes.

1. Select the **Gate Occupancy** tab.

2. In the Gate Occupancy Details table, open filtering controls for the Gate Occupancy Time column.

Figure 8-2. Gate Occupancy Time Filters
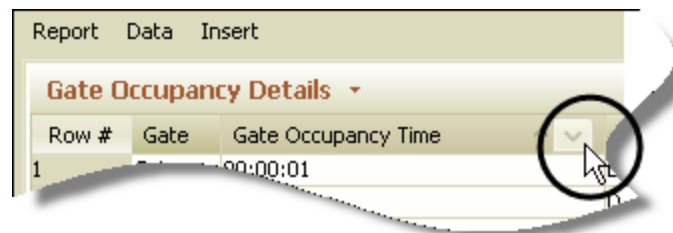
3. Configure the filter (refer to) :

   a. Select **Custom**.

   b. Set Condition to **is more than**.

   c. Set Value to **00:05:00**.

4. Click **OK**.

5. Select the tab for with the Gate Occupancy chart.

Figure 8-3. Example: Gate Occupancy Chart *before* Filtering Source Data
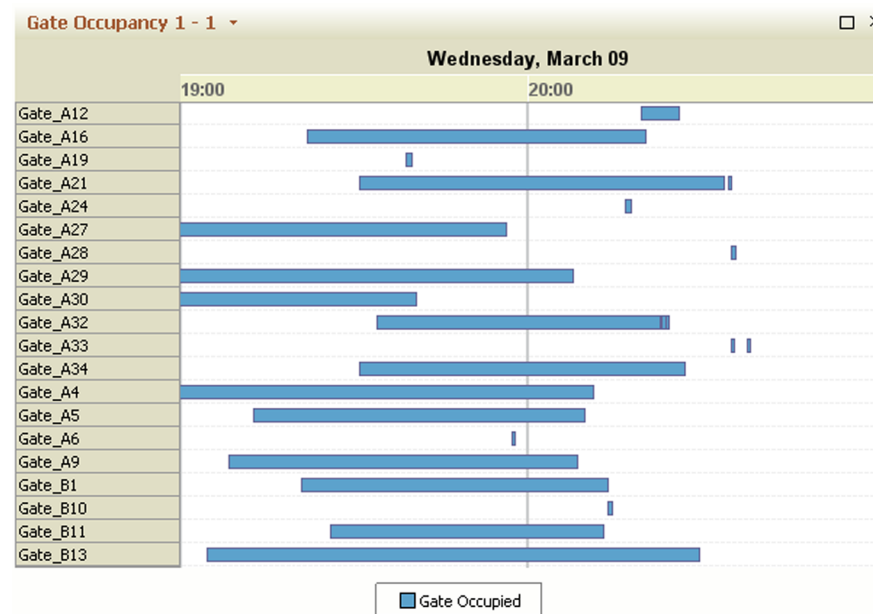
Figure 8-4. Custom Filter Configuration

Figure 8-5. Example: Gate Occupancy Chart *after* Filtering
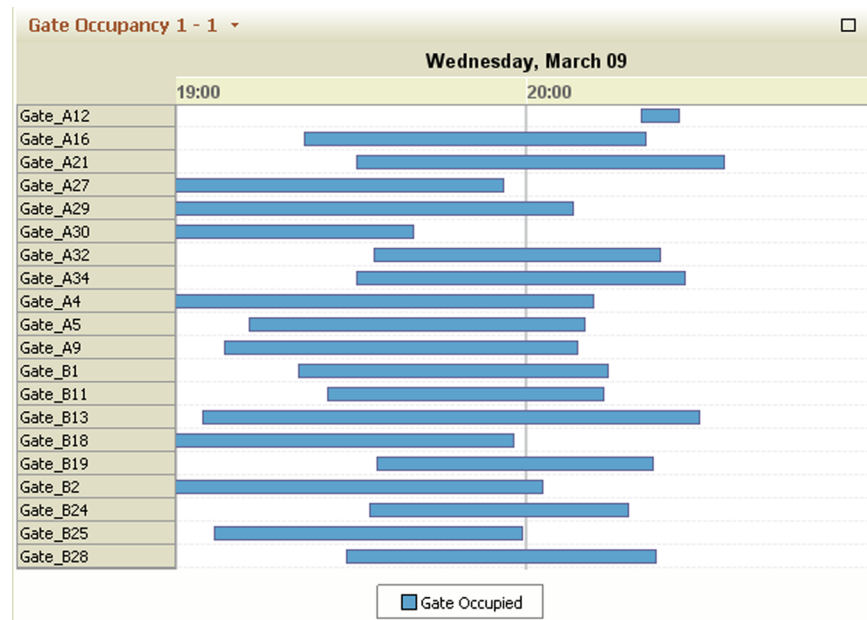
8.2.4 Run a Region Occupancy Report

The Region Occupancy report supplies a target's times of entry and exit and the amount of time the target remained in one or more regions. The Region Occupancy standard report opens in table format and supplies tabbed sheets: Inbound, Outbound, Unknown, and Summary.

ℹ️ NOTE: When you try to run a report that is larger than a set size, Aerobahn tells you to export the data set to a comma-separated values (CSV) file. The threshold for this protection, the *OpsView Dataset Limit*, is set in *Advanced User Settings* in **SystemAdmin**. The *OpsView Dataset Limit* makes sure that your computer can manage the initial data set. When Aerobahn exports to a CSV file, it exports the data set—not the data in a pivot table.

➡️ Select the time zone before the "Interval." If you set an "Absolute" time interval and later change the time zone, you must reset the interval.

1. Select **Reporting > New Report**, or click **New Report** in the *Report Management* tool.

2. Select the **Standard Report Types** tab.

3. Select **Region Occupancy**.

4. Set the time zone.

5. Select the Interval. (The demand for client PC resources increases with an increase in time interval.)

   ■ If Relative, choose a Time Range.

   ■ If Absolute, set the start and stop time.

6. Enter target-specific filter information that focuses your query. *The Callsign field is case-sensitive*.

7. OPTIONAL—Click in the boxes to select or remove the check from Inbound, Outbound, or Unknown direction.

8. Select and/or remove the check from regions. You must select at least one region to run a Region Occupancy report.
   Note: Aerobahn inserts a check in the All Regions box when you select a region or group of regions (refer to Figure 8-6 below) .

9. Click **Run Report**.

   The standard Region Occupancy report references the *Region Occupancy* data set type (refer to *Work with Table Data* on page 3-9 for more information on how to work with the data in this report).

Figure 8-6. Region Selection

All regions selected

Some regions selected

Aerobahn inserts a check in *and darkens* a checkbox when *some* of the items in that group are selected.

Refer to *Report Menu Bar* on page 8-31 for information on the options in these menus: Report, Data, and Insert.

8.2.5 Run a Runway Occupancy Report

The Runway Occupancy report supplies the times at which an aircraft enters and exits a runway as well as the amount of time on the runway.

> **NOTE:** When you try to run a report that is larger than a set size, Aerobahn tells you to export the data set to a comma-separated values (CSV) file. The threshold for this protection, the *OpsView Dataset Limit*, is set in *Advanced User Settings* in **SystemAdmin**. The *OpsView Dataset Limit* makes sure that your computer can manage the initial data set. When Aerobahn exports to a CSV file, it exports the data set—not the data in a pivot table.

> Select the time zone before the "Interval." If you set an "Absolute" time interval and later change the time zone, you must reset the interval.

1. Select **Reporting > New Report**, or click **New Report** in the *Report Management* tool.
2. Select the **Standard Report Types** tab.
3. Select **Runway Occupancy**.
4. Set the time zone.
5. Select the Interval. (The demand for client PC resources increases with an increase in time interval.)
    - If Relative, choose a Time Range.
    - If Absolute, set the start and stop time.
6. Click **Run Report**.

The standard Runway Occupancy report references the *Flight Details* data set type.

Refer to *Work with Table Data* on page 3-9 for more information on how to work with the data in this report.

Refer to *Report Menu Bar* on page 8-31 for information on the options in these menus: Report, Data, and Insert.

8.2.6 Run a Runway Operations Daily by Hour Report

The Runway Operations Daily by Hour report supplies the number of arrival and departure operations on a given runway over a 24-hour period.

The generated report comprises two pivot tables and a line chart. One sheet contains a pivot table that shows Arrivals and Departures by hour for each runway. The second sheet shows the total Arrivals and Departures by hour and includes a line chart of that data.

ℹ NOTE: When you try to run a report that is larger than a set size, Aerobahn tells you to export the data set to a comma-separated values (CSV) file. The threshold for this protection, the *OpsView Dataset Limit*, is set in *Advanced User Settings* in **SystemAdmin**. The *OpsView Dataset Limit* makes sure that your computer can manage the initial data set. When Aerobahn exports to a CSV file, it exports the data set—not the data in a pivot table.

➡ Select the time zone before the "Interval." If you set an "Absolute" time interval and later change the time zone, you must reset the interval.

1. Select **Reporting > New Report**, or click **New Report** in the *Report Management* tool.

2. Select the **Standard Report Types** tab.

3. Select **Runway Operations Daily By Hour**.

4. Set the time zone.

5. Select the Interval. (The demand for client PC resources increases with an increase in time interval.)

    ▪ If Relative, choose a Time Range.

    ▪ If Absolute, set the start and stop time.

6. Click **Run Report**.

The standard Runway Operations Daily by Hour report references the *Arrival Departure Binned Counts* data set type. The standard *Arrival Departure Summary* reports also refer to the *Arrival Departure Binned Counts* data set.

ℹ NOTE: The first Event Time column supplies the day of the month.

Refer to *Charts* on page 8-40 for more information on line charts.

Refer to *Report Menu Bar* on page 8-31 for information on the options in these menus: Report, Data, and Insert.

8.2.7 Run a Runway Operations Hourly Window Report

The Runway Operations Hourly Window report supplies a count of arrivals and departures on each runway minute-by-minute, in one-hour periods. The report also sums each row and column. This shows you how many operations occurred each minute as well as how many operations occurred on each runway during the entire reporting period.

Data is supplied in pivot table *and* line chart format.

Arrival Departure Summary reports refer to *Arrival Departure Sliding Window Count* data sets.

NOTE: When you try to run a report that is larger than a set size, Aerobahn tells you to export the data set to a comma-separated values (CSV) file. The threshold for this protection, the *OpsView Dataset Limit*, is set in *Advanced User Settings* in **SystemAdmin**. The *OpsView Dataset Limit* makes sure that your computer can manage the initial data set. When Aerobahn exports to a CSV file, it exports the data set—not the data in a pivot table.

Select the time zone before the "Interval." If you set an "Absolute" time interval and later change the time zone, you must reset the interval.

1. Select **Reporting > New Report**, or click **New Report** in the *Report Management* tool.
2. Select the **Standard Report Types** tab.
3. Select **Runway Operations Hourly Window**.
4. Set the time zone.
5. Select the Interval.
    - If Relative, choose a Time Range.
    - If Absolute, set the start and stop time.
6. Click **Run Report**.

The standard Runway Operations Hourly Window report references the *Arrival Departure Sliding Window Counts* data set type.

Refer to for information on the options in these menus: Report, Data, and Insert.

8.2.8 Run a Taxi Time Report

The Taxi Time report supplies information related to taxi times for arrivals and departures. Taxi Time reports help you to measure how much time an aircraft spends on the ground, from the time it lands until it is in the gate or from the time it pushes back until it takes off.

ℹ NOTE: When you try to run a report that is larger than a set size, Aerobahn tells you to export the data set to a comma-separated values (CSV) file. The threshold for this protection, the *OpsView Dataset Limit*, is set in *Advanced User Settings* in **SystemAdmin**. The *OpsView Dataset Limit* makes sure that your computer can manage the initial data set. When Aerobahn exports to a CSV file, it exports the data set—not the data in a pivot table.

➡ Select the time zone before the "Interval." If you set an "Absolute" time interval and later change the time zone, you must reset the interval.

1. Select **Reporting > New Report**, or click **New Report** in the *Report Management* tool.
2. Select the **Standard Report Types** tab.
3. Select **Taxi Time**.
4. Set the time zone.
5. Select the Interval. (The demand for client PC resources increases with an increase in time interval.)
   - If Relative, choose a Time Range.
   - If Absolute, set the start and stop time.
6. Click **Run Report**.

The standard Taxi Time report references the *Flight Details* data set type.

8.2.8.1 Summary Information

Select the *Summary* sheet to open Movement Time, Ramp Time, Runway Occupancy Time, and Total Taxi Time tables providing averages, maximum, and minimum times for arrivals and departures in each table.

The number of rows (Row Count) used to calculate those values is supplied for each report summary.

Refer to *Work with Table Data* on page 3-9 for more information on how to work with the data in this report.

Refer to *Report Menu Bar* on page 8-31 for information on the options in these menus: Report, Data, and Insert.

8.2.9 Run a Wheels Up/Wheels Down Report

The Wheels Up/Wheels Down report supplies surveillance-based validation of ACARS data and validates when an aircraft was on the airport surface. The Arrivals sheet shows wheels-down time stamps and the Departures sheet shows wheels-up time stamps.

NOTE: When you try to run a report that is larger than a set size, Aerobahn tells you to export the data set to a comma-separated values (CSV) file. The threshold for this protection, the *OpsView Dataset Limit*, is set in *Advanced User Settings* in **SystemAdmin**. The *OpsView Dataset Limit* makes sure that your computer can manage the initial data set. When Aerobahn exports to a CSV file, it exports the data set—not the data in a pivot table.

Select the time zone before the "Interval." If you set an "Absolute" time interval and later change the time zone, you must reset the interval.

1. Select **Reporting > New Report**, or click **New Report** in the *Report Management* tool.
2. Select the **Standard Report Types** tab.
3. Select **Wheels Up/Wheels Down**.
4. Set the time zone.
5. Select the Interval. (The demand for client PC resources increases with an increase in time interval.)
    - If Relative, choose a Time Range.
    - If Absolute, set the start and stop time.
6. Click **Run Report**. .

The standard Wheels Up/Wheels Down report references the *Flight Details* data set type.

Refer to *Work with Table Data* on page 3-9 for more information on how to work with the data in this report.

Refer to *Report Menu Bar* on page 8-31 for information on the options in these menus: Report, Data, and Insert.

8.2.10 Run a Watch List Entries Report

You can create a Watch List Entries report, or you can use the Watch List Entries data set with other data sets to create another report.

The following report columns supply information that specifically references rules or the watch list that supplies data for the report:

- *Watch List Name* identifies the watch list.
- *Added to List (UTC)* supplies a time stamp for when that flight was added to the watch list.
- *Removed from List (UTC)* supplies a time stamp for when that flight was removed from the watch list.
- *Rule Name* identifies the rule that sends a flight into a watch list. If two or more rules sent a flight into a watch list, the watch list report identifies the rule that first sent the flight into the watch list for that entry. When a flight occupies but then leaves the watch list, then subsequently occupies it as the result of a different triggering rule, the report shows the first rule for the first entry and the second rule for the second entry.
- *Watch List Duration* shows how long the flight remained in the watch list.
- *Active on Removal* enables you to find whether a target was active when it was dropped from a watch list. This field displays "true" when an active target is removed from a watch list. It displays "false" when a target coasts or is dropped before it leaves a watch list.

Generate a Watch List Entries report as follows:

1. Select **Reporting > New Report**.
2. Select the **<Custom>** report type from the **Standard Report Types** or the **My Report Types** tab.
3. Select the **Watch List Entries** Data Set Type.
4. Set the time zone.
5. Select the Interval:
    - If Relative, choose a Time Range.
    - If Absolute, set the start and stop time.

6. Set up data fields.

    a. Click **Customize**. The Report Column Chooser opens.

    b. Select data fields.

        - To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

        - To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕ .

        - To remove one item from **Selected Fields**, select the item. Click ⊖ or double-click. The item moves to **Available Fields**.

        - To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊖ . The items move to **Available Fields**.

        - To move all items from **Available Fields** to the **Selected Fields** window, click ⊕ .

        - To remove all items from **Selected Fields**, click ⊖ . The items move to **Available Fields**.

        - To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆ . To move an item to the bottom of the list, click ⬇ .

    c. Click **OK**.

7. Select one or more watch list(s) to include in the report.

8. Click **Run Report**. OpsView generates a table.

8.2.11 History Plot

The History Plot (Figure 8-7 on the facing page) is made from the Location History Data Set. You can include this data set in the report parameters when you configure a new custom report, or you can add a History Plot, which generates a Location History Data Set, to some reports (such as those referencing *Flight Details* or *Region Occupancy* data sets).

You can export flight location data from the Location History report. After you generate a report, select **Location History > Export to CSV**.

Refer to *Configure Color Settings* on page 6-2 for general instructions on how to configure the colors of plot points. For example, an inbound plot can be orange for the arrival and inbound taxi, but the plots at the gate can be gray to show a persisted target.

ℹ️ **NOTE:** Aerobahn can use a lot of processing power to make plots of location histories. If you open more than 1 plot window, client PC performance can decrease.

ℹ️ **NOTE:** The locations of flights with proprietary surveillance data do not show if you do not have the **Access Proprietary Surveillance Data** permission. For instructions to configure the permission, refer to *Access Proprietary Surveillance Data Permission* on page 9-13.

Figure 8-7. Location History Plot (sample)
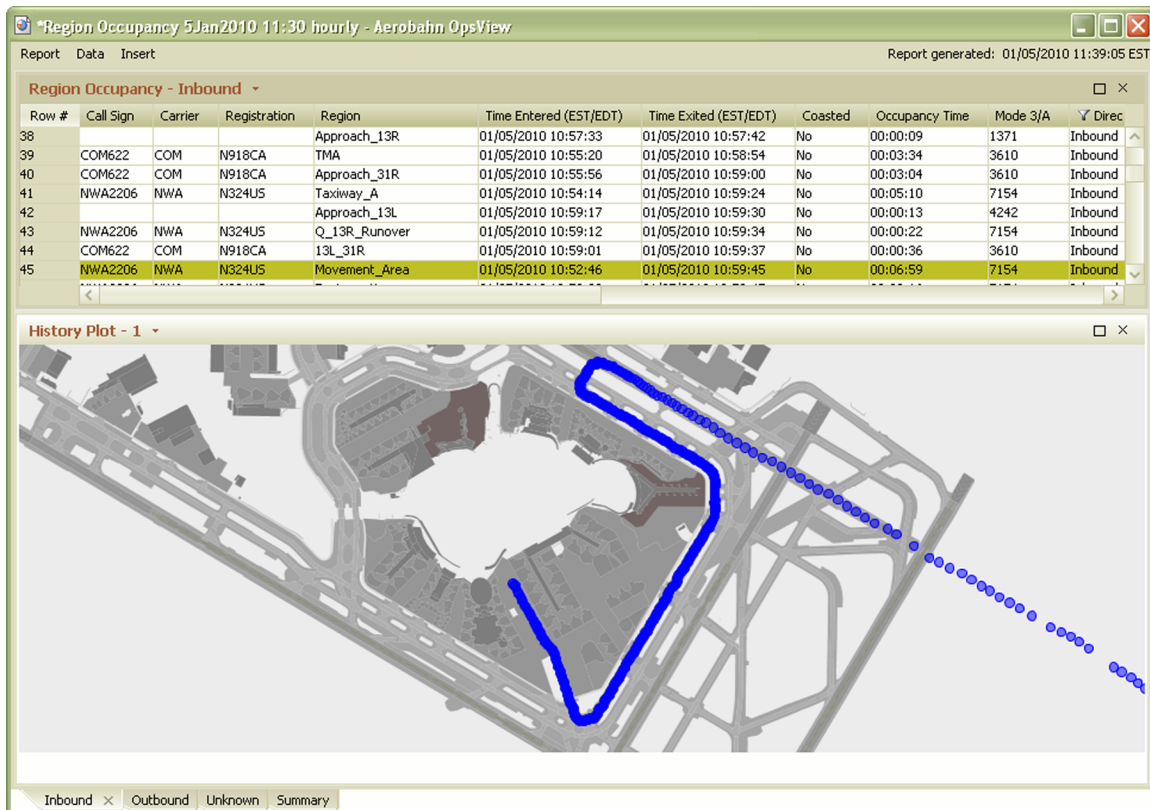
ℹ️ **NOTE:** Keyboard shortcuts (except Z and B) and scrolling mouse zoom controls are available in Location History plots (refer to *Use Display Controls* on page 7-240 for more information on how to use keyboard shortcuts).
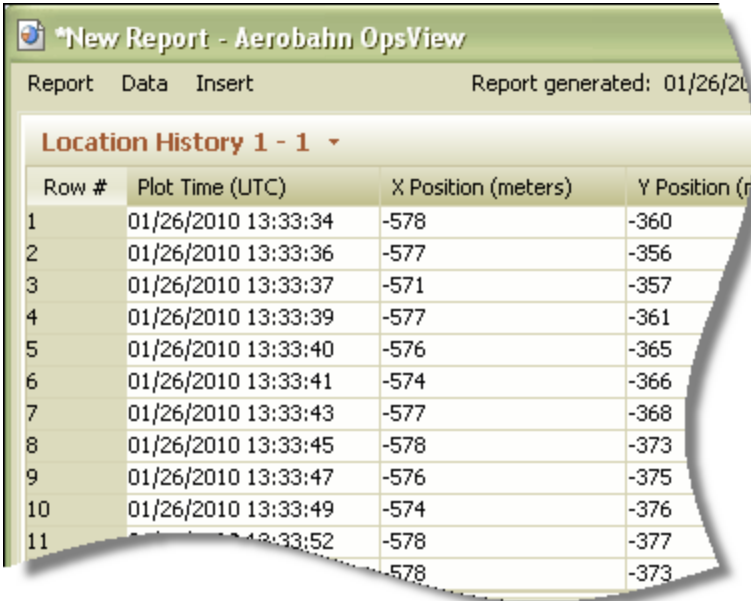
You can make a **Location History Plot** as a report, or you can add a plot to a report.

8.2.11.1 Create a Location History from the Report Parameters window

If you supply a call sign, you can generate a Location History table that shows plot times and X/Y coordinates for that flight. You can insert a History Plot element to plot these data on the airport map.

1. Select **Reporting > New Report**.

2. In the **Standard Report Types** or the **My Report Types** tab, select the **<Custom>** report type.

3. Select the **Location History** Data Set type.

4. Set the time zone.

5. Select the Interval:

   - If Relative, choose a Time Range.
   - If Absolute, set the start and stop time.

6. Enter the call sign of the flight to be plotted.

7. Click **Run Report**. OpsView generates a Location History table.

The Location History table () shows plot values at 1-second intervals. Click **Insert** to insert a Location History Plot that displays the data on the airport map. Click the table title to export Location History data as a CSV file.

Figure 8-8. Sample Location History Table

8.2.11.2 Add a History Plot to Report Parameters

NOTE: This procedure requires you to supply the call sign of the flight to be plotted .

If you are in the process of generating a new report and wish to add a history plot to other report elements, you can add a *Location History Data Set* to the report parameters.

Select the time zone before the "Interval." If you set an "Absolute" time interval and later change the time zone, you must reset the interval.

1. Select **Reporting > New Report**.
2. Select the **Standard Report Types** or the **My Report Types** tab.
3. Select a named report type or **Custom**.
4. Set the time zone.
5. Select the Interval:
    - If Relative, choose a Time Range.
    - If Absolute, set the start and stop time.
6. Click **Add Data Set**.
7. In the new Data Set control window, select **Location History** Data Set Type.

8. Enter the same time zone and Interval entered in steps 4 and 5.

9. Enter the call sign of the flight to be plotted. *This is a case-sensitive field*.

10. Click **Run Report**.

If you save this custom Report Type, OpsView saves the Location History Data Set.

8.2.11.2.1 Add a History Plot after a report has been generated

You can add a Location History Plot to a report that has already been generated. Right-click in a row, and select **Show Location History Plot**. OpsView generates the plot of the location of that aircraft.

ℹ NOTE: If **Show Location History Plot** is *not* an option when you right-click in the table, you cannot generate a History Plot in this report.

The Location History Plot opens in the sheet that it was created from. For example, if you started in an "Inbound" sheet, the History Plot is added to the "Inbound" sheet.

To see a time stamp for a plot point, put the pointer above the point on the plot. The time stamp information shows in the lower left of the Location History Plot window.

8.2.11.3 Calculate the Time Difference Between Plot Points

Aerobahn can calculate the time difference between two points in a Location History Plot.

1. CTRL-click one of the two plot points of interest.

2. CTRL-click the second plot point. The time difference shows in a window.

You can zoom in on a History Plot to isolate individual points. The following zoom tools are active in a History Plot:

- +/– keys
- mouse wheel

ℹ NOTE: The "zoom to" function does not operate in the History Plot.

8.2.11.4 Change the History Plot Title

Report element titles can be edited to reflect changes in contents.

1. Click the default title, and select **Edit Titles**.

2. When the **Edit Titles** window opens, enter the new title.

3. Click **OK**.

8.2.11.5 Close the History Plot

⚠️ **CAUTION:** If you added a History Plot with the right-click Show Location History Plot procedure, you will delete the Location History Data Set when you close the plot.

Click the tool title, and select **Remove**, or click **X** to close the window.

8.2.12 Run an Airport Daily Summary Report

ℹ️ **NOTE:** The Airport Daily Summary Report references these data sets: Arrival Departure Binned Counts, Flight Details, METAR, and Operations Count by Hour. If you run this report, you may need to adjust the Java Runtime Environment Parameters (specifically, to increase Maximum Memory to 512MB) in **SystemAdmin**. Contact your System Administrator for more information.

The Airport Daily Summary Report has seven sections in tabbed format (refer to Table 8-4 below for descriptions of each report) .

Table 8-4. Airport Daily Summary Report Contents

Report Tab	Description
Performance Summary	Supplies a comprehensive list of flights in table format. Performance Summary supplies a collection of the following pivot tables: ■ Operation Counts—Arrivals and departures ■ On Time Counts—Arrivals and departures ■ Average Taxi Time—Arrivals and departures ■ Extended Taxis—Numbers of arrivals and departures with taxi times that exceed the pre-configured values for arrival taxi time and departure taxi time ■ Compliance Summary—Number of non-compliant flights during the reporting period These data also show in bar and pie charts.

Table 8-4. Airport Daily Summary Report Contents (continued)

Report Tab	Description
Operations by Hour and Runway	Like the Runway Operations Daily by Hour Report (*Run a Runway Operations Daily by Hour Report* on page 8-14), this report presents arrival and departure operations by time in pivot tables. Unlike the Runway Operations Daily by Hour Report, Arrivals and Departures have separate pivot tables in this presentation and are paired with line graphs.
Compliance Summary	The Compliance Summary supplies a report on metering compliance and metering compliance status by carrier group or by carrier. Non-compliant flights are listed. This report is the OpsView equivalent of the real-time Compliance Monitor tool.
Compliance Summary - Plot	Two bar charts show the number of compliant and non-compliant flights by carrier group and the distribution of non-compliance reasons by carrier group.
Departure Queue by Hour	Three pivot tables—Average Departure Queue by Hour, Compliance Rate by Hour, and Average Metering Delay by Hour—also have line charts.
Weather	The Weather tab supplies a METARS report in table format and a temperature and dewpoint summary as a pivot table and line graph.
Flight Plot	The Flight Plot timeline supplies a plot of these Aerobahn values: AOBT, SOBT, and TMAT for every departure. It also supplies plots of the taxi times on the ramp and in the movement area. When you put the pointer above the graphic data for Taxi Time on Ramp or Taxi Time in Movement Area, Aerobahn shows a small table with flight data.

NOTE: The Airport Daily Summary report is configured to report on data from the previous day. (That is, the interval is "Relative...", and the time range is "Yesterday.") Because this report pulls its data from more than 1 data set, when you change the reporting interval, you must set up reporting filters for each data set to get the results you expect.

1. Select **Reporting > New Report**, or click **New Report** in the *Report Management* tool.

2. Select the **Other Report Types** tab.

3. Select **Airport Daily Summary Report**.

4. Set up the reporting filter for the *Arrival Departure Binned Counts* data set.

   a. Select the time zone.

   b. Select the Interval:

      ▪ If Relative, choose a Time Range.

      ▪ If Absolute, set the start and stop time.

5. Set up the reporting filter for the *Flight Details* data set.

   a. Set the time zone.

   b. Select the Interval:

      ▪ If Relative, choose a Time Range.

      ▪ If Absolute, set the start and stop time.

6. Set up the reporting filter for the METAR data set.

   a. Set the time zone.

   b.   Select the Interval:

      ▪ If Relative, choose a Time Range.

      ▪ If Absolute, set the start and stop time.

7. Set up the reporting filter for the *Operations Count by Hour* data set.

   a. Set the time zone.

   b.   Select the Interval:

      ▪ If Relative, choose a Time Range.

      ▪ If Absolute, set the start and stop time.

8. Click **Run Report**.

In Flight List, right-click a table row in these reports to access *Taxi Time Details* or *Show Location History Plot*.

8.3 Run a Custom Report

If it is not necessary to generate a standard report format, you can run a report that references one or more data set(s).

NOTE: If you have "Report Unrestricted Data Records" permission, Aerobahn can report on all flights in a data set. If you do not have this permission, Aerobahn can report only on those carrier codes in the Carrier List for Proprietary Data Access.

1. Select **Reporting > New Report**, or click **New Report** in the **Report Management** tool.

2. Select the **Standard Report Types** or **My Report Types** tab.

3. Select **<Custom>**.

4. Select a data set type (refer to *Data Set Types* on the facing page for more information).

5. Set the time zone.

6. Select the Interval.

   ▪ If Relative, choose a Time Range.

   ▪ If Absolute, set the start and stop time.

   > **ℹ NOTE:** The demand for client PC resources increases with an increase in time interval.

7. OPTIONAL—For "Data Fields," click **Customize**. This opens the **Report Column Chooser**. Select data types to include in the query.

8. Repeat steps 4–7 to set the correct report parameters.

9. Click **Run Report**. After processing the request, OpsView displays the report containing the requested data sets.

The default Custom Report layout is one sheet per data set. Each sheet contains a single table that references the data set for that sheet. You can add report elements from the *Insert* menu.

Refer to *Filter and Sort Table Data* on page 8-54 for more information on how to use the data in this report.

Refer to *Calculate Time Differences* on page 8-53 for instructions on how to calculate the difference between two time stamps.

Customize Data Fields

Select the data columns to show and/or hide in the report.

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕.

- To remove one item from **Selected Fields**, select the item. Click ⊖ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊖. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⊕.

- To remove all items from **Selected Fields**, click ⊖. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⊕ or ⊕ until it is in the correct location. To move an item to the top of the list, click ⊕. To move an item to the bottom of the list, click ⊕.

Time Preferences in OpsView Reports

OpsView uses the *Display Time Preference* setting in **SystemAdmin** to populate the default time zone of data sets, so whatever setting you have chosen in **SystemAdmin** serves as the default time zone for *custom* reports. OpsView standard reports were created using UTC.

The time zone saved in the report type overrides the default time zone saved in **SystemAdmin**. This provides consistency and helps to avoid confusion when the same report type is used by more than one person, possibly in situations with different time references.

You can change the time zone for data sets before running a report, and you can change the time zone of individual columns after a report is run.

Refer to *Select Time Preference* on page 9-22 for more information on setting this default in **SystemAdmin**.

8.3.1 Data Set Types

You can use these data set types to make custom reports (*Run a Custom Report* on page 8-27) or to change standard reports (*OpsView Standard Report Types* on page 8-3).

ℹ️ **NOTE:** If you have "Report Unrestricted Data Records" permission, Aerobahn can report on all flights in a data set. If you do not have this permission, Aerobahn can report only on those carrier codes in the Carrier List for Proprietary Data Access.

Table 8-5. Data Set Types

Type	Definition/Notes
A-CDM Alerts	Supplies the Alert ID and the alert start and end times for a given flight.
Airport Status Dashboard Changes	Supplies data for Airport Status Dashboard updates. Shows who made a change, the type of change, and the time and date for each change.
Arrival Departure Binned Counts	Supplies data for summarizing arrivals and departures by time and by carrier.
Arrival Departure Sliding Window Counts	Supplies data for summarizing arrivals and departures by time and by runway.
De-ice Queue Depth	Supplies the average number of flights (based on the percentage of time that departures spend in a queue) in each de-ice queue for the sample time period.
De-ice Statistics	Supplies, for a given de-ice pad, start and stop times, pad throughput, minimum / maximum / average occupancy times, and minimum / maximum / average wait times.
Flight Details	Shows operations, along with aircraft properties, flight information, taxi information, and runway occupancy time.
Gate Occupancy	Supplies gate-occupancy data.
Location History	Supplies data for the "History Plot." Can also be used to make line charts in which x and/or y are plotted in respect to time to represent rate of change of the position (velocity). Units are meters (refer to *History Plot* on page 8-20.
METAR	Supplies a METAR report (or combined with other data sets for other reports). This data set includes a range of weather-related data fields.

Table 8-5. Data Set Types (continued)

Type	Definition/Notes
NOTAM	Gives a report of NOTAMS with durations that overlap or fall within the report time.
Operations Count by Hour	Supplies all operations—arrivals (wheels down events) and departures (wheels up events)—for each hour (0–23) in the specified time range.
Region Occupancy	Supplies movement data related to one or more regions. These data include flight ID, time and date, gate assignments, origination airport, and destination. Requires the selection of one or more regions (refer to *Run a Region Occupancy Report* on page 8-12).
Region Status	Supplies region status details over the specified time range.
Simple Flight Details	Supplies data that enables—for a selected flight—display of a list of all regions through which that flight passed during its taxi, along with the entry time, exit time, and occupancy time for each region.
Turn Events	Supplies a report of all turnaround events and event times over the specified time range.
User Accounts	Supplies a report of user access.
Watch List Entries	Supplies a report that shows when flights were added to and removed from a selected watch list, duration in the watch list, and the region that the flight was in when it was added to the watch list.

8.3.2 Report Menu Bar

All reports offer the main menu bar: Report / Data / Insert.

Some options in each menu may not be active in a report.

Table 8-6. Report Menu

Command	Description
Save Report	Saves all parts of a report and enables report sharing: the data set and open tables, pivot tables, graphs, and chart that refer to it. You can also share the report during the save process. You can open the saved report from **Reporting > Report Management**.
Save Report Type	Saves data set query parameters and report configuration information (data set definitions, report elements [tables, pivot tables, charts, and graphs], and layout but no report data. You can make a new report based on a saved Report Type. You can open saved report types in **Reporting > Report Management**.
Save Quick Report	Makes a shortcut that lets you run a Report Type without changes.
Create Report Schedule	Requires that the open report was run with a relative time range exceeding one day. Saves a report as a data set type and opens a scheduling dialog box.
Rerun Report Now	Runs open reports that were configured to query data from a relative time interval (hours, days, weeks, etc.) using that same interval but starting from the present.
Delete Report	Deletes a *saved* report. If a report has not been saved, close it, but do not save it.
Close	Closes a saved report but does not delete it. You can open a report from **Reporting > Report Management**.

Table 8-7. Data Menu

Command	Description
Add/Modify Data Set(s)	Opens the *Report Parameters* with settings used to configure the original report. You can add a new data set or change the data set(s) already used for that report. Click **Run Report** when finished to run a report with the new parameters.
Show Start/End Times	Identifies the data set, start date and time, and the end date and time.

When you insert a report element (bar chart, history plot, line chart, pie chart, pivot table, or table), that element shows on the active "sheet" (refer to *Charts on page 8-40* for more information on these report elements).

Table 8-8. Insert Menu

Command	Description
Sheet	Adds a blank sheet to a report. You can insert a data element (such as a table, history plot, line chart, etc.) on a sheet (refer to *Insert a blank sheet in a report* on page 8-44 for instructions).
Bar Chart	Opens the *Edit Parameters* control for creating a bar chart.
History Plot	This menu choice is active when the Plot History Data Set was run. If a Location History Plot is created in a report, this menu choice is made active while that history plot is open.
Line Chart	Opens the *Edit Parameters* control for creating a line chart.
Pie Chart	Opens the *Edit Parameters* control for creating a pie chart. For pie charts, the terms "categories" and "value series" have meaning, but X- and Y-axis do not.
Pivot Table	Opens a pivot table report element. OpsView makes it possible to develop (through a drag-and-drop interface) custom pivot tables that refer to the data set from which they are developed. This function requires an understanding of pivot tables and of the report data.
Table	Inserts a table.
Gate Occupancy Chart	Supplies a timeline that shows the periods during which gates are occupied. It is easiest to insert a Gate Occupancy Chart based on the data collected in a Gate Occupancy report (refer to *Run a Gate Occupancy Report* on page 8-8) .

Table 8-8. Insert Menu (continued)

Command	Description
Time Chart	A configurable time-based charting element that displays time spans (bars) and events (diamonds) stacked horizontally. The Gate Occupancy Chart is a pre-configured adaptation of the Time Chart.

8.3.3 Build Effective Pivot Tables

OpsView pivot tables collect and filter data from data sets.

For example, although a Region Occupancy data set contains much more data, the Summary sheet of a standard Region Occupancy report supplies a pivot table that summarizes occupancy time data—average, maximum, minimum, and an event count—for the reporting period. The pivot table does many of the tasks to extract meaning from the data set: It finds the individual data items, identifies the maximum and minimum values, computes the average, and counts the operations based on the data in the data set.

The OpsView Pivot Table template lets you drag items from the field list into four fields:

- Row—Drag in fields that represent categories into which you will collect data
- Column—Drag in fields that represent categories into which you will collect data
- Data—Drag in numeric data fields that can be collected
- Filter—Drag in a field (such as Carrier) that will allow you to emphasize certain data without changing the table design

To make sure that you drop the item in the correct location, press the mouse button until the destination (such as "Drop Row Fields Here") is outlined.

Collect by Time

You can use a single pivot table to summarize data by year, quarter, month, day, fractions of a day, and fractions of an hour. The key is to set up the Row field (or Column field depending on the table layout) so that the time units become more specific as "buckets" move toward the right. For example: Month/Date/Hour.

When you first drag the Event Time field into the Row field or Column field, Event Time displays as a full time stamp. To collect data as described in this topic and to expand and collapse views of that data, you need to "bucket" the event time.

Set up the time sequence as follows (larger time units to the left of smaller time units):

1. Drag the **Event Time** field from the Field List into the Pivot Grid.

2. Right-click **Event Time**.

3. Select **Bucket Dates and Times**.

4. Select the "bucket size." If selecting **By Time Interval**, a sub-menu opens. Select from that sub-menu. The "bucket" acquires the selected property.
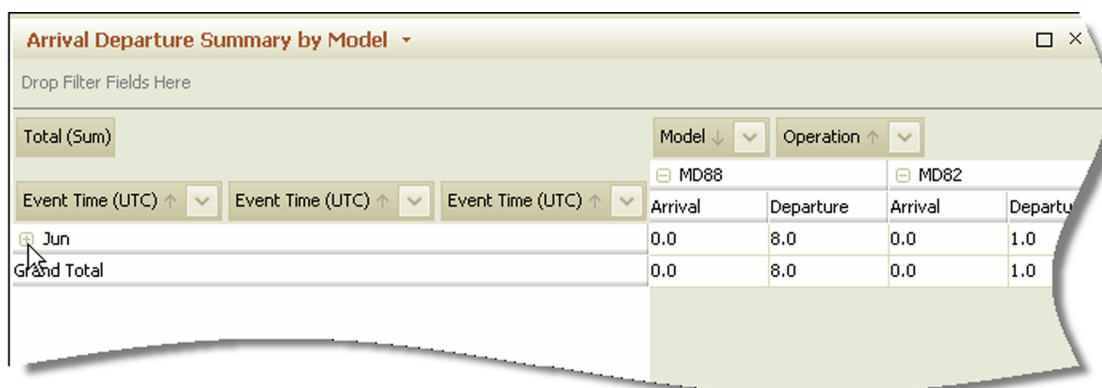
When the pivot table is created, you can expand and collapse the displayed data to answer the question at hand. For example, assume that you are asked, "How many of each aircraft model used the airport last month?" You could right-click on the pivot table and select **Collapse All** to collapse all row contents to the leftmost field. In the examples in this topic, this is the "month" data. You could also click the ⊟ beside the month name to collapse contents of the row.

Figure 8-9. Pivot Table showing Month Data only

Collecting Data by Month and Date

To see how many of each aircraft model were used at the airport on a day, you can expand the pivot table to show this data.

Click ⊞ beside the month name to expand the next bucket category: dates.

Figure 8-10. Pivot table showing Month and Date Buckets

Arrival Departure Summary by Model ▾			MD88		MD82	
Drop Filter Fields Here						
Total (Sum)			Model ↓	Operation ↑		
Event Time (UTC) ↑	Event Time (UTC) ↑	Event Time (UTC) ↑	Arrival	Departure	Arrival	De
⊟ Jun	⊞ 06		0.0	0.0	0.0	0
	⊞ 07		1.0	2.0	0.0	
	⊞ 08		0.0	8.0	0.0	
Grand Total			1.0	10.0	0.0	1

Collecting Data by Month, Date, and a Fraction of a Day

What if you need to divide data into fractions of a day? For example, to show when various aircraft models landed and took off during a day, you could divide each day into 1-hour "buckets." You could expand data for every day or for only one day.

Figure 8-11. Pivot Table showing Month, Date, and Hour Buckets

Total (Sum)			Model ↓		Operation ↑	
			⊟ MD88		⊟ MD82	
Event Time (UTC) ↑	Event Time (UTC) ↓	Event Time (UTC) ↑	Arrival	Departure	Arrival	Depart
⊟ Jun	⊟ 08	00:00 - 01:00	0.0	3.0	0.0	0.0
		01:00 - 02:00	0.0	0.0	0.0	0.0
		02:00 - 03:00	0.0	0.0	0.0	0.0
		03:00 - 04:00	0.0	0.0	0.0	0.0
		04:00 - 05:00	0.0	0.0	0.0	0.0
		05:00 - 06:00	0.0	0.0	0.0	0.0
		06:00 - 07:00	0.0	0.0	0.0	0.0
		07:00 - 08:00	0.0	0.0	0.0	0.0
		08:00 - 09:00	0.0	0.0	0.0	0.0
		09:00 - 10:00	0.0	0.0	0.0	0.0
		10:00 - 11:00	0.0	0.0	0.0	0.0
		11:00 - 12:00	0.0	0.0	0.0	0.0
		12:00 - 13:00	0.0	0.0	0.0	0.
		13:00 - 14:00	0.0	0.0	0.0	0.
		14:00 - 15:00	0.0	0.0	0.0	0
		15:00 - 16:00	0.0	1.0	0.0	0
		16:00 - 17:00	0.0	0.0	0.0	
		17:00 - 18:00	0.0	0.0	0.0	
		18:00 - 19:00	0.0	0.0	0.0	
		19:00 - 20:00	0.0	2.0	0.0	
		20:00 - 21:00	0.0	1.0	0.0	
		21:00 - 22:00	0.0	0.0	0.0	
		22:00 - 23:00	0.0	0.0	0.0	
		23:00 - 00:00	0.0	1.0	0.0	
	⊞ 07		1.0	2.0	0.0	0
	⊞ 06		0.0	0.0	0.0	0
Grand Total			1.0	10.0	0.0	1.

Collecting Data in Larger Time-based Units

To make multi-year or yearly reports, *make sure that the year and quarter "buckets" are to the left of months* in the Row fields. If you set up fields in this way, you can expand and collapse data for a variety of data displays from the same report.
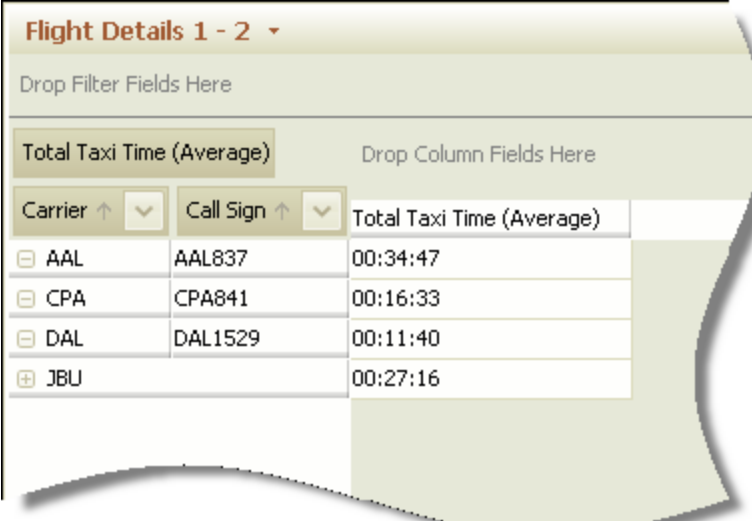
Collect by Carrier

You can collect data by carrier in the pivot table without losing the information related to a call sign.

Because the carrier is a more general category than call sign, put carrier to the left of call sign when constructing the pivot table row fields.

Note how the data in the two tables is different. Because the data fields show *average* data, JBU, with three call signs, has an average taxi time that is different than its individual taxi times. Other carriers in this sample show only one call sign. These carriers show the same average taxi time whether the data is collected by carrier only or by carrier and call sign.

Figure 8-12. Collecting Data by Carrier Only

Figure 8-13. Collecting Data by Carrier and Call Sign

Expressing Results as Counts or Percentage

Some field items (e.g., "Is Compliant," "Is On Time") are configured to enable you to toggle the expression of data from a count to a percentage (Boolean fields).

1. After you have built the pivot table, right-click the field item.
2. Select **Aggregations > [expression]**. The format updates.

Figure 8-14. Expanded menu for selecting data format
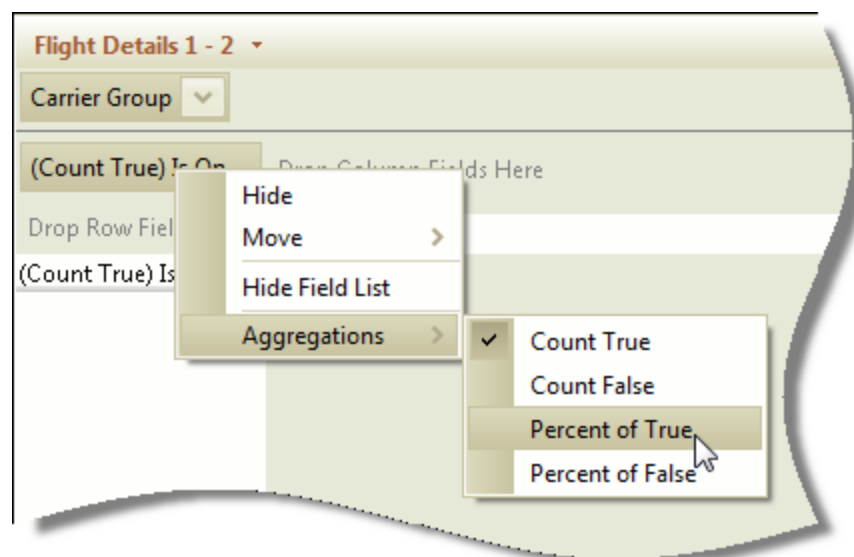
Filter Pivot Table Data

By using the filter field, you can show only the data that you will show without changing a table layout. For example, you could set up a pivot table that correlates operations by first departure fix, and use "Operation" in the data field *and* the filter field to enable you to show and hide data without changing the overall table format.

> **i** **NOTE:** The same "Operation" field name can be dragged from the field list to different locations in the "pivot grid." The effect of that field changes based on the context in which it is used. When dropped on the Data Field destination, it results in a "count." When dropped in the Filter Field destination, it allows you to filter data by operation type.

8.3.4 Charts

When you make an OpsView report, default output will be a data set (which you do not see) and, usually, a table or a pivot table that references that data set and displays some or all of its contents.

You can make graphical report elements (line charts, pie charts, bar charts, and time charts) from tables or pivot tables. (With the exception of time charts, it is usually easiest to make graphs and charts from pivot tables.) If you have made a functional pivot table, you have sorted the data in a way that will help you make a plot of data in meaningful charts.

Chart data are dynamically attached to the table data they reference. (This is what you do when you select a report element in the "Reference Report Element" menu of the report-element parameters.) For example, if you made a pie chart that shows region occupancy percentages by carrier filtered for inbound aircraft, the pie chart updates when you filter the table data for outbound aircraft (refer to) .

Figure 8-15. Data-Reference Relationships in OpsView Reports
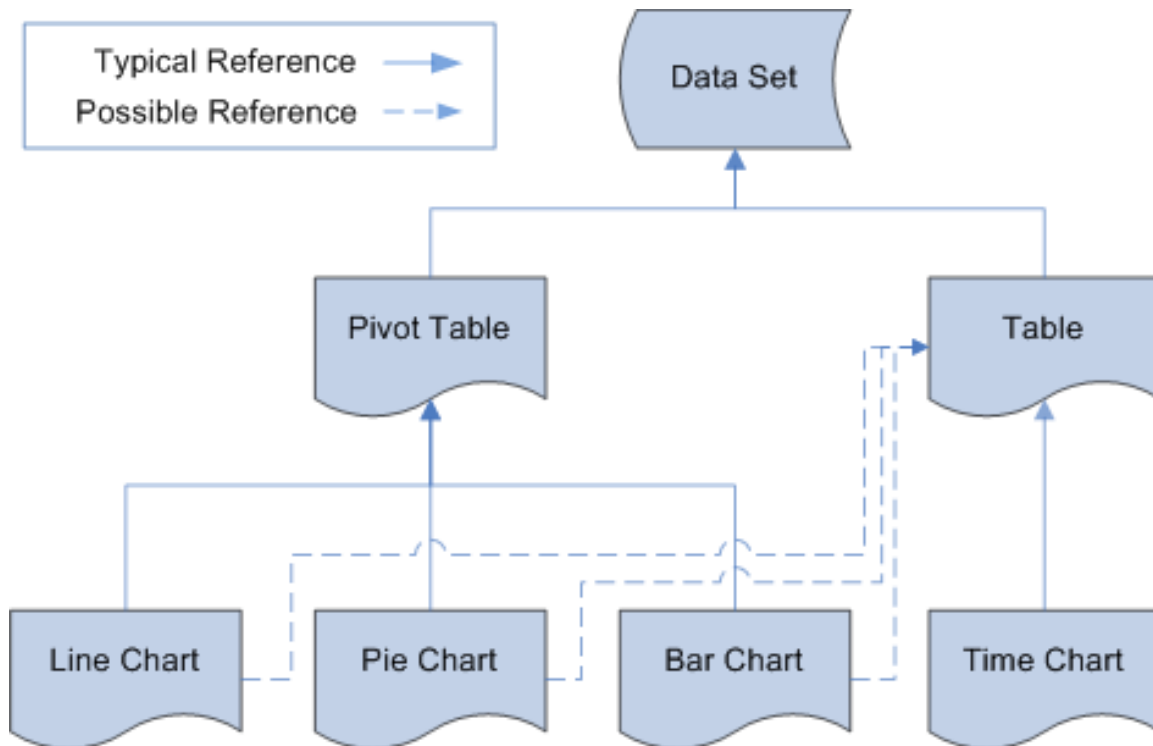
Table 8-9. OpsView Graphical Output Options

Use...	to...
Line Chart	show trends or changes
Pie Chart	show percentages of a whole
Bar Chart	compare data from two or more conditions or data sets
Time Chart	show events on a timeline

The key to making good charts is selecting meaningful data combinations.

For line charts, pie charts, and bar charts, you will always work with two variables: (1) a specific column or all columns and (2) a specific row or all rows. You select the column(s) or row(s) to serve as the "Category" on the horizontal (X) axis or the "Value Series" on the vertical (Y) axis (refer to *Insert a Chart* on the next page for best procedures for adding line charts, pie charts, and/or bar charts to a report).

For the Time Chart, you will identify Time Ranges, which result in bars that show a span of time, and/or events, which are shown by points along the timeline (refer to *Insert a Time Chart* on the next page for best procedures for adding a time chart to a report).

8.3.4.1 Insert a Chart

Use these instructions to insert a line chart, pie chart, or bar chart into an Aerobahn report.

> ℹ **NOTE:** A chart shows in the report sheet that is open at the time you insert the chart. To add a chart on a separate sheet, add a sheet before you insert the graph or chart.

1. Select the sheet on which you will display the chart.
2. Select **Insert > [Choose Graph or Chart]**.
3. Click **Select Categories** for "Horizontal (Categories) Axis." The *Select Categories* dialog box opens.
4. Choose the "Reference Report Element" and select the headers, columns, or rows to use as the horizontal (X) axis labels. There can be more than one option. Be sure that you have selected the report element to which the graph or chart is linked.
5. Click **OK**.
6. Click **Add Value Series**. The Add Value Series dialog box opens.
7. Choose the "Reference Report Element" and select the column(s) or row(s) from which to retrieve data. Select the same report element that was chosen for the Horizontal (Categories) Axis.
8. Click **OK**.
9. Optional: Enter a title for the chart and/or (for Bar Chart or Line Chart only) labels for the X- and Y-axes. (To make a chart with default titles and labels, take no action.)
10. Click **OK**.

