

Harmony for ANSPs Web User's Guide

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Chapter 1. Getting Started

Harmony for ANSPs Web provides ANSPs and their stakeholders with the capability to monitor demand and capacity at airports and airspaces in the strategic, pre-tactical, and tactical time frames. By integrating flight intent and flight data sources (e.g., marketing data, airline schedule data, flight plan data, and surveillance updates), demand predictions are computed, regularly updated, and displayed to users in order to provide situational awareness.

Overview of Harmony for ANSPs Web

Harmony for ANSPs Web includes the following components and functionality (listed in alphabetical order):

Alerts

- View and acknowledge alerts for changes to Traffic Flow Initiatives (TMIs)
- View and acknowledge alerts for changes to Resources (runway configurations and Flow Constrained Areas [FCAs])
- View and acknowledge alerts for changes to Flights (noncompliance alerts and ISE bridged flights)

COBT Compliance Window

• View Calculated Off Block Time (COBT) compliance in relation to the current time

Data Source Reports

• Super Users and Flow Managers can view Data Source Reports (a count of flights based on the latest sources of data).

Decision Support TMI

- Execute Fix Balancing analysis
- Model Fix Balancing TMI
- Model Route Detour TMI
- Model Level Capping TMI

Demand Graph

- Monitor demand
- View Demand Graphs by various elements (e.g., major, data source)
- Access time-bin-specific Flight Lists
- View demand counts
- Set Capacity
- Access Flight Lists

Edit Mode

- Update flight data (ACID, AC Type, AC Reg)
- Update flight contact information (email address, phone number, mobile carrier)
- Update a controlled flight's ATOT, ALDT
- Update a controlled flight's LOBT (the LIBT is calculated from the LOBT)
- Update a controlled flight's ELOBT (the ELIBT is calculated from the ELOBT) with an
 option to resume the auto-management of the EL time
- Cancel a flight with slot hold
- Reinstate a controlled flight
- Request an Inter Aircraft Operator Slot Exchange (ISE) on a pre-departure, controlled flight
- Swap two flights in an arrival TMI (GDP-A or GDP-A-RWY) or AFP
- Swap a flight with an unassigned slot in an arrival TMI (GDP-A or GDP-A-RWY) or AFP
- Create a flight from an existing flight
- Swap an active and a pre-departure flight (Super User only)
- Add flights (non-controlled or controlled) to a TMI (Super Users only)
- Cancel any controlled flight (Super Users only)
- Free controlled slots in a TMI (Super Users only)

Flight Data Upload

• Import and upload scheduled flights data, airport slots (strategic slot) data, and post-operational flight data

Flight List

- View Flight Lists and flight details
- Export Flight Lists to a CSV file

Мар

- Create and manage FCAs
- Filter the displayed flights with aircraft groupings
- Manage the display of layers (e.g., airports, flights, range rings, FCAs, approach controls, sectors, and flight information regions [FIRs])
- Create and manage range rings
- View weather
- Save map views
- Access Demand Graphs

Access Flight Lists

Reporting

- Run a Flight History report for a single flight
- Run a Flight Summary report for a range of flights
- Run an Airport Summary report for a graphical view of an airport's data (e.g., demand lead time, resource utilization, data overview, actual demand accuracy, pre-tactical demand, flight planning and schedule matching.
- Run a Benefit Measurement Metrics Report (via the Arrival Delay Dashboard) to view metrics for determining how much airborne holding and fuel was saved by an implemented Measure (TMI).
- Run a ATFM Measure Performance Report to view departure compliance analysis of a selected measure.

Runway Configuration

• View current and scheduled runway configurations

TMI Parameters Display

• View TMI parameters for actual and scheduled programs

Work Views

- Create Work Views (including Demand Graphs, Flight Lists, and COBT Compliance Windows; or Edit Mode)
- Configure a Work View as the default, which opens when you log in
- Edit Work Views
- Delete Work Views

Scope

This document provides the detailed procedures for using Harmony for ANSPs Web's components. A high-level description of the components is provided, as well as step-by-step details for using the application.

Document Conventions

The following conventions are used in this document:

- **Bold** text is used to indicate on-screen buttons, tabs, and icons. For example: Click **Submit** or click the **Map** icon.
- The **bold** Courier font is used to indicate a keyboard key.
 - For example: Press Enter.
- *Italicized* text is used to indicate the name of menus, fields, dropdown lists, and other labels in the application. For example: Enter the FCA in the *FCA Name* field.

Supported Browsers

Table 1 lists the supported browsers for Windows and Linux.

You are able to use some unsupported browsers; however, performance is not guaranteed.

Operating System	Browser	Version
Windows	Internet Explorer	10 and 11
Windows	Firefox	45 ESR and 52 ESR
Linux	Firefox	45 ESR and 52 ESR

Internet Explorer – Error Messages Settings

Internet Explorer may display Harmony for ANSPs Web messages in "program-like" language instead of the Harmony for ANSPs Web-coded messages. If you experience this and prefer to read Harmony for ANSPs Web's easy-to-understand messages, you must update the *Show friendly HTTP message* setting:

Note that "*friendly HTTP*" sounds like something that would be easy to read; however, the Harmony for ANSPs Web messages are more specific and user-friendly.

To update the setting, complete the following steps:

1. Open Internet Explorer > Tools > Internet Options.

The Internet Options dialog box opens.

- 2. Click the Advanced tab.
- 3. Scroll down to the *Browsing* section and locate the *Show friendly HTTP error messages* option (see Figure 1).



Figure 1: Unselect "Show friendly HTTP error messages" option

- 4. Unselect Show Friendly HTTP error messages.
- 5. Click OK.

The Internet Options dialog box closes.

Harmony for ANSPs Web-coded, user-friendly messages will be displayed.

Internet Explorer – Browser Compatibility View Settings

If you are using Internet Explorer, it is necessary to configure the browser's compatibility view settings. This will enable you to successfully access the system where you must change your password upon your initial log in. Specifically, you will:

- 1. Add *metronaviation.com* as a website that should be displayed in Compatibility View.
- 2. Unselect the Display intranet sites in Compatibility View option.

To update the Compatibility View settings, complete the following steps:

1. Select Tools > Compatibility View settings.

The Compatibility View Settings dialog box opens.

- 2. Make the following updates (see Figure 7):
 - In the Add this website field, enter metronaviation.com
 - Unselect the Display intranet sites in Compatibility View option.



Figure 2: Compatibility View settings

3. Click Close.

Firefox - Windows 10 Touch Screen Issue

Some older versions of Firefox on touch screen computers may not operate as expected (e.g., nothing will happen when you click a tool tip or element). The solution is to disable the touch screen feature. Please contact your administrator or designated Information Technology (IT) group to assist you.

Firefox - Login Screen Not Displayed

Some older versions of Firefox used on newer operation systems (e.g., Windows 10) may display a white screen instead of the Login screen. The solution is to clear the offline data cache.

To to clear the offline data cache, complete the following steps:

1. In Firefox, select *Tools > Options*.

As shown in Figure 3, the Options window opens with the General information displayed.

2. In the left-side navigation panel, select Advanced.

The Advanced information is displayed.

3. Towards the top of the screen and below *Advanced* heading, click the *Network* tab.

The Offline Web Content and User Data section is displayed at the bottom of the screen and lists the websites that are allowed to store data for offline use (see Figure 3).



Figure 3: Location of the Offline Web Content and User Data box

4. Select the Harmony for ANSPs Web website listed in the box (similar to the one in Figure 3).

The **Remove** button is activated.

5. Click Remove.

The confirmation dialog box opens (see Figure 4).

Remov	ve offline website data	×
?	After removing this data, https://ansp-qa1-dm.metronaviation.com will not be available offline. Ar you sure you want to remove this offline website?	re
	Remove offline data Cancel	

Figure 4: Remove offline website data confirmation dialog box

6. Click Remove offline data.

The Harmony for ANSPs Web website is removed from the Offline Web Content and User Data box.

7. Click your bookmark or enter the URL for Harmony for ANSPs Web.

The Login screen is displayed.

Firefox - Toolbar Buttons are Disabled for Touch Screen Computer

Some users with activated touch screen functionality have experienced locked buttons on the Harmony for Web toolbar when they first log in. The solution is to permanently disable the offline cache.

To disable permanently the offline cache, complete the following steps:

1. Open Firefox and enter the following text in the address bar: about:config (see the green circle labelled "1" in Figure 5). Note that this figure also illustrates step 4.



Figure 5: Graphical view of steps 1 and 4; and the resulting filtered list

2. Press the Enter key or click the address bar arrow to submit the command.

A warning about the risks associated with changing advanced settings is displayed.

3. Click the **I accept the risk** button to accept the risk. Note that the button's label may be different depending on the version of Firefox.

A list of preferences is displayed.

4. To filter the list to cache offline settings row, in the Search field, enter the following text: browser.cache.offline.enable (see the green circle labelled "4", as previously shown in Figure 5).

The list is filtered and displays only the row for the browser cache offline (see blue-highlighted row, as previously shown in Figure 5).

By default, the value is set to true.

5. In order to disable the offline cache, you need to set the value to false. To do this, right-click the row and select *Toggle* (see Figure 6).



Figure 6: Select Toggle to disable the offline cache

- 6. The value toggles to false and the offline cache is permanently disabled.
- 7. To restore the offline cache, repeat the previous steps, and toggle the value to *true*.

Logging into Harmony for ANSPs Web

Access to Harmony for ANSPs Web is via a Single Sign-On (SSO) page. Before logging in, your Administrator will provide a URL to the SSO page (see Figure 7) and login credentials (i.e., username and password).



Figure 7: Single Sign-On (SSO) page

To log in for the first time, complete the following steps:

1. Go to the URL provided by your administrator.

The SSO page is displayed (see Figure 7).

2. Enter the username and password provided by your administrator. Note that your username is case-insensitive (i.e., you can enter it in either uppercase or lowercase).



When you log in for the first time, you will immediately receive a verification email with a link to change your password and verify/update your basic profile settings. The link will expire five minutes after being sent; therefore, it is imperative that you click the link to verify your email address within five minutes of the sent time.

If you do not click the link within five minutes and the link expires, re-enter your login credentials to generate another verification email.

- **Note:** If you do not receive an email within a minute, check your Junk Email folder. If the verification email is in your Junk E-mail folder, create a rule to ensure future emails are not blocked.
- Click the link and follow the prompts to change your password and update your basic profile settings. For information about the password criteria, see "Password Criteria" on page 10.

Password Criteria

- Passwords must contain 3 out of 4 of the following categories:
 - Lowercase letters (a-z)
 - Uppercase letters (A-Z)
 - Numbers (0-9)
 - Symbols (e.g., !. & () @ ^ < > | / { } [])
- Passwords must be changed on a regular basis, at least once every 60 days.
- Your previous twelve passwords are verified and cannot be reused.

Password Error Message

When your password has expired or you enter a new password that does meet the password criteria, the following message is displayed:

Error! Could not modify attribute for DN (uid = username...

Resetting Your Password

You will be prompted to change your password on a regular basis; however, you may need to reset it in between the set intervals (e.g., if you forget your password). The process is similar to when you logged in for the first time.

If you forget your password or want to reset your password, complete the following steps:

1. On the Login page, enter your username and click Forgot Password? (located below the *Password* field).

You will immediately receive a verification email with a link to change your password. The link will expire five minutes after being sent; therefore, it is imperative that you click the link to verify your email address within five minutes of the sent time.

If you do not click the link within five minutes, re-click Forgot Password? to generate another verification email.

- **Note:** If you do not receive an email within a minute, check your Junk Email folder. If the verification email is in your Junk E-mail folder, create a rule to ensure future emails are not blocked.
- 2. Click the link and follow the prompts to change your password. For information about the password criteria, see "Password Criteria" on page 10.

Locked User Accounts

After three successive failed login attempts, your user account will be locked. After 30 minutes, your account will be unlocked. Contact your administrator for assistance.

Bookmarking Harmony for ANSPs Web

The Login screen is an SSO authentication page that is separate from the Harmony for ANSPs Web application domain. Instead of bookmarking the Login page, bookmark Harmony for ANSPs Web's Home Page <u>after</u> you log in (see Figure 8). When you click the bookmark, you will be taken to the Login page; however, upon login, the Harmony for ANSPs Web Home Page will open.

Eile Edit View Higtory Bookmarks Iools Help		- 🗆 X
Harmony Web X +	216-204 15 H 🗐 I 🖷 🕃 🔍 I 🗐 🛛 I	• 🗾 🕻 🖿 Lupor
Artine FOC	Arport - YMML ATFM - Home	
		UNIX.
THE THE THE		lad 1999
Tower - YBBN	ATFM Detail - YSSY > COBT Complian	oe - YSSY >
		- ther

Figure 8: Bookmark the Home Page (not the SSO/Login page)

This page is intentionally blank.

Chapter 2. Home Page

The Home Page is displayed when you first log in (see Figure 9). In the top center of the window (below the main toolbar) is the Module and Element Selection dropdown. Below it are the Work Views (i.e., the blocks below the dropdown). The Work Views on your Home Page will be based on your configuration. For more information about Work Views, see Chapter 4: Work Views. This section provides a high-level overview of the Home Page and the main toolbar.

Eile Edit View	Higtory <u>B</u> ookmarks Web ×	Iools Help +				-	×
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	Tower - Y'BBN	> Int verse Int verse	ATFNI Detail - YSSY		COET Compliance - YS	isy >	

Figure 9: Home Page

Main and Work View Toolbars

At the top of the screen is the main toolbar, which is viewable on every screen. The toolbar displayed on the Home page is shown in Figure 10. For more information about the toolbar elements, see "Main Toolbar Buttons and Controls" on page 17.



Figure 10: Home page toolbar

The Work View has additional functionality; therefore, additional buttons are displayed in the toolbar (see Figure 11). For illustrative purposes, these buttons are denoted with red squares. The **Home** and **Map** buttons are simultaneously displayed and the **Layout Configuration** and **Save Work View** (star) buttons are available.



Figure 11: Main toolbar in a Work View has additional options.

Out-of-Sync Timestamp Alert

A connection issue in which the browser is not getting updates from the server can cause the system timestamp in the toolbar to be out of sync with the actual time. This asynchronous state causes the data to be stale and prevents you from receiving alerts.

After two minutes of this out-of-sync state, the timestamp will blink in red font to alert you to the connection issue (see Figure 12).



Figure 12: Blinking red timestamp alerts you to out-of-sync timestamp

After five minutes of the out-of-sync state, a warning message will notify you that the system time is out of sync and ask whether you want to refresh the browser (i.e., reload application) to try to re-establish the network connection (see Figure 13).



Figure 13: Message after five minutes of out-of-sync state

Note that refreshing the browser will return you to the home screen. The timestamp will continue to blink in red font until the time is synchronized.

Module and Element Selection Dropdowns

At the top of the screen is the Module menu and Element (Airport or FCA) selection dropdown, i.e., *Select Airport or FCA* field (see Figure 14).



Figure 14: Module selection dropdowns for airport or FCA

The Module Menu is used to open the Flight List, COBT Compliance Window, Edit Mode (i.e., All Flights View and TMI View), and Demand Graph for the selected airport or FCA. This functionality will be reviewed in the following sections:

- Chapter 5: Flight List
- Chapter 6: COBT Compliance Window
- Chapter 7: Edit Mode All Flights View
- Chapter 8: Edit Mode TMI View
- Chapter 9: Demand Graph.

Work Views

Below the component dropdown list, are the Work View links (see Figure 15). A Work View can be a either a customized configuration of an Edit Mode Work View for a single airport or FCA, or customized configurations of Flight Lists, Demand Graphs, and COBT Compliance Windows for any combination of airports and FCAs. For more information, see Chapter 4: Work Views.

Perth	>	YMML YSSY	>
ҮРРН		YMML	Q
Edit Mode Work Vi	ew	Work	View

Click to open Work Views

Figure 15: Two types of Work Views

Online Help and About Harmony Web

In the upper right corner of the main toolbar, click *to access the System Settings and online* Help and review the software version information (see Figure 16). The *System Settings* option will be covered in Chapter 18: System Settings.



Figure 16: System Settings' options

Displaying Online Help in a Separate Window

Depending on how your browser is configured, the online Help may open in a new browser tab instead of a separate window. To view the online Help alongside Harmony Web (instead of clicking back and forth between the two tabs), select the *Harmony Web Help* tab and drag it outside the frame of your browser.

Main Toolbar Buttons and Controls

Table 2 describes the buttons, icons, and controls used in the main toolbar on the Home Page and in a Work View.

Button	Name	Description
2019-08-20 22:00	Timestamp	System's current date and time
2019-08-20 22:02	Blinking Red Timestamp	Two minutes after the system time is out of sync with the actual time, the time stamp will blink red.
		After five minutes of the asynchronous state, a warning message is displayed asking whether you want to refresh the browser to resolve the issue.
Π	Pause	Pause data updates
		Toggles with red Paused (Resume Update) button
Paused @ 13:08	Resume Update	Timestamp that data was paused
		Click to initialize a data refresh and resume data updates
		Toggles with green Pause button
*	Home	Go to Home Page button displayed on Map and toggles with Map button
		In a Work View, displays simultaneously with the Map button
0	Мар	Open Map view button displayed on Home Page and toggles with Home button
		In a Work View, displays simultaneously with the Home Page button
ব্রহ	Decision Support TMI	Open Decision Support TMI to execute Fix Balancing analysis, and to model Route Detour TMI and Level Capping TMI
8	Layout Configuration	Select Work View layout configuration
_		This button is displayed only in Work View.
	Data Tools	Access Flight Data Upload, Reporting, TMI Parameters Display, Runway Configuration, and Data Source Reports
0	System Settings	Access System Settings, Help, and About

Table 2: Main	Toolbar	Buttons	and	Control

Button	Name	Description
T	Star	Save current Work View
_		This button is only displayed in the toolbar when you are in a Work View.
Select Work View 👻	Work View	Select existing Work View from dropdown list
💻 💣 눈	TMI, Resource, and Flight Alerts	Alert icons for TMI, Resource, and Flight events
		The absence of an orange circle with a number indicates there are not any new or existing unacknowledged alerts.
₽2 &1 ±27	Orange Circle with Number on Alerts	Alerts you to new TMI, Resource, and Flight events
		Displays the total number of new and existing unacknowledged alerts for both FCA and runway configuration events
Logout	Log out	Log out of Harmony Web
Flight List Lill Demand Graph Color Edit Mode COBT Compliance Window	Module Type dropdown	Select an element for the type of module (i.e., Flight List, Demand Graph, Edit Mode, COBT Compliance Window)
	Flight List	Option in the Select Module dropdown
		In the Work View block, denotes a Flight List module
		Note that the Flight List icon also identifes a COBT Compliance Window module
Lill	Demand Graph	Option in the Select Module dropdown
		In the Work View block, denotes a Demand Graph module
ø	Edit Mode	Option in the Select Module dropdown
		Denotes an Edit Mode Work View
Q	Magnifying Glass is a New (undefined) Panel	In the Work View block, denotes an undefined panel (i.e., it is not associated with a Flight List, COBT Compliance Window, or Demand Graph)

Chapter 3. Alerts

Harmony Web users are notified of changes to a TMI (e.g., addition, revision, purge, expiration), flight (e.g., compliance threshold is not met or a flight is bridged), or resource (e.g., an FCA or airport's runway configuration). You are notified of new events that occur after you log in. That is, alerts are not displayed for activities that occurred before you logged in.

Alert Notifications

When a TMI, resource or flight event occurs, the corresponding notification button displays an orange circle with the total number of new and unacknowledged alerts (see Figure 17). The number increases as new events take place and decreases as alerts expire or you clear or acknowledge alerts.



Figure 17: Orange circle shows total number of new and unacknowledged alerts.

Depending on your alert-notification settings, a pop-up with summary alert information is displayed when an event occurs (see Figure 18). The summary includes information such as the time of the event, name of the element (e.g., FCA, airport, flight, TMI), start and end time of the event, whether the TMI is actual or proposed, and action taken. The duration of the pop-up is based on the *Pop-Up Duration* setting in the System Settings' *Alerts* tab. For more information about configuring alert notifications, see "Alerts Settings" on page 215.

⊑8 (★ ★69 Logout
29/0439: 29/0439: ACTUAL AFP (28/1900-29/0459) PURGED TMI

Figure 18: Alert notification pop-up message

The pop-up will expire or you can click it to close the pop-up. Note that this action only closes the pop-up, that is, the alert remains included in the notification count and displayed in the Alerts list.

TMI Alerts

When a TMI is added, revised, purged, compressed, or expired, the event is listed in the TMI Alerts window (see Figure 19).

	TMI Alerts	(2) 1	2 mi	Parameters Dis	splay				
3	Event Time	Element	TMI Event	Param Type	TMI Type	Start Time	End Time		
	29/0343	YBBN	NEW TMI	ACTUAL	GDP-A	29/0345	29/0759	×	5
4	29/0351	FCAJS	NEW TMI	PROPOSED	AFP	29/0400	29/0759	×	
	29/0420	YBBN	PURGED TMI	ACTUAL	GDP-A	29/0345	29/0759	×	
						6 Acknowled	ige All Clea	ar All	

Figure 19: TMI Alerts lists the TMI events

The reference numbers in Figure 19 are described in the following list:

- 1. The TMI Alerts label parenthetically lists the total number of acknowledged and unacknowledged alerts.
- 2. The TMI Parameters Display button opens the TMI Parameters window. For more information, see Chapter 15: TMI Parameters Display.
- 3. The column headers label the data elements, which are defined in Table 3.
- 4. The text of an unacknowledged event is in orange font. The text of an acknowledged event is in white font.
- 5. The **X** button clears an individual event.
- 6. The Acknowledge All button simultaneously acknowledges all events on the active tab. Once an event is acknowledged, the font color changes to white.
- 7. The Clear All button simultaneously removes all events from the active tab.

Data Element	Description
Event Time	Time (in DD/HHmm format) that the TMI was added, revised, or purged
Element	Airport code or FCA name
TMI Event	Lists the type of event: – NEW TMI – REVISED TMI – PURGED TMI – COMPRESSED TMI – EXPIRED TMI
Param Type	Indicates whether the TMI event is for an Actual or Proposed TMI

Table	. TN 41	A	Data	
Table 3	5. I IVII	Aleris	Dala	Elements

Data Element	Description
ТМІ Туре	Type of TMI (e.g., GDP-A, GDP-D, AFP, GS)
Start Time	Runway configuration start time in DD/HHmm format
End Time	Runway configuration end time in DD/HHmm format

Flight Alerts

Flight Alerts has three tabs, *Compliance Alerts, ISE Bridged Flights*, and *Pop-Up*, which are viewable by all users. For Aircraft Operators, the *Majors only* checkbox is displayed as an indicator that the list is filtered by flights in their major.

Note: The parenthetical numbers in the tab labels represent the *total of both acknowledged and unacknowledged events* for the specified tab.

Viewing Compliance Alerts, ISE Bridged Flights, and Pop-Up Flight Events

The steps to view the Compliance Alerts, ISE Bridged Flights, and Pop-Up tabs are similar.

To view the Compliance Alerts, ISE Bridged Flights, and Pop-Up Flights events, complete the following steps:

1. Click the Flight Alerts button 2103

The Flight Alerts window opens. For more information see Figure 20.

2. To view the Compliance Alerts events, click Compliance Alert (105)

The *Compliance Alerts* tab opens and the label color changes to blue, which indicates that the tab is active. For more information, see "Compliance Alert Tab" on page 21.

3. To view the ISE Bridged Flights events, click ISE Bridged Flights (5)

The *ISE Bridged Flights* tab opens and the label color changes to blue, which indicates that the tab is active. For more information, see "ISE Bridged Flights Tab" on page 22.

Compliance Alert Tab

The Compliance Alert tab displays alerts for flights with a compliance value less than the early compliance threshold or greater than the late compliance threshold (see Figure 20). Values range from -30 (early minutes) to 30 (late minutes). The default threshold is 5 minutes early and 5 minutes late. For more information about the default settings, see the COBT Compliance Window section in "Alerts Settings" on page 215.

Flight	Flight Alerts I Majors Only								
Compliance Alert (105) ISE Bridged Flights Pop-Up Flights									
Info	Event Time	ACID	ADEP	ADES	Major	Compliance	Cti TMI		
6	08/1842	VLE830	YSSY	YMML	UNKN	0	GDP-A(08/1745 - 08/23	×	^
6	08/1742	VLE824	YSSY	YMML	UNKN	0	GDP-A(08/1745 - 08/23	×	
0	08/1701	VLE823	YMML	YSSY	UNKN	0	GDP-A(08/1415 - 08/22	×	
1	08/1701	VLE823	YMML.	YSSY	UNKN	0	GDP-A(08/1415 - 08/22	×	
6	08/1709	VLE823	YMML	YSSY	UNKN	0	GDP-A(08/1415 - 08/22	×	
1	08/1846	VLE372	YBTL	YBBN	UNKN		GDP-A-RWY(08/1700	×	
6	08/2022	VLE322	YBBN	YMML	UNKN	0	GDP-A(08/1745 - 08/23	×	~
Flight	Flight Compliance: 3 minutes early to 3 minutes late Acknowledge All Clear All								

Figure 20: Compliance Alert window

Table 4 lists the Compliance Alert data elements.

Table 4: Compliance Alert data elements

Data Element	Description
Info	Open Flight Details for selected flight
Event Time	Time the flight got its ATOT time
ACID	Aircraft ID
ADEP	Flight's departure airport
ADES	Flight's destination airport
Major	Flight's major
Compliance	ATOT-CTOT
Ctl TMI	Controlling TMI
Majors Only	This is displayed only for Aircraft Operators as an indicator that the list is filtered by flights in their major.

ISE Bridged Flights Tab

The ISE Bridged Flights tab displays alerts for flights that were ISE bridged (see Figure 21).

Flight	Flight Alerts State Majors Only								
Compl	Compliance Alert (105) ISE Bridged Flights (5) Pop-Up Flights								
Info	Event Time	ACID	ADEP	ADES	Major	Slot	Cti TMI		
1	06/1259	EAQ470	YMML	YSSY	QFA		GDP-A(06/1230 - 06/1359)	×	
1	06/1308	RXA454	YGTH	YSSY	RXA		GDP-A(06/1230 - 06/1359)	×	
1	06/1314	EAQ404	YMML	YSSY	QFA		GDP-A(06/1230 - 06/1359)	×	
1	06/1317	RXA3	YMTG	YMML	RXA		GDP-A(06/1315 - 06/1359)	×	
1	06/1327	JST785	YPAD	YMML.	QFA			×	
							Acknowledge All Clear	r All	

Figure 21: ISE Bridged Flights window

ISE Bridged Flights Data Elements

Table 5 lists the ISE Bridged Flights data elements.

Table 5: ISE Bridged Flights data elements

Data Element	Description
Info	Open Flight Details for selected flight
Event Time	Time the Flight was ISE bridged
ACID	Aircraft ID
ADEP	Flight's departure airport
ADES	Flight's destination airport
Major	Flight's major
Slot	Slot the flight was ISE bridged into
Ctl TMI	Controlling TMI
Majors Only	This is displayed only for Aircraft Operators as an indicator that the list is filtered by flights in their major.

Pop-Up Flights Tab

The Pop -Up Flights tab displays alerts for pop-up flights (see Figure 22).

Flight Alerts								
Compliance Alert ISE Bridged Flights Pop-Up Flights (97)								
Info	Event Time	ACID	ADEP	ADES	Major	Slot	СШТМІ	
6	22/1028	AIC302	YSSY	YMML	NOC	22/1834	AFP(21/2000 - 22/1559)	^
6	22/1028	MAS142	YSSY	WMKK	QFA	22/1842	AFP(21/2000 - 22/1559)	
6	22/1028	CCA176	YSSY	ZSPD	NOC	22/2124	AFP(21/2000 - 22/1559)	
8	22/1028	GIA713	YSSY	WIII	QFA	22/2128	AFP(21/2000 - 22/1559)	17
6	22/1028	EAQ416	YMML.	YSSY	QFA	22/1323	GDP-A(22/0715 - 22/1559)	
1	22/1028	HVN772	YSSY	VVTS	QFA	22/2143	AFP(21/2000 - 22/1559)	
6	22/1028	EAQ410	YMML.	YSSY	QFA	22/1210	GDP-A(22/0715 - 22/1559)	
<	22/4020	A A DE0.2	Veev	DV CI	054	22/2002	AED(24/2000 22/4650)	Ň
							Acknowledge All Clear A	AII

Figure 22: Pop-up Flights window

Pop-Up Flights Data Elements

Table 6 lists the Pop-Up Flights data elements.

Table 6: Pop-up Flights data elements

Data Element	Description
Info	Open Flight Details for selected flight
Event Time	Time pop-up flight was triggered
ACID	Aircraft ID
ADEP	Flight's departure airport
ADES	Flight's destination airport
Major	Flight's major
Slot	Slot in which the pop-up flight was put
Ctl TMI	Controlling TMI
Majors Only	This is displayed only for Aircraft Operators as an indicator that the list is filtered by flights in their major.

Resource Alerts

The Resource Alerts window has two tabs, *Airport Event* and *FCA Event*. By default, the window always opens to the *Airport Event* tab. The active tab is denoted by a blue label and the hidden tab is denoted by a gray label (see Figure 23).

Note: The parenthetical numbers in the tab labels represent the *total of both acknowledged and unacknowledged events* for the specified tab.

Figure 23 shows that there are four airport (runway configuration) events and one FCA event. These numbers include both the acknowledged and unacknowledged alerts.

Click the tab label to view the corresponding events.

Resource Alerts			
Airport Event (4)	FCA Event (1)		

Figure 23: Number is total of acknowledged and unacknowledged events

Viewing Airport and FCA Events

The steps to view the Airport Event and FCA Event tabs are similar.

To view the Airport and FCA events, complete the following steps:

1. Click the **Resource Alerts** button



The Resource Alerts window opens. For more information, see "Resource Alerts" on page 24.

2. To view the Airport Event tab, click Airport Event (4)

The *Airport Event* tab opens and the label color changes to blue, which indicates that the tab is active. For more information, see "Airport Event Tab" on page 25.

3. To view the FCA Event tab, click FCA Event (3)

The *FCA Event* tab opens and the label color changes to blue, which indicates that the tab is active. For more information, see "FCA Event Tab" on page 27.

Airport Event Tab

When a runway configuration is added, updated, or deleted, the event is listed on the *Airport Event* tab (see Figure 24).

Resource Alerts 1 Runv					uration Schedule	
Airport Event	Airport Event (4) FCA Event (3)					
3/ent Time	Name	Resource Event	Details	Start Time	End Time	
20/1450	YPPH	ADDED CONFIG	21/24V	20/2300	21/1359 🗙	
<mark>(4</mark>)/1500	YPPH	UPDATED CONFIG	21/24V	20/1500	20/2259 🗙	
20/1504	YPPH	ADDED CONFIG	03A/03D06DA	21/0330	21/0559 🗙	
20/1505	YPPH	REMOVED CONFIG	03A/03D06DA	21/0330	20/2259 🗙	
			6		7	
				Acknowledge	All Clear All	

Figure 24: Airport Event tab lists the runway configuration events

The reference numbers in Figure 24 are described in the following list:

1. The Runway Configuration Schedule button opens the Runway Configuration window. For more information, see Chapter 16: Runway Configuration.

- 2. Alert tabs
 - The Airport Event tab parenthetically lists the total number of acknowledged and unacknowledged runway configuration events. The blue-colored Airport Event tab indicates that it is the active tab.
 - The FCA Event tab parenthetically lists the total number of acknowledged and unacknowledged FCA configuration events. The gray-colored FCA Event tab indicates that it is not the active tab.
- 3. The column headers label the data elements, which are defined in Table 7.
- 4. The text of the unacknowledged events is in orange font. The text of acknowledged events is in white font.
- 5. The **X** button clears an individual event.
- Acknowledge All 6. The button simultaneously acknowledges all events on the active tab. Once an event is acknowledged, the font color changes to white.
- Clear All button simultaneously removes all events from the active tab. 7. The

Data Element	Description
Event Time	Time (in DD/HHmm format) that the runway configuration was added, updated, or deleted
Name	Airport code
Resource Event	Lists the type of event: – ADDED CONFIG – UPDATED CONFIG – REMOVED CONFIG
Details	Name of the runway configuration
Start Time	Runway configuration start time in DD/HHmm format
End Time	Runway configuration end time in DD/HHmm format

Table 7: Airport Event data elements

FCA Event Tab

When an FCA is added, updated, or deleted, the event is listed on the *FCA Event* tab (see Figure 25).

Resource Alerts	2			1 FCAL	.ist
Airport Event (1)	FCA Event (3)				
3 vent Time	Name	Resource Event	Start Time	End Time	5
20/1431	FCAJS1	INITIAL AIRSPACE	20/1500	21/1359	×
⁴ 20/1437	FCAJS1	UPDATE AIRSPACE	20/1500	21/1359	×
20/1456	FCAJS1	DELETE AIRSPACE	20/1500	21/1359	×
		(3	7	
			Acknowledg	e All Clear	All

Figure 25: FCA Event tab lists the FCA events

The reference numbers in Figure 25 are described in the following list:

- 1. The **FCAList** button opens the Map for a view of the FCA's location.
- 2. The FCA Event tab parenthetically lists the total number of acknowledged and unacknowledged FCA events. The blue-colored FCA Event tab indicates that it is the active tab.
- 3. The column headers label the data elements, which are defined in Table 8.
- 4. The text of the unacknowledged events is in orange font. The text of acknowledged events is in white font.

- 5. The **X** button clears an individual event.
- 6. The Acknowledge All button simultaneously acknowledges all events on the active tab. Once an event is acknowledged, the font color changes to white.
- 7. The Clear All button simultaneously removes all events from the active tab.

Table 8: FCA Event data elements

Data Element	Description
Event Time	Time (in DD/HHmm format) that the FCA was added, updated, or deleted
Name	FCA Name
Resource Event	Lists the type of event: – INITIAL AIRSPACE – UPDATE AIRSPACE – REMOVE AIRSPACE
Start Time	FCA start time in DD/HHmm format
End Time	FCA end time in DD/HHmm format

Clearing (permanently moving) Events

You can clear (permanently remove) a single event or simultaneously clear all the events from the active window or tab. Clearing events permanently removes them. If you want to retain the event for the duration of your current session, acknowledge the event instead of clearing it. For more information, see "Acknowledging Events" on page 29.

Clearing (permanently removing) a Single Event

Clear a single event by clicking the **X** (delete) button.

To clear (permanently remove) a single event, complete the following steps:

1. Click the Alerts button 232, 44, or 2103

The selected Alerts window opens.

2. If the window has two tabs (e.g., Resource Alerts has an Airport Event tab and FCA Event tab), click the tab that contains the events you want to remove.

The selected tab is displayed

The tab label color changes to blue.

3. Select the event that you want to remove permanently from the list.

The row is highlighted blue (see Figure 26).
Resource Alerts				FCA	List
Airport Event (4)	FCA Event (3)				
Event Time	Name	Resource Event	Start Time	End Time	
20/1431	FCAJS1	INITIAL AIRSPACE	20/1500	21/1359	×
20/1437	FCAJS1	UPDATE AIRSPACE	20/1500	21/1359	×
20/1456	FCAJS1	DELETE AIRSPACE	20/1500	21/1359	×
			Acknowled	lge All Clear	All

Figure 26: Selected row is highlighted blue

4. At the end of the row, click 💌.

The event is permanently removed from the list.

The event count that is parenthetically listed in the tab's label decreases by one.

If the alert was unacknowledged (font was orange), the **Alerts** button's orange-encircled number decreases by one.

Clearing (permanently removing) all Events

Permanently remove from the active window or tab all events by clicking the Clear All button.

To clear (permanently remove) all events, complete the following steps:

1. Click the Alerts button 232, 44, or 2103.

The selected Alerts window opens.

2. In the lower left corner of either the active window or tab, click Clear All

All event notifications are removed from the selected tab.

The number of events and the parentheses are removed from the tab's label.

The **Alerts** button's orange-encircled number decreases by the number of unacknowledged alerts that was removed.

Acknowledging Events

You can acknowledge a single event or simultaneously acknowledge all the events on the selected tab.

Acknowledging a Single Event

Acknowledge a single event by selecting it.

To acknowledge a single event, complete the following steps:

1. Click the Alerts button $\boxed{232}$, $\boxed{540}$, or $\boxed{2103}$

The selected Alerts window opens.

- 2. If the window has two tabs, click the tab that contains the events you want to remove. The selected tab is displayed.
- 3. Select the event that you want to acknowledge.

The row is highlighted blue and the orange font changes to white (see Figure 26).

On the Alerts button, the orange-encircled number decreases by one.

Note that the parenthetical number in the tab's label remains the same because this count includes the total of acknowledged and unacknowledged alerts.

Resource Alerts				FCA	List
Airport Event (4)	FCA Event (2)				
Event Time	Name	Resource Event	Start Time	End Time	
20/1437	FCAJS1	UPDATE AIRSPACE	20/1500	21/1359	×
20/1456	FCAJS1	DELETE AIRSPACE	20/1500	21/1359	×
			Acknowled	lge All Clear	All

Figure 27: White font indicates the alert has been acknowledged

Acknowledging all Events

Acknowledge all the events on the selected tab by clicking the Acknowledge All button.

To acknowledge all events, complete the following steps:

1. Click the Alerts button 232, 44, or 2103

The Alerts window opens.

2. In the lower left corner of window or active tab, click Acknowledge All

The orange font of all unacknowledged events changes to white font.

On the **Alerts** button, the orange-encircled number decreases by the number of unacknowledged alerts that was acknowledged.

Closing an Alerts Window

To close the Alerts window, click anywhere outside of the Alerts window frame.

Alerts Buttons and Controls

Table 9 describes the buttons, icons, and controls used in Alerts.