8.3.4.2 Insert a Time Chart

> ℹ **NOTE:** You can make Time Charts most easily from the Flight Details data set type (refer to *Run a Custom Report* on page 8-27). The standard Gate Occupancy report type offers a custom time chart (refer to *Insert a Gate Occupancy Chart* on page 8-9).

> ℹ **NOTE:** A chart shows in the report sheet that is open at the time you insert the chart. To add a chart on a separate sheet, add a sheet before you insert the graph or chart.

1. Select the sheet on which you will display the chart.

2. Select **Insert > Time Chart**.

3. Select the Reference Report Element.

4. Select the Chart Identification (row labels).

5. Select the Time Ranges.
   The selection of Time Ranges is based on the data set that you started with. The Flight Details data set gives alternatives. If no parameters show in the selection window, click **Add**, and make your own time range parameter. Give this range a name, and define start and stop times. Click **OK** when finished. The time range that you defined shows in the Time Range selection window.

6. Select Events to be displayed on the time line.

7. Click **OK**.

8.3.4.3 Change Line Chart Format

Line Charts are available in two formats: "Direct" or "Stepped."

1. Right-click in a line chart.

2. Select **Line Render Type**. A second menu opens. The current format is checked.

3. Select the unchecked line format to change the line chart format.

8.3.4.4 Display Data Point Detail

Put the pointer above a data point (bar in a bar chart, point in a line chart or time chart, or a slice of a pie chart) to display date, time stamp, and value for the graphical data at the tip of the pointer.

In a Time Chart, you can select which parameters to add to the default mouseover contents.

1. Select **Time Chart > Mouse Over Settings**.

2. Select each item to display when you put the pointer above a data point.

3. Click **OK**.

8.3.4.5 Update Chart Titles

Although graph and chart data are dynamically linked to the table data they reference, you must enter new graph and chart titles to change the displayed titles.

For example, assume that you create a pie chart (from a Region Occupancy report) that shows region occupancy percentages by carrier filtered for inbound aircraft, and you enter a chart title that includes the term "Inbound." If you filter the Direction column to show outbound aircraft, the pie chart automatically updates to reflect outbound data. The title of the pie chart, however, continues to show that the data is "Inbound." You can easily change this title so that it accurately labels the new pie chart.

1. Click the window title. (See 1 in illustration.)

2. Select **Edit Title**. (See 2 in illustration.)
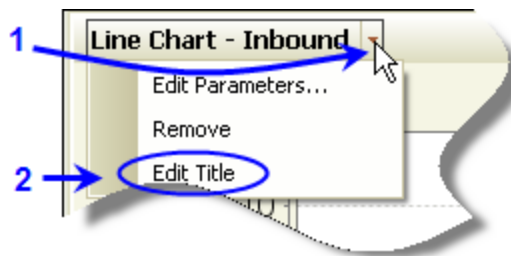
3. Replace the title text with the new text.

4. Click **OK**.

8.3.5 Insert a blank sheet in a report

When you insert a report element (bar chart, history plot, line chart, pie chart, pivot table, or table), that element shows on the active "sheet" (refer to *Charts on page 8-40* for more information on these report elements).

You can add a blank sheet to a report and insert a report element on that sheet as follows:

1. From the report's menu bar, select **Insert > Sheet**.

2. With the blank sheet open, select **Insert > [Report Element]**.
    If more than 1 data set was used to create this report, identify–when prompted–the data set that the report element should reference. If not prompted to make a choice, omit this step.

8.3.6 Move a Report Element

You can move a report element (a chart, history plot, or pivot table) from one sheet to another in a single report. Report elements can be moved to sheets that contain other report elements or to blank sheets.

1. If the destination sheet does not already exist, insert a new sheet.

2. Click in the title bar of the report element to be moved to the new sheet, and drag it to the tab of the destination sheet. The destination sheet opens, and a docking rectangle shows on the sheet. Do not release the mouse button.

3. Put the pointer inside the docking rectangle and release the mouse button. The report element moves to the new sheet.

When you save a report, you are saving the current configuration of report elements.

8.3.7 Report Sheets (Tabs)

Most data sets present data in tabular format with different information sorted onto different sheets for easier use.

⚠ **CAUTION:** The active tab is highlighted and marked with an X. Click the **X** to delete the sheet.

Two standard reports—Taxi Time and Region Occupancy—offer a Summary sheet. The Summary sheet supplies the average, maximum, and minimum occupancy time values (as well as the number of rows used to calculate those values).

8.3.8 Report Name

When you save a report, give the report a name.

You can use punctuation in a report name. No file extension is necessary.

If an * (asterisk) is before the report name, you changed the report after it was saved. Aerobahn tells you to save the report when you try to close a report with * before the file name.

8.3.9 Make and Use Report Types

You can make report types to collect data for unique requirements. Your report types work like standard report types. They give the same types of outputs as standard reports, but they are adapted to your unique requirements.

➡ Select "Relative Time Interval" when setting up the interval for a report type.

1. Make a custom report (refer to *Run a Custom Report* on page 8-27).

2. Select **Report > Save Report Type**.

3. Enter a title for the report type.

4. Optional—Select **Share Report Type** to make the report type available to other users. Then, select the group(s) with which you will share the report type.

5. Click **Save**.

This report type is available in your Report Parameters "My Report Types" tab. Select this report type to run a report that uses the configuration that you set up for the report type.

8.4 Use Data Delivery

Data Delivery lets an approved Aerobahn user get Aerobahn report data when that user is not logged in to Aerobahn.

When an approved user requests one, a special "Direct Query URL" is supplied for a specified data set (refer to *Get the Direct Query URL* on the facing page). This URL lets the user directly query the Aerobahn database via an HTTP request. **Data Delivery** lets your IT system pull data from **Aerobahn** (refer to *Query the Aerobahn Database* on page 8-50).

Approved users can monitor usage reports through the **SystemAdmin > Data Delivery** tab (accessible when a user group is selected).

Figure 8-16. Data Delivery Report Retrieval interface
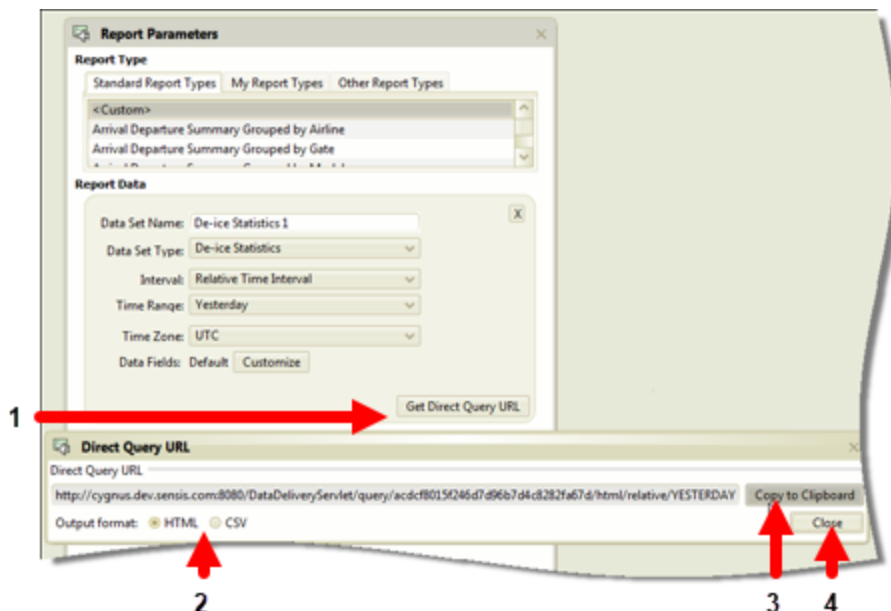
Key	Description
1	After setting up the report parameters, click to get the Direct Query URL.
2	Choose the output format.
3	Click to copy the Direct Query URL in the window to the Clipboard.
4	Click to close the **Direct Query URL** dialog box.

8.4.1 Get the Direct Query URL

You need the Direct Query URL to query the Aerobahn database from a web browser or to import the data directly into a spreadsheet.

1. Select **Reporting > New Report**, or click **New Report** in the **Report Management** tool.

2. Select the **Standard Report Types** or **My Report Types** tab.

3. Select **<Custom>**.

   ℹ **NOTE:** It is possible to select a standard report. If you change report fields (step 7), you receive, when the report generates, a system message related to the format change. You will also see empty columns in the generated report.

4. Select a data set type (refer to *Data Set Types* on page 8-29.

   > ℹ **NOTE:** If you have "Report Unrestricted Data Records" permission, Aerobahn can report on all flights in a data set. If you do not have this permission, Aerobahn can report only on those carrier codes in the Carrier List for Proprietary Data Access.

5. Set the time zone.

6. Select the Interval. The requirement for client PC resources increases as the time interval increases.

   - If Relative, select a Time Range.
   - If Absolute, set the start and stop time.

7. OPTIONAL For "Data Fields," click **Customize**. This opens the **Report Column Chooser**. Select data types to include in the query. (For guidance on how to use the column chooser, refer to *Customize Data Fields* on page 8-28.)

8. OPTIONAL Click **Add Data Set**. Then, do steps 4–7 again to set more report parameters.

9. Click **Get Direct Query URL**.

10. Select the download format.

    - HTML format lets you get data to use in a web browser. **Microsoft Excel** also lets you import data using an HTML link.
    - CSV output lets you save this report in TXT format. Use tools in the application that you open the output file in to set up columns.

11. Click **Copy to Clipboard**.

12. Click **Close**.

The URL is available to paste into your web browser or **Microsoft Excel**. Go to *Query the Aerobahn Database* on page 8-50.

8.4.2 Change the Direct Query URL

After you have generated a Direct Query URL, you can change its time parameters to make a new database query. It is not necessary to log in to Aerobahn to change a Direct Query URL.

For example, you can change a query with a relative time interval to a query with an absolute time interval. You can also change a query with a relative time interval of one week to a relative time interval of the past 24 hours.

To change a Direct Query URL, edit the last part of the URL. (See marked sections in and in .) To edit those contents, paste the URL into **Notepad**. Then, replace the time-related characters that are generated when you click **Get Direct Query URL**. Copy the full URL from **Notepad**, and paste this into your browser or into **Microsoft Excel**.

Edit the characters that follow `/html` or `/csv`

- Keep or change the interval: `/absolute/` or `/relative/`.

- If the interval is `/absolute/`, enter the start and stop time stamps. Break "beginning" and "ending" times with "/". The format for this data must be as follows: `yyyy-MM-ddTHH:mm:ss.sss`. For code definitions, refer to . (For example, `/html/absolute/2013-10-09T00:00:00.000+0000/2013-10-09T13:30:00.000+0000`)

- If the interval is `/relative/`, enter a variable from "Variables for Relative Queries" (refer to).

Table 8-10. Variables for Relative Queries

Minutes/Hours	Days	Weeks	Months/Years
`LAST_15_ MINUTES`	`TODAY`	`LAST_CALENDAR_WEEK`	`LAST_CALENDAR_MONTH`
`LAST_30_ MINUTES`	`YESTERDAY`	`LAST_CALENDAR_2_ WEEKS`	`LAST_CALENDAR_2_ MONTHS`
`LAST_HOUR`	`LAST_2_ DAYS`	`LAST_CALENDAR_3_ WEEKS`	`LAST_CALENDAR_3_ MONTHS`
`LAST_3_HOURS`	`LAST_3_ DAYS`	`LAST_CALENDAR_4_ WEEKS`	`LAST_CALENDAR_4_ MONTHS`
`LAST_6_HOURS`	`LAST_4_ DAYS`	—	`LAST_CALENDAR_6_ MONTHS`
`LAST_12_HOURS`	`LAST_5_ DAYS`	—	`LAST_CALENDAR_9_ MONTHS`
`LAST_24_HOURS`	`LAST_6_ DAYS`	—	`LAST_CALENDAR_12_ MONTHS`
—	`LAST_7_ DAYS`	—	`LAST_CALENDAR_YEAR`
—	`LAST_14_ DAYS`	—	`CALENDAR_YEAR_TO_ DATE`

Table 8-10. Variables for Relative Queries (continued)

Minutes/Hours	Days	Weeks	Months/Years
—	LAST_21_DAYS	—	CALENDAR_MONTH_TO_DATE
—	LAST_28_DAYS	—	—
—	LAST_30_DAYS	—	—

Table 8-11. Time/Date Conventions for Absolute Intervals

Format	Definition
yyyy	year
MM	2-digit month (e.g., Jan.=01, Dec.=12)
dd	2-digit day (01-31)
T	Date-Time Separator
HH	2-digit, 24-hr format hours (00-23)
mm	2-digit minutes (00-59)
ss	2-digit seconds (00-59)
sss	3-digit milliseconds (000-999)
Z	Zulu time zone or offset in hours from Greenwich Mean Time (+/-HH)

Figure 8-17. Direct Query URL structure, Absolute Time Interval

```
http://server.name.com:8080/DataDeliveryService/query/[directQueryParamKey]/[format]/absolute/[timeIntervalStart]/[timeIntervalEnd]
```

Figure 8-18. Direct Query URL structure, Relative Time Interval

```
http://server.name.com:8080/DataDeliveryService/query/[directQueryParamKey]/[format]/relative/[relativeType]
```

8.4.3 Query the Aerobahn Database

You can use a direct query URL to access the Aerobahn database using a web browser or Microsoft Excel.

8.4.3.1 Query the Aerobahn database using a web browser

1. Get the Direct Query URL (refer to *Get the Direct Query URL* on page 8-47).
2. Paste the Direct Query URL into the web browser.
3. Optional—Change the Direct Query URL (refer to *Change the Direct Query URL* on page 8-48).
4. Press ENTER.
5. Enter your **Aerobahn** user name and password when prompted.
6. Click **OK**.

8.4.3.2 Query the Aerobahn database using Microsoft Excel

> **NOTE:** This instruction was written for **Microsoft Excel 2007**. You may need to use a different procedure for a different version of that software.
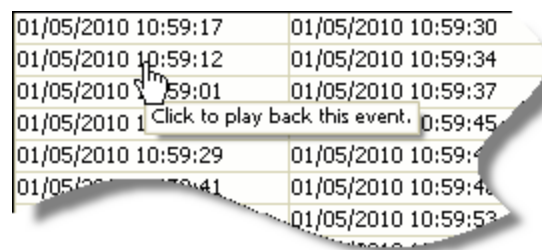
1. Get the Direct Query URL (HTML format).
2. Open **Microsoft Excel**.
3. Click the **Data** tab.
4. Click **From Web**. The **New Web Query** dialog box opens.
5. Paste the Direct Query URL in to the location bar at the top of the dialog box.
6. Optional—Change the Direct Query URL (refer to *Change the Direct Query URL* on page 8-48).
7. Click **Go**.
8. Enter your Aerobahn user name and password when prompted.
9. Click **OK**.
10. Select the data you will import.
11. Click **Import**.
12. Select the worksheet and cell you will import the data into.
13. OPTIONAL Make Import Settings:
    - Replace data, and clear cells that need to be empty
    - Fill down formulas in columns adjacent to data.
14. Click **OK**.

8.5 Play Back Report Events

This function is available in reports that contain timestamps (Figure 8-19 below), such as "Time Entered" or "Time Exited." (In the *Aerobahn User's Guide*, "timestamp" as it applies to OpsView reports, is intended to refer to the event date and to the time information that is supplied in a single data field of a report.)

1. Click a timestamp in a report. The Playback control opens. Notice that display is in the Playback: Stop mode.

2. If **Map Display** is not open in the OpsView workspace, open it: **Tools > Map Display**.

3. Click **Play** in the Playback control. If **Map Display** is active, targets start to show in a few seconds. The related target is highlighted.

Figure 8-19. Report Timestamps

Notes:

- When you click on the map away from the highlighted target, the target goes back to its usual color.

- When you click in the **OpsView** report on a different timestamp, Playback restarts at the new time.

- Select **Live** mode in the *Playback* window to stop a Playback session. The Data Mode bar shows the change in mode and the current time. Closing the Playback command window does not stop playback.

Refer to *Replay Recorded Events* on page 3-22 for more information on Playback controls.

8.6 Access Taxi Time Details

Taxi Time Details supplies a region-to-region chronology of an aircraft's movement. *Taxi Time Details* can be opened from a report that references the Flight Details data set. Because *Taxi Time* and *Wheels Up / Wheels Down*

reports refer to the Flight Details data set, *Taxi Time Details* is available from these standard reports.

Right-click a table row in these reports to access *Taxi Time Details*.

To export the detailed report for this flight, select **Options > Export to CSV**.

---

i **NOTE:** Occupancy time is the calculated difference between the time at which a target exited a region and the time at which that target entered that region. Therefore, only *Left Region* events give an occupancy-time value.

8.7 Calculate Time Differences

You can calculate time differences in tables and in Location History plots.

Calculate time difference in a table

To calculate the difference between two time columns in an OpsView report, CTRL-click the two columns in succession. You can click in any sequence.

For example, assume that you need to know how long it took for a given flight to travel from the gate stand to its Wheels Up time. To calculate this time, CTRL-click the Wheels Up time stamp ([1] in) . Then, CTRL-click the Left Parking Area time stamp [2]. The Time Difference shows the calculated value.

Figure 8-20. Time-Difference Calculation (Taxi Time Report example)
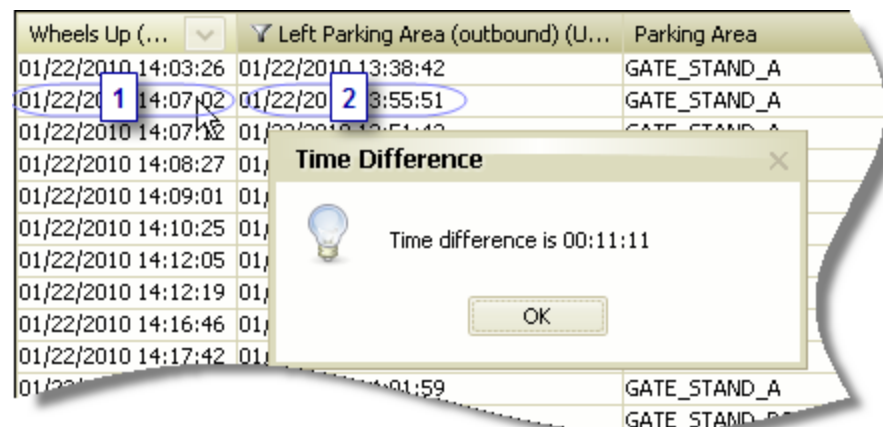
Calculate time difference in a Location History plot

To calculate the span of time between two points in a Location History plot, CTRL-click two plot points in succession(refer to *History Plot* on page 8-20 for more information on history plots).

8.8 Filter and Sort Table Data

OpsView tables have flexible filtering and sorting options.

ℹ NOTE: This information applies to real-time tools and report tools.

Filter Data in Table Columns

ℹ NOTE: When you change data filters, you change the report structure.

Click ⌄ in a column header to open filter controls. This button shows when you move the pointer into the column header.

- (All) is the same as no filter. Select **(All)** to delete a filter.
- (Custom) lets you select a range of filter conditions. You do not see all filter conditions in each column. Filter conditions change by the type of data in a column. For example, you can use "is after" and "is before" only in a column that contains time stamps (refer to Table 8-12 below).
- Select an item to show rows that contain that item in that column.

When a filter is set up in a column, Aerobahn shows you this in two areas on the screen:

- **[Filtered]** shows above the table.
- A funnel icon shows that a filter is in operation.

Table 8-12. Custom Data Filters

Custom Filter Conditions	Description
is anything	Select "is anything" to show all data. It has the same effect as "All" or as no filter.
is	Select an item from Value(s) list. The table displays only the data row that contains that item. As an alternative to the "is" filter, you can select an item from the column header menu. For example, select a flight ID, and all other flights are filtered out.
doesn't equal	Select an item from Value(s) list. The table shows data rows that do not contain that item.

Table 8-12. Custom Data Filters (continued)

Custom Filter Conditions	Description
is after	Select a time. Aerobahn shows data rows with time stamps after the selected time.
is at	Select a time. Aerobahn shows data rows with time stamps that are equal to the selected time.
is at or after	Select a time. Aerobahn shows data rows with time stamps that are equal to or after the selected time.
is at or before	Select a time. Aerobahn shows data rows with time stamps that are equal to or before the selected time.
is before	Select a time. Aerobahn shows data rows with time stamps that are before the selected time.
is between	Aerobahn shows data rows with time stamps that are between a selected start and end time.
is in	Select checkboxes for items in the Value(s) list. The table shows the data rows that contain those items. For example, select the checkboxes for more than one flight ID. Click **OK**. Then, click **OK** again to close the dialog. Only the rows for those flights show.
isn't in	Select checkboxes for items from Value(s) list. The table shows data rows that do not contain the selected items.
is empty	Select "is empty" from Value(s) list to show only those rows that have an empty cell in that column.
is not empty	Select "is not empty" from Value(s) list to show only rows that do not have an empty cell in that column.
begins with	Select "begins with" from Value(s) list, and enter one or more characters. If a cell in the filtered column has those characters as the first characters, Aerobahn shows that row. If those characters are not the first characters in the cell, Aerobahn hides that row. NOTE: This is a case-sensitive field.
contains	Select "contains" from Value(s) list, and enter one or more characters. If a cell in the filtered column includes those characters in that sequence, Aerobahn shows that row. If those characters are not there, Aerobahn hides that row. NOTE: This is a case-sensitive field.
doesn't contain	Select "doesn't contain" from Value(s) list, and enter one or more characters. If a cell in the filtered column does not include those characters in that sequence, Aerobahn shows that row. If those characters are there, Aerobahn hides that row. NOTE: This is a case-sensitive field.
ends with	Select "ends with" from Value(s) list, and enter one or more characters. If a cell in the filtered column has those characters as the last character(s), Aerobahn shows that row. If those characters are not the last characters in the cell, Aerobahn hides that row. NOTE: This is a case-sensitive field.

Find a hidden filter

There are two methods for finding a filter.

Method 1

If you hide a column that is filtered, the filter stays active. If "[Filtered]" shows at the top of the table, information is filtered although you do not see funnel icons.

Figure 8-21. Table with Filter Active (Filtered columns do not show)

1. Right-click on the header bar for the table.

2. Click **Column Chooser**.
    The **Choose Columns to Display** dialog box opens.

3. Move data fields to show to **Selected Fields**. (For more information, refer to *How to Select and Move Data Fields* on the facing page.)

---

 i **NOTE:** Column names in red have a filter applied. Column names in green are dynamic fields. (For more information about dynamic fields, refer to *Dynamic Field Components* on page 9-51.)

How to Select and Move Data Fields

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕.

- To remove one item from **Selected Fields**, select the item. Click ⊕ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⊕ .

- To remove all items from **Selected Fields**, click ⊕. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⊕ or ⊕ until it is in the correct location. To move an item to the top of the list, click ⊕ . To move an item to the bottom of the list, click ⊕.

Method 2

Right-click a column header, and select "Show Filtered/Sorted Columns." All columns display. A funnel icon shows that a filter is active.

This procedure changes the table configuration. To restore the initial configuration, hide the individual columns again.

Example: Set up a custom filter to show more than one Flight ID

Use this procedure to generate a list of flight IDs/call signs for a carrier. Use the "begins with" value to show data from flights with flight IDs that start with a specified letter or letters.

ℹ **NOTE:** The Region Occupancy report is an example only. You can use this procedure in a table with a "Flt ID" or "Call Sign" column.

A funnel symbol shows that a filter is on.

1. Click [ ] in the Call Sign (or Flt ID) column, and select **(Custom...)**.

2. In the Condition list, select **begins with**.

3. Supply one (or more) letter(s) and number(s) in the Value(s) field. Entries are case-sensitive.

4. Click **OK** to put the table data through a filter to show information that starts with that character (or those characters) only.

5. Click in the Call Sign (or Flt ID) column, and select **(Custom...)**.

6. In the Condition list, select **begins with**.

7. Supply one (or more) letter(s) and number(s) in the Value(s) field. Entries are case-sensitive.

8. Click **OK** to filter the table data so that it shows information that starts with that character (or those characters) only.

Example: Set up a custom filter for specified Flight IDs

Use this procedure to show only the table rows related to selected flights.

1. Click [⌄] in the Call Sign column, and select **(Custom...)**.

2. In the Condition list, select **is in**.

3. Expand the Value(s) menu, and select the flight ID boxes for the flights to show in the table.

4. Click **OK** to close the list.

5. Click **OK** to filter the table data.

Figure 8-22. Results of filtering

In this condition, the filter decreased the number of rows from 511 to 3. You can monitor only the data you need to monitor.

8.9 Sort Pivot Table Data

The *Sort Ascending* and *Sort Descending* functions allow you to rearrange pivot table data in a number of ways.

The most common way to rearrange data is to click the pivot fields. You can also do column sorts by right-clicking in a column. (The following examples from the *Runway Operations Daily by Hour* report illustrate and explain some options.)

Refer to the glossary for definitions of data fields used in reports.

Reverse Chronology

To reverse chronology, right-click the Event Time (hours) column, and select **Sort Descending**. All table data adjusts.

Reverse Column Sequence

To reverse the left-to-right sequence of columns, click a column field label (the examples here are "Runway" and "Operation").

In this example, an ascending (arrow points up) Runway sequence causes the runways with the higher-value integer values to be put to the right of those given lower-value integers. Likewise, the "Arrival" operation is put to the left of "Departure" because "A" precedes "D" in the alphabet.

Figure 8-23. Sort by Column Fields
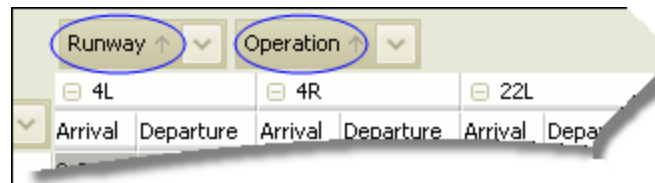
To organize data by number of *operations* (instead of by time), right-click in an operations column, and select **Sort Ascending** (or **Sort Descending**).

Note the relationship between the hours (listed in time order) and the Arrival volumes (refer to Figure 8-24 below) .

Figure 8-24. Sort in Columns (chronological)

After you click **Sort Ascending**, the 31R Arrivals are sequenced from least to greatest (refer to Figure 8-25 on the facing page). The 31R Arrivals now control the sequence of all data in the table. Note that event times are no longer in time order.

Figure 8-25. Sort in Columns (operations)

8.10 Use the Pivot Table Thumbnail Viewer

The thumbnail view helps you locate data clusters in tables and scroll to a location with a single click.

1. Click ⬦.

2. Drag the "window" across the table thumbnail.

3. Release the mouse button. The data selected in the thumbnail view shows in the normal table view.

8.11 Table Sheet Options

Click the title of a table sheet to open a menu.

Table 8-13. Menu Options

Select	Result
Edit Parameters	Opens the dialog box in which you make identities for X/Y axes, for categories and value series, and for parameters for time charts.
Export to CSV	Saves data on a sheet as a comma-separated values file. That file can be opened in common spreadsheet programs.
Export to PDF	Opens the PDF Export Settings dialog box. Navigate to a location to which the PDF will be saved, select a portrait or landscape layout, and click **OK**.
Remove	Clears data from a sheet without removing the sheet. To delete a sheet from a table, click the **X** on the sheet's tab.
Edit Title	Lets you change the text in the title (the text you clicked to open the menu of sheet options) of a sheet. When you change this title, you do not change the text in the tab. Double-click a tab name to change tab text. Then, replace the highlighted text.

Figure 8-26. Renaming a Table Sheet
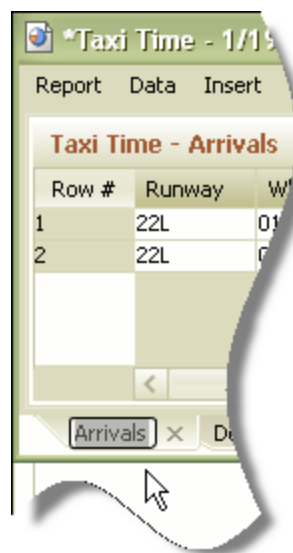
Double-click a tab name to select it.
Replace this text to rename the sheet.

8.12 Create a Quick Report

A Quick Report gives a procedure for running a report from the workspace in two clicks. After you have generated a report, you can use that report to create a Quick Report that can be run again.

➡ Create (i.e., "Save") a Quick Report from a report with a *relative time interval* set in the report parameters. (Using a relative time interval lets you can run the Quick Report and still pull the correct amount of data.)

1. With the report open, select **Report > Save Quick Report**. The *Save Quick Link* window opens.

2. OPTIONAL—Edit the name.

3. Click **Save**.

4. Click **OK** to close the system message.

You can now run quick reports based on these parameters (refer to *Run a Quick Report* below).

8.13 Run a Quick Report

You must create a Quick Report before you can run one (refer to *Create a Quick Report* on the previous page).

You can run a Quick Report from the following locations:

- Workspace *Reporting* Menu
- Report Management tool

From the Workspace, select **Reporting > Quick Reports > [name of Quick Report]**.
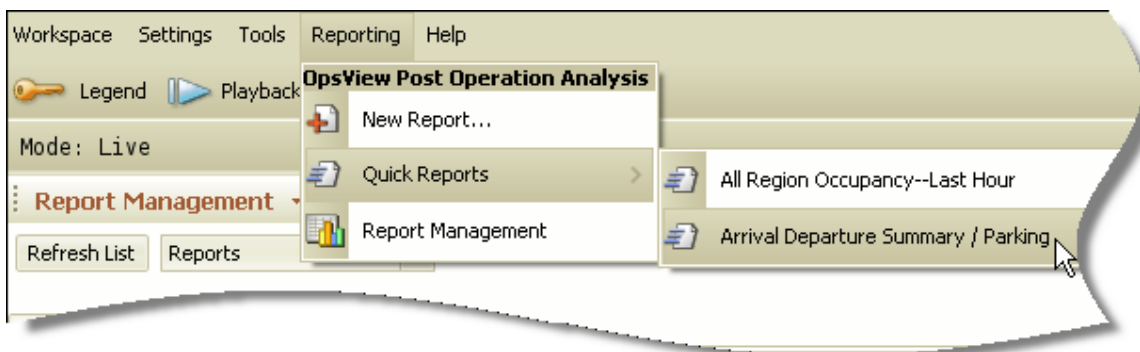
From Report Management,

1. Select **Quick Reports** from the Reports drop-down menu. The list of available Quick Reports opens.
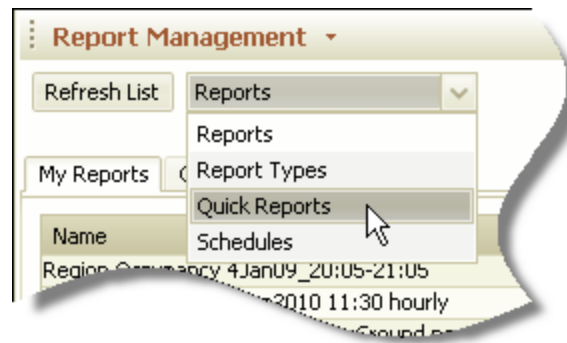
2. Double-click a report title. OpsView generates the report.

8.14 Report Management

The **Report Management** tool provides access to saved reports, report types, quick reports, and report schedules through a drop-down menu (refer to) .

Select **Reporting > Report Management** to open the **Report Management** tool.

Figure 8-27. Report Management "Group" Menu
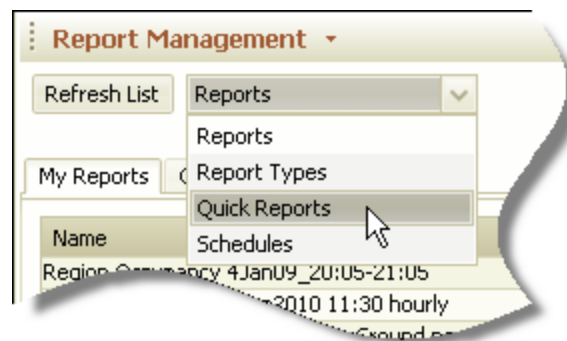
To update an open list, click **Refresh List**.

To run a new report from the Report Management tool, click **New Report** (refer to for instructions).

To manage individual reports, report types, quick reports, and report schedules, right-click a listing.

Table 8-14. Report Management Tools: Quick Reference

Step 1. Choose the Report Management group.	Step 2. Right-click the report listing. Step 3. Select a command from the menu.	Step 4. Follow instructions below.
Reports	Open	The selected report opens. (Alternate Procedure—Double-click the report title.)
	Share	Select the group name(s) from the list, and click **OK**.
	Rename	Replace the text, and click **OK**.
	Delete	This deletes only the report for that date and time. Click **OK** to delete.
Report Types	Run	The *Report Parameters* window opens. You can add and/or modify data sets. Click **Run Report**.
	Schedule	The Create Report Schedule window opens (refer to *Schedule a Report from Reports Management* on the next page).
	Share	Select the group name(s), and click **OK**.
	Delete	This deletes the *Report Type*. Click **OK** to delete.
Quick Reports	Run Now	OpsView generates a new report using current report parameters (refer to *Create a Quick Report* on page 8-64.
	Delete	This deletes only the Quick Report link. Click **OK** to delete.
Schedules	Edit	The Create Report Schedule window opens (refer to *Schedule Reports* on the next page.
	Rename	Replace the text, and click **OK**.
	Delete	This deletes only the schedule. No report, report type, or quick report is deleted. Click **OK** to confirm.

8.14.1 Schedule Reports

You can run reports automatically on a regular schedule. An optional setting enables Aerobahn to tell you or others that a scheduled report has been generated and is available.

ℹ NOTE: The scheduling function requires an offset in days (minimum one day), weeks, months, or years.

You can schedule an open report or a report type. To schedule report types, you must work in the Report Management tool (refer to *Schedule a Report from Reports Management* below.

Schedules are listed in the Report Management *My Schedules* tab.

8.14.1.1 Schedule an Opened Report

1. In the open report, select **Report > Create Report Schedule**. The *Save Report Type* window opens.

2. Enter a new title to change the default.

3. To share the report, select the **Share Report** box and select the group(s) with which to share it. The report type is saved, and the *Create Report Schedule* window opens.

4. Configure the schedule.

   ▪ Select the report schedule interval and timing. Based on your selection, the *Schedule Preview* displays the next reporting date and the scope of the report.

   ▪ Select the group(s) with which to share the report.

   ▪ Select whether and to whom to send Email notifications when a report is available.

5. Click **Schedule Report**.

8.14.1.2 Schedule a Report from Reports Management

Scheduling a Report from My Report Types

1. Select **Report Types** from the Reports drop-down menu.

2. Right-click the title to be scheduled.

3. Select **Schedule**.

4. Configure the schedule.

- Enter the name as you want it to show in your My Schedules list.

- Select the report schedule interval and timing. Based on your selection, the Schedule Preview displays the next reporting date and the scope of the report.

- Select the group(s) with which to share the report.

- Select whether and to whom to send Email notifications of the report's availability.

5. Click **Schedule Report**.

8.14.2 Change a Report Schedule

After reports are scheduled, the schedule is saved in Report Management Schedules.

1. Open Report Management.

2. Select **Schedules** from the Reports drop-down menu.

3. Right-click or double-click the title to be rescheduled.

4. Click **Edit**.

5. Re-configure the schedule.

- Select the report schedule interval and timing. Based on your selection, the *Schedule Preview* displays the next reporting date and the scope of the report.

- Select the group(s) with which to share the report.

- Select whether and to whom to send Email notifications of the report's availability.

6. Click **Schedule Report**.

8.14.3 Delete a Report Schedule

When you no longer need to run a report on a regular schedule, you can delete the schedule. You can do this without removing the Report Type. You can run the report or reschedule it if necessary.

⚠ **CAUTION:** Make sure that you are working in the Reports Management My Schedules list before you attempt to delete scheduling information. If you are in the Report Type group, following these instructions can delete a Report Type.

1. Open Report Management.

2. Select **Schedules** from the Reports drop-down menu.

3. In the My Schedules list, right-click the title of the schedule to be deleted.

4. Select **Delete**.

5. Click **OK**.

8.14.4 Share a Report

Set up Data Sharing in **SystemAdmin**. Data Sharing lets you share workspaces and reports with members of selected groups.

If you have "Share Data" permission, can share the reports you generate with other members of your Aerobahn group.

1. In the report window, select **Report > Save Report**.

2. Select **Share report**. The Save Report dialog box expands.

3. Select group(s) with which to share the report.

4. Click **Save**. This report is now accessible to members of the "Available Shares" groups.

9 SystemAdmin

Open **SystemAdmin** from the Aerobahn portal (refer to Figure 9-1 below for link location).

The **SystemAdmin** application's main function is to maintain system security through user accounts, settings, and permissions. Additional functions include system configuration and diagnostics.

Authorized users use **SystemAdmin** to administer user accounts and to create groups and sub-groups of users. Through password-protected user accounts, users access Aerobahn and its specific functions.

Most users have access to the following **SystemAdmin** functions:

- Change basic user information, such as a password
- See their settings and permissions
- See Aerobahn software version information
- See browser information

The permissions given to a user control access to functions in each Aerobahn application (refer to *Settings and Permissions* on page 9-4 for basic information on permissions).

Figure 9-1. Opening the SystemAdmin Application
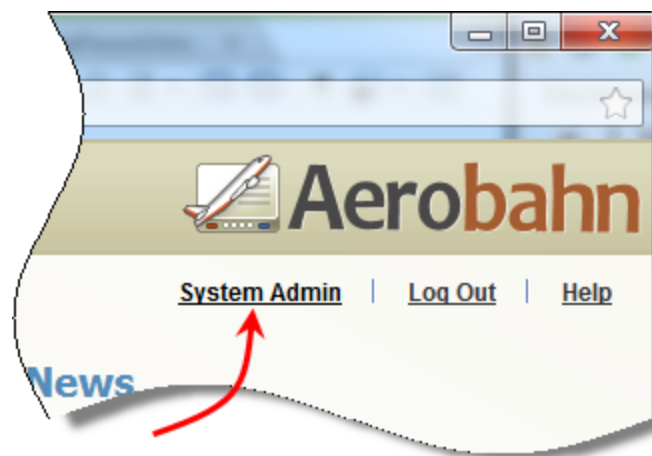
You can find instructions for using **SystemAdmin** functions in these sections:

9.1 SystemAdmin Menu

The **SystemAdmin** main menu is on the left side of the **SystemAdmin** application (refer to Figure 9-2 on the facing page). Use this menu to open configuration pages and system information pages.

This menu portion of the **SystemAdmin** application remains open at all times. When you select a tool from the **SystemAdmin** menu, the selected tool opens to the right of the menu.

SystemAdmin menu options are based on a user's permissions. Because a system administrator has authority to configure Aerobahn settings, he or she typically has access to more main menu options than other Aerobahn users have access to.

Figure 9-2. SystemAdmin Menu
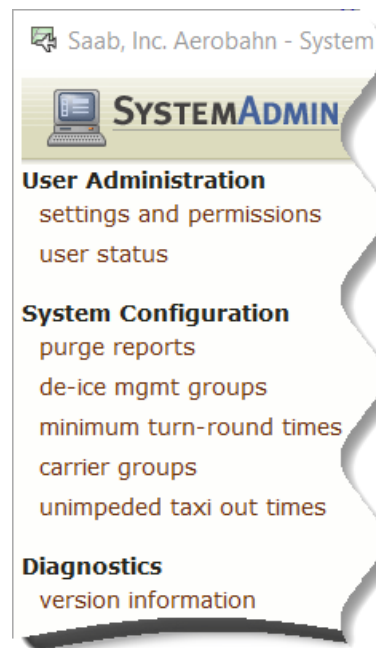
9.2 Aerobahn User Administration

Most user-administration tasks are done in the **Settings and Permissions** page.

Open **Settings and Permissions** as follows:

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on the previous page).

2. Select **User Administration > settings and permissions**.

The primary difference between the User Name version and the Group Name version of the Settings and Permissions page is in the tabbed pages that are available in each. For more information, refer to *Settings and Permissions* on the next page.

Figure 9-3. SystemAdmin Settings and Permissions Page
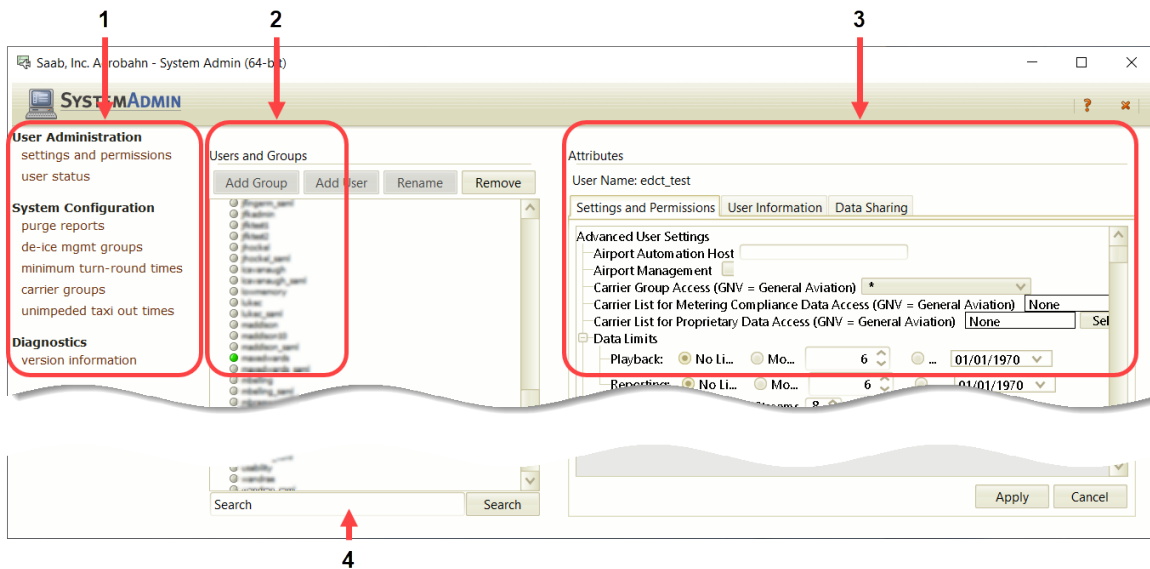
NOTE: A group name ("System") is selected in Users and Groups.

Attribute tabs are different when an individual username is selected.

1	**SystemAdmin** Menu—This menu remains open at all times. When you select a tool, the remainder of the **SystemAdmin** application displays the selected tool.
2	Users and Groups list—Shows when **settings and permissions** is selected. Use to select individual users and user groups. The attributes that show in the Attributes pane refer to the selected user or user group. A green light shows that the user is logged into Aerobahn.
3	Account Attributes—The tabbed options that show when Settings and Permissions is active depend on whether an individual user account or a user group is selected in the Users and Groups list.
4	Username Search feature

9.2.1 Settings and Permissions

Settings and permissions are assigned to groups and to individuals based on organizational requirements.

- Settings for a user or group supply information about that user or group. Settings also specify how Aerobahn should operate when the user or members of a group log in. Your password and username are settings. You can change your settings except for your username.

- Permissions for a user or a user group show what is accessible to a user or to all members of a group. You cannot change your permissions. In **SystemAdmin**, a check mark shows that you have permission to do a function. For example, a check mark next to "Delete Workspace" shows that you can delete a workspace.

Attributes that affect user groups:

- Settings and Permissions
- Licensing
- Data Sharing
- Rules
- Watch List Manager
- Workflows

Attributes that affect individual users:

- Settings and Permissions
- User Information
- Data Sharing

Usually, if you do not have access to a function, it does not show in the menu.

Configure Settings and Permissions

When you select **User Administration > settings and permissions** in **SystemAdmin**, you get access to a list of user groups and individual users and to attributes associated with those user groups and individual users.

The **SystemAdmin** application is used to configure settings for and to give permissions to individual users, groups, and subgroups of users.

Users can configure settings and permissions only for user accounts or groups that are in, or are descendants of, their own group. Users can not configure their own permissions (refer to *Rules for Settings and Permissions* on the next page).

ℹ NOTE: The words "group" and "sub-group" are different only in respect to their relative location in the hierarchy. Rules that apply to a "group" also apply to a "sub-group."

9.2.1.1 Rules for Settings and Permissions

Settings and permissions are assigned to groups and to individuals based on organizational requirements.

- Settings for a user or group supply information about that user or group. Settings also specify how Aerobahn should operate when the user or members of a group log in. Your password and username are settings. You can change your settings except for your username.

- Permissions for a user or a user group show what is accessible to a user or to all members of a group. You cannot change your permissions. In **SystemAdmin**, a check mark shows that you have permission to do a function. For example, a check mark next to "Delete Workspace" shows that you can delete a workspace.

The following rules control management of settings and permissions:

- A user can configure settings (as applicable) and permissions of groups or of individual users.

- Users can change account settings (but not user names). Users can not change their own account permissions.

- Settings (as applicable) and permissions of new users are automatically configured to be the same as those of their parent group. For example, if the parent group can manage group licensing, the users in that group inherit that permission. An Email address is user-specific and is not inherited.

- A user can see, add, change, and remove only those user accounts and groups that are in, or are descendants of, the group that the user is in.

- Users can not see or change permissions that they do not have. For example, if a user has permissions that are not given to the parent of that user, that parent can not see or change those permissions.

- One user (referred to here as "the administrator") cannot set up another user with more extensive permissions than that administrator has. Aerobahn limits inheritance to those permissions that are equal to or more restrictive than the permissions that the administrator has.

- After a user account is set up, a user can change the password and Email address for that user account only when logged in to that user account, unless the user has permission to change passwords and Email for other accounts. This rule does not let User_A change the password of User_B and then log in as User_B.

9.2.1.1.1 Change Permissions for Selected Groups

Give permissions to all members of a group or to some members of a group. For example, give some users access to a group rule.

1. Select a group for which you can configure permissions.
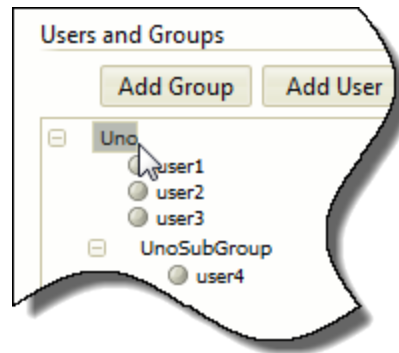
2. Add or delete permissions to use an Aerobahn tool.

3. Click **Apply**. The **Apply changes** message opens.

4. Select the type of permission change:

   - Group only

   - Group and Users only

   - Group and all its Subgroups and Users

5. Click **OK**.

Table 9-1. Permission Changes in SystemAdmin

Apply the change to the...	Purpose
Group only	Select this when you have enabled specified permissions for selected users in this group *and* you do not want those users to lose the specified permissions when you change the group permissions.
	Step 1—Set the individual permissions that are exceptions to the group permissions. (This makes it unnecessary for you to make many changes to adjust permissions for individual users after you change group permissions.)
	Step 2—Set the " Group Only" change.
Group and Users only	Select this when you want the new settings to replace group and user settings. These settings do not replace any specific permissions that have been enabled for specific subgroups under the selected group.

Table 9-1. Permission Changes in SystemAdmin (continued)

Apply the change to the...	Purpose
Group and all its Subgroups and Users	Select this when you want the new settings to replace group, subgroup, and user settings. This setting replaces any specific permissions that have been enabled for subgroups under the selected group.

9.2.1.1.2 Manual Data Entry Permissions

Set permissions in **SystemAdmin** (refer to *Activate Settings and Permissions on page 9-14*).

Permissions for following flight-management variables are located in the **Applications > Launch TaxiView > Tools > Use Map Display tool** group.

Table 9-2. Manual Data: Flight-Management Variables and Permissions

Flight-Management Variables	Permissions
Boarding Time	**Modify Manual Boarding Settings**
De-icing Options	**Modify Manual De-ice Settings**
Delay Reason	**Modify Manual Delay Reason**
EDCT (Estimated Departure Clearance Time)	**Modify Manual EDCTs**
Flight ID	**Modify Manual Callsigns**
Gate	**Modify Manual Gates**
Metering Point	**Modify Manual Metering Point**
Metering Point Duration	**Modify Manual Metering Point**
Passenger Count	**Modify Manual Boarding Settings**
Runway	**Modify Manual Runways**
TOBT (Target Off-Block Time)	**Modify Manual TOBTs**

9.2.1.1.3 Hotkey Permissions

Set permissions in **SystemAdmin** (refer to *Activate Settings and Permissions on page 9-14*).

Table 9-3. Hotkeys: Flight-Management Variables and Permissions

Flight-Management Variables	Permissions
Assigned Gate	**Applications > Launch TaxiView > Tools > Use Map Display tool > Modify Manual Gates**
Assigned Runway	**Applications > Launch TaxiView > Tools > Use Map Display tool > Modify Manual Runways**
Boarding Time	**Applications > Launch TaxiView > Tools > Use Map Display tool > Modify Manual Boarding Settings**
Call Sign	**Applications > Launch TaxiView > Tools > Use Map Display Tool > Modify Manual Callsigns**
Carrier Group	**Applications > Launch TaxiView > Tools > Use Departure Metering tools**
De-icing Options	**Applications > Launch TaxiView > Tools > Use Map Display tool > Modify Manual De-ice Settings**
Delay Reason	**Applications > Launch TaxiView > Tools > Use Map Display tool > Modify Manual Delay Reason**
Estimated Departure Clearance Time (EDCT)	**Applications > Launch TaxiView > Tools > Use Map Display tool > Modify Manual EDCTs**
Metering Point*	**Applications > Launch TaxiView > Tools > Use Map Display tool > Modify Manual Metering Point**
Metering Point Duration*	**Applications > Launch TaxiView > Tools > Use Map Display tool > Modify Manual Metering Point**)
Passenger Count	**Applications > Launch TaxiView > Tools > Use Map Display tool > Modify Manual Boarding Settings**
Scratch Pad Text	**Applications > Launch TaxiView > Tools > Use Map Display tool > Scratchpad Text > Modify Scratchpad Text**
Target Off-Block Time (TOBT)	**Applications > Launch TaxiView > Tools > Use Map Display tool > Modify Manual TOBTs**

*NOTE: Metering Configuration comprises Metering Point and Metering Point Duration

9.2.1.1.4 Rules Permissions

Set permissions in **SystemAdmin** (refer to *Activate Settings and Permissions on page 9-14*).

Table 9-4. Rules: Features and Permissions

Features	Permissions
Manage Group Rules and Watch Lists (authority to make and change group rules)	**System Administration > Manage Group Rules and Watch Lists**
Share a rule with a group	**Applications > Share Data**

Figure 9-4. Share Data Permission (location)
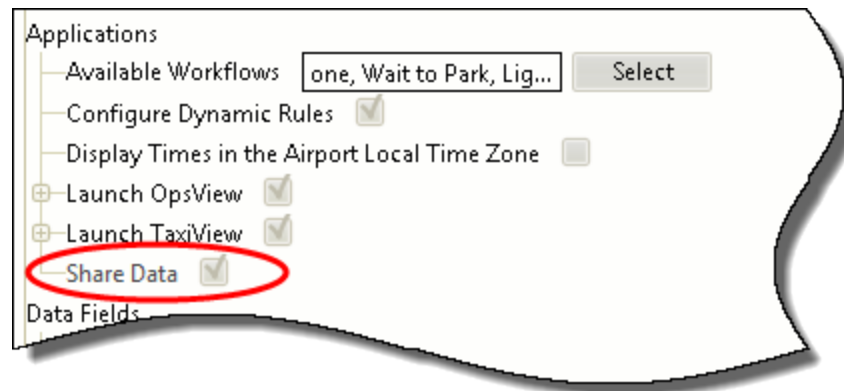
9.2.1.1.5 Airport Configuration Permissions

Set permissions in **SystemAdmin** (refer to *Activate Settings and Permissions on page 9-14*).

Table 9-5. Airport Configuration: Flight-Management Variables and Permissions

Give a user permission to...	Permissions
Edit a configuration that can be scheduled	**System Administration > Airport Configuration > Manage Airport Configurations**
■ Select a configuration as the active configuration ■ Schedule future configurations ■ Modify the active configuration ■ Delete a configuration from the schedule	**System Administration > Airport Configuration > Schedule/Modify/Delete Airport Configurations**
Open the **Airport Configurations** tool	**System Administration > Airport Configuration > View Airport Configurations**

9.2.1.1.6 Departure Metering Permissions

Set permissions in **SystemAdmin** (refer to *Activate Settings and Permissions on page 9-14*).

Table 9-6. Departure Metering: Variables and Permissions

Feature	Permissions
View Compliance Monitor	**Applications > Launch TaxiView > Tools > Use Map Display tool > Departure Metering Tools > Use Compliance Monitor Tool**

9.2.1.1.7 Departure Manager: Metering Coordinator Permissions

Set permissions in **SystemAdmin** (refer to *Activate Settings and Permissions on page 9-14*).

Table 9-7. Metering Actions: Flight-Management Variables and Permissions

Flight-Management Variables	Permissions
Coordinator Actions: ■ Override Metering Compliance Status ■ Add Allocation ■ Remove Unused Allocation ■ Change Allocation Owner ■ Reallocate and Reassign Flights for this Bin	**Applications > Launch TaxiView > Tools > Use Map Display tool > Use Departure Metering Tools > Perform Coordinator Actions**

9.2.1.1.8 ATC Voice Channels Permissions

Set permissions in **SystemAdmin** (refer to *Activate Settings and Permissions on page 9-14*).

Table 9-8. ATC Voice Channels: Flight-Management Variables and Permissions

Flight-Management Variables	Permissions
ATC Voice Channels (for general use)	**System Administration > Launch TaxiView > Tools>ATC Voice Channels**
ATC Voice Channels (for use in Playback mode)	**System Administration > Launch TaxiView > Tools>ATC Voice Channels During Playback**

9.2.1.1.9 Data Limits Settings

Aerobahn provides the capability to replay previously recorded data through Playback (*Replay Recorded Events on page 3-22*) and generate reports on historical data using reporting functions (*OpsView Reporting Tools on page 8-1*).

Users with Advanced User settings permissions can configure data limits in **SystemAdmin** (refer to *SystemAdmin on page 9-1*). There are three options (refer to Figure 9-5 on the facing page):

- No Limit: Permits the user to run a playback or report on an unrestricted time range. This is the default option.

- Months: Permits the user to run a playback or report for a specified number of months prior to today's date. For example, if the option is set to 1 month and today's date is April 14th, the user can only view data recorded from March 14th. If the date changes to April 15th, the user can view data recorded from March 15th to April 15th.

- Date: Permits the user to run a playback or report from a specified date on.

An error message shows when someone tries to start a playback or to run a report that starts before the earliest allowed start time.

Figure 9-5. Data Limits Configuration

9.2.1.1.10 Access Proprietary Surveillance Data Permission

The Access Proprietary Surveillance Data permission controls whether a user can view flights with proprietary surveillance data in these tools:

- Map Display (including playback)
- Extended Map Display (including playback)
- Location History Plot

If this permission is disabled, flights with proprietary surveillance data are hidden in the tools.

ⓘ NOTE: The surveillance data sources that are considered proprietary are configured on the server.

To configure the Access Proprietary Surveillance Data permission:

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. Under **User Administration**, select **settings and permissions**.
3. Select the **Settings and Permissions** tab.
4. From the **Advanced User Settings** group, select or deselect the **Access Proprietary Surveillance Data** option.
5. Click **Apply**.

For information on how to make new settings and permissions active, refer to *Activate Settings and Permissions* on the next page.

9.2.1.2 Activate Settings and Permissions

You must log out and then log in to make most new settings and permissions active. If user1 changes the settings and permissions of user2, user2 must log out and log in for the new settings and permissions to take effect.

This requirement applies to parameters that are selected in tabs available from the **User Administration > settings and permissions** menu selection.

After a user makes the configuration changes in **SystemAdmin** and clicks **Apply**, that user must do these actions:

1. Close **SystemAdmin**.
2. Log out of Aerobahn.

This process confirms the configuration change.

If the account of another user was changed, that other user must also log out of Aerobahn. When the user logs into Aerobahn, the changes in settings and permissions are active.

ℹ NOTE: It is not necessary to log out and log in for these changes to take effect: rules, watchlists, and chat.

9.2.1.3 Add a User Account

ℹ NOTE: This action requires "Manage Users and Groups" permission, which is enabled in **System Administration > Settings and Permissions**.

A user can add a user account or group to any group that is in, or is a descendant of, his or her own group.

This topic explains how to add *an individual user*. For instructions on how to add a group, refer to *Add a User Group* on page 9-19.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. Select **User Administration > settings and permissions**.
3. Select the group in which the new user will go.
4. Click **Add User**. The **Add User** dialog box opens.

5. Enter Username.

ℹ **NOTE**: Each username must be unique within a group and all subgroups of that group.

---

6. Set up the sign-on method:

- Password Method (Direct log in to Aerobahn)

    a. Enter password for systems that require users to sign in directly to Aerobahn.

    b. Re-enter the password.

    Password Requirements:

    - minimum 8 characters
    - minimum 1 alpha character
    - minimum 1 numeric character
    - minimum 1 special character

- (Optional Configuration) Lightweight Delivery Access Protocol (LDAP) Method

    a. Select (put a check in the box) Authenticate Using LDAP....

    b. Select the LDAP domain.

- (Optional Configuration) Single Sign-On Method

    a. Select (put a check in the box) Authenticate using Single Sign-On Provider....

    b. Enter the identity provider.

    c. Enter the User Principal Name.

7. Enter the Display Name (name of the user as it shows in Aerobahn).

8. Enter the normal email address of the user.

9. Optional: Enter the company, title, and telephone number of the user.

10. Select **Enabled** to make the user account active. (For information on disabling user accounts, refer to *Disable or Enable a User Account* on the next page.)

11. Click **OK** to add the user account. The Add User dialog box closes.

12. Click **Apply** to save all changes in SystemAdmin.

13. Close **SystemAdmin.**

For information on how to make new settings and permissions active, refer to *Activate Settings and Permissions* on the previous page.

9.2.1.3.1 Disable or Enable a User Account

> **ℹ NOTE:** This action requires "Manage Users and Groups" permission, which is enabled in **System Administration > Settings and Permissions**.

A user can disable or enable only those user accounts that are in, or are descendants of, his or her own group.

Disabling or enabling an account requires that the user who is disabling or enabling another user's account has permission (under System Administration permissions) to "Modify User Settings." A user cannot disable or enable his or her own account.

9.2.1.3.1.1 Disable a User Account

Disabling a user account has a variety of effects:

- The user name and password of a disabled account can no longer be used to log in to Aerobahn.
- Scheduled reports owned by the disabled account do not run.
- Aerobahn does not send emails to the Email address for the disabled account.
- The disabled account is not available for sharing reports, queries, workspaces, or any other information.

Disable a user account as follows:

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. Select **User Administration > settings and permissions**.
3. Select the user account name.
4. Select the **User Information** tab.
5. Remove the check from **Enable Account**.
6. Click **Apply**.

For information on how to make new settings and permissions active, refer to *Activate Settings and Permissions* on page 9-14.

For information on how to make new settings and permissions active, refer to *Activate Settings and Permissions* on page 9-14.

9.2.1.3.1.2 Enable a User Account

A disabled account can be enabled at any time.

Enable a disabled user account as follows:

1. Open SystemAdmin.

2. Select **User Administration > settings and permissions**.

3. Select the user account name.

4. Select the **User Information** tab.

5. Select (check) **Enable Account**.

6. Click **Apply**.

For information on how to make new settings and permissions active, refer to *Activate Settings and Permissions* on page 9-14.

9.2.1.3.2 Remove a User Account

> ℹ️ **NOTE:** This action requires "Manage Users and Groups" permission, which is enabled in **System Administration > Settings and Permissions**.

An administrator can remove only those user accounts that are in, or are descendants of, his or her own group.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select the user account to be removed.

4. Click **Remove**.

> ℹ️ **NOTE:** To see the **Remove** button, it might be necessary to maximize **SystemAdmin** or move the divider between the User Groups and Permissions.

Refer to for more information on how to show the Remove button.

Figure 9-6. "Remove" Button in SystemAdmin Settings and Permissions
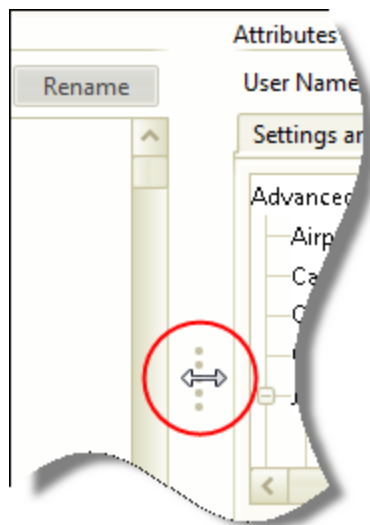
If you do not see the Remove button above the "Users and Groups" list, maximize the **SystemAdmin** window. You may also need to move the divider between the User Group pane and the Permissions pane.
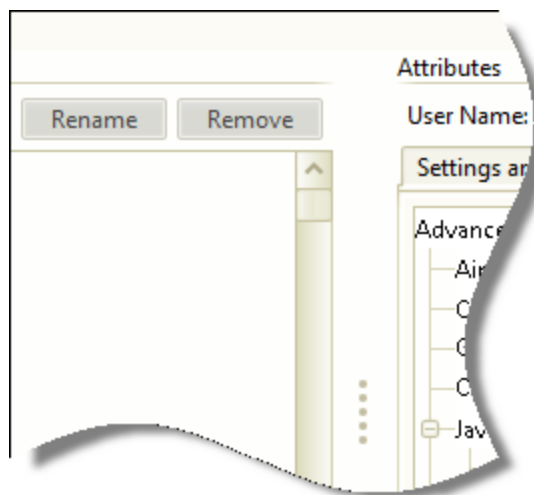
The Remove button shows above the User Group pane.

9.2.1.4 Move a User Account to a Different Group

Use this procedure to move an existing user account from one group of users to another group of users.

ℹ **NOTE:** This action requires "Modify Other User's Group" permission, which is enabled in **System Administration > Settings and Permissions > Manage Users and Groups**.

ℹ **NOTE:** Before you can move a user account into a group, there must be a group to receive the user account. If a new group is necessary, add one (refer to *Add a User Group* on the facing page).

1. Right-click the user account to move. The context menu opens.

2. Click **Move To Group**. The Select Group dialog box opens.
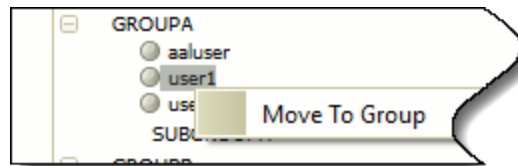
3. Select the group where the user account goes.
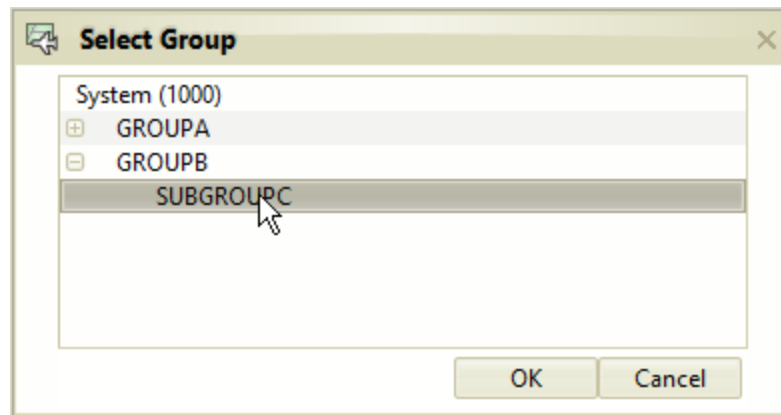
4. Click **OK**. The Confirmation dialog box opens.

5. Click **Yes** to confirm. The user account name moves to the selected location.

9.2.1.5 Add a User Group

> ℹ️ **NOTE:** This action requires "Manage Users and Groups" permission, which is enabled in **System Administration > Settings and Permissions**.

You can add a user account or group to any group that is in, or is a descendant of, your own user group. These instructions explain how to add *a group of users*.

For instructions on how to add an individual user, refer to *Add a User Account on page 9-14*.

1. Open **SystemAdmin**.

2. Select **User Administration > settings and permissions**.

3. Select the group to get the new subgroup.

4. Click **Add Group**.

5. Enter the name of the new group.

6. Click **OK**.

For information on how to make new settings and permissions active, refer to
Activate Settings and Permissions on page 9-14.

9.2.1.5.1 Rename a User Group

ℹ️ **NOTE:** This action requires "Manage Users and Groups" permission,
which is enabled in **System Administration > Settings and
Permissions**.

A user can modify only those user accounts or groups that are in, or are
descendants of, his or her own user group.

1. Open **SystemAdmin**.

2. Select **User Administration > settings and permissions**.

3. Select the **Settings and Permissions** tab.

4. Select the group name to be changed.

5. Click **Rename**.

6. Enter the new name.

7. Click **OK**.

For information on how to make new settings and permissions active, refer to
Activate Settings and Permissions on page 9-14.

9.2.1.5.2 Remove a User Group

ℹ️ **NOTE:** This action requires "Manage Users and Groups" permission,
which is enabled in **System Administration > Settings and
Permissions**.

An administrator can remove only those user accounts or user groups that are
in, or are descendants of, his or her own user group.

1. Open **SystemAdmin**.

2. Select **User Administration > settings and permissions**.

3. Select the user group to be removed.

4. Click **Remove** to delete the group. The name of the deleted user account
   or group no longer shows. This name is now available for a new user
   account or group.

ℹ️ **NOTE:** To see the **Remove** button, it might be necessary to maximize **SystemAdmin** or move the divider between the User Groups and Permissions.

Refer to for instructions on how to show the **Remove** button.

9.2.1.6 Search for a User

You can search for a user account in **SystemAdmin** if you know the first letter or two of the user name.

ℹ️ **NOTE:** This procedure identifies individual usernames, not user group names.

1. Open **SystemAdmin**.
2. Select **User Administration > settings and permissions**.
3. Enter the first few characters of the user name in the search window beneath the **Users and Groups** list.
4. Click **Search**. The first user name that satisfies the search string is highlighted.

Depending on your permissions, you can view the user's permissions and carry out a variety of actions. Refer to the following topics for more information:

- *Add a User Account* on page 9-14
- *Settings and Permissions* on page 9-4
- *Disable or Enable a User Account* on page 9-16
- *Remove a User Account* on page 9-17

9.2.1.7 Create a Group Watch List

In **SystemAdmin**, a user with permission to Manage Group Rules and Watch Lists can create a group watch list. A group watch list can be populated by shared group rules or forced rules and can be used to make sure that personnel have standard Aerobahn workspaces.

1. Open **SystemAdmin**.
2. Select **User Administration > settings and permissions**.
3. Select the group that will use the watch list.
4. Select the **Watch List Manager** tab.
5. Click **New**.
6. Enter a name for the watch list.

7. Click **OK**. This watch list is now available at a group level. Actions defined in group rules and forced group rules can supply data for the rules defined at this level.

You can rename or delete group watch lists through this tab.

9.2.2 Get a User Status Report

> ℹ **NOTE: Manage Users and Groups** permission is necessary to use the User Status report. If you do not see **user status** in the User Administration tools, you do not have permission to get a user status report.

1. Open **SystemAdmin**.
2. Select **User Administration > user status**.

The User Status page in **SystemAdmin** shows a list of all users at a site. The information there includes:

- Login Name for the user
- Full Name for the user
- User Group (refer to "Users and Groups List" in *Aerobahn User Administration* on page 9-3)
- Date that the user account was created
- The last login time
- Login status
- IP address from which an active user has connected

Click **Export** to export the User Status report data to a .CSV file.

9.3 Select Time Preference

Aerobahn expresses time using a 24-hour system. You can select whether tools display time according to the airport's local time zone or UTC.

1. Open **SystemAdmin**.

2. Select **User Administration > settings and permissions**.

3. Examine **Applications > Display Times in Airport Local Time Zone**:

   - If the box is *not checked*, Aerobahn is configured to use UTC. To display airport local time, click to put a check in the box following **Display Times in Airport Local Time Zone**.

   - If the box is *checked*, Aerobahn is configured to use airport local time. To display UTC, clear the *check* from **Display Times in Airport Local Time Zone**.

4. Click **Apply** to apply any change.

For information on how to make new settings and permissions active, refer to *Activate Settings and Permissions* on page 9-14.

Figure 9-7. Time Preference (UTC setting)

You can override the default time display in special circumstances (such as in OpsView reports).

9.4 Configure Data Sharing

➡ This topic shows how to share workspaces, annotations, rules, and reports with other users.

ℹ **NOTE:** Settings and Permissions are given to groups and to individual users. You cannot change your permissions. Contact your supervisor if you have questions.

Set up Data Sharing in **SystemAdmin**. Data Sharing lets you share workspaces and reports with members of selected groups.

These basic rules control data sharing:

- A user must have the "Data Sharing" permission to see "available shares."

- A checkbox must be selected to enable data sharing (refer to Figure 9-9 on the facing page).

- A user can share with a user in the Available Shares list (refer to Figure 9-8 below for an example of a user with extensive, but not complete, sharing permission.

- A user cannot give himself or herself permission to share with a user above him/herself including a "parent." An ancestor has to make the sharing assignment.

- When you select a group, you automatically select its subgroups. You can select and remove the check from individual subgroups to change sharing.

Figure 9-8. Configuring Data Sharing for a User
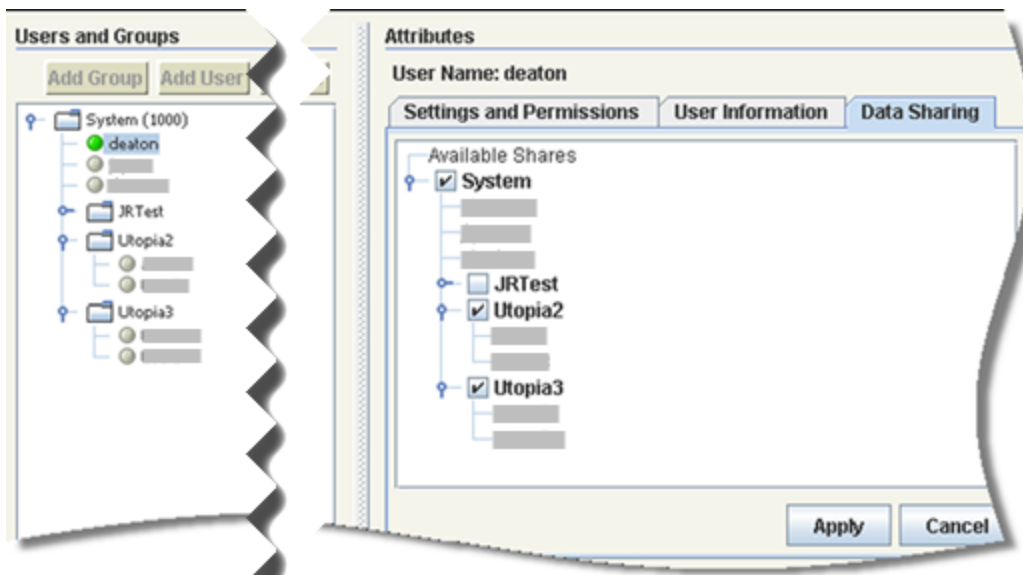
Verify Data-Sharing Permission

Use this procedure to see sharing permissions for the user name that is selected in the *Users and Groups* list.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select an individual user account name.

4. Make sure that Data Sharing is enabled in **Settings and Permissions > Applications**.

 - If **Share Data** is checked, annotations, reports, and rules, a user can share data (refer to).

 - If **Share Data** is not checked, a user cannot share data (refer to).

Figure 9-9. Data Sharing, Enabled
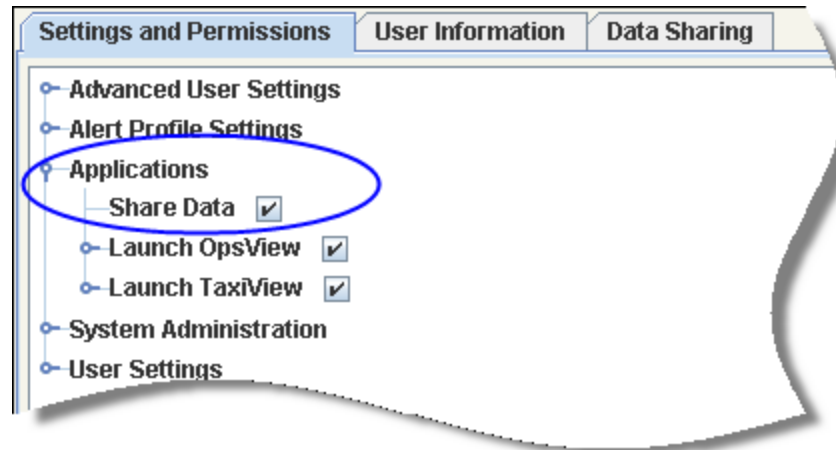
Figure 9-10. Data Sharing, Not Enabled
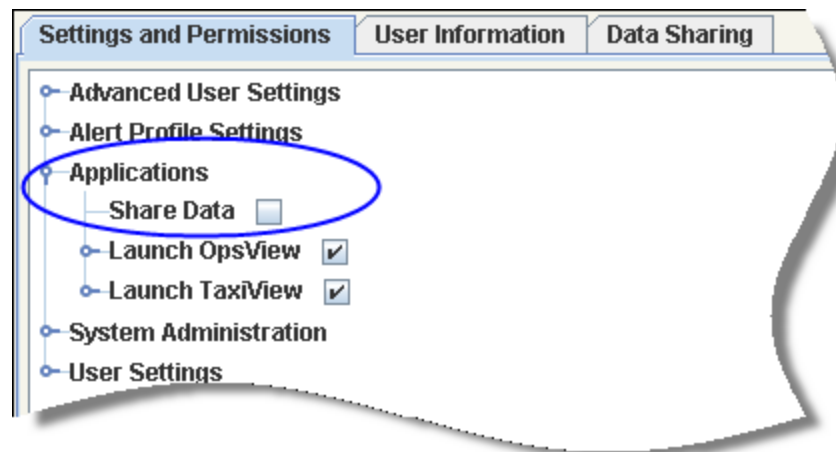
Enable Data Sharing

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select the **Data Sharing** tab.

4. Select the groups with which data can be shared.

5. Click **Apply**.

For information on how to make new settings and permissions active, refer to *Activate Settings and Permissions* on page 9-14.

After data sharing is set up for a user, that user can share data with a group.

9.5 Group Rules Manager

> ℹ **NOTE:** You see Group Rules Manager (**SystemAdmin** Rules tab) only when a group name is selected.

Group Rules Manager is a **SystemAdmin** tool available for sites that use Aerobahn Dynamic Rules (refer to *Settings and Permissions* on page 9-4 for more information on permissions).

Group Rules Manager is opened from the Group Attributes tabs. To see Group Attributes, select a group name. When a user's name is selected, the available tabs supply attributes related to individual users.

The processes used to make and edit group rules through the **SystemAdmin** Group Rules Manager are the same as those used to for individual rules.

- Refer to for information about the Rules wizard.
- Refer to for more information regarding "individual rules," "group rules," and "forced rules."

> ℹ **NOTE:** If Rules Management is open when changes are made in the Group Rules Manager, refresh Rules Management to see the update.

9.6 View Diagnostics

Access to Version Information and Browser Information is available to all registered Aerobahn users.

The information supplied can be useful as a diagnostic aid during the investigation of a problem with Aerobahn service.

9.6.1 Get Aerobahn Version Information

Display the bundle names and installation dates of software components as follows:

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. Select **Diagnostics > version information** .

9.6.2 View Browser Information

Display browser settings as follows:

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **Diagnostics > browser information**:

   - Black text—Settings are in the recommended range.

   - Red text—Settings are not in the recommended range.

9.7 Change Date Format

Dates are displayed throughout Aerobahn (tables, graphs, reports) in a standard format. Users can select from a variety of date formats. (The default is MM/DD/YYYY.)

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select the **Settings and Permissions** tab.

4. Select the date format from **User Settings > Date Format**. (The "User Settings" group is at the bottom of the list.)

5. Click **Apply**.

For information on how to make new settings and permissions active, refer to *Activate Settings and Permissions* on page 9-14.

9.8 Change Passwords and User Information

You can modify information that identifies a user—except for the user name—in the **User Information** tab.

> 🛈 **NOTE:** Local rules specify how Aerobahn passwords are configured. Contact your system administrator for instructions.

> ⚠️ **CAUTION:** If you change the password for a shared account, others who share the account are closed out of Aerobahn. You must give them the new password.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select the **User Information** tab.

4. Select the user name for the account that is to be edited.

5. Change the password, and enter other user information.

6. Click **Apply**.

For information on how to make new settings and permissions active, refer to *Activate Settings and Permissions* on page 9-14.

9.9 Workflows and Workflow State Sets

You can use workflows and workflow states to facilitate collaborative decision making and to streamline operations.

A workflow is a process (made up of a series of workflow states) in which one change triggers a different change. Here is a sample workflow:

1. A carrier selects (in Aerobahn) a workflow that shows that a flight requires rerouting.

2. Air Traffic Control sees (in Aerobahn) that indication and reroutes the flight.

3. Air Traffic Control then changes the workflow to show that a flight has been rerouted.

Another application for workflows is in gate hold and release situations.

At each change (that is when the carrier shows that rerouting is required), the flight can be given a workflow state. This workflow state can be configured with specified properties that tells other Aerobahn users of the change.

You can make a special type of workflow state called an "independent state." You cannot set *prerequisites* for transitions to or from an independent state.

Workflows and workflow states are made in **SystemAdmin**. You can apply a workflow or workflow state to a flight in these ways:

- through a menu that opens when you right-click a flight/target (*Set a Workflow Transition with Right-Click* on page 7-263)

- with a hot key action (*Set a Workflow Transition with a Hotkey* on page 7-264)

- when a flight is dragged into Watch List Viewer that has an associated workflow state (*Set Workflow States in Watch List Viewer* on page 9-40)

9.9.1 Make a Workflow

Refer to *Workflows and Workflow State Sets on the previous page* for more information on how workflows and state sets are different.

1. In **SystemAdmin**, select a group name (from Users and Groups list).

2. Select the **Workflows** tab.

   ℹ **NOTE**: If the "Workflows" tab does not show, you do not have permission to make workflows and workflow states.

3. For Workflows or State Sets, click **Add**. An Input dialog box opens.

4. Enter the Workflow or State Set name. Then, click **OK**.

5. Select **Workflow** or **Independent States**.

   - **Workflow**—You can set workflow states so prerequisite states are necessary.
   - **Independent States**—Workflow states have no prerequisites.

6. OPTIONAL—If manual transitions are allowed for the entire workflow (e.g., to use all associated workflow states with Watch List Viewer), select **Allow Manual Transitions** (check mark shows).
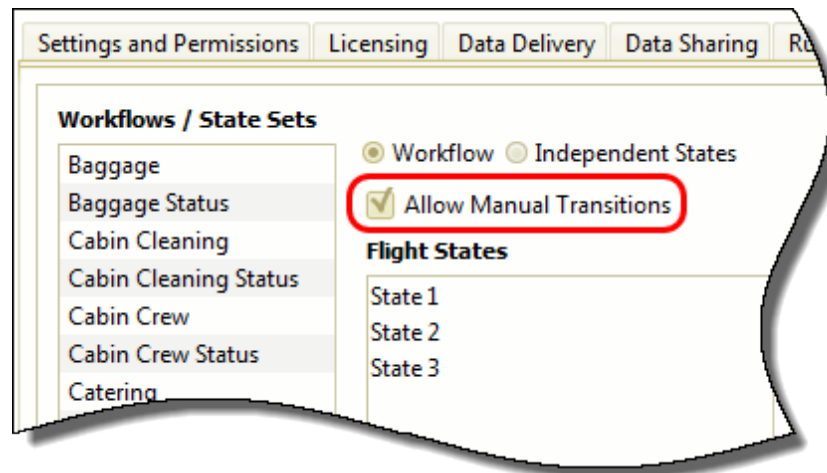
   ℹ **NOTE**: You can allow workflow transitions for only selected Flight States when you set up workflow states (step 9). You must select **Allow Manual Transitions** in both locations for manual transitions to succeed.

7. For Flight States, click **Add**. A (workflow) State Name dialog box opens.

8. Enter a name for the workflow state. Then, click **OK**. Repeat this step to add all workflow states.

> ℹ️ **NOTE**: Aerobahn sets up these flight data fields for each workflow flight state that you make: <flight state:> Duration, <flight state:> Priority, <flight state:> Time Entered, and <flight state:> Time Exited.

9. Set up workflow states.

    - Identify prerequisite workflow states. (Not available for Independent States.)

    - If a state will use the TMA Release Time dialog box, select (put a check mark in) "Uses TMA Release Time Dialog."

    - If a manual transition to a workflow state is allowed, select that state, and set a check mark in "Allow Manual Transitions" for that state (right side of the screen,).

    - Click **Create New Rule** to set up rules for automatic workflow state transitions. Set up the rules using the rule wizard. (To create rules for Workflow States, you must start in **SystemAdmin** and create group or forced group rules (refer to *Make a Rule* on page 4-75).

      > ℹ️ **NOTE**: When you set up a Workflow rule, select **Enter State** for rules that control transition into the selected workflow state. After you make this rule, it is listed in "State Entry Rules." Select **Exit State** for rules that control transition out of the selected state. After you make this rule, it is listed in "State Exit Rules."

10. *For each Flight State*, set group permissions in the Restricted Access and the Restricted Priority windows.

    - *Do not fill* the check box to give a group permission to change a workflow state (Restricted Access window) or to change the priority of a flight (Restricted Priority window) with a given workflow state.

    - Fill the check box (✓) to restrict access to this feature.

11. Exit **SystemAdmin** to confirm the group settings.

> ℹ️ **NOTE:** When the TMA Release Time dialog box opens in a workspace, the user must enter the target release time. Aerobahn calculates the minimum and maximum values.

Figure 9-11. Workflows and Workflow States, Manual Transitions
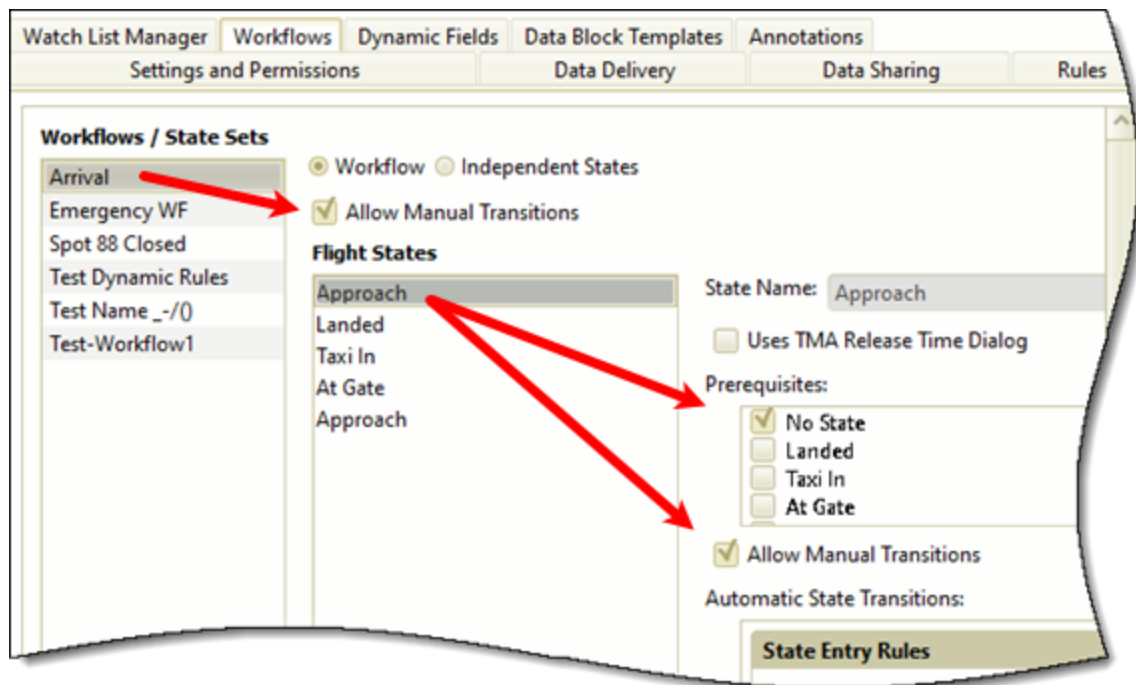
9.9.1.1 Automate a Workflow State Transition

Automatic or manual workflow states are necessary to make workflows or state sets work In **SystemAdmin**. You can assemble a series of workflows that automatically change from one workflow state to another when specified criteria are met.

Aerobahn records the time at which a target enters a new workflow state in the Aerobahn database. This time is shown in real-time tools as "<workflow state> Time Entered (Auto)" and in reports as "<workflow state> Ent Time (Auto)".

Before you can automate a workflow state transition, the workflows must be made. For instructions on how to make a workflow, refer to *Make a Workflow on page 9-29*.

When you set up automatic workflow state transitions, the following workflow- and workflow-state-specific rule criteria can be useful: "Is currently in workflow," "Is not currently in workflow," "Is currently in one of the following workflow states," and "Is not currently in one of the following workflow states."

1. In **SystemAdmin**, select a group name (from **Users and Groups**).

2. Select the **Workflows** tab.

3. In the **Workflows/State Sets** window, select the state set.

4. If a new workflow or state set is necessary, click **Add**, name it, then select the new set name.

5. Be sure that **Is a Workflow** is selected.

6. Select the Flight State that you will create a transition to or from.

7. If a new flight state is necessary, click **Add**, name it, then select the new flight state.

8. Identify prerequisites that must be true before making the transition.

9. Apply State Entry and/or Exit rules.

⚠ **CAUTION:** Rules can be complex structures, and statement sequences are significant. Editing a rule changes its behavior. However, if you need to see the statements that comprise a rule, you can click **Edit Rule** to reveal the structure of a rule. Click **Cancel** to close the rule without editing.

10. If a new rule is necessary, click **Create New Rule**. The **New Workflow Rule** dialog box is similar to the standard rule-creation dialog box, but it has already assigned a rule name (which you can edit), and it requires you to identify criteria as those required to enter the workflow state ("State Entry Rules") or to exit the workflow state ("State Exit Rules"). The **New Workflow Rule** dialog box is pre-populated with the prerequisite workflow.

ℹ **NOTE:** You can make a new rule by editing a rule. Be sure to rename the rule before you close if you use this approach. If you do not rename the rule, you will overwrite the rule.

11. Select and/or remove the check from user groups to adjust access to the workflow.

12. Make workflows accessible to the individual Aerobahn user.

    a. Select **Settings and Permissions** tab.

    b. Select the user name for which permissions are being adjusted. Note that this user must be part of the group that can use this workflow.

    c. Click—in the Applications group—the **Select** button next to Available Workflows.

   d. Move one or more of the Available Workflows into the Accessible
       Workflows window.

   e. Click **OK**.

   f. Click **Apply**.

13. When finished, close **SystemAdmin**. The new workflow transitions will
    be active when users next log in. (You must log out and log back in to
    make this workflow active on your account.)

> ℹ **NOTE:** When a target workflow state changes from Taxi Out Movement
> Area or Taxi Out Ramp Area to the Gate Outbound workflow state,
> Aerobahn resets these data fields to 0: Taxi Time (Surveillance), Taxi
> Time in Movement Area, and Taxi Time in Ramp.

9.9.2 Give a Group the Ability to Change Workflow Priority

A system administrator gives a group or subgroup permission to manually
override the priority that Aerobahn gives to any flight state in a workflow.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select the group that contains the subgroup that will receive a change in
    workflow permissions. The Workflows tab opens.

3. Select the Workflows tab.

4. Select the workflow from the list of Workflows / State Sets.

5. Select a flight state (from the list of Flight States) that has open
    permission to change workflow priority and should be restricted.

6. Select the Restricted Priority window.

7. Select the subgroup name.

8. Fill the check box (☑) to the left of the subgroup name. (Figure 9-12 on
    the next page shows that "TestGroup1Sub2" does not have permission
    to change the selected workflow state priority. The testuser5 in
    "TestGroup1" and the users in "TestGroup1Sub" have permission to
    change the "NewTest" workflow/state set.)

9. Repeat steps 7 and 8 for each Flight State that is to be restricted.

10. Close **SystemAdmin** when finished. This saves your changes.

You can remove restrictions for one or more flight states at any time. Follow
this procedure, but remove the check (step 8).

Figure 9-12. Restricted Priority Permission Settings (SystemAdmin)

9.9.2.1 Show a Workflow State Priority

When a flight transitions into a given workflow state, Aerobahn assigns that flight the next available priority number for that state. You can set up **Map Display** and table-based tools such as **Watch List Viewer**.

9.9.2.1.1 Show a Workflow State Priority in Map Display

A workflow state priority shows in data blocks when the data block is configured to show the **<workflow flight state>: Priority** field (where <workflow flight state> is the name of the flight state).

1. Select **Map Display > Preferences**.
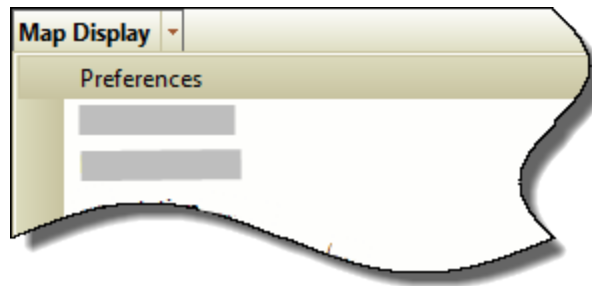
2. Select **Target > Data Block**.

3. Select data fields that have this format: **<workflow flight state>: Priority**.

    - To add 1 item to **Selected Fields**, select the item in the **Available Fields** window. Click ⊕ or double-click. The item moves to **Selected Fields**.

    - To add more than 1 item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⊕.

4. Optional: Apply formatting to the data blocks.

5. Click **Apply**.

6. Make sure that the data block appearance is correct.

7. When all preferences are set up, click **OK**. The *Preferences* window closes.

For complete instructions on how to configure data blocks, refer to *Configure Data Blocks in Map Display* on page 7-205.

9.9.2.1.2 Show Workflow State Priority in Table-Based Tools

1. Select **Watch List Viewer > Column Chooser**.

2. Optional: Enter the first few characters of the flight state field name in the Search window.

3. Select data fields that have this format: **<workflow flight state>: Priority**.

- Add 1 item to **Selected Fields**

  a. Select the item in the **Available Fields** window.

  b. Click ⊕ or double-click. The item moves to **Selected Fields**.

- Add more than 1 item to **Selected Fields**

  a. Select with CTRL-click or SHIFT-click in the **Available Fields** window.

  b. Click ⊕.

4. Click **OK**. The **Column Chooser** dialog box closes. The **<workflow flight state>: Priority** columns are added to the table.

9.9.2.2 Change Workflow Priority

When a flight transitions into a workflow state, Aerobahn assigns that flight the next available priority number. Members of a user group that have permission to change that priority can manually override the priority that Aerobahn assigns.

You can change the priority of flights by dragging a flight with one priority over a flight with a different priority in a real-time table tool. Drag within one table, from one table to another table, or from **Map Display** to a table. You can not drag the icons inside **Map Display** to change priority.

The flight that you drag to the new location is inserted before the other flight. All subsequent flights are sequenced.

1. Show the flight state priority in the tools that you will work in (refer to).

2. Select the flight (call this "Flight A") that you will give a higher priority.

3. Drag "Flight A" over the row of the flight that has the priority that you want to give to "Flight A."

4. Release the mouse button. An "Insert..." message opens.
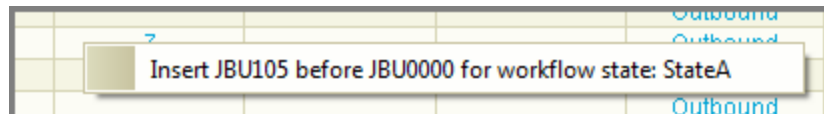
5. Click the message to change the priority of "Flight A" and sequence the remaining flights.

> **ℹ NOTE:** This is an insertion, not a swap. If you moved "Flight A" from a priority 5 to give it a priority 3, "Flight A" would get priority 3, and the flight that had priority 3 would get priority 4. The flight that originally had priority 4 changes to priority 5, and so on. Aerobahn shows the change on all tools that show that flight state priority.

9.9.3 Make a Workflow Accessible in the Workspace

Use these instructions to make a workflow accessible from a menu in **Map Display** and **Watch List Viewer** or by using hotkeys. After a workflow is created, you must give users permission to workflows. After a group has access, you can control individual access to workflows.

> **ℹ NOTE:** The permission to access to workflows and the permission to change the priority of a flight state are set separately for each flight state. That is, a group member could use workflows but not have control over state priority.

Refer to these topics for instructions on how to control access to workflows and workflow states:

- *Give Access to an Unrestricted Workflow* below
- *Set up Restricted Access to a Workflow* on the next page

9.9.3.1 Give Access to an Unrestricted Workflow

Use this instruction to give users permission to use workflows and workflow states. This procedure uses SystemAdmin Settings and Permission tab to set permissions for "Available Workflows."

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. Select the Settings and Permissions tab.
3. Select the user or group to receive access to the workflow.
4. Find Available Workflows (in the Applications group).
5. Click **Select**. A list of available workflows opens.

6. Make selections:

- To select one workflow, click the workflow and then click the single right arrow to move it from Available Workflows to Accessible Workflows.

- To select a group of Available Workflows, CTRL-click. Then, click the single right arrow to move them to Accessible Workflows.

- To select all of the Available Workflows, click the double right arrows.

- To remove Accessible Workflows from a context (right-click) menu in **Map Display** and **Watch List Viewer**, select workflows in Accessible Workflows, and click the left arrows. The selected workflows move out of Accessible and into Available.

7. Click **Apply**. The **Apply changes** dialog box opens.

8. Select the group and or individuals to which the permission applies to.

9. Click **OK**.

9.9.3.2 Set up Restricted Access to a Workflow

ℹ NOTE: Use this instruction to restrict access to workflows to selected groups. This method is an alternative to assigning permissions through the Settings and Permissions tab. If a workflow does not need to be restricted to one or more groups, consider assigning permissions to use the permission as needed rather than restricting the use of the permission.

For instructions on how to give permission for a workflow to a group or to individuals, refer to *Give Access to an Unrestricted Workflow* on the previous page.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select the group to receive access to the workflow. The Workflows tab opens.

3. Select the Workflows tab.

4. Select the workflow from the list of Workflows / State Sets.

5. Select the first state from the list of Flight States. When you do this, the "Restricted Access" window fills with user group names and user names.

6. Select a user group name.

7. *For each Flight State*, set group permissions in the Restricted Access and the Restricted Priority windows. Fill the check box (☑) to restrict

access to a feature.

8. Close **SystemAdmin** when finished. This saves the changes.

9.9.4 Change a Workflow State

You can change a workflow state assignment by using a context (right-click) menu or by using hotkeys. You can use these techniques to select more than one flight and change the workflow state for all of the selected flights at one time.

Change a Workflow State: Right-click on a Target

You can right-click a target to open a menu, and, if you have access to workflow states, you can change or remove a workflow.

To take a flight out of a workflow state, click the check mark that is next to the workflow state name to remove the check mark. This takes the flight out of the workflow state.

Look at **Selection Details** to make sure that the flight exited from that workflow state. The time that you removed tool from the from shows in the "Exit Time" column.

Change a Workflow State: Use Hotkeys

> **NOTE:** Use this procedure with the Workflow Transition hotkey and Remove Workflow hotkey. When you use Remove Workflow, Aerobahn takes the selected flight(s) out of the assigned workflow state.

You can change a workflow state with pre-configured keyboard hotkeys (refer to *Configure Hotkey Settings* on page 6-23 for more information). This function permits the selection of more than 1 flight.

If you can click the flight(s) for which you will change the workflow state, use this instruction:

1. Click the flight(s) for which you will change the workflow state.
2. Press the hotkey configured to start the workflow transition function.

If you cannot click the flight(s) for which you will change the workflow state, use this instruction to search for flights:

1. Press the hotkey configured to start the workflow transition function.
2. Enter the search criteria. As you enter criteria, the Results field populates. Enter * to show (in Results) all flights that match the search criteria.

3. OPTIONAL—Click or TAB to **Criteria**, and configure search options to restrict search. The initial "Quick Search" is controlled by the hotkey configuration. You can restrict individual searches (override the hotkey configuration). Any change you make for an individual search does not affect the hotkey configuration.

4. Select one (or more) flight(s) from the Results. (SHIFT-click or CTRL-click to select more than 1 flight.)

5. Press ENTER or click **Apply** to change the workflow state.

9.9.5 Set Workflow States in Watch List Viewer

You can drag a flight into a Watch List Viewer with an eligible subsequent associated workflow state to set a new workflow state.

This process has these main steps:

1. [Set up the workflow and workflow states](#).

2. Assign "Available Workflows" permissions (in SystemAdmin) for users or groups of users who need to use the drag-and-drop function for the associated workflows.

3. Associate a workflow state with a Watch List Viewer.

    a. Open **Watch List Viewer** (refer to *Use the Watch List Viewer* on page 7-120).

    b. Select **<Watch List Viewer > Associated Workflow State**. The Select Associated Workflow State dialog box opens.

        i. Select the workflow.

        ii. Select the workflow state.

        iii. Click **OK** to save associated workflow state settings and close the dialog box.

4. OPTIONAL: Set up this Watchlist Viewer to *show only those flights that are in the associated workflow state*.

    ■ This step uses rules to create a Watch List Viewer that shows only flights that are in a selected workflow state.

    ■ An alternative is to add columns for the workflow states to the Watch List Viewer(s).

5. Move flights to change workflow state and/or priority:

- Drag a flight from one Watchlist Viewer to another to change its workflow state (refer to *Workflow State Change (Priority Neutral) on the next page*).

- Drag a flight from one position to another position within the same Watchlist Viewer to change its priority in that workflow state (refer to *Move flights to change priority below*).

---

i NOTE: You can also set workflow states with these methods:

- *Set a Workflow Transition with a Hotkey* on page 7-264
- *Set a Workflow Transition with Right-Click* on page 7-263

Set up the workflow and workflow states

Before you can use Watchlist Viewer and the Associated Workflow State feature, it is necessary to make a workflow in SystemAdmin (refer to *Make a Workflow* on page 9-29). A workflow is a process (made up of a series of workflow states) in which one change triggers a different change.

For automatic transitions to work, you must use group or forced group rules (made in SystemAdmin) to create rules for Workflow States (refer to *Make a Rule* on page 4-75).

---

i NOTE: Select ☑ Allow Manual Transitions when you set up the workflow to enable the drag-and-drop feature in Watch List Viewer. You can set up rules that show only flights that satisfy a rule in a Watch List Viewer with manual transitions, but rules are optional.

Set up permissions to use the workflow

It is necessary to give a user permission to use the workflow that contains the workflow states that are associated with the Watch List Viewers in this procedure. Permission can be given to an individual user or to a group of users.

For more information on permissions for this feature, refer to *Make a Workflow Accessible in the Workspace* on page 9-37.

Move flights to change priority

You can move flights from one position into another position in the same Watch List Viewer to change priority. When you drop a lower priority flight onto a flight with a higher priority, the flight that had the higher priority moves down

the list to make room for the flight that previously had a lower priority. For example, if you move flight C with a priority of 3, onto the row that has flight B with a priority of 2, the two priorities change: Now flight C has a priority of 2, and flight B has a priority of 3.

Move flights to change workflow state

Select the flight and drag it into the Watch List Viewer with the correct associated workflow state. There are three areas that you can drop a flight into that will not change flight priority (that is, are neutral, in terms of changing priority) (refer to Figure 9-13 below).

You can change the workflow state and the priority in one move. If you drop the flight on top of another flight, you will change priorities in the Watch List Viewer as described in "*Move flights to change priority* on the previous page."

Figure 9-13. Workflow State Change (Priority Neutral)
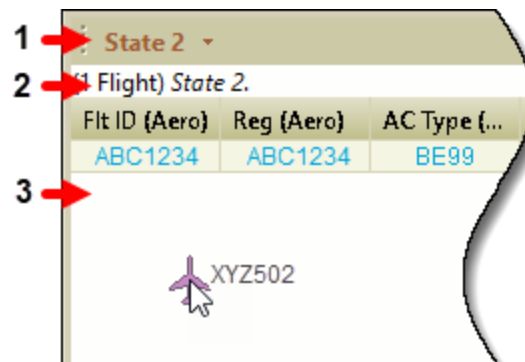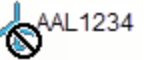
Table 9-9. Priority "Safe" Areas

Area	Description
1	Header
2	Source Field
3	Table Background (below the bottom row in a Watch List Viewer table)

When you try to move a flight with into a Watch List Viewer with a workflow state that is not correct for the flight, Watch List Viewer prevents the move. Aerobahn shows you when the move attempt is allowed or not allowed (refer to Table 9-10 on the facing page).

Table 9-10. Watch List Viewer: Validity of Flight Moves

Flight Icon	Move Validity
AAL1234	Move is allowed
AAL1234	Move is not allowed

9.10 Set up Minimum Turn-round Time in SystemAdmin

> **NOTE:** You must have access to **System Configuration > minimum turn-round times** in **SystemAdmin** to edit default minimum turn-round time (MTTT). The combination of your permissions for "Carrier Group Access" and "Carrier Code List for Proprietary Data Access" determine the carrier group and airline codes for which you can configure MTTT.

Aerobahn uses minimum turn-round time (MTTT) to calculate the predicted off-block time. Aerobahn compares the predicted off-block time with the estimated off-block time from the airline. If necessary, Aerobahn sends an alert.

You can set up the controls for these alerts in two locations:

- the **Minimum Turn-round Times** page in **SystemAdmin**—Use this to set MTTT at the Carrier Group level.
- the **Manage Flight** dialog box—Use this to set MTTT for an individual flight (refer to *Set MTTT in Manage Flight* on page 7-226).

9.10.1 Change Default MTTT for a Carrier Group

Use these instructions to set the default minimum turn-round time (MTTT) *for all flights* in a Carrier Group.

1. Select **System Configuration > minimum turn-round times**.
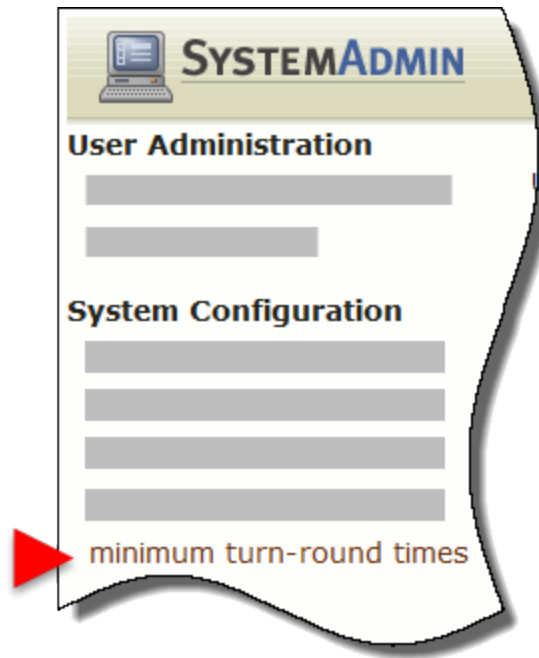
2. Select carrier group(s).

3. Enter (replace) the Default MTTT value.

4. Click **Apply**.

9.10.2 Change MTTT based on Aircraft Type, Destination, and Airline Code

Use this procedure to set up a minimum turn-round time (MTTT) that overrides the default MTTT when one of these target parameters is the same as the flight information:

- aircraft type
- destination
- airline code

ℹ **NOTE:** The MTTT value for a flight is determined by matching the flight information (carrier group, airline code, aircraft type, and destination) with a configuration in the MTTT table. If more than one MTTT configuration applies to a flight, the more restricted configuration is used. If the flight does not match any of these configurations, a default is applied.

ℹ NOTE: This procedure requires "Configure Minimum Turnaround Times" permission. The combination of your permissions for "Carrier Group Access" and "Carrier Code List for Proprietary Data Access" determine the carrier group and airline codes for which you can configure MTTT.

Instructions

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **System Configuration > minimum turn-round times**.
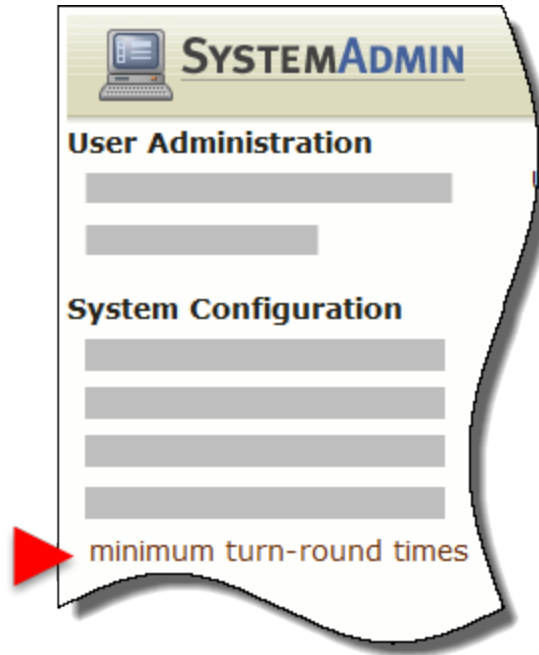
3. Select carrier group(s). (Carrier group choices are limited to those listed in your "Carrier Group Access" permission.)

4. Enter ICAO airline code (Airline Code choices are limited to those listed in your "Carrier List for Proprietary Access" permission.)

   ℹ **NOTE:** If asterisks (*) are selected in the drop down, this MTTT configuration ignores Airline Code. The menu might not include asterisks (*).

5. OPTIONAL—Enter additional data to use as Aerobahn adjusts MTTT:
   - aircraft type
   - IATA (3-letter) destination code

6. Enter the MTTT in minutes.

7. Click ➕. The information that you entered shows in the MTTT table.

   ℹ **NOTE:** In-line updates to the MTTT table are saved immediately.