Button	Name	Description
TMI Parameters Display	TMI Parameters Display	Open the TMI Parameters Display window
Airport Event	Airport Event	Display the Runway Configuration events
		The blue label indicates the tab is active
FCA Event	FCA Event	Display the FCA events
		The gray label indicates the tab is not active.
Airport Event (4)	Airport Event (alert count)	The number in parentheses is a total count of all acknowledged and unacknowledged Airport Event alerts.
		The gray label indicates the tab is not active.
FCA Event (3)	FCA Event (alert count)	The number in parentheses is a total count of all acknowledged and unacknowledged FCA Event alerts.
		The gray label indicates the tab is not active.
Compliance Alert	Compliance Alert	Display the Compliance events
		The blue label indicates the tab is active.
Compliance Alert (105)	Compliance Alert (alert count)	The number in parentheses is a total count of all acknowledged and unacknowledged Compliance Event alerts.
		The blue label indicates the tab is active.
ISE Bridged Flights	ISE Bridged Flight	Display the ISE Bridged Flights events
		The gray label indicates the tab is not active.
ISE Bridged Flights (5)	ISE Bridged Flight (alert count)	The number in parentheses is a total count of all acknowledged and unacknowledged ISE Bridged Flights alerts.
		The blue label indicates the tab is active.
Pop-Up Flights	Pop-Up Flights	Display the Pop-Up Flights events
		The gray label indicates the tab is not active.
Pop-Up Flights (82)	Pop-Up Flights (alert count)	The number in parentheses is a total count of all acknowledged and unacknowledged Pop-Up Flights alerts.
		The blue label indicates the tab is active.

Table 9: Alerts	buttons,	icons,	and	controls
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Button	Name	Description
G Majors Only	Majors Only	This is displayed only for Aircraft Operators as an indicator that the list is filtered by flights in their major.
•	Information / Flight Details	Open the Flight Details for the selected flight
Runway Configuration Schedule	Runway Configuration Schedule	On the Airport Event tab, open the Runway Configuration window (For more information, see Chapter 16: Runway Configuration)
FCA List	FCA List	On the FCA Event tab, open the Map for a view of the FCA's location
Acknowledge All	Acknowledge All	On the selected tab, marks all events as read, which changes the font to white and subtracts the events from the Resource Alert button's count.
Clear All	Clear All	Permanently remove all events on the active tab
×	Close	Remove the selected event Close the pop-up alert
Cancel	Cancel	Close the Resource Alert window

Chapter 4. Work Views

A Work View is a saved layout of Flight Lists, COBT Compliance Windows, and Demand Graphs for any combination of airports and FCAs (see Figure 28). It can include up to four of these components (Flight Lists, COBT Compliance Windows, or Demand Graphs). An Edit Mode Work View is a saved layout for a single airport or FCA (see Figure 29). When you log in for the first time, the Home Page displays system-defined Work Views (see Figure 28). You can use these Work Views or create and save new Work Views that are customized to your preferences.

The Work View provides a visual summary of its components. It displays the layout configuration, the name of the airports/FCAs, and a Flight Detail icon (which also depicts a COBT Compliance Windows module) or Demand Graph icon. For Edit Mode Work Views, a single Edit Mode (pencil) icon is displayed.

The following Work View example includes the following (see Figure 28):

- The name of the Work View in the heading (i.e., Airline YMML).
- A right-facing caret (\sum) in the heading, which you click to open the Work View.
- The example Work View has three modules; however, you can have up to four modules. Each module is each labelled with the name of its element (airport/FCA) or your customized name and has an icon representing the type of module:
 - Flight List (
 - Demand Graph (
 - New Panel () on the lower right (for more information about the New Panel, see "Creating Work Views" on page 34).



Figure 28: Work View Example

The Edit Mode Work View shows a single Edit (pencil) icon (see Figure 29).



Figure 29: Edit Mode Work View

Opening a Work View

You can open the Work View using one of the following methods:

- Click directly on the (caret) on the right side of the heading (as previously shown in Figure 28 and Figure 29).
- In the toolbar, click the dropdown arrow Select Work View , and select the Work View from the list of monitored Work Views, or enter the first letter(s) of the Work View name to search the quick filter list.

Creating Work Views

You can create a Work View starting with a single Demand Graph, Flight List, or Edit Mode. You also can change an existing Work View and save it with a new name.

Note: Work View deletions are executed in the System Settings component. For information about deleting Work Views, see "Deleting Work Views" on page 211 in Chapter 18: System Settings.

To create a Work View from a single component, complete the following steps:

 From the Home Page Module menu, select Fight List, Demand Graph, COBT Compliance Window, or Edit Mode, and from the dropdown list, select the airport/FCA. You also can enter the first letter(s) of the airport/FCA to search the quick filter list (see Figure 30).



Figure 30: Select a module and airport or FCA

The selected element opens.

2. In the main toolbar, click and select the layout configuration (see Figure 31). Note that the Layout Configurations button is not displayed for Edit Mode Work Views because an Edit Mode Work View can be configured for only one instance of Edit Mode for a single airport or FCA.



Figure 31: Layout configurations for non-Edit Mode Work Views

The Work View displays the selected configuration (see Figure 32).

The undefined panels are labelled *New Panel* and display the *Module and Element* selection dropdowns.

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	Time (UTC)		Reset			

Figure 32: New layout configuration with three New Panels

- In each New Panel, select either Flight List, Demand Graph, or COBT Compliance Window, and from the dropdown, select an airport or FCA, and click Go.
 The selected module and element opens.
- To rename the panel, double-click the name, New Panel. New Panel is highlighted white (see Figure 33).



Figure 33: Double-click to highlight and rename New Panel.

- 5. Enter the new name.
- To save your changes to the Work View, click (located in the main toolbar).
 The Save Work View dialog box opens (see Figure 34).



Figure 34: Save Work View dialog box

- 7. Enter a unique Name in Name. It is important to enter a unique name because if enter an existing work view name, it will update the existing work view instead of creating a new one.
- 8. Select Set as default to save the Work View as the default Work View that will open when you log in.
 - **Note:** You can also configure the default status of an existing Work View in the Systems Settings component. For additional information, see "Work Views Settings" on page 211 in Chapter 18: System Settings.
- 9. Click Save

A success message is displayed.

The Work View is added to the Home Page.

The Work View is added to the Work View list in System Settings, and the Home Page *Select Work View* dropdown list and quick filter list.

If you selected Set as default , the Work View will open when you log in.

Moving Panels

You can move panels to a new location within a Work View layout.

To move a panel, complete the following steps:

1. Click in the upper right corner of the module.

A dropdown with the available move options is displayed (see Figure 35). The displayed options are relevant to the panel's position. For example, a panel that is on the bottom will not include the *Bottom* option.



Figure 35: Move options for panel located on the bottom, right side

- To save your changes to the Work View, click 1 (located in the main toolbar).
 The Save Work View dialog box opens.
- 3. Click Save

Note: If the Work View is system-defined, you will be prompted to

Name:

A success message is displayed.

rename the Work View in

The Work View layout is saved.

If you saved a new Work View, it is added to the Work View list in System Settings, and the Home Page *Select Work View* dropdown list and quick filter list.

Changing the Layout Configuration

You can select a different layout configuration for a Work View. You can change the configuration to one with the same number of modules, or you can change the configuration to one with fewer modules. When changing to a configuration with fewer modules, you must reset the panels that you do not want to include. This will enable the system to identify the active modules to keep in the new configuration.

The following two sets of steps explain how to change the layout for each scenario.

To change the layout configuration to one with the same number of modules, complete the following steps:

1. In the main toolbar, click 🛄

The list of layout configurations is displayed.

2. Select a configuration that has the same number of modules.

The new configuration is displayed.

 To save your changes to the Work View, click [1] (located in the main toolbar). The Save Work View dialog box opens. 4. Click Save

Note: If the Work View is system-defined, you will be prompted to

rename the Work View in Name:

The layout configuration is saved.

A success message is displayed.

If you saved a new Work View, it is added to the Work View list in System Settings, and the Home Page *Select Work View* dropdown list and quick filter list.

To change the layout configuration to one with fewer modules, complete the following steps:

1. Reset the panel for each component that you do not want to include in the new configuration (see Figure 36). For example, if you are going from four panels to two panels, you must reset two panels so that only two panels remain active,



Figure 36: Reset the panel

2. In the main toolbar, click 🛅

The list of layout configurations is displayed.

3. Select the configuration that has fewer components.

The panel that was reset is removed.

The new configuration is displayed.

- 4. To save your changes to the Work View, click 🞑 (located in the main toolbar). The Save Work View dialog box opens.
- 5. Click Save

Note: If the Work View is system-defined, you will be prompted to

rename the Work View in Name:

The layout configuration is saved.

A success message is displayed.

If you saved a new Work View, it is added to the Work View list in System Settings, and the Home Page *Select Work View* dropdown list and quick filter list.

Editing Work Views

You can update an existing Work View.

To update an existing Work View, complete the following steps:

1. From the Home page or Select Work View dropdown list in the Main toolbar, select a Work View.

The Work View opens.

- 2. Update the Work View (e.g., show new columns).
- 3. Click click [1] (located in the main toolbar).

The Save Work View dialog box opens.

4. Click Save

A warning message is displayed alerting you that the Work View name already exists (see Figure 37).

Warning X			
Work view name already exists. Replace existing work view?			
Yes No			

Figure 37: Warning message when saving updates

- 5. Click **Yes** to save the changes.
- 6. If you click **No**, you are returned to the Save Work View dialog box to enter a new name.



Figure 38: Save Work View dialog box

7. Enter the new name and click **Save**.

The new Work View is displayed on the Home page.

Renaming Modules

You can rename the title of modules in a Work View in order to make the names more descriptive.

To rename the titles, complete the following steps:

1. Double-click the title.

The title is highlighted white (see Figure 39).





Note that the flight count (e.g., 13 flights) in the Flight List title cannot be edited as it is system-generated,

- 2. Enter the new title. The title can only contain a-z, A-Z, 0-9, -, and /.
- 3. To save your changes to the Work View, click 🞑 (located in the main toolbar). The Save Work View dialog box opens.
- 4. Click Save
 - Note: If the Work View is system-defined, you will be prompted to

rename the Work View in Name:

The layout configuration is saved with the new title.

A success message is displayed.

If you saved a new Work View, it is added to the Work View list in System Settings, and the Home Page *Select Work View* dropdown list and quick filter list.

Work Views Buttons and Controls

Table 10 describes the buttons, icons, and controls used in Work Views.

Button	Name	Description
	Demand Graph	Select a Demand Graph
		Indicates a Demand Graph module
III	Flight List	Select a Flight List Indicates a Flight List module

Table 10: Work Views Buttons and Controls

Button	Name	Description
Q	New Panel	Indicates a New Panel (undefined module)
ø	Edit Mode	Indicates an Edit Mode Work View
Belets Airpent or ECA	Element dropdown	Lists the monitored airports and FCAs
Go	Go	Open selected module and element (airport/FCA)
+	Move	Move the panel to the left, right, top, or bottom
		This is only displayed in a Work View with multiple elements.
00	Flight List or Demand Graph Tools	Open tools for the Flight List or Demand Graph
*	Star	Main toolbar Save current Work View
	Layout Configuration	Displayed in the Main toolbar (except for Edit Mode Work Views).
		Select Work View layout configuration
Set as default 🗌	Set as default	Save Work View dialog box
		Save Work View as default view that opens when you log in
Save	Save	Save Work View dialog box
		Save the updates
Close	Close	Save Work View dialog box
		Close without saving the updates

Chapter 5. Flight List

The Flight List lists flights for the selected airport or FCA (see Figure 40). You can view flight summaries and flight details for each flight. The flight data is refreshed by the system at a configured interval. The Flight List Tools include the functionality to configure which columns are displayed; filter fights by different data types including aircraft, route, and times; export the Flight List to a CSV file, and reset panels to change the Work View.

Edit Mode is a Flight List Tool that provides the capability to update a flight's data (ACID, AC Type, AC Reg) and contact information (email address, phone number, mobile carrier); cancel a flight; reinstate a cancelled flight; and update a flight's times (LOBT, LIBT, AOBT, AIBT). For more information about Edit Mode, see Chapter 7: Edit Mode – All Flights View and Chapter 8: Edit Mode – TMI View.

l			1)							3	1000	
	Info	Status	Map	ACID		ADEP	ADES	AC Type	EOBT	ETOT	ATOT	ELDT	
5	10	•	•	2 231	N	YSSY	YOFS	B350	A01/2006	A01/2017	01/2017	E01/2108	
	0	•	•	UFA400	N	YSSY	YMML	8738	A01/2007	A01/2018	01/2018	E01/2128	
•	0	•		JST602	N	YMAV	YSSY	A320	A01/1902	A01/1908	01/1906	A01/2019	01/201
	10	•	•	TGG213	N	YSSY	YMML	A320	A01/2010	A01/2020	01/2020	E01/2128	
0	0	•		QLX2200	N	YSWG	YSSY	DHBD	A01/1925	A01/1930	01/1930	A01/2021	01/202
D	0	•	•	QFA504	N	YSSY	YBBN	8738	A01/2010	A01/2021	01/2021	E01/2130	
	6 0	•	•	QL/264	N	YSSY	YUHI	DH68	A01/2012	A01/2023	01/2023	E01/2153	
0		•		QFA501	N	YBBN	YSSY	8738	A01/1857	A01/1904	01/1904	A01/2023	01/202
	0	•	_	QFA400	N	YMML	YSSY	8738	A01/1907	A01/1913	01/1913	A01/2025	01/202
0	0	•	•	V02505	N	YSSY	YBCG	8738	A01/2014	A01/2025	01/2025	E01/2123	
0	0	•	•	JST402	N	YSSY	YBCG	A320	A01/2017	A01/2028	01/2028	E01/2128	
0	0	•		QLK161D	N	YPMQ	YSSY	DHBD	A01/1938	A01/1939	01/1939	A01/2029	01/202
0	0	•	•	TGG352	N	YSSY	YBBN	A320	A01/2021	A01/2031	01/2031	E01/2139	
0	0	•	•	AM253	N	YSSY	YSTW	BE20	A01/2021	A01/2032	01/2032	E01/2110	
•	0	•		V021148	N	YSTW	YSSY	AT76	A01/1931	A01/1934	01/1934	A01/2033	01/203 🗸
-4	17							8					9 🕩
	Active	Completed			« <	Page	1 of 3	3 > >	1 😂 100 🔻	Per Page		Displayin	1 - 100 of 300

Figure 40: Flight List

Flights for an aircraft operator's major are in bold font.

The reference numbers in Figure 40 are described in the following list:

- 1. Airport or FCA name and total flights (see "Renaming Flight Lists" on page 60)
- Map location pin opens Map and displays flight's trajectory (see "Viewing Harmony Trajectory for Airborne Flights" on page 47 and "Viewing Airborne Flight's Harmony Trajectory" on page 127 in Chapter 11: Map).
- 3. Flight search by ACID
- 4. Flight List Tools controls
 - Manage Columns (see "Managing Columns (Flight List Tool)" on page 48)
 - Filter (see "Filtering (Flight List Tool)" on page 52)

- Export (.csv) (see "Exporting Flight List to CSV File (Flight List Tool)" on page 58)
- Edit Mode (see Chapter 7: Edit Mode All Flights View and Chapter 8: Edit Mode – TMI View)
- Reset Panel (see "Resetting the Panel (Flight List Tool)" on page 59)
- 5. Click the + or to show or hide the flight summary (see "Viewing Flight Summary" on page 45)
- 6. Opens the Flight Details (see "Viewing Flight Details" on page 45)
- 7. Legend for flight statuses (i.e., Active and Completed)
 - Active = Active (i.e., has an ATOT but no ALDT):
 - **Completed** = Completed (i.e., has an ALDT):
- 8. Pagination controls (see "Viewing Multiple Pages of Data" on page 44)
- 9. Range of flights displayed in the active window and the total number of flights

Viewing Multiple Pages of Data

Some flight records span multiple pages. Centered below the Flight List are the page controls for viewing the different pages of data (see Table 11). Use the controls to navigate the pages and define the number of records displayed on each page.

Control	Name	Description
«		Display the first page of the data. This button is not enabled if you are viewing the first page.
<		Display the previous page of data. This button is not enabled if you are viewing the first page.
Page 1 of 1	Total Pages	Display the current page number and the total number of pages. To view a specific page, enter the page number and press the Enter key.
>	Next Page	Display the next page of data. This button is not enabled if you are viewing the last page.
*	Last Page	Display the last page of data. This button is not enabled if you are viewing the last page.
0	Refresh	Refresh only the Flight List data. This differs from your browser's F5, Ctrl+F5, and Refresh button functionality as they refresh the entire Harmony Web web application.
100 🔻 Per Page	Records per Page	Define the number of records displayed on the page. Use the dropdown menu to select 50, 100, 250, or All.

Table 11: Page controls

Control	Name	Description
Displaying 1 - 13 of 13	Total Records	Display the displayed range of records and the total number of records.

Viewing Flight Summary

The Flight Summary contains the ACID (FID), ADED/DRwy/DFix, ADES/ARwy/AFix, Major, Flight State, AC Reg, AC Type, AC Type Group, EOBT, ETOT, ELDT, EIBT, and FPL Route.

The Flight Summary for an FCA contains two additional elements, EENTRY and EEXIT.

To view the flight summary, complete the following steps:

1. In the first column, click

The panel expands and displays the flight summary (see Figure 41).

The Expand button toggles to **D**.

YE	BN (509	flights)								
	Info	Stat	ACID	CNX	ADEP	ADES	АС Туре	SOBT	EOBT	ETO
	i	A	VLE361	N	YBBN	YBTL	UNKN	18/1537	A18/1530	A18/
	ACID (F	FID) VLE	361 (280155)	ADEP / D	Rwy / DFix	YBBN / 19) / ZZZZZ	ADES / ARwy /	AFix YBTL / / ZZZZ	z
	Major UNKN			AC Reg	VLE36		AC	Type UNKN	A	
	E	OBT A18/	1530		ETOT	A18/1537		E	LDT E18/1659	
	FPL Ro	oute								

Figure 41: Flight Summary expand/collapse toggle button

The Flight Summary displays the ACID (FID), ADED/DRwy/DFix, ADES/ARwy/AFix, Flight State, Delay TOD (LTOD in minutes), Major, AC Reg, AC Type, AC Type Group, EOBT, ETOT, ELDT, EIBT, and FPL Route.

2. Click I to close the Fight Summary panel.

The Flight Summary panel closes.

The Collapse button toggles to	÷
--------------------------------	---

Flight List Status

The flight list statuses are A (Active), P (Planned), C (Controlled/Cancelled), S (Scheduled), and L (Airline).

Viewing Flight Details

The Flight List displays the elements that are configured by default or customized by you. You can view additional information in the Flight Details component.

To view the Flight Details, complete the following steps:

()

1. In the Info column, click

The Flight Details opens (see Figure 42).

Flight Details f	or QFA154											×
	QFA154 (As of 23:17)											
	Flight Inf	2 Flight Leg Int			nformation							
ACID	QFA154		Major	QFA					Departu	ire	Arrival	
АС Туре	B738	,	AC Type	JET				Airport	NZAA		YN	IML
AC 8	10.07		Group					Runway			1	16
AC Reg			A 1					Fix	ZZZZZ	Z	L	ZZI
Delay Status		50.01	Alarm	00 EA	0.07		Estimated	Fix Time	25/213	8	26/	0053
FPL Route	LEDET DCT BU	LLA	Q29 LIZZ	079F3801 I DCT	501			LTOD		0		
		_	_	2 Fli	aht Event	Timec	504					
				<u> </u>	an cven		FGA:	FCAJS10	043			
			OBT	тот	DFix	Entry	Exit	AFix	LDT	IB1	r i	EET
	Estimated	(E)	25/2126	25/2136	25/2138	26/0055	26/0055	26/0053	26/0105	26/01	10	209
	Actual	(A)		25/2136								
	Calculated	(C)	25/2126	25/2136		26/0107	26/0107	26/0041	26/0053	26/0058		197
	Flight Plan	(P)	25/2100							26/00	41	221
A	ircraft Operator	(L)										
Strate	gic Airport Slot	(R)										
Mark	teting Schedule	(S)										
	Initia	I (I)	25/2100	25/2110		26/0018	26/0018		26/0027	26/00	32	197
Earliest Air	craft Operator (I	EL)	25/2100	25/2110					26/0027	26/00	132	197
	Original	(0)	25/2100	25/2110		26/0018	26/0018		26/0027	26/00	132	197
	Base	(B)	25/2100	25/2110		26/0018	26/0018		26/0027	26/00	32	197
Origir	nal Calculated (C	DC)	25/2126	25/2136		26/0107	26/0107		26/0053	26/00	58	197
	Traffic Management Initiatives Controlling TMI											
FCAJS1043 AFF	P (26/0000 - 26/15	59)	YMMLO	GDP-A (25	2315 - 26/0	344)						
26/0107A		Co	ontrol Type	e Cor	ntrol Exemp	t Pop	-Up					
Clet Time Due			AFP				1					
Slot Time, Run	way											

Figure 42: Flight Details window

The window is divided into the following four panels (as numbered in the image):

- 1. **Flight Information**: ACID, Major, AC Type, AC Type Group, AC Reg, Delay Status, Alarm, and FPL Route
- 2. **Flight Leg Information**: (Departure and Arrival): Airport, Runway, Fix, Estimated Fix Time, and LTOD

- 3. Flight Event Times: For detailed information, see Appendix A: Flight Details Data Elements.
- 4. Traffic Management Initiatives: For controlled flights, Name of TMI (outlined in green if it is the controlling TMI), Slot Time, Runway (for Runway GDPs), Control Type, Control Exempt and Pop-Up indicators. This section is not displayed for uncontrolled flights. As you click each TMI, the Slot Time, Runway information updates for the selected TMI.

Viewing Harmony Trajectory for Airborne Flights

If an airborne flight's Harmony trajectory is available, will be displayed in the Map column. Clicking the icon will open the map with the trajectory displayed for the flight. For more information, see "Viewing Airborne Flight's Harmony Trajectory" on page 127 in Chapter 11: Map.

To view Harmony trajectory, complete the following steps:

1. In the Map column, click

The Map opens with the flight's ACID and Harmony trajectory displayed (see Figure 43).

- The solid portion is the completed great-circle distance (GCD) line to the ADEP.
- The dotted portion is the projected trajectory, which is based on the Harmony trajectory.
- **Note:** Based on the available adaptation data, the Harmony trajectory could differ from the flight plan (FLP) route.



Figure 43: Harmony trajectory for selected flight

Managing Columns (Flight List Tool)

The default, displayed columns are configured in System Settings; however, you can use the Manage Columns tool to customize which columns are displayed in your Work Views and in which order. The column order can also be changed directly in the Flight List. For a listing of the columns in the Flight List, see Appendix B: Flight List Data Elements.

Manage Columns Tool

Use the Manage Columns Tool to add/remove columns and to select the order of displayed columns.

To add and remove columns using the Manage Columns tool, complete the following steps:



The list of Flight List tools is displayed.

2. Select III Manage Columns.

The Add/Remove Columns component opens. Figure 44 shows the columns for an airport flight list and Figure 45 shows the columns for an FCA flight list.

Available Columns		Displayed Columns	5
Name 1	Description	Name	Description
AC Reg	Aircraft Registration	ACID	Aircraft ID
AC Type Group	Base Aircraft Type Group	CNX	Cancelled
AEET	Actual Elapsed En Route	ADEP	Departure Airport
AFix	Arrival Fix	ADES	Arrival Airport
AIBT	Actual In Block Time	AC Type	Aircraft Type
AOBT	Actual Of Block Time	SOBT	Marketing Schedule Off BI.
ARwy	Arrival Runway	EOBT	Estimated Off Block Time
BIBT	Base Estimated In Block	ETOT	Estimated Take Off Time
BLDT	Base Estimated Landing	ATOT	Actual Take Off Time
BOBT	Base Estimated Off Bloc	ELDT	Estimated Landing Time
BTOT	Base Estimated Take Off	ALDŤ	Actual Landing Time
DFix	Departure Fix	FPL Route	Flight Plan Route
DRwy	Departure Runway		
EAFT	Estimated Arrival Fix Time		
EDFT	Estimated Departure Fix		
EEET	Estimated Elapsed En R		
EIBT	Estimated In Block Time		
Email	Contact Email		
en	Halassa Eliadet 10		

Figure 44: Add/Remove Columns component for an airport flight list

1	dd/Remove Column	5		×
	Available Columns		Displayed Column	5 -
	Name 1	Description	Name	Description
	AC Reg	Aircraft Registration	ACID	Aircraft ID
	AC Type Group	Base Aircraft Type Group	CNIX	Cancelled
	AEET	Actual Elapsed En Route	ADEP	Departure Airport
	AENTRY	Actual FCA Entry Time	ADES	Arrival Airport
	AEXIT	Actual FCA Exit Time	AC Type	Aircraft Type
	AFix	Arrival Fix	ETOT	Estimated Take Off Time
è	AIBT	Actual In Block Time	ATOT	Actual Take Off Time
1	ALDT	Actual Landing Time	EENTRY	Estimated FCA Entry Time
	AOBT	Actual Off Block Time	EEXIT	Estimated FCA Exit Time
	ARwy	Arrival Runway	ELDT	Estimated Landing Time
	BEntry	Base Estimated Entry Time	FPL Route	Flight Plan Route
	BExit	Base Estimated Exit Time		370 (J
	BIBT	Base Estimated In Block		
	BLDT	Base Estimated Landing		
	BOBT	Base Estimated Off Bloc		
	BTOT	Base Estimated Take Off		
	CHDT	Coloritated Landian Time		
		Save	Cancel	

Figure 45: Add/Remove Columns for an FCA flight list

The Available Columns panel (on the left side) lists all columns that are not displayed.

The Displayed Columns panel (on the right side) lists all displayed columns.

ACID is highlighted as a visual indicator that it must always be displayed (i.e., cannot be moved to the *Available Columns* panel.

3. Select the column that you want to move, hold down the left mouse button, drag the column to the other panel, and once you position the column, release the mouse button.

Note: By default, the *Available Columns* list is always sorted alphabetically. You cannot change the order.

- 4. To change the order of the *Displayed Columns*, select, drag, and drop the column in the desired location.
- 5. Click Save
 - **Note:** This saves your updates until you close the Work View/Flight List. Continue to the next step to save your updates for future use.

The Add/Remove Columns component closes.

The Flight List columns reflect your updates.

To save your changes, click [1] (located in the main toolbar). The Save Work View dialog box opens (see Figure 46).



Figure 46: Save Work View dialog box

- 6. If this is a system-defined Work View, rename it in Name: and if you want this to be the default Work View that opens when you log in, select Set as default
- 7. Click Save

A success message is displayed.

If you saved a new Work View, it is added to the Work View list in System Settings, and the Home Page *Select Work View* dropdown list and quick filter list.

If you set this as the default Work View, it will open the next time you log in.

Positioning Columns on the Flight List

Use the drag-and-drop method to change the order of displayed columns.

To change the order of the columns on the Flight List , complete the following steps:

1. Select the column with your left mouse and hold down the mouse button as you drag the column to the desired location (see Figure 47).

The name of the column being moved is displayed.

A green arrow denotes the current location as you drag the column.



Figure 47: Drop and drag column to new position.

2. Release the mouse button.

The column is in its new position.

To save your changes, click (located in the main toolbar).
 The Save Work View dialog box opens (see Figure 48).

Save Work View					
Name:	Airline FOC				
Set as o	default 🗋				
	Save Close				

Figure 48: Save Work View dialog box

4. Click Save

Note: If the Work View is system-defined, you will be prompted to

rename the Work View in Name:

A success message is displayed.

If you saved a new Work View, it is added to the Work View list in System Settings, and the Home Page *Select Work View* dropdown list and quick filter list.

Searching for a Flight

You can search for a specific flight within the current screen. To search all the flights in the Flight List, it is recommended that you change the display to *All* so that all flights are on accessible on one screen. Note that you will need to use the scroll bar to view all the flights.

To search all the flights for a flight, complete the following steps:

1. At the bottom of the Flight List, change the **Per Page** to *All* (see Figure 49).



Figure 49: Select All to display all flights.

2. To refresh the current view to include all the flights on one screen, click \square .

The Flight List will display all the flights on one screen and the Display Counter will reflect the total flight count (see Figure 50).



Figure 50: Flight Counter indicator that all flights are displayed

3. In the Flight Search tool (located below the **Logout** button), enter the partial or complete ACID for the flight of interest (see Figure 51).



Figure 51: Flight Search tool

The flights meeting the search criteria are denoted with orange font (see Figure 52). Use the scroll bar to review all the flights.

	Info	Stat	Map	ACID	С
÷	i	A		EAQ1462	::
Ŧ	i	A		JST502	Ν
÷	i	Р		VLE416	Y
÷	i	S		EAQ926 <	•
÷	i	A	•	EAQ121 <	••

Figure 52: Orange font denotes search results

Filtering (Flight List Tool)

The Flight List data can be filtered by data elements which have been grouped into Aircraft, Route, and Times (see Figure 53).

Fligh	t List Filter						
Airc	raft						•
•	Major	-	includes	ANO X VOZ X	AL X		
•	Flight State	•	includes	ACTIVE # PLAN	3		
0							
Rou	.te						•
•	ADEP	•	includes	YSSY K YMML K)	-	
•	ADES	•	includes				
		does n	ot include	(YBBN X			<u> </u>
0							
Tim	es						•
•	ELOT	Abso	lute				
	05/0159					08/0	159
0							_
					Destaur	TRANK D	-
					and the second second		

Figure 53: Flight List Filter panel

AND/OR Operators

AND/OR operators work as follows:

- The OR statement consists of the multiple values within the *"includes"* or *"does not include"* fields. That is, the data does not have to meet all the listed criteria.
- The AND statement is a joining of the set of *"includes/does not include*" criteria within an individual data element group (i.e., Aircraft, Route, and Times). That is, the resulting data needs to satisfy both the inclusion and exclusion criteria.
- As you add new filters within a data element group, the filter criteria is joined by AND to the other data element groups.

To filter the Flight List, complete the following steps:

1. From Flight List Tools (), select Tilter

The Flight List Filter window opens (see Figure 54).

• On the left side, the panel contains the controls to filter by Aircraft, Route, and Times.

Fight List Filter												*
Aircraft		^ Y	SSY									
• rouan			Status	ACID	CNX	ADEP	ADES	ACTIPE	508T	EOBT	ETOT	ATOT
				EAQ1514	N	1508	YSSY	8712	21/0030	A210025	A21/2000	21/2020 /
· ·		0		PELK164	N	1551	NZAA	8772	21/2396	A21/2346	A21/2396	21/2356
			Α.	RXASS	N	Y35Y	YSOU	5734	21/2356	A21/2381	A212356	21/2356
			Α.	EA02225	N	YSSY	YSWG	DHBC	21/0396	A21/2346	A210396	21/2356
			5	EA02173	۲	YPMG	Y95Y	DHBC	21/0302	821/2317	\$21,2220	
Route	•	•	1	JST767	*	TRAD	YSSY	UNIN	21/2211	\$21/2226	\$21,2233	
roudes	9		5	EAG44		YMMAL	YSST	LINKN	21/2237	821/2252	821/2300	
			. 8	VLE863	*	YMMAL	1551	UNKN	21/2237	521/2252	521/2300	
•				HVN772	N	Y35Y	WTS	LINKN	22/0001	A21/2388	A22/0001	22/0001
		•	۸	RXX464	N	YNAR	YSSY	8/34	210308	A21/2256	A21/2000	21/2300
			A	JST415	N	YBCG	YSSY	LINKN	21/2154	A21/2146	A21/2154	21/2154
		0		EAQ1472	N	1908	YSSY	DHOC	21/2226	A210321	A21/2226	21/2336
Times	•		5	JST548	۲	YEHM	YBST	UNION	21/2158	\$21/2213	\$21/2217	
-		0	5	PLK348	N	NZINN	1351	UNKN	21/2115	\$212124	\$21/2128	
			C	EAG2176	۲	1351	YPING	DHISC	21/2339	C210364	C220004	
		0		XAX223	N	1851	WMMOX	UNKN	120005	A21/2368	A220005	22/0005
0				EAG16TT	N	YBSY	YSCO	DH8C	22 0005	A21/2385	A23/0008	22/0005
			۸	RXATIS	N	YMEN.	1851	5/34	21/2211	A21/2307	A21/2211	21/2311
	A participation description	0	P	JST204	N	NZAA	YSSY	UNKN	21/2106	P21/2111	P252121	
	Prevent Save Cancel		- 5	VLENSE	. *	TOON	YBSY	E170	21/2226	\$21/2251	\$21/2258	
	and a second second	-	-									
		-	-			200 m 201	-			and the second second second	122-12	THE OWNER WATER OF
4	>	- 14	LTM I	Converted		< Pa	ge 1	oria >	> C 10	0 🐨 Per Page	Displayin	1g 1 - 100 of 911

• On the right side, the preview Flight List is displayed.

Figure 54: Flight List Filter window

Before proceeding, it is useful to understand the functionality of the controls (see Table 12).

Table 12: Aircraft Group controls

Control	Name	Description
^	Collapse	Collapse the panels (Aircraft, Route, Vertical Limits, or color).

Control	Name	Description
•	Expand	Expand the panel (Aircraft, Route, Vertical Limits, or color).
•	Remove	Remove a criterion row.
•	Add	Add an <i>inclusion</i> criterion row (i.e., <i>includes</i>).
~	Down Caret	Show an <i>exclusion</i> criterion row (i.e., <i>does not include</i>).
^	Up Caret	Hide an empty exclusion criterion row

2. In the *Aircraft* panel dropdown list, select a criterion (see Figure 55).



Figure 55: Aircraft filtering criteria

- 3. Following the selected criterion is the "*includes*" field where you either use your keyboard to enter the criterion or select the criterion from a list that corresponds with the selected filter criterion.
 - If you select ACID or AC Reg, use your keyboard to enter the values that you want to include. Separate multiple ACIDs with a space—do not use any punctuation. You can enter letters, numbers, and the wildcard asterisk (*). The asterisk can be used as the first or last character. For example, *AL123*, AAL456*, or *AAL7890.
 - If you select *Major*, *AC Type*, *AC Type Group*, or *Flight State*, from the dropdown list, select the pre-defined value (see Figure 56). Note that *Major*, *AC Type*, and *Flight* fields have quick filters, that is, if you enter the first letter(s), the list will filter by the criteria you entered.

Flight List Filter		
Aircraft		•
👄 Flight State 👻 includes	1. 1-	
0	ACTIVE AIRLINE AIRPORT CANCEL COMPLETED	
Route	PLAN SCHEDULED	•
includes		*

Figure 56: Flight State filtering

- 4. In the *Route* panel, you can filter by routing elements.
 - From the *Route* dropdown, select *ADEP*, *ADES*, or ADES ADEP), AFix, or DFix (see Figure 57).



Figure 57: Route element filtering

• From the *includes* dropdown list, select the corresponding value(s) that you want to include. The *ADES* - *ADEP* filter allows you to filter by specific ADES or ADEP (see Figure 58). Note that the *ADEP*, *ADES*, and *ADEP* - *ADES* fields have quick filters; if you enter the first letter(s), the list will go to the matching values.

Route	•
ADES - ADEP ADEP include	es 🔽 🔨 🔨
OR ADES includ	es 🗸 🗸

Figure 58: ADES - ADEP filter

5. You can also exclude certain criteria. To exclude an element, click (located adjacent to the element dropdown list).

The "does not include" row is displayed (see Figure 59).

The 🔛 toggles to 🔼.



Figure 59: Click down caret to display exclusion row.

- 6. Following "*does not includes*" is the field where you either use your keyboard to enter the criteria or select the criteria from a list or a quick filter that corresponds with the entered filter criterion. If this is coupled with inclusion criteria, the two are joined by an *AND*, which the resulting data needs to satisfy both inclusion and exclusion criterion.
- 7. In the *Times* panel, you can filter by times (see Figure 60).



Figure 60: Times filtering

8. When you select a time, click Absolute or Relative and use the thumbs to select the absolute or relative time range.

The Absolute times are in DD/HHMM format (see Figure 61).

Times	•
EDFT Absolute	
01/0201	03/0301

Figure 61: Time range slider – Absolute

The Relative times are relative to the current system time and are formatted in minutes (i.e., not HHMM format) (see Figure 62).



Figure 62: Time range slider – Relative

9. To add another row for additional criteria, click 🕒. Adding additional rows joins this statement with the rest of the filter with an *AND* operator so the resulting data must meet all criteria in each of the rows.

An empty row is displayed.

10. To delete a row, click

The row no longer is displayed.

11. When you finish adding the filtering criteria, click Preview

The Flight List in the right panel is filtered.

The filter elements are displayed below the airport/FCA name (see Figure 63).



Figure 63: Element criteria in heading

12. Click Save

Note: This saves your updates until you close the Work View. Continue to the next step to save your updates for future use.

The Flight List Filter window closes.

The Flight List is filtered and the filter criteria is listed in orange font below the airport/FCA name.

13. To save your changes, click 🞑 (located in the main toolbar).

The Save Work View dialog box opens (see Figure 64).



Figure 64: Save Work View dialog box

14. Click Save

Note: If the Work View is system-defined, you will be prompted to

rename the Work View in Name:

A success message is displayed.

If you saved a new Work View, it is added to the Work View list in System Settings, and the Home Page *Select Work View* dropdown list and quick filter list.

Clearing the Filter

To clear the Flight List's filter, click Clear Filter (located before the filter criteria).

Exporting Flight List to CSV File (Flight List Tool)

You can export a Flight List to a CSV file.