Delete an MTTT Configuration

To delete an MTTT configuration, click 🗑 for the row of interest.

9.11 Set Unimpeded Taxi Out Time

> ℹ️ **NOTE:** This function applies when Aerobahn is in Pre Departure Sequencer (PDS) mode.

Unimpeded taxi out time (UXOT [ACDM]) is the quantity of time, in minutes, that the system predicts is necessary for an aircraft to taxi from a specified gate to a specified runway without constraint. This value is configured for each pairing of a runway with a gate/stand.

1. Open **SystemAdmin** (refer to).

2. Select **System Configuration > unimpeded taxi out times**.
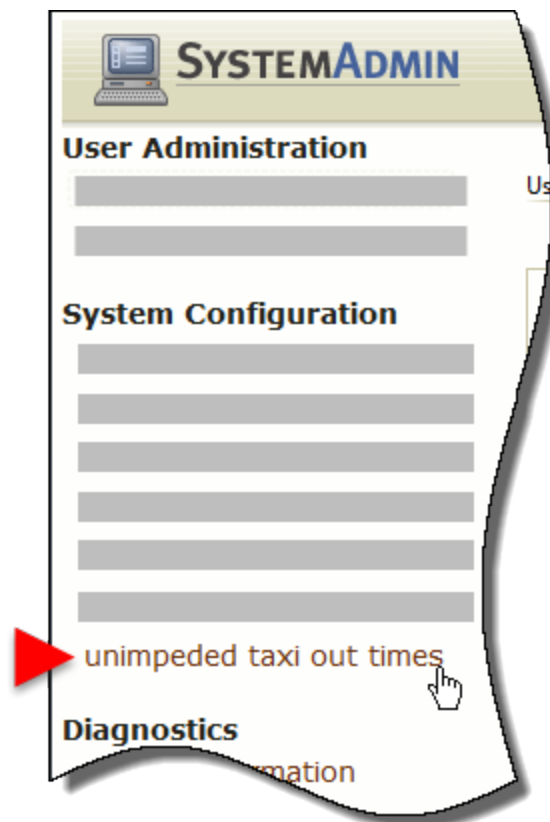
3. Select the table that specifies the value for UXOT (ACDM):

    ▪ **Runway Defaults**—to set up the default UXOT (ACDM) for all pairs that use a specified runway.

    ▪ **Runway-Gate Pair UXOT Values**—to set up individual runway-gate/stand pairs.

         a. Select the UXOT value for a pair in the table.

         b. Replace the value in the table. The new value shows in Black.

4. Click **Apply**.

    ℹ **NOTE**: If you changed a runway default value, all pairs that used that default value (these show in Red in the "Runway-Gate Pair UXOT Values" table) change.

9.12 Create a De-ice Management Group

A de-ice management group is an entity responsible for de-icing. Before a de-ice management group can be configured in Aerobahn, an approved user must create the de-ice management group in **SystemAdmin**.

This procedure creates an non-configured de-ice management group. After a de-ice management group has been created, it can be configured in the De-ice Group Configuration utility. To configure the de-ice management group, refer to *Use De-ice Configuration* on page 4-94.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. Select **System Configuration > de-ice mgmt groups** .
3. Click **Add**.
4. Enter a management group name.
5. Click **OK**. The new management group name is added to the list.

The new name will be included in the **Management Groups** pane when **De-ice Group Configuration** is next opened. A user who is working in **De-ice Group Configuration** must close that utility and reopen it to view the new management group name in the list.

9.12.1 Rename a De-ice Management Group

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. Select **System Configuration > de-ice mgmt groups** .
3. Select a management group name from the list.

4. Click **Rename**.

5. Make the necessary changes.

6. Click **OK**. The new group name replaces the original name.

9.12.2 Remove a De-ice Management Group

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **System Configuration > de-ice mgmt groups** .

3. Select a management group name from the list.

4. Click **Remove**. The de-ice management group is removed from the list.

9.13 Add a Dynamic Field

To make a dynamic field, put together data fields, expressions, functions, and operators in a formula to calculate a new value.

A dynamic field can be used in the real-time mode where other data fields are used, including tabular tools, data blocks, and rules. Dynamic fields are green in the Column Chooser in tabular tools. Dynamic fields are not available in reports.

A dynamic field is available to users who have permission to use dynamic fields. All users have access to that data field for real-time tools.

Refer to *Dynamic Field Components* on page 9-51 for descriptions of the data fields, expressions, functions, and operators that you can use to make a dynamic field (refer to *Dynamic Fields Dialog Box* on page 9-55 for a guide to the controls used to make a dynamic field).

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select a user group. More tabs open below "Attributes," and the Group Name shows above the row of tabs.

4. Select the **Dynamic Fields** tab.

5. Click **Add**. The **Add Dynamic Field** dialog box opens.
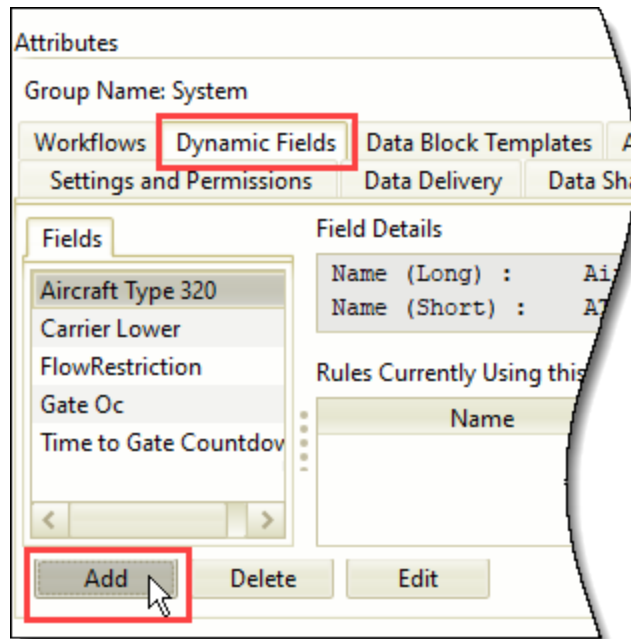
6. Enter the long and the short names for the new dynamic field.

   ℹ NOTE: You can use dynamic fields in the Email notification rule action. Do not do Step 6 when you set up a rule to send an Email notification.

7. Select Aerobahn data fields, functions, and operators from the "Available..." list, and move them to the Formula field to make a formula:
   - Select an item, and click **Add Selected**, or
   - Double-click an item.

   Refer to *Dynamic Field Components* on the facing page for descriptions of functions and operators.

   ℹ NOTE: You can make corrections as you make the formula. You add only one element at a time to the Formula field. Elements are added to the formula at the cursor location. You can also edit the Formula field as plain text. The Add Dynamic Field function checks the validity of the formula as you make it.

8. Click **OK**.

9.13.1 Dynamic Field Components

Give the data field a long name and a short name. Then, add data fields, functions, and operators to make a new data field.

Make dynamic fields at the group level in **SystemAdmin** (refer to *Add a Dynamic Field* on page 9-49 for instructions). To set up a data field, make a formula that puts together (some or all of) these parts:

- Aerobahn data fields
- arithmetic operators
- expressions
- functions

Dynamic fields generally follow the syntax rules used in spreadsheet applications, including MS Excel, OpenOffice Calc, and Google Sheets. The Aerobahn version of this notation is known as Aeroscript.

EXAMPLE

[AOBT (Aero)] - [SOBT (Aero)]

AND ([Is Persisted] , [EOBT (Aero)] > NOW() + 15 min)

IF(ISBLANK([AIBT (Aero)]) , "Flight has not yet arrived" , "Flight has arrived") // This is a single-line comment

Table 9-11. Arithmetic Operators

Operator	Meaning	Example	Operand Combinations
+	Addition ℹ️ **NOTE:** The + and - operators have an implied 0 as the left parameter if none is provided. So, the expression "+5" is translated as "ADD (0,5)".	5+2	numeric and numeric, date-time and duration, duration and duration, duration and date-time.

Table 9-11. Arithmetic Operators (continued)

Operator	Meaning	Example	Operand Combinations
-	Subtraction **NOTE**: The + and - operators have an implied 0 as the left parameter if none is supplied. So, the expression "-5" is translated as "SUBTRACT(0,5)".	5-1, -1	numeric and numeric, date-time and duration, duration and duration
*	Multiplication	5*3	numeric and numeric, duration and numeric
x = y	EQUALS		
x <= y	LESSTHANEQUALS		
x < y	LESSTHAN		
x >= y	GREATERTHANEQUALS		
x > y	GREATERTHAN		

Table 9-12. Expressions (Examples)

Description	Example
A number expression	12
A number expression	12.6
A string. Quotes are not necessary. Space at end is deleted.	abc123
A string that contains a space. A string is enclosed by quotation marks but cannot contain a quotation mark.	"abc123 "
A field reference	[Scheduled Off Block Time (Aerobahn)]
A field reference	[SOBT (Aero)]
A Boolean value. If this is set off with quotation marks (i.e., "true"), it is a string.	true
This is null (i.e., *empty set* or *no value*. If this is set off with quotation marks (i.e., "null"), it is a string.	null
A function call that takes in arguments separated by commas in a list.	<function_name> (12, null, a string)
A duration in which hours, minutes, and seconds are separated by colons. In this example, 12 hours, 5 minutes, 0 seconds.	12:05:00 or 12:5:0
A duration spelled out.	12 hours 20 seconds
A comment. When you add a double slash (//), the rest of line becomes a comment and is ignored.	// This is a comment

Table 9-13. Functions

Function	Description	Arguments
SUM (x, y, z...)	Returns the sum of all arguments. If all numbers, you get a number. If all durations, you get a duration. If you have a date time, everything else must be a duration. If anything is a string, you get a string concatenation of all arguments.	
FIRSTNONEMPTY (x, y, z...)	Selects the first value that is not null from an ordered, comma-separated list of values	2 or more field names of the same type separated by commas
IF (booleanExpression, trueExpression, falseExpression, nullExpression)	Checks the Boolean expression, and returns the true, false, or null value. False and null expressions are optional. Returns null if it does not have an expression to return.	
NOT (booleanExpression)	Returns the inverse of the value of the Boolean expression (or null).	
OR (x, y, z...)	Returns true if any of the given expressions is true (or null, if any are null).	
AND (x, y, z...)	Returns true if all of the given expressions are true (or null, if any are null).	
NOW ()	Returns the current date and time.	
LEFT	Returns the specified number of characters from start of a text string.	
RIGHT	Returns the specified number of characters from end of a text string.	
MID	Returns the specified number of characters from the middle of a text string.	
FIND	Returns the starting position of one text with another text string.	
LOWER	Converts all letters in a text string to lowercase.	
UPPER	Converts all letters in a text string to uppercase.	
ISBLANK ([field name])	Returns true if its argument is null.	
startsWith()	Returns true if the first parameter starts with the second parameter.	
contains()	Returns true if the first parameter contains the second parameter.	

Table 9-13. Functions (continued)

Function	Description	Arguments
matches()	Returns true if the first parameter matches the second parameter. Uses regular expressions for the second parameter. Example: matches([Call sign (Aerobahn)], "DAL.*")	
endsWith()	Returns true if the first parameter ends with the second parameter.	
is in list()	Returns true if the first parameter is in the second list.	
floor(a)	Returns *a* rounded down to the nearest whole number. Example: ceiling(3.141) → 3	
ceiling(a)	Returns *a* rounded up to the nearest whole number. Example: ceiling(3.141) → 4	
round(a,b)	Returns *a* rounded to the *b* number of place values from the decimal point. Examples: round(123.456, 2) → 123.46 round(123.456, -1) → 120 round(123.456, -2) → 100	

Table 9-14. Advanced Notation: Functions and Operators

Function/Operator	Description
Functions	
isDeparture ( )	Returns true if the flight is a departure.
is Arrival ( )	Returns true if the flight is an arrival.
currentTime ( )	The current system time.
systemTime ( )	Alias of currentTime.
isUnderSurveillance ( )	Returns true if the target is not a look ahead.
isOutsideSurveillance ( )	Returns true if the target is a look ahead.
isParked ( )	Returns true if the target is parked (persisted).
isVehicle ( )	Returns true if the target is a vehicle (i.e., not an aircraft).
Operators	

Table 9-14. Advanced Notation: Functions and Operators (continued)

Function/Operator	Description
x, y	Return the FIRSTNONEMPTY The ”,” and ”;” operators have implied null for left and right parameters. So these expressions translate to “FIRSTNONEMPTY (Foo(x), null)”: Foo(x), Foo(x) ;
x ? y	IF
x OR y	OR
x AND y	AND

9.13.2 Dynamic Fields Dialog Box

Figure 9-14. Add Dynamic Field Dialog Box Controls
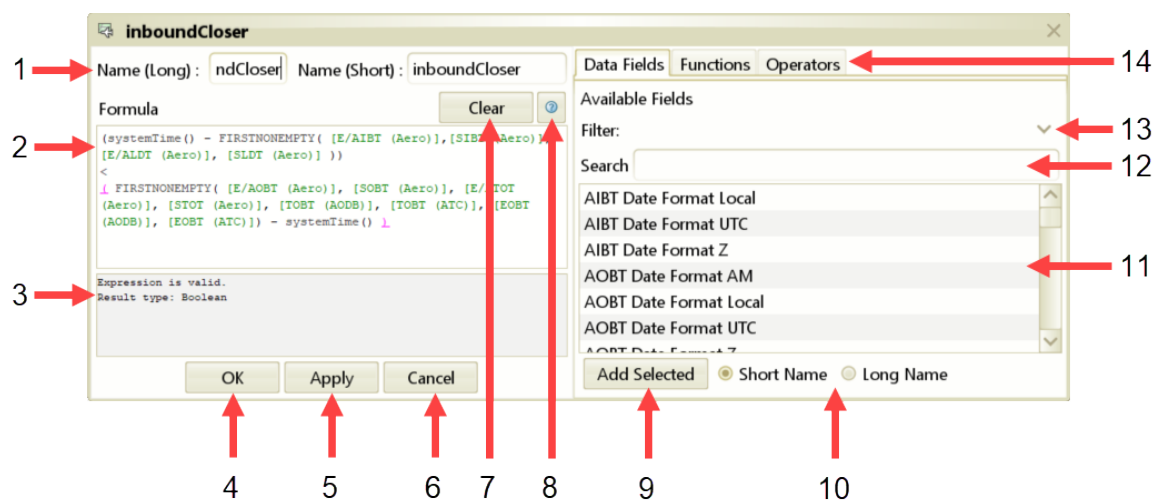
Table 9-15. Add Dynamic Fields Dialog Box Components

Ref.	Description
1	Long and short names for the dynamic field. These fields do not show when this dialog box is opened from the Rules Management tool.
2	The formula. This is a text field and can be edited as plain text.
3	Validation notes
4	Click to save the formula and close the dialog box.

Table 9-15. Add Dynamic Fields Dialog Box Components (continued)

Ref.	Description
5	Click to save the formula. The dialog box remains open.
6	Click to cancel the operation and close the dialog box.
7	Click to clear text in the Formula field.
8	Click to open this topic in the Help system.
9	Click to add a selected data field from the Available Fields to the cursor location in the Formula field.
10	Select **Short Name** to insert the short name for the selected field in the Formula field. Select **Long Name** to insert the long name for the selected field in the Formula field. For example, when you select (Scheduled In Block Time (Carrier)" and **Short Name**, "[SIBT (Carrier)] shows in the Formula field. If you selected **Long Name**, [Scheduled In Block Time (Carrier)] shows in the Formula field. This choice does not change the way the formula works. It changes only the display of the data field name.
11	The list of available data fields. This list changes when you use a filter or enter text in the Search box.
12	Search Box—Enter the short or the long name for a data field. For example, if you enter "sib," the tool will give "Scheduled In Block Time (Aerobahn)" as one of the possible Available Fields. If you know what you want, the short name can narrow your search. For example, if you enter "Scheduled," you can get 15 possible field names. If you enter SIB, you get 4.
13	Open the filter list, and select filters.
14	To insert a data field, function, or operator, select the tab, select the item from the "Available" list, and click **Add Selected**. You can filter the data field list (refer to).

9.13.2.1 Filter Field Names in the Data Field Tab

By default, the Available Fields list shows all data fields.

1. Click the Filter button to open a list of field filters.
2. Click a filter name to select a filter. CTRL-click to select more than one filter.

The data fields that pass through the selected filter(s) show in the Available Fields list.

Figure 9-15. Data Field Filters
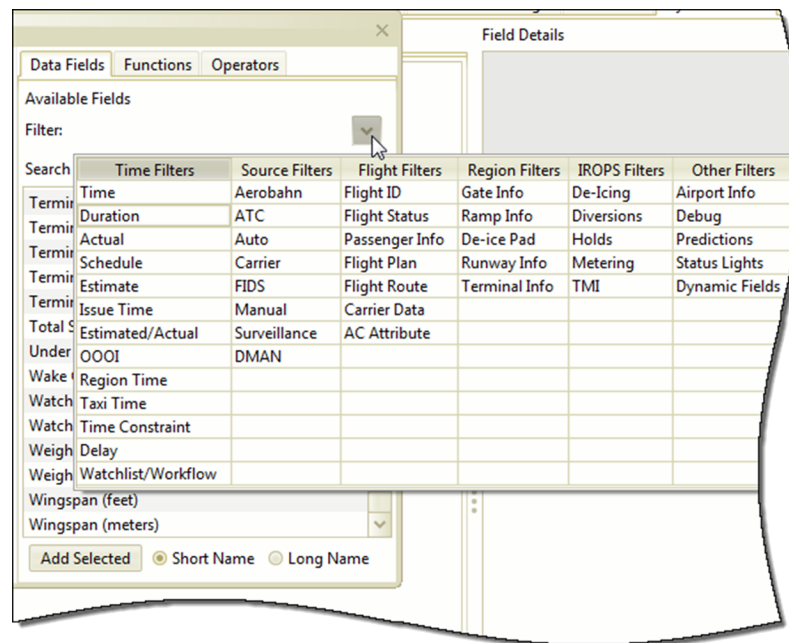
9.14 Make a Data Block Template

A data block template contains a collection of data fields. An Aerobahn user can use the template as is or copy the collection and add or remove items (refer to *Configure Data Blocks in Map Display* on page 7-205).

ℹ️ **NOTE:** To make a data block template in **SystemAdmin**, "Manage Group Templates" permission is necessary (in the System Administration: Data Block Templates group).

ℹ️ **NOTE:** To make a shared data block template from a Preferences dialog box that you open in a real-time tool, the "Share Templates" permission is necessary (in the **System Administration: Data Block Templates** group).

When a data block template is made in **SystemAdmin** (rather than in another tool),

- A user gets permission to use that template through the group of users in SystemAdmin.
- The data block template can be used to build system rules.

Instructions

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. In the **Users and Groups** list, select the group that will have access to the data block template. Additional pages show in the **Attributes** section of the **Settings and Permissions** page.

3. Select the **Data Block Templates** Attribute page.

4. Select the **Group Templates** tab. (It may be empty.)

5. Click **Create**. The **Create Data Block Template** dialog box opens.
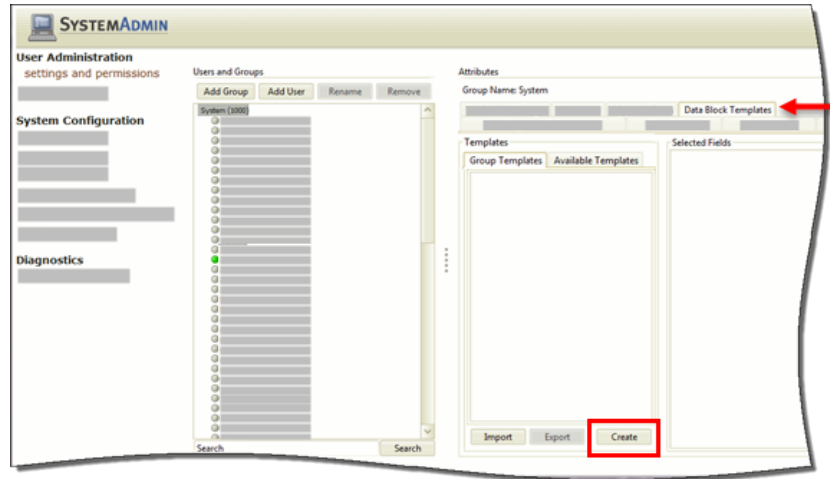
6. Enter a name for the template.

7. Select data fields that will show in the data block when data is available.

   ▪ Add and organize data fields (refer to *How to Select and Move Data Fields* on the facing page).

   ▪ Click **Line Break** to start a new text line in data blocks and unformatted mouseovers.

   ▪ Enter text in the **Field Label** box to use as a label before data. For example, you might enter "Gate" as a field label for "Gate Assigned (Carrier)."

8. When all preferences are set up, click **OK**.

How to Select and Move Data Fields

- To add one item to **Selected Fields**, select the item in the **Available Fields** window. Click ➡ or double-click. The item moves to **Selected Fields**.

- To add more than one item to **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ➡.

- To remove one item from **Selected Fields**, select the item. Click ⬅ or double-click. The item moves to **Available Fields**.

- To remove more than one item from **Selected Fields**, select with CTRL-click or SHIFT-click in the **Available Fields** window. Click ⬅. The items move to **Available Fields**.

- To move all items from **Available Fields** to the **Selected Fields** window, click ⬇.

- To remove all items from **Selected Fields**, click ⬇. The items move to **Available Fields**.

- To change sequence of the **Selected Fields** list, drag an item to its new location. As an alternative, select an item and click ⬇ or ⬆ until it is in the correct location. To move an item to the top of the list, click ⬆. To move an item to the bottom of the list, click ⬇.

How to Use Line Breaks in Data Blocks

Use line breaks to group the information in data blocks so that it is easier to read and understand. Insert line breaks when you select and organize data block fields (refer to *Use Line Break in Data Blocks* on page 10-22).

Refer to *Use Line Break in Data Blocks* on page 10-22.

9.14.1 Rename a Data Block Template

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. In the **Users and Groups** list, select the group that has access to the data block template.

3. Select the **Data Block Templates** Attribute page.

4. Select the **Group Templates** tab.

5. Right-click the Template name to be renamed.

6. Select **Rename**.

7. When all preferences are set up, click **OK**.

9.14.2 Copy a Data Block Template in SystemAdmin

You can make a copy (i.e., clone) of one data block template, rename that copy, and then add and remove data fields. There are two methods:

- Duplicate
- Copy to Local

Method 1: Duplicate

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. In the **Users and Groups** list, select the group that has access to the data block template.
3. Select the **Data Block Templates** Attribute page.
4. Select the **Group Templates** tab.
5. Right-click the Template name to be duplicated.
6. Select **Duplicate**. The Duplicate Data Block Template dialog box opens.
7. Enter a template name.
8. Add or remove data fields.
9. Add line breaks or field labels for data blocks and unformatted mouseovers. (For more information on line breaks, refer to *Use Line Break in Data Blocks* on page 10-22.)
10. Click **OK** to confirm changes and to add the data block to the available selections.

Method 2: Copy to Local

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).
2. In the **Users and Groups** list, select the group that has access to the data block template.
3. Select the **Data Block Templates** Attribute page.
4. Select the **Available Templates** tab.
5. Click **Copy to Local**. The Copy Data Block Template dialog box opens.
6. Enter a template name.
7. Add or remove data fields.
8. Add line breaks or field labels for data blocks and unformatted mouseovers.
9. Click **OK** to confirm changes and to add the data block to the available selections.

9.14.3 Delete a Data Block Template

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. In the **Users and Groups** list, select the group that has access to the data block template.

3. Select the **Data Block Templates** Attribute page.

4. Select the **Group Templates** tab.

5. Right-click the Template name to be deleted.

6. Select **Delete**.

7. Click **Yes** to confirm that you want to delete the data block template.

9.15 Add a Carrier Group

A carrier group configuration is a list of carriers. Aerobahn uses these lists to find a carrier group that a flight belongs to.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **System Configuration > carrier groups**.
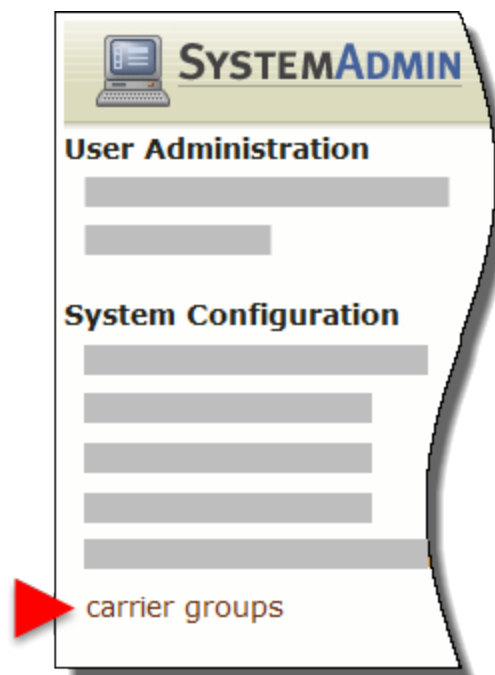
3. Click **Add**. The **New Carrier Group** dialog box opens.
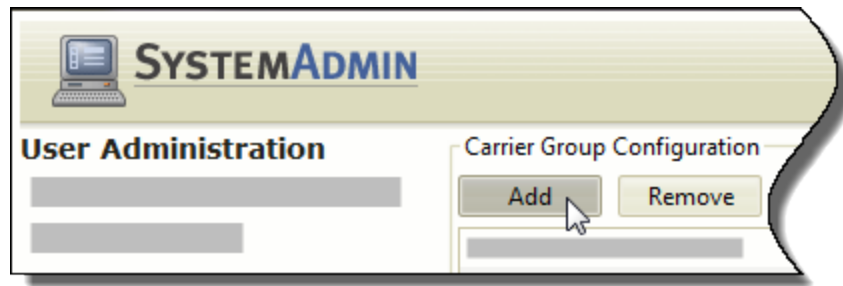
4. Enter a group name.

5. Click **OK**. The new group name is added to the list.

After you add a carrier group, it is necessary to configure it (refer to *Configure a Carrier Group below*).

9.15.1 Configure a Carrier Group

A carrier group configuration is a list of carriers. Aerobahn uses these lists to find a carrier group that a flight belongs to.

When Aerobahn looks for a carrier group, it starts at the top of the list and works down through until it finds a carrier group that contains the same carrier code (the first 3 letters of a call sign) as the flight. Then, Aerobahn identifies the flight with the carrier group. If no group with the carrier code is found, the flight is identified with the default carrier group.

ℹ **NOTE:** Only one carrier group can be the default carrier group at a time.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **System Configuration > carrier groups**.
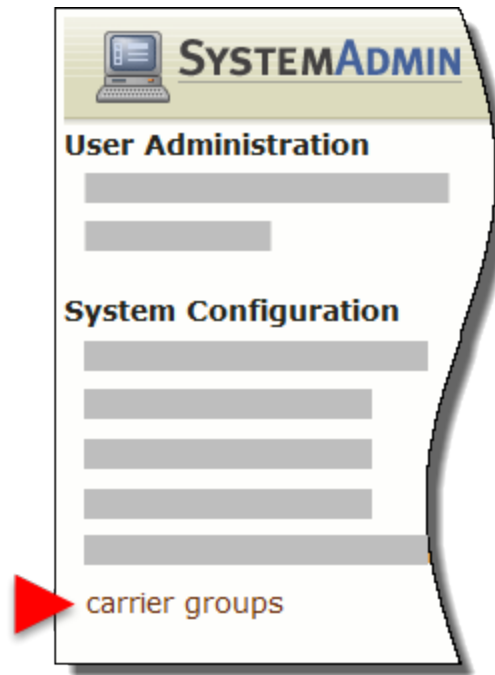
3. Select the carrier group from the Carrier Group Configuration list.

   ℹ **NOTE**: If the carrier group is not in the list, create it. It is necessary to create a Carrier Group before you configure it (refer to *Add a Carrier Group* on page 9-61.

4. Enter a "short name" for the carrier. The "Short Name" ("GA" in the figure) is associated with the *Carrier Group*. You can use the carrier code letters, but the short name and the carrier code have specified functions in Aerobahn.
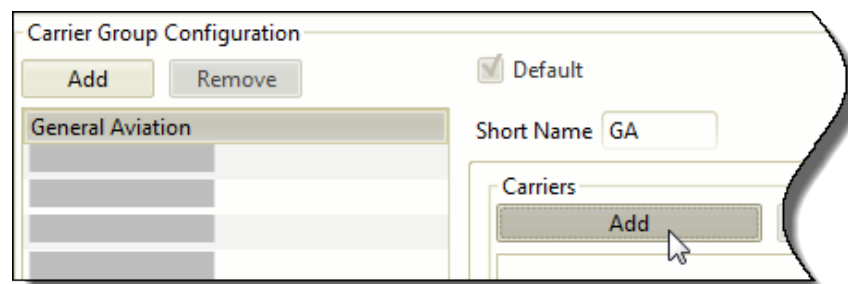
5. Add carriers to the carrier group.

    a. Click **Add** to open the **Add Carrier** dialog box.

    b. Enter a carrier code.

    c. Click **OK**. The carrier code is added to the list of carriers.

    d. Repeat a—c for each new carrier.

6. Configure Terminals.

    ▪ To Add:

        a. Click **Add** to open the **Add Terminal** dialog box.

        b. Select the terminal to add.

        c. Click **OK**.

    ▪ To Remove:

        a. Select the terminal to remove.

        b. Click **Remove**.

7. Configure Terminal and Carrier Pairs.

    ▪ To Add:

        a. Click **Add** to open the **Add New Pair** dialog box.

        b. Select a terminal.

        c. Enter a carrier code.

        d. Click **OK**.

    ▪ To Remove:

        a. Select a pair.

        b. Click **Remove**.

8. Put a check mark in the "'Provide Carrier Codes for De-ice Configuration" box to make available to the De-ice Configuration tool those carrier codes that are associated with a carrier group (refer to *Use De-ice Configuration on page 4-94*).
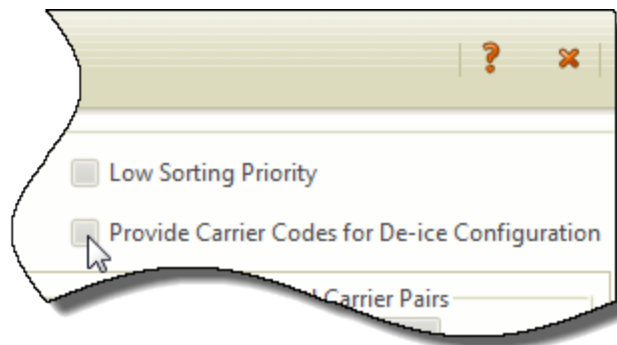
9. Identify any carrier group that—when carriers are sorted by priority—can be given a lower priority than a carrier group that is not marked.
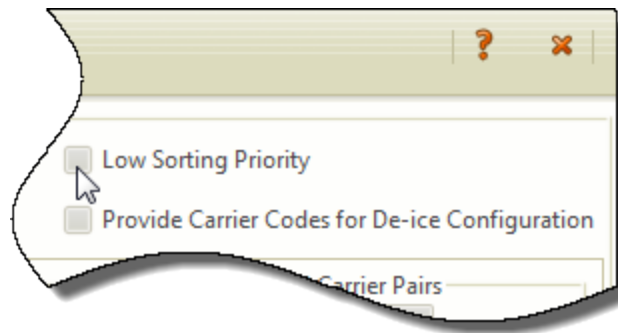
10. Click **Apply**.

9.15.2 Remove a Carrier Group

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **System Configuration > carrier groups** .

3. Select a group configuration name from the Carrier Group Configuration list.

4. Click **Remove**. The group configuration is removed from the list.

9.16 Use Group Annotation Manager

ℹ **NOTE: System Administration > Manage Group Annotations**

permission is necessary to use Group Annotation Manager.

The **Group Annotation Manager** is a **SystemAdmin** tool that you can use for these tasks:

- *Create a System Annotation* on the next page
- *Edit a System Annotation* on page 9-67
- *Import an Annotation for a System Annotation* on page 9-67
- *Export a System Annotation* on page 9-68
- *Remove a System Annotation* on page 9-68

Drag-and-Drop Actions

The **Group Annotation Manager** shows system annotations in priority order, with the highest priority annotations at the top of the list. (Higher priority annotation layers show on top of lower priority annotation layers in **Map**

Display.) To change the priority of system annotations or to make a system annotation "forced," drag the annotation label to the new location. A line shows the drop destination.

Figure 9-16. Group Annotation Manager, Drag-and-Drop Actions
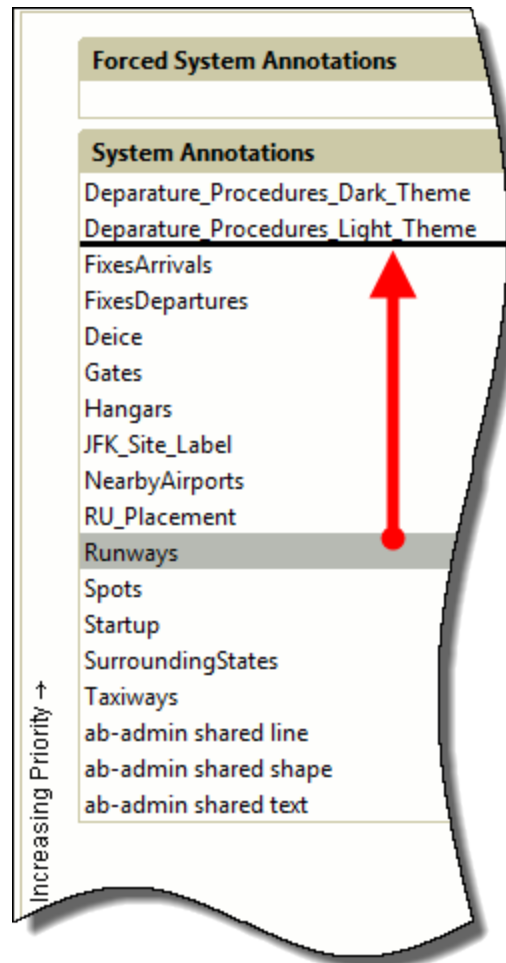
Forced System Annotations

Annotations in the **Forced System Annotations** list show in **Map Display** for all members of the group. A forced annotation is visible to all members of the group.

To create a Forced System Annotation, drag a System Annotation into the Forced System Annotations list.

9.16.1 Create a System Annotation

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select your group name. Note that the tabs change in the Attributes window.

4. Select the **Annotations** page.

5. Click **Create**. The **Annotation Editor** opens.

6. Enter a name for the annotation layer.

7. Enter annotation elements.

8. Click **Up** or **Down** to change the order of elements to change the priority of each element. The annotation elements are "stacked" on top of each other just as they appear in the **Annotation Editor**.

9. Click **Save**.

9.16.2 Edit a System Annotation

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select your group name. Note that the tabs change in the Attributes window.

4. Select an annotation from the **Forced System Annotations** list or the **System Annotations** list.

5. Open the Annotation Editor:

   - Click **Edit**.
   - Right-click the annotation, and select **Edit** from the menu.

6. Make necessary changes.

7. Click **Save**.

9.16.3 Import an Annotation for a System Annotation

You can import an annotation file to use as a system annotation. After you import the annotation, you can move it to Forced System Annotations.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select your group name. Note that the tabs change in the Attributes window.

4. Select the **Annotations** page.

5. Click **Import Annotation From File**. The **Open** dialog box opens.

6. Select the annotation file name. The file name shows in the File Name field.

7. Click **Open**. The imported annotation file shows at the bottom of the System Annotations list.

9.16.4 Export a System Annotation

You can export an annotation file from the System Annotation list for use by another group or for an individual to edit as a personal annotation.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select your group name. Note that the tabs change in the Attributes window.

4. Select the **Annotations** page.

5. Right-click the annotation item. A menu opens.

6. Select **Export Annotation to File**. The Save dialog box opens.

7. Navigate to the save location, and enter a file name.

8. Click **Save**. The exported annotation file saves to the specified location.

9.16.5 Remove a System Annotation

⚠ **CAUTION:** There is no "undo" command.

1. Open **SystemAdmin** (refer to *SystemAdmin Menu* on page 9-2).

2. Select **User Administration > settings and permissions**.

3. Select your group name. Note that the tabs change in the Attributes window.

4. Select the **Annotations** page.

5. Right-click the annotation layer to open a menu.

6. Select **Delete**. The annotation is removed from the list.

10 Reference

10.1 Customer Service

Telephone

+1-877-973-6747 USA & Canada

+1-315-445-5000 All Countries

Email

CustomerService@saabinc.com

Mail

Customer Service

Saab, Inc.

85 Collamer Crossings

East Syracuse, NY 13057

USA

10.2 Frequently Asked Questions

[What are the recommended configurations for my client PC?](#)

[How do I access the Java Control Panel?](#)

[My computer was recently upgraded. Now I receive an "insufficient memory" message or a message that I need to download a newer version of Java Runtime Environment (JRE). What should I do?](#)

[How do I configure Java Runtime Environment cache settings?](#)

[Why do I receive a request to accept a security certificate? How should I respond?](#)

[I am attempting to run a new version of Aerobahn, but I seem to be getting an old version. What is wrong?](#)

[Can I run more than 1 Aerobahn session at 1 time on a PC?](#)

[How do I configure Internet Explorer to let me launch Aerobahn for more than 1 site on 1 PC?](#)

[I have Tabbed Browsing enabled in Internet Explorer. How do I configure it to open links in a new window?](#)

[Why does my computer screen look different from the description in the instructions?](#)

[Why can't I see a workspace that I've just opened?](#)

[How do I update Aerobahn to a 64-bit architecture?](#)

What are the recommended configurations for my client PC?

Beyond requirements that are common to all client PCs, Client PC hardware configurations vary based on three classes (tiers) of user requirements.

Hardware

64-bit Windows 10+ Operating System

8GB available of memory

1GB available space on hard disk

scrolling pointing device

display with 1920x1080 minimum resolution

Software

Application	Requirement
Internet Browser and Java Runtime Environment (JRE)	■ Microsoft Edge Version 77+ with 64-bit Java Version 7+ or later that is compatible with the browser, with cache set to at least 1000MB ■ Google Chrome 96+ with 64-bit Java Version 7+ or later that is compatible with the browser, with cache set to at least 1000MB
Third-Party Software	Pop-Ups Enabled on blocking toolbars and software
Aerobahn Launcher	64-bit Aerobahn Launcher application

Network Requirements

Firewall access must be configured on both the Client PC and network to allow communication with the Aerobahn server.

- PC and IT firewalls give access from the Client PC to the Aerobahn Server on TCP ports 80 and 443
- 512 kbps (or faster) connection to Aerobahn Server

ℹ **NOTE:** If video integration is available, additional bandwidth may be required dependent on the number of allowed simultaneous streams.

How do I access the Java Control Panel?

There are two ways to open the Java Control Panel: with Aerobahn open and with Aerobahn closed.

Method 1: Aerobahn is open

With Aerobahn open, open the Java Control Panel from the system tray.

1. After logging into Aerobahn and with the Portal open, you will see a Java icon located in the system tray (located in the lower right corner of your monitor).
2. Right-click the Java icon, and click **Open Control Panel**.

Method 2: Aerobahn is not open

With Aerobahn closed, open the Java Control Panel via Windows.

1. Click Windows **Start**.
2. Select **Settings**.
3. Select **Control Panel**.
4. On the Windows Control Panel, double-click the Java icon.

My computer was recently upgraded. Now I receive an "insufficient memory" message or a message that I need to download a newer version of Java Runtime Environment (JRE). What should I do?

1. Open the **Java Control Panel** (refer to *How do I access the Java Control Panel? on the previous page*).
2. Select the **Advanced** tab.
3. Select **Enable the next-generation Java Plug-in**.
4. Click **OK**.
5. Restart the web browser.

How do I set Java Runtime Environment cache settings?

1. Open Java Control Panel.
2. From the General tab, select "Settings..." in the Temporary Internet Files panel.
3. Select **Keep temporary files on my computer**.
4. Accept the default location.
5. Set JAR compression to **None**.
6. Set disk space to **1000MB**.
7. Click **OK**.

Why do I receive a request to accept a security certificate? How should I respond?

Because several Aerobahn applications are Java "applets," a security dialog box opens at the first login. This security dialog box also opens after TaxiView upgrades.

The Microsoft Internet Explorer browser has this security control for all applets.

1. Make sure that Saab, Inc., Saab Sensis Corporation, or Sensis Corporation is named as Publisher.
2. Select "Always trust content from this publisher."
3. Click **Run**. The dialog box from will not open each time Aerobahn Java applications start.

I attempted to run a new version of Aerobahn, but I got an old version. What is wrong?

Because Aerobahn is a web-based application, you always get the latest version that is available at your site. However, several Aerobahn applications are Java "applets." When an applet starts, the Microsoft Internet Explorer (IE) browser looks for key files it needs to run successfully. The browser looks for these files in its memory (its "cache"). If it finds the files, the applications run with those files. If the browser does not find the files, the files are downloaded from the remote Aerobahn server.

When you start a new version of Aerobahn for the time, the browser downloads the new files from the Aerobahn server. So that you do not use files from a previous version of Aerobahn stored in the browser cache, you must clear the browser cache and Java Plugin cache. This forces the browser to download the new files.

To clear the IE browser cache:

1. Exit Aerobahn.

2. Close and reopen IE.

3. Select **Tools > Delete Browsing History > Delete Temporary Internet Files**.

4. Click **Yes** to start to delete temporary files (that is, to clear the browser cache).

5. When the process is complete, click **Close**.

To clear the Java Plugin cache:

1. Open the Java Control Panel.

2. On the General tab, in the Temporary Internet Files section, click **Settings**.

3. In the Temporary Files Settings Dialog, click **Delete Files**. This deletes the files that are currently stored in your Java Plugin cache.

4. Click **OK**. Click **OK** again. Click **OK** a third time.

ℹ **NOTE:** You can adjust Internet Explorer and Java Plugin settings to clear the browser and plugin cache when you close the browser. If you do this, you receive the latest version of Aerobahn each time you start it. This approach increases start time: All application files are downloaded each time you start the application.

To keep the *browser cache* cleared:

1. Click **Tools > Internet Options**.

2. Select the **Advanced** tab.

3. In the "Settings" box, scroll down to the section labeled "Security," and select **Empty Temporary Internet Files folder when browser is closed**.

4. Click **OK**.

This option does not delete cookies, but it will clear your browser cache of other files when you close your browser.

To keep the *Java Plugin cache* cleared:

1. Open the Java Control Panel.

2. On the General tab, in the Temporary Internet Files section, click **Settings**.

3. In the Temporary Files Settings Dialog, remove the check from **Keep temporary files on my computer**.

Can I run more than one Aerobahn session at one time on a PC?

Although it is not recommended that you operate simultaneous Aerobahn sessions on the same PC (because of processing and memory demands), it is possible. Running more than one Aerobahn session on one PC is allowed if each session is connected to a different Aerobahn server, and you have accounts on each of those servers. Each Aerobahn session must be started from a new browser instance.

You cannot use a single PC connected to an Aerobahn server to run more than one Aerobahn session. Two user accounts for a single service cannot be active on a PC at a time. If you try to start a second session, you get a message that the first session will close if you continue. If you click **Cancel**, the first session stays active, and the second user is not logged in.

You can have more than one **Map Display** and/or report window open simultaneously. This is not the same as having two user accounts open at once.

How do I configure Internet Explorer to let me start Aerobahn for more than one site on 1 PC?

To start Aerobahn for more than one site on a single PC, start each session in a new Internet Explorer window. *IE must not reuse windows for launching shortcuts*.

1. Open **Internet Explorer**.
2. Click **Tools > Internet Options**.
3. Select the **Advanced** tab.
4. In the "Browsing" section, remove the check from **Reuse windows for launching shortcuts**.
5. Click **OK**.

Figure 10-1. Internet Options, Advanced Settings
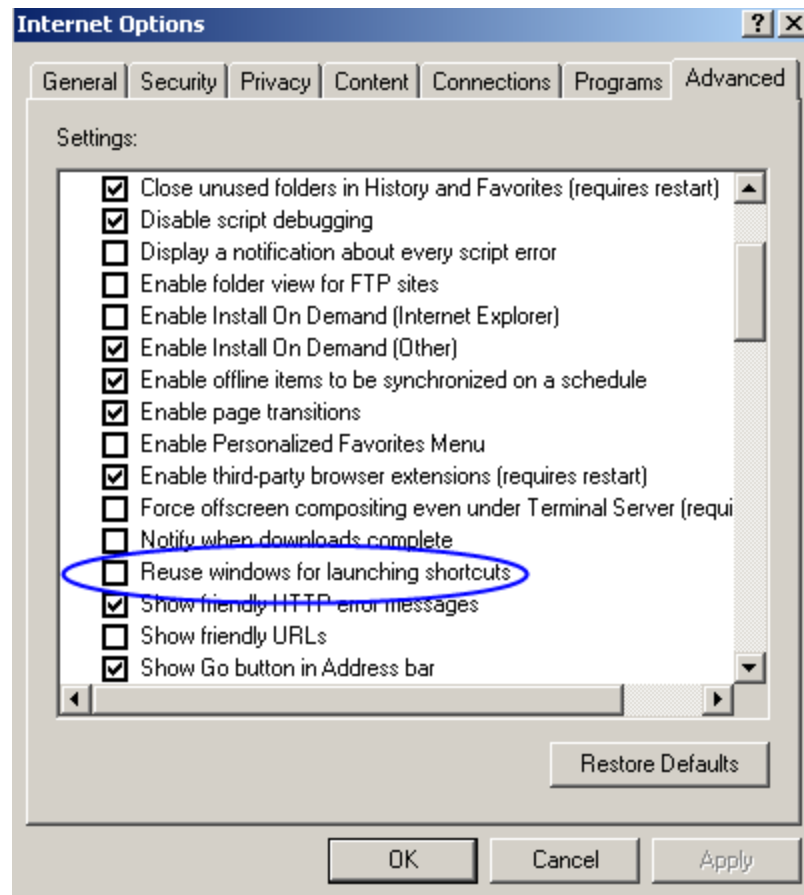
I have Tabbed Browsing enabled in Internet Explorer. How do I set it to open links in a new window?

When IE is set to use tabbed browsing (that is, "Enable Tabbed Browsing" [see red oval] is checked in the Internet Options), you must set IE to open links from other programs in a new window.

1. Open **Internet Explorer**.
2. Click **Tools > Internet Options**.
3. Select the **General** tab.
4. Click **Settings**.
5. Under "Open links from other programs in," select **A new window** (see blue oval).
6. Click **OK**.

Figure 10-2. Internet Options, Tabbed Browsing Settings
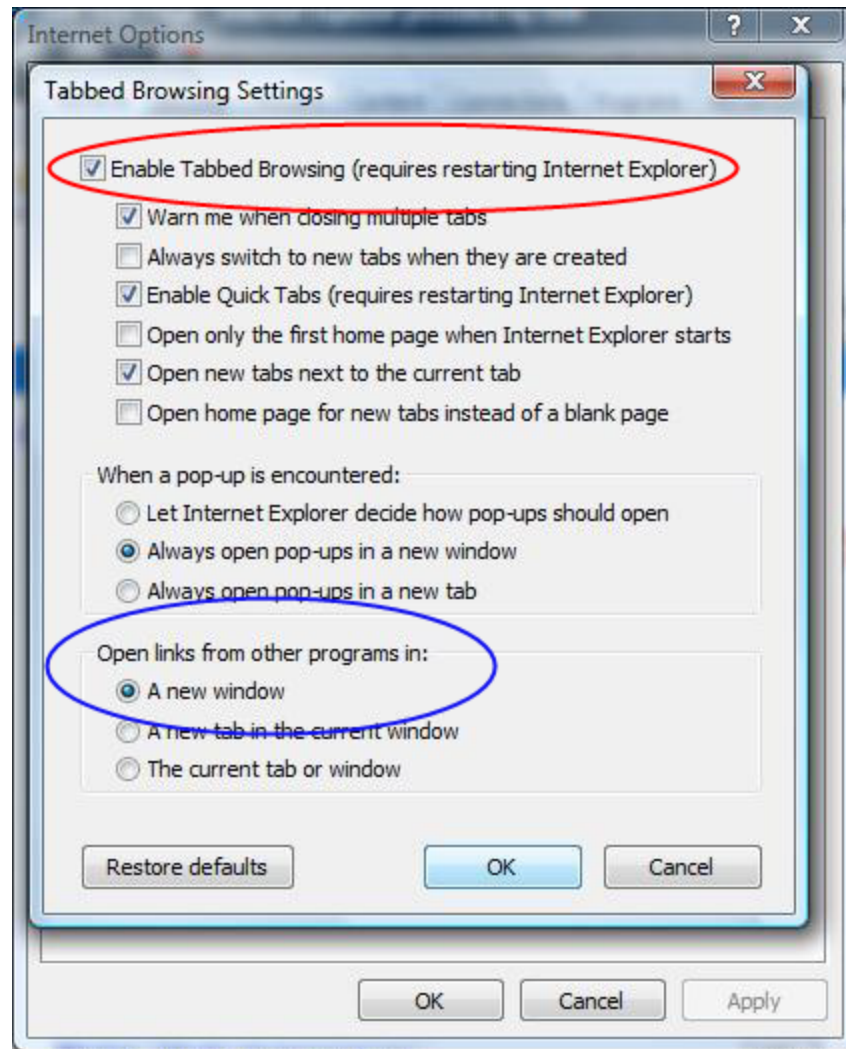
Why does my computer screen look different from the description in the instructions?

There are several causes that could make your computer screen look different from the description in the *Aerobahn User Guide*:

- Different Aerobahn sites use slightly different Aerobahn configurations. The *Aerobahn User Guide* attempts to close gaps between some of these different configurations, and sometimes there are slight differences in displays.

- At an Aerobahn site, users can have different permissions that can change the Aerobahn display. Specifically, some Aerobahn users have menu options that others do not have. Contact your System Administrator if you have questions about a tool.

- Finally, the size of a window can affect the way controls show in that window. For example, it is possible that you will not see a text-entry field or a menu in a window when it opens simply because the screen is not maximized. If the instructions say that something should be in a certain location, but you don't see it there, drag one corner of the window to expand the window.

Why can't I see a workspace that I've just opened?

If your last Aerobahn session was on a system that had two or more monitors, and you are now starting a session on a workstation with a single monitor (such as a laptop computer), how you shut down the previous session (the one using 2 or more monitors) matters. If your workspace was open on a secondary monitor when you exited from Aerobahn, it is possible that workspace does not show now (refer to *Move a Workspace into View* on page 10-14 for instructions on making that workspace show on your screen).

If you floated a tool—rather than a full workspace—into a second monitor, start with a new workspace (i.e., a workspace other than the one that opens when you log in). To start a new workspace from the portal, click the workspace button that you did not use the last time. Then, open the "lost" in the new workspace.

An alternative is to load a different workspace (refer to *Load a Workspace* on page 5-3).

When you go back to the 2-monitor configuration, the "lost" tool shows on the second monitor.

How do I update Aerobahn for a 64-bit architecture?

Before build 10.4.0, Aerobahn used a 32-bit architecture. Using the 64-bit version of Aerobahn has some clear advantages as its users begin to use tools like digital video and larger data sets for CDM applications.

To update your version of Aerobahn to a 64-bit architecture, clear the Aerobahn cache when you open the login screen (refer to *Login Help* on page 2-7) . You need to do this only one time. After you clear the cache, log in, and Aerobahn runs in the 64-bit architecture.

10.3 Reset Password

> ℹ️ **NOTE:** What if your regular password suddenly does not work? This can occur if a person who shares your account reset the password. Contact your supervisor before you try to reset the password.

When you click **Forgot your password**, the password is reset, and an Email is sent to the Email address attached to that user name (Aerobahn account). One Email address is attached to each Aerobahn account. When you change a password for an account, other users who use that user name must use that password to log in.

If your Email account is not attached to the user account, you can get a new password as follows:

- Contact the person who has the Email account that is attached to the Aerobahn user account.

   ➡️ The Email address that is attached to an account is in **SystemAdmin > settings and permissions**. Select the User Information tab. The Email address is shown there.

- Contact your supervisor. Your supervisor has access to user accounts and passwords.
- Contact Saab, Inc. Customer Service.

If your Email is attached to the user account, click **Forgot your password** on the Login page. You will receive a new password by Email. Then, you can log in.

If other users share your account, give them the new password.

10.4 Use the Aerobahn Diagnostic Utility

If you get errors when you start Aerobahn or open applications, use the Aerobahn Diagnostic Utility. This utility collects information about your system at the time of the problem.

1. Enter this into your web browser: [your usual Aerobahn URL]/**diagnose.php**

2. When the report shows, click **Copy** (button at the bottom of the diagnostic utility screen).

3. Paste the report into an Email.

4. Send the Email to customerservice@saabinc.com.

10.5 View Aerobahn Log

The Aerobahn Log (client log) can help Customer Service find the cause of a problem. These instructions tell you how to send log files to Customer Service.