To export the Flight List to a CSV file, complete the following steps:

1. From Flight List Tools (), select List Cosv .

A CSV file is created with the format: *flight-list-[name]-YYYYMMDDhhmm.csv*

A dialog box with file save/open options opens (see Figure 65). This dialog box will vary depending on your browser and operating system.

pening flight-list-yss	y-201705012150.csv
You have chosen to	open:
🐴 flight-list-yss	y-201705012150.csv
which is: Micr	osoft Excel Comma Separated Values File (36.7 KB)
from: https://	metronaviation.com
What should Firefo	x do with this file?
Open with	Microsoft Excel (default)
🖱 Save File	
Do this auto	matically for files like this from now on.
🕅 Do this auto	omatically for files like this from now on.
🔲 Do this guto	omatically for files like this from now on.

Figure 65: Example of save dialog box

2. Select the option appropriate for your needs and click OK.

The CSV file will be saved to your default folder for downloads.

Resetting the Panel (Flight List Tool)

The Reset Panel option closes the Flight List and displays the Module dropdown menu so you open another Flight List, Demand Graph, or COBT Compliance Window. For more information about how this functionality can be used, see "Changing the Layout Configuration" on page 38 in Chapter 4: Work Views.

To reset the panel, complete the following steps:

1. From Flight List Tools (), select SReset Panel .

The Flight List closes.

A new panel with the header *New Panel* is opened and the Module dropdown menu is displayed (see Figure 66).

New Panel	+	o g
🕍 Sidect Airport or PCA: 🗸 🗸		

Figure 66: New Panel

- From the Module dropdown menu, select either Flight List, Demand Graph, or COBT Compliance Window.
- 3. From the dropdown list, select an airport or FCA.
- 4. Click ^{Go}.

The selected Flight List, Demand Graph, or COBT Compliance Window opens.

5. To save your changes, click 🔯 (located in the main toolbar).

The Save Work View dialog box opens (see Figure 67).

Save Work View				
Name:	Airline FOC			
Set as default 🗋				
	Save Close			

Figure 67: Save Work View dialog box

6. Click Save

Note: If the Work View is system-defined, you will be prompted to

rename the Work View in Name:

A success message is displayed.

If you saved a new Work View, it is added to the Work View list in System Settings, and the Home Page *Select Work View* dropdown list and quick filter list.

Renaming Flight Lists

You can rename Flight Lists to make the name more descriptive.

To rename Flight Lists, complete the following steps:

1. Double-click the module name.

The name is highlighted white (see Figure 68).



Figure 68: Rename Flight List

Figure 69: Rename module

Note: The flight count (e.g., 13 flights) in the Flight List name cannot be edited as it is system-generated,

- 2. Enter the new name.
- 3. To save your changes to the Work View, click 🔯 (located in the main toolbar). The Save Work View dialog box opens.
- 4. Click Save

Note: If the Work View is system-defined, you will be prompted to

rename the Work View in Name:

The Flight List name is saved to the Work View.

A success message is displayed.

If you saved a new Work View, it is added to the Work View list in System Settings, and the Home Page *Select Work View* dropdown list and quick filter list.

Flight List Buttons and Controls

Table 13 describes the buttons, icons, and controls used in the Flight List.

Control	Name	Description
00	Flight List Tools	Access the Flight List Tools
Q	Search	Search for the specified ACID
*	Star	Save current Work View
0	Expand	Display Flight Summary
	Collapse	Hide Flight Summary
0	Information/Flight Details	Open Flight Details for the selected flight
•	Map Location Pin	Open flight's trajectory on Map
Save	Save	Save updates
Cancel	Cancel	Cancel updates
Close	Close	Close without saving the updates
Preview	Preview	Preview filtered data

Table 13: Flight List Buttons and Controls

Control	Name	Description		
×	x	Close dialog box or window		
Active	Active Flights	Denotes active flights		
Completed	Completed Flights	Denotes completed flights		

Chapter 6. COBT Compliance Window

The COBT Compliance Window displays the COBT compliance in relation to the current time (see Figure 70). This window is intended to provide users a view of which flights are currently in their compliance window. This view is a preconfigured flight list that filters the selected airport/FCA's flight list by COBT-Now (current time) and Flight State.

2017-12-13 02:13 VSSY (3 flights) 2 Clear Filter: Active Filter: FLIGHT STATE, COBT - NOW 3							2:13 🔲 🖝			
2	Ð	Info	Status	ACID	ADEP	ADES	AC Type	COBT	COBT - NOW	СТОТ
	•	8	С	EAQ2030	YSSY	YARM	DH8C	13/0207	4	13/0217
5	÷	0 6) с	VLE960	YBBN	YSSY	UNKN	13/0209	-2	13/0216
				10.00	1 COAD	MOON	CONTRACTOR OF	100000		42/0042

Figure 70: The COBT Compliance Window

The reference numbers in Figure 70 are described in the following list:

- 1. Airport or FCA name and total of its filtered flights in parenthesis
- 2. Clear Filter Display unfiltered Flight List
- 3. Active Filter Lists the elements to the filter
- Column headers Identify data elements (for more information, see "COBT Compliance Data Elements" on page 64)
- 5. Definition or the flight Summary or collapse the open Flight Summary panel

6. 0 – Open Flight Details window

To view the COBT Compliance Window, complete the following steps:

1. On the Home Page, select COBT Compliance from the dropdown and select an FCA or airport (see Figure 71).



Figure 71: Open from Home Page

The COBT Compliance Window opens with the flight list filtered by COBT-Now (current time) and Flight State (as shown in Figure 70). For more information about the data elements, see "COBT Compliance Data Elements" on page 64.

COBT Compliance Data Elements

Table 14 describes the COBT Compliance Window's data elements, including the Flight Summary panel.

Data Element	Description
INFO	Open Flight Details
STATUS	Flight's status A (Active), P (Planned), C (Cancelled), S (Scheduled), and L (Airline)
ACID	Aircraft ID
ADEP	Departure Airport
ADES	Arrival Airport
АС Туре	Aircraft Type
COBT	Calculated Off Block Time
COBT-NOW	Calculated Off Block Time - Current time (in minutes)
СТОТ	Calculated Take Off Time
FID	Flight ID
ADEP/DRwy/DFix	Departure Airport/Departure Runway/Departure Fix
ADES/ARwy/AFix	Arrival Airport/Arrival Runway/Arrival Fix
Flight State	Current state of the flight (e.g., Active, Airline, Airport, Cancel, Completed, Planned, Scheduled, Controlled)
Delay TOD (LTOD)	Time Out Delay with Length of Time Out Delay (LTOD) in minutes,
Major	Flight's Major
AC Reg	Aircraft Registration
AC Type Group	Aircraft equipment classification (e.g., Heavy, Light, Jet, Turbo, Unknown)
EENTRY	Estimated Entry
EEXIT	Estimated Exit
EOBT	Estimated Off Block Time

Table 14: COBT Compliance Window Data Element
Data Element	Description
ETOT	Estimated Take Off Time
ELDT	Estimated Landing Time
EIBT	Estimated In Block Time
FPL Route	Lists the Flight Plan Route from ADEP to ADES

COBT Compliance Window Buttons and Controls

Table 15 describes the buttons used in the COBT Compliance Window.

Button	Name	Description
Clear Filter	Clear Filter	Save system settings for all tabs and closes System Settings
0	Expand	Expand the row to view the Flight Summary panel
	Collapse	Collapse the open Flight Summary panel
0	Flight Information	Open Flight Details for selected flight

Table 15: COBT Compliance Window Buttons

This page is intentionally blank.

Chapter 7. Edit Mode – All Flights View

The Edit Mode All Flights View provides a view of the uncontrolled and controlled flights for airports and FCAs for the selected airport or FCA.

Depending on your role, you have varying levels of permission to update flight data and contact information; cancel and reinstate flights; update a flight's Actual times (AOBT, AIBT), and Aircraft Operator times (LOBT and LIBT), and earliest Aircraft Operator times (ELOBT and ELIBT); request ISE, and add a flight to an TMI. For more information about permissions, see Appendix C: User Roles and Permissions.

Edit Mode provides the following capabilities to update flights:

- Update flight data (ACID, AC Type, AC Reg)
- Update flight contact information (email address, phone number, mobile carrier)
- Cancel a flight
- Reinstate a flight
- Update a flight's LOBT (the LIBT is calculated from the LOBT)
- Update a flight's ATOT, ALDT
- Update a ELOBT (the ELIBT is calculated from the ELOBT) with an option to resume the auto-management of the EL time
- Add flights (non-controlled or controlled) to a TMI (Super Users only)

Opening Edit Mode

Edit Mode is accessed from the Flight List Tools (¹²⁶) or the Home Page's Element Module dropdown menu (see Figure 72).



Figure 72: Edit Mode selection

Edit Mode's Views of Flights

Edit Mode has two views:

• All Flights – Lists all uncontrolled and controlled flights.

• **TMI View** – Lists the controlled flights and slots associated with the selected TMI. For more information, see Chapter 8: Edit Mode – TMI View.

All Flights View

When you open Edit Mode for an airport or FCA that does not have a TMI, the *All Flights* view is displayed by default (see Figure 73).

Ein	ter y	en Hytory	Bookmarks]	jooli Hely	É.								-	a x
	Harri	ony Web	×	+						-				
4	DE	https://w	- 3n.m	etronavia	tion.com/	harmonyweb	nee/			2	e	Q. Search	* 0 + *	œ ≡
-	AVIA	UPPN FILIN	1				1777 a	2017-	12-17 16:44 🔼	aused @ 10.44			- 1 💴 🍋 📰	Legout
					3 E	NI Flights				• 📃 q	\$	EA0628		N
	lefo	Status	ACID	CNK	ADEP	ADES	AC Type	SOUT	EOBT	ETOT	ATOT	LANGVED	100	
•	0		VLERSE	N	YSSY	YMM.	E170	17/1349	A17/1339	A17/1349	17/1 **	- OData		
•	0	A	EAQ410	N	YMME.	YSSY	UNKN	17/1518	A17/1510	A17/1518	17/1	ACC. EMARCE		
	0	A	VLEH13	N	YMM.	YSSY	UNKN	12/1518	A17/1510	A17/1518	17/1	AC TYPE UNION		
•	0	A	EAQ2077	N	YMEA	YMME	C140C	17/1434	A17/1430	A17/1434	17/1	AC Reg: EAQ62	C	
•	0		EAQ628		YMM.	YEEN	4 ai	17/1451	P17/1536	P17/1544		- O Contact	<u>(</u>)	
•	0	A	RXA3752		YMTG	YMM.	SF34	17/1500	A17/1456	A17/1500	17/1	- OResentate		
•	0	A	VLE804	N	YSSY	YMME.	E170	17/1435	A17/1425	A17/1435	17/1	01		
0	0	A	EAG405	N	YSSY	YNM.	UNKN	17/1435	A17/1425	A17/1435	12/1	- Officies		
•	0		JST440	Y	YMML	YBCG	UNKN	17/1457	P17/1542	P17/1548		- CAdd to TMI		
	0	•	VLEB17	N	YMME.	YSSY	E170	17/1548	A17/1540	A17/1548	\$7/1			
•	0	A	EAQ403	N	YSSY	YMML	UNKN	17/1450	A17/1440	A17/1450	17/1			
•	0	*	EAQ627	N	YEEN	YMME	LINKN	17/1346	A17/1309	A17/1346	17/1			
	0	- ^	VLERID.		YMM	YSSY	E179	17/1502	A17/1555	A17/1603	17.5 *	Create Flight From	Tubrol Read Clear Selector	

Figure 73: Edit Mode's All Flights view

The reference numbers in Figure 73 are described in the following list:

- 1. Flight List label Lists the airport or FCA, number of controlled and uncontrolled flights, and EDIT MODE label.
- 2. Paused @ 16:38 When you select a flight in the *All Flights* view, the data update is paused and at the top of the window, the **Paused** button displays the time the data was paused. To to initialize a data refresh and resume the updates, click

Paused @ 16:38 . The button toggles to the III.

- 3. All Flight/TMI dropdown Select *All Flights* to view all flights for the selected airport/FCA; or select a TMI/FCA to view its flights and unassigned slots.
- 4. All Flights view List of all number of controlled and uncontrolled flights for the selected airport or FCA.
- 5. Edit Mode action panel When you select a flight in the *All Flights* view, the Edit Mode action panel opens to the right of the Flight List (also shown in Figure 74). Only one panel can be open at a time. Clicking a panel's radio button will close any open panel before opening the selected panel.

	1) EAQ130		ZS	PD - YSSY	
2 — O Data					
3 – O Conta	act				
	el				
	s	_]
A Time	• 👻				
TOT:			e)	
LDT:	Ê	HHmm	e)	
6 — 🔿 Add to	o TMI				
7	Create Flight From	Submit	Reset	Clear Selection	

Figure 74: Edit Mode action panel for All Flights view

The reference numbers in Figure 74 are described in the following list:

- 1. The ACID and departure and arrival airports are listed (i.e., ADEP ADES).
- 2. **Data** Update the ACID, AC Type, and AC Reg. For more information, see "Updating Flight Data" on page 70.
- 3. **Contact** Update the *Email, mobile number,* and *mobile carrier.* For more information, see "Updating Contact Information" on page 71.
- Cancel/Reinstate The displayed label depends on the status of the selected flight. If you select a cancelled flight, the label reads Reinstate. If you select a flight eligible for cancellation, the label reads Cancel.

Super Users and Flow Managers can cancel and reinstate any flight. Aircraft Operators can cancel and reinstate only flights in their major and subcarriers. Flights for an aircraft operator's major are in bold font. For more information, see "Cancelling a Flight" on page 72 and "Reinstating a Cancelled Flight" on page 73.

- 5. **Times** Update ATOT, ALDT, ELTOT, ELOBT, LOBT, and LIBT in the Times panel. (For more information, see "Updating Times" on page 74.)
- 6. Add to TMI Super Users can add the selected flight to a TMI. For more information, see "Adding a Flight to a TMI (Super Users only)" on page 75.
- 7. Create Flight From Create a flight from an existing flight. For more information, see "Creating a Flight from Existing Flight" on page 76.

Note: When you update a panel, you must submit your updates before updating another panel. While the system will allow you to update multiple panels, it will submit only the modifications to the last panel that you updated. For example, if you update the L Time and then update the contact information, when you click **Submit**, only the contact updates will be submitted.

Updating Flight Data

You can update a flight's ACID, AC Type, or AC Reg in the Data panel (see Figure 75). This panel is grayed out for active flights. If adding an AC Type, it must be already be included in your Adaptation data.

- 🖸 Data	
ACID:	AAL255
AC Type:	UNKN
AC Reg:	AAL25

Figure 75: Data panel

To update the flight's data, complete the following steps:

1. Select an inactive flight.

The ACID, AC Type, and AC Reg fields in the Data panel are activated.

2. Update the data.

The **Submit** button is activated as soon as you change the data.

Note: Before updating another panel (e.g., Contact or Times) you must submit these changes.

3. Click Submit

The panel is replaced with a collapsed Status panel.

The flight being updated is briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed (see Figure 76).

The status shows *Pending* and then updates to *Success*. A **▼** is displayed in the *Status* column as a visual indicator that the final status has been returned.

M	STR.	1944 1994											2010-10-20 10:00 🔟		•			2 🖬 💷
re									ALTIN	P16				a «	11	Treaters	Action	5944
1	-	-	400	00	4007	-	ACTION	ETUT	ATUT	EENTHY	10007	6.07	FFL Rode		-	2010-10291	Consulty of Trict	- Common
•	•		FD423		VINCE	YETL.	8350	ADDITEM	29/1334	29/1405	291405	12991405	DCT CS V294 S					
	0		1,000		THE.	METH	8/28	ACTIVITIES	29/1405	291405	291108	E29/1044	DCT ML HILDI D					
	0		AMINE		YMLT	1984	1020	ADMINEP	29/1407	291407	2911443	8291448	DCT LT W259-C					
	0		F0962	•	TING	THE	PCI2	A29/1415	291410	29/1410	291434	A29/1442	DCT AVEND JDT					
•	0		14A218		YMME.	WOOD	A308	A29/1413	291413	291413	291109	12992107	DCT HEPPIA CHS.					
	0		VOORHI		THE	YSOY	8457	P29/1515		29/15/15	29/159	P29/15/8	DCT ML H129 D					
•	0					VIEW .	ATKS	12201010		2941010	291006	P09/1808	OCT BILTEDAT					
	0		OFA7252		THE	1000	8/54	POWNER		29/15/21	291009	P29/1718	DCT NONEX HERE					
	0		V038571		THE	Gentr	8452	1291528		29/1526	291159	P29/1812	DOT MUHDAS A					
O	0		FORM		YRIE	YEAL	PCG	109/1907		29/1520	29/1120	P3941836	DCT AVE JOH ALL					
	0		ANCORN		WSSS	NOAA	8798	A391105	2941100	291534	291598	6292558	DCT SURGAME.					
	0		REAR		WEIGHT	YOUN	LPOIN	A291162	201102	29/1535	291100	829/1748	OCT BRUNDING					
	0		AMOTHE		THE	TMEN	8129	P28/1536		29/1535	291558	P29/1841	DCT TASUM W2.					
⊡	0	•	CERRO		VIMIL.	MPLL.	A333	128/1536		29/1536	2911058	PONCESS	NOTIN LAGOR N.					
	0		07435		RPLL	YBBY	A1112	ADVITION	29/1145	201536	291109	E2W235E	DCT VEHICE AND		1.1	-		

Figure 76: Flight being updated is briefly highlighted brown

4. Click 🛨 to expand the panel (see Figure 77).

The button toggles to \square .

The panel lists the timestamp, the action, the status, and the updated data.

	Timestamp	Action	Status
=	2017-05-03 01	Edit data for AAL255	Success
	ACID: AAL251 AC Type: UNKN AC Reg: AAL25		

Figure 77: Status panel

Updating Contact Information

You can update an inactive flight's contact information (see Figure 78). The contact information is grayed out for active flights.

Contact	
Email:	
Mobile Number:	
Mobile Carrier:	Select Mobile Carrier 🗸 🗸

Figure 78: Contact panel

To update the contact information, complete the following steps:

- 1. Select an inactive flight.
- 2. Click the **Contact** radio button.

The *Email* and *Mobile Number* fields are activated.

3. Enter an Email and/or Mobile Number.

If you enter a Mobile Number, the Mobile Carrier field is activated.

- 4. Select a *Mobile Carrier* from the dropdown list.
 - **Note:** Before updating another panel (e.g., Data or Times,) you must submit these changes.
- 5. Click Submit

The panel is replaced with a collapsed Status panel.

The flight being updated is briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed (see Figure 76).

The status shows *Pending* and then updates to *Success*. A **▼** is displayed in the *Status* column as a visual indicator that the final status has been returned.

6. Click 🛨 to show the status details.

The button toggles to \square .

Cancelling a Flight

You can cancel flights in the Cancel panel. Your user role determines which flights you can cancel:

- Super Users can cancel a flight in any state (pre-departure and active).
- Flow Managers and Aircraft Operators can cancel pre-departure flights.
- Aircraft Operators can only cancel the flights in their major and subcarriers. Flights for an aircraft operator's major are in bold font.

To cancel a flight, complete the following steps:

1. If you are a Super User, select an active or inactive flight. If you are a Flow Manager or Aircraft Operator, select an inactive flight.

On the right, the Edit Mode action panel is activated.

2. Click the **Cancel** radio button. Note that if the flight is not eligible for cancelling, the **Cancel** radio button will be inactive (grayed out).

The Cancel panel opens and the flight's OBT is displayed in the Cancel panel (see Figure 79).



Figure 79: Cancel panel

3. Click Submit

The panel is replaced with a collapsed Status panel.

The flight being updated is briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed (see Figure 76).

The status shows *Pending* and then updates to *Success*. A **▼** is displayed in the *Status* column as a visual indicator that the final status has been returned.

4. Click 🛨 to show the status details.

The button toggles to \square .

The panel lists the timestamp, the action (Cancel flight [ACID]), the status (pending, until a response from the system is received), and the cancelled ACID.

The Flight State changes to CANCEL.

The CNX column displays Y.

Reinstating a Cancelled Flight

You can reinstate cancelled flights in the Reinstate panel (see Figure 80). Super Users and Flow Managers can reinstate flights. Aircraft Operators can reinstate only flights in their major and subcarriers. Flights for an aircraft operator's major are in bold font.



Figure 80: Reinstate panel

To reinstate a cancelled flight, complete the following steps:

1. Select the cancelled flight that you are authorized to reinstate.

The flight's data is displayed in the Edit Mode action panel.

The Reinstate panel replaces the Cancel panel.

- 2. Click the **Reinstate** radio button to activate the panel.
- 3. Update the OBT date and time. Select the date from the _____ and enter the time in HHMM format.
- 4. Click Submit

The panel is replaced with a collapsed Status panel.

The flight being updated is briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed (see Figure 76).

The status shows *Pending* and then updates to *Success*. A **▼** is displayed in the *Status* column as a visual indicator that the final status has been returned.

5. Click 🛨 to show the status details.

The button toggles to \Box .

The panel lists the timestamp, the action (Reinstate flight [ACID]), the status (pending, until a response from the system is received), the reinstated ACID, and the EOBT in DD/HHMM format.

The CNX column displays N.

Updating Times

In the Times panel, Super Users and Flow Managers can update times (ATOT, ALDT, LOBT, LIBT, ELIBT, and ELOBT). Airport Operators can update these times for flights in their major and subcarriers. Flights for an aircraft operator's major are in bold font. EL times (ELIBT and ELOBT) have the option to have the system resume management of their time. You can update the ALDT for an active flight and the ATOT, ALDT, ELIBT, ELOBT, and LOBT for a pre-departure, planned, or a scheduled flight (see Figure 81).

⊙Times		_	
A Time	-]	
TOT:	03 🏙		0
LDT:		ННММ	0

Figure 81: Times panel for an active flight

To update the times, complete the following steps:

1. Select an active or inactive flight.

The Times panel is activated. By default, EL Time is selected for a pre-departure, planned, or scheduled flight and A Time is selected for an active flight.

2. From the Times dropdown list, select EL Time (default selection), L Time, or A Time (see Figure 82).

O Times	
EL Time	-
EL Time	le l
L Time	1
A Time	

Figure 82: Times dropdown list

3. For an active flight, select the date from

format, or click or set the ALDT to the current system time.

4. For an inactive flight, click the Times radio button, and repeat the same process for the LOBT, ELOBT, ELIBT, ATOT, or ALDT.

Note: The EL time has the option to be auto-managed (see Figure 83). EL times are auto-managed until you manually change them. This option enables you to resume auto-management after you manually update the times.

_− © Times ———				-		
EL Time	-					
OBT:	12 🛗	0317				
IBT:	12 🛗					
Auto-manage EL Time: 🕑						

Figure 83: Auto-manage option for EL times

- 5. Click Submit
 - **Note:** Before updating another panel (i.e., Data, Contact, or Cancel/Reinstate) you must submit these changes or else your updates will not be processed.

The flight being updated is briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed (see Figure 76).

The panel is replaced with a collapsed Status panel.

The status shows *Pending* and then updates to *Success*. A **▼** is displayed in the *Status* column as a visual indicator that the final status has been returned.

6. Click H to show the status details.

The button toggles to \square .

The panel lists the timestamp, the action (Edit A/L Times for [ACID]), the status (pending...success), the Type (A or L), and updated times (LOBT, LIBT, ATOT, ALDT, ELIBT, ELOBT).

Adding a Flight to a TMI (Super Users only)

Super Users can add to a TMI (GDP-A, GDP-D, AFP) an operating flight (controlled or non-controlled, pre-departure, active) that is within the start and end time of the TMI to assign a slot and be counted as controlled demand. Only active TMIs within the operational day of the flight's ETD for GDP-D, ETA for GDP-A, or ENTRY for AFP are available.

To add a flight to a TMI, complete the following steps:

1. From the All Flights list, select the flight that you want to add to a TMI.

In the right-side action panel, *Add to TMI* is activated. If there is not an active TMI or the selected flight is cancelled, the *Add to TMI* option is not active.

Note: The *Add to TMI* panel is only displayed for Super Users. Other users will not see it.

2. Click the Add to TMI radio button.

The panel expands and displays the TMIs dropdown list (see Figure 84).

_ ⊙Add to TMI ——		
TMIs:	✓	

Figure 84: TMI dropdown

- If flight is a departure, only GDP-Ds are displayed.
- If the flight is an arrival, only GDP-As are displayed.
- If the flight has the same ADEP/ADES, GDP-Ds and GDP-As are displayed.
- 3. From the dropdown, select a TMI.
- 4. Click Submit

The flight being updated is briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed (see Figure 76).

The status shows *Pending* and then updates to *Success*. A **▼** is displayed in the *Status* column as a visual indicator that the final status has been returned.

The flight is added to the TMI and assigned a slot.

The flight's Flight Details include the TMI.

Creating a Flight from Existing Flight

Super Users, Flow Managers, and Aircraft Operators can create a flight using information from an existing flight. An Aircraft Operator can only create/update flights in its own major and subcarriers. Flights for an aircraft operator's major are in bold font.

To create a flight from another flight, complete the following steps:

1. Select a flight in the Edit Mode Flight List.

The flight's ADEP, ADES, and AC TYPE are populated in the Edit Mode action panel.

2. Click Create Flight From

The Create Flight panel is displayed (see Figure 85).

	Create Flight
Data ———	
ACID:	
ADEP:	ZBAA
ADES:	WSSS
AC Type:	UNKN
AC Reg:	
Contact	
Email:	
Mobile Number:	
Mobile Carrier:	Select Mobile Carrier
_ Times	
LOBT:	HHmm
LIBT:	HHmm
	Submit Cancel

Figure 85: Create Flight panel

- 3. Complete the required fields, *ACID, AC Reg, LOBT*, and *LIBT*. The contact fields are optional.
- 4. Click Submit

The panel is replaced with a collapsed Status panel.

The status shows *Pending* and then updates to *Success*. A **▼** is displayed in the *Status* column as a visual indicator that the final status has been returned.

	Timestamp	Action	Status
e	2017-05-05 13	Create Flight JS123	Success

Figure 86: Status panel after submitting new flight

5. Click 🛨 to view the details.

```
The button toggles to \square.
```

The panel expands (see Figure 87).

Timestamp	Action	Status
2017-05-05 13 ACID: JS123 ADEP: ZBAA ADES: WSSS LOBT: 05/1800 LIBT: 12/2200 AC Type: UNKN Ac Reg: 11111 Email: Mobile Number: Mobile Carrier:	Create Flight JS123	Success

Figure 87: Details of new flight creation

Edit Mode-All Flights View Buttons and Controls

Table 16 describes the buttons, icons, and controls used in Edit Mode – All Flights View.

Button	Name	Description
Q ⁰	Flight List Tools	Access Edit Mode
Create Flight From	Create Flight From	Create flight based on selected flight
Submit	Submit	Submit updates to Harmony server
Reset	Reset	Reset to data to its state prior to your updates
Clear Selection	Clear Selection	Clear selected flight data
Đ	Expand	Show status panel to review submit details
Ξ	Collapse	Hide status panel
0	Clock	Set the date and time of an active flight's ALDT to the current system time.
**	Calendar	Select month and day
	Red Marker	Indicates that an action's status has been returned or that an action is pending

Table 16: Edit I	Mode-All Flights	View Buttons	and Controls
	nous / III ingino	Them Batterie	

Chapter 8. Edit Mode – TMI View

The Edit Mode–TMI View provides a view of FCA/airport-specific controlled flights and slots for AFPs, ground stops for airports and FCAs (GS), and arrival/departure GDPs (i.e., GDP-A, GDP-A-RWY, GDP-D). Arrival GDPs and AFPs display active and pre-departure flights. FCA and airport GSs and departure GDPs display only pre-departure flights.

Depending on your role, you have varying levels of permission to cancel flights with slot hold, reinstate flights, swap two flights, swap a flight with an unassigned slot, or request ISE. Super Users can cancel or free any controlled flight. For more information about permissions, see Appendix C: User Roles and Permissions.

Edit Mode–TMI View includes much of the functionality found in Edit Mode–All Flights View as well as the additional functionality:

- Cancel a flight with slot hold
- Reinstate a controlled flight
- Perform an ISE request on a pre-departure, controlled flight
- Free controlled slots in a TMI (Super Users only)
- Cancel any controlled flight (Super Users only)
- Swap two flights
- Swap a flight with an unassigned slot

For more information about the shared functionality with Edit Mode–All Flights View, see the following sections:

- Update flight data (ACID, AC Type, AC Reg) (see "Updating Flight Data" on page 70)
- Update flight contact information (email address, phone number, mobile carrier) (see "Updating Contact Information" on page 71)
- Update a controlled flight's ATOT, ALDT, LOBT (the LIBT is calculated from the LOBT), and ELOBT (the ELIBT is calculated from the ELOBT) with an option for the system to resume auto-management of the EL times (see "Updating Times" on page 74)
- Creating a Flight (see "Creating a Flight from Existing Flight" on page 76)

Edit Mode can be accessed from the Flight List Tools () or the Home Page's Element Module dropdown menu (see Figure 88). By default, Edit Mode opens the Flight List for the current TMI or the earliest scheduled TMI.



Figure 88: Edit Mode selection

Edit Mode TMI Slot List

The TMI View Slot List contains the controlled flights and unassigned slots for the selected program (see Figure 89). The displayed default columns are based on the type of program.

- **GDP-A, GDP-D, and airport GS** programs display Info, Element Slot, Major, ACID, ADEP, ADES, Ctl Type, EOBT, ETOT, ELDT, COBT, CTOT, and Program Delay.
- **AFP and FCA GS** programs display Info, Element Slot, Major, ACID, ADEP, ADES, Ctl Type, EOBT, ETOT, EENTRY, ELDT, COBT, CTOT, and Program Delay.

For information about adding columns, see "Managing Columns (Flight List Tool)" on page 48.

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			195485A 195445A											-Otes	1		•			
0	0	Â	10/0443A 10/0445A	NOC	RONT	ANYN	Y0094	60°	A10/025	A10/00/10	E10504	19/0/01	10/00/20	C Street		57				
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0	0		1054524	Q/A	EAGEN	YNNE	11004	6	C100304	C104012	CIONER	19/0304	19/0712							
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	0		100507A 100515A	UNKN	VLENIF VLENI#	HEWHI YFHD	Y004	900	A100151 C100259	A10/0155 C10/0306	E105458 C100513	15/0155	15/0155	Cancelle	e (20)					
0	0		100515A	Q/A Q/A	ANG4005 EAQ1713	ANTY YOLA	YEEN		A15/0226 C10/0430	A10/0230 C10/0434	E100615 C100515	15/0231	15/0226	A00	ADEP VIDOR	ADES	Startes	Eenert Siz	2	
	0		10/0617A	09935	VLETTE	YERN	YERDAY	00P	C10/0483	C10/0407	C10/0518	15/5453	10/0407	EAGHE	YEAD	1061	8 =			
	0	c	1995224	LEWIN	VLEHT	YSSY	Y189N	60P	C10/0424	C100414	C109(23	10/04/04	100414	EAGENE	YMM.	VIDEN				
C)														ATTACK AND CONTRACT OF A DESCRIPTION OF	176940	12/2/1	- AL			

Figure 89: Edit Mode's TMI Slot List

The reference numbers in Figure 89 are described in the following list:

- 1. Flight List label Lists the airport or FCA, number of slots, and EDIT MODE label.
- 2. Eligible Subs After selecting a flight for swapping, click the Eligible Subs checkbox to filter the Slot List by the slots that are eligible for substitutions. By default, it is not selected. When you select it, the label will display the number of eligible slots

out of the total count. In the following example, YBBN (137 slots) - Edit Mode updated to YBBN (128 out of 137 slots) - Edit Mode (see Figure 90).

Figure 90: Label when Eligible Subs is selected

Note: For Aircraft Operators only, the Major Only option is displayed above the Eligible Subs option (see Figure 91). Select the Major Only option to filter the Slot List by flights in your Major and subcarriers. Flights for an aircraft operator's major are in bold font.



Figure 91: Aircraft Operator's Major Only option

- 3. All Flights/[TMI name] dropdown Select *All Flights* to view all the flights for the selected element or select a specific *TMI* to view the Slot List of its flights and unassigned slots. Note that GS TMIs do not have unassigned slots.
- 4. Paused @ 16:38 When you select a flight in the *TMI* view, the data update is paused and at the top of the window, the **Paused** button displays the time the data was paused. To to initialize a data refresh and resume the updates, click

Paused @ 16:38 . The button toggles to the .

 Subs ISE indicator – Indicates whether Subs and ISE are on or off. Green font indicates that Subs and/or ISE are allowed for the viewed airport or airspace. Gray text with a strikeout indicates that Subs and/or ISE are not permitted for the viewed airport or airspace (see Table 17).

Label	Font	Description
Subs	Green text	Subs allowed
ISE	Green text	ISE allowed
Subs	Gray text with strikeout	Subs is not allowed
ISE	Gray text with strikeout	ISE is not allowed

Tabla	17.	Sube	and		availability
lable	17:	Subs	and	ISE	availability

- Slot List Lists the controlled flights and unassigned slots for the selected airport or FCA.
- Edit Mode action panel When you select a flight in the *TMI* view, the Edit Mode action panel opens to the right of the Slot List (also shown in Figure 92). Only one panel can be open at a time. Clicking a panel's radio button will close any open panel before opening the selected panel. For more information about the action panel, see "Edit Mode Action Panel – TMI View" on page 82.
- 8. Cancelled (29) The Cancelled panel lists the cancelled flights. The parenthetical number in the label is the total number of cancelled flights.

Selecting and Unselecting Flights

In the TMI view, only two flights can be selected at one time. When you select a flight, the row is highlighted blue. How you unselect a flight depends on whether the **Eligible Subs** option is selected.

- Eligible Subs If Eligible Subs is not checked, clicking either selected flight will unselect it.
- Eligible Subs If Eligible Subs is checked, clicking the second row you selected will unselect it; however, this does not apply to the first-selected row. To unselect the

first-selected row, click Clear Selection

Edit Mode Action Panel – TMI View

The Edit Mode action panel is similar to the panel on the *All Flights* view; however, it has the ISE Request and Free Slot panels and a list of the cancelled flights. Only one panel can be open at a time. Clicking a panel's radio button closes the open panel before opening the selected panel. A closer view of the Edit Mode action panel for the TMI view is shown in Figure 92.

Note: When you update a panel, you must submit your updates before updating another panel. While the system will allow you to update multiple panels, it will submit only the modifications to the last panel that you updated. For example, if you update the L Time and then update the contact information, when you click **Submit**, only the contact updates will be submitted.

			333	Y	YMML - YBBN				
2	⊙Data								
	ACID:	L L	/LE333						
	AC Type:		JNKN						
	AC Reg:	١	/LE33						
3	-OContac	:t							
4	-OCance	I							
5									
X									
×		40651 —							
	8	Create Flig	ht From Sub	ornit Reset	Clear Selection				
9	Cancelle	d (20)							
	ACID	ADEP	ADES	Slot H	Element Slot				
	VLE1217	YSCB	YBBN	N		^			
	EAQ662	YPAD	YBBN	N					
	JST824	YSSY	YBBN	N					
	EAQ616	YMML	YBBN	Ν					
	VLE705	YMHB	YBBN	N					
	EAQ24	YWLM	YBBN	N		×			

Figure 92: Edit Mode action panel for TMI Flight List

The reference numbers in Figure 92 are described in the following list:

- 1. The ACID and departure and arrival airports are listed (i.e., ADEP ADES).
- 2. **Data** Update the *ACID*, *AC Type*, and *AC Reg*. For more information, see "Updating Flight Data" on page 70.
- 3. **Contact** Update the *Email, mobile number,* and *mobile carrier.* For more information, see "Updating Contact Information" on page 71.
- Cancel/Reinstate The displayed label depends on the status of the selected flight. If you select an eligible cancelled flight, the label reads Reinstate. If you select a flight eligible for cancellation, the label reads Cancel.

Super Users and Flow Managers can cancel a flight with slot hold options and reinstate a flight to a specific slot. Note that Slot Hold is not available for GS flights.

Aircraft Operators can cancel and reinstate only flights in their major and subcarriers.Flights for an aircraft operator's major are in bold font. For more information, see "Cancelling a Flight with Slot Hold" on page 84 and "Reinstating Flights" on page 87.

- 5. **Times** Update ATOT, ALDT, ELTOT, ELOBT, LOBT, and LIBT. For more information, see "Updating Times" on page 74.
- ISE Request Super Users and Flow Managers can perform an ISE request on pre-departure, controlled flights. Aircraft Operators can perform an ISE request on pre-departure, controlled flights in their major and subcarriers. This functionality is disabled for GS TMIs.
- 7. **Free Slot** Super Users can add the selected flight to a TMI. For more information, see "Freeing a Slot (Super Users only)" on page 92.
- 8. Create Flight From Create a flight from an existing flight. For more information, see "Creating a Flight from Existing Flight" on page 76.
- 9. **Cancelled (#) list** Lists cancelled flights. The number in parentheses represents the total number of cancelled flights.
 - **Note:** When you update a panel, you must submit your updates before updating another panel. While the system will allow you to update multiple panels, it will submit only the modifications to the last panel that you updated.

Expired Program

If a program expires while you are in the Edit Mode - TMI View, a message is displayed and you are returned to the All Flights view (see Figure 93).



Figure 93: Message when TMI expires

Cancelling a Flight with Slot Hold

Controlled flights in GDPs and AFPs can be cancelled with the option to hold the slot. (Slot Hold is not available for GS flights.) The slot must be within the start/end time of the TMI. If you cancel a flight and Slot Hold is selected, the slot is held. Cancelled flights do not retain ownership of the cancelled slot unless the Slot Hold flag is set. If you do not select the Slot Hold check box during a cancel, the cancelled flight's slot is returned to the Unassigned Slot pool and becomes available for swaps or for a pop-up flight. If you cancel a flight within its Associated TMI (and the flight has a different Controlling TMI), there is no change in the Controlling TMI or Associated TMI.

You can cancel a flight using the Cancel section in the action area or by dragging a flight from the Slot List to the Cancelled panel.