1. Start an Email to Customer Service using one of these procedures:

   - Click here to start an Email to CustomerService@saabinc.com

   - Go to the **Aerobahn Portal** page, and click **Contact Us**.

   - Open your Email program, and start an Email to CustomerService@saabinc.com

2. Enter the information that Customer Service told you to enter in the Subject field.

3. From the workspace, select **Help > View Aerobahn Log**.

4. Get the log file or log files.

   - For the current log file only

     a. Click **Copy to Clipboard**.

     b. Paste the Aerobahn Log from the Clipboard into the message field.

   - For more log files

     a. Click **Find in Explorer**.

     b. Copy the files in the log folder into the Email.

5. Click **Close** to close the Aerobahn Log window.

6. Send the message.

10.6 Export Network Data

Aerobahn operates on various network systems: copper T1s, MPLS, VPN, 3G, and 4G. Network conditions have an effect on Aerobahn performance.

The Export Network Data function lets you collect information about network performance at a given time.

1. Select **Help > Export Network Data**.
2. Save the CSV file. The CSV file contains time stamps and round-trip "ping" data that can be used when you examine network performance.

10.7 Move a Workspace into View

NOTE: If you have just logged in to Aerobahn, and the last workspace that you used or your normal start-up workspace is missing, this topic provides one procedure for finding it.

If you have one monitor at this time, and you had two monitors for your last session, how you closed that last session determines what you see. If a workspace was open on the second monitor when the session closed, that workspace can be hidden when you work on one monitor. You can move the "missing" workspace back to your monitor (refer to *Move a Workspace into View* above).

CAUTION: Keyboard keys are shown in capital letters. Do not press SHIFT when you press these keys unless SHIFT is indicated.

1. Click the TaxiView or OpsView icon for the "missing" workspace (on the Portal page). This selects the workspace. You will not see the result of this or subsequent actions until step 6 when the workspace shows in the display area of the monitor.
2. Press ALT+SPACEBAR to open a menu.
3. Press R (restore).
4. Press ALT+SPACEBAR again.
5. Press M (move).
6. Press a cursor key repeatedly until the workspace shows. After the workspace starts to show, you can drag it fully into view or continue to press the cursor key.

> ℹ **NOTE:** Which cursor key will move the "lost" workspace into view? It is common for second monitors to be put to your right as you look at the main monitor. If you think that this is true, press (several times) the left cursor key to move the hidden workspace into view. If that does not move the workspace into view, try the right cursor. Go slowly when you make adjustments.

10.7.1 Move a floated tool into view

If you floated a tool—rather than a full workspace—into a second monitor, start with a new workspace (i.e., a workspace other than the one that opens when you log in). To start a new workspace from the portal, click the workspace button that you did not use the last time. Then, open the "lost" in the new workspace.

An alternative is to load a different workspace (refer to *Load a Workspace* on page 5-3).

When you go back to the 2-monitor configuration, the "lost" tool shows on the second monitor.

10.8 System Overview

Aerobahn processes and stores surveillance data, airline and airport flight schedule data, ASDI[1], etc. Aerobahn gives users situational awareness and helps stakeholders to make decisions.

Aerobahn is a secure, web-enabled system that is available 24 hours a day, 7 days a week. Users connect (via a web browser) with the Aerobahn Server, which runs Aerobahn applications and utilities.

A typical Aerobahn system contains these elements:

- Surveillance system
- Externally supplied data sources
- Scalable client/server system
- Software applications

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[1]"Aircraft Situation Display to Industry." A data feed provided by the Volpe Center. ASDI data elements include the location, altitude, airspeed, destination, estimated time of arrival, and tail number or designated identifier of aircraft operating on instrument flight rules (IFR) flight plans within U.S. airspace.

The typical configuration for an Aerobahn system contains:

- A fault-tolerant, virtual server that operates in a hosted, tier-4 data center
- A primary database/application virtual server
- A collection of "gateway" virtual servers for pre-processing data
- A WAN (Internet-based or dedicated) that connects the client to the Aerobahn data center
- Client computers (typically customer owned) on which the Aerobahn application operates

10.9 Predictive Technology

The Aerobahn Prediction Engine examines these data and identifies the routing of aircraft during taxi:

- taxi start region and time
- taxi end region and time
- airport configuration
- de-ice data
- region closures
- taxi waypoints added by users
- surface congestion

10.10 Diversion Management

In Aerobahn, real-time information on the diversion status of flights is given to the scheduled destination and to the diversion destination airport. Aerobahn records recovery flights as new flights.

You can see data fields for diversion management in real-time tools such as **Selection Details**. These fields are available for dynamic rules and watch list functions:

- Diversion Destination Airport[1]
- Diversion Origination Airport[2]
- Diversion Status[3]
- Diversion Time[4]
- Recovery Exists[5]

10.11 Aircraft Turn Events

Table 10-1. Turnaround Event Definitions

Event	Definition	Object Name	Event Type
(Belt/High) Loader connect / disconnect (+ position)	The loader has reached its final position near the cargo door of the aircraft or has left that position.	Loader	Connected/Disconnected
ACU connect / disconnect	The AC hose is detected as being inflated or deflated.	PC Air Hose	Inflated/Deflated
Aircraft present	More than half of the aircraft has appeared at or has left the stand.	Aircraft	Arrived At Stand/Left Stand
Aircraft stationary	The aircraft has been fully parked at the final position.	Aircraft	Parked
Airstairs connected / disconnected (+ position)	The airstairs have reached their final position at the aircraft door or have left their final position.	Passenger Ramp	Connected/Disconnected

[1]If the Diversion Status is "Diversion," this field indicates the airport (by IATA identifier) the flight is diverted to.
[2]This is the origination airport for the diverted flight that led to a recovery flight. If a flight originated at Airport A with an intended destination Airport B but was diverted to Airport C, the Diversion Origination Airport for the recovery flight will be Airport A.
[3]Indicates "Diversion" when a flight is re-routed to an alternate airport, and "Recovery" when the flight is being used to complete the route of a previously diverted flight by flying from the alternate airport to the original destination.
[4]The time at which Aerobahn received the first diversion message for the associated flight
[5]If the Diversion Status is "Diversion," then this field indicates whether a recovery flight exists to the originally scheduled destination. A check mark ("True" state) indicates that a recovery flight exists. An empty cell ("False" state) indicates that no recovery flight exists.

Table 10-1. Turnaround Event Definitions (continued)

Event	Definition	Object Name	Event Type
Airstairs present	The airstairs have parked in the proximity of the serviced aircraft or have started moving away from the observed stand.	Passenger Ramp	Arrived At Stand/Left Stand
Bridge fully retracted	The wheels of the bridge have entered or left the special marked area on the apron where they should be located when the bridge is not in use.	Bridge	Entered Parking/Left Parking
Busses present	The bus has parked in the proximity of the serviced aircraft or has started moving away from the observed stand.	Bus	Arrived At Stand/Left Stand
Cargo door open / close (+ position)	The aircraft cargo door either is fully open or is not open.	Aircraft	Cargo Door Open/Closed
Catering connect / disconnect (+ position)	The catering truck is positioned near the respective aircraft door and is lifted to the height of the door, or the catering truck has started to move away from the connection point.	Catering Truck	Connected/Disconnected
Catering present	The catering truck has parked in the proximity of the serviced aircraft or has started to move away from the observed stand.	Catering Truck	Arrived At Stand/Left Stand
Catering truck deployment of handrails	After the catering truck has been connected, the guardrail has been installed or removed on the bridge between the catering truck and the aircraft.	Catering Truck	Guardrail Installed/Guardrail Removed
Chocks on / off	The chocks have been put around, or have been removed from, the respective wheel of the aircraft.	Chocks	On/Off
Fueler present	The fueler truck has parked in the proximity of the serviced aircraft or has started moving away from the observed stand.	Fueler	Arrived At Stand/Left Stand
Fueling connect / disconnect (+ position)	The fueling hose has been connected to, or has been disconnected from, the respective point of fuel fill location.	Fueler	Connected/Disconnected

Table 10-1. Turnaround Event Definitions (continued)

Event	Definition	Object Name	Event Type
Ground Power connect / disconnect	The power cable has been connected or disconnected from the aircraft.	Ground Power	Connected/Disconnected
Jetbridge connected / disconnected (+ position)	The jet bridge is put to the final position at the aircraft and is not moving, or has been moved out of its final position at the aircraft.	Bridge	Connected/Disconnected
Pushback started	The aircraft has started to be pushed out of the stand.	Aircraft	Pushback Started
Pushback tug present	The pushback tug has parked in the proximity of the serviced aircraft or started moving way from the observed stand.	Pushback	Arrived At Stand/Left Stand
Pushback tug connect	The pushback tug has been connected to the wheel of the aircraft, or the pushback tug has been disconnected from the wheel of the aircraft.	Pushback	Connected/Disconnected
Stand clear check	Stand clear is performed at specified time intervals before the plane arrives on stand (according to the data from the airport). The stand is considered to be clear if it does not have equipment parked on the tarmac. The system reports whether the stand is clear or not, without reporting the position of the found object. The system does not consider the following objects as FOD: 1) Small FOD, 2) People, and 3) Equipment parked at dedicated areas. Depending on the requirements, the system can ignore chocks and cones as well. The system requires a strictly defined boundary for every stand.	Stand	Clear/Not Clear
Wing Walkers present	At least one wing walker is present during the push-back.	Wing walkers	Present
Tail stand installed / removed	The tail stand has been installed on or removed from the aircraft	Tailstand	Installed/Removed

10.11.1 Monitor Turn States

Dynamic rules can help you to monitor turn states. You can make dynamic rules that do these tasks:

- Identify flights in a certain turn state in **Watch List Viewer**.

- Show the turn progress in **Map Display** (refer to for an example).

1. Select **System > Rules Management**.

2. Select the **Aircraft and Flight Rules** tab.

3. Click **Create New Rule**.
   The **New rule** dialog box opens.

4. Select **Define Criteria**, if it is not already selected in the left pane.

5. Click **Add Flight Criteria**.
   The **Define New Criteria** dialog box opens.

6. From the top-left dropdown, select a turn event data field.

7. Configure the criteria.

   - Do Steps a and b if you selected one of these in Step 6:

     - **Has Turn Event**

     - **Has Turn Event (Selected target)**

     - **Does not have Turn Event**

     - **Does not have Turn Event (Selected target)**

     a. Click **Add Turn Event Criteria**.

     b. Follow prompts—work from left to right—to set up rule criteria. Options on the right change based on selections made.

   - If you selected other turn event data field, select **True** or **False** from the next dropdown.

8. Click **OK**.

9. Configure progress bar to show in **Map Display**.

   ℹ **NOTE:** This procedure uses the "light" workspace background as an example. If you use the "dark" workspace background, select **Dark** below, instead of **Light** (refer to for changing the workspace background).

a.   Select the **Aircraft/Vehicle Actions > Icon Effects** tab.

b.   Configure a progress level.

   i.   Put a check mark to **Change Icon to**.

   ii. Select a progress level (25, 50, 75, or 100%) for the criteria you configured in Step 7.

c.   Configure the background color.

   i.   Put a check mark to **Change icon fill color to**.

   ii. Select **Light**.
        The **Select Icon Fill Color Light Theme** dialog box opens.

   iii. Select a color.

   iv. Click **OK**.

d.   Configure the progress bar color.

   i.   Put a check mark to **Change icon edge color to**.

   ii. Select **Light**.
        The **Select Icon Fill Color Light Theme** dialog box opens.

   iii. Select a color.

   iv. Click **OK**.

10. Select **Choose Name**.

11. Enter the new name in the Rule Name field.

12. Click **Finish**.

Figure 10-3. Turn Progress Bar in Map Display (Example)
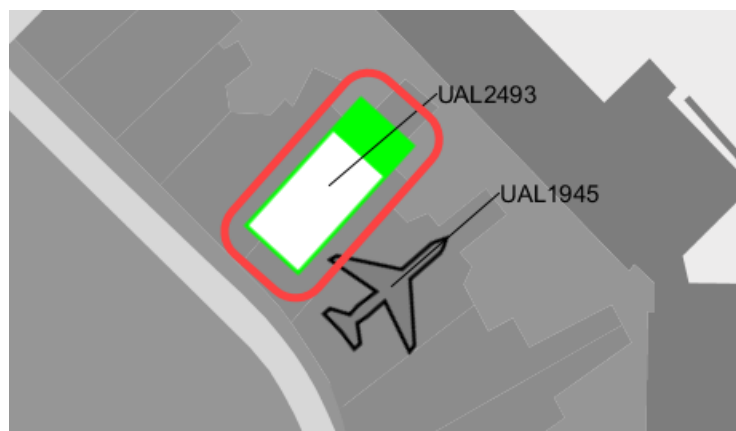
10.12 Edit Manual Data Fields

You can change data in **Watch List Viewer** and **Selection Details** tools and in the **Manage Flight** dialog box:

- *Change the Data in Watch List Viewer and Selection Details* on page 7-304
- *Change the Data in the Manage Flight Dialog Box* on page 7-225

10.13 Use Line Break in Data Blocks

Use a line break to group the information in data blocks. You can add multiple line breaks.

Add a Line Break

ℹ **NOTE:** A new line break shows at the end of the list of fields. Move it into position after you add it.

1. Open the "Select Fields" tool (available when you create or edit a rule in **Rules Management**).
2. Click **Line Break**. "LINE BREAK" shows at the bottom of the list of Selected Fields.
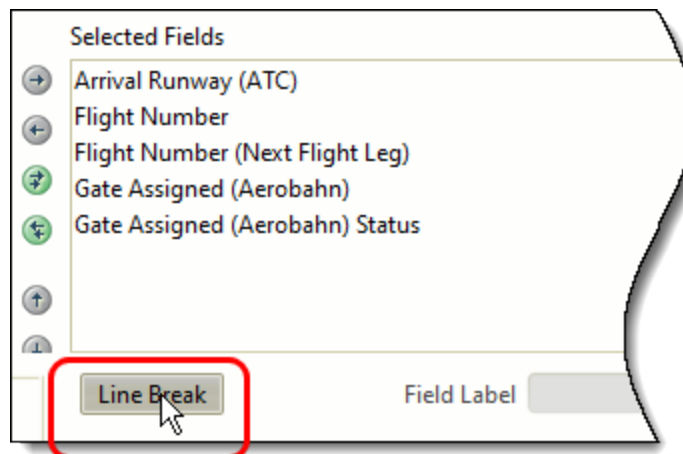
3. Select **LINE BREAK**.

4. Click ⬆ to move LINE BREAK to the correct position.
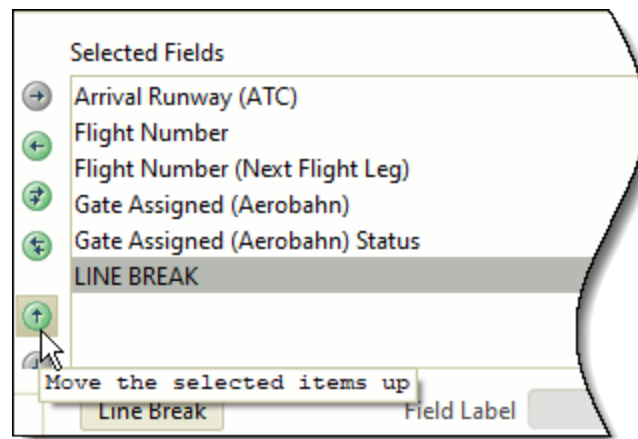
Move a Line Break

1. Open the "Select Fields" tool (available when you create or edit a rule in **Rules Management**.

2. Select **LINE BREAK**.

3. Click ⬆ to move LINE BREAK to the correct position.
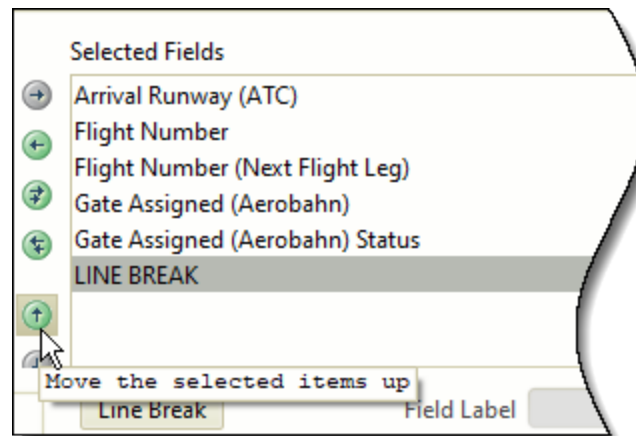
Delete a Line Break

1. Select **LINE BREAK** in the Selected Fields list (available when you edit a rule in **Rules Management**.

2. Press Delete.

10.14 Use Function Keys to Set Manual Values

Aerobahn is configured to supply dynamic data for a target. Manually entered data override that dynamic data.

You can configure keyboard function keys (hotkeys) to set manual values for a flight and to start several flight-management tasks (refer to *Configure Hotkey Settings* on page 6-23 for more information). Once you configure a hotkey, you can press the hotkey to start a flight-management function.

Press keyboard function keys to change selected data fields (refer to *Configure Hotkey Settings* on page 6-23). You can select more than 1 flight, but each function key gets only one data field.

> **NOTE:** This function is expanded by the Hotkey Dashboard tool (refer to *Use the Hotkey Dashboard* on page 7-190; refer to *Hotkey Permissions* on page 9-8

You can enter manual values in these ways:

- Use the hotkey search function to find one or more targets for which you will enter some information
- Select a target in a real-time tool and then press a hotkey

Use the Hotkey Search to Enter a Value

1. Press the function key that opens the necessary data entry screen.
2. Enter the search criteria. As you enter search criteria, the Results field fills. Enter * to show (in Results) flights that meet the search criteria.
3. OPTIONAL—Click or TAB to **Criteria**, and set search options. The initial "Quick Search" is controlled by the hotkey configuration. You can change individual searches (override the hotkey configuration). A change you make for an individual search does not change the hotkey configuration.
4. Select one (or more) flight(s) from the Results. (SHIFT-click or CTRL-click to select more than 1 flight.)
5. Enter the data in the Update window.
6. Press ENTER or click **Apply**.

Use a Hotkey to Enter a Value for a Selected Target

1. Select a target.

2. Press the function key that opens the necessary data entry screen.

3. Enter the data.

4. Press ENTER or click **Apply**.

10.15 Zoom In/Out on Help Topics

Press CTRL and roll the scroll wheel on your pointing device to zoom in and out on the Help interface.

You can also change the text size by changing browser settings (refer to your browser documentation).

10.16 Use Aerobahn Screen Captures in other Documents

There are three ways that you can share what you see on your Aerobahn display in other documents:

- Capture a screen print and paste it in a document.
- Save an image from Aerobahn as a graphic to use in a document.
- Print an image of your Aerobahn screen for immediate sharing or for your files.

i NOTE: Headings are not included in the picture.

Make a Screen Capture for Immediate Use

You can copy and paste a screen print of a graph or chart into an open document.

1. Right-click in the graph/chart.

2. Select **Copy**.

3. Paste the information into a document.

Save a Screen Capture

A graph or chart may be saved in an image (.PNG) file for use in reports and presentations.

1. Right-click in the graph or chart.

2. Select **Save as...**.

3. Select the Save In drive and folder location.

4. Enter a file name.

5. Make sure that an image file type is identified.

6. Click **Save**.

Some report elements (for example, the Gate Occupancy Chart) can be exported to PDF. Check the menu available from the report title for availability.

Print a Screen Capture

1. Right-click in the graph or chart.

2. Select **Print...**.

3. Make any Page Setup changes.

4. Click **OK** to print.

You can export some report elements (for example, the Gate Occupancy Chart) to PDF. Check the menu available from the report title for availability.

10.17 Install Aerobahn Launcher

The Aerobahn Launcher application lets you start an Aerobahn session without using a web browser. The Aerobahn Launcher removes some problems that you can have with Java Runtime Environment (JRE) when you start Aerobahn in a browser.

You can use Aerobahn Launcher to access your Aerobahn Login Portal, or you can use it if you log in to Aerobahn directly.

ℹ **NOTE:** Aerobahn Launcher is available in 64-bit and 32-bit versions. The 64-bit version requires requires 209.3 MB. The 32-bit version requires 196.2 MB of free disk space.

1. Download the Aerobahn Launcher (launcher.aerobahn.com).

   - Click **Aerobahn Launcher Installer (64-bit)** to download the 64-bit installation program. This is the best choice for most users.

     > **i NOTE**: When you update from a 32-bit (all pre-3.1.0 versions of Aerobahn Launcher) to a 64-bit version of Launcher, you must clear the Aerobahn cache after you upgrade the Launcher and before you launch Aerobahn to bring an Aerobahn site up to the 64-bit architecture.

   - Click **Aerobahn Launcher Installer (32-bit)** to download the 32-bit installation program.

2. Run the installer.

3. Double-click (or run as administrator) **aerobahn-launcher-setup.exe**.

4. If the security warning dialog box opens, click **Run**. The setup program opens. The **Select Destination Location** dialog box opens.

   > **i NOTE**: You need read/write permissions for the installation location.

5. Select the folder for the Aerobahn Launcher application:

   - To accept the default location (your user folder), click **Next**.
   - To change the folder, click **Browse**. Navigate to and select the folder. Then, click **Next**.

   > **i NOTE**: When you install an Aerobahn Launcher update in the same folder as a previous version of the Aerobahn Launcher, the update replaces the previous version. The update adopts the configurations that you had set up in the previous version of the Launcher.

   The **Select Additional Tasks** dialog box opens.
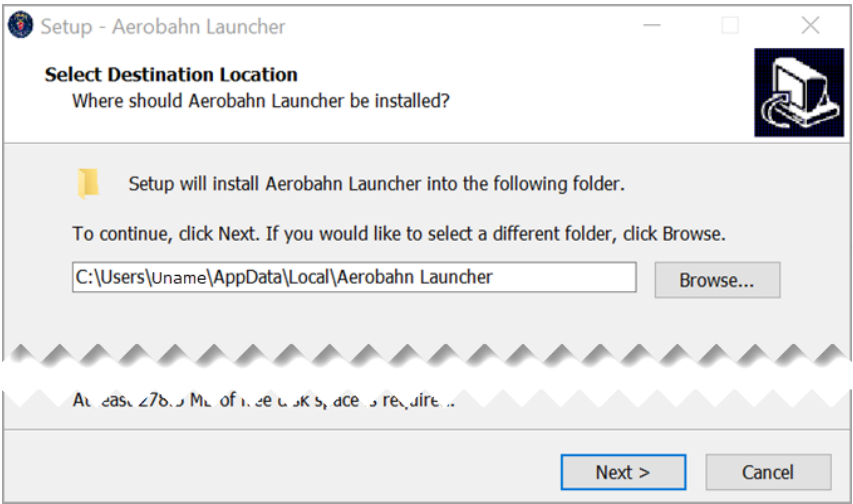
6. Select any additions. For example, if you want a desktop shortcut, make sure that there is a check mark next to **Create a desktop shortcut**.

7. Click **Next**. The **Ready to Install** dialog box opens.

8. Click **Install**. The setup utility installs the Aerobahn Launcher.

9. Click **Finish** to close the setup program.

10.18 Touchscreen Basics

Many Aerobahn functions work with the Windows touchscreen. A tap is the same as a mouse click. A double-tap or tap-and-hold is the same as a right-click.

ℹ️ **NOTE:** You can move data blocks and persisted targets using swipe and drag gestures. You cannot move targets that are not persisted.

Gesture		Description
	Tap	Same as a mouse click. Tap to select a target in a real-time tool or to select a tool from a menu
	Double-tap (also Tap and Hold on some platforms)	Same as a right-click. Double-tap a target to open a menu.

Gesture		Description
	Swipe / Drag right	If you touch a data block, this gesture moves it toward the right edge of the display.
		If you touch the airport surface, this gesture moves the airport surface toward the right edge of the display.
	Swipe / Drag left	If you touch a data block, this gesture moves it toward the left edge of the display.
		If you touch the airport surface, this gesture moves the airport surface toward the left edge of the display.
	Swipe / Drag up	If you touch a data block, this gesture moves it toward the upper edge of the display.
		If you touch the airport surface, this gesture moves the airport surface toward the upper edge of the display.
		If you touch a table tool, this gesture scrolls towards the bottom of the table.
		NOTE: In table tools, scrolling occurs if "Use Drag and Drop to Scroll" is selected (refer to *General Settings* on page 6-15
	Swipe / Drag down	If you touch a data block, this gesture moves it toward the lower edge of the display.
		If you touch the airport surface, this gesture moves the airport surface toward the lower edge of the display.
		If you touch a table tool, this gesture scrolls towards the top of the table.
		NOTE: In table tools, scrolling occurs if "Use Drag and Drop to Scroll" is selected (refer to *General Settings* on page 6-15
	Pinch	Zoom out.
		Press Home to return the Map Display to its default setting.
	Spread	Zoom in.
		Press Home to return the Map Display to its default setting.

10.19 Licensing Notes

Aerobahn uses a modified form of OpenJFX. You can find this library and source at:

https://github.com/mbrame12/jfxpanel-sync.git

10.20 Related Documents

The following document gives additional information on the Aerobahn system and its components:

Aerobahn System Administration Manual (Document # 730-022444).

Contact Customer Service to get this document.

Document History

Starting with *Aerobahn User Guide* version 52 (supporting Aerobahn 8.11), the Document History in each User Guide release identifies substantive content changes only for the current release and the three previous releases. For more information, contact *Customer Service on page 10-1*.

Release notes are appended to the online *Aerobahn User's Guide* (Help).

Rev.	Date	Author	Description
78	2025-02-14	B Lee	Aerobahn 12.1.4 Updates Revised Topic ■ Glossary (AERO-47109, AERO-47129)
77	2024-10-15	B Lee	Aerobahn 12.1.1 Updates New Topic ■ Enable or Disable Lockdown Sorting (AERO-38501) Revised Topics ■ Configure Hotkey Settings (AERO-45883) ■ Glossary (AERO-46091)
76	2024-06-04	B Lee	Aerobahn 12.1.0 Updates New Topic ■ Manage Link Between Tow Vehicle and Aircraft (AERO-32199) Revised Topics ■ SystemAdmin Menu (AERO-38836) ■ Aerobahn User Administration (AERO-38836) ■ Context-Menu Controls in Map Display and Extended Range Map Display (AERO-32199) ■ Glossary (AERO-45649, AERO-32513, AERO-35372, AERO-35373, AERO-32199)

Glossary

<workflow flight state>: Priority
> The priority (position in a numeric sequence) assigned to a flight in a given workflow flight state. A user who has permission can change flight-state priority.

A-CDM
> Airport Collaborative Decision Making is a Eurocontrol airport efficiency initiative that focuses on pre-departure and turn-round sequences.

A/ETA
> This field provides either the Actual (A) or Estimated (E) Time of Arrival. Estimated times are presented within parentheses.

A/ETD
> This field provides either the Actual (A) or Estimated (E) Time of Departure. Estimated times are presented within parentheses.

AAST (Surv)
> See "Actual At Spot Time (Surveillance)"

Abort TO
> See "Is an Aborted Take Off"

AC Dr Clsd (Carrier)
> See "Aircraft Cabin Door Closed (Carrier)"

AC Dr Clsd (Manual)
> See "Aircraft Cabin Door Closed (Manual)"

AC Type (3rd Party)
> See "Aircraft/Vehicle Type (Third Party)"

AC Type (Aero)
> See "Aircraft/Vehicle Type (Aerobahn)"

AC Type (ATC)
> See "Aircraft Type (ATC)"

AC Type (FAA Reg)
> See "Aircraft Type (FAA Registry)"

AC Type (Surv)
> See "Aircraft/Vehicle Type (Surveillance)"

AC/Vehicle Type
> Aircraft or Vehicle model

ACARS
Aircraft Communications Addressing and Reporting System

ACGT (Aero)
See "Actual Commencement of Ground Handling Time (Aerobahn)"

ACGT (Carrier)
See "Actual Commencement of Ground Handling Time (Carrier)"

ACGT (Manual)
See "Actual Commencement of Ground Handling Time (Manual)"

ACGT On Time
Tells whether ACGT (Aerobahn) was received in a reasonable amount of time. (True when within "reasonable" specification.)

ACGT Timeliness
Provides a time duration so that you can determine if Actual Commencement of Ground Handling Time (Aerobahn) was received in a reasonable amount of time

Act Dep Delay (ATC)
See "Actual Departure Delay (ATC)"

Act DI Dur
See "Actual De-ice Pad Duration"

Act DI Loc
See "Actual De-ice Location"

Act DI Q Dur
See "Actual De-ice Queue Duration"

Act Tow Dur (Aero)
See "Actual Tow Duration (Aerobahn)"

Act Tow Dur (AODB)
See "Actual Tow Duration (AODB)"

Act Tow Dur (Carrier)
See "Actual Tow Duration (Carrier)"

Act Tow Dur (Man)
See "Actual Tow Duration (Manual)"

Act Tow Dur (Surv)
See "Actual Tow Duration (Surveillance)"

Act Tow Off (AODB)
See "Actual Tow Off Time (AODB)"

Act Tow Off (Carrier)
    See "Actual Tow Off Time (Carrier)"

Act Tow On (AODB)
    See "Actual Tow On Time (AODB)"

Act Tow On (Carrier)
    See "Actual Tow On Time (Carrier)"

Active on Removal
    Used in the "Watch List Entries" report type to indicate whether a flight was active when it was removed from a watch list. This field displays "true" when active targets are removed from a watch list. It displays "false" when a coasted target is dropped from a watch list.

Actual At Spot Time (Surveillance)
    The time at which an aircraft arrived at the location where ground control transitions from one authority to another authority

Actual Commencement of Ground Handling Time (Aerobahn)
    Best available time for which ground handling started

Actual Commencement of Ground Handling Time (Carrier)
    Carrier-provided ground handling start time

Actual Commencement of Ground Handling Time (Manual)
    The time (entered by an Aerobahn user) at which ground handling starts

Actual De-ice Location
    The Aerobahn region name for the de-icing operation. Value is derived from surveillance and de-ice logic.

Actual De-ice Pad Duration
    The amount of time the aircraft spent in de-icing operations. Value is derived from surveillance.

Actual De-ice Pad Entry Time
    The surveillance-based time at which the aircraft entered the de-icing region

Actual De-ice Pad Exit Time
    The surveillance-based time at which the aircraft left the de-icing region

Actual De-ice Queue Duration
    Amount of time the aircraft occupied the de-ice queue region before it entered the de-ice pad. For flights going to de-ice pads without an associated de-ice queue region, this is the amount of time the flight required to taxi from the gate to the de-ice pad.

Actual De-ice Queue Entry Time
The time (derived from surveillance and de-ice state logic) at which the aircraft enters the de-ice queue

Actual Departure Delay (ATC)
Total excess time the flight spent taxiing in the movement area over and above the nominal taxi time. Rounded to the nearest minute.

Actual In
Actual in block time provided by the carrier

Actual In Block Time - IROPS (AODB)
Original AODB provided in block time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual In Block Time - IROPS (ATC)
Original ATC provided in block time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual In Block Time - IROPS (Carrier)
Original Carrier provided in block time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual In Block Time - IROPS (FIDS)
Original FIDS provided in block time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual In Block Time - IROPS (Surveillance)
Original Surveillance derived in block time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual In Block Time - IROPS (Third Party)
Original Third Party provided in block time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual In Block Time - IROPS (VDGS)
Original VDGS provided in block time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual In Block Time (Aerobahn)
Provides best available Actual In Block Time data based on a hierarchical preference scheme

Actual In Block Time (AODB)
AODB-provided in block time

Actual In Block Time (ATC)
ATC-provided gate or stand entry time

Actual In Block Time (Carrier)
Carrier-provided in-block time

Actual In Block Time (FIDS)
FIDS-provided in-block time

Actual In Block Time (Surveillance)
Time of gate entry as determined by surveillance-driven events interpreted by Aerobahn

Actual In Block Time (Third Party)
The actual in-block time provided by a commercial third party information source

Actual In Block Time (VDGS)
Time of gate entry provided by Visual Docking Guidance System (VDGS)

Actual Landing Time - IROPS (AODB)
Original AODB provided landing time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Landing Time - IROPS (ATC)
Original ATC provided landing time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Landing Time - IROPS (Carrier)
Original Carrier provided landing time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Landing Time - IROPS (Surveillance)
Original Surveillance derived landing time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Landing Time - IROPS (Third Party)
Original Third Party provided landing time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Landing Time (Aerobahn)
The best available Actual Landing Time data based on a hierarchical preference scheme

Actual Landing Time (AODB)
Actual Landing Time provided by AODB

Actual Landing Time (ATC)
Wheels-down time reported by air traffic control

Actual Landing Time (Carrier)
Landing time provided by the carrier

Actual Landing Time (Surveillance)
Wheels-down time as determined by surveillance-driven events interpreted by
Aerobahn

Actual Landing Time (Third Party)
The actual landing time provided by a commercial third party information source

Actual Movement Area Time (Aerobahn)
Time at which a departure reaches the movement area. Derived from surveillance
or user-entered data.

Actual Movement Area Time (ATC)
Time at which the air traffic controller indicated the flight began to taxi in the
movement area.

Actual Movement Area Time (Manual)
Time at which a departure reaches the movement area. Derived from user-
entered data.

Actual Movement Area Time (Surveillance)
Time at which a departure reaches the movement area. Used in calculating
departure metering compliance.

Actual Off
Wheels-up time provided by carrier

Actual Off Block Time - Approved
The AOBT that is sent to an external interface

Actual Off Block Time - IROPS (AODB)
Original AODB provided off block time received prior RTG. This field will only be
populated if a RTG message is received from a carrier data source.

Actual Off Block Time - IROPS (ATC)
Original ATC provided off block time received prior RTG. This field will only be
populated if a RTG message is received from a carrier data source.

Actual Off Block Time - IROPS (Carrier)
Original Carrier provided off block time received prior RTG. This field will only be
populated if a RTG message is received from a carrier data source.

Actual Off Block Time - IROPS (FIDS)
Original FIDS provided off block time received prior RTG. This field will only be
populated if a RTG message is received from a carrier data source.

Actual Off Block Time - IROPS (Manual)
Original Manually entered off block time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source. NOTE: this field cannot be manually edited by a user.

Actual Off Block Time - IROPS (Surveillance)
Original Surveillance derived off block time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Off Block Time - IROPS (Third Party)
Original Third Party provided off block time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Off Block Time - IROPS (VDGS)
Original VDGS provided off block time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Off Block Time - Trusted
The first AOBT (Surv) after a configurable time data field (e.g., Aircraft Cabin Door Closed or Actual Startup Approval Time)

Actual Off Block Time (Aerobahn)
Provides best available Actual Off Block Time data based on a hierarchical preference scheme

Actual Off Block Time (AODB)
The time (provided by Airport Operational Database) at which the aircraft leaves the gate.

Actual Off Block Time (ATC)
Gate-exit time provided by air traffic control

Actual Off Block Time (Carrier)
Carrier-provided gate-exit time

Actual Off Block Time (FIDS)
FIDS-provided gate-exit time

Actual Off Block Time (Manual)
Gate-exit time entered by user (manual entry)

Actual Off Block Time (Surveillance)
Gate-exit time as determined by surveillance-driven events interpreted by Aerobahn. In the case of towing, AOBT is cleared when Towing Status (Surveillance) transitions to Towing and ATST - AOBT < 2-3 hours, and is set based on region history if Towing Status (Surveillance) transitions from Towing to Not Towing.

Actual Off Block Time (Third Party)
The actual off-block time provided by a commercial third party information source

Actual Off Block Time (VDGS)
Time of gate exit provided by Visual Docking Guidance System (VDGS)

Actual On
Landing time provided by the carrier

Actual Out
Off block time provided by the carrier

Actual Ready Time (Aerobahn)
The best available time that the departing aircraft is ready for movement

Actual Ready Time (ATC)
The time (provided by ATC) that the departing aircraft is ready for movement

Actual Ready Time (Manual)
The time (entered by an Aerobahn user) that the departing aircraft is ready for movement

Actual Start of Boarding Time (Aerobahn)
Best available time passengers began to board the aircraft based on a hierarchical preference scheme

Actual Start of Boarding Time (AODB)
AODB-provided time passengers began to board the aircraft

Actual Start of Boarding Time (Carrier)
The time (provided by the carrier) at which passengers began to board the aircraft

Actual Start of Boarding Time (Manual)
The time (entered by an Aerobahn user) at which passengers began to board the aircraft

Actual Startup Approval Time
See "Actual Startup Approval Time (ATC)"

Actual Startup Approval Time (Aerobahn)
The time (best available) at which the aircraft received ATC approval to start

Actual Startup Approval Time (ATC)
ATC-provided time the aircraft received ATC approval to start up

Actual Startup Approval Time (Manual)
The time (entered by an Aerobahn user) at which the aircraft received ATC approval to start

Actual Startup Request Time (Aerobahn)
> The time (best available) at which the pilot requested start-up clearance

Actual Startup Request Time (ATC)
> The time (provided by ATC) at which the pilot requested start-up clearance

Actual Startup Request Time (Manual)
> The time (entered by an Aerobahn user) at which the pilot requested start-up clearance

Actual Take Off Time - IROPS (AODB)
> Original AODB provided take off time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Take Off Time - IROPS (ATC)
> Original ATC provided take off time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Take Off Time - IROPS (Carrier)
> Original Carrier provided take off time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Take Off Time - IROPS (Manual)
> Original Manually entered take off time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source. NOTE: This field cannot be manually edited by a user.

Actual Take Off Time - IROPS (Surveillance)
> Original Surveillance provided take off time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Take Off Time - IROPS (Third Party)
> Original Third Party provided take off time received prior RTG. This field will only be populated if a RTG message is received from a carrier data source.

Actual Take Off Time (Aerobahn)
> The best available Actual Take Off Time data based on a hierarchical preference scheme

Actual Take Off Time (AODB)
> Actual Take Off Time provided by AODB

Actual Take Off Time (ATC)
> Wheels-up time provided by air traffic control

Actual Take Off Time (Carrier)
> Wheels-up time provided by carrier-provided data source(s)

Actual Take Off Time (Manual)
User-entered wheels-up time

Actual Take Off Time (Surveillance)
Wheels-up time as determined by surveillance-driven events interpreted by Aerobahn

Actual Take Off Time (Third Party)
The actual take time provided by a commercial third party information source

Actual Taxi In Time
Taxi Time (Carrier)

Actual Taxi Out Time
Taxi Time (Carrier)

Actual Tow Duration (Aerobahn)
The best available difference (in seconds) between the Actual Tow End time and the Actual Tow Start time based on this preference scheme (most to least preferred data): manual, surveillance, carrier, AODB.

Actual Tow Duration (AODB)
Difference (in seconds) between the Actual Tow End time and the Actual Tow Start time as provided by the Airport Operational Data Base

Actual Tow Duration (Carrier)
Difference (in seconds) between the Actual Tow End time and the Actual Tow Start time provided by carrier data

Actual Tow Duration (Manual)
Difference (in seconds) between the user-entered Actual Tow End Time (Manual)/Current Time and the Manual Actual Tow Start time

Actual Tow Duration (Surveillance)
Time duration since Actual Tow Start Time (Surveillance) that increments each second until the tow ends.

Actual Tow End
See one of the "Actual Tow End Time" data fields

Actual Tow End Time
The actual time and date that the tow ended

Actual Tow End Time (Aerobahn)
The best available time and date that the tow ended. Provides the best available data in this order: Manual, AODB/Carrier, Surveillance.

Actual Tow End Time (AODB)
  The actual time and date that the tow ended as derived from Airport Operational
  Data Base data

Actual Tow End Time (Carrier)
  The actual time and date that the tow ended as derived from carrier-provided data

Actual Tow End Time (Manual)
  User-entered time when the tow ended. This field has a null value if the Estimated
  Tow End Time (Manual) has not elapsed, and the tow has not been manually
  completed. The Actual Tow End Time (Manual) is automatically be populated if
  the Estimated Tow End Time (Manual) has elapsed or the tow has been manually
  completed.

Actual Tow End Time (Surveillance)
  Time/date that a tow ended as seen by surveillance. ATET is set when Towing
  Status (Surveillance) transitions from Towing to Towing Completed.

Actual Tow Off Time (Aerobahn)
  The best available time and date that the tow of an arrival flight started from the
  arrival gate or stand

Actual Tow Off Time (AODB)
  Time and date that the tow of an arrival flight off of the arrival gate/stand started.
  Received from the Airport Operational Data Base.

Actual Tow Off Time (Carrier)
  Time and date that the tow of an arrival flight off of the arrival gate/stand started.
  Received from the carrier.

Actual Tow Off Time (Manual)
  User-entered time when the tow began towing. This time cannot be later than the
  current time. Once the tow start time has elapsed, or if the tow is manually
  completed, Aerobahn sets the Actual Tow Start Time (Manual) to the time that the
  tow began.

Actual Tow Off Time (Surveillance)
  Time and date that the tow of an arrival flight started from the arrival gate or stand.
  Derived from surveillance data.

Actual Tow On Time (Aerobahn)
  The best available time and date that the tow of a departure flight ended on the
  departure gate or stand

Actual Tow On Time (AODB)
  Time and date that the tow of a departure flight onto the departure gate/stand
  ended. Received from the Airport Operational Data Base.

Actual Tow On Time (Carrier)
Time and date that the tow of a departure flight onto the departure gate/stand ended. Received from the carrier.

Actual Tow On Time (Manual)
User-entered time when the tow ended. This field has a null value if the Estimated Tow End Time (Manual) has not elapsed, and the tow has not been manually completed. The Actual Tow End Time (Manual) is automatically be populated if the Estimated Tow End Time (Manual) has elapsed or the tow has been manually completed.

Actual Tow On Time (Surveillance)
Time and date that the tow of a departure flight ended on the departure gate or stand. Derived from surveillance data.

Actual Tow Start Time (Aerobahn)
Time and date that the tow started. Provides the best available data in this order: Manual, AODB/Carrier, Surveillance.

Actual Tow Start Time (AODB)
Time and date that the tow started. Received from the Airport Operational Data Base.

Actual Tow Start Time (Carrier)
Time and date that the tow started. Received from the carrier.

Actual Tow Start Time (Manual)
User-entered time when the tow actually began. If a time in the past is entered, an error message shows, and the tow is not added. If the current time is entered, the Estimated Tow Start Time (Manual) is also populated immediately. If a start time that is in the future is entered, Aerobahn populates the Actual Tow Start Time (Manual) when the Estimated Tow Start Time (Manual) has elapsed or when a tow is manually completed before it is scheduled to be completed.

Actual Tow Start Time (Surveillance)
Time/date that a tow began as seen by surveillance. ATST is set when Towing Status (Surveillance) transitions to Towing, and is cleared if Towing Status (Surveillance) transitions from Towing to Not Towing.

Add/Move/Remove Persisted Targets
Enables the user to manipulate persisted targets (i.e., targets that are frozen in place following the loss of surveillance updates in a specified "persistence" region)

Added To List
Derived from rule action (date and time that a flight was added to watch list).

Added to List Region

Derived from rule action (flight added to watch list). Identifies the region of interest that the flight was in when it was added to the list.

Additional Parameters

Various Java runtime parameters

ADEP

See "Aerodrome of Departure"

ADEP (ICAO)

See "Aerodrome of Departure (ICAO)"

ADES

See "Aerodrome of Destination"

ADES (ICAO)

See "Aerodrome of Destination (ICAO)"

Advanced User Settings

Advanced technical settings and permissions settings or settings related to data access

Aerodrome Curf

See "Aerodrome Curfew"

Aerodrome Curfew

Carrier-provided data

Aerodrome of Departure

In order of precedence based on availability: Origination Airport from the ANSP, Origination Airport from Carrier

Aerodrome of Departure (ICAO)

The ICAO code for the origination aerodrome

Aerodrome of Destination

In order of precedence based on availability: Aerodrome of Destination from ATC, Aerodrome of Destination from Carrier

Aerodrome of Destination (ICAO)

The ICAO code for the destination aerodrome

AIBT - IROPS (3rd Party)

See "Actual In Block Time - IROPS (Third Party)"

AIBT - IROPS (AODB)

See "Actual In Block Time - IROPS (AODB)"

AIBT - IROPS (ATC)
See "Actual In Block Time - IROPS (ATC)"

AIBT - IROPS (Carrier)
See "Actual In Block Time - IROPS (Carrier)"

AIBT - IROPS (FIDS)
See "Actual In Block Time - IROPS (FIDS)"

AIBT - IROPS (Surv)
See "Actual In Block Time - IROPS (Surveillance)"

AIBT - IROPS (VDGS)
See "Actual In Block Time - IROPS (VDGS)"

AIBT (3rd Party)
See "Actual In Block Time (Third Party)"

AIBT (Aero)
See "Actual In Block Time (Aerobahn)"

AIBT (AODB)
See "Actual In Block Time (AODB)"

AIBT (ATC)
See "Actual In Block Time (ATC)"

AIBT (Carrier)
See "Actual In Block Time (Carrier)"

AIBT (FIDS)
See "Actual In Block Time (FIDS)"

AIBT (Surv)
See "Actual In Block Time (Surveillance)"

AIBT (VDGS)
See "Actual In Block Time (VDGS)"

AIBT Accuracy
Determine if AIBT (Carrier) is within a configured range from the actual in block time (Surveillance)

AIBT Accurate
If AIBT (Carrier) is within a configured range from the actual in block time (Surveillance), the value is "True." If the AIBT (Carrier) is not within that range, the value is "False."

AIBT On Time

Tells whether AIBT (Carrier) was received in a reasonable amount of time. (True when within "reasonable" specification.)

AIBT SIBT Diff

Absolute difference (in seconds) between AIBT and SIBT

AIBT SIBT Pass

The absolute difference between AIBT and SIBT is less than X minutes (True/False)

AIBT Timeliness

Provides a time duration so that you can determine if Actual In Block Time (Carrier) was received in a reasonable amount of time

Aircraft Cabin Door Closed (Carrier)

The date and time provided by a carrier that the cabin door was closed

Aircraft Cabin Door Closed (Manual)

Date and time that the cabin door was closed

Aircraft State

The status that HKG/CAD ATC assigns to a flight: Airborne, PreTaxi, Taxi, or Arrived. Aerobahn sets the A-CDM Milestone 03 Time data field for an inbound-outbound flight pair to the current time in 2 situations: When the Aircraft State is set to "Airborne" or when the inbound flight's ATOT (Aero) is not null.

Aircraft Type (AODB)

The aircraft type received from Airport Operational Database

Aircraft Type (ATC)

The aircraft type reported via an ATC data source.

Aircraft Type (Carrier)

The aircraft type received from the carrier

Aircraft Type (FAA Registry)

The aircraft type extracted from the FAA registry. The FAA registry is a published list of aircraft by tail number.

Aircraft/Vehicle Type (Aero)

In order of precedence based on availability: Aircraft Type (FAA), Aircraft Type (Surveillance), Aircraft Type (FAA Registry). For vehicles, displays the user-specified vehicle type.

Aircraft/Vehicle Type (Aerobahn)

Provides best available Aircraft/Vehicle Type data based on a hierarchical preference scheme: ASDI, ASDE-X, FAA Registry.

Aircraft/Vehicle Type (Surveillance)
For aircraft, an aircraft type (from ASDE-X or A-SMGCS system) in ICAO format (e.g., "B712"). For vehicles, a user-specified vehicle type.

Aircraft/Vehicle Type (Third Party)
Aircraft/Vehicle Type provided by a commercial third party information source

Airline Code Marketing
ICAO code of the airline that is selling the flight

Airline Code Operating
ICAO code of the airline that is operating the flight

Airline Group
One airline or a collection of airlines (for example, all that use a particular terminal) for which a single entity manages flight-departure priorities

Airline Mktg
See "Airline Code Marketing"

Airport Automation Host
Host portion of the URL link embedded in a scheduled report notification E-mail. Required if URL links are to be resolvable by users.

Airport Configuration
Airport Configuration settings and permissions

Airport Curf
See "Airport Curfew"

Airport Curfew
Carrier-provided data

Airport Management
Enables the airport management user to perform some actions typically reserved for carriers without getting access to proprietary carrier data. This permission can allow airport management to make, move, and remove a persisted target, for example.

Airspeed (kts)
See "Filed True Airspeed (knots)"

ALDT - IROPS (3rd Party)
See "Actual Landing Time - IROPS (Third Party)"

ALDT - IROPS (AODB)
See "Actual Landing Time - IROPS (AODB)"

ALDT - IROPS (ATC)
See "Actual Landing Time - IROPS (ATC)"

ALDT - IROPS (Carrier)
See "Actual Landing Time - IROPS (Carrier)"

ALDT - IROPS (Surv)
See "Actual Landing Time - IROPS (Surveillance)"

ALDT (3rd Party)
See "Actual Landing Time (Third Party)"

ALDT (Aero)
See "Actual Landing Time (Aerobahn)"

ALDT (AODB)
See "Actual Landing Time (AODB)"

ALDT (ATC)
See "Actual Landing Time (ATC)"

ALDT (Carrier)
See "Actual Landing Time (Carrier)"

ALDT (Surv)
See "Actual Landing Time (Surveillance)"

ALDT Accuracy
Determine if ALDT (ATC) is within a configured range from the actual landing time (Surveillance)

ALDT Accurate
If ALDT (ATC) is within a configured range from the actual landing time (Surveillance), the value is "True." If the ALDT (ATC) is not within that range, the value is "False."

ALDT ELDT MS3 Diff
Absolute difference between ALDT (ATC) and ELDT (ATC) at the time Milestone 3 is reached.

ALDT ELDT MS3 Pass
Is the absolute difference between ALDT (ATC) and ELDT (ATC) at the time Milestone 3 is reached less than X minutes?

ALDT ELDT MS4 Diff
Absolute difference between ALDT (ATC) and ELDT (ATC) at the time Milestone 4 is reached.

ALDT ELDT MS4 Pass
Is the absolute difference between ALDT (ATC) and ELDT (ATC) at the time
Milestone 4 is reached less than X minutes?

ALDT ELDT MS5 Diff
Absolute difference between ALDT (ATC) and ELDT (ATC) at the time Milestone
5 is reached.

ALDT ELDT MS5 Pass
Is the absolute difference between ALDT (ATC) and ELDT (ATC) at the time
Milestone 5 is reached less than X minutes?

ALDT On Time
Tells whether ALDT (ATC) was received in a reasonable amount of time. (True
when within "reasonable" specification.)

ALDT Timeliness
Provides a time duration so that you can determine if ALDT (ATC) was received in
a reasonable amount of time

Alert Status 01a
ATC Flight Plan Correlation Alert

Alert Status 01b
Flight Plan Already Correlated Alarm

Alert Status 01c
Flight Plan Correlation Failure Alert

Alert Status 01d
Flight Plan Missing for Correlation Alarm

Alert Status 01e
Inbound/Outbound Flight Correlation Alarm

Alert Status 01f
Flight Plan Airport Schedule Alert

Alert Status 02
Discrepancy between SOBT and EOBT

Alert Status 03
Aircraft Type discrepancy

Alert Status 04
Aircraft Registration discrepancy

Alert Status 05
First Destination discrepancy

Alert Status 06
   Non-Airborne alert

Alert Status 07
   EIBT + MTTT discrepancy with EOBT

Alert Status 08
   EOBT Compliance alert

Alert Status 09
   Boarding Not Started

Alert Status 10a
   TOBT Rejected or Deleted

Alert Status 10b
   TOBT Confirmation Missing

Alert Status 11a
   Flight not Compliant with TOBT/TSAT (Warning)

Alert Status 11b
   Flight not Compliant with TOBT/TSAT (Alert)

Alert Status 12a
   TSAT lost due to late ASAT

Alert Status 12b
   TSAT Compliance Alert

Alert Status 13a
   Automatic TOBT and CTOT Conflict

Alert Status 13b
   CTOT Compliance

Alert Status 13c
   Regulation Cancelled Alert

Alert Status 13d
   Late Regulation Alert

Alert Status 14a
   Flight Schedule Cancellation

Alert Status 14b
   Flight Plan Cancellation

Alert Status 14c
   Flight Suspension Alert

Alert Status 14d
　　Flight De-Suspension Alert

Alert Status 15
　　Aircraft Not at Gate

Alert Status 16
　　Aircraft Off Blocks Late

Alert Status 17a
　　Aircraft Departing Late

Alert Status 17b
　　Regulated Aircraft Missed CTOT

Alert01
　　See "Alert Status 01"

Alert02
　　See "Alert Status 02"

Alert03
　　See "Alert Status 03"

Alert04
　　See "Alert Status 04"

Alert05
　　See "Alert Status 05"

Alert06
　　See "Alert Status 06"

Alert07
　　See "Alert Status 07"

Alert08
　　See "Alert Status 08"

Alert09
　　See "Alert Status 09"

Alert10a
　　See "Alert Status 10a"

Alert10b
　　See "Alert Status 10b"

Alert11a
　　See "Alert Status 11a"

Alert11b
    See "Alert Status 11b"

Alert12a
    See "Alert Status 12a"

Alert12b
    See "Alert Status 12b"

Alert13
    See "Alert Status 13"

Alert14
    See "Alert Status 14"

Alert14a
    See "Alert Status 14a"

Alert14b
    See "Alert Status 14b"

Alert14c
    See "Alert Status 14c"

Alert14d
    See "Alert Status 14d"

Alert15
    See "Alert Status 15"

Alert16
    See "Alert Status 16"

Alert17a
    See "Alert Status 17a"

Alert17b
    See "Alert Status 17b"

Altitude
    Mode C height

Altitude (m)
    See "Altitude (meters)"

Altitude (meters)
    The height of the target relative to sea level represented in meters

AMAT (Aero)
    See "Actual Movement Area Time (Aerobahn)"

AMAT (ATC)
See "Actual Movement Area Time (ATC)"

AMAT (Manual)
See "Actual Movement Area Time (Manual)"

AOBT-Approved
See "Actual Off Block Time - Approved"

AOBT-Trusted
See "Actual Off Block Time - Trusted"

AOBT - IROPS (3rd Party)
See "Actual Off Block Time - IROPS (Third Party)"

AOBT - IROPS (AODB)
See "Actual Off Block Time - IROPS (AODB)"

AOBT - IROPS (ATC)
See "Actual Off Block Time - IROPS (ATC)"

AOBT - IROPS (Carrier)
See "Actual Off Block Time - IROPS (Carrier)"

AOBT - IROPS (FIDS)
See "Actual Off Block Time - IROPS (FIDS)"

AOBT - IROPS (Manual)
See "Actual Off Block Time - IROPS (Manual)"

AOBT - IROPS (Surv)
See "Actual Off Block Time - IROPS (Surveillance)"

AOBT - IROPS (VDGS)
See "Actual Off Block Time - IROPS (VDGS)"

AOBT (3rd Party)
See "Actual Off Block Time (Third Party)"

AOBT (Aero)
See "Actual Off Block Time (Aerobahn)"

AOBT (AODB)
See "Actual Off Block Time (AODB)"

AOBT (ATC)
See "Actual Off Block Time (ATC)"

AOBT (Carrier)
See "Actual Off Block Time (Carrier)"

AOBT (FIDS)
See "Actual Off Block Time (FIDS)"

AOBT (Manual)
See "Actual Off Block Time (Manual)"

AOBT (Surv)
See "Actual Off Block Time (Surveillance)"

AOBT (VDGS)
See "Actual Off Block Time (VDGS)"

AOBT On Time
Tells whether AOBT (Carrier) was received in a reasonable amount of time. (True when within "reasonable" specification.)