Your user role determines which flights you can cancel:

- Super Users can cancel a controlled flight in any state (pre-departure, active, or completed).
- Flow Managers and Aircraft Operators can cancel only controlled pre-departure flights.
- Aircraft Operators can cancel only the flights in their major and subcarriers. Flights for an aircraft operator's major are in bold font.

To cancel a flight, complete the following steps:

1. In the Slot List, select the flight to be cancelled.

On the right, the Edit Mode action panel is activated.

2. Click the **Cancel** radio button or drag and drop the flight in the Cancelled panel.

If you drag and drop the flight, a text box with a green check mark and the ACID indicates the flight is eligible for cancellation and you can drop the flight (see Figure 94).



Figure 94: Drag-and-drop indicator

The Cancel panel opens and the flight's OBT is displayed.

The Slot Hold section displays the flight's Slot ID for each TMI that controls the flight (see Figure 95). Note that Slot Hold is not available for GS flights.

VI	_E641	YSCB - YSSY
— () Data ———		
- O Contact		
Cancel ——		
Slot Hold:	C YSSY.6210271.A.09	2242A
	FCAJS4.6212512.A.	092208A
– O Times ––––		
— O ISE Request		
— OFree Slot —		

Figure 95: Cancel panel with Slot Hold option for a non-GS flight

- 3. Click the checkbox for the slots that are to be held.
- 4. At the bottom of the panel, click Submit

The flight being updated is briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed

The flight is removed from the Slot List and is placed into the Cancelled list (see Figure 96).

- The Slot Hold column displays a Y.
- The parenthetical number in the Cancelled label increases to include the cancellation in the total number of cancelled flights.

Cancelled (1)							
ACID	ADEP	ADES	Slot Hold	Element Slot			
VLE641	YSCB	YSSY	Y	09/2242A			

Figure 96: Cancelled flight is listed in Cancelled section

The slot in the Slot List is held and lists only the status, element slot, and major.

At the top of the panel, the confirmation message is displayed (see Figure 97).

The status initially shows *Pending* and then updates to *Success*. A
 is displayed in the *Status* column as a visual indicator that the final status has been returned.

	Timestamp	Action	Status
÷	2017-12-09 22	Cancel flight VLE641	Success
		Figure 97: Success message	

5. To expand the confirmation message, click 🖽.

The button toggles to \Box .

The message is expanded and displays a summary of the cancellation including the timestamp of the cancellation, action taken, status, ACID, and held slots.(see Figure 98).



Figure 98: Confirmation message

Reinstating Flights

Super Users and Flow Managers can reinstate cancelled, controlled flights. Aircraft Operators can reinstate flights in their own Major or subcarriers, unless the flight was cancelled by a Super User or Flow Manager. Flights for an aircraft operator's major are in bold font. Pre-departure flights can be reinstated to a slot if the estimated COBT/CTOT is not in the past. The estimated COBT/CTOT is based on the flight's new slot and its current EET/taxi time

Reinstating a Flight with Slot Hold

You can reinstate a cancelled flight to its held slot.

To reinstate a cancelled flight with slot hold, complete the following steps:

1. In the Cancelled panel, select the cancelled flight with slot hold (as indicated by the Y in the Slot Hold column).

The Edit panel opens the selected flight.

The Cancel panel is replaced with the Reinstate panel.

2. Click the Reinstate radio button.

The Reinstate panel opens and displays the flight's held slot time (see Figure 99).



Figure 99: Reinstate panel displays flight's slot time

3. At the bottom of the panel, click Submit

The flight being updated is briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed.

The flight is removed from the Cancellation list and reinstated to its slot with an Active status.

The Cancelled label's number decreases by one.

The flight's displayed CTOT/CLDT is updated based on the slot and the flight's current EET.

At the top of the panel, the confirmation message is displayed.

- The status initially shows *Pending* and then updates to *Success*. A
 is displayed in the *Status* column as a visual indicator that the final status has been returned.
- 4. To expand the confirmation message, click 🖽.

The button toggles to \square .

The message is expanded and displays a summary of the reinstatement including the timestamp of the cancellation, action taken, and status; listed below this is another summary that includes ACID, REINSTATE (action) and the flight's Slot (see Figure 100).

Timestamp	Action	Status
2017-12-17 20 ACID: VLE520 REINSTATE Slot: 17/2231	Reinstate flight VLE520	Success

Figure 100: Reinstatement confirmation summary

Reinstating a Flight to an Unassigned Slot

You can reinstate a flight (with or without Slot Hold) to an unassigned slot. Slot Hold is not an option for GS flights.

To reinstate a cancelled flight to an unassigned slot, complete the following steps:

1. In the Cancelled list, select the cancelled flight and drag it to an unassigned slot.

A text box with a green check mark and the ACID indicates the flight is eligible for reinstatement you can drop the flight (see Figure 101).



Figure 101: Successful drag-and-drop indicator

2. Drop the flight in the unassigned slot.

The row is highlighted blue with red markers and populated with the flight's information (see Figure 102).

÷	i	С	18/0633A	QFA	EAQ7431	YMML
÷	0	С	18/0635A	QFA	EAQ7433	YMML
Đ	0	С	18/0636A	RXA	RXA3286	YMML
			18/0638A			

Figure 102: Markers indicate an unsubmitted reinstatement request.

On the right, the Edit Mode action panel and automatically opens the Reinstate panel.

The Reinstate panel displays the slot time (see Figure 103).

The **Submit** button is activated.

- OReinstate			
Slot Time:	18 🋗		

Figure 103: Reinstate panel displays flight's slot time

3. At the bottom of the panel, click Submit

The flight being updated is briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed.

The flight is removed from the Cancellation list and reinstated to its slot with an Active status.

The Cancelled label's number decreases by one.

The flight's displayed CTOT/CLDT is updated based on the slot and the flight's current EET.

At the top of the panel, the confirmation message is displayed.

- The status initially shows *Pending* and then updates to *Success*. A
 is displayed in the *Status* column as a visual indicator that the final status has been returned.
- 4. To expand the confirmation message, click 🖽.

The button toggles to \square .

The message is expanded and displays a summary of the reinstatement including the timestamp of the cancellation, action taken, and status; listed below this is another summary that includes ACID, REINSTATE (action) and the flight's Slot (see Figure 104).

	Timestamp	Action	Status
•	2017-12-17 21	Reinstate flight RXA3286	Success
	ACID: RXA3286 REINSTATE Slot: 18/0636		

Figure 104: Reinstatement confirmation summary

Requesting an Inter Aircraft Operator Slot Exchange (ISE)

Super Users and Flow Managers can perform Inter Aircraft Operator Slot Exchange (ISE) for pre-departure, controlled flights in a GDP or AFP. ISE functionality is not available for a GS. Aircraft Operators can perform ISE flights in their major or subcarriers. Flights for an aircraft operator's major are in bold font

To submit an ISE Request, complete the following steps:

1. In the Edit Mode Flight List dropdown, select a GDP or AFP.

The Flight List is displayed.

2. Select a pre-departure flight.

The data update pauses and the Edit Mode action panel opens and displays the **ISE Request** radio button (see Figure 105).



Figure 105: ISE Request displayed for pre-departure flights

3. Click the **ISE Request r**adio button.

The ISE Request panel opens (see Figure 106).

JST566	YMML - YBBN
- O Data	
- O Contact	
-OCancel	
O Times	
_ OISE Request ———]
Original Slot Time:	17/0325
Requested Slot Time:	17 🛗 0326
ISE Window:	10
Latest Requested Slot Time:	17/0336

Figure 106: ISE Request panel

Table 18 describes the ISE Request data elements.

Table 18: ISE Request data elements

Data Element	Description
Original Slot Time	Read-only field with the current slot time
Requested Slot Time	Defaults to 1 minute after original slot time
ISE Window	Default value is 10 minutes
Latest Requested Slot Time	Read-only field with the Requested Slot Time + ISE Window

4. In the *Requested Slot Time* field, enter the time using the **Calendar** control to select a date and your keyboard to enter the time in HHmm format.

The Latest Requested Slot Time is automatically calculated.

5. In the *ISE Window* field, enter how many minutes later than the requested slot that the algorithm should look for slot options.

The Latest Requested Slot Time increases by the number of minutes you entered.

6. At the bottom of the panel, click Submit .

The flight being updated is briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed.

The status shows *Pending* and then updates to *Success*. A **▼** is displayed in the *Status* column as a visual indicator that the final status has been returned.

7. To expand the confirmation message, click \boxdot .

The ISE Request information is displayed (see Figure 107). It includes the timestamp, action, status, Requested Slot Time, ISE Window, the requested ISE, the new slot assignment, and the resulting list of bridged flights (SBRG) and slot assignments.

	Timestamp	Action	Status				
•	2017-12-16 23	ISE request for JST566	Success				
	Requested Slot Time: 17/0400 ISE Window: 10 Inter Aircraft Operator Slot Exchange request for JST566 to requested Slot between 17/0400 - 17/0410 was successful.						
	ISE Flight JST566 SBRG flight assigr - Flight VLE347 to - Flight VLE1250 to - Flight EAQ632 to - Flight EAQ546 to - Flight EAQ2345 t - Flight VLE1268 to - Flight EAQ837 to - Flight VLE620 to - Flight EAQ2559 t - Flight EAQ2419 t	has been assigned to Slot 17/0404. The iments were made: Slot 17/0327 o Slot 17/0330 o Slot 17/0332 o Slot 17/0335 to Slot 17/0347 o Slot 17/0347 to Slot 17/0355 o Slot 17/0357	following				
	- Flight VLE981 to - Flight EAQ548 to	Slot 17/0400 Slot 17/0402					

Figure 107: ISE Request confirmation summary

Freeing a Slot (Super Users only)

Super Users can remove a flight's slot and the flight will remained controlled by the TMI. That is, the Super User can free the slot assignment of a non-pre-departure flight (defined as being in an estimated, active or completed state) that departs non-compliant and no longer needs its slot. The Harmony Client will assign the freed slot in compression or revision if another flight can use it; the slot becomes eligible for another flight to sub into. ESM will not permit a flight with a freed slot to participate in substitution actions.

To free a slot, complete the following steps:

1. Select a non-pre-departure flight (estimated, active or completed state) in a GDP-A, GDP-D, or AFP.

The Free Slot option is activated.

- **Note:** The *Free Slot* panel is only displayed for Super Users. Other users cannot see it.
- 2. Click the Free Slot radio button.

The *Free Slot* panel opens with the selected flight's slot information (see Figure 108).

The slot in the Slot List no longer displays the flight information and the row is marked with red triangles as a visual indicator that the free slot action has not been submitted



Figure 108: Freed slot information

3. Click Submit

The flight being updated is briefly highlighted brown in the panel to visually mark the data that is being processed.

The flight is cleared from the slot and the slot is listed as unassigned.

The flight no longer is displayed in the Edit Mode - TMI View; however, it is displayed in the Edit Mode - All Flights view.

Note: If the freed slot had a slot hold, the slot hold is removed when the slot is freed.

The status shows *Pending* and then updates to *Success*. A **▼** is displayed in the *Status* column as a visual indicator that the final status has been returned.

4. To expand the confirmation message, click 🛨.

The *Freed Slot* summary is displayed with the timestamp, action, status and freed slot (see Figure 109).

Timestamp	Action	Status
2017-12-10 02	Free Slot request for MAS135	Success
Freed Slot: YBBN.	6266348.A.100740A	

Figure 109: Freed slot confirmation message

Substitutions

You can perform flight and slot substitutions of all pre-departure flights and active arrival flights you cannot swap active departure flights, nor can you swap flights in a GS TMI. Note that Active state flights include flights in an Estimated state (such flights are treated as active even though they do not have ATOT values). Substitution requests are transmitted directly to Harmony. Also of note is that all Slot Substitution functionality is available for pop-up flights. The setting to allow pop-up slot substitution is configured during installation.

Flights can be included in an Arrival GDP (i.e., GDP-A, GDP-A-RWY) and a Departure GDP (i.e., GDP-D), as well as AFPs. The TMI that assigns the calculated times is the Controlling TMI. Any other TMI is the Associated TMI. User-initiated swap actions within the Associated TMI will update the calculated times and slot for that flight. For eligible TMIs, this action changes the Associated TMI to the new Controlling TMI, and the former Controlling TMI becomes the Associated TMI.

Super Users, Flow Managers, and Aircraft Operators can substitute slots within their minimum departure notification time. Super Users can substitute two active flights, and active and pre-departure flights regardless of the time between the active flight ETA and the slot. Aircraft Operators can substitute only flights in their own Major and subcarriers. Flights for an aircraft operator's major are in bold font. For more information about permissions, see Appendix C: User Roles and Permissions.

Swapping Two Flights

You can swap two flights in an arrival TMI (GDP-A or GDP-A-RWY) or AFP. Flights in a GS TMI cannot be swapped.

Note that active flights cannot be swapped in a departure TMI (GDP-D). Super Users can swap active or pre-departure flights regardless of the flight's ETA to the targeted slot. Flow Managers and Aircraft Operators can swap active pre-departure flights that are within a configurable threshold of their active ETA Compliance Window. Aircraft Operators can swap only flights in their own Major and subcarriers.

You can swap a flight with another flight by selecting each flight or dragging and dropping the flight into the other flight's slot.

To swap a flight with another flight, complete the following steps:

1. Select the flight you want to swap.

The flight is highlighted blue to show selection.

The selected flight is listed in the Edit Mode action panel.

2. Select Eligible Subs . If you are an Aircraft Operator, select Major Only

The Slot List is filtered to show only the slots that are eligible for substitution.

The Slot List for Aircraft Operators is further filtered to show only flights in their Major and subcarriers.

The Slot List label lists the number of eligible slots out of the total number of slots (see Figure 110).

YBBN (128 out of 137 slots) - EDIT MODE - Showing eligibl... C Eligible Subs

Figure 110: Count of eligible flights

3. Select the other flight with which you want to swap.

The flight is highlighted blue to show selection.

Note: Instead of selecting each flight, you can drag and drop one flight into the other fight's slot.

The selected flight is added to the Edit Mode action panel with the previously selected flight (see Figure 111).

ACID	ADEP - ADES	Element Slot	COBT
VLE44	WADD - YBBN	17/0750A	17/0259
EAQ7431	YMML - YBBN	17/0752A	17/0557

Figure 111: Flights selected for swapping are listed in action panel

4. Click Model

In the Slot List, the flights move to their new slots.

Each column in the selected rows is marked with **r** to show that a swap has been modelled.

The **Submit** button is activated.

5. Click Submit .

The flights being updated are briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed.

The slots are exchanged for the flights.

The flights' control times (COBT/CTOT/CLDT/CIBT) are updated based on the new slot.

The flights' control type updates to SUBS.

The status shows *Pending* and then updates to *Success*. A **▼** is displayed in the *Status* column as a visual indicator that the final status has been returned.

6. To expand the confirmation message, click \boxdot .

A summary of the swap is displayed (seeFigure 112). It includes the timestamp, action, status, and lists the ACID and slot assignment of the swapped flights.



Figure 112: Swap confirmation summary

Swapping Flight and Unassigned Slot

You can swap a flight with an unassigned in an arrival TMI (GDP-A or GDP-A-RWY) or AFP. Note that active flights cannot be swapped in a departure TMI (GDP-D).

Super Users can swap active pre-departure flights regardless of the flight's ETA to the targeted slot. Flow Managers and Aircraft Operators can swap active a pre-departure flight that is within a

configurable threshold of their active ETA Compliance Window. Aircraft Operators can swap only flights in their own Major and subcarriers. Flights for an aircraft operator's major are in bold font.

You can swap a flight with an unassigned slot by selecting the flight and unassigned slot or dragging and dropping the flight into the assigned slot.

To swap a flight with an unassigned slot, complete the following steps:

1. Select the flight you want to swap.

The flight is highlighted blue to show selection.

2. Select Eligible Subs . If you are an Aircraft Operator, select Major Only

The Slot List is filtered to show only the slots that are eligible for substitution.

The Slot List for Aircraft Operators is further filtered to show only flights in their Major and subcarriers.

The Slot List is filtered to show only the slots that are eligible for the swap and the heading is updated with the number of available slot (see Figure 113).

```
CAJS17C (1884 out of 1915 slots) - EDIT MODE - Showing eligible ... 🗹 Eligible Subs
```

Figure 113: Count of eligible flights

3. Select an eligible unassigned slot.

The slot is highlighted blue to show selection.

Note: Another method is to drag and drop the flight in the assigned slot (see Figure 114). As you drag the flight, a text box with a green check and the ACID is displayed to show that the slot is valid. If the slot is not eligible, the green check is replaced with a red X to indicate that you cannot drop the flight in slot.

	Info	Status	Element Slot	Major	ACID
			11/2351A		
	11/2352A 📀 JST616			616 🕇	
÷	6	А	11/2354A	QFA	EAC 541
÷	6	А	11/2355A	QFA	UAE 1822
÷	1	А	11/2357A	QFA	JST616
÷	1	A	11/2358A	QFA	EAQ444

Figure 114: Drag-and-drop method

4. Click Model

Each column in the selected rows is marked with **r** to show that a swap is in progress.

The **Submit** button is activated.

5. Click Submit

The flight being updated is briefly highlighted brown in the flight list and the panel to visually mark the data that is being processed.

The flight is moved into the unassigned slot and the flight's original slot is displayed on the Slot List as an unassigned slot.

The flight's control times (COBT/CTOT/CLDT/CIBT) are updated based on the new slot.

The flight's control type updates to SUBS.

The status shows *Pending* and then updates to *Success*. A **▼** is displayed in the *Status* column as a visual indicator that the final status has been returned.

Edit Mode-TMI View Alerts Buttons and Controls

Table 19 describes the buttons, icons, and controls used in Edit Mode - TMI View.

Button	Name	Description
¢;	Flight List Tools	Access Edit Mode
Create Flight From	Create Flight From	Create flight based on selected flight
Submit	Submit	Submit updates to Harmony server
Reset	Reset	Reset to data to its state prior to your updates
Model	Model	This button is only displayed after you select two slots for swapping. Click to model the swap submitting the substitution.
Clear Selection	Clear Selection	Clear selected flight data
÷	Expand	Show status panel to review submit details
Ξ	Collapse	Hide status panel
0	Clock	Set the date and time of an active flight's ALDT to the current system time
曲	Calendar	Select month and day

Table 19: Edit Mode Buttons and Controls

Button	Name	Description
Major Only	Major Only	Aircraft Operators are the only users with this option to filter the Slot List by their major and subcarriers.
Eligible Subs	Eligible Subs	Select to view only the eligible slots for the selected flight
Auto-manage EL Time: 🗹	Auto-manage EL Time	Select to have the system auto-manage EL times after you manually update the EL times
ST616	Valid Slot Indicator	The green check in front of the ACID indicates the slot is eligible for swapping.
		Note that the slot is subject to further validation when you submit the request.
3 JST616	Invalid Slot Indicator	Indicates the slot is not eligible for swapping and you cannot drop the flight in the slot.
	Red Marker	Indicates that an action's status has been returned or that an action is pending

Chapter 9. Demand Graph

The Demand Graph component enables you to monitor the overall demand of an airport or FCA and to set capacity for an airport or FCA. Figure 115 shows a Demand Graph with each component denoted by a number. The list below the figure describes each component.



Figure 115: Demand Graph window

The reference numbers in Figure 115 are described in the following list:

Note: A blue button or tab means it is selected and shown on the active graph.

- 1. The name of the airport or FCA
- 2. The Demand Graph Tools (Set Capacity and Reset Panel)
- Lists the types of data the graphs are colored by (Status, Data Source, AC Type Group, Carrier, AFix and DFix). These also can be added in System Settings. For more information, see "Demand Graph Settings" on page 208 in Chapter 18: System Settings.
- 4. Click **I** to create a new graph.
- 5. Click **Arrival**, **Departure**, **or Total** buttons to display bars for arrival and departure demand, and total demand.
- 6. Time Bin in minutes (15, 30 or 60). This is shown on the x-axis.
- 7. **Capacity** and **Cancelled Flights** buttons. Click to show/hide capacity and cancelled flights.

8. **Legend** defines the color of the bars (see Figure 116). The colors correspond with the type of active graph (e.g., Arrived, Active, Controlled, Departing Past ETD, Departing, Cancelled). Click Legend to show/hide the legend.

Figure 116: Expanded Legend (red border is for illustrative purposes)

- 9. Aircraft Count is shown on the y-axis.
- 10. Visual capacity overlay controlled by capacity buttons in #7. The color of the bar underlining the capacity value maps to the color of the outline of the data it corresponds to.
- 11. The V (green triangle) marks the current system time.
- 12. The bars represent the number of arrival (blue border), departure (red border), or total flights (black border). Roll over the bar to view the flight counts. Double-click the bar to open a Flight List with the corresponding flights.
- 13. The hours selected in the Time Bin are displayed along the x-axis.
- 14. Locked/Unlocked toggle button. The button shows the current state (locked or unlocked. The desired action (unlock or lock) is the opposite of the button:
 - Click in the lock / move the thumbs(orange squares) together to change the range of the time displayed.
 - Click (1) to unlock / independently move the sliders to change the total number of hours displayed.
- 15. Time (UTC) slider bar. Move the thumbs to adjust the time range.
- 16. Click Reset to reset the view to the current time, that is, reset any slider movement.
- 17. Total count is displayed in white text at the top of the Demand Graph. The corresponding bar has a black border.

For more information about Demand Graph settings, see "Demand Graph Settings" on page 208 in Chapter 4: Work Views.

Adding a Graph

There are four types FCA Demand Graphs: Status, Data Source, AC Type Group, and Carrier. Airports have two additional graph types: AFix and DFix. These graphs are also referred to as color graphs. *Color By* is a feature in Harmony Web that differentiates the type of Demand Graph.

To add a graph, complete the following steps:

1. Click (located after the row of tabs for the types of graphs in the current Demand Graph.
The Color By: dropdown list is displayed.

2. From the *Color By:* dropdown list:, select the type of graph that you want to add (see Figure 117).



Figure 117: Types of graph in Color By list

3. To create the Demand Graph, click

The new Demand Graph is displayed and denoted by AFix * in the heading.

4. To save your changes to the Work View, click 🔯 (located in the main toolbar). The Save Work View dialog box opens (see Figure 118).

Save Work View			
Name:			
Set as default 🗖			
Save Close			

Figure 118: Save Work View dialog box

- 5. Enter a unique Name in Name
- 6. Select Set as default to save the Work View as the default Work View that will open when you log in.
- 7. Click Save

A success message is displayed.

The Work View is added to the Home Page.

The Work View is added to the Work View list in System Settings.

If you selected Set as default, it is marked as the default Work View.

Removing a Graph

You can remove a color graph.

To remove a graph, complete the following steps:

1. In the graph's title, click the *x* (see Figure 119).



Figure 119: Click x to remove graph.

The graph is removed and no longer is displayed in toolbar.

Setting Capacity (Demand Graph Tool)

Harmony Web has the capability to set capacity for an airport or FCA.

To set the capacity, complete the following steps:

1. Click

The list of Demand Graph tools is displayed.

2. Select 🛧 Set Capacity

The Set Capacity dialog box opens for the FCA (on the left) or airport (on the right) (see Figure 120). The difference between the two is that the airport has Arrival Capacity and Departure Capacity while and FCA simply has a throughput capacity for the airspace.

Set Capacity: FCAJS0425	Set Capacity: TNCC 🗙
Start Time: 2017-05-02 🎬 18 👻 30 ▼	Start Time: 2017-05-02
Total Capacity: 42 per hour	Arrival Capacity: 30 per hour
Submit Reset Close	Departure Capacity: 26 per hour Total Capacity: 56 per hour
	Submit Reset Cancel

Figure 120: FCA and airport Set Capacity dialog boxes

- 3. Click the *Star Time* and *End Time* calendars to select the date.
- 4. From the hour and minute dropdown lists, select the *Start Time* and *End Time* or use your keyboard to enter the capacity.

5. Click the Total *Capacity/Arrival Capacity/Departure Capacity* up and down controls to select the per-hour flight capacity.

For airport capacity, the *Total Capacity* is simultaneously calculated as you increase/decrease the arrival and departure capacity.

6. To save your updates, click Submit

The update is reflected on the Demand Graph for the specified time range.

Opening a Flight List

You can open the Flight List from the bars in the Demand Graph.

To open the Flight List, complete the following steps:

1. Double-click a bar in the Demand Graph.

The Flight List for the selected bar opens.

Resetting Panel (Demand Graph Tool)

The Reset Panel option closes the Demand Graph and displays the Module dropdown menu so you open another Flight List or Demand Graph. For more information about how this functionality can be used, see "Changing the Layout Configuration" on page 38 in Chapter 4: Work Views.

To reset the panel, complete the following steps:

1. From Demand Graph Tools (Select Select Reset Panel

The Demand Graph closes.

A new panel with the header *New Panel* is opened and the Module dropdown menu is displayed (see Figure 121).



Figure 121: New Panel

- 2. From the Module dropdown menu, select either Flight List or Demand Graph.
- 3. From the dropdown list, select an airport or FCA.

4. Click Go.

The selected Flight List or Demand Graph opens.

5. To save your changes, click 🖄 and follow the steps in "Managing Columns (Flight List Tool)" on page 48.

Demand Graph Buttons and Controls

Table 20 describes the buttons, icons, and controls used in the Demand Graph.

Control	Name	Description
Qo	Demand Graph Tools	Access the Demand Graph Tools
+	Add	Add a new Demand Graph
▼	Green Triangle	Marks current time on Bar Graph
	Lock	Indicates the Time (UTC) thumbs on the slider bar are locked, which means they move together
_	Unlocked	unlocked, which means they move independently
		Click to lock the thumbs
Submit	Submit	Submit your updates to the Harmony server
Reset	Reset	Reset the capacity to cancel your updates without closing the Set Capacity dialog box
Cancel	Cancel	Close Set Capacity dialog box without saving your updates
Go	Go	Click to create Demand Graph
*	Star	Open Save Work View dialog box
Save	Save	Save Work View
Close	Close	Close Save Work View dialog box without saving your updates
0	Clock	Set the date and time of an active flight's ALDT to the current system time.

Table 20: Demand Graph Buttons and Controls

Control	Name	Description
05 🋗	Calendar	Select month and day

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Chapter 10. Decision Support TMI

The Decision Support TMI tools provide Super Users and Flow Managers the capability to model Fix Balancing TMI, Route Detour TMI, and Level Capping TMI.

- <u>Fix Balancing TMI</u> provides pre-tactical and tactical decision support monitoring capabilities for identifying delay metric projections for each arrival fix to an airport.
- <u>Route Detour TMI</u> provides assistance with horizontal re-routing resulting from route or sector constraints by providing route options to avoid the constrained resource.
- <u>Level Capping TMI</u> provides the capability to keep flights above or below a specific altitude for a period of time in order to avoid severe weather or congestion. The decision-support TMI results provide decision support in the form of modelled ETAs for flights routed above or below the Level Capping FCA.

Decision Support TMI Window

Decision Support TMI is accessed via the Main or Work View toolbar. For more information about the toolbars, see "Main and Work View Toolbars" on page 14.

To open the Decision Support TMI window, complete the following steps:

1. In either the Main or Work View toolbar, click 🤐.

The Decision Support TMI window opens (see Figure 122).

Harmony Web	\times +	
		🔲 I 🕋 💽 I
Select TMI Type 🗸	Select Resource 🗸	

Figure 122: Decision Support TMI window

The Decision Support TMI window displays two dropdowns:

- Select TMI Type The TMI types are listed:
 - See "Fix Balancing TMI" on page 108
 - See "Route Detour TMI" on page 114
 - See "Level Capping TMI" on page 119
- Select Resources A list of the available FCAs or airports for the selected TMI Type

For each TMI type, the modelled data is summarized in a Data View table, graphically displayed in a graph, and the flights are listed in a Flight List.

Fix Balancing TMI

The Fix Balancing TMI tool provides pre-tactical and tactical decision support monitoring capabilities for identifying delay metric projections for each arrival fix to an airport. Super Users and Flow Managers can execute flight delay analysis and situational modeling functions to support operational needs. The Fix Balancing TMI identifies the recommended flights to move by considering the delay reduction for a flight based on the additional flight time to use a new arrival fix (for a defined airport).

To preview and model the Fix Balancing TMI, complete the following steps:

1. Click is to open the Decision Support TMI window.

The Decision Support TMI window opens.

In the upper left corner are two dropdowns, Select TMI Type and Select Resource.

- 2. From the Select TMI Type dropdown, select Fix Balancing.
- 3. From the Select Resource dropdown, select an airport.
- 4. On the right side of the screen, the TMI Parameters panel opens (see Figure 123).

TMI Parameters - YSSY			×
Fix Balancing			
Look Ahead:	4 🔶		
Terminal Area Delay:	60 🗢		
Duration:	60 🖨		
Window Interval:	15 🔶		
			Preview
Start Time 23/0845			—
From Fix 🔻 1	o Fix(es)		-
Minimum Delay Savings: Delay Metric Difference:	60 ♦		
		Reset	Model

Figure 123: Fix Balancing TMI Parameters panel

For a description of each element in the panel, see Table 21 in "Fix Balancing Data Elements" on page 112

- 5. In the TMI Parameters panel on the right, use the dropdowns to adjust the Lookahead, Terminal Area Delay, Duration, and Window Interval.
- 6. To preview the fix balancing, click Preview

Note: Before continuing to the next step, you must submit the Preview parameters.

The *Data View*, *Flight List*, and *Graph* sections for the selected airport open (see Figure 124). For information about the data elements, see Table 21 in "Fix Balancing Data Elements" on page 112.

In the Data View table and Graph, the Fix balancing analysis returns modelled delay distributions for each fix (see Figure 124).

The Line Graph's line color corresponds with the colored Fix buttons above the graph.

Harmo	ony Web		× +																	
	DN TION				2018-0	3-23 09:36	🛄 I (• •			•	. 2	±20 Lo	gout						
Fix Bala	ancing	•	YSSY									Show T	di Parameters							
YSSY												Q 4	Export (csv)	9						
Data Viev		line		marr	LICHUR	MEN PAR	-	Info	ACID	ADEP	ADES	AFix	EAFT							
-	BOREE	ныв	MARLN	RIVET	VONNI	WELSH	YAKH	0	MAS143	WMKK	YSSY	WELSH	23/0917							
Number								0	EAQ42	Will	YSSY	WELSH	23/0917							
flights	211	211	211	211	211 211	211	211	0	EAQ82	WSSS	YSSY	WELSH	23/0925							
airport															0	VLE938	YBBN	YSSY	VONNI	23/0930
Demand			45	-	-	-		0	RXA454	YNAR	YSSY	WELSH	23/0922							
at fix	3	•	15	53	23	63	•	0	EAQ1472	YSCB	YSSY	RIVET	23/0928							
Total	20.01	0-00	11.71	147.00	163-16	404-37	36.17	0	VLE516	YBCG	YSSY	VONNI	23/0934							
(mm:ss)	30.01	0.00	44.31	147.20	163.10	101,37	20.17	0	JST409	YBCG	YSSY	VONNI	23/0936							
								0	JST38	WADD	YSSY	WELSH	23/0934							
Graph								0	VLE837	YMML	YSSY	RIVET	23/0936							
BORE	HBB	MARL	N RIVET	VONH	WELS	Н ҮАККИ		0	EAQ426	YMML	YSSY	RIVET	23/0938							
241		л						0	BAW15	WSSS	YSSY	WELSH	23/0940							
Ē 32		/						0	FJI911	NFFN	YSSY	VONNI	23/0945							
À22	1		\backslash					0	JST763	YPAD	YSSY	WELSH	23/0944							
۵.			J.			1	-	0	EAQ521	YBBN	YSSY	VONNI	23/0949							
đ	\$ 4	\$0,00	104S	1º	130	the state	35	0	EAQ574	YPPH	YSSY	WELSH	23/0947							
		_		_		0.0	-	0	RXA118	YMER	YSSY	MARLN	23/0943							
	me (UTC):						Rest	0	VI E643	YSCB	YSSY	RIVET	23/0950							

Figure 124: Preview of Fix Balancing TMI

Note: If you change any parameters after submitting the parameters, you

must click **Preview** again to submit the updates before continuing to the next step.

7. If the TMI Parameters panel is hidden, click

Show TMI Parameters to open it.

- 8. Located Below the **Preview** button, use the slider bar thumb to set the Start Time of the model.
- Select the fixes you want to model in the *From Fix* and *To Fix(es)* dropdown lists. To close the To Fix(es) dropdown, click the arrow; and to remove a fix, click the x (see Figure 125).



Figure 125: Controls in the To Fix(es) box

- 10. From the Minimum Delay Settings dropdown, select the number of seconds.
- 11. From the *Delay Metric Difference* dropdown list, select the number of seconds.
- 12. To model the fix balancing, click Model

The following elements are updated:

- Data View
- Graph
- Flight List

Fix Balancing Data View

The Data View table is updated with the modelled demand (see Figure 127). Each of the fields is described in Table 21.

Data View						
	MARLN	VONNI	YAKKA	RIVET	BOREE	WELSH
Number of flights to the airport	561	561	561	561	561	561
Demand at HBB	0	0	0	0	0	0
Modeled Demand at HBB	0	0	0	0	0	0
Demand at to Fix	42	146	19	169	18	159
Modeled Demand at to Fix	42	146	19	169	18	159
Total delay (min)	1984	5984	777	8077	944	5132
Max delay (min)	110	110	110	110	110	110
Average delay (EET extension, mm:ss)	47:14	40:59	40:53	47:47	52:26	32:16

Figure 126: Modelled Data View

Fix Balancing Graph

The Graph is updated with the modelled demand (see Figure 127).



Figure 127: Modelled fix balancing data in Graph

a. To view the modelled demand for a particular fix, click a To Fix button (located above the graph). Unlike the Preview graph, only one To Fix can be displayed at a time.

The modelled fix demand line is shown with a dashed line and the original fix demand line is shown with a solid line. The color of the line matches the color of the fix button.

- b. To toggle between the original and modelled fix demand lines, click --- Modeled or
 Original
- c. Below the graph, move the slider thumbs to change the time range of the displayed demand.
- d. To lock the slider thumbs so they move together, click 🛄. The button toggles to

), which indicates that the slider thumbs are locked.

e. To unlock the slider thumbs so they move independently, click 🚨. The button

toggles to 1, which indicates that the slider thumbs are locked.

f. To reset the Graph to its initial view, click Reset

and click **Q**. The

Fix Balancing Flight List

The Flight List is updated for the selected Fix. That is, when you select a Fix button on the Graph, the Flight List updates to show the flights for the From Fix to the selected To Fix (see Figure 128).

From H								Q 4	Export (.csv)
Info	Flight State	Major	ACID	ADEP	ADES	AFix	MAFix	EAFT	MEAFT (
i	Scheduled	JGO	JG79	YGLA	YSSY	YAKKA	YAKKA	23/1821	23/1821 ī
1	Controlled	QFA	EAQ2007	YSTW	YSSY	YAKKA	YAKKA	23/1532	23/1532 3
6	Active	NOC	PAC241	RJAA	YSSY	YAKKA	YAKKA	23/1946	23/1946 §
i	Controlled	QFA	EAQ2003	YSTW	YSSY	YAKKA	YAKKA	23/1517	23/1517 3
i	Scheduled	UNKN	VLE1280	YBHM	YSSY	YAKKA	YAKKA	23/1815	23/1815 7
i	Scheduled	QFA	EAQ2005	YSTW	YSSY	YAKKA	YAKKA	23/1911	23/1911 1
(1)	Scheduled	QFA	EAQ867	YBHM	YSSY	YAKKA	YAKKA	23/1659	23/1659 3
(1)	Controlled	JGO	JG71	YGLA	YSSY	YAKKA	YAKKA	23/1736	23/1736 £

Figure 128: Modelled Flight List for selected To Fix

- a. Only some of the columns are viewable. Use the scroll bar at the very bottom of the window to scroll to right.
- To search for a particular flight, enter the ACID in flight is highlighted yellow (see Figure 129).

From H	BB to YAKKA					, jg79	٩
Info	Flight State	Major	ACID	ADER	AFix	MAFix	EAFT
i	Scheduled	JGO	JG79	YGLA	YAKKA	YAKKA	23/1821

Figure 129: ACID is highlighted yellow

c. To export the Flight List, see "Exporting Modelled Data" on page 124.

Fix Balancing Data Elements

Table 21 describes the Fix Balancing data elements.

Table 21: Fix Balancing data elements

Element	Description
TMI Parameters	
Lookahead Time	Hours to look ahead in the future
Terminal Area Delay	Nominal delay in terminal area due to speed, vectoring and length of final descent
Duration	Window duration to control projection's interval's range.

Element	Description
Window Interval	Window translation to control projection's interval's subsequent start time.
Start Time	Start time of model in dd/hhmm format
From Fix dropdown	Select fix
To Fix(es) dropdown	Select fixes
Minimum Delay Savings	Fix delay savings to consider move to alternate terminal fix.
Delay Metric Difference	Difference in total delay to stop further evaluation in Fix Balancing TMI
Data View - Fix Balancing	
Column Heading	Name of To Fix(es)
Number of flights to the airport	Number of flights scheduled to arrive at the airport
Demand at [From Fix name]	Number of flights scheduled to arrive at the From Fix prior to modelling
Modelled Demand at [From Fix name]	Number of flights moved away from the From fix
Demand at To Fix	Number of flights scheduled to arrive at the To Fix prior to modelling
Modelled Demand at To Fix	Number of flights moved to the To Fix
Total delay	Total passback delay per fix
Max delay	Highest passback delay assigned to a single flight
Average delay (EET extension)	Average passback delay per flight
Line Graph- Fix Balancing	
Delay (Min)	Delay in minutes (Y-axis)
Time	Time by hours (X-axis)
Legend	Describes demand lines for preview and model of From fix and selected To fix: – Original (solid line) – Modelled (dotted line)
From [Fix name] button	Color of From fix corresponds with colored line on graph
To [Fix name] button	Color of To fix button corresponds with colored line on graph Only one To fix can be viewed at a time
Flight List - Fix Balancing	
Info	Open Flight Details
Flight State	Status of Flight. For example, Active, Planned, Cancelled, Scheduled, Airline
Major	Flight's Major
ACID	Aircraft ID
ADEP	Departure airport
ADES	Destination airport
AFix	Original fix for the flight
MAFix	Modelled fix for the flight

Element	Description					
AFT	Arrival fix time for the flight					
MEAFT	Modelled arrival fix time for the flight					
Delay	Flight's delay					

Route Detour TMI

Route Detour TMI provides assistance with horizontal re-routing resulting from route or sector constraints by providing route options to avoid the constrained resource.