AOBT SOBT Diff
Absolute difference (in seconds) between AOBT and SOBT

AOBT SOBT Pass
The absolute difference between AOBT and SOBT is less than X minutes (True/False)

AOBT Timeliness
Provides a time duration so that you can determine if Actual Off Block Time (Carrier) was received in a reasonable amount of time

AOBT TOBT Diff
Absolute difference (in seconds) between AOBT and TOBT

AOBT TOBT Pass
The absolute difference between AOBT and TOBT is less than X minutes (True/False)

AOBT TOBT TSAT Diff
Absolute difference (in seconds) between AOBT - TOBT at AOBT

AOBT TOBT TSAT Pass
AOBT - TOBT at AOBT is less than X minutes (True/False)

AODB
Airport Operational Database. An information system that connects with other information sources and supports retrieval of various flight-related information that is used by other airport information systems.

APE
Aerobahn Prediction Engine

Applications
Aerobahn application settings and permissions

Approver (Manual)
　　Refer to Approver Name (Manual)

Approver Name (Manual)
　　Free-text field

APR
　　Approach

APREQ
　　A traffic management initiative (TMI) typically issued by the Air Route Traffic
　　Control Center to departure flights that are ascending into congested overhead
　　stream traffic. Flights are issued release times that result in an orderly flow of
　　departure traffic into the surrounding airspace.

APREQ (ATC)
　　Approval Request Time

Apron (Aerobahn)
　　See "Apron Assigned (Aerobahn)"

Apron (Carrier)
　　See "Apron Assigned (Carrier)"

Apron (FIDS)
　　See "Apron Assigned (FIDS)"

Apron (Manual)
　　See "Apron Assigned (Manual)"

Apron Act
　　See "Apron Actual"

Apron Actual
　　Same as Apron Assigned if available. Otherwise, value is derived from Stand
　　Assigned (Aerobahn).

Apron Assigned (Aerobahn)
　　First value is Apron Actual. Then, value is derived from Stand Assigned (Aero).

Apron Assigned (Carrier)
　　Value is derived from Stand Assigned (Carrier)

Apron Assigned (FIDS)
　　Value is derived from Stand Assigned (FIDS)

Apron Assigned (Manual)
　　Value is derived from Stand Assigned (Manual)

ARDT (Aero)
    See "Actual Ready Time (Aerobahn)"

ARDT (ATC)
    See "Actual Ready Time (ATC)"

ARDT (Manual)
    See "Actual Ready Time (Manual)"

ARDT On Time
    Tells whether ARDT (Aerobahn) receipt time is is reasonable. (True when within "reasonable" specification.)

ARDT Timeliness
    Provides a time duration so that you can determine if Actual Ready Time (Aerobahn) was received in a reasonable amount of time

ARDT TOBT Diff
    Absolute difference (in seconds) between ARDT and TOBT

ARDT TOBT Pass
    The absolute difference between ARDT and TOBT is less than X minutes (True/False)

Arr Gate (3rd Party)
    See "Arrival Gate (Third Party)"

Arr Gate (AODB)
    See "Arrival Gate (AODB)"

Arr Gate (ATC)
    See "Arrival Gate (ATC)"

Arr Gate (Carrier)
    See "Arrival Gate (Carrier)"

Arr Gate (FIDS)
    See "Arrival Gate (FIDS)"

Arr Proc
    See "Arrival Procedure Name"

Arr Proc (Filed)
    See "Arrival Procedure Name (Filed)"

Arr Stand
    See "Arrival Stand"

Arr Station GMT Adj
    See "Arrival Station GMT Adjustment"

Arr Status
  See "Arrival Status"

Arrival Call Sign
  Call sign of the aircraft when it entered the gate

Arrival Delay (Aerobahn)
  Derived from carrier/Flight Stats, FIDS. Indicates duration of delay.

Arrival Delay (Carrier)
  Carrier (various). Indicates duration of delay.

Arrival Delay (FIDS)
  FIDS (airport-specific). Indicates duration of delay.

Arrival Gate
  The assigned gate at the destination airport (carrier-provided data)

Arrival Gate (AODB)
  AODB-provided assigned gate at the destination airport

Arrival Gate (ATC)
  ATC-provided assigned gate at the destination airport.

Arrival Gate (Carrier)
  Carrier-provided assigned gate at the destination airport

Arrival Gate (FIDS)
  FIDS-provided assigned gate at the destination airport

Arrival Gate (Third Party)
  The destination airport's assigned gate provided by a commercial third party
  information source

Arrival Marketing Carrier Code
  Marketing carrier code of the aircraft when it entered the gate

Arrival Mode 3/A
  Mode 3/A code of the aircraft when it entered the gate

Arrival Procedure
  See "Arrival Procedure Name"

Arrival Procedure (Filed)
  The filed RNAV- or instrument-arrival procedure that the flight is to follow to land at
  the airport

Arrival Procedure Name

Current or final RNAV- or instrument-arrival procedure that the flight follows to land at the airport

Arrival Procedure Name (Filed)

The filed RNAV- or instrument-arrival procedure that the flight is to follow to land at the airport

Arrival Stand

The assigned stand at the destination aerodrome (carrier-provided data)

Arrival Station GMT Adjustment

Difference in hours between the time zone of the arrival station and GMT. Carrier proprietary.

Arrival Status

A 1-letter code to indicate arrival status. Carrier proprietary.

ARV

Arrived

ASAT (Aero)

See "Actual Startup Approval Time (Aerobahn)"

ASAT (ATC)

See "Actual Startup Approval Time (ATC)"

ASAT (Manual)

See "Actual Startup Approval Time (Manual)"

ASAT AOBT Diff

Absolute difference (seconds) between ASAT and AOBT

ASAT On Time

Tells whether ASAT (Aerobahn) was received in a reasonable amount of time. (True when within "reasonable" specification.)

ASAT Timeliness

Provides a time duration so that you can determine if Actual Startup Approval Time (Aerobahn) was received in a reasonable amount of time

ASBT (Aero)

See "Actual Start of Boarding Time (Aerobahn)"

ASBT (AODB)

See "Actual Start of Boarding Time (AODB)"

ASBT (Carrier)

See "Actual Start of Boarding Time (Carrier)"

ASBT (Manual)
    See "Actual Start of Boarding Time (Manual)"

ASBT On Time
    Tells whether ASBT (Aerobahn) receipt time was received in a reasonable
    amount of time. (True when within "reasonable" specification.)

ASBT Timeliness
    Provides a time duration so that you can determine if Actual Start of Boarding
    Time (Aerobahn) was received in a reasonable amount of time

ASDE-X
    Airport Surface Detection Equipment, Model X

ASDI
    "Aircraft Situation Display to Industry." A data feed provided by the Volpe Center.
    ASDI data elements include the location, altitude, airspeed, destination, estimated
    time of arrival, and tail number or designated identifier of aircraft operating on
    instrument flight rules (IFR) flight plans within U.S. airspace.

Asgn Equip
    See "Assigned Equipped"

Asgn FL
    See "Assigned Flight Level"

Asgn Spot (Carrier)
    See "Assigned Spot (Carrier)"

Asgn Spot (Manual)
    See "Assigned Spot (Manual)"

ASR
    Airport Surveillance Radar

ASRT (Aero)
    See "Actual Startup Request Time (Aerobahn)"

ASRT (ATC)
    See "Actual Startup Request Time (ATC)"

ASRT (Manual)
    See "Actual Startup Request Time (Manual)"

ASRT On Time
    Tells whether ASRT (Aerobahn) was received in a reasonable amount of time.
    (True when within "reasonable" specification.)

ASRT Timeliness
> Provides a time duration so that you can determine if Actual Startup Request Time (Aerobahn) was received in a reasonable amount of time

Assigned Equipment
> Aircraft equipment assigned to the flight. Carrier proprietary.

Assigned Flight Level
> Filed assigned flight level

Assigned Gate
> See "Gate Assigned (Carrier)"

Assigned Gate (FIDS)
> See "Gate Assigned (FIDS)"

Assigned Spot (Carrier)
> Assigned Spot received from a carrier data source

Assigned Spot (Manual)
> User-entered Assigned Spot

At Gate
> Time of gate entry as determined by surveillance-driven events interpreted by Aerobahn

At Gate (inbound)
> See "Actual In Block Time (Surveillance)"

At Parking Area (inbound)
> The time at which the flight arrived this region. Derived from surveillance.

At Spot (inbound)
> The time at which the flight arrived this region. Derived from surveillance.

At Spot (outbound)
> The time at which the flight arrived this region. Derived from surveillance.

ATA
> Actual Time of Arrival

ATC
> Air Traffic Control

ATCRBS
> Air Traffic Control Radar Beacon System

ATD
> Actual Time of Departure

ATET (Aero)
  See "Actual Tow End Time (Aerobahn)"

ATET (AODB)
  See "Actual Tow End Time (AODB)"

ATET (Carrier)
  See "Actual Tow End Time (Carrier)"

ATET (Manual)
  See "Actual Tow End Time (Manual)"

ATET (Surveillance)
  See "Actual Tow End Time (Surveillance)"

ATOT - IROPS (3rd Party)
  See "Actual Take Off Time - IROPS (Third Party)"

ATOT - IROPS (AODB)
  See "Actual Take Off Time - IROPS (AODB)"

ATOT - IROPS (ATC)
  See "Actual Take Off Time - IROPS (ATC)"

ATOT - IROPS (Carrier)
  See "Actual Take Off Time - IROPS (Carrier)"

ATOT - IROPS (Manual)
  See "Actual Take Off Time - IROPS (Manual)"

ATOT - IROPS (Surv)
  See "Actual Take Off Time - IROPS (Surveillance)"

ATOT (3rd Party)
  See "Actual Take Off Time (Third Party)"

ATOT (Aero)
  See "Actual Take Off Time (Aerobahn)"

ATOT (AODB)
  See "Actual Take Off Time (AODB)"

ATOT (ATC)
  See "Actual Take Off Time (ATC)"

ATOT (Carrier)
  See "Actual Take Off Time (Carrier)"

ATOT (Surv)
  See "Actual Take Off Time (Surveillance)"

ATOT On Time

Tells whether ATOT (ATC) is received in a reasonable amount of time (True when within "reasonable" specification.)

ATOT Timeliness

Provides a time duration so that you can determine if ATOT (ATC) was received in a reasonable amount of time

ATOT TTOT Diff

Absolute difference (in seconds) between ATOT and TTOT

ATOT TTOT Pass

The absolute difference between ATOT and TTOT is less than X minutes (True/False)

ATST (Aero)

See "Actual Tow Start Time (Aerobahn)"

ATST (AODB)

See "Actual Tow Start Time (AODB)"

ATST (Carrier)

See "Actual Tow Start Time (Carrier)"

ATST (Man)

See "Actual Tow Start Time (Manual)"

ATST (Surv)

See "Actual Tow Start Time (Surveillance)"

Available Workflows

Specifies which workflows the user can view and transition. Workflows are lists of manual flight states the user can assign to a flight.

Avg Occ Time

In the De-ice Statistics Data Set, "Avg Occ Time" is the average (mean) occupancy of a de-icing pad region by an aircraft during the sample time

Avg Wait Time

In the De-ice Statistics Data Set, "Avg Wait Time" is the average (mean) time that a flight spent waiting in a de-icing queue before entering the de-icing pad

AVI

Audio Video Interleave format. A digital recording format.

AZET

See "Actual De-ice Pad Entry Time"

AZQT

See "Actual De-ice Queue Entry Time"

AZXT
See "Actual De-ice Pad Exit Time"

Boarding Status
An indication of how far the boarding process has progressed: <null>, Starting Status, Open, Boarding, Gate Check-In, Final Call, Closed

Boarding Time
The time that boarding began for the flight

Boundary Crossing Distance
ASDI (FAA flight plan data)

Boundary Crossing Name Fix
ASDI (FAA flight plan data)

Boundary Crossing Radial
ASDI (FAA flight plan data)

Boundary Crossing Update Time
ASDI (FAA flight plan data)

Brd Status
See "Boarding Status"

C-Count
See "Connection Count to Selected Target"

C-Direction
See "Connection Direction to Selected Target"

Calculated Take Off Time
The expected wheels up time that is issued by the ANSP for tactical slot allocation

Calculated Take Off Time (Aerobahn)
The time provided by ATC, taking into account the ATC flow situation, that an aircraft has been calculated to take off

Calculated Take Off Time (ATC)
The time provided by ATC, taking into account the ATC flow situation, that an aircraft has been calculated to take off

Calculated Take Off Time (Carrier)
The time provided by the operating carrier, taking into account the ATC flow situation, that an aircraft has been calculated to take off

Calculated Take Off Time (Manual)
The use4-entered time, taking into account the ATC flow situation, that an aircraft is calculated to take off

Call Sign

Alphanumeric identifier used to identify a particular aircraft at a particular point in time. In Aerobahn, this field is the 3-character ICAO code followed by the flight number. Although "Call Sign," "Flight ID," and "Flight Number" are often used interchangeably, their meanings may vary for aviation stakeholders at different points in time, and therefore the terms are easily confused. Take note of the context in which the term is being used to decode its meaning in a particular case.

Call Sign (3rd Party)

See "Call Sign (Third Party)"

Call Sign (Aero)

See "Call Sign (Aerobahn)"

Call Sign (Aerobahn)

Best available call sign based on a hierarchical preference scheme

Call Sign (AODB)

Call Sign provided by Airport Operational Database

Call Sign (ATC)

Call sign provided by air traffic control

Call Sign (Carrier)

Alphanumeric identifier used to identify a particular aircraft at a particular point in time. In Aerobahn, this field is the 3-character ICAO code followed by the flight number. Although "Call Sign," "Flight ID," and "Flight Number" are often used interchangeably, their meanings may vary for aviation stakeholders at different points in time, and therefore the terms are easily confused. Take note of the context in which the term is being used to decode its meaning in a particular case.

Call Sign (FIDS)

Call sign provided by the Flight Information Display System (FIDS)

Call Sign (Third Party)

The call sign provided by a commercial third party information source

Call Sign (VDGS)

Call sign provided by a VDGS data source

Call Sign Alt (AODB)

See "Call Sign Alternate (AODB)"

Call Sign Alt (Carrier)

See "Call Sign Alternate (Carrier)"

Call Sign Alternate (AODB)
Call sign provided by the AODB. This field can be populated with a different value than what is in the Call Sign (AODB) field in situations where the carrier provides a call sign differing from the original value.

Call Sign Alternate (Carrier)
Call sign provided by the Carrier. This field can be populated with a different value than what is in the Call Sign (Carrier) field in situations where the carrier provides a call sign differing from the original value.

Call Sign Inb
See "Call Sign Inbound"

Call Sign Inbound
Call sign for the inbound leg of an outbound flight. (This field applies only to outbound flights.)

Call Sign Opr
See "Call Sign Operating Carrier"

Call Sign Out
See "Call Sign Outbound"

Call Sign Outbound
Call sign that will be used for the outbound leg of an inbound flight. (This field applies only to inbound flights.)

Cancelled?
See "Is Cancelled?"

Cargo Final Ind
See "Cargo Finalization Indicator"

Cargo Finalization Indicator
Carrier proprietary data indicating cargo finalization

Carrier
ICAO code of the airline that is operating the flight

Carrier Code Marketing (ATC)
ICAO code of the airline that is selling the flight; this value is used to validate substitutions in the TFDM Substitution Manager.

Carrier Group
One airline or a collection of airlines (for example, all carriers using a particular terminal) for which a single entity manages flight-departure priorities.

Carrier Group for Departure Metering
This attribute is available only at sites that use departure metering. Limits the user to being able to manipulate, in the departure metering tools, only flights from the specified carrier group(s).

Carrier List for Metering Compliance Data Access
This attribute is available only at sites that use departure metering. Specifies the flights for which metering compliance data will be visible to the user. The list of ICAO codes may represent the operating carrier code or the marketing carrier code of the flight, where the carrier code is the first three characters in the callsign (e.g., FLG, BAW, FDX). An asterisk (*) indicates all carrier codes.

Carrier List for OpsView Callsign Access
Specifies the flights for which callsigns will be visible in OpsView. All other flight callsigns will be masked. The list of ICAO codes may represent the operating carrier code or the marketing carrier code of the flight, where the carrier code is the first three characters in the callsign (e.g., FLG, BAW, FDX). An asterisk (*) indicates all carrier codes.

Carrier List for OpsView Flight Access
Specifies which flights will be included in Aerobahn reports. All other flights will be filtered out completely. The list of ICAO codes may represent the operating carrier code or the marketing carrier code of the flight, where the carrier code is the first three characters in the callsign (e.g., FLG, BAW, FDX). An asterisk (*) indicates all carrier codes.

Carrier List for Proprietary Data Access
Specifies the flights for which proprietary data will be visible to the user. The list of ICAO codes may represent the operating carrier code or the marketing carrier code of the flight, where the carrier code is the first three characters in the callsign (e.g., FLG, BAW, FDX). All manually entered fields are considered proprietary. An asterisk (*) indicates all carrier codes.

Carrier Mktg (ATC)
See "Carrier Code Marketing (ATC)"

CCO Time
Crew Critical Off time. The latest time that the flight must be completed in order to ensure the crew has at least 8 hours of rest in the past 24 hours (NLT 16 hours past reporting or on-call time).

CCW
Counterclockwise

CDM
Collaborative Decision Making

CDM Op Status

See "CDM Operational Status"

CDM Operational Status

Indication of where the flight is or what the flight is doing

Clear Active

Date and time (derived from surveillance) that an outbound aircraft exited the runway region

Clear Milestones Time

The time at which the user cleared Milestones 9, 10, 12, 14, 15, and 16

Clear MS Time

See "Clear Milestones Time"

Cloud Base

In the METAR data set, the Cloud Base number indicates the base elevation of the cloud layer

Cloud Type

In the METAR data set, the Cloud Type is the same as the METAR cloud coverage report. The numeral indicates the cloud layer, with 1 being the lowest layer and 3 the highest layer. Thus, the report shows cloud coverage at three elevations.

Coasted

Targets that were previously recognized as being in motion but for which Aerobahn has stopped receiving updates from the surveillance system are referred to as "coasting targets." When target "Coast" preferences are set so that the Coast signal is enabled, an aircraft is considered "coasted" when surveillance for that target is lost. A coasting target's icon is replaced by the coast symbol. In a Region Occupancy Data Set report, indicates whether or not an aircraft coasted during that region occupancy.

COBT

See "Controlled Off-Block Time"

Codeshares

A data field that provides codeshare call signs associated with the flight

Conference Host

An Aerobahn user who establishes a conversation via the Chat tool.

Configure Dynamic Rules

Enables the user to create, edit, or delete dynamic rules

Connection Count to Selected Target
　　The passenger connection count for the selected target

Connection Direction to Selected Target
　　The passenger connection direction for the selected target

Connection Time
　　For a crew member on an inbound flight, this is the time between the E/AIBT
　　(Carrier) of the current flight and the E/AOBT (Carrier) of the downline flight. For a
　　crew member on an outbound flight, this is the difference between the E/AOBT
　　(Carrier) of the current flight and the E/AIBT (Carrier) of the upline flight.

Contact Time (Manual)
　　User-entered time at which contact is made between the ramp and ATC for a
　　flight.

Controlled Off-Block Time
　　Time that aircraft should leave the gate to arrive at the runway at the controlled
　　take off time (CTOT). Based on predicted taxi time.

Crew Base
　　The base of operation for a crew member. This is where a crew member generally
　　starts and ends her duty.

Crew Position
　　The position of a crew member on the flight. Positions include: CA = Captain, FO =
　　First Officer, FB = Second Captain, FC = Third Captain, RC = Relief Captain, XA =
　　Supervisory Captain, CKA = Check Airman, FA-01 through FA-## = Flight
　　Attendant (number indicates position), FA-99 = not a regular flight attendant, but
　　rather auditing a flight. An FA-99 should not be taken into account when trying to
　　make sure that a crew will be legal for a flight. The FA-99 can go on a different
　　flight if necessary.

Crew Rest Due Time
　　Time the crew must be off duty to meet minimum crew rest regulations

Crew Rest Time
　　See "Crew Rest Due Time"

Crew Type
　　Pilot or flight attendant

Cross Threshold
　　Date and time (derived from surveillance) that an inbound aircraft entered a
　　runway region

Crossbleed Req (Manual)
　　See "Crossbleed Required (Manual)"

Crossbleed Required (Manual)
User-entered (True-False) indication of whether a flight requires a crossbleed

CSV
Comma Separated Value

CSV Export Watch List Viewer tool
Enables the user to export table data to a comma-separated values file

CTOT (Aerobahn)
See "Calculated Take Off Time (Aerobahn)"

CTOT (ATC)
See "Calculated Take Off Time (ATC)"

CTOT (Carrier)
See "Calculated Take Off Time (Carrier)"

CTOT (Manual)
See "Calculated Take Off Time (Manual)"

Curr Dep Delay (ATC)
See "Current Departure Delay (ATC)"

Curr Rep Delay (ATC)
See "Current Reportable Delay (ATC)"

Current Departure Delay (ATC)
Excess time the flight has so far spent taxiing in the movement area over and above the nominal taxi time. Rounded to the nearest minute.

Current Flt ID (Aero)
The Flight ID (Aerobahn) assigned to the aircraft that occupies the gate now. See "Flight ID (Aerobahn)".

Current Reportable Delay (ATC)
Excess time the flight has so far spent taxiing in the movement area over and above the nominal taxi time, but only populated once the value is greater than 15 minutes. Rounded to the nearest minute. Will be updated once after take off.

CW
Clockwise

Data Set Types
Specifies the report data sets the user can access

Datablock Fields
Specifies the data fields available in Map Display, Selection Details, Watchlist Viewer, and other tools. Selections made in the individual fields specified in this category determine whether a user can view the named data fields.

Date Format
Specifies the preferred format for dates displayed in Aerobahn

De-ice Actual Start Time (Manual)
An entered time value

De-ice Actual Stop Time (Manual)
An entered time value

De-ice Duration
The amount of time spent in de-icing operations. Value is derived from surveillance. This data field is identified as De-ice Duration 1, 2, or 3 when the aircraft exceeds its holdover time and must return to de-icing. Aerobahn accommodates a total of three de-icing operations for a single aircraft.

De-ice End Time
The surveillance-based time at which the aircraft left the de-icing region. This data field is identified as De-ice End Time 1, 2, or 3 when the aircraft exceeds its holdover time and must return to de-icing. Aerobahn accommodates a total of three de-icing operations for a single aircraft.

De-ice Event Type
De-ice event type that is active when the flight completes its de-icing

De-ice Fluid Type
Type (I and/or IV) of chemical used during the de-ice process

De-ice Management Group
In real-time tools, management group to which flight currently belongs. In reporting tools, management group to which flight belonged when it entered the De-iced state.

De-ice Pad
The de-ice pad (pad name, gate name, or ramp name). Aerobahn accommodates three de-icing operations for a single aircraft. De-ice Pad 1 tells the region (pad name, gate name, or ramp name) where aircraft first de-iced. De-ice Pad 2 tells the second region, where aircraft de-iced if the aircraft required two de-icing operations. De-ice Pad 3 tells the third region, if any, where aircraft de-iced if the aircraft required three de-icing operations.

De-ice Pad Group
In real-time tools, the pad group to which the flight currently belongs. In reports, the pad group to which the flight belonged when it entered the "De-iced" state.

De-ice Pred

See "De-ice Predicted"

De-ice Pred Pad

See "De-ice Predicted Pad"

De-ice Predicted (Aerobahn)

Current de-ice mode based on a hierarchical preference scheme: De-ice Predicted (Manual), De-Ice Predicted (Auto)

De-ice Predicted (ATC)

Current de-ice mode (De-icing, Not De-icing) prescribed by air traffic control

De-ice Predicted (Auto)

Current de-ice mode (De-icing, Not De-icing) prescribed by the management group setting for the flight

De-ice Predicted (Manual)

User-entered de-ice mode: De-icing, Not De-icing. Clear the manual de-ice mode by setting this value to empty.

De-ice Predicted Pad

Populated with the name of the de-ice pad on which Aerobahn expects the flight to de-ice if the De-ice Predicted field is True. This pad is either manually specified by the user, or it is automatically assigned based on mappings of operating carriers to de-ice pads.

De-ice Queue End Time

The time at which the aircraft leaves the de-ice queue

De-ice Queue Start Time

The time at which the aircraft enters the de-ice queue

De-ice Queue Time

The difference between the De-ice Queue End Time and De-ice Queue Start Time

De-ice Remarks

A free-text field edited in the Manage Flights dialog, the De-icing Manager, and via Hot Keys

De-ice Start Time

The surveillance-based time at which the aircraft entered the de-icing region. This data field is identified as De-ice Start Time 1, 2, or 3 when the aircraft exceeds its holdover time and must return to de-icing. Aerobahn accommodates a total of three de-icing operations for a single aircraft.

De-ice State

The following states are possible: Assigned (Gate) – The flight is at the gate and assigned to a de-ice bay, but the flight has not de-iced and does not occupy the corresponding de-ice queue. Assigned (Taxi) – The flight is taxiing and assigned to a de-ice bay, but the flight has not de-iced and does not occupy the corresponding de-ice queue. Queued – The flight has entered the queue corresponding to its assigned de-ice bay or has occupied a different queue for an extended period. On Pad – The flight occupies a de-ice bay. De-iced – The flight is predicted to de-ice, has been in the On Pad state, is no longer occupying a pad region, and is not in a de-ice queue region. Departed Without De-icing – The flight is predicted to de-ice, but it has never entered the De-iced state, and it has a wheels-up time.

De-ice Truck

De-ice truck identifier selected from list

De-icing Data

Code for de-icing status. Carrier proprietary.

Deadheading

In the Selection Details tool, Flight Crew tab, "Deadheading" means that the crew member is not at work on the selected flight.

Delay Value

Time in minutes

Delete Workspaces

Enables the user to permanently remove a configured workspace

DEP

Departed

Dep Gate (3rd Party)

See "Departure Gate (Third Party)"

Dep Gate (AODB)

See "Departure Gate (AODB)"

Dep Gate (ATC)

See "Departure Gate (ATC)"

Dep Gate (Carrier)

See "Departure Gate (Carrier)"

Dep Gate (FIDS)

See "Departure Gate (FIDS)"

Dep Proc (Filed)

See "Departure Procedure Name (Filed)"

Dep Stand
See "Departure Stand"

Dep Station GMT Adj
See "Departure Station GMT Adjustment"

Dep Status
See "Departure Status"

Departure Assignment Priority
The initial value is based on the SOBT. A user can change this initial value.

Departure Call Sign
Call sign of the aircraft when it left the gate

Departure Delay (Aerobahn)
The best available delay duration data based on a hierarchical preference scheme

Departure Delay (Carrier)
Delay duration data based on carrier-provided data

Departure Delay (FIDS)
Delay duration based on FIDS (airport-specific) data

Departure Field (Filed)
The filed RNAV- or instrument-departure procedure that the flight is to follow as it
departs

Departure Gate
The assigned gate at the origination airport (carrier-provided data)

Departure Gate (AODB)
AODB-provided assigned gate at the origination airport

Departure Gate (ATC)
ATC-provided assigned gate at the origination airport

Departure Gate (Carrier)
Carrier-provided assigned gate at the origination airport

Departure Gate (FIDS)
FIDS-provided assigned gate at the origination airport

Departure Gate (Third Party)
The assigned gate at the origination airport that is provided by a commercial third
party information source

Departure Marketing Carrier Code
Marketing carrier code of the aircraft when it left the gate

Departure Mode 3/A

Mode 3/A code of the aircraft when it left the gate

Departure Priority

See "Departure Assignment Priority"

Departure Procedure

Current or final RNAV- or instrument-departure procedure that the flight follows to depart from the airport

Departure Procedure (Filed)

The filed RNAV- or instrument-departure procedure that the flight is to follow as it departs

Departure Procedure Name (Filed)

The filed RNAV- or instrument-departure procedure that the flight is to follow as it departs

Departure Stand

The assigned stand at the origination aerodrome (carrier-provided data)

Departure State

Numeric code. Carrier proprietary.

Departure Station GMT Adjustment

Difference in hours between the time zone of the departure station and GMT. Carrier proprietary.

Departure Status

A 1-letter code to indicate departure status. Carrier proprietary.

Design Group

An integer (1-6), based on wingspan, used to categorize aircraft size. Design Groups 1: Wingspans from 0ft - 48ft 2: Wingspans from 49ft - 78ft 3: Wingspans from 79ft - 117ft 4: Wingspans from 118ft - 170ft 5: Wingspans from 171ft - 213ft 6: Wingspans from 214ft - 262ft Design Group classifications are from USA Federal Aviation Administration Administration (FAA) Aircraft Design Group (ADG). FAA Aircraft Design Groups are defined in FAA Advisory Circular 150/5300-13A, Table 1-2.

Design Group (FAA)

An integer (1-6), based on wingspan, used to categorize aircraft size. Design Groups 1: Wingspans from 0ft - 48ft 2: Wingspans from 49ft - 78ft 3: Wingspans from 79ft - 117ft 4: Wingspans from 118ft - 170ft 5: Wingspans from 171ft - 213ft 6: Wingspans from 214ft - 262ft Design Group classifications are from USA Federal Aviation Administration Administration (FAA) Aircraft Design Group (ADG). FAA Aircraft Design Groups are defined in FAA Advisory Circular 150/5300-13A, Table 1-2.

Dest (ICAO)
See "Destination Airport (ICAO)"

Destination Airport
In order of precedence based on availability: Destination Airport from FAA, Destination Airport from Carrier. IATA identifier.

Destination Airport (ICAO)
The ICAO code representing the destination airport

Dewpoint
The dew point is a temperature (degrees Celsius) at which the air becomes saturated. You can use the dew point temperature to make predictions about icing and fog.

DI Fluid
See "De-ice Fluid Type"

DI Pred (Aero)
See "De-ice Predicted (Aerobahn)"

DI Pred (Auto)
See "De-ice Predicted (Auto)"

DI Pred (Manual)
See "De-ice Predicted (Manual)"

DI Remarks
A free-text field edited in the Manage Flights dialog, the De-icing Manager, and via Hot Keys.

DI Truck
See "De-ice Truck"

Direction
Inbound, Outbound, Parked, or Unknown

Disable Performance Optimization Popup
Disables popup system message that recommends Java memory settings

Dispatch Desk Asgn
See "Dispatch Desk Assignment"

Dispatch Desk Assignment
Assignment data. Carrier proprietary.

Dispatcher Desk Assignment
Assignment data. Carrier proprietary.

Display Times in the Airport Local Time Zone
Specifies whether or not to display times in the Airport Local Time Zone. When the box is unchecked, times are displayed in UTC.

Div To (ICAO)
See "Diverted To (ICAO)"

Diversion ADEP
See "Diversion Aerodrome of Departure"

Diversion ADEP (ICAO)
See "Diversion Aerodrome of Departure (ICAO)"

Diversion ADES
See "Diversion Aerodrome of Destination"

Diversion ADES (ICAO)
See "Diversion Aerodrome of Destination (ICAO)"

Diversion Aerodrome of Departure
This is the aerodrome of departure for the diverted flight that led to a recovery flight. If a flight departed from Aerodrome A with an intended destination Aerodrome B but was diverted to Aerodrome C, the Diversion Aerodrome of Departure for the recovery flight is Aerodrome A.

Diversion Aerodrome of Departure (ICAO)
Diversion Aerodrome of Departure (ICAO)

Diversion Aerodrome of Destination
If the Diversion Status is "Diversion," this field indicates the aerodrome (by IATA identifier) the flight is diverted to.

Diversion Aerodrome of Destination (ICAO)
If the Diversion Status is "Diversion," this field indicates the aerodrome (by ICAO identifier) the flight is diverted to.

Diversion Dest
The airport to which a flight is diverted to.

Diversion Destination Airport
If the Diversion Status is "Diversion," this field indicates the airport (by IATA identifier) the flight is diverted to.

Diversion Destination Airport (ICAO)
If the Diversion Status is "Diversion," this field indicates the airport (by ICAO identifier) the flight is diverted to.

Diversion Orig (ICAO)
See "Diversion Origination Airport (ICAO)"

Diversion Origination Airport

This is the origination airport for the diverted flight that led to a recovery flight. If a flight originated at Airport A with an intended destination Airport B but was diverted to Airport C, the Diversion Origination Airport for the recovery flight will be Airport A.

Diversion Origination Airport (ICAO)

The ICAO code representing the diversion origination airport

Diversion Status

Indicates "Diversion" when a flight is re-routed to an alternate airport, and "Recovery" when the flight is being used to complete the route of a previously diverted flight by flying from the alternate airport to the original destination.

Diversion Time

The time at which Aerobahn received the first diversion message for the associated flight

Diverted To (ICAO)

The ICAO code representing the diversion destination airport

Downline Passenger Count

See "Passenger Count (Downline Connection)"

DQM

Dynamic Queue Monitor

DSF

Saab Data Service Facility

Dummy?

See "Is a Dummy Flight"

Duty End

Duty End Time. Duty time ends for a crew member when the aircraft is parked after the last flight, and there is no intention for further aircraft movement by that crew member.

Duty LTA for FA

Duty Latest Time of Arrival for Flight Attendant. The time at which it is necessary for duty to end so that the flight attendant stays with the daily limit. Shows as "Duty LTA" in column header.

Duty Period Mandatory Off Time

The time at which the duty period must end in order for a pilot to remain legal. Shows as "DPMOT" in column header.

Duty Start
Duty Start Time. Duty time begins when a crew member is required to report with the intent of operating a flight.

Duty Time Remaining for FA
Duty Time Remaining for Flight Attendants. Time remaining in minutes before the flight attendant is considered illegal. Shows as "DTR (minutes)" in column header.

E/A Rwy Time
Estimated/Actual Runway Time. If inbound flights, this is rollup of ALDT (Aero), ALDT (ATC), and ELDT (Pred) where a flight is a "forecasted operation" if its E/A Runway time is an estimated time and a "completed operation" if its E/A Runway Time is an actual time. If an outbound flight, this is a rollup of ATOT (Aero), ATOT (ATC), and ETOT (Pred), where a flight is a "forecasted operation" if its E/A Runway time is an estimated time, and a "completed operation" if its E/A Runway Time is an actual time.

E/A Tow End
See "Estimated/Actual Tow End Time"

E/AIBT
See "Estimated/Actual In Block Time"

E/ALDT
See "Estimated/Actual Landing Time"

E/AOBT
See "Estimated/Actual Off Block Time"

E/ATOT
See "Estimated/Actual Take Off Time"

Earliest Off Block Time (ATC)
Earliest time a Flight Operator would be able to push back or taxi from its parking stand for departure in the absence of metering. Provided by TFDM.

Earliest Off Block Time (Manual)
Earliest time a Flight Operator would be able to push back or taxi from its parking stand for departure in the absence of metering. Provided by the user and sent to TFDM.

EAST (Aero)
See "Estimated At Spot Time (Aerobahn)"

EDCT
See "Estimated Departure Clearance Time"

EDCT (Aerobahn)
See "Estimated Departure Clearance Time (Aerobahn)"

EDCT (ATC)
See "Estimated Departure Clearance Time (ATC)"

EDCT (Man)
See "Estimated Departure Clearance Time (Manual)"

EDIT (Man)
See "Estimated De-ice Pad Duration (Manual)"

Edit Region Closures
Enables the user to create, modify, and remove region closures in the Region Closures tool

Edit Tool Titles
Enables the user to change the text on the tool headers and tabs

EIBT (3rd Party)
See "Estimated In Block Time (Third Party)"

EIBT (Aero)
See "Estimated In Block Time (Aerobahn)"

EIBT (AODB)
See "Estimated In Block Time (AODB)"

EIBT (Carrier)
See "Estimated In Block Time (Carrier)"

EIBT (FIDS)
See "Estimated In Block Time (FIDS)"

EIBT (Pred)
See "Estimated In Block Time (Prediction)"

EIBT (VDGS)
See "Estimated In Block Time (VDGS)"

EIBT At MS3
EIBT (Aero) value at the time Milestone 3 is initially met. If Milestone 3 is cleared and set again, the initially reported EIBT value will not be overwritten with a new value.

EIBT At MS4
EIBT (Aero) value at the time Milestone 4 is initially met. If Milestone 4 is cleared and set again, the initially reported EIBT value will not be overwritten with a new value.

EIBT At MS5

EIBT (Aero) value at the time Milestone 5 is initially met. If Milestone 5 is cleared and set again, the initially reported EIBT value will not be overwritten with a new value.

EIBT At MS6

EIBT (Aero) value at the time Milestone 6 is initially met. If Milestone 6 is cleared and set again, the initially reported EIBT value will not be overwritten with a new value.

ELDT (3rd Party)

See "Estimated Landing Time (Third Party)"

ELDT (Aero)

See "Estimated Landing Time (Aerobahn)"

ELDT (ATC)

See "Estimated Landing Time (ATC)"

ELDT (Carrier)

See "Estimated Landing Time (Carrier)"

ELDT (Pred)

See "Estimated Landing Time (Prediction)"

ELDT At MS3

ELDT (ATC) value at the time Milestone 3 is initially met. If Milestone 3 is cleared and set again, the initially reported ELDT value will not be overwritten with a new value.

ELDT At MS4

ELDT (ATC) value at the time Milestone 4 is initially met. If Milestone 4 is cleared and set again, the initially reported ELDT value will not be overwritten with a new value.

ELDT At MS5

ELDT (ATC) value at the time Milestone 5 is initially met. If Milestone 5 is cleared and set again, the initially reported ELDT value will not be overwritten with a new value.

ELDT Long Term Accuracy

Determine if, when a flight was more than a pre-configured number of minutes away from landing at the airport, ELDT (ATC) was within a configured range from the actual landing time (Surveillance)

ELDT Long Term Accurate

If, when a flight was more than a pre-configured number of minutes away from landing at the airport, ELDT (ATC) was within a configured range from the actual landing time (Surveillance), the value is "True." If the ELDT (ATC) was not within

that range, the value is "False." See also, "ELDT Long Term Accuracy."

ELDT Short Term Accuracy
Determine if, when a flight was less than a pre-configured number of minutes away from landing at the airport, ELDT (ATC) was within a configured range from the actual landing time (Surveillance).

ELDT Short Term Accurate
If, when a flight was less than a pre-configured number of minutes away from landing at the airport, ELDT (ATC) was within a configured range from the actual landing time (Surveillance), the value is "True." If the ELDT (ATC) was not within that range, the value is "False." See also, "ELDT Short Term Accuracy."

Enable Active Flights CSV Export
Enables the user to export table data to a comma-separated values file

Enable Current Runway Usage CSV Export
Enables the user to export table data to a comma-separated values file

Enable De-icing Throughput CSV Export
Enables the user to export table data to a comma-separated values file

Enable Operation Counts - Carrier CSV Export
Enables the user to export table data to a comma-separated values file

Enable Operation Counts - Runway CSV Export
Enables the user to export table data to a comma-separated values file

Enable Region Occupancy Monitor CSV Export
Enables the user to export table data to a comma-separated values file

Enable Region Status CSV Export
Enables the user to export table data to a comma-separated values file

Enable Scheduled Flight Manager CSV Export
Enables the user to export table data to a comma-separated values file

Enable Surface Delay Summary CSV Export
Enables the user to export table data to a comma-separated values file

Eng Class
See "Engine Class"

Eng Model
See "Engine Model"

Eng Type
See "Engine Type"

Engine Class
The aircraft engine class

Engine Model
The aircraft engine model

Engine Type
The aircraft engine type

ENI
Enroute Inbound

ENO
Enroute Outbound

ENR
Enroute (not arriving or departing local airport)

Entry Flight Info ID
Internal unique identification number for the flight associated with the entry event of the gate occupancy. Available in the Gate Occupancy Report.

Entry Target ID
Internal unique identification number for the target associated with the entry event of the gate occupancy. Available in the Gate Occupancy Report.

EOBT (3rd Party)
See "Estimated Off Block Time (Third Party)"

EOBT (Aero)
See "Estimated Off Block Time (Aerobahn)"

EOBT (AODB)
See "Estimated Off Block Time (AODB)"

EOBT (ATC)
See "Estimated Off Block Time (ATC)"

EOBT (Carrier)
See "Estimated Off Block Time (Carrier)"

EOBT (FIDS)
See "Estimated Off Block Time (FIDS)"

EOBT (Pred)
See "Estimated Off Block Time (Prediction)"

EOBT (VDGS)
See "Estimated Off Block Time (VDGS)"

EOBT (Vid)
> See "Estimated Off Block Time (Video)"

Equipage
> Type of transponder with which the aircraft is equipped: ADSB over the Mode S link, ATCRBS only, Mode S only, or ADSB over the UAT link. "Dual equipage" indicates that both ATCRBS and ADSB over UAT are present.

ErOBT (ATC)
> See "Earliest Off Block Time (ATC)"

ErOBT (Manual)
> See "Earliest Off Block Time (Manual)"

EROT
> See "Estimated Route Open Time"

ESBT
> See "Estimated Start Boarding Time"

ESBT (Manual)
> See "Estimated Start Boarding Time (Manual)"

Est Board Complete
> See "Estimated Boarding Complete Time"

Est DI Blk Dur
> See "Estimated De-ice Blocking Duration"

Est DI Dur (Aero)
> See "Estimated De-ice Pad Duration (Aerobahn)"

Est DI Dur (Auto)
> See "Estimated De-ice Pad Duration (Auto)"

Est Tow Off (AODB)
> See "Estimated Tow Off Time (AODB)"

Est Tow Off (Carrier)
> See "Estimated Tow Off Time (Carrier)"

Est Tow On (AODB)
> See "Estimated Tow On Time (AODB)"

Est Tow On (Carrier)
> See "Estimated Tow On Time (Carrier)"

Estimated At Spot Time (Aerobahn)
    Provides best available Estimated At Spot Time data based on a hierarchical
    preference scheme

Estimated De-ice Blocking Duration
    Amount of time the aircraft is predicted to be waiting on the de-ice pad after it has
    de-iced because another aircraft is preventing it from leaving

Estimated De-ice Pad Duration (Aerobahn)
    Estimate of how long a particular flight will be on the de-ice pad, based on manual
    entry and pre-configured estimates

Estimated De-ice Pad Duration (Manual)
    User-entered estimate of how long a particular flight will be on the de-ice pad

Estimated De-ice Pad Entry Time
    Aerobahn algorithms calculate that this is the time at which a flight will enter the
    de-ice pad

Estimated De-ice Pad Exit Time
    Aerobahn algorithms calculate that this is the time at which a flight will leave the
    de-ice pad

Estimated Departure Clearance Time
    Carrier proprietary

Estimated Departure Clearance Time (Aerobahn)
    Best known runway release time ("Wheels Off") assigned to aircraft because of
    Traffic Management Initiatives (TMIs) that require holding aircraft on the ground at
    the departure airport.

Estimated Departure Clearance Time (ATC)
    ANSP-provided runway release time ("Wheels Off") assigned to aircraft because
    of Traffic Management Initiatives (TMIs) that require holding aircraft on the ground
    at the departure airport.

Estimated Departure Clearance Time (Manual)
    User-entered ATC-estimated time for the flight to get clearance for departure

Estimated In Block Time (Aerobahn)
    Provides best available Estimated In Block Time data based on a hierarchical
    preference scheme

Estimated In Block Time (AODB)
    AODB-provided Estimated In Block Time

Estimated In Block Time (Carrier)
    Carrier-provided estimated in block time

Estimated In Block Time (FIDS)
FIDS-provided estimated in block time

Estimated In Block Time (Predicted)
The estimated time that the inbound flight will arrive at the gate. This time is based on the predicted route and represents the time Aerobahn expects the predicted route will be complete. This estimates is provided by the Aerobahn Prediction Engine (when installed).

Estimated In Block Time (Third Party)
The estimated in-block time provided by a commercial third party information source

Estimated In Block Time (VDGS)
Estimated In Block Time provided by a VDGS data source

Estimated Landing Time (Aerobahn)
Provides best available Estimated Landing Time data based on a hierarchical preference scheme

Estimated Landing Time (ATC)
The estimated landing time provided by air traffic control

Estimated Landing Time (Carrier)
Carrier-provided estimated landing time

Estimated Landing Time (Predicted)
For an inbound flight, the estimated time that the aircraft will go wheels down on the runway. For an outbound flight, the estimated time that the aircraft will go wheels down at the destination airport. These estimates are calculated by the Aerobahn Prediction Engine (when installed).

Estimated Landing Time (Third Party)
The estimated landing time provided by a commercial third party information source

Estimated Off Block Time (Aerobahn)
Provides best available Estimated Off Block Time data based on a hierarchical preference scheme

Estimated Off Block Time (AODB)
Estimated Off Block Time provided by Airport Operational Database

Estimated Off Block Time (ATC)
ATC-provided estimated off block time.

Estimated Off Block Time (Carrier)
Carrier-provided estimated off block time

Estimated Off Block Time (FIDS)
FIDS-provided estimated off block time

Estimated Off Block Time (Predicted)
Best available Estimated Off Block Time based on a hierarchical preference scheme subject to compliance with the minimum turnaround time for the aircraft with respect to in block times for the linked flight

Estimated Off Block Time (Third Party)
The estimated off-block time provided by a commercial third party information source

Estimated Off Block Time (VDGS)
Estimated Off Block Time provided by a VDGS data source

Estimated Off Block Time (Video)
Estimated Off Block Time provided by video analytics

Estimated Route Open Time
The time at which the closed fix (i.e., the end time of the fix closure) for a flight is estimated to open again

Estimated Start Boarding Time
The time that boarding began for the flight

Estimated Start Boarding Time (Manual)
The user-entered time that boarding began for the flight

Estimated Take Off Time (Aerobahn)
The best available Estimated Take Off Time data based on a hierarchical preference scheme

Estimated Take Off Time (ATC)
The estimated time provided by air traffic control at which the aircraft will go wheels up

Estimated Take Off Time (Carrier)
Carrier-provided estimate of the time that the aircraft will go wheels up

Estimated Take Off Time (Predicted)
For an outbound flight, the estimated time that the flight will go wheels up. This time is based on the predicted route and represents the time that the predicted route will be complete.

Estimated Take Off Time (Third Party)
The estimated take off time provided by a commercial third party information source

Estimated Target Take Off Time (CDM)
The estimated take off time calculated as TSAT + EXOT (CDM)

Estimated Taxi In Time (Manual)
The user-entered estimated amount of time that it will take a flight to taxi from the landing point to the gate

Estimated Taxi In Time (Predicted)
Four prediction procedures and a user-entered EXIT for the flight are used as available in the following order: EXIT (Manual), EXIT (Prediction 4), EXIT (Prediction 3), EXIT (Prediction 2), or EXIT (Prediction 1).

Estimated Taxi Out Time (CDM)
The difference between ETOT (CDM) and EOBT

Estimated Taxi Out Time (Manual)
The user-entered estimated amount of time that it will take a flight to taxi from the gate point to the take off point

Estimated Taxi Out Time (Nominal)
The difference between TTOT (Derived) and TSAT

Estimated Taxi Out Time (Predicted)
Four prediction procedures and a user-entered EXOT for the flight are used as available in the following order: EXOT (Manual), EXOT (Prediction 4), EXOT (Prediction 3), EXOT (Prediction 2), or EXOT (Prediction 1).

Estimated Taxi Time on Apron
Amount of time an aircraft is expected to take taxiing on the apron between the stand and the movement area (in either direction)

Estimated Time En-route
ELDT (or SLDT) - ETOT (or STOT). (Use the Aerobahn-selected value of each. If it is available, use estimated value over scheduled value.)

Estimated Time to Gate/Runway (Aerobahn)
Provides an estimated time to the gate or runway data based on Aerobahn prediction algorithms

Estimated Time to Stand/Runway (Aerobahn)
Provides an estimated time to the stand or runway data based on Aerobahn prediction algorithms

Estimated Tow End Time (Manual)
The time and date entered by a user as an estimate of when the tow will end

Estimated Tow Off Time (AODB)
> The estimated time and date that the tow of an arrival flight off the arrival gate/stand will start. Received from the Airport Operational Data Base.

Estimated Tow Off Time (Carrier)
> The estimated time and date that the tow of an arrival flight off the arrival gate/stand will start. Received from the carrier.

Estimated Tow On Time (AODB)
> The estimated time and date that the tow of a departure flight onto the departure gate/stand will end. Received from the Airport Operational Data Base.

Estimated Tow On Time (Carrier)
> The estimated time and date that the tow of a departure flight onto the departure gate/stand will end. Received from the carrier.

Estimated Tow Start Time (Manual)
> User-entered estimate (must be in the future) of the date and time that a tow will begin

Estimated/Actual In Block Time
> The actual in-block time shows when it is available from inbound linked flight. Otherwise, the estimated in-block time shows between parentheses. The column heading indicates (between parentheses) the source of the data.

Estimated/Actual Landing Time
> The actual landing time shows when it is available from inbound linked flight. Otherwise, the estimated landing time shows between parentheses. The column heading indicates (between parentheses) the source of the data.

Estimated/Actual Off Block Time
> The actual off-block time shows when it is available. Otherwise, the estimated off-block time shows between parentheses. The column heading indicates (between parentheses) the source of the data.

Estimated/Actual Take Off Time
> The actual take off time shows when it is available. Otherwise, the estimated take off time shows between parentheses. The column heading indicates (between parentheses) the source of the data.

Estimated/Actual Tow End Time
> Estimated or actual time and date when a tow ended

ETA
> Estimated Time of Arrival

ETD
> Estimated Time of Departure

ETET (Man)
See "Estimated Tow End Time (Manual)"

Etime
See "Operational State Elapsed Time"

ETime
Elapsed Time

ETOT (3rd Party)
See "Estimated Take Off Time (Third Party)"

ETOT (Aero)
See "Estimated Take Off Time (Aerobahn)"

ETOT (ATC)
See "Estimated Take Off Time (ATC)"

ETOT (Carrier)
See "Estimated Take Off Time (Carrier)"

ETOT (CDM)
See "Estimated Target Take Off Time (CDM)"

ETOT (Pred)
See "Estimated Take Off Time (Predicted)"

ETST (Manual)
See "Estimated Tow Start Time (Manual)"

ETTGR (Aero)
See "Estimated Time to Gate/Runway (Aerobahn)"

ETTSR (Aero)
See "Estimated Time to Stand/Runway (Aerobahn)"

Event Time
Operation (Arrival/Departure) time. Corresponds to wheels-down time and wheels-up time.