To model the Route Detour TMI, complete the following steps:

1. Click is to open the Decision Support TMI window.

The Decision Support TMI window opens.

In the upper left corner are two dropdowns, Select TMI Type and Select Resource.

- 2. From the Select TMI Type dropdown, select Route Detour.
- 3. From the Select Resource dropdown, select an Adapted Partial Airway or Adapted Sector FCA.

On the right side of the window, the TMI Parameters panel opens (see Figure 130).

TMI Parameters - FCAJS18		×
Route Detour	FCA Infor	mation
	General	
23/1218 23/1314	Туре	Adapted
	Rate	9
	Heading Ran	ige
	Start	
	End	
	Vertical Limi	*-
	verucai Liini	
	Min	U
	Max	600
	Times	
	Start	23/1215
	End	23/1314
	Reset	Model

Figure 130: Route Detour TMI Parameters panel

On the left is a Times slider bar. On the right are four informational sections. The *General, Heading Range, Vertical Limits, and Times data are informational and cannot be edited.*

For a description of each element in the panel, see Table 22.

- 4. In the TMI Parameters panel on the right, use the slider bar thumbs to adjust the preview time range. You can also change the time by manually entering the start and end times in DD/HHmm format.
- 5. Click Model

The modelled data is returned (see Figure 131).

- The Data View lists the outcome of the modeling (Number of flights in FCA, Number of fights with reroutes, and Average delay)
- The Graph displays a comparison of the modelled TMI (Flights in FCA and Flights not Rerouted). The color of the bars in the Graph's corresponds with the colored

buttons located above the graph Flights in FCA and Flights without Reroutes

• The Flight List returns all flights that were part of the FCA and the status of the decision support results.

Harmony Web × +									
(0 & https://ansp.metronaviation.com/harmonyweb/app/		90% C	9, Sear	ch		*	0 + 1		=
METRON	2018-03-27	13.42 🔲] [in the second	• 1	. 2	🥶 I 📖	-
Route Detour							Show T	di Parameters	
FCAJS327C							Q 4	Export (cav)	
Data View Number of flights in FCA 231	into	Flight State	Major	ACID	ADEP	ADES	ETOT	Entry	
Number of flights with reroutes 37	0	Controlled	OFA	EAQ15	KLAX	YOON	27/0242	27/150	7 1
Average delay (EET extension, 24.75	0	Controlled	UNKN	VI.E8	KLAX	YEEN	27/0212	27/143	8
(kemm	0	Controlled	NOC	UAL98	KLAX	YMML	27/0123	27/155	8
Graph	0	Adve	QFA	UAE434	ONDE	YBBN	27/0046	27/144	4
Fights in FCA. Flights without Resources	0	Active	voz	ETD450	OMAA	YSSY	27/0031	27/145	2
	0	Controlled	NOC	CSN381	ZGGG	YBBN	27/0732	27/155	3
Э	0	Active	OFA	CPA111	WHH	YSSY	27/0522	27/141	3
2x	0	Controlled	QFA	JST58	WADD	YBBN	27/0956	27/151	2
28	0	Adve	QFA	EAQ2	OMDE	YSSY	27/0016	27/143	0
24	0	Active	OFA	EAQ128	19444	YSSY	27/0607	27/145	3
2	0	Adve	QFA	EAQ24	VTBS	YSSY	27/0537	27/143	5
£20	0	Active	QFA	KAL121	R0K(\$1	YSSY	27/0511	27/141	
816	0	Adve	QFA	EA022	RJAA	YSSY	27/0511	27/135	6
1	0	Active	QFA	UAE412	ONDE	YSSY	27/0037	27/144	2
12	0	Active	QFA	EAQ130	2590	YSSY	27/0626	27/154	3
	0	Adhre	QFA	EAQ82	WSSS	YSSY	27/0617	27/134	
	0	Active	QFA.	JAL771	RJAA	YSSY	27/0456	27/134	4
	0	Adhre	NOC	CCA173	ZBAA	YSSY	27/0322	27/142	0
	0	Controlled	OFA	CE8561	ZSPD	YSSY	27/0641	27/155	5
57 57 57 57 57 57 58 57 57 57	3 ⁰ 0	Adhre	OFA	JST12	RJAA	YBCG	27/0547	27/141	7
	0	Adive	OFA	CES727	ZSNU	YSSY	27/0552	27/153	0
	-	A COLOR	061	A19401	DMD:	VOOV	37.0434	97469	. ~

Figure 131: Route Detour modelled data

Route Detour Data View

The Data View table is updated with the number of flights in the FCA, the number of flights with reroutes, and average delay (see Figure 132). Each of the fields is described in Table 22.



Figure 132: Modelled Data View

Route Detour Graph

The Graph is displayed with the bars representing the number of flights in the FCA and the number of flights without reroutes. The flight count is on the y-axis and the time is on the x-axis. (see Figure 133).



Figure 133: Modelled data in Graph

a. Below the graph, move the slider thumbs to change the time range of the displayed demand.

b. To lock the slider thumbs so they move together, click
. The button toggles to

🔎, which indicates that the slider thumbs are locked.

c. To unlock the slider thumbs so they move independently, click 🚨. The button

toggles to 1, which indicates that the slider thumbs are locked.

d. To reset the Graph to its initial view, click Reset

Route Detour Flight List

The Flight List returns all flights that were part of the FCA and the status of the decision support results. (see Figure 140). The data elements are described in Table 22.

Clear Sorting Q Lexport (ort (.csv)
Info	Flight State	Major	ACID	ADEP	ADES	ETOT	Entry
6	Controlled	QFA	EAQ16	KLAX	YBBN	27/0242	27/1507 ^
6	Controlled	UNKN	VLE8	KLAX	YBBN	27/0212	27/1438
i	Active	QFA	UAE434	OMDB	YBBN	27/0046	27/1444
i	Active	VOZ	ETD450	OMAA	YSSY	27/0031	27/1452
6	Active	QFA	CPA111	VHHH	YSSY	27/0522	27/1413
i	Controlled	QFA	JST58	WADD	YBBN	27/0956	27/1512
1	Plan	UNKN	VLE46	WADD	YBBN	27/0732	27/1245
<							>

Figure 134: Modelled Flight List with reroute status

The number of alternative routes is displayed in the *No. Rte Op* column. To view the alternate routes and the amount of delay for each route, click the plus sign in the first column to expand the selected flight (see Figure 135).

Info	Flight State	Major	ACID	ADEP	ADES	ETOT	Entry	No. Rte Op.			
6	Plan	voz	TGW8888	YBBN	YMML	12/2022	12/2031	2			
Delay	Alternate Route	Alternate Route									
117	YBBNARBEY.I	YBBNARBEY.H119.BOLYMML									
117	YBBNYMML										



Route Detour TMI Data Elements

Table 22 describes the Route Detour data elements.

Table 00. Davite	Deteur		
Table 22. Roule	Deloui	Tivii uala	elements

Element	Description					
FCA Information						
General						
Туре	Type of FCA (i.e., Partial Airway or Adapted Sector)					
Rate	Hourly arrival rate					
Heading Range						
Start	Start heading					
End	End heading					
Vertical Limits						
Min	Minimum vertical limit					
Мах	Maximum vertical limit					
Times						
Start	Prepopulated with FCA's start time Cannot be earlier than FCA's start time					
End	Prepopulated with FCA's end time Cannot be later than FCA 'send time or earlier than TMI start time					
Parameters – Route Detour						
Times						
Slider	Move slider thumbs to define the time range					
Start	Start time of route detour					
End	End time of route detour					
Data View – [FCA Name]						
Number of flights in FCA	Number of flights belonging to the selected Partial Airway or adapted Sector FCA					
Number of flights with reroutes	Number of flights assigned a reroute in modelled TMI					
Average delay (EET extension), mm:ss	Average delay incurred per flight for the minimum delay reroute option in modelled TMI (in minutes and seconds)					
Graph – [FCA Name]						
Demand	(Y-axis)					
Time	Time in hours (X-axis)					
Flight List						
Info	Open Flight Details					
Flight State	State of Flight. For example, Active, Planned, Cancelled, Scheduled, Airline					
Major	Flight's Major					
ACID	Aircraft ID					
ADEP	Departure airport					

Element	Description
ADES	Destination airport
ETOT	Estimated Take Off Time
Entry	Time of entry
Delay	Delay incurred from rerouting
Route Options	Click the plus sign (+) expand view of route options
No. Rte Options	Number of alternate route options available

Level Capping TMI

Level Capping TMI provides the capability to keep flights above or below a specific altitude for a period of time in order to avoid severe weather or congestion. The decision-support TMI results provides decision support in the form of modelled ETAs for flights routed above or below the Level Capping FCA.

To model the Level Capping TMI, complete the following steps:

1. Click is to open the Decision Support TMI window.

The Decision Support TMI window opens.

In the upper left corner are two dropdowns, Select TMI Type and Select Resource.

- 2. From the Select TMI Type dropdown, select Level Capping.
- 3. From the *Select Resource* dropdown, select a Circle, Polygon, or Adapted Sector FCA.

On the right side of the screen, the TMI Parameters panel opens (see Figure 136).

TMI Parameters - FCABATEST1		×
Level Capping	FCA Inform	mation
Times	General	
23/1259	23/1559 Type	Polygon
	Rate	150
	Heading Ran	ge
	Start	0
	End	360
	Vertical Limi	ts
	Min	0
	Max	600
	Times	
	Start	22/2000
	End	23/1559
	Reset	Model

Figure 136: Level Capping TMI Parameters

On the left is a Times slider bar. On the right are four informational sections. The *General, Heading Range, Vertical Limits, and Times* data are informational and cannot be edited.

For a description of each element in the panel, see Table 23.

- 4. In the TMI Parameters panel on the right, use the slider bar thumbs to adjust the preview time range. You can also change the time by manually entering the start and end times in DD/HHmm format.
- 5. Click Model

The modelled data is returned (see Figure 137).

Ein Fist Zwin Hillich Bergemann Jock Rels									-	п х
Plannery Tela X +										
O				0.0	learth .			1.*1	0 4 #	
METRON			201	16.45-26 17-10 (•		E I LIGH
Level Degang • PCA4500 •									(1000)000	
FCA0324D		sintera) Santas							Q 🔺	(101)
Data Vine	344	Fight State	Major	A00 T	ADEP	ADES	ETOT 1	Entry	Delay	Cap Statu
Number of Flights in FCA 1752	0	Scheduled	LINKON	TREAM	ATTPY	YDON	34/2148	25/0011	0.00	Destruits
	0	Active	OFA	ANDEDT	10(3)	1357	24/12/12	24/2012	0.00	Destrutio
werste over pri terminer, men et sen re-	0	Scheduled	OFA	ACA33	CUM	YSSY.	24/2154	25/1017	0.00	Destinatio
Gaph	0	Scheduled	OFA	AGA10	CYVII	YESY-	24/1534	255447	8.00	Destruto
Turnistics Contactions	0	Plan	OFA.	AOttil	NINNIN	VSRR.	24/1748	34/1919	0.05	Destruto
	0	Scheduled	NOC	ACIU	VDP	VMM.	25/0318	25/1431	0.00	Destruto
*	0	Fian .	MOC	AC312	YSSY	VMM.	24/1909	24/1828	0.00	Desiration
	0	Active	NOC	AC312	VIDP	YMMA.	240543	26/2000	0.00	Destinatio
	0	Actin	OTA:	ANG1	ATTR	1084		24/1831	6.00	Destination
x	0	Scheduled	OFA	ANGANO	ATPY	1004	25/0023	25/0246	0.00	Destroto
32 S S S S S S S S S S S S S S S S S S S	0	Scheduled	QFA	NKS	ATTY	10004	34/2312	25/0135	0.00	Destructo
	0	Scheduled	NOC	ATMIN	VMEN	YGEH	25/9448	25,9448	0.00	Destruin
57	0	Scheduled	NOC	ATMEN	YGDH	YMEN	25/0648	25,0548	0.00	Destination
8.	0	Scheduled	NOC	A714582	YMEN	YGRH.	250118	25/0118	0.00	Destrution
	0	Scheduled	NOC	ATMOD	YIGTH	YMEN	25/0318	25/0318	0.00	Destroto
	0	Scheduled	QFA.	AUN10	MWW	YSSY	25/0001	254216	0.00	Destruto
	0	Scheduled	LINACI	AIFT	NUMA.	YSSY	25/0339	25/9432	0.00	Destination
	0	Scheduled	QFA	BAW15	19555	YEEY	25/0752	25/13%	0.00	Destination
	0	Activ	OTA	BAW15	W538	YSSY	24/1317	24/1945	0.00	Destination
	0	Actin	OFA	CALST	RCIP	YSSY	26/1613	36/2327	0.00	Destruto
P P P P P P P P P P P P P	0	Scheduled	QFA.	CALST	RCTP	YSSY	24/0954	24/1704	0.00	Destruto
	0	Scheduled	OFA	CALIE	NUM	YSSY	254254	21/0348	0.00	Destruin
Time (UTC) 📕 📕	0	Scheduled	NOC	OCA173	7544	YSSY-	25/0448	25/1367	0.00	Destination
and and an and a second s	4.1000	11-2210-021			1.1.2.1020-01	and street	1000 C			3

Figure 137: Level Capping modelled view

- The Data View lists the outcome of the modeling (Number of flights in FCA, Number of fights capped, and Average delay).
- The Graph displays a comparison of the modelled TMI (Flights in FCA and Flights not capped). The color of the bars in the Graph's corresponds with the colored buttons located above the graph (Flights in FCA and Flights not Capped).
- The Flight List returns all flights that were part of the FCA and the status of the decision support results.

Level Capping Data View

The Data View table is updated with the modelled flight counts and average delay (see Figure 138). Each of the fields is described in Table 23.

Data View	
Number of flights in FCA	1752
Number of flights capped	27
Average delay (EET extension, mm:ss)	1408:72

Figure 138: Modelled Data View

Level Capping Graph

The Graph is displayed with the bars representing the Flight in FCA and Flights not Capped. The flight count is on the y-axis and the time is on the x-axis. (see Figure 139).



Figure 139: Modelled Level Capping data in Graph

- a. Below the graph, move the slider thumbs to change the time range of the displayed demand.
- b. To lock the slider thumbs so they move together, click
 . The button toggles to

A, which indicates that the slider thumbs are locked.

c. To unlock the slider thumbs so they move independently, click 🚨. The button

toggles to 1, which indicates that the slider thumbs are locked.

d. To reset the Graph to its initial view, click Reset

Level Capping Flight List

The Flight List returns all flights that were part of the FCA and the status of the decision support results. (see Figure 140). The data elements are described in Table 23.

Clear	Clear Sorting Sorted By: (Cap Status: ASC), (ACID: ASC), (ETOT: DESC)							port (.csv)	
Info	Flight State	Major	ACID 1	ADEP	ADES	ETOT 1	Entry	Delay	Cap Statu
i	Scheduled	UNKN	7PE531	AYPY	YBBN	24/2148	25/0011	0:00	Destinatio
6	Active	QFA	AAR601	RKSI	YSSY	24/1232	24/2052	0:00	Destinatio
(1)	Scheduled	QFA	ACA33	CYVR	YSSY	24/2104	25/1017	0:00	Destinatio
•	Scheduled	QFA	ACA33	CYVR	YSSY	24/1534	25/0447	0:00	Destinatio
•	Plan	QFA	ACI110	NWWW	YMML	24/1748	24/1919	0:00	Destinatio
•	Scheduled	NOC	AIC302	VIDP	YMML	25/0318	25/1431	0:00	Destinatio
6	Plan	NOC	AIC302	YSSY	YMML	24/1809	24/1809	0:00	Destinatio
1	Active	NOC	AIC302	VIDP	YMML	24/0843	24/2000	0:00	Destinatio
i	Active	QFA	ANG3	AYPY	YBBN		24/1831	0:00	Destinatio
<									>

Figure 140: Modelled Flight List with cap status

Level Capping TMI Data Elements

Table 22 describes the Level Capping data elements.

Table 23: Level Capping TMI data elements

Element	Description
TMI Parameters	
Times	
Slider	Move slider thumbs to define the time range
General	
Туре	Type of FCA (i.e., Circle, Polygon, or Adapted Sector)
Rate	Hourly arrival rate
Heading Range	
Start	Start heading
End	End heading
Vertical Limits	
Min	Minimum vertical limit
Max	Maximum vertical limit
Times	
Start	Prepopulated with FCA's start time Cannot be earlier than FCA's start time
End	Prepopulated with FCA's end time Cannot be later than FCA's end time or earlier than TMI start time
Parameters – Level Capping	
Times	
Start	Start time of route detour
End	End time of route detour

Element	Description
Minimum delay	
Data View – [FCA Name]	
Number of flights in FCA	Number of flights in FCA in modelled TMI
Number of flights capped	Number of flights capped in modelled TMI
Average delay (EET extension)	Average delay in modelled TMI
Graph – [FCA Name]	
Number of flights in FCA	Number of flights in FCA (y-axis)
Time	Time (x-axis)
Flight List	
Info	Open Flight Details
State	State of Flight. For example, A (Active), P (Planned), C (Cancelled), S (Scheduled), L (Airline)
Major	Flight's Major
ACID	Aircraft ID
ADEP	Departure airport
ADES	Destination airport
ETOT	Estimated Take Off Time
Entry	Time of entry to FCA
Delay	Delay incurred from capping
Cap Status	Status of cap (e.g., Flight Capped, Flight Not Capped, Flight In FCA, Destination In FCA)

Exporting Modelled Data

You can export Flight Lists for Fix Balancing, Route Detour, and Level Capping TMIs to a CSV file.

To export the data to a CSV file, complete the following steps:

1. To export the model output to a CSV file, click Run

A CSV file is created.

A dialog box with file open/save options opens.

2. Select the option appropriate for your needs (e.g., *Open with [application]* or *Save File*) and click **OK**.

The CSV file will be saved to your default folder for downloads.

Alerts Buttons and Controls

Table 24 describes the buttons, icons, and controls used in Decision Support TMI.

Button	Name	Description
Reset	Reset	Restores the TMI parameters to their full FCA bounds (i.e., undo your updates)
Model	Model	Model the TMI parameter with your updates
Run	Run	Exports flight list in CSV format for all returned fixes, routes, or level capping
Show TMI Parameters	Show TMI Parameters	Show the TMI parameters panel for the selected TMI Type.
Flights in FCA	Flights in FCA	Level Capping and Route Detour: Represents number of flights in the FCA
Flights without Reroutes	Flights without Reroutes	Route Detour: Represents number of flights without reroutes
Flights not Capped	Flights not Capped	Level Capping: Represents number of flights not capped
Preview	Preview	Fix Balancing: Submit updated parameters for modelling
	Locked	Indicates the Time (UTC) thumbs on the slider bar are locked, which means they move together
		Click to unlock the thumbs
	Unlocked	Indicates the Time (UTC) thumbs on the slider bar are unlocked, which means they move independently
		Click to lock the thumbs
Export (.csv)	Export (.csv)	Export Flight List to CSV formatted file
Modeled	Modelled	Fix Balancing: Click to display modelled data
- Original	Original	Fix Balancing: Click to display original view

Table 24: Decision Support TMI buttons, icons, and controls

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Chapter 11. Map

The map is an aircraft situation display that shows airborne flight movements, airports, FCAs, range rings, and overlays for weather and aeronautical information (e.g., sectors, FIRs). In addition, the map provides standard zoom and pan functionality.

To view the Map, click (located on the main toolbar). This map displays a range ring, FIRS, and airports (orange dots) (see Figure 141). Note that FIRs, Sectors, and Approach Controls are all controlled by adaptation data.



Figure 141: Map view

The Map can also be opened by clicking the location pin icon in the Flight List's Map column (see Figure 142). For more information see "Viewing Airborne Flight's Harmony Trajectory" on page 127.

	Info	Мар	ACID	CNX
		• •	VOZ954	Ν
Ð	Î	•	QFA533	N
	6		VO7958	N

Figure 142: Open Map from Flight List

Viewing Airborne Flight's Harmony Trajectory

You can view an airborne flight's Harmony trajectory by clicking the flight icon. Note that only one flight route can be displayed at a time. You can set the size of the flight icon. For more information, see "Map Settings" on page 212.

To view the Harmony trajectory, complete the following steps:

1. Click the flight's icon.

The flight's ACID and Harmony trajectory is displayed (see Figure 143). To hide the route, click the flight again or on another flight.

- The solid portion is the completed great-circle distance (GCD) line from the ADEP.
- The dotted portion is the projected trajectory, which is based on the Harmony trajectory.
- **Note:** Based on the available adaptation data, the Harmony trajectory could differ from the flight plan (FLP) route.



Figure 143: The blue line shows the Harmony trajectory for the selected flight.

Flight Movement

The map shows airborne flight movement. As flight location information is received, the flights will move accordingly each time the map updates. The Map Update interval setting is configured in the System Settings' Map tab. For more information about the Map Update interval setting, see "Map Settings" on page 212.

When Harmony does not receive flight updates, the flight is said to be "stale" and remains in the same position. Stale flights are represented by an outline of the aircraft (see Figure 144). The length of time before a flight is determined to be stale and how long stale flights are displayed on the map are configured in the System Settings' Map tab. For more information about the Stale Visual and Stale Remove interval settings, see "Map Settings" on page 212.



Figure 144: Example of a stale flight (outlined aircraft)

Airports

Airports are represented by a solid or hollow circle (see Figure 145).

- The solid circle is for an airport that is in the configuration file in adaptation. Such an airport is always viewable at any zoom level.
- The hollow circle is for an airport that has an active flight but is not part of the adapted data. Such an airport is viewable only if it has an active flight and when the map is zoomed in.



Figure 145: Airport icons

Airport Right-Click Menu – Show Flight List and Demand Graph

Airports and FCAs have a right-click menu with the options to show the Flight List or Demand Graph (see Figure 146).



Figure 146: Airport right-click menu

For more information about the Flight List, see Chapter 5: Flight List. For more information about the Demand Graph, see Chapter 9: Demand Graph.

Map Components

The Map component tabs are in the upper, left corner of the map (see Figure 147). Each tab displays a panel where you can manage the specified aspect of the map (i.e., FCAs, layers, range rings, weather view, and locations).



Figure 147: Map component tabs

- Manage FCAs (see Chapter 12: FCAs)
- Manage Aircraft Groups (see "Managing Aircraft Groups" on page 130)
- Layers (see "Managing Layers" on page 138)
- Range Rings (see "Managing Range Rings" on page 140)
- Weather (see "Viewing Weather" on page 143)
- Locations (see "Setting Locations (Map Views)" on page 146)

Managing Aircraft Groups

You can manage how aircraft are colored based on data element filters. This is accomplished by creating color-coded filters that are based on groupings of aircraft and route elements. The filters can be active or pre-defined for future use. You can move filters back and forth between *Active Aircraft Group* or *Available Aircraft Grouping* section.

The management of active and available aircraft is the same; therefore, the following instructions apply to both types of aircraft groups.

Adding Active and Available Aircraft Groupings

This section will walk you through creating and color-coding a filter so that you can distinguish flights based on your criteria.

AND/OR Operators

AND/OR operators work as follows:

• The OR statement consists of the multiple values within the "*includes*" or "*does not include*" fields. That is, the data does not have to meet all the listed criteria.

- The AND statement is a joining of the set of "*includes/does not include*" criteria within an individual data element group (i.e., Aircraft and Route). That is, the resulting data needs to satisfy both the inclusion and exclusion criteria.
- As you add new filters within a data element group, the filter criteria is joined by AND to the other data element groups.

To add a group, complete the following steps:

- 1. On the Map, click to open Aircraft Groups.
- 2. In the Active Aircraft Grouping or Available Aircraft Grouping heading, click the plus sign).

The Create Active Aircraft Grouping or Create Available Aircraft Group dialog box opens (see Figure 148).

There are five panels: Filter Name, Aircraft, Route, Vertical Limits, and Color.

Create Active	Aircraft Group	2		×
Filter Name				
Aircraft				-
•	- in	cludes		•
0				
Route				
•	v in	cludes		-
0				
Vertical Limit	s (100's ft MS	L)		*
				•
Color				
			-	Close

Figure 148: Create Available Aircraft Group dialog box

Before proceeding, it is useful to understand the functionality of the controls (see Table 25).

Table 25: Aircraft	Group	Controls
--------------------	-------	----------

Control	Name	Description
•	Collapse	Collapse the panels (Aircraft, Route, Vertical Limits, or color).

Control	Name	Description
•	Expand	Expand the panels (Aircraft, Route, Vertical Limits, or color).
0	Remove	Remove a criterion row.
Ð	Add	Add an <i>inclusion</i> criterion row (i.e., <i>includes</i>).
~	Down Caret	Show an <i>exclusion</i> criterion row (i.e., <i>does not include</i>).
<	Up Caret	Hide an empty exclusion criterion row

- 3. Enter a name in
- 4. In the Aircraft panel dropdown list, select a criterion (see Figure 149).



Figure 149: Aircraft filtering criteria

- 5. Following the selected criterion is the "includes" field where you either use your keyboard to enter the criterion or select the criterion from a list that corresponds with the selected filter criterion.
 - If you select *ACID*, use your keyboard to enter the ACIDs that you want to include. Separate multiple ACIDs with a space—do not use any punctuation. You can enter letters, numbers, and the wildcard asterisk (*). The asterisk can be used as the first or last character. For example, *AL123*, AAL456*, or *AAL7890.
 - If you select *Major* or *AC Type Group*, select from the dropdown list the major or type of aircraft (see Figure 150). Note that *Major*, *AC Type*, and *Flight* fields have quick filters, that is, if you enter the first letter(s), the list will filter by the criteria you entered.



Figure 150: AC Type Group filtering

- 6. In the Route panel, you can filter by routing elements.
 - From the Route dropdown, select ADEP, ADES, or FCA (see Figure 151).
 - From the dropdown list, select the airports or FCAs that you want to include.



Figure 151: Route element filtering

7. You can also exclude certain criteria. To exclude aircraft by ACID, Major, or AC Type

Group, click . (located adjacent to the element dropdown list).

The "does not include" row is displayed (see Figure 152).

The 🔽 toggles to 🔼.		
Route		•
	✓ includes	^
	does not include 🔹 🗸	

Figure 152: Click down caret to display exclusion row.

- 8. Following "*does not includes*" is the field where you either use your keyboard to enter the criteria or select the criteria from a list that corresponds with the selected filter criterion.
 - If you select *ACID*, use your keyboard to enter the ACIDs that you want to exclude. Separate multiple ACIDs with a space—do not use any punctuation. You

can enter letters, numbers, and the wildcard asterisk (*). The asterisk can be used as the first or last character. For example, *AL123*, AAL456*, or *AAL7890.

- If you select *Major* or *AC Type Group*, select from the dropdown the major or type of aircraft that you want to exclude.
- 9. To add another row for additional criteria, click
 . Adding additional rows joins this statement with the rest of the filter with an AND operator so the resulting data must meet all criteria in each of the rows.

An empty row is displayed.

10. To delete a row, click

The row no longer is displayed.

11. Use the sliders, control arrows, or your keyboard to define the minimum (Min) and maximum (Max) vertical limits (in 100's ft mean sea level [MSL]) (see Figure 153).



Figure 153: Vertical Limits

12. Click the color for the display of the group (see Figure 154). If you do not select a color, the default color is used. For more information about the default color, see "Setting the Aircraft's Default Color" on page 136.

Color	^

Figure 154: Color palette for group

13. When you finish defining the filter, click

• The filter is saved and the *Create Available/ Aircraft Group* dialog box closes. Note that a confirmation message is not displayed.

Save

- Aircraft meeting the filter's criteria is displayed in the selected color only if it is an active grouping.
- The filter is listed in either the Active Aircraft Grouping or Available Aircraft Grouping list.

Activating and Deactivating Aircraft Groups

The Active Aircraft Grouping pane lists the active filters and the Available Aircraft Grouping pane lists the filters available for future use. You can deactivate an active filter by dragging it to the Available Aircraft Grouping. Likewise, you can activate an available filter by dragging it to the Active Aircraft Grouping.

Note: Deactivating a group to remove the color differs from selecting and unselecting the *Show* checkbox.

To activate or deactivate a filter, complete the following steps:

1. With your left-mouse button, select the filter that you want to move and hold down the mouse button.

The color of the row changes to blue to indicate selection.

2. Drag the selected row to the other Aircraft Grouping pane.

A tooltip is displayed as you drag the filter:

3. Drag the row into the desired position (see Figure 155). Note that the dotted, red line is for illustration purposes; you will not see it displayed as you drag the row.

1 selected row

A thin, green line with two arrows marks the placement of filter.

Show	Filter	Color	
R	AAL		10
2	Light	NO.	10
e	Turbo		10
R	Default		1
	× • •	selected row	
Availat	e Aircraft Grouping	selected row	• +
Availat	ole Aircraft Grouping	selected row Color	• +

Figure 155: Green arrows denote location of dragged filter

4. Release the mouse button.

The moved filter is listed in the Grouping (see Figure 156).

Availat	le Aircraft Grouping		• +
Show	Filter	Color	
S	ADES TNCA		1 Û
e	Turbo		10

Figure 156: Filter is repositioned.

Editing Active and Available Aircraft Groups

You can edit an aircraft group's aircraft and route criteria, vertical limits, and color.

To edit an active or available filter, complete the following steps:

1. In the list of Active or Available Aircraft filters, locate the filter that you want to edit and

click *(the pencil icon).*

The Edit Active Aircraft Group or Edit Available Aircraft Group dialog box opens.

- Update the elements as described in "Adding Active and Available Aircraft Groupings" on page 130.
- 3. When you are finished updating the filter, click

The filter is saved and the *Edit Available/ Aircraft Group* dialog box closes. Note that a confirmation message is not displayed.

Save

Setting the Aircraft's Default Color

Aircraft that are not included in the filters are displayed in a user-defined, default color.

To set the default color, complete the following steps:

1. Locate the *Default* aircraft filter (it is always the last filter listed in the *Available Aircraft Grouping* pane (see Figure 157).

Note that it cannot be moved from this position, nor can it be deleted.

Active Aircraft Grouping		
Show	Filter	Color
S	AAL	/1
S	Light	/ 1
Ø	Turbo	/ 1
8	Default	= /

Figure 157: Default filter is always listed last and cannot be moved.

2. In the Default filter row, select the

The Edit Default dialog box opens (see Figure 158).


Figure 158: Edit Default dialog box

- 3. Click a color.
- 4. Click Save.

The Edit Default dialog box closes.

All flights that are not included in a filter are displayed in the selected color.

Showing or Hiding Flights (as defined by filters)

You can opt to show or hide the flights as defined by the filters. By default, all filters are shown.

Note: In order for flight filters to be displayed, flights must be configured as visible at the layer level (see "Showing and Hiding Layers" on page 138).

To show or hide flights, complete the following steps:

1. To show flights, in the Active Aircraft Grouping or Available Aircraft Grouping pane, select the Show checkbox associated with the selected filter (see Figure 159).

Active	Aircraft Grouping	- ++	-
Show	Filter	Color	
0	AAL	//	1
×.	Light	/ 1	1
e	Turbo	- / 1	i
0	Default	- /	
			_

Figure 159: Select/unselect the Show checkbox

The flights are displayed on the map.

2. To hide flights, unselect the Show checkbox associated with the filter.

The flights are not displayed on the map.

Deleting Active and Available Aircraft Groups

You can delete aircraft filters that you no longer need.

Note: The *Default* filter cannot be deleted, which is why it does not have *Trash Can* icon.

To delete an active or available filter, complete the following steps:

1. In the Active Aircraft Grouping or Available Aircraft Grouping pane, locate the filter that

you want to delete, and click

A Delete Confirmation message is displayed.

2. Click **Yes** to continue with the deletion or **No** to cancel the deletion.

If you clicked **Yes**, the grouping is deleted from the list of aircraft grouping and the map.

A confirmation message is displayed stating that the active aircraft group was successfully deleted.

3. Click **OK** to close the confirmation message.

Managing Layers

The map has multiple display layers (airport, range rings, FCAs, approach controls, sector, and FIRs). You can control which layers are displayed on the map. The available layers are dependent on the adaptation uploaded by your administrator.

Showing and Hiding Layers

If a layer element is not part of your adaptation, it will not be shown on the map even if you select Visible.

To show and hide the layers, complete the following steps:



The Layer panel is displayed (see Figure 160).

ҟҧ҄		
Layer	Color	Visible
Airports		Ľ
Flights		⊻
Range Rings		Ľ
FCAs		Ľ
Approach Controls		Ľ
Sectors		Ľ
FIRs		Ľ
Flight Icons		
HEAVY: 🛧		
JET: 🛧		
TURBO: +		

Figure 160: Layer panel and Flight Icons legend

The upper panel, *Layer*, shows the display color of the listed elements (i.e., Airports, Flights, Range Rings, FCAs, Approach Controls, Sectors, and FIRS). The *Visible* checkbox is selected to indicate that layer is displayed. An unchecked check box indicates that the layer is not displayed on the map.

The lower panel, *Flight Icons*, shows the icons displayed for the types of aircraft (i.e., Heavy, Jet, Light, and Turbo). Note that the white color of the icons is only to display the different icons; it does not represent the color of the flights on the map.

The display color of the flights is defined in the Aircraft Groups component. For information about setting the colors, see "Adding Active and Available Aircraft Groupings" on page 130.

2. To hide a layer, unselect the *Visible* check box adjacent to the layer that you want to hide.

The layer no longer is displayed on the map.

A red triangle is displayed in the *Visible* column as a visual indicator that you changed the map's display (see Figure 161).

Layer	Color	Visible
Airports		B
Range Rings		Ó
FCAs		0

Figure 161: The red triangle indicates an update.

3. To show a layer, select the *Visible* check box adjacent to the layer that you want to show.

The layer is displayed on the map.

Managing Range Rings

Range Rings can be used to approximate distance or time from a point. You can create, edit, and delete range rings.

Creating Range Rings

You can create a range rings and specify the number of rings and the distance between the rings.

To create a range ring, complete the following steps:



The Range Ring panel is displayed. The *Create Range Ring Group* panel is displayed at the top of the panel (see Figure 162).

Create Range Ring Group		•
Name:	Range Ring Name	
Center:	Lat,Lon Point	s
Ring Spacing:	10	nm
Number of Rings:	1 ≑ Reset	
Current Range Ri	ng Groups	•

Figure 162: Create Range Ring Group panel

- 1. In the *Name* field, enter a unique name using alphanumeric characters.
- 2. In the *Center* field, you can either manually enter the latitude and longitude coordinates in decimal degrees, separated by commas, or continue to the next step to draw the center on the map.

3. To draw the center on the map, click (the pencil icon) and move your cursor to map.

A blue dot with a white border is displayed with your cursor. This indicates that you are in draw mode.

- 4. Move your cursor and blue dot to the center point of the range ring, click once, and release the mouse button before moving your mouse.
 - **Note:** If you do not release the mouse button before moving your mouse, you will simply move the map.

A 🔵 (blue dot) representing the center is displayed on the map.

The *Center* field lists the coordinates of the center.

5. To define the amount of space between the rings, move the Ring Spacing slider or use your keyboard to enter the number of nautical miles in the *nm* field (see Figure 163). The spacing must be between 5 and 100 nm and must be entered in increments of 5.



Figure 163: Slider to define space between rings

As you move the slider, the number of nautical miles is numerically displayed.

If you enter the number of nautical miles, the slider will move to correspond with the entered value.

- 6. Use the spinners to select up to 20 range rings.
- 7. When you have completed all the fields, click

The range rings are displayed on the map (see Figure 164). Note that a confirmation message is not displayed. The name of the range ring is displayed below the center point, and each ring displays the number of nautical miles (nm) it is from the center point.

Save



Figure 164: Range rings

The range ring group is listed in the *Current Range Ring Groups* panel (see Figure 165).

Edit Range Ring Group	-
Current Range Ring Groups	
RR1612	e 🖉
YBSC1612	e 🖉 🥢

Figure 165: List of current range rings

Editing Range Rings

You can edit the center, ring spacing, and number of rings of an existing range ring group; however, you cannot edit the name.

To edit a range ring group, complete the following steps:



1. On the map, click

The *Range Ring panel* is displayed.

2. In the Current Range Ring Groups list, select the group to be edited, and click .

The *Edit Range Ring Group* panel is displayed. It is the same as the Create Range Ring Group, except for the fact that the *Name* field is inactive (grayed out).

3. To edit the center, use your keyboard to enter the coordinates or click the

A blue dot with a white border is displayed with your cursor. This indicates that you are in draw mode.

- 4. Move your cursor and blue dot to the center point of the range ring, click once, and release the mouse button before moving your mouse.
 - **Note:** If you do not release the mouse button before moving your mouse, you will simply move the map.

A () (blue dot) representing the center is displayed on the map.

The Center field lists the coordinates of the center.

5. To edit the amount of space between the rings, move the Ring Spacing slider or use your keyboard to enter the number of nautical miles in the *nm* field. The spacing must be between 5 and 100 nm and must be entered in increments of 5.

As you move the slider, the number of nautical miles is numerically displayed.

If you enter the number of nautical miles, the slider will move to correspond with the entered value.

- 6. Use the spinners to select up to 20 range rings.
- 7. When you have completed our updates, click Save

The updates are displayed on the map. Note that a confirmation message is not displayed.