Excess Gate Occupancy Time (Aerobahn)
The amount of time that a departing flight spent in a gate beyond the carrier-provided SOBT, based on surveillance data

Excess Gate Occupancy Time (Carrier)
The additional time that a departing flight spent in a gate beyond the carrier-provided SOBT, based on the carrier-provided AOBT

Excess Stand Occupancy Time (Aerobahn)
> The amount of time that a departing flight spent in a stand beyond the carrier-provided SOBT, based on surveillance data

Excess Stand Occupancy Time (Carrier)
> The additional time that a departing flight spent in a Stand beyond the carrier-provided SOBT, based on the carrier-provided AOBT

Exempt (Aero)
> See "Exempt from Hourly Count (Aerobahn)"

Exempt (ATC)
> See "Exempt from Hourly Count (ATC)"

Exempt (Manual)
> See "Exempt from Hourly Count (Manual)"

Exempt from Hourly Count (Aerobahn)
> Roll up value of Exempt (Manual) and Exempt (ATC). If "True," the flight is not counted in the Hourly Operations Count statistic.

Exempt from Hourly Count (ATC)
> Marked "True" (i.e., flight is exempt) when the Reason for Special Handling (ATC) contains an STS code from a configurable list. A flight marked "False" is not exempt.

Exempt from Hourly Count (Manual)
> User-provided field to indicate that a flight is exempt from (i.e., is not counted in) the Hourly Operations Count statistic. "True" indicates the flight is exempt.

EXI
> Extended Range Inbound

EXIT (Manual)
> See "Estimated Taxi In Time (Manual)"

EXIT (Pred)
> See "Estimated Taxi In Time (Predicted)"

Exit Flight Info ID
> Internal unique identification number for the flight associated with the exit event of the gate occupancy. Available in the Gate Occupancy Report.

Exit Point
> Point in space (latitude, longitude, altitude) to which an aircraft is routed after departure, provided in a filed flight plan

Exit Point Clsd
> See "Exit Point Is Closed"

Exit Point Is Closed
True if a flow restriction with a "Closed" type has criteria that returns true for this flight. Otherwise, False.

Exit Target ID
Internal unique identification number for the target associated with the exit event of the gate occupancy. Available in the Gate Occupancy Report.

EXO
Extended Range Outbound

EXOT (CDM)
See "Estimated Taxi Out Time (CDM)"

EXOT (Manual)
See "Estimated Taxi Out Time (Manual)"

EXOT (Nominal)
See "Estimated Taxi Out Time (Nominal)"

EXOT (Pred)
See "Estimated Taxi Out Time (Predicted)"

Ext Taxi Status
See "Extended Taxi Status"

extended range target
Aircraft that is located beyond the range of the airport surface surveillance system (typically > 10 nmi) and that is tracked only by enroute radars or ADS-B receivers.

Extended Startup Time
The number of minutes that Aerobahn needs to add to the estimated taxi time

Extended Taxi Status
Extended, Normal, <empty>

EXU
Extended Range Unknown

EZET
See "Estimated De-ice Pad Entry Time"

EZXT
See "Estimated De-ice Pad Exit Time"

FAA
USA Federal Aviation Administration

Filed Speed in Knots (ATC)
> True airspeed (knots) filed with Flight Plan

Filed Speed Kn (ATC)
> See "Filed True Airspeed (knots)"

Filed True Airspeed (knots)
> FAA-supplied speed for the flight

FIR Entry Time
> The time that a flight enters a "flight information region" (FIR)

FIR On Time
> If the receipt of the FIR (Flight Information Region) Entry time is within a configured number of minutes of the FIR Entry time value itself, the value is "True." If the receipt of FIR Entry time was not within that range, the FIR On Time value is "False."

FIR Timeliness
> Determine if the receipt of the FIR (Flight Information Region) Entry time is within a configured number of minutes of the FIR Entry time value itself.

First Dep Fix Clsd
> See "First Departure Fix Is Closed"

First Departure Fix
> Point in space (latitude, longitude, altitude) to which an aircraft is routed after departure, provided in a filed flight plan

First Departure Fix Is Closed
> True if a flow restriction with a "Closed" type has criteria that returns true for this flight. Otherwise, False.

First Fix
> Point in space (latitude, longitude, altitude) to which an aircraft is routed after departure, provided in a filed flight plan. Corresponds to real-time "First Departure Fix" data field.

Flight
> Registration number, origination and destination airport, flight identification, aircraft type, and other identifying flight details are collectively known as a "flight."

Flight ID
> Zero-padded version of a call sign (e.g., flight CX7 is padded to CX007) based on site configuration

Flight ID (Aerobahn)
> Provides best available Flight ID data based on a hierarchical preference scheme

Flight ID (Manual)
> User-entered Flight ID. When this field is populated, the Flight ID (Aerobahn) field also displays the contents of this field. Aerobahn maintains an association between Flight ID (Manual) and a target as follows: - The "Flight ID (Manual)" field is associated with the Flight that is assigned to the target at the time the field is manually populated. Once the target is no longer associated with that Flight, the field is cleared and the "Flight ID (Aerobahn)" field no longer displays Flight ID (Manual).

Flight ID Inbound
> Zero-padded version of a call sign (e.g., flight CX7 is padded to CX007) per linked inbound flight (Call Sign Inbound)

Flight ID Outbound
> Zero-padded version of a call sign (e.g., flight CX7 is padded to CX007) per linked outbound flight (Call Sign Outbound)

Flight Info ID
> Internal unique identification number for flight information

Flight Leg Status
> A 1-letter code to indicate leg of multi-leg flight. Carrier proprietary.

Flight Manager
> Flight Manager is a server-based process that organizes and distributes flight-plan information. Flight Manager works with other server processes to correlate flights to target flight plans, to update flight plan data, and to support data distribution and recording.

Flight Number
> The portion of the call sign that does not include the carrier identifier (that is, everything after the first three characters). The call sign is contained in the Flight ID. If there is no call sign (that is, if the Flight ID contains Registration), then the Flight Number field will be empty.

Flight Number (Next Flight Leg)
> The portion of the call sign that does not include the carrier identifier for the next leg of the flight. Carrier proprietary.

Flight Number (Prior Flight Leg)
> The portion of the call sign that does not include the carrier identifier for the prior leg of the flight. Carrier proprietary.

Flight Origination Date
> Date the flight is scheduled to depart its origination airport. This field will be the first non-null Flight Origination Date received from any source. Changing time zone settings in workspaces and reports does not affect this field.

Flight Origination Date (AODB)
Date the flight is scheduled to depart its origination airport as received from an AODB data source. Changing time zone settings in workspaces and reports does not affect this field.

Flight Origination Date (ATC)
ASDI-supplied origination date for the flight

Flight Origination Date (Carrier)
Date the flight is scheduled to depart its origination airport as received from a Carrier data source. Changing time zone settings in workspaces and reports does not affect this field. Note: The value received from the carrier is often the origination date, in local time, of the first flight leg

Flight Origination Date (Downline Connection)
The origination date of the flight for the downline connection. Carrier proprietary.

Flight Origination Date (Downline Crew Connection)
The origination date of the flight for the downline crew connection. Carrier proprietary.

Flight Origination Date (Downline Crew Deadhead Connection)
The origination date of the flight for the downline crew deadhead connection. Carrier proprietary.

Flight Origination Date (Next Flight Leg)
The origination date of the flight for the flight's next leg, carrier proprietary. Changing time zone settings in workspaces and reports does not affect this field.

Flight Origination Date (Prior Flight Leg)
The origination date of the flight for the flight's prior leg, carrier proprietary. Changing time zone settings in workspaces and reports does not affect this field.

Flight Origination Date (Upline Connection)
The origination date for the upline connection. Carrier proprietary.

Flight Origination Date (Upline Crew Connection)
The origination date of the flight for the upline crew connection. Carrier proprietary.

Flight Origination Date (Upline Crew Deadhead Connection)
The origination date of the flight for the upline crew deadhead connection. Carrier proprietary.

Flight Priority (ATC)
Indicates whether a flight has been flagged by ATC as a priority. Marked "Active" if Flight Plan contains configurable STS Code. Marked "Active (Man)" if a user manually sets this flag. Marked "Inactive (Man)" if the user manually clears this flag.

Flight Priority (Carrier)

Select "Active" or "Inactive" to show that a flight priority has been flagged by ATC. Aerobahn re-evaluates the sequence position of a flight when its Flight Priority status changes. A flight with "Active" status will occupy an earlier slot in the sequence relative to flights with Flight Priority (Carrier) "Inactive" status.

Flight Release Status

Progress status relative to release of the flight. Carrier proprietary.

Flight Route

Current or final series of waypoints, in the legacy FAA format, the flight follows to travel from the origination to the destination

Flight Route (Filed)

Filed series of waypoints, in the legacy FAA format, that the flight follows to travel from the origination to the destination

Flight Status (ATC)

A Flight Plan status field with these possible values: Filed, Scheduled, Active, and Canceled

Flight Time Mandatory Off Time

The maximum amount of flight time a pilot is allowed in one shift. Shows as "FTMOT" in column header.

Flight Type (AODB)

AODB-provided flight type. Values are site-specific.

Flight Type (Carrier)

Carrier-defined flight types (such as connection carrier)

Flow Group

A group name given to a flight based on the Departure Procedure, First Fix, Transition Route, and Transition Fix. This is used to identify flights with similar flight routes.

Flow Management Status

If the flight has a calculated takeoff time (CTOT), estimated departure clearance time (EDCT), or approval request time (APREQ), the Flow Management Status = Regulated. If the flight does not have one of these properties, the Flow Management Status = Unregulated.

Flow Mgmt Status

See "Flow Management Status"

Flow Restriction Controlled Elements

Comma-delimited list of controlled element criteria from all TMIs affecting the flight

Flow Restriction Miles-In-Trail
Required spacing between aircraft affected by the same TMI in miles

Flow Restriction Minutes-In-Trail
Required spacing between aircraft affected by the same TMI in minutes

Flow Restriction Name
Comma-delimited list of text strings identifying the names of the TMIs affecting the flight

Flow Restriction NAS Elements
Comma-delimited list of NAS (route) element criteria from all TMIs affecting the flight

Flow Restriction Type
Comma-delimited list of one or more of the TMI types that have affected the flight.

Flt #
See "Flight Number"

Flt ID (Aero)
See "Flight ID (Aerobahn)"

Flt ID (Manual)
See "Flight ID (Manual)"

Flt In Countdown
The difference of the current system time (hh:mm) minus "Flt In Time" for the next flight in the gate. This value can be negative

Flt In Time
For inbound flights, the Actual In Block Time (AIBT) (hh:mm) for the next flight is scheduled to arrive in the gate. If AIBT is not available, Estimated In Block Time (EIBT) shows. If AIBT and EIBT are not available, Scheduled In Block Time (SIBT) shows. For outbound flights, Actual Off Block Time (AOBT) - a pre-configured number (N) of minutes. If AOBT is not available, EOBT - N minutes. If AOBT and EOBT are not available, Scheduled Off Block Time (SOBT) - N minutes.

Flt Info ID
Engineering Use Only

Flt Leg Status
Flight Leg Status

Flt Num (Dnline Crew DH)
See "Flight Number (Downline Crew Deadhead Connection)"

Flt Num (Dnline Crew)
See "Flight Number (Downline Crew Connection)"

Flt Num (Dnline)
    See "Flight Number (Downline Connection)"

Flt Num (Next Leg)
    See "Flight Number (Next Flight Leg)"

Flt Num (Prior Leg)
    See "Flight Number (Prior Flight Leg)"

Flt Num (Upline Crew DH)
    See "Flight Number (Upline Crew Deadhead Connection)"

Flt Num (Upline Crew)
    See "Flight Number (Upline Crew Connection)"

Flt Num (Upline)
    See "Flight Number (Upline Connection)"

Flt Orig Date
    See "Flight Origination Date"

Flt Orig Date (AODB)
    See "Flight Origination Date (AODB)"

Flt Orig Date (Dnline Crew DH)
    See "Flight Origination Date (Downline Crew Deadhead Connection)"

Flt Orig Date (Dnline Crew)
    See "Flight Origination Date (Downline Crew Connection)"

Flt Orig Date (Dnline)
    See "Flight Origination Date (Downline Connection)"

Flt Orig Date (Next Leg)
    See "Flight Origination Date (Next Flight Leg)"

Flt Out Countdown
    The difference (hours:minutes) of current system time minus "Flt Out Time" for the
    flight that is in the gate now. This can be a negative value.

Flt Out Time
    NOTE: Inbound flights should always have a null "Flt Out Time." The Actual Off
    Block Time (AOBT, hh:mm) if outbound. If outbound and AOBT is not available,
    "Flt Out Time" is Estimated Off Block Time (EOBT). If outbound and AOBT/EOBT
    are not available, "Flt Out Time" is Scheduled Off Block Time (SOBT). If none of
    these conditions are true, the table cell is blank.

Flt Rel Status
    See "Flight Release Status"

Flt Route
> See "Flight Route"

Flt Route (Filed)
> See "Flight Route (Filed)"

Freeze Screen
> Enables the user to stop the Aerobahn display from updating

FTMOT
> Flight Time Mandatory Off Time. This is the abbreviation that shows in the Selection Details Flight Crew tab.

Fuselage (feet)
> The length of the fuselage in feet

Fuselage (ft)
> The length of the fuselage in feet

Fuselage (m)
> The length of the fuselage in meters

Gate
> For outbounds, this is the gate from which Aerobahn detects the aircraft departing. For inbounds, this is the gate to which Aerobahn detects the aircraft arriving. For flights that occupy gate regions that overlap, Aerobahn determines the gate in accordance with the "Overlapping Gate Parameters" specified in the Gate Restriction Configuration utility.

Gate Act (Surv)
> See "Gate Actual (Surveillance)"

Gate Actual (Surveillance)
> For outbounds, this is the gate from which Aerobahn detects the aircraft departing. For inbounds, this is the gate to which Aerobahn detects the aircraft arriving. For flights that occupy gate regions that overlap, Aerobahn determines the gate in accordance with the "Overlapping Gate Parameters" specified in the Gate Restriction Configuration utility. This field does not change when a persisted target is manually moved or towed.

Gate Asgn - Hardstand (Carrier) Status
> See "Gate Assigned - Hardstand (Carrier) Status"

Gate Asgn (3rd Party)
> See "Gate Assigned (Third Party)"

Gate Asgn (3rd Party) Status
> See "Gate Assigned (Third Party) Status"

Gate Asgn (Aero)
See "Gate Assigned (Aerobahn)"

Gate Asgn (Aero) Status
See "Gate Assigned (Aerobahn) Status"

Gate Asgn (AODB)
See "Gate Assigned (AODB)"

Gate Asgn (AODB) Status
See "Gate Assigned (AODB) Status"

Gate Asgn (ATC)
See "Gate Assigned (ATC)"

Gate Asgn (ATC) Status
See "Gate Assigned (ATC) Status"

Gate Asgn (Carrier)
See "Gate Assigned (Carrier)"

Gate Asgn (Carrier) Status
See "Gate Assigned (Carrier) Status"

Gate Asgn (FIDS)
See "Gate Assigned (FIDS)"

Gate Asgn (FIDS) Status
See "Gate Assigned (FIDS) Status"

Gate Asgn (Man)
See "Gate Assigned (Manual)"

Gate Asgn (Manual) Status
See "Gate Assigned (Manual) Status"

Gate Asgn Est Avail
See "Gate Assigned Estimated Availability"

Gate Assigned - Hardstand (Carrier)
Carrier-provided parking spot

Gate Assigned - Hardstand (Carrier) Status
Status is... - "Occupied" if there is an aircraft in "Gate Asgn - Hardstand (Carrier)" - "Unoccupied" if there is not an aircraft in "Gate Asgn - Hardstand (Carrier)" - "Blocked" if there is an aircraft in another gate that satisfies an "Adjacency Restriction" with respect to "A/C Type (Aero)" and "Gate Asgn - Hardstand (Carrier)" - N/A if "Gate Asgn - Hardstand (Carrier)" is empty

Gate Assigned (Aerobahn)

Provides best available Gate Assigned data based on a hierarchical preference scheme

Gate Assigned (Aerobahn) Status

Best available Assigned Gate Status based on hierarchical preference scheme

Gate Assigned (AODB)

Gate assignment provided by Airport Operational Database

Gate Assigned (AODB) Status

"Occupied" when an aircraft is in the assigned gate. "Unoccupied" when the assigned gate is vacant.

Gate Assigned (ATC)

ATC-provided assigned gate.

Gate Assigned (ATC) Status

• "Occupied" if there is an aircraft currently in "Gate Asgn (ATC)" • "Unoccupied" if there is not an aircraft currently in "Gate Asgn (ATC)" • "Blocked" if there is an aircraft currently in another gate that satisfies an "Adjacency Restriction" with respect to "A/C Type (Aero)" and "Gate Asgn (ATC)" • N/A if "Gate Asgn (ATC)" is empty

Gate Assigned (Carrier)

Carrier-provided gate assignment

Gate Assigned (Carrier) Status

Status is... - "Occupied" if there is an aircraft in "Gate Asgn (Carrier)" - "Unoccupied" if there is not an aircraft in "Gate Asgn (Carrier)" - "Blocked" if there is an aircraft in another gate that satisfies an "Adjacency Restriction" with respect to "A/C Type (Aero)" and "Gate Asgn (Carrier)" - N/A if "Gate Asgn (Carrier)" is empty

Gate Assigned (FIDS)

FAA- or airport-provided gate assignment

Gate Assigned (FIDS) Status

Status is... - "Occupied" if there is an aircraft in "Gate Asgn (FIDS)" - "Unoccupied" if there is not an aircraft in "Gate Asgn (FIDS)" - "Blocked" if there is an aircraft currently in another gate that satisfies an "Adjacency Restriction" with respect to "A/C Type (Aero)'" and "Gate Asgn (FIDS)" - N/A if "Gate Asgn (FIDS)" is empty"

Gate Assigned (Manual)

User-entered gate the aircraft is intended to use. This is primarily used by the Aerobahn Prediction Engine.

Gate Assigned (Manual) Status

Status is... - "Occupied" if there is an aircraft in "Gate Asgn (Manual)" - "Unoccupied" if there is not an aircraft in "Gate Asgn (Manual)" - "Blocked" if there is an aircraft in another gate that satisfies an "Adjacency Restriction" with respect to "A/C Type (Aero)" and "Gate Asgn (Manual)" - N/A if "Gate Asgn (Manual)' is empty"

Gate Assigned (Third Party)

The assigned gate provided by a commercial third party information source

Gate Assigned (Third Party) Status

• "Occupied" if there is an aircraft currently in "Gate Asgn (3rd Party)" • "Unoccupied" if there is not an aircraft currently in "Gate Asgn (3rd Party)" • "Blocked" if there is an aircraft currently in another gate that satisfies an "Adjacency Restriction" with respect to "A/C Type (Aero)" and "Gate Asgn (3rd Party)" • N/A if "Gate Asgn (3rd Party)" is empty

Gate Assigned Estimated Availability

The latest "EOBT (Aero)" of any flight that occupies or blocks the "Gate Asgn (Aero)" (in accordance with Gate Restriction Configurations). This value is null if no flights occupy or block the "Gate Asgn (Aero)," if "Gate Currently Occupying" is not null, or if "Direction" is outbound.

Gate Assignment On Time

Tells whether gate/stand assignment was received in a reasonable amount of time in respect to ELDT (ATC)

Gate Assignment Timeliness

Tells whether the assigned gate or stand was received in a reasonable amount of time

Gate Curr Occ

See "Gate Currently Occupied"

Gate Currently Occupying

Gate that the aircraft currently occupies. Blank when aircraft does not occupy a gate. For flights that occupy gate regions that overlap, Aerobahn determines the gate in accordance with the "Overlapping Gate Parameters" specified in the Gate Restriction Configuration utility. This field changes when a persisted target is manually moved or towed.

Gate Occ Time

See "Gate Occupancy Time"

Gate Occupancy Start Time (Carrier)

Date and time derived from carrier-provided data

Gate Occupancy Time
Amount of time the aircraft has occupied the gate

Gate Occupancy Time (Carrier)
Carrier-provided amount of time that the aircraft has occupied the gate

Gate Pred
See "Gate Prediction"

Gate Predicted
For an inbound flight, the gate that Aerobahn expects the flight to use. This predicted gate is used as the route end point during prediction, and the predicted routes use this as the destination end point.

Gate To Deicing Dur (Pred)
See "Gate To Deicing Duration (Predicted)"

Gate To Deicing Duration (Predicted)
The predicted time it will take the target to taxi from its gate to predicted de-icing pad. Field is only populated if the Aerobahn Prediction Engine is enabled and flight is outbound and deicing.

Gate To Metering (Pred)
See "Gate to Metering Point Duration (Predicted)"

Gate To Metering Point Duration (Predicted)
The predicted time it will take the target to taxi from its gate to predicted metering point. Field is only populated if the Aerobahn Prediction Engine is enabled and flight is outbound and metering.

Gate To Runway (Pred)
See "Gate to Runway Duration (Predicted)"

Gate To Runway Duration (Predicted)
The predicted time it will take the target to taxi from its gate to predicted runway. Field is only populated if the Aerobahn Prediction Engine is enabled, and flight is outbound.

GDP
See "Ground Delay Program"

Gnd Time Obj
See "Ground Time Objective"

Ground Delay Program
A traffic management initiative (TMI) that holds aircraft at their departure airport to manage demand at their destination. The US FAA evaluates demand vs. capacity to determine when a TMI should be created.

Ground Stop

A traffic management initiative (TMI) that prevents selected flights from taking off until the program has ended. A ground stop (GS) is often the result of a weather event and is usually shorter than a ground delay program. A GS can end suddenly.

Ground Stop (Manual)

User-entered indication that the flight's destination airport is currently under a ground stop

Ground Time Objective

Time in hours. Carrier proprietary.

GS

See "Ground Stop"

GTI

Taxi In Gate

GTO

Taxi Out Gate

Has CTOT

If "True" the flight has a Calculated Take Off Time. If "False," the flight does not have a Calculated Take Off Time.

Has Suspended Flight Plan

Manual indicator to mark a flight plan as suspended

Has Suspended FP

See "Has Suspended Flight Plan"

Heading (Deg)

See "Heading (Degrees)"

Heading (Degrees)

The bearing of the target derived from the surveillance source represented in degrees, where 0 is North

Heavy Des

See "Heavy Designator"

Heavy Designator

FAA indication of whether or not an aircraft is certified to operate above an FAA-set weight threshold. In a data field or data block, a green check mark shows aircraft is a Heavy, and a red X mark shows aircraft is not a Heavy. A Heavy aircraft icon is marked with bars across the fore and aft sections of the icon.

Hide Scratchpad Text

Enables the user to toggle off the display of scratchpad text (i.e., a flight data field containing free-form text entered by another user)

Hold (Carrier)

See "Is Holding (Carrier)"

Hold Cnt

See "Hold Count"

Hold Count

Number of times the flight has transitioned into the Holding state

Hold Dur

See "Hold Duration"

Hold Duration

Total amount of time aircraft occupied the Possibly Holding, Probably Holding, or Holding states, for the current possible or probable hold, or the most recent actual hold. Populated whenever the flight is in the Possibly Holding, Probably Holding, or Holding states, and when the flight is not holding after holding at least once. Resets when the aircraft re-enters the Possibly Holding state after being in the Not Holding state. If, however, the aircraft returns to Not Holding without entering Holding, the field resets to show the time for the most recent actual hold, if there was one.

Hold End

See "Hold End Time"

Hold End Time

Time at which the aircraft last transitioned out of the Holding state. Populated whenever the flight is not holding after holding at least once. Resets to null when the aircraft re-enters the Possibly Holding state after being in the Not Holding state. If, however, the aircraft returns to Not Holding without entering Holding, the field resets to show the time for the most recent actual hold, if there was one.

Hold Pattern

The pattern (if any) at which an aircraft in the Possibly Holding, Probably Holding, or Holding states is located. Populated whenever the flight is in the Possibly Holding, Probably Holding, or Holding states, and when the flight is not holding after holding at least once. Logs hold a pattern name for the most recent hold only. This resets when the aircraft re-enters the Possibly Holding state after being in the Not Holding state, but if the aircraft returns to Not Holding without entering Holding, the log resets to show information for the last hold. Possible Values: standard FAA hold pattern name (Navaid * State Code or Fix name Fix type * State Code * ICAO Region, e.g. ADOKE WP*AR*K4). Field is <null> if aircraft is in the Not Holding state.

Hold Pnt (Manual)
> See "Holding Point (Manual)"

Hold Pnt Dur (Manual)
> See "Holding Point Duration (Manual)"

Hold Start
> See "Hold Start Time"

Hold Start Time
> Time at which the aircraft first entered the Possibly Holding state, for the current possible or probable hold, or the most recent actual hold. Populated whenever the flight is in the Possibly Holding, Probably Holding, or Holding states, and when the flight is not holding after holding at least once. Resets when the aircraft re-enters the Possibly Holding state after it was in the Not Holding state. If, however, the aircraft returns to Not Holding without entering Holding, it resets to show the time for the most recent actual hold, if there was one.

Hold State
> The probability that the aircraft is in an airborne hold. Possible Values: Not Holding, Possibly Holding, Probably Holding, Holding.

Hold Total Dur
> See "Hold Total Duration"

Hold Total Duration
> Sum of the durations for all holds the flight has experienced

Holding Point (Manual)
> User-entered taxiway segment designated for metering

Holding Point Duration (Manual)
> The user-entered amount of time that an aircraft is expected to wait at the assigned metering point

Host
> See "Conference Host"

I-AIBT (Carrier)
> See "Inbound - Actual In Block Time (Carrier)"

I-ALDT (ATC)
> See "Inbound - Actual Landing Time (ATC)"

I-ATOT (ATC)
> See "Inbound - Actual Take Off Time (ATC)"

I-EIBT (Carrier)
> See "Inbound - Estimated In Block Time (Carrier)"

I-ELDT (ATC)

See "Inbound - Estimated Landing Time (ATC)"

IATA

International Air Transport Association

ICAO

International Civil Aviation Organization

ID

As used in the Active Flights tool, "ID" refers to the Aerobahn Auto Aircraft ID feature. Auto Aircraft ID is configured to display one of the following aircraft identifiers: ICAO Flight ID, Registration Number, or Mode S ID.

INB

Inbound, an aircraft categorized as an "arrival"

Inbound - Actual In Block Time (Carrier)

Carrier-provided gate arrival time for the associated inbound flight

Inbound - Actual Landing Time (ATC)

ATC-provided landing time for the associated inbound flight

Inbound - Actual Take Off Time (ATC)

ATC-provided take off time for the associated inbound flight

Inbound - Actual Take Off Time (ATCO

ATC-provided take off time for the associated inbound flight

Inbound - Estimated In Block Time (Carrier)

Carrier-provided gate arrival time for the associated inbound flight

Inbound - Estimated Landing Time (ATC)

ATC-provided landing time for the associated inbound flight

Indicate De-ice Decisions

Enables the user to indicate whether or not a flight will de-ice and, if so, to indicate the de-ice pad to be used

International or Domestic Indicator

Based on FIDS, carrier, or FAA ASDI information, indicates whether a flight is "International" or "Domestic"

Intl/Dom Ind

See "International or Domestic Indicator"

Invalid TMAT

An indicator that the estimated off-block time (EOBT) for a flight is too late to meet Target Movement Area Time (TMAT)

IROPS Status
> See "Irregular Ops Status"

Irregular Operations Status
> A status code. Carrier proprietary.

Irregular Ops Status
> A status code. Carrier proprietary.

Is a Compliant Aircraft
> True=compliant/False=non-compliant. Derived from departure metering compliance status.

Is a Dummy Flight
> True if target is not correlated to a scheduled flight.

Is a Missed Approach
> True once a missed approach is detected until the aircraft is once again on a final approach

Is a Missed Aprch
> Is a Missed Approach

Is a Persisted Aircraft
> True only when the aircraft is a persisted aircraft. An aircraft may persist automatically in a persistence region, or a user may manually designate an aircraft as a persisted aircraft.

Is a Placeholder
> True if a user-created placeholder. Otherwise, false.

Is a Tow Vehicle
> Indication of whether a vehicle is a tow vehicle; set to True if the vehicle's Mode S or Call sign is on a configurable list of tow vehicles identifiers and False if not on the configurable list.

Is a Vehicle?
> True only when the Target Type is "Vehicle"

Is an Aborted Take Off
> True only when Aerobahn detects a rejected take off

Is an Extended Taxi
> A taxi time greater than a pre-configured value. Outbound total taxi time > N minutes, inbound total taxi time > M minutes, where N and M are configurable on the server.

Is Cancelled?
> True if a flight is cancelled, false otherwise

Is Compliant
> See "Is a Compliant Aircraft"

Is Flow Restricted
> True if any flow restriction criteria return true for this flight. False otherwise.

Is Holding (Carrier)
> Boolean indicator of if flight is holding received from carrier data source

Is On Time
> True = on time. False = delayed. Derived from surveillance.

Is Veh?
> See "Is a Vehicle?"

Java Runtime Environment Parameters
> Settings that affect the performance of Java applets

JRE
> Java Runtime Environment

Last Arr Fix
> See "Last Arrival Fix"

Last Arrival Fix
> Final Flight Route Fix before the aircraft lands at the airport

Last Fix
> See "Last Arrival Fix"

Last Fix Coord Time - Act
> See "Last Fix Coordination Time - Actual"

Last Fix Coord Time – Est
> See "Last Fix Coordination Time – Estimated"

Last Fix Coord Time – Prop
> See "Last Fix Coordination Time – Proposed"

Last Fix Coordination Time - Actual
> Time of pilot/FAA coordination at the last fix

Last Fix Coordination Time – Estimated
> Estimated time of pilot/FAA coordination at the last fix

Last Fix Coordination Time – Proposed
> Scheduled time of pilot/FAA coordination at the last fix

Launch OpsView
> Enables the user to access the OpsView workspace and reporting functionality

Launch Playback
Enables the user to activate a replay of the Aerobahn display from a previous time

Launch TaxiView
Enables the user to access the TaxiView workspace and real-time tools

Layover LTA for FA
Layover Latest Time of Arrival for Flight Attendant. The time that it is necessary for duty to end so that the flight attendant can get enough rest to pursue the next duty. Shows as "Layover LTA" in column header.

Left Gate (outbound)
See "Actual Off Block Time (Surveillance)"

Left Parking Area (outbound)
Time of gate-stand exit as determined by surveillance-driven events interpreted by Aerobahn

Linked Diversion Flight Info ID
The unique identifier for diversion leg associated with a flight. A flight, RecFlt, has an associated diversion leg if its "Diversion Status" is "Recovery" and if there is another flight, DivFlt, that has these properties: - "Diversion Status" is "Diversion" - "'Flight Id (Aero)" for DivFlt and for RecFlt are equal - "Dest" for DivFlt and for RecFlt are equal - "Div To" for DivFlt and for RecFlt are equal - "Orig" Field is null if a flight has no associated diversion leg

Linked Inbound Flight Info ID
The unique identifier for the inbound leg associated with a flight. Field is null if a flight is inbound or has no associated inbound leg.

Linked Outbound Flight Info ID
The unique identifier for the outbound leg associated with a flight. Field is null if a flight is outbound or has no associated outbound leg.

Linked Recovery Flight Info ID
The unique identifier for the recovery leg associated with a flight. A flight, DivFlt, has an associated recovery leg if its - "Diversion Status" is "Diversion" and there is another flight, RecFlt, that has these properties: - "Diversion Status" is "Recovery" - "Flight Id (Aero)" for RecFlt and DivFlt are equal - "Dest" for RecFlt and DivFlt are equal - "Diversion Orig" for RecFlt and DivFlt are equal - "Orig" is null if a flight has no associated diversion leg

Linked Tow Aircraft (Aerobahn)
Call sign of the aircraft currently associated with the tow vehicle target that was determined by the surveillance-based tow state logic or manually set by a user. Only set for targets whose Target Type is Vehicle.

Linked Tow Aircraft (Manual)
Call sign of the aircraft currently associated with the tow vehicle target determined by a user action.

Linked Tow Aircraft (Surveillance)
Call sign of the aircraft currently associated with the tow vehicle target that was determined by the surveillance-based tow state logic. Only set for targets whose Target Type is Vehicle.

Linked Tow End Location Flight Info ID
Unique identifier for the flight that occupies or blocks "Tow End Loc (Aero)" for the flight. This value is null if "Tow Status (Aero)" is "Not Towing" or if no flights occupy or block "Tow End Loc (Aero)."

Linked Tow Vehicle (Aerobahn)
Call sign of the tow vehicle currently associated with the aircraft target that was determined by the surveillance-based tow state logic or manually set by a user. Only set for targets whose Target Type is Aircraft.

Linked Tow Vehicle (Manual)
Call sign of the tow vehicle currently associated with the aircraft target determined by a user action.

Linked Tow Vehicle (Surveillance)
Call sign of the tow vehicle currently associated with the aircraft target that was determined by the surveillance-based tow state logic. Only set for targets whose Target Type is Aircraft.

Lnk Div ID
See "Linked Diversion Flight Info ID"

Lnk Inb ID
See "Linked Inbound Flight Info ID"

Lnk Out ID
See "Linked Outbound Flight Info ID"

Lnk Rec ID
See "Linked Recovery Flight Info ID"

Lnk Tow AC (Aero)
See "Linked Tow Aircraft (Aerobahn)"

Lnk Tow AC (Manual)
See "Linked Tow Aircraft (Manual)"

Lnk Tow AC (Surv)
See "Linked Tow Aircraft (Surveillance)"

Lnk Tow End ID
    See "Linked Tow End Location Flight Info ID"

Lnk Tow Veh (Aero)
    See "Linked Tow Vehicle (Aerobahn)"

Lnk Tow Veh (Manual)
    See "Linked Tow Vehicle (Manual)"

Lnk Tow Veh (Surv)
    See "Linked Tow Vehicle (Surveillance)"

Load Display Control toolbar
    Enables the user to access the toolbar used to zoom, pan, and rotate the map

Load Workspace
    Enables the user to read in a previously saved workspace

Login Workspace
    Specifies the workspace to be loaded when the user logs in. This setting can be changed by a user with "Set User Login Workspace" permission through the TaxiView > Workspace menu.

Manage Airport Configurations
    Enables a user to edit a configuration that can be scheduled

Manage Chat Channels
    Enables the user to create chat channels, add users to, or remove chat channels

Manage Group Licensing
    Enables the user to assign how many licenses (simultaneous logins) particular user groups receive

Manage Group Rules and Watch Lists
    Enables the user to create, edit, or remove rules and watchlists for entire groups of users

Manage Region Statuses
    Enables the user to create, modify, and remove region statuses in the Region Status tool

Manage Report Purge Threshold
    Enables the user to set a number of days before the system automatically purges a scheduled report

Manage Report Type
    Permits the user to manage Standard Report Types for others

Manage Users and Groups
Enables the user to add and remove users and groups and to edit their settings and permissions

Manage Vehicle Registration
Enables the user to add vehicles and vehicle information to the system (when system is configured for vehicle tracking)

Manage Workflows and States
Enables the user to configure workflows and flight states that users can use to manually track the status of flights

Manual Call Sign
See "Flight ID (Manual)"

Manually Corrected Flight
A user associated the target (aircraft) with a particular flight. This overrides the automatic correlation made by Aerobahn.

Marketing Carrier
See "Carrier Code Marketing"

Max Lndg Wt (kg)
See "Maximum Landing Weight (kg)"

Max Lndg Wt (lbs)
See "Maximum Landing Weight (lbs)"

Max Occ Time
In the De-ice Statistics Data Set, the longest occupancy of a de-icing pad region by an aircraft during the sample time

Max Wait Time
In the De-ice Statistics Data Set, the longest time that a flight spent waiting in a de-icing queue before entering the de-icing pad

Maximum Landing Weight
The maximum weight approved for normal landing of a particular aircraft

Maximum Landing Weight (kg)
The maximum weight (in kilograms) approved for normal landing of a particular aircraft

Maximum Landing Weight (lbs)
The maximum weight (in pounds) approved for normal landing of a particular aircraft

Maximum Memory

Maximum size, in megabytes, of the memory allocation pool for the Aerobahn Java applets on the client PC

Maximum Take Off Weight

Weight, above which, an aircraft cannot become airborne

MDS

Multistatic Dependent Surveillance

Meas FL

See "Measured Flight Level"

Measured Flight Level

Surveillance-provided (MLAT, ASDE-X) altitude in 100ft increments

METAR

An hourly aviation weather report

Metering Compliance Status

Indication of whether or not the flight was compliant with its departure metering time

Metering Compliance Status - Simple

Indication of whether or not the flight was compliant with its departure metering time. Value is from the Metering Compliance Status data field.

Metering Delay

Recommended off-block time (ROBT) - Scheduled off-block time (SOBT) in minutes

Metering Delay (minutes)

Recommended off-block time (ROBT) - Scheduled off-block time (SOBT) in minutes

Metering Point

A single region or a group of contiguous regions that is used to determine metering compliance based on the time at which a flight enters and exits that region or group of regions

Metering Point (Manual)

User-entered taxiway segment designated for metering.

Metering Point Duration (Manual)

The user-entered amount of time that an aircraft is expected to wait at the assigned metering point.

Metering Point To Runway Duration (Predicted)
> The predicted time it will take the target to taxi from its predicted metering point to predicted runway. Field is only populated if the Aerobahn Prediction Engine is enabled and flight is outbound and metering duration.

Metering Status (Aerobahn)
> Value derived from surveillance and manual input

Metering Status (Manual)
> User-entered value derived from AMAT

Metering Status (Surveillance)
> Derived from surveillance and TMAT

Metering To Rwy Dur (Pred)
> See "Metering Point To Runway Duration (Predicted)"

Milestone 01 Time
> The time at which the departure flight or associated inbound flight completed Milestone 1

Milestone 02 Time
> The time at which the departure flight or associated inbound flight completed Milestone 2

Milestone 03 Time
> The time at which the departure flight or associated inbound flight completed Milestone 3

Milestone 04 Time
> The time at which the departure flight or associated inbound flight completed Milestone 4

Milestone 05 Time
> The time at which the departure flight or associated inbound flight completed Milestone 5

Milestone 06 Time
> The time at which the departure flight or associated inbound flight completed Milestone 6

Milestone 07 Time
> The time at which the departure flight or associated inbound flight completed Milestone 7

Milestone 08 Time
> The time at which the departure flight or associated inbound flight completed Milestone 8

Milestone 09 Time
The time at which the departure flight or associated inbound flight completed Milestone 9

Milestone 10 Time
The time at which the departure flight or associated inbound flight completed Milestone 10

Milestone 11 Time
The time at which the departure flight or associated inbound flight completed Milestone 11

Milestone 12 Time
The time at which the departure flight or associated inbound flight completed Milestone 12

Milestone 13 Time
The time at which the departure flight or associated inbound flight completed Milestone 13

Milestone 14 Time
The time at which the departure flight or associated inbound flight completed Milestone 14

Milestone 15 Time
The time at which the departure flight or associated inbound flight completed Milestone 15

Milestone 16 Time
The time at which the departure flight or associated inbound flight completed Milestone 16

Min Occ Time
In the De-ice Statistics Data Set, the shortest occupancy of a de-icing pad region by an aircraft during the sample time

Min Wait Time
In the De-ice Statistics Data Set, the shortest time that a flight spent waiting in a de-icing queue before entering the de-icing pad

Minimum Memory
Initial size, in megabytes, of the memory allocation pool for the Aerobahn Java applets on the client PC

Minimum Turn-round Time (Aerobahn)
Shortest amount of time required to ready an aircraft for departure after arrival. Also referred to as "Minimum Time to Turn."

Minimum Turn-round Time (Default)
Shortest amount of time required to ready an aircraft for departure after arrival. Also referred to as "Minimum Time to Turn."

Minimum Turn-round Time (Manual)
Shortest amount of time required to ready an aircraft for departure after arrival. Also referred to as "Minimum Time to Turn."

Mode 3/A
Mode 3/A codes are allocated by air traffic control authorities for regional use. The identity code value is set (as 4 octal digits) by the pilot, as directed by air traffic control instructions. The value may sometimes be changed during flight. (Received from ASDE-X, A-SMGCS.)

Mode 3/A (ATC)
Mode 3/A codes are allocated by air traffic control authorities for regional use. The identity code value is set (as 4 octal digits) by the pilot, as directed by air traffic control instructions. The value may sometimes be changed during flight. (Received from ATC data sources)

Mode S
Mode S is a discrete selective interrogation rather than a general broadcast. Mode S transponders ignore interrogations not addressed with their unique identity code, reducing channel congestion.

Model
See "Aircraft/Vehicle Type (Aerobahn)"

Modify Active Flights Settings
Enables the user to change the way the Active Flights tool works

Modify Advanced User Settings
Enables the user to configure advanced settings for other users, such as proprietary data access, java runtime settings, powered by icon display, and report size limits

Modify Airport Demand Settings
Enables the user to change the way the Airport Demand tool works

Modify Chat Settings
Enables the user to change the way the Chat tool works

Modify Current Runway Usage Settings
Enables the user to change the way the Current Runway Usage tool works

Modify De-icing Throughput Tool Settings
Enables the user to change the way the De-icing Throughput tool works

Modify Delays by Region Settings
Enables the user to change the way the Delays by Region tool works

Modify Delays by Region tool
Enables the user to change the way the Delays by Region tool works

Modify Manual Callsigns
Enables the user to tag a flight with an additional callsign

Modify Manual Delay Reason
Enables the user to enter a reason for a flight being delayed at the gate (and assigned a Target Off-Block Time [TOBT])

Modify Manual EDCTs
Enables the user to assign a flight an estimated departure clearance time

Modify Manual Gates
Enables the user to assign a flight to a gate. This field overrides the automatic assigned gate in Gate Assigned (Aero).

Modify Manual Metering Point
This attribute is available only at sites that use departure metering. Enables the user to assign to a flight a location (on the movement area) where it will wait off the gate until its target movement area time.

Modify Manual Runways
Enables the user to assign to a flight a runway. This field overrides the automatic predicted runway in Runway (Aero).

Modify Manual TOBTs
Enables the user to indicate a flight has an airline-imposed gate delay (affects metering assignment)

Modify Map Display Settings
Enables the user to change the way the Map Display tool works

Modify Operation Counts - Airport Settings
Enables the user to change the way the Operation Counts - Airport tool works

Modify Operation Counts - Carrier Settings
Enables the user to change the way the Operation Counts - Carrier tool works

Modify Operation Counts - Runway Settings
Enables the user to change the way the Operation Counts - Runway tool works

Modify Operations Timeline tool Settings
Enables the user to change the way the Operations Timeline tool works

Modify or Add Elements to Workspace Layout
Enables the user to add or remove tools, or to change the arrangement of tools in a workspace

Modify Other's Passwords or E-mail Addresses
Enables the user to reset passwords or to change E-mail addresses belonging to other users

Modify Preferences
Enables the user to change the appearance of the map, the targets, or the target data blocks

Modify Region Occupancy Monitor Settings
Enables the user to change the way the Region Occupancy Monitor tool works

Modify Scratchpad Text
Enables the user to edit scratchpad text (i.e., to edit a flight data field containing free-form text entered by another user)

Modify Selection Details Settings
Enables the user to change the way the Selection Details tool works

Modify User Settings
Enables the user to modify user settings for other users such as the date format and whether or not the performance optimization popup is active

Modify Watch List Graph Settings
Enables the user to change the way the Watch List Graph tool works

Modify Watch List Viewer tool
Enables the user to change the way the Watch List Viewer tool appears and works

Modify Workspace Settings
Enables the user to change the way a workspace is configured

Movement Area Entrance Time
For outbound aircraft, the time at which the aircraft entered the movement area. Not applicable to inbound aircraft.

Movement Area Exit Time
For inbound aircraft, the time at which the aircraft exited the movement area. Not applicable to outbound aircraft.

Movement Area To Take Off Duration (Predicted)
The predicted time it will take the target will taxi in the movement area. Field is only populated if the Aerobahn Prediction Engine is enabled and flight is outbound.

Movement State
> A real-time value (derived from position updates) indicating whether the target is "Moving" or "Stationary"

Movement Time
> See "Taxi Time in Movement Area"

MS1 Time
> See "Milestone 01 Time"

MS10 Time
> See "Milestone 10 Time"

MS11 Time
> See "Milestone 11 Time"

MS12 Time
> See "Milestone 12 Time"

MS13 Time
> See "Milestone 13 Time"

MS14 Time
> See "Milestone 14 Time"

MS15 Time
> See "Milestone 15 Time"

MS16 Time
> See "Milestone 16 Time"

MS2 Time
> See "Milestone 02 Time"

MS3 Time
> See "Milestone 03 Time"

MS4 Time
> See "Milestone 04 Time"

MS5 Time
> See "Milestone 05 Time"

MS6 Time
> See "Milestone 06 Time"

MS7 Time
> See "Milestone 07 Time"

MS8 Time
See "Milestone 08 Time"

MS9 Time
See "Milestone 09 Time"

MSDP
Multi-sensor Data Processor

MTOW
Maximum Take Off Weight

Mtrg Comp Smp
See "Metering Compliance Status - Simple"

Mtrg Dly (min)
See "Metering Delay (minutes)"

Mtrg Sts (Manual)
See "Metering Status (Manual)"

Mtrg Sts (Surv)
See "Metering Status (Surveillance)"

MTTT (Aero)
See "Minimum Turn-round Time (Aerobahn)"

MTTT (Default)
See "Minimum Turn-round Time (Default)"

MTTT (Manual)
See "Minimum Turn-round Time (Manual)"

Mvmnt Ent Time
See "Movement Area Entrance Time"

Mvmnt Ext Time
See "Movement Area Exit Time"

Mvmt Area Dur (Pred)
See "Movement Area To Take Off Duration (Predicted)"

NAS
U. S. National Airspace System

Next Fld ID (Aero)
The Flight ID (Aerobahn) of the next flight that is scheduled to occupy the gate.
See "Flight ID (Aerobahn)".

Next Flight in Gate EIBT
See "Next Flight in Gate Estimated in Block Time"

Next Flight in Gate Estimated Arrival Time
EIBT of the next flight expected to occupy the gate (actual or assigned) of the flight of interest. The actual gate is used if a value is available. Otherwise, the assigned gate is used otherwise.

Next Flight in Gate Estimated In Block Time
The "EIBT (Aero)" for the "'Next Flight in Gate ID," or, if "EIBT (Aero)" is not available, the "SIBT (Aero)" of "Next Flight in Gate ID."

Next Flight in Gate ID
Among the set of flights whose "Gate Asgn (Aero)" is equal to or blocked by "Gate Curr Occ" (in accordance with Gate Restriction Configurations), this is the Flight ID of the flight with the earliest "EIBT (Aero)." This value is null if "Gate Curr Occ" is null.

Next Flight in Stand EIBT
See "Next Flight in Stand Estimated In Block Time"

Next Flight in Stand Estimated In Block Time
The "'EIBT (Aero)" for the "Next Flight in Stand ID"

Next Flight in Stand ID
Among the set of flights whose "Stand Asgn (Aero)" is equal to or blocked by "Stand Curr Occ" (in accordance with Gate Restriction Configurations), this is the Flight ID of the flight with the earliest "EIBT (Aero)." This value is null if "Stand Curr Occ" is null.

No Surveillance Inbound
An inbound flight that is not presently under surveillance

No Surveillance Outbound
An outbound flight that is not presently under surveillance

NTP
Network Time Protocol

Num of Eng
See "Number of Engines"

Number of Engines
The number of engines on the aircraft

Observation Time
The date and time of the observation/report

Occ. Time

See "Occupancy Time"

Occupancy Time

The calculated difference between the time at which a target exited a particular region and the time at which that target entered that region.

Off Block Delay (FIDS)

Off-block date and time derived from the airport FIDS

OIN

Outside Surveillance Inbound

On Active (outbound)

Aerobahn-measured time (derived from surveillance) at which an aircraft enters the active runway for take off

On Time Status

Indication of whether flight is actually on schedule or expected to arrive or depart on schedule. Possible Values: On Time, Late

ONM

On Movement Area (direction unknown)

ONR

On Ramp (direction unknown)

Op State

See "Operational State"

Op State (ATC)

See "Operational State (ATC)"

Operating

In the Selection Details tool, Flight Crew tab, "Operating" means that the crew member is at work on the selected flight

Operating Carrier

The airline that flies the plane carrying the passengers and/or cargo

Operating or Deadheading

Crew members are "operating" if they are working on the flight. They are "deadheading" if they are not working the flight (basically passengers). Shows as "Oper/Dead" in column header.

Operation

Inbound, Outbound, Parked, or Unknown

Operational State
> Brief descriptions of the current action being performed by the target (i.e., the target's current state): Approach (APR), Arrived (ARV), Departed (DEP), Enroute Inbound (ENI), Enroute Outbound (ENO), Enroute (ENR), Extended Range Inbound (EXI), Extended Range Outbound (EXO), Extended Range Unknown (EXU), Taxi In Gate (GTI), Taxi Out Gate (GTO), Outside Surveillance Inbound (OIN), On Movement Area (ONM), On Ramp (ONR), Outside Surveillance Outbound (OUT), Persisted (PER), Removed (RMV), Taxi in Movement Area (TIM), Taxi in Ramp (TIR), Taxi Out Movement Area (TOM), Taxi Out Ramp (TOR), Taxi Out Unknown (TOU), Unknown (UNK)

Operational State (ATC)
> Brief descriptions of the current action being performed by the flight determined by the FAA.

Operational State Elapsed Time
> Amount of time the aircraft has been in the current operational state

Operator Email
> The email address associated with the operator of the aircraft

OpsView Data Set Limit
> Maximum size, in bytes, for an OpsView dataset. If the data set is greater than this, the user will not be able to display the data as a report in Aerobahn. The data will, however, be available for export as a comma-separated values (CSV) file.

Orig
> See "Origination Airport"

Orig (ICAO)
> See "Origination Airport (ICAO)"

Origination Airport
> In order of precedence based on availability: Origination Airport from FAA, Origination Airport from Carrier

Origination Airport (ICAO)
> The ICAO code representing the origination airport

OT Status
> See "On Time Status"

OUT
> Outside Surveillance Outbound

Outbound Flight Punctual

The absolute difference between AOBT and SOBT is less than X minutes AND the absolute difference between AOBT and TOBT is less than Y minutes (True/False)

Overlap Time

Shows the difference of "Flt In Time" minus "'Flt Out Time" when both values are available. If both values are not available, this field is empty. This field can have a negative value.

Overlap/Countdown

Shows the Overlap Time when available. (See "Overlap Time.") If Overlap Time is not available, shows the Flt In Countdown. (See "Flt In Countdown.")

Pad Grp

See "De-ice Pad Group"

Pad Throughput

The number of flights that exited the pad during the sample period

Parking Area

Aerobahn region name for a designated parking area

Parking Region Time (Aerobahn)

The amount of time that an aircraft occupied a parking area (based on surveillance)

Passenger Count (AODB)

Total passenger count. Provided by AODB.

Passenger Count (Carrier)

Total passenger count (carrier-provided data)

Passenger Count (Downline Connection)

Sum of passengers with connections to a downline flight. Carrier proprietary.

Passenger Count (Manual)

Total passenger count entered by user

Passenger Count Local (AODB)

Local passenger count (passengers arriving to or departing from local airport) provided by AODB.

Passenger Count Status

Which passenger count has been received. Carrier proprietary.

Passenger Count Status (Carrier)

Which passenger count has been received (carrier proprietary).

Passenger Count Total
Number of passengers (carrier-provided data)

Pax Ct (AODB)
See "Passenger Count (AODB)"

Pax Ct (Carrier)
See "Passenger Count (Carrier)"

Pax Ct (Manual)
See "Passenger Count (Manual)"

Pax Ct Conn (Dnline)
See "Passenger Count (Downline Connection)"

Pax Ct Local (AODB
See "Passenger Count Local (AODB)"

Pax Ct Status
Passenger Count Status

Pax Ct Status (Carrier)
See "Passenger Count Status (Carrier)"

Pax Ct Thru
See "Passenger Count Thru"

Pax Ct Total
See "Passenger Count Total"

PDS
See "Pre Departure Sequencer"

PDU
Power Distribution Unit

PER
Persisted

Perform Coordinator Actions
Enables the user to perform all operator actions (except unassign a flight) for any carrier group, create new allocations in static bins, add a manual AMAT, override a flight's compliance status, change the carrier group of a flight, change the carrier group of an empty slot, and reallocate or reassign one or more static bins

Persisted
A target is considered "Persisted" when surveillance for that target is lost, when the target is in a defined persistence-enabled region, and persistence is enabled. Based on user-configured preferences, the target displays as persisted.

Persisted State
> Indicates persistence status: Not Persisted; Persisted; Persisted, Manually
> Moved; or Persisted, Manually Added

Placeholder?
> See "Is a Placeholder"

POBT
> See "Preliminary Target Off Block Time"

Pos Lat/Lon (d)
> See "Position Lat/Lon (degrees)"

Pos X/Y (m)
> See "Position X/Y (meters)"

Position Lat/Lon (degrees)
> Lat/Lon coordinates of flight

Position X/Y (meters)
> Coordinates of flight relative to system center

Powered By (All)
> Enables display of features in the Powered By list on the splash (Portal) page

Pre Departure Sequencer
> The "Pre Departure Sequencer (PDS) generates the PSAT/TSAT until ATC
> provides the final time.