Deleting Range Rings

You can delete range rings.

To delete a range ring group, complete the following steps:

1. On the map, click

Yes

The Range Ring panel is displayed.

2. In the Current Range Ring Groups list, select the range ring group to be deleted, and

click 🔟 .

A Delete Confirmation message is displayed.

3. Click

to continue with the deletion or

to cancel the deletion.

If you clicked **Yes**, a confirmation message is displayed stating that the range ring was successfully deleted.

4. Click to close the confirmation message.

Viewing Weather

Harmony can receive various types of meteorological data through external system interfaces for visualization on the map. The displayed weather is based on the weather data sources that are configured at the time of installation.

Showing and Hiding the Weather Layer

You can control whether the weather is displayed and which weather data sources are displayed.

To show or hide the weather layer, complete the following steps:

1. On the map, click

The weather panel is displayed (see Figure 166).



Figure 166: Weather panel

On the left side of the panel, the available weather data sources are listed. To the right of the weather source is a *Visible* checkbox. The *Visible* checkbox is checked to indicate that the weather layer is displayed. An unchecked check box indicates that the weather layer is not displayed on the map.

2. To hide a weather layer, unselect the *Visible* check box adjacent to the layer that you want to hide.

The weather layer no longer is displayed on the map.

A red triangle is displayed in the *Visible* column as a visual indicator that you changed the map's display (see Figure 161).



Figure 167: The red triangle indicates an update.

3. To show a weather layer, select the *Visible* check box adjacent to the weather data source that you want displayed on the map.

The Convective Weather layer is displayed on the map. The white border represents the area for which weather data is being reported (see Figure 168).



Figure 168: White line shows boundary of convective weather data

In this example, the Curacao Radar weather is bordered by a white circle (see Figure 169).



Figure 169: White circle shows boundary of local weather

Panning the Map

Panning enables you to move the Map's area of view north, south, east, or west within the Map window. It is useful for bringing an area of the Map that is outside the Map window into view, or for centering the Map view on an area of interest. Panning is often used with the zoom feature.

To pan the map, hold down the left mouse button and drag the map in any direction, and release the mouse button.

Zooming the Map

You can zoom in (for a close-up view), zoom out (for a distant view), and reset the map to its default view using one of the following methods.

• Use your mouse's scroll button (scroll up for zoom in and scroll down for zoom out).

• Click the on-screen zoom controls that are located in the upper, right corner of the map (see Figure 170).



Figure 170: Zoom controls

The **Reset** button (**M**) returns the view to the default view as defined in the System Settings' Map tab or the Map's Location tab. For more information, see "Map Settings" on page 212 and "Setting Locations (Map Views)" on page 146.

Setting Locations (Map Views)

You can set map views (referred to as locations) by positioning the map and saving the location. Each Map View will save the center location and zoom level that the user is currently viewing. The default view will display each time you open the map. You can create and save additional views for use.

To create locations, complete the following steps:

1. On the map, click

The Locations panel is displayed (see Figure 171).

ҟҧ҈	
Saved Locations	•
Location	
TNCA	● 🖪 🏛
Location Name: Enter Location Name	8

Figure 171: Create location (map view)

2. Move the map to the location you want and zoom the map to the magnification level.

Location Name: 3. In

enter a unique name usina alphanumeric characters and spaces. Special characters are not allowed.

Note: The name "*Default*" is reserved for the system-defined view.

4. To save the map view, click 🖺, which is located to the right of the Location Name field.

The location is saved and added to the Saved Locations list.

Saving a Default Location (Map View)

You can save a location to be the default map view when you open the Map. Once you save a default location, it will override the default location defined in the System Settings.

To save the default location, complete the following steps:

 The to the right of the saved location in the Saved Locations list, are three icons. Click (diskette) to set the location as the default view.

A Success confirmation message is displayed confirming the location was saved as the default location.

OK to close the message. 2. Click

Displaying a Non-default Location

You can display a map view that is not the default view.

To display a non-default location, complete the following step:

1. The to the right of the saved location in the Saved Locations list, are three icons. To set

the location as the default view, click 💟 (solid location marker).

The selected map view is displayed.

Deleting Locations

You can delete any location—except for the Default view. The view that is named "Default" is defined per the System Settings. It For more information about the system's Default view, see "Map Settings" on page 212 in Chapter 18: System Settings.

To delete a location, complete the following steps:

1. To the right of the saved location in the Saved Locations list, are three icons. Click (trashcan) to delete the saved location view.

A Delete Confirmation message is displayed.

Yes No 2. Click to continue with the deletion or to cancel the deletion. If you clicked **Yes**, a confirmation message is displayed stating that the location was successfully deleted.

3. Click OK to close the confirmation message.

Map Buttons and Controls

Table 26 describes the buttons, icons, and controls used in the Map, except for the FCA component. For information about FCAs, see Chapter 12: FCAs.

Control	Name	Description	Component
+	Plus Sign	Zoom In	Мар
	Reset button	Located in the map's upper right corner Reset to map's default view (defined in the Manage Location component)	Мар
-	Minus Sign	Zoom Out	Мар
	Airport Solid Circle	Airport is in the configuration file in adaptation Always visible at any zoom level	Мар
	Airport Hollow Circle	Airport has active flights, but the airport is not part of the adapted data Visible only if the airport has active flights and	Мар
		when map is zoomed in	
	Red Triangle	Visual indicator that an update was made	Location Weather
0	Two-tone Marker	Open Manage Locations panel	Location
Û	Trashcan	Delete the location	Location
	Diskette	Save existing location as the Default view or save a new location name	Location
	Solid Marker	Located in each Saved Locations row (left panel) Go to the location view for the specified location	Location
•	Blue Dot	Marks center of range ring	Range Rings
Reset	Reset	Clear the fields' data	Range Rings
Save	Save	Save the element	Range Rings

Table 26: Map Buttons and Controls	Table 26:	Controls
------------------------------------	-----------	----------

Control	Name	Description	Component
Cancel	Cancel	Closes the dialog box without saving	Aircraft Group
ø	Pencil	Edit the element Draw on the map (i.e., FCAs or the range ring center point)	Create FCAs Aircraft Groups Range Rings
Û	Trashcan	Delete an element	Aircraft Groups Range Rings
+	Plus Sign	Add an element	Aircraft Groups
•	Expand	Display the panel section	Aircraft Groups Range Rings
^	Collapse	Hide the panel section	Aircraft Groups Range Rings
•	Spinners	Select number of range rings	Range Rings

This page is intentionally blank.

Chapter 12. FCAs

FCAs supports general demand monitoring of an airspace that can help you scope the impact of a constraint, such as a weather event or a capacity-reducing event. Just as airport demand can be monitored, FCAs enable you to create dynamic airspace definitions for monitoring. Flights are captured in the FCA if their predicted Entry time falls between the FCA's start/end times.

This section discusses creating, filtering, and updating FCAs. Super Users, Flow Managers, and ANSP Users can create, edit, and remove FCAs.

Creating FCAs (Polygon, Line, Circle, Adapted)

The following instructions list the steps for Super Users, Flow Managers, and ANSP Users to create any type of FCA (Polygon, Line, Circle, and Adapted). The steps to create an Adapted FCA are slightly different from the steps to create a Polygon, Line, or Circle FCA.

- For Adapted FCAs, select the Adapted Type (Sector, Fix, or Partial Airway) and Element (see the panel on the left side of Figure 172). Other fields unique to Partial Airway FCAs are addressed in this section's steps.
- For non-adapted FCAs, select Polygon, Line, or Circle from the dropdown and click the pencil button to draw the FCA (see the panel on the right side of Figure 172).

AVIATION	
☆\$@▲♥	<u>}</u>
Create FCA	Create FCA
Ala (Mag	PLATENCE PLATENCE IN
Adapted V	
Start Time 2018-03-06 兰 02 💌 00 💌	Start Time 2018-03-06 🛗 02 💌 00 💌
End Time 2018-03-06 🛗 09 🔻 59 🔻	End Time 2018-03-06 🛗 09 💌 59 💌
Vertical Limits (100's ft MSL)	Vertical Limits (100's ft MSL)
Heading Range (degrees)	Heading Range (degrees)
Filters T	Filters T
Submit Reset	Submit
Current FCAs	Current FCAs

Figure 172: Create FCA panels for Adapted and Polygon/Line/Circle

To create an FCA, complete the following steps:

In the main toolbar, click (the Map icon).
 The Map is displayed.

The 🖸 toggles to 🗖 (the Home Page icon).

2. Click [2] (the Manage FCAs tab).

The Manage FCA panel opens.

Two bars are displayed: Create FCA and Current FCA (see Figure 173).



Figure 173: Initial Manage FCA panel

Create FCA	-
	Create FCA

The Create FCA panel opens (as previously shown in Figure 172).

Note: For the following steps, refer to Table 27 for more information about the data and fields.

- 4. Enter the FCA name.
- 5. Select the Hourly Rate.
- 6. Select the type of FCA:
 - For an **Adapted FCA**, select *Adapted*. From the *Adapted Type* dropdown, select *Sector*, *Fix*, or *Partial Airway*, and from the *Element* dropdown, select the specific sector, fix, or airway respectively (see Figure 174).



Figure 174: Adapted, Adapted Type, and Element dropdowns

- For a **non-adapted FCA**, select *Polygon*, *Line*, or *Circle;* and click the pencil to draw the FCA. For more information about drawing a non-adapted FCA, see "Drawing FCAs (Line, Polygon, Circle)" on page 156.
- 7. For Adapted Partial Airway FCAs only, complete the following (see Figure 175):
 - From the Partial Airway Point 1 dropdown, select the start location point.
 - From the Partial Airway Point 1 dropdown, select the stop location point.
 - Select or unselect the Directional checkbox.

ҟ⊴҈©●♥
Create FCA
FCA NAME Hourly Rate
Adapted 👻 Partial Airway 👻 ZZ929 👻
Start Time 2018-03-23 🛗 14 ▼ 00 ▼
End Time 2018-03-23 🛗 21 🔻 59 🔻
Partial Airway Point 1:
Partial Airway Point 2:
Directional: 🕼
Filters 🝸 🏛
Submit Reset

Figure 175: Adapted Partial Airway FCA parameters

- 8. Use the calendar and time controls to select the Start and End Times.
- 9. Use the slider thumbs to set the Vertical Limits. (This does not apply to Adapted Partial Airway FCAs.)
- 10. Use the slider thumbs to set the Heading Range. (This does not apply to Adapted Partial Airway FCAs.)
- 11. To filter which aircraft or routes to include or not include in the FCA, see "Filtering FCAs" on page 159. Note that filtering is not a required step when creating an FCA. You are able to add filtering after the FCA has been created.

12. When you have finished creating the FCA, click

During transmission to the server, the **Submitting** Upon completion:

- The Submitting button toggles to Submit.
- A success message is displayed.
- The FCA and FCA name are displayed on the Map.
- The FCA is listed in the Select Airport or FCA dropdown list.
- The FCA is displayed in the quick filter list.

13. Click OK to close the message.

Table 27: FCA field names

Element	Information	Required
FCA NAME	 Enter a 15-character, alphanumeric name. No special characters are allowed. 	Yes
	• By default, the first letters must be FCA. The system will automatically insert "FCA" as the first three letters. FCA is included in the 15-character limit.	
	 The system automatically converts all letters to uppercase. 	
Hourly Rate	Enter an arrival rate up to 150	Yes
Lino	Select Polygon, Line, Circle, or Adapted.	Yes
Line	 If creating a Polygon, Line, or Circle FCA, (see "Drawing FCAs (Line, Polygon, Circle)" on page 156). 	
Lat,Lon Points	Draw the FCA (see "Drawing FCAs (Line, Polygon, Circle)" on page 156).	Yes (Line, Polygon,
	 Optionally, you can use your keyboard to enter/paste the latitude and longitude points in decimal degrees (separated by commas). 	and Circle FCAs)
Radius	 Use your keyboard to enter the radius or draw the Circle FCA (see the steps for Circle FCAs in "Drawing FCAs (Line, Polygon, Circle)" on page 156). 	Yes (Circle FCA)
Adapted Type 🔻	• Select Sector, Fix, or Partial Airway.	Yes (Adapted FCA)

Element	Information	Required
Element 👻	• Select the sector, fix, or adapted airway from the list. The list corresponds with the selected Adapted Type.	Yes (Adapted FCA)
Point 1 👻	 For Adapted Partial Airway FCAs only, select adapted location reference. 	Yes (Adapted Partial Airway)
Point 2 🔻	 For Adapted Partial Airway FCAs only, select adapted location reference. 	Yes (Adapted Partial Airway)
	 For Adapted Partial Airway FCAs only, select the checkbox to indicate if the created airway is directional (by default, this is checked). If the check box is checked, only flights traveling in the direction from the start location to the stop location (and not vice versa) will be included in the FCA. 	Yes (Adapted Partial Airway)
2017-04-01	Start Time Date	Yes
	• Keep the current system date (default selection) or select a future date.	
	• The date cannot be in the past.	
2017-04-01	 End Time Date Keep the current system date (default selection) or select a future date. 	Yes
	• The date must be the same as or after the start date.	
	 Note that you cannot enter a date that will cause the range to cross the operational day. 	
15 🔻 30 💌	Start Time	Yes
	 Select an hour equal to or greater than the current system time. The time cannot be in the past. 	
	• Select the minutes. The minutes are listed in 15-minute increments (i.e., 00, 15, 30, and 45). By default, the system will select the future 15-minute increment that is closest to the system time.	

Element	Required	
23 🕶 29 💌	End Time	Yes
	• Select an hour that is equal to or after the Start Time hour.	
	• Select the minutes. The minutes are listed in 15-minute increments (i.e., 14, 29, 44, and 59).	
	 Note that you cannot enter a time that will cause the range to cross the operational day. 	
Vertical Limits (100's ft MSL)	Use the sliders, control arrows, or your keyboard to define the minimum (<i>Min</i>) and maximum (<i>Max</i>) vertical limits (in100's ft MSL).	No
	This setting is not shown for Adapted Partial Airway FCAs.	
Heading Range (degrees)	Use the sliders, control arrows, or your keyboard to define the minimum (<i>Min</i>) and maximum (<i>Max</i>) degrees of the heading range.	No
	This parameter is used for directional capture of flights in an FCA.	
	This setting is not shown for Adapted Partial Airway FCAs.	
Point 1 🔹	Select the start and end reference locations	Yes (Adapted Partial Airway)
Filters T	Click filter icon to open the <i>FCA Filter</i> dialog box. For more information about filtering aircraft, see "Filtering FCAs" on page 159.	No

Drawing FCAs (Line, Polygon, Circle)

When creating an FCA, you will select the type of FCA and either draw the FCA or use your keyboard to enter its coordinates.

The instructions in this section are an extension of the high-level steps listed in "Creating FCAs (Polygon, Line, Circle, Adapted)" on page 151.

To draw a Circle FCA, complete the following steps:

1. From the FCA type dropdown, select Circle

A new field, Radius, is displayed adjacent to the Lat,Lon Points field.

2. Click (the pencil icon) and move your cursor to map.

A blue dot with a white border 🔛 is displayed with your cursor.

3. Move your cursor and blue dot to the center point of the Circle FCA, click once, and release the mouse button before moving your mouse.

Note: If you do not release the mouse button before moving your mouse, you will simply move the map.

4. Move your cursor out from the center point to define the radius, and quickly double-click.

The cursor reverts to an arrow.

The Radius and Lat, Lon fields are populated with the associated coordinates.

The Circle FCA is displayed on the map (see Figure 176). Note that the name of the FCA will be displayed after you submit the FCA.



Figure 176: Example of a Circle FCA

To draw a Line FCA, complete the following steps:

- 1. From the FCA type dropdown, select Line
- 2. Click *(the pencil icon)* and move your cursor to map.

A blue dot with a white border 🔛 is displayed with your cursor.

3. Move your cursor and blue dot to the starting point of the Line FCA, click once, and *release the mouse button before moving your mouse*.

Note: If you do not release the mouse button before moving your mouse, you will simply move/pan the map.

- 4. Continue to the next point of the line, click once, and release the mouse button. Repeat this step until you are ready to move to the line's end point.
- 5. Move your cursor to the end point of the Line FCA, and quickly double-click.

Note: Note that drawn FCAs are blue. FCAs that are in the system are lavender.

The cursor reverts to an arrow.

The *Lat,Lon* field is populated with the associated coordinates.

The Line FCA is displayed on the map (see Figure 177). Note that the name of the FCA will be displayed after you submit the FCA.



Figure 177: Example of a Line FCA

To draw a Polygon FCA, complete the following steps:

- 1. From the FCA type dropdown, select Polygon
- 2. Click (the pencil icon) and move your cursor to the map.

A blue dot with a white border 💦 is displayed with your cursor.

3. Move your cursor and blue dot to the starting point of the Polygon FCA, click once, and *release the mouse button before moving your mouse*.

Note: If you do not release the mouse button before moving your mouse, you will simply move the map.

- 4. Repeat this step for each point of the polygon, except for the final point. For the end point, continue to the following step.
- 5. Move your cursor to the end point of the Polygon FCA, and quickly double-click.
 - **Note:** The last point of the polygon does not have to meet (be on top of) the first point. Double-clicking will close the shape between the first and last point.

The cursor reverts to an arrow.

The Lat,Lon field is populated with the associated coordinates.

The Polygon FCA is displayed on the map (see Figure 178). Note that the name of the FCA will be displayed after you submit the FCA.



Figure 178: Example of a Polygon FCA

Filtering FCAs

You can filter which aircraft to include in or exclude from an FCA. More specifically, you can filter by aircraft elements (i.e., ACID and AC Type Groups), and routing elements (i.e., ADEP and ADES). You can configure the filter when you create the FCA or at a later time when you edit the FCA.

AND/OR Operators

AND/OR operators work as follows:

- The OR statement consists of the multiple values within the *"includes"* or *"does not include"* fields. That is, the data does not have to meet all the listed criteria.
- The AND statement is a joining of the set of *"includes/does not include"* criteria within an individual data element group (i.e., Aircraft, Route, and Times). That is, the resulting data needs to satisfy both the inclusion and exclusion criteria.
- As you add new filters within a data element group, the filter criteria is joined by AND to the other data element groups.

The following steps walk you through filtering the FCA to include and exclude aircraft based on the selected criteria.

To filter an FCA's aircraft, complete the following steps:

1. To open the FCA Filter dialog box, click the filter icon located next to the Filters label



The FCA Filter dialog box opens (see Figure 179).



Figure 179: FCA Filter dialog box

By default, the FCA Filter dialog box opens with "includes" rows for Aircraft and Route filtering.

Before beginning the steps, it is useful to understand the functionality of the controls (see Table 28).

lcon	Name	Information
	Collapse	Collapse the Aircraft or Route pane.
•	Expand	Expand the Aircraft or Route pane
Θ	Remove	Remove a criterion row.
•	Add	Add an <i>inclusion</i> criterion row (i.e., <i>includes</i>).
~	Down Caret	Show an <i>exclusion</i> criterion row (i.e., <i>does not include</i>).
<u>^</u>	Up Caret	Hide an empty exclusion criterion row

Table 28: FCA Filter controls

2. In the *Aircraft* dropdown list, select a criterion (see Figure 180).



Figure 180: Aircraft filtering criteria

- 3. Following "*includes*" is the field where you either use your keyboard to enter the criteria or select the criteria from a list that corresponds with the selected filter criterion.
 - If you select *ACID*, use your keyboard to enter the ACIDs that you want to include. Separate multiple ACIDs with a space—do not use any punctuation. You can enter letters, numbers, and the wildcard asterisk (*). The asterisk can be used as the first or last character. For example, *AL123*, AAL456*, or *AAL7890.
 - If you select *AC Type Group*, select from the dropdown list the type of aircraft (see Figure 181).



Figure 181: AC Type Group filtering

- 4. In the *Route* pane, you can filter aircraft by routing elements.
 - From the *Route* dropdown, select *ADEP* or *ADES*.
 - From the dropdown, select the airports that you want to include.
- 5. To exclude aircraft by their ACID or AC Type Group, click 🔛 (located adjacent to the element dropdown list).

The "does not include" row is displayed (see Figure 182).

The 🔽 toggles to 🔼.



Figure 182: Click down caret to display exclusion row.



- 6. Following "*does not includes*" is the field where you either use your keyboard to enter the criteria or select the criteria from a list that corresponds with the selected filter criterion. If this is coupled with inclusion criteria, the two are joined by an *AND*, which the resulting data needs to satisfy both inclusion and exclusion criterion.
 - If you select *ACID*, use your keyboard to enter the ACIDs that you want to exclude. Separate multiple ACIDs with a space—do not use any punctuation. You can enter letters, numbers, and the wildcard asterisk (*). The asterisk can be used as the first or last character. For example, *AL123*, AAL456*, or *AAL7890.
 - If you select *AC Type Group*, select from the dropdown the type of aircraft that you want to exclude.
- 7. To add another row for additional criteria, click ①. Adding additional rows joins this statement with the rest of the filter with an *AND* operator so the resulting data must meet all criteria in each of the rows.

An empty row is displayed.

8. To delete a row, click 의.

The row no longer is displayed.

9. When you are done adding the criteria, click Save.

The filter criteria is *applied* and the FCA Filter dialog box closes.

Submit

The FCA panel displays the Active Filters (see Figure 184).



Figure 184: Active filters are displayed in FCA panel.

10. To submit the FCA, click

During transmission to the server, the **Submit** button toggles to

A confirmation message is displayed indicating the FCA was successfully updated.

Editing FCAs and FCA Filters

In *Edit FCA* mode, you can edit an FCA's start and end time, hourly rate, and filter criteria. You can also add a filter to an existing FCA that was created without any filter criteria. Super Users, Flow Managers, and ANSP Users can edit FCAs.

To edit an FCA or FCA filter, complete the following steps:

1. On the map, click *(the Manage FCAs tab)*.

The FCA panel opens on the left side.

2. Click Current FCAs

The list of FCAs is displayed (see Figure 185)

Current FCAs	•
FCACIRC2	e 🖉
FCAJS	e 🖉
FCALINE2	e 🖉

to locate the FCA.

Figure 185: List of current FCAs

3. Click the **I** located next to the FCA that you want to edit.

The *Edit FCA* panel opens and displays the selected FCA's data.

- 4. You can edit the following fields:
 - Start Time
 - End Time
 - Hourly Rate

5. Click **I** to add a filter to the FCA or update the existing filter.

The *Filter FCA* dialog box opens. For more information, see "Filtering FCAs" on page 159.

6. When you are finished updating the filter and editing the FCA, click

During transmission to the server, the Submit button toggles to

Upon completion, the **Submitting** button toggles to **Submit** and a success message is displayed.

Deleting FCAs

Super Users, Flow Managers, and ANSP Users can delete active and future FCAs.

To delete an FCA, complete the following steps:

(the Manage FCAs tab). 1. On the map, click

The FCA panel opens on the left side.

Current FCAs to display the list of FCAs. 2. Click

The list of FCAs is displayed (see Figure 185)

Current FCAs	-
FCACIRC2	Ø 🛍
FCAJS	S 🗊
FCALINE2	e 🖉

Figure 186: List of current FCAs

- 3. Locate the FCA that you want to delete and click the corresponding A Delete Confirmation dialog box is displayed.
- Yes 4. Click to delete the FCA.

The FCA is removed from the Map and the list of Current FCAs.

- A success message confirming the deletion is displayed. •
- The FCA no longer is listed in the Select Airport or FCA dropdown list. •
- The FCA no longer is displayed in the quick filter list. ٠

Deleting FCA Filters

You can clear an FCA filter.

To delete an FCA filter, complete the following steps:

- 1. On the map, click 1 (the Manage FCAs tab).

The FCA panel opens on the left side.

2. Click Current FCAs

to display the list of FCAs.

The list of FCAs is displayed.

3. Click the I located next to the FCA that has the filter that you want to delete.

The Edit FCA panel opens and displays the selected FCA's data.

Below the Filters icons, the Active Filter is displayed in orange font (see Figure 187).



Figure 187: List of current FCAs

4. Click the interview of the filter icon. Do not confuse this with the trashcan icon in the Current FCA list.

The Active Filter listing in orange font is cleared.

5. To save this change, you must click

During transmission to the server, the Submit button toggles to

Upon completion, the **Submitting** button toggles to **Submit** and a success message is displayed.

Submit

FCA Buttons and Controls

Table 29 describes the buttons, icons, and controls used in the FCA.

Control	Name	Description
R	Blue-dot Cursor	Cursor indicating you are in draw mode after clicking the Pencil to draw the FCA
Submit	Submit	Submit updates to the server.
Submitting	Submitting	 Indicates a transaction to the server is in process.
		Will toggle back to Submit when the transaction is completed.

Table 29: Buttons and icons

Control	Name	Description
Reset	Reset	Clear the Create FCA or Edit FCA panel.
Close	Close	Close the FCA Filter without saving any updates.
T	Filter	Open the FCA Filter tool to add or edit the filter criteria.
Û	Trashcan	Delete the selected FCA or remove the filter from the selected FCA.
ø	Pencil	Edit the selected FCA.
×	Close	Close dialog box.
Yes	Yes	Confirm the requested action.
No	No	Cancel the requested action.
ОК	ОК	Close the Message dialog box

Chapter 13. Flight Data Upload

The Flight Data Upload component is used to upload your flight data into the Harmony system. You can create or modify Scheduled Flight data, Airport Slot data, and Post-Ops Flight data through a simple text format that uses comma-separated values (CSV) or in-line editing. The generated data in CSV format can be uploaded into the Harmony system. Harmony performs data-integrity error checks in the upload, review, and processing steps.

Your permission level determines which uploads you can perform:

- Super Users, Flow Managers, and Aircraft Operators can upload Flight Schedule data, and Post-Ops Flights data. An Aircraft Operator can only Post-Ops flights in its own major and subcarrier.
- Super Users, Flow Managers, and ANSP users can upload Airport Slot data.

Uploading Data

The upload process is the same for Scheduled Flights, Airport Slots, and Post-Ops Flights. This section explains how to upload the data. The subsequent sections address each of the flight data types.

To upload flight data files, complete the following steps:

1. Click E and select flight Data Upload from the Data Tools menu.

The Open Flight Data File window opens (see Figure 188).

Ele Edit Yiew Higtory Bookma	eks Icols Help					
METRON HORZON Coon Flott Dida File	* (+		2017-11-22 64 48 🕕 [•	🗲 i Logost
		Scheduled Flights Scheduled Flights Airport Slots Post-Ops Flights		Browse		
Upload Status						
File Origin	Upload Summary			Time Uploaded	Time Completed	Remove

Figure 188: Open Flight Data File window

2. From the Data File dropdown, select the data file that you want to upload: *Scheduled Flights, Airport Slots, or Post-Ops Flights* (see Figure 188).

- 3. Click Browse
- 4. Navigate to the local directory containing the file that you want to upload, and select the file.

The data in the CSV file loads.

Note: If you selected the wrong data file type in Step 2 or uploaded the wrong data file, you will get an error message stating: Unable to load [*filename.csv*]: Cannot find records to import. Invalid file format (see Figure 189). If you get this message, return to Step 2 and reselect the data file type.

Error 🗙
Unable to load NEW_PostOp -NoMajor.csv : Cannot find records to import. Invalid file format.
ΟΚ

Figure 189: Error message if wrong data file type selected

In the Status column, either OK or Error is displayed for each record.

Errors are outlined in red and rollover tips identify the errors.

5. Click in the red-outlined error fields and make the corrections.

The Error status updates to OK.

6. Click Upload to upload the records for processing.

The Upload Status panel at the bottom of the window reports the status.

- File Origin: Name of uploaded file
- Upload Summary: Brief summary of the transaction's status with number of records in parentheses [e.g., (5) OK, (1) Warnings, (0) Errors].
- Time Uploaded: DD/hhmm format
- Time Completed: DD/hhmm format
- Remove:Remove button
- 7. Click 🛨 to show Upload Summary details (see Figure 190).

Details of the error include the flight ID and specific error.

Uş						-
	File Origin	Upload Summary	Time Uploaded	Time Completed	Remove	
•	PostOp.csv Flight Id CFH28 ERR201: JST701 ERR201: VO21361 ERR201: VO2556 ERR201:	Failed to process flight schedule updates (0 OK(s), 0 Warning(s), 5 Error(s) Error No matching flight for a Flight Modify message No matching flight for a Flight Modify message No matching flight for a Flight Modify message No matching flight for a Flight Modify message	02/2225	02/2225	•	- E



8. Correct the errors and click Upload

The data is uploaded to the system.

The Upload Status panel at the bottom of the window reports the status.

Removing Upload Summary Records

You can remove the Upload Summary records.

To remove an Upload Summary record, complete the following steps:

1. In the Remove column of the record to be removed, click \bigcirc .

The record is removed from the Upload Status panel.

Scheduled Flights

The Flight Schedule Upload component is used to upload your flight data into the Harmony system. The Flight Schedules data includes ACID, ADEP, ADES, OBT, IBT, AC Type, CNX, and AC Reg (see Figure 191). OBT and IBT will be entered as Aircraft Operator times with an L prefix.

An * (asterisk) in the column header indicates that the data element is required.

Eile Edit	Yiew Higt orizon	ory Bookmarks ×	Iooh Help						
MET	REN	ĺ			2017-1	1-22 04:48 🛄			• 💽 Logout
School Order	Ind Figh	ACEP	ADEP*	ADES-	OBT*	er.	AC Type*	ave	AC Reg
	ок	V0Z456	YMML	YSSY	03/1950	04/0300	8744	N	JST701
	ок	QFA456	үррн	YSSY	03/1950	03/2345	8744	N	V021361
	ОК	JCS456	YMM.	YSSY	03/1950	03/2100	B744	N	V029843
					Uplead Ca	ncal			-
File	Origin	Uploa	d Summary				Time Uploaded	Time Completed	Remove
FSI	l csv Errors	Flight	schedule update(s)	completed successfu	Ry (3 record(s)).		02/2332	02/2332	•

Figure 191: Flight Schedule load

Airport Slots

The Airport Slot Upload component provides an airport user a mechanism for uploading strategic airport slot information into the Harmony system. The Airport Slots data includes ACID, AC Type, ADEP, OBT, ADES, IBT, and CNX (see Figure 192). OBT and IBT will be entered as Strategic Airport Slot times with an R prefix.

An * (asterisk) in the column header indicates that the data element is required.

MET	REN	× (•		2017-11-22 04 48 🕕			• •	l Legent
Order	Status	ACIO*	AC Type*	ADEP*	OBT	ADES*	187	CN0*	
	OK	ASY497	8731	YSSY	03/0330	YMML	03/0505	N	
2	OK	ASY9251	SF34	YSWG	03/0645	YMML	03/0800	N	
	OK	ASY9257	SF34	YSWG	03/1045	YMML	03/2200	N	
	OK	ASY479	A325	YWLM	03/2000	YMME.	04/2140	Ň	
				Upios	d Cancel				
					Ť.				
File	Origin	Upload S	Summary			Time Uploaded	Time C	Completed	Remove
_									

Figure 192: Airport Slots load

Post-Ops Flights

The Post-Operational Flight Times Upload component is used to upload your post-operational Aircraft Operator actual ground event times to the Harmony system. Post-Ops Flights data includes ACID, ADEP, ADES, AOBT, AIBT, AC Type, AC Reg, ATOT and ALDT (see Figure 193).

An * (asterisk) in the column header indicates that the data element is required.

J ₽ He	pricon	×	+								ALC: NO
MET O	REN KORZON					2017-11-22 04:48				🛃	Logout
Order	Status	ACID*	ADEP*	ADES*	AOBT*	AIET*	AC Type*	AC Reg	ATOT	ALDT	
	OK	07121	YPGV	YMG8	14/1739	14/1822	BE20	VHZCO	14/1743	14/181	1
2	OK	JST701	YMML	YMHE	14/1906	14/2012	A329	VHVQQ	14/1912	14/200	8.
	OK	V021361	YMLT	YMML	14/1914	14/2009	8738	VINTIN	14/1918	14/200	¢.
4	OK	V02556	YPPH	YSSY	14/0244	14/0643	A332	VIOFE	14/0251	14/063	ŧ.,
5	OK	GLK580	YBCV	YBBN	14/0543	14/0729	DHIRC	VHSEW	14/0547	14/072	s.,
					Uptor						
File	Origin		Uplead Summary				Time Uploaded		Time Completed Rem		Remove

Figure 193: Post-Ops Flights load

Flight Data Upload Buttons and Controls

Table 30 describes the buttons, icons, and controls used in Flight Data Upload.

Button	Name	Description
	Data Tools	Access Data Tools (Flight Data Upload and Reporting)
Browse	Browse	Navigate to CSV file
Upload	Upload	Upload records for processing
Upload	Inactive Upload	The Upload button is inactive (grayed out) until all errors are corrected.
Cancel	Cancel	Close window without uploading data
÷	Expand	Expand to show Upload Summary details
	Collapse	Collapse to hide Upload Summary details
0	Remove	Remove Upload Status summary
•	Collapse	Collapse Upload Status panel
	Expand	Expand Upload Status panel

Table 30: Flight Data Upload buttons and controls
Chapter 14. Reporting

The Reporting component has defined flight and airport data reports that you can generate and export. The toolbar has four border-separated subsections that contain the controls to run, export, view, and navigate reports (see Figure 194).

Marmony Web	Harmony Reporting	× +	
2	3	4	5
Filght History Report 🔍 Run Reset	Cancel 🗾 Export 🔍		- • 🚥 🗸

Figure 194: Reporting toolbar

- 1. Reporting opens in a separate tab.
- 2. Dropdown menu with a ist of reports and the **Run**, **Reset**, and **Cancel** buttons.
- 3. Export type dropdown and **Export** button.
- 4. Pagination section with navigations buttons to the first page, previous page, next page, and last page, as well as the text box for the current page number.
- 5. Zoom section with buttons to zoom in and zoom out, and select zoom level dropdown.

Report Types

The dropdown provides access to the following reports:

- 1. Flight History Report (see "Flight History Report" on page 174)
- 2. Flight Summary Report (see "Flight Summary Report" on page 175)
- 3. Airport Summary Report (see "Airport Summary Report" on page 176)
- 4. Benefit Measure Metrics Report (see "Benefit Measure Metrics Report" on page 179)
- 5. **ATFM Measure Performance Report** (see "ATFM Measure Performance Report" on page 181).

Flight History Report

The Flight History report provides flight information for a single flight. You can search for data by a Flight ID or by the flight's IOBT Time, ACID, ADEP, and ADES (see Figure 195).

Flight History Report	•	Run
Flight ID		
Flight ID		
IOBT Time		
YYYY/MM/DD HH:mm		
ACID		
ACID		
ADEP		
ADEP		
ADES		
ADES		

Figure 195: Flight History search criteria

Figure 196 shows an example of the Flight History report. The search criteria is listed at the top of the report. Use the horizontal scroll bar to view all the columns.



Figure 196: Flight History report

Flight History Report

Flight Summary Report

The Flight Summary Report provides flight information for a range of flights. You can search for data by the IOBT Start Time and IOBT End Time; a specific flight ID; or include the ACID, ADEP, or ADES to further filter which data is returned (see Figure 197).

Flight Summary Report Run
Flight ID
Flight ID
IOBT Start Time
YYYY/MM/DD HH:mm
IOBT End Time
YYYY/MM/DD HH:mm
ACID
ACID
ADEP
ADEP
ADES
ADES

Figure 197: Flight Summary search criteria

Figure 198 shows an example of the Flight Summary report. The search criteria is listed at the top of the report. Use the horizontal scroll bar to view all the columns.

C Harrowy Web	🗙 🔛 Harmony Repo	rting X d	F.										
. O& https://anip-	da1-web.metronaviation.com	Nhanhony-etclass	o/haim-ony_repo	rishord.				e	Q. Search		+		=
METRION Autor	nticated user:												
Report contains \$1	Intel exces												
								-16 16					
Flight Summary Repo	t Run Reset	Cancel pdf	Expert	•• •	1 > >>		100 -						
Flight ID												_	
Fight ID		Flight Sum	mary Report										
Inter States Trees			and frequency	S									
Concert start time		KOET Bart Dat	· 2010-03/25 11:44	2									
2010/03/20 11/44		COT END	 2010-03/22 11.44 20 mill 										
IOBT End Time		AD	P. sul										
2018/03/22 11:44		ACK	1 mar.										
ACID		Fight	B aut										
ACD				110									
					1			0					
ADEP		EVENT_TIME	rusit_c	OLTHOUR, TH	ALT_FLIGHT_ID_BOUT	m_c	800	ADEP	ROOP_TERMINEL	priz.	~	160	
ADEP		2110-03122-04-46	18.8104	~	08 9-4		RXA628	1528	~	22222	27	1752	-
ADES			1000		-						-		-
ADES		2010/05/22 05:58	104107	~	~	~	604528	12011	~	12122	1	222	
	10	2018-03-22 17:88	198198	~	nue :	nu#	KAG2004	17FAD		22222	22	1222	_
		2010/03/22 04:54	19.4100	24	n.4	-	EACO ALS	VIAN	-	82222	22	1222	-
													_
		2018-03-22 04:56	164165	~	~*	~8	RAGISTI	855¥	~	22222	22	222	
		2010/03/22 17:00	144150	~	-	~	C/A7856	7508	~	12222	22	1222	-
			hanta?				Traine Tra	1000	-		_		_
		and the second second	- Aller			-	LP 486.00	and a	m	and a second	ſ	and .	

Figure 198: Flight Summary report

Airport Summary Report

The Airport Summary Report provides a graphical view of an airport's data (e.g., demand lead time, resource utilization, data overview, actual demand accuracy, pre-tactical demand, flight planning and schedule matching. You can search by the airport's ICAO identifier and start date (see Figure 199).



Figure 199: Airport Summary search criteria

Figure 200 shows an example of the Airport Summary report. The report has three sections.

- The table at the top contains the flight data.
- Below the table is a graph that compares the scheduled times to the ALDT and ETA.
- Below the ALDT-ETA graph are several bar graphs that further analyze the data. Table 31 describes the data elements in each section.



ALDT ETA

A 🔷 Scheduled





Airport Summary Data Elements

Table 31 describes the Airport Summary report's data elements.

Data Element	Description
Heading	Airport for which the report was generated
TABLE	
Report Start Time	Start Time in YYYY/MM/DD (default time is start of the operational day (e.g., 18:00)
Total Flights	Total arrival flights
Cancellations	Number of cancelled flights
Diversions	Number of diverted flights
Number AOBT	Number and percentage of Actual Off Block Times
Number ATOT	Number and percentage of Actual Take Off Times
Number ALDT	Number and percentage of Actual Landing Times
Number AIBT	Number and percentage of Actual In Block Time
Departure Flight Count	Flight count from the departure airport
Major Flight Count	Flight count per Major
GRAPH	
Y-axis	Number of scheduled flights
X-axis	Date and time in DD/HH format
ALDT bar (red)	Total flights that actually landed in the specified time
ETA bar (gray)	Total ALDT flights that met their ETA in the specified time
BAR GRAPHS	
Flight Plan Lead Time	Minutes before OBT
Flight Plan and Schedule Matching	Schedule, No Flights and Schedule and Flight Plan
Pre-Tactical OBT Accuracy	POBT - Scheduled OBT (minutes)
Pre-Tactical EET Accuracy	PEET - Scheduled EET (minutes)
Actual Departure Accuracy	ATOT - ETD (minutes)
Actual Landing Accuracy	ALDT - ETA (minutes)

Table 31: Airport	Summary data	elements
-------------------	--------------	----------

Benefit Measure Metrics Report

The Benefit Measure Metrics report provides information about the reduction in airborne holding attributable to an ATFM initiative (GDP and AFP measures). This report is for determining how much airborne holding and fuel was saved by an implemented measure. This information is also useful to track efficiency and fuel savings benefits derived from the ATFM System.

5 ATFM Mea	sures implement	ed between 2	018-03-07 18:00 a	nd 2018-03-08	8 18:00							
Export												
										Search:		
Event Time	\$	Element	ATFM Mea	isure Type		Start Time		End Time	ATFM Measure ID			
7/1913		VHHH	GDP			07/1900		07/1959	12368986			
7/1914		WSSS	GDP			07/1900		07/2359	12373730			
7/1724		FCALINE	AFP			07/1800		08/1759	12444614			
7/1936		FCALINE	AFP			07/1800		08/1759	12451446			
3/1801		FCALINE1	AFP			07/2100		08/1759	12584237			
TFM Measu	re Performance	for FCALINE:	: AFP(07/1800 - 08	/1759)						Search:		_
light ID	ACID	ADEP	ADES	AC Type	BETOT	стот	0 BELDT	Holding Minimized	🔶 Fuel M	nimized Kg		
13767	BKP154	VTSM	VTBS	AT43	07/1803	08/1728	07/1849	1405	13067			
9399	MAS3187	WBKK	WBGS	AT43	07/1929	08/1821	07/2033	1372	12760			
33640	BKP185	VTBS	VTSM	AT43	07/1944	08/1826	07/2030	1362	12667			
33616	BKP178	VTSM	VTBS	AT43	07/2009	08/1757	07/2055	1308	12164			
33514	BKP189	VTBS	VTSM	AT43	07/2118	08/1844	07/2204	1286	11960			
33804	BKP307	VTBS	VTBO	AT43	07/1759	07/2151	07/1815	232	2158			
33241	THA472	YSSY	VTBS	B744	07/1345	07/1339	07/2243	-6	-923			
3659	THA221	VTBS	VTSP	8772	07/1918	08/1819	07/2001	1381	137271			
owing 1 to 8 of 1	95 entries								Previous 1 2	3 4 5	25	N
15-minute -												
					Fuel M	inimized Kg						=
2M				Wednesday, M Fuel mini	ar 7, 19:30 mized KG: 531,144							
0												
-1M 17:45	18:00 18:15	18:30	18:45 19:00	19:15 19:3	0 19:45 20:00	20:15 20	30 20:45	21:00 21:15	21:30 21:45 22:00	22:15	22:30	

Figure 201 shows an example of the Benefit Measure Metrics report.

Figure 201: Benefit Measure Metrics report

- The top of the report lists the implemented measures. When you select a measure, the following two sections are populated with the data for the selected measure. Click the **Export** button to export the data.
- The middle of the report lists the benefits report for the flights in the selected measure. Click the **Export** button to export the data.
- The bottom of the report displays a bar graph depicting the fuel savings. Use the time bin dropdown (located in the upper left corner) to select the increments (e.g., 15 minutes, 30 minutes) that the data is displayed (see Figure 202). Hover over a bar to display the date and amount of fuel minimized (see Figure 202).

15-1	ninute •									
										F
2M							Wed	nesday, Mar 7	19:30	
1M							• Fi	uel minimiz	ed KG: 531,	,14
0				-					0-	
-1M								5	(m)	
- 1.04		10.00	10.15	10.70	10.45	10.00	10.15	10,20	-fue	

Figure 202: Time bin and bar information

To save an image of the bar graph, right-click on the pie chart and select the option to download it in PNG, JPEG, SVG or PDF format.

Benefit Measure Metrics Report Data Elements

Table 32 describes the Benefit Measure Metrics Report's data elements.

Data Element	Description					
Summary statement above table	Measure Implemented between [time range]					
Event Time	Event Time in YYYY-MM-DD HH:mm format					
Element	Airport or FCA					
ATFM Measure Type	GDP or AFP					
Element Type	APT for airport or FCA					
Start Time	Start Time in YYYY-MM-DD HH:mm format					
End Time	End Time in YYYY-MM-DD HH:mm format					
ATFM Measure ID	Identifying number for the event					
Summary Statement above table	Benefits report for [number of flights] during [Measure ID]; [number of minutes of holding minimized]; [amount in Kg] of fuel minimized					
Flight ID	Flight identifier					
ACID	Aircraft identifier					
ADEP	Departure airport					
ADES	Arrival airport					
• АС Туре	Aircraft type or UNKN for unknown					
• BETOT	Base Estimated Time of Take Off					
• CTOT	Calculated Time of Take Off					
• BELDT	Base Estimated Landing Time					
Holding Minimized	 Number of holding minutes that were minimized 					

 Table 32: Benefit Measure Metrics Report data elements

Data Element	Description
Fuel Minimized Kg	 Amount of fuel that was minimized (in Kg)
Bar Graph Heading	Fuel Minimized Kg
Y-axis	Number of Kg in millions
X-axis	Base Estimated Landing Time per hour

ATFM Measure Performance Report

The ATFM Measure Performance Report provides information about the departure compliance for flights in a selected ATFM measure (TMI).

- Compliance is measured at the departure airport as [ATOT-CTOT].
- Flights are considered compliant if ATOT-CTOT is between -5 and +10 minutes. Flights that are outside this range are considered non-compliant.
- Exempt flights are not included in the compliance statistics nor categorized as compliant/non-compliant.

The top of the report lists the implemented measures (see Figure 203). When you select a measure. The measures are based on the user-selected operational date (with the default start-of-operational-day time of 18:00). For example, 2018-03-05 18:00 and 2018-03-06 18:00.

AIPM Measures	implemented between 201	8-03-07 18:00 and 2018-03-08 1	8:00				
win.cost#					Searc	fu [_
Event Time	1 Denet	ATFM Measure Type	3 Start Time	End Time	ATEM Measure 10		
67/1913	VIDE	GDP	67/1900	07/1958	12360908		
07/1914	W\$\$\$	GGP	67/1906	87(2358	12373738		
07/1724	FCALINE	AFP	67/1000	05/1759	12484814		
07/1936	FCALINE	ISP	07/1000	00/1759	12431646		
06/1501	FCAUNE1	AFP	07/2100	00/1759	12584237		

Figure 203: Top section of ATFM Measure Performance Report

When you select a measure, the lower portion of the report displays the Departure Compliance analysis of the flights in the selected measure. Each of the red-encircled numbers corresponds with the corresponding number listed below Figure 204.





- 1. The Overview summarizes the measure's flight information, which includes the number of flights; exempt and non-exempt flights; compliant and non-compliant flights; and total, average, and max delay.
- 2. The pie chart illustrates the non-compliant (blue slice), compliant (green slice), and exempt (gray slice) flights. As you hover your cursor over a slice, it separates from the pie and displays the percentage of flights. The percentage is also displayed in each slice's label.

To view the compliance percentage by carrier, click a slice (see Figure 205).



Figure 205: Click to view compliance of carriers

To save an image of the pie chart, right-click on the pie chart and select the option to download the image as an image (PNG, JPEG, SVG) or document (PDF).

- 3. To the right of the pie chart, is a statistical summary of the compliance for the non-exempt flights. The summary includes the following statistics: minimum, maximum and average minutes of compliance; and the 1st, 2nd (median), and 3rd quartiles.
- 4. To the far right, the histogram provides a side-by-side comparison of the compliant and non-compliant flight counts. As you hover your cursor over a bar, a pop-up box displays the number of flights and the range of compliance (e.g., 13 flights with compliance -5 to -1 minutes). Note that the color scheme is the same as the pie chart (i.e., green idicates "compliant" and blue indicates "non-compliant").

Generating Reports

The following steps are for generating all reports. While the search criteria is different for the reports, the steps to run the reports are the same.

To generate reports, complete the following steps:

- 1. From the Data Tools 📃 (located on the main toolbar), select 🗎 Reporting.
 - The Harmony Reporting component opens in separate tab that is labelled *Reporting*.
- To select the type of report, click the dropdown arrow and select the report.
 The search criteria fields for the selected report are displayed.

3. Enter the search criteria. The search criteria for each report is describe in Table 33. If

you want to clear the fields, click Reset

4. Click Run

The aqua-colored processing indicator and "Executing report..." message are displayed below the logo.

When the report successfully executes, a confirmation message with the number of total pages "*Report contains # total pages*" is displayed below the logo and the report is displayed on the right side of the screen.

Cancelling an In-progress Report

An in-progress report can be stopped by clicking Cancel.

To stop an in-progress report, complete the following steps:

1. For a report that has the aqua-colored processing indicator and "Executing report..."

message, click Cancel

The aqua-colored processing indicator and "*Cancelling report...*" message are displayed below the logo.

The report stops processing and the cancellation message "*Report run cancelled*" is displayed below the logo.

Note: Sometimes, the report may successfully complete even though you clicked **Cancel**. This is because the data had already been retrieved and was uploading to your screen before you clicked **Cancel**.

Exporting Reports

Reports can be exported in PDF and CSV formats.

To export a report, complete the following steps:

1. After running the report, from the file type dropdown list (see Figure 206), select the format of the report.

pdf 🗸	Export
csv 🔬	
pdf	

Figure 206: Export file type dropdown

2. Click Export . For the Benefit Measure Metrics Report, a blue Export button is displayed both in the *Measures Implemented* and *Benefit Report* section.

A file is created for the selected format is created with the filename (e.g., *flight-list-[name]-YYYYMMDDhhmm.csv*)

A dialog box with file save/open options opens (see Figure 207). Note that the dialog box will vary depending on your browser and operating system.

Opening flight-list-ys	sy-201711261815.csv	Х
You have chosen to	open:	
🔝 flight-list-yssy	-201711261815.csv	
which is: Micr	osoft Excel Comma Separated Values File (1.6 KB)	
from: https://	dm.metronaviation.com	
What should Firefo	x do with this file?	
Open with	Microsoft Excel (default) ~	
○ Save File		
🗌 Do this <u>a</u> uto	matically for files like this from now on.	
	OK Cancel	

Figure 207: Example of Save/Open dialog box

3. Select the option to either open or save the file and click **OK**.

Depending on which options you selected, the file is either opened or saved to your default folder for downloads.

Search Criteria Data Elements

Table 33 describes the search criteria's data elements.

Data Element	Description	Report
Flight ID	Flight Identification	 Flight History
	• Must be 1–19 numeric characters.	Flight Summary
	 Must be greater than 0. 	
IOBT Time	Initial Off Block Time	 Flight History
	Must be 16 characters.	
	 Must be in YYYY/MM/DD HH:mm format. 	
	 When Flight ID is provided, IOBT Time must be empty. 	

Table 33:	Search	Criteria	Data	Elements
		•		

Data Element	Description	Report
IOBT Start Time	Initial Off Block Time Start Time	Flight Summary
	 Must be 16 characters. Must be in YYYY/MM/DD HH:mm format 	
	 When Flight ID is provided, IOBT Time must be empty. 	
IOBT End Time	Initial Off Block Time End Time	 Flight Summary
	Must be 16 characters.	
	 Must be in YYYY/MM/DD HH:mm format. 	
	 When Flight ID is provided, IOBT Time must be empty. 	
Start Time	Starting date of report. The default time range is the start of the operational day (e.g., 18:00) of the selected date to the start of the operational day for the following day.	 Benefits Dashboard ATFM Measure Dashboard
End Time	Ending date and time of report	 Arrival Delay Dashboard (for Benefit Measure Metrics Report)
Report Start Date	Starting date and time of report	Airport Summary
	Must be 16 characters.	
	Must be in YYYY/MM/DD	
ACID	Aircraft Identification	Flight History
	 Must contain only alphanumeric characters. 	Flight Summary
ADEP	Departure Airport	Flight History
	Each entry must be 2–5 characters.	 Flight Summary
	 Multiple entries require commas with no space between entries. 	
	 Entries must be alphanumeric characters or a comma. 	
ADES	Arrival Airport	Flight History
	Each entry must be 2–5 characters.	Flight Summary
	 Multiple entries require commas with no space between entries. 	Benefits Dashboard
	 Entries must be alphanumeric characters or a comma. 	

Data Element	Description	Report
ICAO	International Civil Aviation Organization airport identifier	Airport Summary
	Must be 4 characters.	

Reporting Buttons and Controls

Table 34 describes the buttons, icons, and controls used in Reporting.

|--|

Button	Name	Description
Run	Run	Generate and load the selected report
Reset	Reset	Clear data from the entry fields
Cancel	Cancel	Cancel the in-progress report
Export	Export	Export the report in the selected format
<<	First Page	Display the first page of the data
<	Previous Page	Display the previous page of data
1	Page Number	Display the page number
>	Next Page	Display the next page of data
>>>	Last Page	Display the last page of the data
+	Increase	Zoom in
-	Decrease	Zoom out
100 🔽	Records per page	Number of records displayed on the page, page width, and page height
15-minute -	Time dropdown	Select increment of time to display Benefit Measure Metrics Report data in bar graph
Search:	Search field	Enter search parameter for Benefit Measure Metrics Report data

Chapter 15. TMI Parameters Display

The TMI Parameters Display enables you to view the TMI parameters for scheduled and currently active TMIs (i.e., GDP-A for airports and runways; GDP-D for airports; AFP and GS for FCAs and airports). Note that Proposed programs are not displayed.

GDP and AFP program rates are displayed in a line graph. GDP-D runway rates are displayed in stacked bars per runway. The TMI Parameters Display (see Figure 208) is accessed via Data Tools menu or a button in TMI Alerts.

The TMI parameters are automatically updated per the Auto-Update Interval defined in the System Settings' General tab. Note that if the **Pause** button in the main toolbar is selected, the parameters are not updated until you click the **Pause** button to resume the updates.

Figure 208 shows an example of the TMI Parameters Display for an AFP. The data elements in the TMI Parameters Display are specific to the selected TMI. For more information about which data elements are available for each TMI type, see Table 35 in "TMI Parameters Data Elements" on page 191. The table also includes a description of the data elements.



Figure 208: TMI Parameters Display window

The reference numbers in Figure 208 are described in the following list:

1. The TMI Parameters Display title bar heading parenthetically indicates whether the selected TMI is Actual or Proposed.

- 2. The left-side panel displays a hierarchy in which the two top-level folders are for the element type (Airport and FCA). A subfolder exists for each resource (airport or FCA) that has a scheduled or currently active TMI. Within each subfolder, the TMIs for the airport or FCA are listed.
- 3. FCA or airport name, type of program, and the start and end times.
- 4. Slot List is available only for AFPs. For more information, see "Slot List Option for AFPs" on page 188.
- 5. Timestamp of when the data was received.
- 6. Subs indicator.
- See the sections outlined in red. The data is presented in multiple subsections (e.g., Times, Include, Impacting Condition, General, Exemptions, FCAs, Departure/Arrival Groups, Departure/Arrival Airports, Flights, and the graphical Rates section.

- 8. **Program** Click to show or hide the program rate.
- 9. Time Bin Display the graph's capacity and demand information based on the selected time increment (i.e., 15-min, 30-min, 60-min).
- 10. Rates line graph: Rates are listed on the y-axis and the time is listed on the x-axis. The line represents the AAR for GDP-A programs and ADR for GDP-D programs. Runway rates for GDP-A programs are displayed as stack bars per runway.
- 11. Locked/Unlocked toggle button. The button shows the current state (locked or unlocked. The desired action (unlock or lock) is the opposite of the button:
 - Click c to the lock / move the thumbs (orange squares) together to change the range of the time displayed.
 - Click () to unlock / independently move the sliders to change the total number of hours displayed.
- 12. Time (UTC) slider bar. Move the thumbs to adjust the time range.
- 13. Click Reset to undo your changes and reset the Rates graph to its default settings.

Slot List Option for AFPs

AFPs have an additional row in the Times section for Slot List options (see Figure 209). There are two Slot List options, *Default* and *Schedule*. The Schedule view displays the Slot List schedule and removed slots.

Note: The following reference numbers correspond with the Rates section. GS TMIs do not have the Rates section.

FCAJS11:	AFP(23/0715 -	23/1559) Da	ta retrieved at: 2018
Times			
Sta	t 23/0715	Updated	23/0711
En	d 23/1559	Data	23/0708
Slot Li	t Schedule	Show	
	_		

Figure 209: Slot List row for an AFP

To view the Schedule, complete the following steps:

1. In the Slot List Schedule cell, click

Show	or	Vie
Hide		

W

The Show/View button toggles to

_ _ _ _

The Slot List opens and displays the Slot List schedule and list of removed slots (see Figure 210).

The Start and End Times and Slot Interval are shown for each slot.

Removed Slots are displayed.

	Dat	22/0708			ditte:	in.
	Da	a 23/07/00		Aircraft Categ	огу	ALI
	Hide			Car	rier	AL'
	Slot List				nit	36.
TMI(s)	Start Time	End Time	Slot	Interval (min)		5
	23/0715	23/0744		15		
	23/0745	23/1044		26		-
	23/1045	23/1344		31		
82	23/1345	23/1559		15		
	Removed Slots					
REEF						
				_2	\checkmark	

Figure 210: Schedule Slot List

Hide

2. To collapse/hide the Schedule, click The Schedule closes.

Viewing TMI Parameters Display

TMI Parameters Display can be accessed via Data Tools or TMI Alerts.

To view the TMI Parameters Display, complete the following steps:

- 1. Open the TMI Parameters Display view with one of the following methods:
 - Click and select TMI Parameters Display from the Data Tools menu.
 - Click [] (TMI Alerts in the main toolbar). In the upper right corner of the TMI
 Alerts window, click [TMI Parameters Display].

The TMI Parameters Display window opens (as previously shown in Figure 208).

2. To show or hide the Program Rate, click **Program** or roll your mouse over the circle.

The center of the circle is colored yellow to show selection and the rate is displayed in a pop-up box (see Figure 211).



Figure 211: Roll over circle to display program rate

3. To change the time display of the graph, from the Time Bin dropdown, select a time increment (15-min, 30-min, or 60-min) (see Figure 212).



Figure 212: Time Bin dropdown

4. To undo your changes, click Reset

The Rates line graph to its default settings.

Note: If the TMI currently being viewed no longer is available (e.g., it expires or is purged), a message is displayed (see Figure 213).



Figure 213: Message when TMI is no longer available

TMI Parameters Data Elements

Table 35 describes the TMI Parameters data elements.

Element	Description	Program Type
Times		
Start	Start time of program	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA
End	End time of program	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA,
Slot List	<u>Start Time</u> : Start time for generating slots <u>End Time</u> : End time for generating slots <u>Slot Intervals (Minutes)</u> : Count of created slots (in 15 minute intervals) <u>Removed Slots</u> : List of removed slots	AFP
Update	Last ADL time that passed before running the program	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA
Data	ADL time on which you are modelling and analyzing data	GDP-A, GDP-D, GS-Airport, GS-FCA, AFP

Table 35: TMI	Parameters	data	elements
---------------	------------	------	----------

Element Description		Program Type
Include		
Arrival Fix	Fix Arrival fixes included in the TMI.	
Departure Fix	Departure fixes included in the TMI.	GDP-D, GS-Airport
Aircraft Category	Aircraft types (e.g., Heavy, Light, Jet, Turbo, or All) included in the TMI.	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA
Carrier	Carriers (i.e., ALL or carrier code for aircraft operator) included in the TMI.	
Delay Limit	The maximum number of minutes a flight can be delayed. Default value is 360 minutes.	AFP, GDP-A, GDP-D
Impacting Condition		
Category	Reason for running the TMI	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA
Cause	Cause of the selected category	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA
Probability of Extension	Lists probability of FCA extension (i.e., Low, Medium, High)	GS-Airport, GS-FCA
General		
Controlled by	Controlled flights can be prevented from having their controlling TMI changed when a new program is issued. Flights can be selected by TMI Scope, Exemption Status, or Other TMI(s).	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA
EXEMPTIONS		
Exempt By	Type of exemption (i.e. Distance or Tier) Distance exemption includes distance in nautical miles (NM.)	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA

Element	Description	Program Type
Non-Exempt Internationals	Indicates whether international flights are included in the TMI:	AFP, GDP-A, GDP-D,
	Y = International flights are included N = International flights are excluded	GS-Airport, GS-FCA,
Exclude Flights	List of excluded flights.	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA
FCAs		
Exempt	Flights in listed FCAs are excluded from the TMI.	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA
Departure Groups		
Exempt	Departure groups that will be excluded from the TMI.	AFP, GDP-A, GS-Airport, GS-FCA
Non-Exempt	Departure groups that will be included in the TMI.	AFP, GDP-A, GS-Airport, GS-FCA
Arrival Groups		
Exempt	Arrival groups that will be excluded from the TMI.	GDP-D
Non-Exempt	Arrival groups that will be included in the TMI.	GDP-D,
Departure Airports		
Exempt	Departure airports that will be excluded from the TMI.	AFP, GDP-A, GS-Airport, GS-FCA
Non-Exempt	Departure airports that will be included in the TMI.	AFP, GDP-A, GS-Airport, GS-FCA
Arrival Airports		
Exempt	Flights arriving at the listed airports will be excluded from the TMI.	GDP-D
Non-Exempt	Flights arriving at the listed airports will be included in the TMI.	GDP-D,

Element	Description	Program Type
Flights		
Exempt	Flights that will be excluded from the TMI.	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA
Pre-departure Exempt by	Pre-departure flights departing within the specified time parameters (e.g., Departure Time, Data Time + [number of minutes]) will be excluded from the TMI.	AFP, GDP-A, GDP-D, GS-Airport, GS-FCA
Active Exempt by Arrival Time	Active flights arriving within the specified time parameters (e.g., Data Time + [number of minutes]) will be excluded from the TMI.	AFP, GDP-A

TMI Parameters Display Buttons

Table 36 describes the buttons, icons, and controls used in TMI Display Parameters.

Table 36: TMI Parameters Display alerts buttons, icons, and controls

Button	Name	Description
60-min 🔻	Time Bin	Select the time increments of the display (15-min, 30-min, 60 min)
	Locked	Indicates the Time (UTC) thumbs on the slider bar are locked, which means they move together Click to unlock the thumbs
	Unlocked	Indicates the Time (UTC) thumbs on the slider bar are unlocked, which means they move independently Click to lock the thumbs
Hide	Hide	Collapse the Slot List
Program	Program	Click to show or hide the program rate.
Show	Show	Open the Slot List
Reset	Reset	Reset to default settings
View	View	Open the Slot List

Chapter 16. Runway Configuration

Runway Configuration provides a view of the active and scheduled runway configurations, including the start and end time, name, landing rules, arrival (ARWY) and departure (DRWY) runways, and the airport arrival (AAR) and departure (ADR) rates. The expanded details of a runway includes its AC group. The list of Runway Configurations is automatically updated per the Auto-Update Interval defined in the System Settings' General tab. Note that if the **Pause** button in the main toolbar is selected, the runway data is not updated until the button is re-clicked to resume updates.

Viewing Runway Configurations

Runway Configurations can be accessed via the Data Tools menu or the *Airport Event* tab in Resource Alerts.

To view runway configurations, complete the following steps:

- 1. Open the Runway Configuration view with one of the following methods:
 - Click and select Runway Configuration from the Data Tools menu.

Click (Resource Alerts in the main toolbar). In the upper right corner of the Resource Alerts window, click Runway Configuration Schedule.

The Runway Configuration window opens (see Figure 214). For more information about the data, see "Runway Configuration Data Elements" on page 198.

R	Runway Configuration X							
I	Select Airport.		-					
	Start Time	End Time	Name	Landing Rule	ARWY	AAR	DRWY	ADR
	3) 			315 V			100	
				0	_			
				Cano	201			

Figure 214: Runway Configuration window when first opened

From the Select Altroit (Select Airport) dropdown, select an airport or begin to type the airport code and the smart filter will navigate the list.
 The airport's runway configurations are displayed (see Figure 215).

R	Runway Configuration X							
Y	BBN - BRISBA	NE	-					
	Start Time	End Time	Name	Landing Rule	ARWY	AAR	DRWY	ADR
•	Default	Default	19VMC	VMC	19	25	19	20
•	19/1830	19/2044	14IMC	ILS	14	15	14	15
Ð	19/2215	20/0259	01ILS	ILS	01	22	01	20
	Cancel							

Figure 215: List of runways at a selected airport

3. To view the runway's aircraft types as well as the departure/arrival runways and

capacities, click 🕒 to expand the row.

The row expands (see Figure 216). For more information about the data, see "Runway Configuration Data Elements" on page 198.

Y	'BBN - BRISBA	NE	-					
	Start Time	End Time	Name	Landing Rule	ARWY	AAR	DRWY	ADR
÷	Default	Default	19VMC	VMC	19	25	19	20
	19/1830	19/2044	14IMC	LS	14	15 Runway Type 14 Arrival 14 Departure	14 Rate A 15 LIG 15 HEAVY, JE	15 .C Group ht, turbo et, light, turb
	19/2215	20/0259	01ILS	ILS	01	22	01	20

The **Expand** button toggles to the **Collapse** button

Figure 216: Expanded view of runway configuration

Sorting the Data

You can sort the data in ascending or descending order for the current view. That is, as soon as you close and reopen the window, it reverts to the default sort.

To sort the list, complete the following steps:

1. Roll over the column heading that you want to sort by ascending or descending order.

A dropdown arrow is displayed (see Figure 217).



Figure 217: Roll over column heading reveals the sort arrow

2. Click the dropdown arrow.

The dropdown menu opens and displays the options *Sort Ascending*, *Sort Descending*, and *Columns* (see Figure 218).

Runway Configuration				
YBBN - BRISBANE				
	Start Time	🔐 End Time		
÷	Default	¶∰ Sort Ascending		
÷	19/1830	↓ ^A Sort Descending		
÷	19/2215	🔟 Columns 🛛 🖌		

Figure 218: Dropdown menu

3. Select Sort Ascending or Sort Descending.

The list of runways is sorted according to your selection.

Showing and Hiding Columns

You can configure which columns are shown or hidden in the *current* view. That is, as soon as you close and reopen the window, it reverts to the default display of all available columns.

To configure which columns are displayed, complete the following steps:

1. Roll over any column heading.

A dropdown arrow is displayed (as previously shown in Figure 217).

2. Click the dropdown arrow.

The dropdown menu opens and displays the options *Sort Ascending*, *Sort Descending*, and *Columns* (as previously shown in Figure 218).

3. From the dropdown menu, select Columns.

A list of the columns is displayed with a checkbox for each column (see Figure 219).

The check indicates the column is shown and the absence of a check indicates the column is hidden.



Figure 219: List of columns

4. In the list of columns, select a column heading to show it or unselect a column heading to hide it.

The column is added or removed from the display based on your selection or deselection.

Runway Configuration Data Elements

Table 37 describes the Runway Configuration data elements.

Data Element	Description
Start Time	The start time of the runway configuration in DD/HHMM format
End Time	The end time of the runway configuration
Name	Name of predefined configuration
Landing Rule	ILS – Instrument Landing System IFR – Instrument Landing Rules IMC – Instrument Meteorological Conditions PRM – Precision Runway Monitor VFR – Visual Flight Rules VMC – Visual Meteorological Conditions
ARWY	Arrival runway identifier
AAR	Airport Arrival Rate
DRWY	Departure runway identifier
ADR	Airport Departure Rate

Table 37: Runway	Configuration	data elements
------------------	---------------	---------------

Data Element	Description
Runway	The runway identifier
Туре	Type of runway: Arrival or Departure
Rate	Runway capacity: AAR or ADR
AC Group	Aircraft Equipment Classification (e.g., Heavy, Jet, Light, Turbo, or Unknown)

Runway Configuration Buttons

Table 38 describes the buttons, icons, and controls used in Runway Configuration.

Button	Name	Description
×	Close or X	Close the window
Ð	Plus Sign / Expand	Expand the row to display more data
	Minus Sign / Collapse	Collapse the expanded view
Cancel	Cancel	Close the window

Table 38: Runway Configuration buttons

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Chapter 17. Data Source Report

The Flight Data Source Report component displays arrival flight counts for the current and following operational day. The counts are based on the latest source of data for each flight as provided by airline marketing schedules (e.g., the Official Airline Guide [OAG]), flight schedule uploads, and flight plans). The report is available to Super Users and Flow Managers.

Flight Data Source Report Window

To open the Flight Data Source Report window, complete the following steps:

1. Click E and select Data Source Report from the Data Tools menu.

 Player
 X

 Flagd Duts Source Report - (data relineved at 2010)

 X

 Classes

 Classes

 Classes

 State.out

 State.out

The Flight Data Source Report window opens (see Figure 220).

Figure 220: Flight Data Source Report window

The heading has the date and time of the data retrieval in DD/HHMM format.

The left-side panel displays two collapsed folders. One folder is named with the date of the current operational date and the other is named with the date of the following operational day.

2. Click **C** to expand the operational day folder.

The list of airports and counts is displayed with the Scheduled/Airline/Planned counts (e.g., YSSY 141 / 0 / 0).

3. Select an airport to view the scheduled flights.

The airlines are listed in the lower left panel where the matrix presents their Scheduled, Airline, and Planned counts (see Figure 221).

Flight Data Source Report - (data retrieved at: 22/0517)									
23/051	7								
▼									
C YS	T YSSY (141 / 0 / 0)								
🗅 YM	T YMML (103 / 0 / 0)								
🗋 YB	P YBBN (47 / 0 / 0)								
D YP	T YPPH (55 / 0 / 0)								
🗅 YS	YSCB (7 / 0 / 0)								
C) YB	T YBCG (6 / 0 / 0)								
C YB	T YBCS (6 / 0 / 0)								
C YP	T YPAD (18 / 0 / 0)								
	25								
	Scheduled	Airline	Planned						
QFA	114	0	0						
VOZ	13	0	0						
REX	0	0	0						
RXA	1	0	0						

Figure 221: The lower panel shows counts

4. In the lower panel, select an airline to view its scheduled flights.

The flights are loaded into the right-side panel (see Figure 222). For more information about the data, see Table 39 in "Data Source Report Data Elements" on page 204).

E-2209577 C-1907(431/0)(0) C-1908(437/0)(0) C-1908(437/0)(0) C-1908(437/0)(0) C-1906(387/0)(0) C-190(387/0)(0) C-190(387/0)(0) C-190(387/0)(0) C-190(387/0)(0)		ACIO ACA33 E4012 EA018 EA08	Major Oria Oria Oria	CHAR CHAR	0007 220045	COST	EDFT	ADEB	But	снт	ENT.	EIET
HARD (1858(8) HARD (1858(8) HARD (ACA33 EA012 EA018 EA08 UNEA18	0/A 0/A 0/A	CYVR KLAX	220045	Lover	1 mart		1000	Name of Street	041	
 Mean, (1032020) Masca (423020) Macca (423020) Macca (423020) Macca (423020) Macca (423020) Macca (423020) 		EAQ12 EAQ18 EAQ18 EAQ18	0% 0% 0%	KLAX	220045						and shall	_
C 14440 (182810) C 14660 (6010) C 19660 (6010) C 19600 (601		EAQ15 EAQ15 EAQ8 UNE418	0%	NLAX.	210724		220051	TOOT			221331	
C) Aavo (assaila) C) Aaca (evoid) D) Aloca (evoid) C) Aloca (evoid) C) Aloca (evoid) C) Aloca (evoid)		EAG8	004				210130	TSST			22/1147	
С мино (назана) С макса (екото) С макса (екото) С макса (укото)		LACA18		****	22/0100		22/0104	TOOT			221119	
C) YBCC (87919) C) YBCC (87919) C) YBCC (87919)		CDAE 410	<u> </u>	NDFW	210015		212021	Y557			2211025	
		Statistics of the local division of the loca	OR N	VTBS	220604		22/96/10	YSSY			22/1347	
C webstern		BAW15	QFA.	#555	22/0538		2210544	7357			221206	
		CALSE	094	1934	220548		2210403	RCIP			22/1324	
		CPA111	094	11001	22/04/34		22/0440	YSSY			22(1213	
		CIW101	OF A	11081	22/08/28		22/04/35	1551			22/1706	
		CPA101	O/A	Vieel	22/0658		2210705	YSSY			22/1438	
		MA1143	QFA	TANK	22/6458		220505	Y35Y			22/1147	
		E4021	OFA	YESY	22/01/54		22/0616	RJMA			22/1409	
		EAG/421	QEA	1557	220634		22/04/52	YMME.			226735	
		EA07523	OFA	VDSV	220541		22/0607	NEM			22/0828	
		CPA138	OFA.	YSSY	22/01/58		22/0612	WHH			22/1338	
		EAG2	094	OMDIE	21(2333		2112339	YSSY			22/1154	
		ENG24	QFA .	VTBS	22/0449		22/04/55	YSSY			22/12/14	
		EAQ128	OFA .	11001	22/0519		22/05/25	1557			22/1255	
		MAS123	QFA:	WMKK	220904		220910	7557			22/1982	
Scheduled Arline	Planed	JS128	OFA	vtse	220953		22/08/19	YSSY			22/1423	
£A 114 B		KAL121	OFA	IIKSI	22/0338		220344	VSDY.			22/12/12	
		J01966	OFA	19994	220834		220848	YSSY			22/1207	
a i i		EA022	QFA	RJAA	22/0423		22/04/29	YSSY			22/1222	
04A 1 B		CALST	OFA	RCTP	22/5834		22/08/40	TSST			22/1607	

Figure 222: Scheduled flights for selected airline displayed in the right-side panel

Sorting the Data

You can sort the data in ascending or descending order for the current view. That is, as soon as you close and reopen the window, it reverts to the default sort. This functionality is the same throughout the application. For more information, see "Sorting the Data" on page 196 in Chapter 16: Runway Configuration.

Showing and Hiding Columns

You can configure which columns are shown or hidden in the *current* view. That is, as soon as you close and reopen the window, it reverts to the default display of all available columns. This functionality is the same throughout the application. For more information, see "Showing and Hiding Columns" on page 203 in Chapter 16: Runway Configuration.

Exporting Data

You can export the data to a CSV file.

To export the data to a CSV file, complete the following steps:

1. In the upper right corner, click the download button

A CSV file is created with the format: *flight-list-[name]-YYYYMMDDhhmm.csv*

A dialog box with file save/open options opens (see Figure 223). This dialog box will vary depending on your browser and operating system.

Opening flight-list-ys	sy-201711261815.csv	\times				
You have chosen to	open:					
🚯 flight-list-yssy	-201711261815.csv					
which is: Microsoft Excel Comma Separated Values File (1.6 KB) from: https://dm.metronaviation.com						
What should Firefox do with this file?						
Open with	Microsoft Excel (default)					
○ Save File						
Do this automatically for files like this from now on.						
	OK Cancel					

Figure 223: Example of Open/Save dialog box

Select the option to either open or save the file and click OK.
 The CSV file is either opened or saved to your default folder for downloads.

Data Source Report Data Elements

Table 39 describes the Data Source Report's data elements.

Data Element	Description
ACID	Aircraft Identifier
Major	The flight's major
ADEP	Departure Airport
IOBT	Initial Off Block Time in DD/HHMM format
EDFT	Estimated Departure Fix Time
ADES	Arrival Airport
Slot	Slot
CIBT	Calculated In Block Time in DD/HHMM format
EAFT	Estimated Arrival Fix Time in DD/HHMM format
EIBT	Estimated In Block Time in DD/HHMM format
Program Delay	Amount of delay created by a TMI
Initial Delay	Amount of initial delay

Data Source Report Buttons and Controls

Table 40 describes the buttons, icons, and controls used in Data Source Report.

Button	Name	Description
•	Expand Folder	Expand the closed operational day folder to view the airports and airline counts
▼ 🗁	Collapse Folder	Collapse the expanded operational day folder
	Data File	Data file for each airport
*	Export	Export data to CSV file
Cancel	Cancel	Close the window without uploading data
×	Close or X	Close the window

Table 40: Data Source Report buttons and controls

Chapter 18. System Settings

The default settings for data update intervals, layout configurations, Flight List, Demand Graph, Work Views, Maps, Substitution List, and Alerts are defined in System Settings. Note that updates made in System Settings will dictate the configuration of components created in the future.

There are seven tabs: General, Flight List, Demand Graph, Work Views, Map, Substitution List, and Alerts (see Figure 224). The active tab is highlighted blue. In the following figure, *General* is the active tab.