Pred Dep Delay (ATC)
> See "Predicted Departure Delay (ATC)"

Pred DI Loc (Aero)
> See "Predicted De-ice Location (Aerobahn)"

Pred DI Loc (ATC)
> See "Predicted De-ice Location (ATC)"

Pred DI Loc (Man)
> See "Predicted De-ice Location (Manual)"

Pred DI Loc (Manual)
> See "Predicted De-ice Location (Manual)"

Predicted De-ice Location (Aerobahn)
> Calculated de-ice pad location that takes into account the configured de-ice
> location, de-ice queue occupancies, any manual entries, actual de-ice location
> occupancies, and constraints such as maximum queue length and duration and
> the need to balance use of the de-ice pads.

Predicted De-ice Location (ATC)
De-ice pad derived from ATC data

Predicted De-ice Location (Manual)
User-entered de-ice pad

Predicted Departure Delay (ATC)
Excess time the flight is expected to spend taxiing in the movement area over and above the nominal taxi time. Rounded to the nearest minute.

Preliminary Startup Approval Time (Aerobahn)
The time (generated by the Aerobahn Pre-Departure Sequencer after taking into account TOBT, CTOT, and/or the traffic situation) that an aircraft can expect to receive startup / push back approval

Preliminary Target Off Block Time
Aerobahn calculates this value (POBT) for each outbound flight when the flight plan for the flight is made active and there is no Target Off Block Time (TOBT). When the Target Off Block Time (TOBT) is assigned for the flight, Aerobahn clears the Preliminary Target Off Block Time (POBT).

Preliminary Target Startup Approval Time
Aerobahn calculates this value (PSAT) under these conditions: The flight plan for the flight is made active. The TOBT is null. And, the POBT is not null. When the flight is assigned a Target Startup Approval Time (TSAT), PSAT status is cleared.

Pressure
In the METAR data set, atmospheric pressure measured in millibars (mb)

Priority (Manual)
User-entered priority for a flight

PSAT
See "Preliminary Target Startup Approval Time"

Purge All Persisted Targets
Enables the user to permanently remove persisted targets (i.e., targets that are frozen in place due to the loss of surveillance updates in a specified "persistence" region)

Queue Depth
In the De-ice Queue Depth Data Set, the average number of targets that are waiting in the de-icing queue during the sample period. In Aerobahn, an aircraft marked for de-icing is considered to be in the de-ice queue for the entire time between AOBT and the time it enters the de-ice pad.

Quick Report
> An OpsView function that enables you to run a Report Type without any modifications

Ramp (Aero)
> See "Ramp Assigned (Aerobahn)"

Ramp (AODB)
> See "Ramp Assigned (AODB)"

Ramp Actual
> Same as Ramp Assigned if available. Otherwise, value is derived from Gate Assigned (Aerobahn).

Ramp Assigned (Aerobahn)
> First value is Ramp Actual. Then, value is derived from Gate Assigned (Aerobahn)

Ramp Assigned (AODB)
> Value is derived from Gate Assigned (AODB)

Ramp Assigned (Carrier)
> Value is derived from Gate Assigned (Carrier)

Ramp Assigned (FIDS)
> Value is derived from Gate Assigned (FIDS)

Ramp Assigned (Manual)
> Value is derived from Gate Assigned (Manual)

Ramp Time
> See "Taxi Time in Ramp"

Ramp To Movement Area Duration (Predicted)
> The predicted time it will take the target will taxi in the non-movement area. Field is only populated if the Aerobahn Prediction Engine is enabled and flight is outbound.

Ramp To Mvmt Area Dur (Pred)
> See "Ramp to Movement Area Duration (Predicted)"

Range
> A calculated distance in nautical miles from the system center for aircraft targets in the following operational states: Enroute Extended Inbound, Enroute Extended Outbound, Approach, Enroute, and Departing. Range value is zero for all other targets under surveillance, and null for those not under surveillance.

Raw Report
> In the METAR data set, METAR report data in its original syntax, before it is formatted in tabular form

Raw Surv Source
See "Raw Surveillance Source"

Raw Surveillance Source
The raw NASDI surveillance source that is currently in use for the target. Null if the target is not under surveillance.

Reason for Special Handling (ATC)
Item 18 of ICAO Flight Plan

Recommended Off Block Time
ROBT is based on the average time-to-spot from each gate and on the Target Movement Area Time (TMAT)

Recommended Off Block Time (Aerobahn)
Calculated by Aerobahn, the ROBT is based on the average time-to-spot from each gate and on the Target Movement Area Time (TMAT)

Record Map Display
Enables the user to make a video recording of the Map Display and to save it to an audio-video interleave (AVI) file

Recovery Exists
If the Diversion Status is "Diversion," then this field indicates whether a recovery flight exists to the originally scheduled destination. A check mark ("True" state) indicates that a recovery flight exists. An empty cell ("False" state) indicates that no recovery flight exists.

Reg
See "Registration"

Reg (3rd Party)
See "Registration (Third Party)"

Reg (Aero)
See "Registration (Aerobahn)"

Reg (AODB)
See "Registration (AODB)"

Reg (ATC)
See "Registration (ATC)"

Reg (Carrier)
See "Registration (Carrier)"

Reg (FIDS)
See "Registration (FIDS)"

Reg (Surv)
> See "Registration (Surveillance)"

Reg (VDGS)
> See "Registration (VDGS)"

Region Closures
> Region Closures settings and permissions

Region Curr Occ
> See "Region Currently Occupying"

Region Currently Occupying
> The region that the aircraft occupies. This field is used for flights that occupy regions that overlap, in accordance with "Overlapping Gate Parameters" specified in Gate Restriction Configuration.

Region Map
> A named collection of defined regions.

Region Occupied
> In a Watch List Entries data set, the contiguous region the flight occupied when it was added to the watch list

Regions
> Also called "Regions of Interest." A finite, bounded two-dimensional area on the surface of an airport whose boundaries are used as thresholds for tracking aircraft position and movement as various occupancy and event metrics are calculated.

Registration
> Unique, alphanumeric string that identifies an aircraft. Because aircraft have historically displayed their registration on or in the area of the aircraft tail, the registration is often referred to as the "tail number." In the USA, the registration number is also referred to as an "N-number" because it starts with "N". In Aerobahn, the registration can be derived from Mode S (MLAT/ASDE-X) using conversion or OAG lookup, or it can be provided directly from A-SMGCS.

Registration (Aerobahn)
> Best available tail-number based on a hierarchical preference scheme

Registration (AODB)
> The aircraft tail number provided by Airport Operational Database

Registration (ATC)
> Aircraft tail number in flight data provided by Air Traffic Control

Registration (Carrier)
> Aircraft tail number in flight data provided by carrier

Registration (FIDS)
Aircraft tail number in flight data provided by FIDS provider

Registration (Surveillance)
Aircraft tail number in flight data derived from the Mode S code in the surveillance data

Registration (Third Party)
Tail number provided by a commercial third party information source

Registration (VDGS)
Registration provided by a VDGS data source

Remark Free Text
FIDS free text field, provided-defined

Remark Text Codes
FIDS field. Shows "See Remark Free Text" by default.

Remove Flight
Enables the user to remove a flight from the system using the Remove Flight feature in the right-click context menu

Remove Persisted Targets
Enables the user to remove permanently a single persisted target (i.e., target that is frozen in place due to the loss of surveillance updates in a specified "persistence" region)

Removed from List
The date and time at which the flight on a particular row was removed from the selected watch list

Report Element Types
Specifies report elements the user can access

Report Type
A collection of OpsView data-set query parameters and report configuration information (data set definitions, report elements [tables, pivot tables, charts, and graphs], and layout but no associated data

Requested Flight Level
Flight level

Restr Controlled Elements
See "Flow Restriction Controlled Elements"

Restr MINIT
See "Flow Restriction Minutes-In-Trail"

Restr MIT
      See "Flow Restriction Miles-In-Trail"

Restr Name
      See "Flow Restriction Name"

Restr NAS Elements
      See "Flow Restriction NAS Elements"

Restr Type
      See "Flow Restriction Type"

RMV
      Removed

ROBT
      See "Recommended Off Block Time"

Rqst FL
      See "Requested Flight Level"

RTG
      Return To Gate

Rule Watch List
      The name of the rule that triggered a flight listing in Watch List Viewer

Runup Repo Req (Manual)
      See "Runup Reposition Required (Manual)"

Runup Reposition Required (Manual)
      User-entered (True-False) indication of whether the flight requires a Runup
      Reposition

Runway
      See "Runway Actual"

Runway (ACDM)
      The expected departure runway used by the Pre-Departure Sequencer

Runway Act
      See "Runway Actual"

Runway Actual
      Runway on which a flight landed

Runway Asgn (Man)
      See "Runway Assigned (Manual)"

Runway Assigned (Aerobahn)
The best available "Runway Assigned" data based on a hierarchical preference scheme

Runway Assigned (ATC)
ANSP-provided runway assignment

Runway Assigned (Manual)
User-entered runway the aircraft is intended to use

Runway Entrance Time
The time that a departing flight entered the runway to take off

Runway Exit Time
The time that arriving flight left the runway after landing

Runway Occupancy Time
Amount of time the aircraft has occupied the runway

Runway Pred
See "Runway Predicted"

Runway Predicted
The runway the PDS expects the flight to use.

Runway Region Occupancy Time
For inbound flights, the first runway region occupancy elapsed time for a flight that is in either the 'Arrival' or 'Taxi In Movement' Operational State. (Note: any future runway exit events are ignored for this field). For outbound flights, the final runway region occupancy elapsed time for a flight that is in either the 'Departing' or 'Enroute Out' Operational State.

Sample End Time
A sample is a period of time, usually N minutes long. The sample end time is the end of the period over which statistics are accumulated for the sample.

Sample Start Time
A sample is a period of time, usually N minutes long. The sample start time is the start of the period over which statistics are accumulated for the sample.

Save Workspace
Enables the user to save a workspace for later retrieval

Sch Equip
See "Scheduled Equipment"

Sch Tow Dur (Aero)
See "Scheduled Tow Duration (Aerobahn)"

Sch Tow Dur (AODB)
See "Scheduled Tow Duration (AODB)"

Sch Tow Dur (Carrier)
See "Scheduled Tow Duration (Carrier)"

Sch Tow Dur (Man)
See "Scheduled Tow Duration (Manual)"

Sch Tow Off (AODB)
See "Scheduled Tow Off Time (AODB)"

Sch Tow Off (Carrier)
See "Scheduled Tow Off Time (Carrier)"

Sch Tow On (AODB)
See "Scheduled Tow On Time (AODB)"

Sch Tow On (Carrier)
See "Scheduled Tow On Time (Carrier)"

Schedule Region Closures
Enables the user to schedule region closures in the Region Closures tool

Schedule/Modify/Delete Airport Configurations
Enables a user to select a configuration as the active configuration, schedule future configurations, modify the active configuration, and to delete a configuration from the schedule

Scheduled Equipment
Aircraft equipment scheduled for the flight. Carrier proprietary.

Scheduled Flight Management
Enables the user to access the Scheduled Flight Management tool

Scheduled In
See "Scheduled In Block Time (Carrier)"

Scheduled In (FIDS)
See "Scheduled In Block Time (FIDS)"

Scheduled In Block Time (Aerobahn)
Provides best available Scheduled In Block Time data based on a hierarchical preference scheme

Scheduled In Block Time (AODB)
The in-block time provided by Airport Operational Database

Scheduled In Block Time (Carrier)
Carrier-provided scheduled in-block time

Scheduled In Block Time (FIDS)
FIDS-provided scheduled in-block time

Scheduled In Block Time (Third Party)
Scheduled in-block time provided by a commercial third party information source

Scheduled In Block Time (VDGS)
Scheduled In Block Time provided by a VDGS data source

Scheduled Landing Time (Aerobahn)
Provides best available Scheduled Landing Time data based on a hierarchical preference scheme

Scheduled Landing Time (ATC)
The scheduled landing time provided by air traffic control

Scheduled Landing Time (Carrier)
Carrier-provided scheduled landing time

Scheduled Landing Time (Third Party)
Scheduled landing time provided by a commercial third party information source

Scheduled Off
See "Scheduled Take Off Time (Carrier)"

Scheduled Off (ASDI)
See "Scheduled Take Off Time (FAA)"

Scheduled Off Block Time (Aerobahn)
Provides best available Scheduled Off Block Time data based on a hierarchical preference scheme

Scheduled Off Block Time (AODB)
Time (provided by Airport Operational Database) at which the aircraft is scheduled to leave the gate

Scheduled Off Block Time (ATC)
ATC-provided scheduled off-block time

Scheduled Off Block Time (Carrier)
Carrier-provided scheduled off-block time

Scheduled Off Block Time (FIDS)
FIDS-provided scheduled off-block time

Scheduled Off Block Time (Third Party)
The scheduled off-block time provided by a commercial third party information source

Scheduled Off Block Time (VDGS)
Scheduled Off Block Time provided by a VDGS data source

Scheduled On
See "Scheduled Landing Time (Carrier)"

Scheduled On (ASDI)
Scheduled Landing Time (FAA)

Scheduled Out
See "Scheduled Off Block Time (Carrier)"

Scheduled Out (FIDS)
See "Scheduled Off Block Time (FIDS)"

Scheduled Take Off Time (Aerobahn)
Provides best available Scheduled Take Off Time data based on a hierarchical preference scheme

Scheduled Take Off Time (ATC)
The time that Air Traffic Control provides as the scheduled time for the aircraft to go wheels up

Scheduled Take Off Time (Carrier)
Carrier-provided time that the aircraft is scheduled to go wheels up

Scheduled Take Off Time (Third Party)
Scheduled take off time provided by a commercial third party information source

Scheduled Taxi Time (FIDS)
The scheduled taxi time provided by the airport-specific FIDS data

Scheduled Tow Duration (Aerobahn)
The best available difference (in seconds) between the Scheduled Tow Start time and Scheduled Tow End time based on this preference scheme (most to least preferred data): manual, surveillance, carrier, AODB.

Scheduled Tow Duration (AODB)
Difference (in seconds) between the Scheduled Tow Start time and the Scheduled Tow End time provided by the Airport Operational Data Base

Scheduled Tow Duration (Carrier)
Difference (in seconds) between the Scheduled Tow Start time and the Scheduled Tow End time provided by the carrier

Scheduled Tow Duration (Manual)
Difference (in seconds) between the manually set Scheduled Tow Start time and manually set Scheduled Tow End time

Scheduled Tow Duration (Surveillance)
Difference (in seconds) between the surveillance-provided Scheduled Tow Start time and the surveillance-provided Scheduled Tow End time

Scheduled Tow Off Time (AODB)
The scheduled time and date for the start of the tow of an arrival flight off the arrival gate/stand. Received from the Airport Operational Data Base.

Scheduled Tow Off Time (Carrier)
The scheduled time and date for the start of the tow of an arrival flight off the arrival gate/stand. Received from the carrier.

Scheduled Tow On Time (AODB)
The scheduled time and date for the end of the tow of a departure flight onto the departure gate/stand. Received from the Airport Operational Data Base.

Scheduled Tow On Time (Carrier)
The scheduled time and date for the end of the tow of a departure flight onto the departure gate/stand. Received from the carrier.

Scratch Pad
See "Scratch Pad Text"

Scratch Pad Text
User-entered text field in the Map Display data block that is visible only to users with proprietary data access to the associated flight

Scratch Pad Text (Public)
User-entered text field (in the Map Display data block) that is visible to all users

Scratchpad Text
User-entered text field in the Map Display data block that is visible only to users with proprietary data access to the associated flight

Search for Targets
Enables the user to access the Search feature for locating flights on the Aerobahn display

Sequence Date
The date of the flight sequence.

Sequence Number
A unique identifier for a flight leg. Shows as "Sequence No." in column header.

Set User Login Workspace
Enables the user to determine which workspace appears when login is complete

Share Data
Enables the user to share reports, queries, or workspaces with other Users/Groups. The set of Groups with which the user is allowed to share is configured under the Data Sharing tab.

Ship # (AODB)
See "Ship Number (AODB)"

Ship # (Carrier)
See "Ship Number (Carrier)"

Ship Number
Airline-specific, unique aircraft identifier

Ship Number (AODB)
AODB-provided ship number (Airline-specific, unique aircraft identifier)

Ship Number (Carrier)
Airline-specific, unique aircraft identifier

SIBT (3rd Party)
See "Scheduled In Block Time (Third Party)"

SIBT (Aero)
See "Scheduled In Block Time (Aerobahn)" for definition

SIBT (AODB)
See "Scheduled In Block Time (AODB)"

SIBT (Carrier)
See "Scheduled In Block Time (Carrier)"

SIBT (FIDS)
See "Scheduled In Block Time (FIDS)"

SIBT (VDGS)
See "Scheduled In Block Time (VDGS)"

SID
See "Standard Instrument Departure"

Site
Airport of interest. Aerobahn adds to pivot table field list.

SLDT (3rd Party)
See "Scheduled Landing Time (Third Party)"

SLDT (Aero)
See "Scheduled Landing Time (Aerobahn)"

SLDT (ATC)
See "Scheduled Landing Time (ATC)"

SLDT (Carrier)
See "Scheduled Landing Time (Carrier)"

SMP
See "Surface Metering Program"

SMP Exempt Reason (ATC)
See "Surface Metering Program Exempt Reason (ATC)"

SMP Exempt Status (ATC)
See "Surface Metering Program Exempt Status (ATC)"

SMS
Short Message System

SMTP
Simple Mail Transfer Protocol

SOBT (3rd Party)
See "Scheduled Off Block Time (Third Party)"

SOBT (Aero)
See "Scheduled Off Block Time (Aerobahn)"

SOBT (AODB)
See "Scheduled Off Block Time (AODB)"

SOBT (Carrier)
Scheduled Off Block Time (Carrier)

SOBT (FIDS)
See "Scheduled Off Block Time (FIDS)"

SOBT (VDGS)
See "Scheduled Off Block Time (VDGS)"

Source ID (AODB)
See "Source Specific ID (AODB)"

Source ID (ATC)
Source Specific ID (ATC)

Source ID (Carrier)
See "Source Specific ID (Carrier)"

Source ID (FIDS)
See "Source Specific ID (FIDS)"

Source ID (VDGS)
>   See "Source Specific ID (VDGS)"

Source Specific ID (3rd Party)
>   See "Source Specific ID (Third Party)"

Source Specific ID (AODB)
>   AODB-provided unique identifier

Source Specific ID (ATC)
>   ATC-provided unique identifier

Source Specific ID (Carrier)
>   Carrier-provided unique identifier

Source Specific ID (FIDS)
>   FIDS-provided unique identifier

Source Specific ID (Third Party)
>   Third Party-provided unique identifier

Source Specific ID (VDGS)
>   VDGS-provided unique identifier

Sp AC Qual
>   See "Special Aircraft Qualifier"

Special Aircraft Qualifier
>   Single character representing any "special" qualities of the aircraft being flown for this flight. Special qualities include H - Heavy, T - TCAS, F - B757, L - B757 and TCAS, B - Heavy and TCAS, M - Wake Turbulence, and O – Others.

Special Purpose Indicator
>   Indicates that the pilot has keyed the IDENT button on the transponder

Speed (knots)
>   Aircraft speed in knots (from MLAT,ASDE-X).

Speed in Knots (Surveillance)
>   Aircraft speed in knots (from MLAT, ASDE-X)

Speed Kn (Surv)
>   See "Speed in Knots (Surveillance)"

SPI
>   See "Special Purpose Indicator"

Spot
>   The location where aircraft ground control transitions from one authority to another authority.

STA
> Scheduled Time of Arrival

Stand Act (Surv)
> See "Stand Actual (Surveillance)"

Stand Actual (Surveillance)
> For outbounds, this is the stand from which Aerobahn detects the aircraft departing. For inbounds, this is the stand to which Aerobahn detects the aircraft arriving. For flights that occupy regions that overlap, Aerobahn determines the stand in accordance with the "Overlapping Gate Parameters" specified in the Gate Restriction Configuration utility. This field does not change when a persisted target is manually moved or towed.

Stand Asgn (Aero)
> See "Stand Assigned (Aerobahn)"

Stand Asgn (Aero) Status
> See "Stand Assigned (Aerobahn) Status"

Stand Asgn (AODB) Status
> See "Stand Assigned (AODB) Status"

Stand Asgn (ATC)
> See "Stand Assigned (ATC)"

Stand Asgn (ATC) Status
> See "Stand Assigned (ATC) Status"

Stand Asgn (Carrier)
> See "Stand Assigned (Carrier)"

Stand Asgn (Carrier) Status
> See "Stand Assigned (Carrier) Status"

Stand Asgn (FIDS)
> See "Stand Assigned (FIDS)"

Stand Asgn (FIDS) Status
> See "Stand Assigned (FIDS) Status"

Stand Asgn (Man)
> See "Stand Assigned (Manual)"

Stand Asgn (Man) Status
> See "Stand Assigned (Manual) Status"

Stand Asgn Est Avail
> See "Stand Assigned Estimated Availability"

Stand Assigned - Hardstand
A parking spot. Carrier proprietary.

Stand Assigned (Aerobahn)
Provides best available Stand Assigned data based on a hierarchical preference scheme

Stand Assigned (Aerobahn) Status
Best available stand-assignment status based on hierarchical preference scheme.

Stand Assigned (AODB) Status
Status is... - "Occupied" if there is an aircraft in "Stand Asgn (AODB)" - "Unoccupied" if there is not an aircraft in "Stand Asgn (AODB)' - "Blocked" if there is an aircraft in another gate that satisfies an "Adjacency Restriction" with respect to "A/C Type (Aero)" and "Stand Asgn (AODB)" - N/A if "Stand Asgn (AODB)" is empty

Stand Assigned (ATC)
Gate assigned by air traffic control

Stand Assigned (ATC) Status
Status is... - "Occupied" if there is an aircraft in "Stand Asgn (ATC)'" - "Unoccupied" if there is not an aircraft in "Stand Asgn (ATC)" - "Blocked" if there is an aircraft in another gate that satisfies an "Adjacency Restriction" with respect to "A/C Type (Aero)" and "Stand Asgn (ATC)" - N/A if "Stand Asgn (ATC)" is empty

Stand Assigned (Carrier)
Carrier-provided assigned stand

Stand Assigned (Carrier) Status
Status is... - "Occupied" if there is an aircraft in "Stand Asgn (Carrier)" - "Unoccupied" if there is not an aircraft in "Stand Asgn (Carrier)" - "Blocked" if there is an aircraft in another gate that satisfies an "Adjacency Restriction" with respect to "A/C Type (Aero)" and "Stand Asgn (Carrier)" - N/A if "Stand Asgn (Carrier)" is empty

Stand Assigned (FIDS)
The FAA-provided assigned gate/stand

Stand Assigned (FIDS) Status
Status is... - "Occupied" if there is an aircraft in "Stand Asgn (FIDS)" - "Unoccupied" if there is not an aircraft in "Stand Asgn (FIDS)" - "Blocked" if there is an aircraft currently in another gate that satisfies an "Adjacency Restriction" with respect to "A/C Type (Aero)'" and "Stand Asgn (FIDS)" - N/A if "Stand Asgn (FIDS)" is empty"

Stand Assigned (Manual)
> User-entered stand the aircraft is intended to use. This is primarily used by the Aerobahn Prediction Engine.

Stand Assigned (Manual) Status
> Status is... - "Occupied" if there is an aircraft in "Stand Asgn (Manual)" - "Unoccupied" if there is not an aircraft in "Stand Asgn (Manual)" - "Blocked" if there is an aircraft in another gate that satisfies an "Adjacency Restriction" with respect to "A/C Type (Aero)" and "Stand Asgn (Manual)" - N/A if "Stand Asgn (Manual)' is empty"

Stand Assigned Estimated Availability
> The latest "EOBT (Aero)" of any flight that occupies or blocks the "Stand Asgn (Aero)" (in accordance with Gate Restriction Configurations). This value is null if no flights occupy or block the "Stand Asgn (Aero)," if "Stand Currently Occupying" is not null, or if "Direction" is outbound.

Stand Curr Occ
> See "Stand Currently Occupying"

Stand Currently Occupying
> Stand that the aircraft currently occupies. Blank when aircraft does not occupy a stand. For flights that occupy regions that overlap, Aerobahn determines the stand in accordance with the "Overlapping Gate Parameters" specified in the Gate Restriction Configuration utility. This field changes when a persisted target is manually moved or towed.

Stand Occ Time
> See "Stand Occupancy Time"

Stand Occupancy Start Time (Carrier)
> Date and time derived from carrier-provided data

Stand Occupancy Time
> Amount of time the aircraft has occupied the stand

Stand Pred
> See "Stand Predicted"

Stand Predicted
> For an inbound flight, the stand that Aerobahn expects the flight to use. This predicted stand is used as the end point of a route during prediction, and the predicted routes use this as the destination end point.

Standard Instrument Departure
> Current or final RNAV- or instrument-departure procedure that the flight follows to depart from the aerodrome

Standard Report Types

Specifies the standard report types the user can access

Stationary Duration

A real-time value (derived from movement-state transitions) that indicates the amount of time a target has spent in the current stationary state

Stationary State

Moving, Stationary, or Parked. "Parked" state is assigned when a plane is at a gate, and the stationary time counter does not increase while the plane is in this status.

Stationary Taxi Total Duration

The total number of minutes and seconds that the target has spent in the Stationary state outside the gate. (Reports only)

Status

The calculated state of a target displayed in a data block or mouseover: "UNK" (unknown), "INB" (inbound), "OUT" (outbound), or "PER" (persisted). In Diverted Flights Viewer, various flight status information provided by a third-party source.

STD

Scheduled Time of Departure

STOT (3rd Party)

See "Scheduled Take Off Time (Third Party)"

STOT (Aero)

See "Scheduled Take Off Time (Aerobahn)"

STOT (ATC)

See "Scheduled Take Off Time (ATC)"

STOT (Carrier)

See "Scheduled Take Off Time (Carrier)"

STS (ATC)

See "Reason for Special Handling (ATC)"

Surface Metering Program

A restriction at an airport that holds aircraft at their departure gates beyond their earliest off block times to manage congestion in the movement area. The air traffic controllers evaluate the predicted runway queue lengths to determine when surface metering programs (SMP) need to be established.

Surface Metering Program Exempt Reason (ATC)

The reason why TFDM determined the flight to be unsuitable for metering.

Surface Metering Program Exempt Status (ATC)
EXEMPT if TFDM has determined the flight is unsuitable for metering.

Surv Source
See "Surveillance Source"

Surveillance Initialization Time
A target data field that indicates the first moment the target was seen with surveillance. Surveillance Initialization Time should reset each time surveillance re-initializes, such as when a target coasts or persists and then comes back under surveillance. In such a case, the target should get a new detection time.

Surveillance Source
The surveillance source or system that sends updates to a specific target.

System Administration
System administration settings and permissions

T1
A digital transmission line. Refers generally to any data circuit running at 1.544 Mbit/second line rate.

TAF
Terminal Aerodrome Forecast. A concise expression of the expected weather conditions in the proximity of an airport during a specified period.

Tail Number
See "Registration"

Target De-ice Queue Entry Time
Time at which the target entered the de-ice queue

Target Graphics Caching Enabled
Makes Map Display use less CPU when the user is not panning or zooming

Target ID
Internal unique identification number for target information

Target Initialization Time
The time at which an outbound target turns on its transponder

Target Initialization Time (Outbound)
The time at which an outbound target turns on its transponder

Target Movement Area Time (Aerobahn)
The Aerobahn-assigned time (i.e., the "target time") at which a departing flight must be at the spot to fit into the metering plan. Referred to as "TMAT."

Target Movement Area Time (ATC)
Time specified by an active SMP that a metered flight needs to enter the movement area. Flight operators must comply with the TMAT in order to ensure metering is effective.

Target Off Block Time (Aerobahn)
The time at which the airline expects the flight to be able to depart given internal delays (e.g., mechanical problems, late arriving flight). TOBT (Aerobahn) is the best available TOBT derived from user-entered data, carrier, and ATC data.

Target Off Block Time (AODB)
AODB-provided Target Off Block Time. See also "Target Off Block Time (Aerobahn)"

Target Off Block Time (ATC)
TOBT derived from data provided by air traffic control.

Target Off Block Time (Carrier)
TOBT derived from carrier-provided data. See also Target Off Block Time (Aerobahn).

Target Off Block Time (Manual)
TOBT derived from user-entered data. See also Target Off Block Time (Aerobahn).

Target Off Block Time Update Reason
A selectable code that shows the reason why the TOBT was changed. If the TOBT was changed more than 1 time, this shows the reason for the final change.

Target Startup Approval Time (ACDM)
Date and time provided by the latest non-null value for "'Target Startup Approval Time (ACDM)" or "'TSAT (ACDM)" in a real-time field

Target Startup Approval Time (Aerobahn)
The best available Target Startup Approval time provided by flight-data feeds in the following priority: TSAT (Manual), TSAT (ACDM), ROBT (Aero).

Target Startup Approval Time (Manual)
The startup / push back approval time that is typically provided by ATC (manual input) to override the Pre Departure Sequencer (PDS).

Target States - Show ASDI Extended Range Targets
Enables the user to view targets beyond surface surveillance out to 100 nmi

Target Take Off Time
Based on average taxi time from each spot to each runway and on a flight's Target Movement Area Time (TMAT)

Target Take Off Time (Aerobahn)
Provides best available Target Take Off Time data based on a hierarchical preference scheme.

Target Take Off Time (ATC)
Planned runway take off time calculated by TFDM for metered flights.

Target Take Off Time (CDM)
The estimated take off time calculated as the sum of EOBT + EXOT (Pred)

Target Take Off Time (Derived)
Planned runway take off time determined by the Aerobahn departure metering logic derived from the TMAT, the unimpeded taxi time, and the queue delay. Used as the TTOT for manually created slots in the static bin. Set to EDCT if one exists.

Target Take Off Time (Rationer)
The runway take off time that the departure metering logic (rationer) uses as the planned take off ("slot") time in the departure allocation schedule to calculate the Target Startup Approval Time (TSAT)

Target Type
Category of the tracked object: vehicles, aircraft, and reference transponders. Any tracked object that is not one of these is categorized "unknown."

Target Update Period in Seconds
Sets the number of seconds between target updates in TaxiView

Target/(Preliminary) Off Block Time (Aerobahn)
The best available off-block time provided by flight-data feeds in the following priority: TOBT (Manual), TOBT (Carrier), TOBT (ATC), POBT. Preliminary times are in parentheses

Target/(Preliminary) Startup Approval Time (Aerobahn)
The best available startup approval time in the following priority: TSAT (Manual), TSAT (Aero), PSAT. Preliminary times are in parentheses

Taxi In Avg (Dnline)
See "Taxi In Time Average Downline Airport"

Taxi In Time Average Downline Airport
Average time (based on stored Aerobahn data) required for an aircraft to taxi in at a particular airport, at a particular time of day. Downline indicates the destination airport for the outbound flight in question.

Taxi Out Avg (Upline)
See "Taxi Out Time Average Upline Airport"

Taxi Out Time Average Upline Airport

Average time (based on stored Aerobahn data) required for an aircraft to taxi out at a particular airport, at a particular time of day. Upline indicates that it is the origination airport for the inbound flight in question

Taxi Time (Aero)

In order of precedence based on availability: Taxi Time (Carrier), Taxi Time (Aerobahn)

Taxi Time (Aerobahn)

Provides best available Taxi Time data based on a hierarchical preference scheme

Taxi Time (Carrier)

Difference between the Current Time and the Actual Off Block Time (Carrier) field

Taxi Time (Surv)

See "Taxi Time (Surveillance)

Taxi Time (Surveillance)

Total taxi time of an aircraft as determined by surveillance-driven events interpreted by Aerobahn. For inbound aircraft, the difference between either the current time or the Aerobahn Actual In-Block Time and the Aerobahn Actual Landing Time. For outbound aircraft, it is the difference between either the current time or the Aerobahn Actual Take Off Time and the Aerobahn Actual Off-Block Time.

Taxi Time After De-icing

Difference between the de-ice pad exit time (if de-icing occurred) and the wheels up time

Taxi Time Apron

See " Taxi Time on Apron"

Taxi Time Est Rem (Pred)

Taxi Time Estimated Remaining (Prediction)

Taxi Time Estimated Remaining (Prediction)

For an inbound flight, the estimated time duration before the flight will reach the gate. For an outbound flight, the estimated time duration before the flight will take off. Both represent the time remaining until the flight reaches the end of the predicted route.

Taxi Time in Movement Area

For inbound aircraft, the difference between the Movement Area Exit Time and the Actual Landing Time (Surveillance). For outbound aircraft, the difference between the Actual Take Off Time (Surveillance) and the Movement Area Entrance Time.

Taxi Time in Non-Movement Area

For inbound aircraft, the difference between the time at which the aircraft enters the ramp and the Aerobahn IN time. For outbound aircraft, the difference between the Aerobahn OUT time and the time at which the aircraft exits the ramp.

Taxi Time in Ramp

The difference between the time at which the flight entered the ramp area and the time the flight exited the ramp area.

Taxi Time Movement

See "Taxi Time in Movement Area"

Taxi Time Non-Mvmt

Taxi Time in Non-Movement Area

Taxi Time on Apron

The difference between the time at which the flight entered the apron area and the time the flight exited the apron area

Taxiway Used to Enter/Exit Apron

Taxiway identifier

Taxiway Used to Enter/Exit Ramp

Name of first taxiway occupied after leaving runway (arrivals) or last taxiway occupied after entering runway (departures)

Taxiway Used to Enter/Exit Runway

Taxiway identifier

Taxiway Used to Exit/Enter Ramp

Name of first taxiway occupied after leaving ramp (departures) or last taxiway occupied before entering ramp (arrivals)

TCP

Transmission Control Protocol

Terminal (3rd Party)

See "Terminal Assigned (Third Party)"

Terminal (Aero)

See "Terminal Assigned (Aerobahn)"

Terminal (AODB)

See "Terminal Assigned (AODB)"

Terminal Actual

Terminal name (derived from Actual Gate)

Terminal Assigned (Aero)
>   derived from Gate Assigned (Aerobahn)

Terminal Assigned (Aerobahn)
>   Best available Assigned Terminal based on hierarchical preference scheme.
>   Derived from Gate Assigned (Aerobahn)

Terminal Assigned (AODB)
>   Value is derived from Gate Assigned (AODB)

Terminal Assigned (Carrier)
>   Derived from Gate Assigned (Carrier)

Terminal Assigned (FIDS)
>   Derived from Gate Assigned (FIDS)

Terminal Assigned (Manual)
>   Derived from Gate Assigned (Manual)

Terminal Assigned (Third Party)
>   The assigned terminal provided by a commercial third party information source
>   and derived from Gate Assigned (Third Party).

Terminal Flight Data Manager
>   NextGen tower program that improves surface management and efficiency by
>   distributing flight plan data and providing a range of decision support tools to
>   controllers, traffic management coordinators as well as flight and airport
>   operators.

Thru Passenger Count
>   Sum of passengers with a connection to the next flight leg. Carrier Proprietary.

TIM
>   Taxi In Movement Area

Time Entered
>   Time an aircraft entered a region

Time Exited
>   Time an aircraft exited a region

TIR
>   Taxi In Ramp

TMA
>   Terminal Maneuvering Area or Traffic Movement Advisor (depending on context)

TMA Release
>   TMA Release Time (Manual)

TMA Release Time (Manual)
Take off time slot at the upline airport, coordinated between the FAA and airline

TMA Void
See "TMA Void Time (Manual)"

TMA Void Time (Manual)
Time after which a flight can no longer use its TMA Release Time

TMAT
See "Target Movement Area Time"

TMAT (ATC)
See "Target Movement Area Time (ATC)"

TMAT Deviation
Time difference between a flight's AMAT and the nearer limit of the TMAT tolerance window. (For example, if the TMAT tolerance is -5min/+10min, and the flight arrives at the spot 15 minutes past the TMAT, the TMAT Deviation will be +5 min. If it arrives 15 minutes prior to the TMAT, the TMAT Deviation will be -10 min.) The TMAT Deviation of a compliant flight (a flight that arrives at the spot within the TMAT tolerance window) is 0 minutes.

TMI
Traffic Management Initiatives. An US FAA term indicating techniques used to manage demand with capacity in the US National Airspace System (NAS).

TMI ID (ATC)
See "TMI Identifier (ATC)"

TMI Identifier (ATC)
TFDM provided identifier for Traffic Management Initiatives (TMIs) affecting the flight.

TOBT (Aerobahn)
See "Target Off Block Time (Aerobahn)"

TOBT (AODB)
See "Target Off Block Time (AODB)"

TOBT (ATC)
See "Target Off Block Time (ATC)"

TOBT (Carrier)
See "Target Off Block Time (Carrier)"

TOBT (Manual)
See "Target Off Block Time (Manual)"

TOBT At MS9

TOBT (Aero) value at the time Milestone 9 is initially met. If Milestone 9 is cleared and set again, the initially reported TOBT value will not be overwritten with a new value.

TOBT At MS10

TOBT (Aero) value at the time Milestone 10 is initially met. If Milestone 10 is cleared and set again, the initially reported TOBT value will not be overwritten with a new value.

TOBT At MS11

TOBT (Aero) value at the time Milestone 11 is initially met. If Milestone 11 is cleared and set again, the initially reported TOBT value will not be overwritten with a new value.

TOBT At MS12

TOBT (Aero) value at the time Milestone 12 is initially met. If Milestone 12 is cleared and set again, the initially reported TOBT value will not be overwritten with a new value.

TOBT At MS15

TOBT (Aero) value at the time Milestone 15 is initially met. If Milestone 15 is cleared and set again, the initially reported TOBT value will not be overwritten with a new value.

TOBT Count

Number of TOBT changes

TOBT On Time

Tells whether Target Off Block Time (Aerobahn) was received in a reasonable amount of time. (True when within "reasonable" specification.)

TOBT Post TSAT Count

Number of TOBT changes after TSAT

TOBT Timeliness

Provides a time duration so that you can determine if Target Off Block Time (Aerobahn) was received in a reasonable amount of time

TOBT Update Time

Date and time that the Target Off Block Time was last updated. Derived from Manual, Carrier, or ATC data.

TOBT/(POBT)

Refer to "Target/(Preliminary) Off Block Time"

Toggle Annotations

Enables the user to view annotations (i.e., additional map markings, either created at the system level or by other users)

Toggle Layer Visibility
    Enables the user to choose to turn off aspects of the background map, region
    outlines, region labels, and annotations

TOM
    Taxi Out Movement Area

Toolbars
    Enables the user to access toolbars

Tools
    Tool settings and permissions

TOR
    Taxi Out Ramp

Total Operations
    In the Operations Count by Hour data set,the number of operations (arrivals or
    departures) that occurred during in a given hour on a given runway

Total Passenger Count
    See "Passenger Count Total"

Total Seat Count
    Number of seats in that aircraft

Total Taxi Time
    See "Taxi Time (Surveillance)"

TOU
    Taxi Out Unknown

Tow Duration
    The length of a tow (in seconds) from start to end

Tow End Loc
    See "Tow End Location" with specific data source

Tow End Loc (Aero)
    See "Tow End Location (Aerobahn)"

Tow End Loc (AODB)
    See "Tow End Location (AODB)"

Tow End Loc (Carrier)
    See "Tow End Location (Carrier)"

Tow End Loc (Man)
    See "Tow End Location (Manual)"

Tow End Loc (Surv)
> See "Tow End Location (Surveillance)"

Tow End Location (Aerobahn)
> The region where the tow is stopped. Provides the best available data in this order: Manual, AODB/Carrier, Surveillance.

Tow End Location (AODB)
> The region where the tow is stopped. Received from the Airport Operational Data Base.

Tow End Location (Carrier)
> The region where the tow is stopped. Received from the carrier.

Tow End Location (Manual)
> User-entered region where the tow is stopped. Default value is the current location of a target.

Tow End Location (Surveillance)
> The region where the tow is stopped.

Tow Start
> See "Tow Start Location"

Tow Start Loc
> See "Tow Start Location"

Tow Start Loc (Aero)
> See "Tow Start Location (Aerobahn)"

Tow Start Loc (Aerobahn)
> See "Tow Start Location (Aerobahn)"

Tow Start Loc (AODB)
> See "Tow Start Location (AODB)"

Tow Start Loc (Carrier)
> See "Tow Start Location (Carrier)"

Tow Start Loc (Manual)
> See "Tow Start Location (Manual)"

Tow Start Loc (Surveillance)
> See "Tow Start Location (Surveillance)"

Tow Start Location (Aerobahn)
> The region where a tow started. Provides the best available data in this order: Manual, AODB/Carrier, Surveillance.

Tow Start Location (AODB)
The region where a tow started. Received from the Airport Operational Data Base.

Tow Start Location (Carrier)
The region where a tow started. Received from the carrier.

Tow Start Location (Manual)
The region where a tow started. Received from Aerobahn user input.

Tow Start Location (Surveillance)
Region where tow commenced (modified logic to set)

Tow Start Time
The time and date when a tow started

Tow Status
See "Towing Status"

Tow Status (Aero)
See "Towing Status (Aerobahn)"

Tow Status (Aerobahn)
See "Towing Status (Aerobahn)"

Tow Status (AODB)
See "Towing Status (AODB)"

Tow Status (Carrier)
See "Towing Status (Carrier)"

Tow Status (Man)
See "Towing Status (Manual)"

Tow Status (Surv)
See "Towing Status (Surveillance)"

Tow Veh
See "Is a Tow Vehicle"

Towing Status
An indication (Towing, Not Towing) that an aircraft is or is not being towed

Towing Status (Aerobahn)
An indication (Vehicle: Not Towing, Towing, Tow Completed; Aircraft: Not Towing, Tow Candidate, Towing, Tow Completed) that an aircraft is or is not being towed, that the aircraft is scheduled to be towed, or that towing is complete. Provides the best available data in this order: Manual, AODB/Carrier, Surveillance.

Towing Status (AODB)
An indication (Towing, Not Towing, Scheduled, Completed) of the towing status for an aircraft based on Airport Operational Data Base data

Towing Status (Carrier)
An indication (Towing, Not Towing, Scheduled, Completed) of the towing status for an aircraft based on carrier-provided data

Towing Status (Manual)
An indication (Towing, Not Towing, Completed) of the towing status for an aircraft based on data input by an Aerobahn user

Towing Status (Surveillance)
An indication (Towing, Not Towing, Scheduled, Completed) of the towing status for an aircraft based on surveillance data

Tracking Device ID
MAC Address

Traffic Flow Management System
NAS-Wide system for planning and implementing strategic and tactical traffic flow management initiatives to mitigate demand/capacity imbalances.

Transition Fix
Point in space (latitude, longitude, altitude) to which an aircraft is routed to transition from the terminal area to the enroute space

Trk Dev ID
See "Tracking Device ID"

TSAT (Aero)
See "Target Startup Approval Time (Aerobahn)"

TSAT (Manual)
See "Target Startup Approval Time (Manual)"

TSAT AOBT Diff
Absolute difference (seconds) between TSAT and AOBT

TSAT ASAT Diff
Absolute difference (seconds) between TSAT and ASAT

TSAT At MS9
TSAT (Aero) value at the time Milestone 9 is initially met. If Milestone 9 is cleared and set again, the initially reported TSAT value will not be overwritten with a new value.

TSAT At MS10
TSAT (Aero) value at the time Milestone 10 is initially met. If Milestone 10 is cleared and set again, the initially reported TSAT value will not be overwritten with a new value.

TSAT At MS11
TSAT (Aero) value at the time Milestone 11 is initially met. If Milestone 11 is cleared and set again, the initially reported TSAT value will not be overwritten with a new value.

TSAT At MS12
TSAT (Aero) value at the time Milestone 12 is initially met. If Milestone 12 is cleared and set again, the initially reported TSAT value will not be overwritten with a new value.

TSAT At MS13
TSAT (Aero) value at the time Milestone 13 is initially met. If Milestone 13 is cleared and set again, the initially reported TSAT value will not be overwritten with a new value.

TSAT At MS14
TSAT (Aero) value at the time Milestone 14 is initially met. If Milestone 14 is cleared and set again, the initially reported TSAT value will not be overwritten with a new value.

TSAT At MS15
TSAT (Aero) value at the time Milestone 15 is initially met. If Milestone 15 is cleared and set again, the initially reported TSAT value will not be overwritten with a new value.

TSAT Frozen Count
Number of frozen TSATs

TSAT On Time
Tells whether TSAT (Aerobahn) was received in a reasonable amount of time. (True when within "reasonable" specification.)

TSAT Timeliness
Provides a time duration so that you can determine if Target Startup Approval Time (Aerobahn) was received in a reasonable amount of time

TSAT TOBT Diff
Absolute difference (in seconds) between TSAT and TOBT

TSAT/(PSAT) (Aero)
See "Target/(Preliminary) Startup Approval Time (Aerobahn)"

TTOT
    See "Target Take Off Time"

TTOT (Aero)
    Target Take Off Time calculated by Aerobahn, based on flight's TMAT and average taxi time from each spot to each runway

TTOT (ATC)
    See "Target Take Off Time (ATC)"

TTOT (CDM)
    See "Target Take Off Time (CDM)"

TTOT (Derived)
    See "Target Take Off Time (Derived)"

TTOT At MS4
    TTOT (Aero) value at the time Milestone 4 is initially met. If Milestone 4 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT At MS5
    TTOT (Aero) value at the time Milestone 5 is initially met. If Milestone 5 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT At MS6
    TTOT (Aero) value at the time Milestone 6 is initially met. If Milestone 6 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT At MS7
    TTOT (Aero) value at the time Milestone 7 is initially met. If Milestone 7 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT At MS8
    TTOT (Aero) value at the time Milestone 8 is initially met. If Milestone 8 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT At MS9
    TTOT (Aero) value at the time Milestone 9 is initially met. If Milestone 9 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT At MS10
TTOT (Aero) value at the time Milestone 10 is initially met. If Milestone 10 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT At MS11
TTOT (Aero) value at the time Milestone 11 is initially met. If Milestone 11 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT at MS12
TTOT (Aero) value at the time Milestone 12 is initially met. If Milestone 12 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT At MS13
TTOT (Aero) value at the time Milestone 13 is initially met. If Milestone 13 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT At MS14
TTOT (Aero) value at the time Milestone 14 is initially met. If Milestone 14 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT At MS15
TTOT (Aero) value at the time Milestone 15 is initially met. If Milestone 15 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

TTOT At MS16
TTOT (Aero) value at the time Milestone 16 is initially met. If Milestone 16 is cleared and set again, the initially reported TTOT value will not be overwritten with a new value.

Turn % (Vid)
See "Turn Progress Percent (Video)"

Turn End (Vid)
See "Turnaround End Time (Video)"

Turn Progress Percent (Video)
A percentage that shows how much of the turnaround has completed. If there are multiple turns associated with the aircraft, the percentage of the last turn shows.

Turn Start (Vid)
See "Turnaround Start Time (Video)"

Turnaround End Time (Video)
The time at which the aircraft has completed its turn procedures in the gate, provided by Video Analytics. If there are multiple turns associated with an aircraft, this time is the end time of the last turn.

Turnaround Start Time (Video)
The time at which the aircraft has begun its turn procedures in the gate, provided by Video Analytics. If there are multiple turns associated with an aircraft, this time is the start time of the first turn.

TZQT
See "Target De-ice Queue Entry Time"

Under Surv
See "Under Surveillance"

Under Surveillance
True for two types of targets: targets for which Aerobahn is receiving surveillance and targets that have persisted

Unimpeded Taxi Out Time (ACDM)
The amount of time, in minutes, that the system predicts is necessary for an aircraft to taxi from a specified gate to a specified runway without any constraints

Unimpeded Taxi Out Time (Manual)
The estimated time it will take an aircraft to taxi from a gate to a runway without any impediments. The value is received from manual user input.

UNK
Unknown

Use Operation Counts - Airport tool
Enables the user to access the Operation Counts - Airport tool

Use Operation Counts - Carrier tool
Enables the user to access the Operation Counts - Carrier tool

Use Operations Timeline tool
Enables the user to access the Operations Timeline tool

Use System Time tool
Enables the user to access the System Time tool

Use Active Flights tool
Enables the user to access the Active Flights tool

Use Airport Demand
Enables the user to access the Airport Demand tool

Use Chat tool
Enables the user to access the Chat tool

Use Compliance Monitor tool
This attribute is available only at sites that use departure metering. Enables the user to access the Compliance Monitor tool.

Use Current Runway Usage tool
Enables the user to access the Current Runway Usage tool

Use De-icing Throughput tool
Enables the user to access the De-icing Throughput tool

Use Delays by Region tool
Enables the user to access the Delays by Region tool

Use Departure Metering tools
Enables the user to access any of the various Departure Metering tools

Use Map Display tool
Enables the user to access the Map Display tool

Use Operation Counts - Runway tool
Enables the user to access the Operation Counts - Runway tool

Use Region Occupancy Monitor tool
Enables the user to access the Region Occupancy Monitor tool

Use Selection Details tool
Enables the user to access the Selection Details tool

Use Surface Delay Summary tool
Enables the user to access the Surface Delay Summary tool

Use Watch List Graph tool
Enables the user to access the Watch List Graph tool

Use Watch List Viewer tool
Enables the user to access the Watch List Viewer tool

User Settings
User settings and permissions

UTC
Coordinated Universal Time (Zulu)

UXOT (ACDM)
See "Unimpeded Taxi Out Time (ACDM)"

UXOT (Manual)
   See "Unimpeded Taxi Out Time (Manual)"

Veh Model
   See "Vehicle Model"

Veh Name
   See "Vehicle Name"

Veh Ownr
   See "Vehicle Owner"

Veh Ownr Phn
   See "Vehicle Owner Phone"

Vehicle Model
   User-entered identification (20 alphanumeric characters)

Vehicle Name
   User-entered identification (20 alphanumeric characters)

Vehicle Owner
   User-entered identification (30 alphanumeric characters)

Vehicle Owner Phone
   User-entered identification (20 alphanumeric characters)

Vehicle Type
   User-entered identification (20 alphanumeric characters)

View Airport Configurations
   Open the Airport Configuration tool

View All Chat Conversation History
   Enables the user to review previous conversations not currently showing in the Chat tool

View Global Report Usage
   Permits the user to view disk space usage for all OpsView reports

View Meteorology Display
   Enables the user to access the Meteorology tools

View Region Statuses
   Enables the user to view region statuses in the Region Status tool

View Scratchpad Text
   Enables the user to view scratchpad text (i.e., a flight data field containing free-form text)

View Selection Details Flight Connections Tab
Enables the user to view, in the Selection Details tool, the tab that shows connecting flights related to the selected flight

View Selection Details Region History tab
Enables the user to view, in the Selection Details tool, the tab that shows all the map regions the flight has so far traversed (and is predicted to traverse) during its route to the gate or runway

View User Activity
Enables the user to access statistics on what users logged on and when they logged on

View/Edit Movement Area Alerts
Enables the user to use long onboard alerts (available only when the Dynamic Rules Engine is not available)

Visibility
In the METAR data set, Visibility is reported in nautical miles.

Wake Cat (ATC)
See "Wake Category (ATC)"

Wake Category
FAA wake vortex category (possible values: A, B, C, D, E, F) based on maximum take off weight (MTOW) and wingspan. (Refer to FAA order JO 7110.659B).

Wake Category (ATC)
Indication of wake turbulence magnitude based on a/c type.

Wake Turb Cat
See "Wake Turbulence Category"

Wake Turbulence Category
Wake vortex category (possible values: A, B, C, D, E, F) based on maximum take off weight (MTOW) and wingspan. (Refer to FAA order JO 7110.659B.)

Watch Dur
See "Watch List Duration Time"

Watch Entry
See "Watch List Entry Time"

Watch List Duration
Amount of time a target was included in a particular Watch List

Watch List Entry Time
Time a target was added to a particular Watch List

Watch List Name
>   The name of the Watch List the flight is associated with. This name corresponds with the Watch List selected when the report is generated.

Weather
>   In the METAR data set, a coded field indicating the current weather phenomena

Weight Class
>   Aerobahn designation derived from maximum take off weight. This data field uses Weight Class (USA) data field values that align with weight class designations specified in FAA JO 7110.65U.

Weight Class (ICAO)
>   Weight Class (ICAO) data field values align with weight class designations per http://www.skybrary.aero/index.php/ICAO_Wake_Turbulence_Category

Weight Class (USA)
>   Weight Class (USA) data field values align with weight class designations specified in FAA JO 7110.65U.

Wheels Down
>   See "Actual Landing Time (Surveillance)"

Wheels Up
>   See "Actual Take Off Time (Surveillance)"

Wind Dir (deg)
>   In the METAR data set, wind direction in 10-degree increments, starting at true north

Wind gusts
>   Wind-gust velocity provided by METAR reports

Wind Speed
>   The speed report provided by METARS reports

Wingspan
>   Tip-to-tip measurement in meters (m) or feet (ft)

Wingspan (ft)
>   Tip-to-tip measurement in feet

Wingspan (m)
>   Tip-to-tip measurement in meters

Workspaces
>   Workspace settings and permissions

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Index

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