Figure 224: System Settings tabs

General Settings

On the General tab, update the data update interval, and the default layout, position, and default module (see Figure 225).

System Settings
General Flight List Demand Graph Work Views Map Substitution List Alerts
Auto-Update Interval: 🗧
Default Layout: Single Panel 🔻
Default Single Panel -
Default Module: Demand Grapt 👻
Save Reset to System Default Cancel

Figure 225: General settings

- **Auto-Update Interval**: Define how often the data is updated. Move the slider bar's thumb (orange square) or enter a number between 30 and 900 seconds.
- **Default Layout**: Define the default layout of the panels. The dropdown list includes a diagram of each layout.
- **Default Position**: Define the default position based on the *Default Layout* selection.

• **Default Module**: Select which module (Flight List, Demand Graph, or Edit Mode) is selected by default on the Home Page (see Figure 226).



Figure 226: Select Home Page default module

The Default Module selection is reflected on the Home Page dropdown (see Figure 227). In the following example, Flight List was selected in System Settings as the Default Module.

Select Airport or FCA	-	Go

Figure 227: Module dropdown menu on Home Page

• **Reset to System Defaults**: Replace your settings for all components with the settings that were set during the installation of Harmony Web. For more information, see "Resetting Settings to System Default" on page 216.

Flight List Settings

On the Flight List tab, configure the default number of records per page and select which airport or airspace columns are displayed when a Flight List is opened for every component created in the future. (see Figure 228).

Syste	em Settings			×	
Ger	neral Flight List Deman	d Graph Work Views Map	Substitution List Alerts		
irport	Records Per Page; 100 👻	3			
×	Available Columns		Displayed Columns		
pace	Name 1	Description	Name	Description	
Airs	AC Reg	Aircraft Registration	ACID	Aircraft ID	
	AC Type Group	Base Aircraft Type Group	CNX	Cancelled	
	AEET	Actual Elapsed En Route	ADEP	Departure Airport	
	AFix	Arrival Fix	ADES	Arrival Airport	
	AIBT	Actual In Block Time	AC Type	Aircraft Type	
	AOBT	Actual Off Block Time	SOBT	Marketing Schedule Off Bl	
	ARwy	Arrival Runway	EOBT	Estimated Off Block Time	
	BIBT	Base Estimated In Block	ETOT	Estimated Take Off Time	
	BLDT	Base Estimated Landing	ATOT	Actual Take Off Time	
	BOBT	Base Estimated Off Bloc	ELDT	Estimated Landing Time	
	BTOT	Base Estimated Take Off	ALDT	Actual Landing Time	
	CEET	CLDT - CTOT	FPL Route	Flight Plan Route	
	CIBT	Calculated In Block Time			
	CLDT	Calculated Landing Time			
	COBT	Calculated Off Block Time			
	Cal Olas Land	Controlling Clat Wold Elan 💆			
		Save Reset to Syst	em Default Cancel		

Figure 228: Flight List settings

- **Records Per Page**: Define the default number of records per page (i.e., 50, 100, 250, or All)
- Airspace / Airport: Click Airspace or Airport to list the corresponding columns (see Figure 229).



Figure 229: Columns correspond with selected element: Airport or Airspace

• Available Columns / Displayed Columns: Define which columns are displayed by default. For information about moving columns, see "Managing Columns (Flight List Tool)" on page 48.

Demand Graph Settings

On the Demand Graph tab, for airports and airspace, the selected data type (arrival, departure, or both), the time bin, and whether to show capacity and cancelled flights will be the default for all Demand Graphs created in the future (see Figure 230).
System Settings	×
General Flight List D	emand Graph Work Views Map Substitution List Alerts
Airport	
Graph Type Status Cata Source AC Type Group	Data Type: 🕼 Arrival 🐨 Departure 🗋 Total Time Bin: 60-min 💌
Carrier AFIX DFIX	Show Capacity: 🗹
Airspace Graph Type	Data Type: 😼 Total
 Status Data Source AC Type Group Carrier 	Time Bin: 60-min 👻 Show Capacity: 🗹 Show Cancelled 🛛 🐨
	Save Reset to System Default Cancel

Figure 230: Demand Graph settings

Airport

- **Graph Type** Select the types of graphs available for display (i.e., Status, Data Source, AC Type Group, Carrier, FIX, and DFIX).
- **Data Type** Select the type of data that the bars display (i.e., Arrival flights, Departure flights, Total demand).
- **Time Bin** Select the time increment (i.e., 15-min, 30-min, 60-min) to display the graph capacity and demand information.
- Show Capacity Select to show the capacity.
- Show Cancelled Select to show the cancelled flights.

Airspace

• **Graph Type** – Select the types of graphs available for display (i.e., Status, Data Source, AC Type Group, and Carrier,).

- Data Type Total demand is selected by default.
- **Time Bin** Select the time increment (i.e., 15-min, 30-min, 60-min) to display the graph capacity and demand information.
- Show Capacity Select to show the capacity.
- **Show Cancelled** Select to show the cancelled flights.

Work Views Settings

The Work Views tab displays all system-defined Work Views as well as any Work Views that you created (see Figure 231).

System Settings						×
General Flight	List Demand G	Graph Work Vie	ws Map Su	ubstitution List	Alerts	
Show System Defi	ned Work Views: 🛛	z				
Name	Panel 1	Panel 2	Panel 3	Panel 4	Default	
Airline FOC	(U) FL: YSSY	(R) DG: YBBN	(L) DG: YSSY	(M) DG: YMML	0	•
Airport - YMML	(D) DG: YMML	(U) DG: YMML	(L) FL: YMML		0	•
ATFM - Home	(LU) DG: YS	(LD) DG: YB	(RU) DG: Y	(RD) DG: YP	0	•
Tower - YBBN	(D) DG: YBBN	(U) DG: YBBN	(L) FL: YBBN		D	•
ATFM Detail	(D) DG: YSSY	(U) DG: YSSY	(L) FL: YSSY		0	•
COBT Comp	(L) FL: YSSY	(U) FL: YSSY	(D) DG: YSSY		O	•
L: Left, R: Right, U: Up, D: Down, M: Middle, C: Single Panel, LU: Left-Up, LD: Left-Down, RU: Right-Up, RD: Right- Down FL: Flight List, DG: Demand Graph						
	Sa	ve Reset to Syst	em Default Cano	cel		

Figure 231: Work View settings

- Show System Defined Work Views: Select if you want the list to show the system-defined Work Views. Unselect if you want to hide the system-defined Work Views.
- Work View List: Lists the Work View name, the layout position of the element (panels 1–4), and the type of element. The abbreviations are defined in the legend below the Work View matrix (see in Figure 231).
- **Default Check box:** Is selected if the Work View was saved as the Default (see "Managing Columns (Flight List Tool)" on page 48). Unselect the box if you do not want it to be the default Work View.
- **Remove** : Removes the Work View from Harmony Web (system settings and Home Page)

Deleting Work Views

User-created Work Views can be deleted only from System Settings. System-defined Work Views cannot be deleted. The delete buttons for system-defined Work Views are inactivated (grayed out).

To delete a Work View, complete the following steps:

- 1. Go to the Work View tab.
- 2. Locate the Work View that you want to delete, and at the end of the row, click \Box .

The Work View is deleted from the list and from the Home Page.

Map Settings

The Map tab defines how often the map is updated and how to manage "stale" flights. When Harmony Web does not receive flight updates, the flight is said to be "stale" and remains in the same position. Stale flights are represented by an outline of the icon. The Map tab also defines the default location that is displayed when the map is opened and the map's zoom level (see Figure 232).

System Settings	×
General Flight List Demand Graph Work Views Map Substitution List Alerts	
Intervals	
Map Update: 30	seconds
Stale Visual: 180	seconds
Stale Remove: 600	seconds
Remove Stale 🕼 Flights:	
Default View	
Latitude: -3.27	
Longitude: 104.19	
Zoom: 🚍 🗾 🚺	6
Icon Size:	20
Course Description Default	
Save Reserio System Derault Cancer	

Figure 232: Map tab

- Intervals
 - **Map Update**: Defines how often the map data is updated. Move the slider bar's thumb or enter a numeric value up to 3600 seconds.

- **Stale Visual**: Defines how long before a flight is considered "stale." That is, how long since Harmony last received any updates for the flight. Move the slider bar's thumb or enter a numeric value up to 3600 seconds.
- **Stale Remove**: Defines how long a stale flight should remain on the map. The Remove Stale Flight option must be selected in order to change this value. Once the option is selected, you can move the slider bar's thumb or enter a numeric value up to 3600 seconds.
- Default View:
 - Latitude and Longitude: Lists the coordinates (in decimal degrees) of the default location, that is, the location that is displayed when you open the map. This is based on updates made in System Settings or the default location saved in Manage Locations (see "Saving a Default Location (Map View)" on page 147).
 - **Zoom**: Defines the zoom level set in the Map component. Change the zoom level with one of the following methods: move the slider bar's thumb, enter a numeric

value up to 12, or click and to decrease or increase the value.

• **Icon Size**: Adjust the size of aircraft on the map. Move the slider bar's thumb, use the + or - buttons, or enter a numeric value up to 25.

Substitutions List Settings

On the Substitutions List tab, select which airport or airspace columns are displayed when a Flight List is opened for every component created in the future. (see Figure 233).

Along the upper-left border, click **Airspace** or **Airport** to list the corresponding columns.

Syste	em Settings				×
Gen	eral Flight List Deman	d Graph Work Views Map	Substitution List Alerts		
Tig I	Available Columns		Displayed Columns		
ž	Name †	Description	Name	Description	
8	AC Reg	Aircraft Registration	Major	Major Operator	
rspa	AC Type	Aircraft Type	ACID	Aircraft ID	
×.	AC Type Group	Base Aircraft Type Group	ADEP	Departure Airport	
	AEET	Actual Elapsed En Route	ADES	Arrival Airport	
	AENTRY	Actual FCA Entry Time	Ctl Type	Control Type	
	AEXIT	Actual FCA Exit Time	EOBT	Estimated Off Block Time	
	AFix	Arrival Fix	ETOT	Estimated Take Off Time	
	AIBT	Actual In Block Time	EENTRY	Estimated FCA Entry Time	
	ALDT	Actual Landing Time	ELDT	Estimated Landing Time	
	AOBT	Actual Off Block Time	COBT	Calculated Off Block Time	
	ARwy	Arrival Runway	CTOT	Calculated Take Off Time	
	ATOT	Actual Take Off Time	Program Delay	Program Delay	
	BEntry	Base Estimated Entry Time			
	BExit	Base Estimated Exit Time			
	BIBT	Base Estimated In Block			
	BLDT	Base Estimated Landing			
	BOBT	Base Estimated Off Bloc			
	BTOT	Base Estimated Take Off			
	PEET				
		Save Reset to S	ystem Default Cancel		

Figure 233: Substitutions Lists tab

Alerts Settings

On the Alerts tab, configure how you want to be notified of Resource alerts (see Figure 234). Note that the set the Flight Alert Filter and COBT Compliance Window settings are not applicable to Harmony Web's functionality.

System Settings	×
General Flight List Demand Graph Work Views Map Substitution List Alerts	
Show Alerts Pop-up: 🗹	
Pop-Up Duration: 5 seconds	
Alerts Expire After:	
Flight Alert Filter	1
Majors Only:	
Flight Compliance:	
Thresholds (CTOT - ATOT)	
5 minutes early to 5 minutes late	
COBT Compliance Window:	
Thresholds (COBT - NOW) 5 minutes early to 9 minutes late	
Save Reset to System Default Cancel	

Figure 234: Alert settings

Top Section

- Show Alerts Pop-up Select to display pop-up alerts.
- **Pop-Up Duration** Move the slider bar's thumb (orange square) to set how many seconds (1–60) the pop-up is displayed.
- Alerts Expire After Move the slider bar's thumb to set how many hours (1–24) an alert remains in the list.

Flight Alert Filter

• **Major Only** – If checked, this indicates that the user has the RESTRICTED_MAJOR role; therefore, alerts are generated only for the user's matching major.

 Flight Compliance Thresholds (COBT - NOW) – Move the thumbs to set the flight compliance range for alerts. On the left side of the slider bar, select the number of early minutes (-30–0). On the right side of the slider bar, select the number of late minutes (0–30). The default range is 5 minutes early and 5 minutes late.

COBT Compliance Window

- Thresholds (COBT NOW) Move the thumbs to set the COBT compliance range for alerts. On the left side of the slider bar, set the number of early minutes (-30–0). On the right side of the slider bar, set the number of late minutes (0–30).
 - **Note:** When you change the thresholds, existing alerts are still shown in the Flight Alerts' Compliance Alert tab even though they no longer meet the new criteria.

Resetting Settings to System Default

You can reset all settings for all components to the system defaults that were set during the installation of Harmony web. The Reset to System Default button at the bottom of each tab, will reset all settings for the Flight List, Demand Graph, Work Views, Map, Substitution List, and Alerts.

Note: The Reset to System Default function will delete any Work Views that you created.

To reset all the settings for all components, complete the following steps:

1. On any tab in System Settings, click

Reset to System Default

The following warning message is displayed for you to confirm the reset (see Figure 235).



Figure 235: Reset to System Default warning message

2. Click **Yes** to confirm the reset of all components, or click **No** to cancel the reset.

All your settings are removed and Harmony Web returns to the settings set during installation.

System Settings Buttons and Controls

Table 41 describes the buttons used in System Settings.

Button	Name	Description
Save	Save	Save system settings for all tabs and closes System Settings.
Reset to System Default	Reset to System Default	Click to reset to system settings that were configured during Harmony Web installation.
		Warning : This will reset all settings for all components to the settings that were set during the installation of Harmony Web.
Cancel	Cancel	Cancel unsaved changes and close System Settings
×	Close	Close without saving updates
0	Remove	Work Views tab: Remove Work View from Harmony Web system
Airport	Airport	Flight List tab: Display columns unique to an airport
Airspace	Airspace	Flight List tab: Display columns unique to an airspace
	Decrease	Map tab: Decrease zoom level
+	Increase	Map tab: Increase zoom level

Table 41:	System	Settings	Buttons
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Appendix A. Flight Details Data Elements

Table 42: Flight Details Data Elements

Data Element	Description
Flight Information	
ACID	Aircraft ID that identifies the aircraft operator and flight number
Major	The aircraft operator that controls the flight
АС Туре	Aircraft Type
AC Type Group	Aircraft equipment classification (e.g., Heavy, Jet, Light, Turbo, Unknown)
AC Reg	Aircraft Registration
Delay Status	ALD – Aircraft Operator Delay GDP – Delayed by CTOT/CLDT GSD – Delayed by Ground Stop TOD – Time Out Delayed past the flight's ETD
Alarm	CC – CLDT non-compliance: Flights arriving more than 5 minutes before or more than 5 minutes after their Control Time of Arrival.
	EC – CTOT non-compliance: The departure boundaries are more than 5 minutes before or more than 5 minutes after their estimated departure clearance time.
	EA – EET vs. Actual Value: The actual flight time is greater than a specified value, but the flight status is not cancelled. The default value is 15 minutes.
	SF – Spurious Flight: Spurious Flights or flights submitted as SI cancellations with no corresponding entries in the OAG.
	CF – Cancelled but Flew: Flights that were cancelled but later flew without the flight being reinstated properly.
FPL Route	Lists the route from ADEP to ADES
Flight Leg Informatio	n
Airport	Departure and Arrival airports
Runway	Departure and Arrival runways
Fix	Departure (DFIX) and Arrival (AFIX)
Estimated Fix Time	Estimated Arrival and Departure Fix Times
LTOD	Length of Time Out Delay (in minutes)
Estimated (E) Flight I	Event Times
EOBT	Estimated Off Block Time

Data Element	Description
ETOT	Estimated Take Off Time
DFix	Departure Fix
Entry	Entry
Exit	Exit
AFix	Estimated Arrival Fix
ELDT	Estimated Landing Time
EIBT	Estimated In Block Time
EET	Estimated En Route Time
Actual (A) Flight Even	nt Times
AOBT	Actual Off Block Time
ATOT	Actual Take Off Time
DFix	Departure Fix
Entry	Entry
Exit	Exit
AFix	Arrival Fix
ALDT	Actual Landing Time
AIBT	Actual In Block Time
AEET	Actual Estimated En Route Time
Calculated (C) Flight	Event Times
COBT	Calculated Off Block Time
СТОТ	Calculated Take Off Time
Dfix	Departure Fix
Entry	Entry
Exit	Exit
AFix (CAFT)	Calculated Arrival Fix Time
CLDT	Calculated Landing Time
CIBT	Calculated In Block Time
CEET	Calculated Estimated En Route Time
Flight Plan (P) Flight	Event Times
POBT	Flight Plan Off Block Time
PTOT	Flight Plan Take Off Time
DFix	Departure Fix
Entry	Entry
Exit	Exit
AFix	Arrival Fix
PLDT	Flight Plan Landing Time
PIBT	Flight Plan In Block Time
PEET	Flight Plan Estimated En Route Time

Data Element	Description
Aircraft Operator (L)	Flight Event Times
LOBT	Aircraft Operator Off Block Time
LTOT	Aircraft Operator Take Off Time
DFix	Departure Fix
Entry	Entry
Exit	Exit
AFix	Arrival Fix
LLDT	Aircraft Operator Landing Time
LIBT	Aircraft Operator In Block Time
LEET	Aircraft Operator Estimated En Route Time
Strategic Airport Slot	(R) Flight Event Times
ROBT	Strategic Airport Off Block Time
RTOT	Strategic Airport Take Off Time
DFix	Departure Fix
Entry	Entry
Exit	Exit
AFix	Arrival Fix
RLDT	Strategic Airport Landing Time
RIBT	Strategic Airport In Block Time
REET	Strategic Airport Estimated En Route Time
Marketing Schedule	S) Flight Event Times
SOBT	Marketing Schedule Off Block Time
STOT	Marketing Schedule Take Off Time
DFix	Departure Fix
Entry	Entry
Exit	Exit
AFix	Arrival Fix
SLDT	Marketing Schedule Landing Time
SIBT	Marketing Schedule In Block Time
SEET	Marketing Schedule Estimated En Route Time
Initial (I) Flight Event	Times
IOBT	Initial Off Block Time
ITOT	Initial Take Off Time
DFix	Departure Fix
Entry	Entry
Exit	Exit
AFix	Arrival Fix
ILDT	Initial Landing Time
IIBT	Initial In Block Time

Data Element	Description
IEET	Initial Estimated En Route Time
Earliest Aircraft Oper	ator (EL) Flight Event Times
ELOBT	Earliest Aircraft Operator Off Block Time
ELIBT	Earliest Aircraft Operator Take Off Time
DFix	Departure Fix
Entry	Entry
Exit	Exit
AFix	Arrival Fix
ELLDT	Earliest Aircraft Operator Landing Time
ELIBT	Earliest Aircraft Operator In Block Time
ELEET	Earliest Aircraft Operator Estimated En Route Time
Original (O) Flight Ev	ent Times
OOBT	Original Off Block Time
OTOT	Original Take Off Time
DFix	Departure Fix
Entry	Entry
Exit	Exit
AFix	Arrival Fix
OLDT	Original Landing Time
OIBT	Original In Block Time
OEET	Original Estimated En Route Time
Base (B) Flight Event	Times
BOBT	Base Off Block Time
BTOT	Base Take Off Time
DFix	Departure Fix
Entry	Entry
Exit	Exit
AFix	Arrival Fix
BLDT	Base Landing Time
BIBT	Base In Block Time
BEET	Base Estimated En Route Time
Original Calculated (OC) Flight Event Times
OCOBT	Original Calculated Off Block Time
OCIBT	Original Calculated Take Off Time
DFix	Departure Fix
Entry	Entry
Exit	Exit
AFix	Arrival Fix
OCLDT	Original Calculated Landing Time

Data Element	Description
OCIBT	Original Calculated In Block Time
OCEET	Original Calculated Estimated En Route Time
Traffic Management I	nitiatives
Controlling TMI	Legend that indicates the controlling TMI is outlined with a green border
Name of TMI	Airport/FCA name (DD/HHmm - DD/HHmm)
Slot Time, Runway	The flight's slot time and runway (for Runway GDP)
Control Type	AFP, GDP-A, GDP-D
Control Exempt	Indicates whether flight was exempt from departure delay in the most recent TMI event. Checked means Yes and unchecked means No.
Pop-Up	Indicates whether the flight is a pop-up. Checked means Yes and unchecked means No.

Appendix B. Flight List Data Elements

Table 43: Flight List Data Elements

Data Element	Description
AC Reg	Aircraft Registration
АС Туре	Aircraft Type
AC Type Group	Base Aircraft Type Group
ACID	Aircraft ID
ADEP	Departure Airport
ADES	Arrival Airport
AEET	Actual Elapsed En Route Time
AFix	Arrival Fix
AIBT	Actual In Block Time
Airborne Max Delay	Airborne Max Delay
ALDT	Actual Landing Time
AOBT	Actual Off Block Time
ARwy	Arrival Runway
ATOT	Actual Take Off Time
BIBT	Base Estimated In Block Time
BLDT	Base Estimated Landing Time
BOBT	Base Estimated Off Block Time
BTOT	Base Estimated Take Off Time
CAFT	Calculated Arrival Fix Time
CEET	CLDT - CTOT
CIBT	Calculated In Block Time
CLDT	Calculated Landing Time
CNX	Cancelled
COBT	Calculated Off Block Time
COBT - NOW	COBT - NOW (minutes)
COBT - IOBT	COBT - IOBT (minutes). Shows Initial Delay (ground delay)
Compliance	ATOT-CTOT
Ctl Slot	Controlling Slot
Ctl Slot Hold	Controlling Slot Hold Flag
Ctl TMI ID	Controlling TMI Identification
Ctl Type	Control Type
СТОТ	Calculated Take Off Time
DFix	Departure Fix
DRwy	Departure Runway
EAFT	Estimated Arrival Fix Time

Data Element	Description
EDFT	Estimated Departure Fix Time
EEET	Estimated Elapsed En Route Time
EIBT	Estimated In Block Time
ELDT	Estimated Landing Time
Elem Slot	Element Slot
Elem Slot Hold	Element Slot Hold Flag
Elem TMI ID	Element TMI Identification
ELIBT	Earliest Aircraft Operator In Block Time
ELLDT	Earliest Aircraft Operator Landing Time
ELOBT	Earliest Aircraft Operator Off Block Time
ELTOT	Earliest Aircraft Operator Take Off Time
Email	Contact Email
Entry GCD	Distance To FCA
EOBT	Estimated Off Block Time
ETOT	Estimated Take Off Time
FID	Unique Flight ID
Flight State	Flight State
FPL Route	Flight Plan Route
Gate Max Delay	Gate Max Delay
IEET	Initial Estimated Elapsed Time
IIBT	Initial In Block Time
ILDT	Initial Landing Time
IOBT	Initial Off Block Time
ITOT	Initial Take Off Time
LEET	Aircraft Operator Estimated Time
LIBT	Aircraft Operator In Block Time
LLDT	Aircraft Operator Landing Time
LOBT	Aircraft Operator Off Block Time
LOBT-COBT	LOBT- COBT (in minutes) If a flight is moved early, this shows airlines users that have moved to an earlier timeslot
LTOD	Length of Time Out Delay
LTOT	Aircraft Operator Take Off Block Time
Major	Major Operator
Mobile	Contact Mobile Phone Number
Mobile Carrier	Contact Mobile Carrier Service
OCIBT	Original Calculated In Block Time
OCLDT	Original Calculated Landing Time
OCOBT	Original Calculated Off Block Time
OCTOT	Original Calculated Take Off Time

Data Element	Description
OIBT	Original In Block Time
OLDT	Original Landing Time
OOBT	Original Off Block Time
ОТОТ	Original Take Off Time
PEET	Flight Plan Estimated Elapsed Time
PIBT	Flight Plan In Block Time
PLDT	Flight Plan Landing Time
POBT	Flight Plan Off Block Time
Pop-up	Flight is a pop-up flight
Program Delay	Program Delay
PTOT	Flight Plan Take Off Time
REET	Strategic Airport Slot Estimated Elapsed Time
RIBT	Strategic Airport Slot In Block Time
RLDT	Strategic Airport Slot Landing Time
ROBT	Strategic Airport Slot Off Block Time
RTOT	Strategic Airport Slot Take Off Time
SEET	Marketing Schedule Estimated Elapsed Time
SIBT	Marketing Schedule Block Time
SLDT	Marketing Schedule Landing Time
SOBT	Marketing Schedule Off Block Time
Status	Flight Status
STOT	Marketing Schedule Take Off Time
Surface Max Delay	Surface Max Delay
TOD	Time Out Delay (Y or N)

Appendix C. User Roles and Permissions

Your assigned role determines your system access and which actions you are authorized to perform in Harmony Web, Harmony Client, and ESM. This section provides a comparative view of user roles in these Harmony for ANSPs systems. Note that Aircraft Operator's update actions are restricted to its major and subcarriers.

Roles in Harmony for ANSPs Web

All roles have Harmony Web access and capabilities. Table 44 lists the Harmony Web functionality specific to each role. Note that Aircraft Operator's update actions are restricted to its major and subcarriers and that the Super User has enhanced capabilities.

Element	Description	Super User	Flow Manager	ANSP User	Aircraft Operator	Read Only
AMEND_FLIGHT_ROUTE	Amend Flight Route	Х	Х			
CANCEL_FLIGHT_FX	Cancel Flight (FX)	Х	Х		Х	
CANCEL_FLIGHT_OVERRIDE	Super User Cancel Flight Override	Х				
CANCEL_FLIGHT_RM	Remove Cancel Flight (RM)	Х	Х			
CANCEL_FLIGHT_SX	Suspend Cancel Flight (SX)	Х	Х			
CONTROL_OVERRIDE_ADD_FLIGHT	Add Flight to TMI Override	Х				
CONTROL_OVERRIDE_FREE_SLOT	Super User Free Slot from TMI Override	Х				
CREATE_FLIGHT	Create Flight	Х	Х		Х	
IMPLEMENT_SLOT_TMIS	Implement TMIs (Proposed/Actual)	Х	Х			
LOAD_ESM	Load Client ESM component				Х	
LOAD_HARMONY_CLIENT	Load Harmony Client	Х	Х	Х	Х	Х
LOAD_HARMONY_WEB	Load Harmony Web	Х	Х	Х	Х	Х
LOAD_WEATHER	Load Web's Map Weather	Х	Х	Х	Х	Х
MANAGE_AIRPORT_CAPACITY	Manage Airport Capacity (AAR/ADR)	Х	Х			
MANAGE_AIRPORT_RWY_CFG	Manage Runway Configurations	Х	Х			
MANAGE_ALERTS	Manage Alerts	Х	Х	Х	Х	Х
MANAGE_DISPLAY_PROFILE	Manage Display Profile	Х	Х	Х	Х	Х
MANAGE_FCA	Manage FCAs (Create/Edit/Delete)	Х	Х	Х		
MANAGE_FCA_CAPACITY	Manage FCA Capacity (AAR)	Х	Х			
MODEL_DECISION_TMIS	Model Decision Support TMIs	Х	Х			
MODEL_SLOT_TMIS	Model TMIs (New/Revise/Purge/Comp)	X	Х			

Table 44 [.] Harmon	v Web	role	functionality	/ comparison
	y weed	1016	runctionality	companson

Element	Description	Super User	Flow Manager	ANSP User	Aircraft Operator	Read Only
QUERY_AVIATION_RESOURCE	Query Aviation Resource	Х	Х	Х	Х	Х
QUERY_FLIGHT	Query Flight	Х	Х	Х	Х	Х
QUERY_TMI	Query TMI	Х	Х	Х	Х	Х
RESTRICTED_MAJOR	Restricting other roles to user's Major				Х	
SUBSTITUTION_ADVANCED	Advanced Substitution	Х	Х		Х	
SUBSTITUTION_OVERRIDE_ACTIVE_F LT	SU Active Flight ETA Substitution Override	Х				
SUBSTITUTION_OVERRIDE_MAJOR_C HECK	SU Swap Any Major	Х	Х			
SUBSTITUTION_OVERRIDE_MIN_DEP_ NTF	SU Min Dep Notification Substitution Override	Х	Х		Х	
SUBSTITUTION_SIMPLE	Simple Substitution	Х	Х		Х	
UNASSIGNED_SLOT_REQUEST	Unassigned Slot Request				Х	
UPDATE_FLIGHT	Update flight's ACID, ACREG, AC TYPE, Contact Info data	Х	Х		Х	
UPDATE_FLIGHT_ACTUALS	Update flight's actual times	Х	Х	Х		
UPDATE_FLIGHT_AIRLINE	Update flight's L, EL times	Х	Х		Х	
UPDATE_FLIGHT_PLAN	Update Flight Plan	Х	Х			
UPDATE_FLIGHT_POSITION	Update Flight Postion (lat/lon)	Х	Х			
UPLOAD_AIRPORT_SLOTS	Airport slot bulk schedule upload	Х	Х		Х	
UPLOAD_FLIGHT_SCHEDULE	Flight Schedule Upload bulk schedule upload	Х	Х		Х	
UPLOAD_POST_OPS	Post-operational schedule upload of airline actuals	Х	Х		Х	
VIEW_AIRPORT_RWY_CFG	View Airport runway configuration	Х	Х	Х	Х	Х
VIEW_DISPLAY_PROFILE	View Display Profile	Х	Х	Х	Х	Х
VIEW_FCA	View FCA data (FCAs, flights in FCAs)	Х	Х	Х	Х	Х
VIEW_REPORT_DATA_SOURCE	Data source report window (of flight schedules by airlines)	Х	Х			
VIEW_REPORT_GENERAL	View Reports	Х	Х	Х	Х	Х
VIEW_TMI	View TMI data (TMIs, flights in TMIs, TMI Control times)	Х	Х	Х	Х	Х

Roles in Harmony for ANSPs Client

All roles have Harmony Client access and capabilities. Table 45 lists the Harmony Client functionality specific to each role. Note that Aircraft Operator's update actions are restricted to its major and subcarriers.

Element	Description		Flow Manager	ANSP User	Aircraft Operator	Read Only
MANAGE_ALERTS	Alert Manager	Х	Х	Х	Х	Х
EDC_COMMANDS	ADL Request	Х	Х			
MODEL_SLOT_TMIS	Model TMI	Х	Х	Х		
IMPLEMENT_SLOT_TMIS	Implement TMI (Actual/Proposed, New, Revision, Purge)	Х	Х			
EDC_COMMANDS	EDC Commands (Tools > Commands)	Х	Х			
MANAGE_AIRPORT_RWY_CFG	Runway Configuration Tool	Х	Х			
VIEW_AIRPORT_RWY_CFG	Runway Configuration Display	Х	Х	Х	Х	Х
UPDATE_FLIGHT, UPDATE_FLIGHT_AIRLINE,	Update (Set ELOBT, Cancel, Slot Hold)	Х		Х	Х	
CANCEL_FLIGHT_SX	Update (Cancel flight with Slot Hold)	Х	Х			
ECR_COMMAND	ECR	Х	Х			
MANAGE_FCA	FCA Creation, Update and Deletion	Х	Х	Х		
VIEW_FCA	Query FCA Times	Х	Х	Х	Х	Х
MANAGE_DISPLAY_PROFILE	Manage Display Profiles (Save, Load, Update, Remove)	Х	Х	Х	Х	Х
CONTROL_OVERRIDE_ADD_FLIGHT	Force Slot Assignment	Х				
CONTROL_OVERRIDE_FREE_FLIGHT	Remove Slot Assignment	Х				
CANCEL_ANY_FLIGHT_OVERRIDE	Cancel Any Flight	Х				
SUBSTITUTION_OVERRIDE_MIN_DEP_ NTF	Substitute within minimum departure notification time	Х				
SUBSTITUTION_OVERRIDE_ACTIVE_F	Force substitution between active and pre-departure flights	Х				

Table 45: Harmon	v Client role functionalit	v comparison
	y Oneric role runctionali	y companson

Role in Harmony for ANSPs ESM (Aircraft Operator only)

Aircraft Operator is the only role with ESM access and capabilities. Table 46 lists the ESM functionality unique to the Aircraft Operator role.

Element	Description	Super User	Flow Manager	ANSP User	Aircraft Operator	Read Only
CANCEL_FLIGHT_FX	Cancellation				Х	
CREATE_FLIGHT	Create Flight From				Х	
LOAD_ESM	View ESM Flight List				Х	
SUBSTITUTION_ADVANCED	Advanced Substitution				Х	
SUBSTITUTION_ADVANCED	ISE Plus FM				Х	
SUBSTITUTION_SIMPLE	ISE				Х	
SUBSTITUTION_SIMPLE	Substitution - Swap				Х	
UNASSIGNED_SLOT_REQUEST	USR				Х	
UPDATE_FLIGHT	Reinstatement				Х	
UPDATE_FLIGHT_AIRLINE	Edit ELOBT/ELIBT				Х	
UPDATE_FLIGHT_AIRLINE	Edit LOBT/LIBT				Х	

Table 16. ESM	Polos and	normiccione
Table 40. ESIVI	Roles and	permissions

Appendix D. Acronyms

Table 47: List of Acronyms

Acronym	Description
AAR	Airport Acceptance Rate
AC	Carrier or Aircraft
AC Reg	Aircraft Registration
АС Туре	Aircraft Type
AC Type Group	Base Aircraft Type Group
ACID	Aircraft Identifier
ADEP	Airport of Departure
ADES	Airport of Destination
ADR	Airport Departure Rate
AEET	Actual Elapsed En Route Time
AFIX	Arrival Fix
AIBT	Actual In Block Time
ALDT	Actual Landing Time
ANSP	Air Navigation Service Providers
AOBT	Actual Off Block Time
ARwy	Arrival Runway
ATFM	Air Traffic Flow Management
ATOT	Actual Take Off Time
BEET	Base Estimated En Route Time
BELDT	Base Estimated Landing Time
BETOT	Base Estimated Time of Take Off
BIBT	Base Estimated In Block Time
BLDT	Base Estimated Landing Time
BOBT	Base Estimated Off Block Time
BTOT	Base Estimated Take Off Time
CAFT	Calculated AFix Time
CEET	Calculated Estimated En Route Time
CIBT	Calculated In Block Time
CLDT	Calculated Landing Time
CNX	Cancelled Flights
COBT	Calculated Off Block Time
СТОТ	Calculated Take Off Time
DFIX	Departure Fix
DRwy	Departure Runway
EAFT	Estimated Arrival Fix Time

Acronym	Description
EDFT	Estimated Departure Fix Time
EEET	Elapsed En Route Time
EIBT	Estimated In Block Time
ELDT	Estimated Landing Time
ELEET	Earliest Aircraft Operator Estimated En Route Time
ELIBT	Earliest Aircraft Operator In Block Time
ELLDT	Earliest Aircraft Operator Landing Time
ELOBT	Earliest Aircraft Operator Off Block Time
ELTOT	Earliest Aircraft Operator Take Off Time
EOBT	Estimated Off Block Time
ETOT	Estimated Take Off Time
Email	Contact Email
FCA	Flight Constraint Area
FID	Unique Flight ID
FIR	Flight Information Region
FPL Route	Flight Plan Route
IEET	Initial Elapsed En Route Time
IIBT	Initial In Block Time
ILDT	Initial Landing Time
IOBT	Initial Off Block Time
ITOT	Initial Take Off Time
LEET	Aircraft Operator En Route Time
LIBT	Aircraft Operator In Block Time
LLDT	Aircraft Operator Landing Time
LOBT	Aircraft Operator Off Block Time
LTOD	Length of Time Out Delay
LTOT	Aircraft Operator Take Off Time
OAG	Official Airline Guide
MAFix	Modelled Arrival Fix
Major	Major Operator
MEAFT	Modelled Estimated Arrival Fix Time
Mobile	Contact Mobile Phone Number
Mobile Carrier	Contact Mobile Carrier Service Provider
OCEET	Original Calculated Estimated En Route Time
OCIBT	Original Calculated Operator In Block Time
OCLDT	Original Calculated Operator Landing Time
OCOBT	Original Calculated Operator Off Block Time
OCTOT	Original Calculated Operator Take Off Time
OEET	Original Estimated En Route Time

Acronym	Description			
OETA	Original Estimated Time of Arrival			
OETD	Original Estimated Time of Departure			
OIBT	Original In Block Time			
OLDT	Original Landing Time			
OOBT	Original Off Block Time			
ОТОТ	Original Time of Take Off			
PEET	Planned Elapsed En Route Time			
PIBT	Planned In Block Time			
PLDT	Planned Landing Time			
POBT	Planned Off Block Time			
PTOT	Planned Take Off Time			
REET	Strategic Airport Slot Estimate			
RIBT	Strategic Airport Slot In Block Time			
RLDT	Strategic Airport Slot Landing Time			
ROBT	Strategic Airport Slot Off Block Time			
RTOT	Strategic Airport Slot Take Off Time			
SEET	Scheduled Elapsed En Route Time			
SIBT	Marketing Scheduled In Block Time			
SLDT	Marketing Scheduled Landing Time			
SOBT	Marketing Scheduled Off Block Time			
STOT	Marketing Scheduled Take Off Time			
TOD	Time Out Delay			

Appendix E. Revision History

Table 48: Revision History

Software Version	Document Version	Date MM/DD/YYYY	Updates	Updated By	Approved By
6.0.0	6.0.0	12/22/2017	Initial Version, Software Release 6.0.0	JS Sullivan	B. Fujisaki
7.0.0	7.0.0	03/30/2018	Updated for Software Release 7.0.0	JS Sullivan	J. Nalevanko
7.0.0	7.0.0	05/04/2018	Documented additional Release 7.0.0 functionality: ATFM Measure Performance Report section	JS Sullivan	J. Nalevanko
7.0.3	7.0.3.1	11/01/2019	Updated for Release 7.0.3	JS Sullivan	B. Fujisaki

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