

CALENDAR UPDATE

For

CTA's FOS/Flight Operations System

By



USER'S GUIDE

CALENDAR UPDATE by OMNIWARE for FOS by CTA

Calendar Update helps you realize efficiencies in your operations department by virtually eliminating the need for manual and labor intensive two-way communication between the multiple parties involved in a single flight. Near real-time trip information is automatically distributed and disseminated across your network using your existing FOS and Microsoft Exchange server infrastructure. The trip information can be viewed from several different types of interfaces such as Outlook, Outlook Web Access, Windows Mobile PDA's and Blackberries – as long as there is a connection to the Exchange server for synchronization.

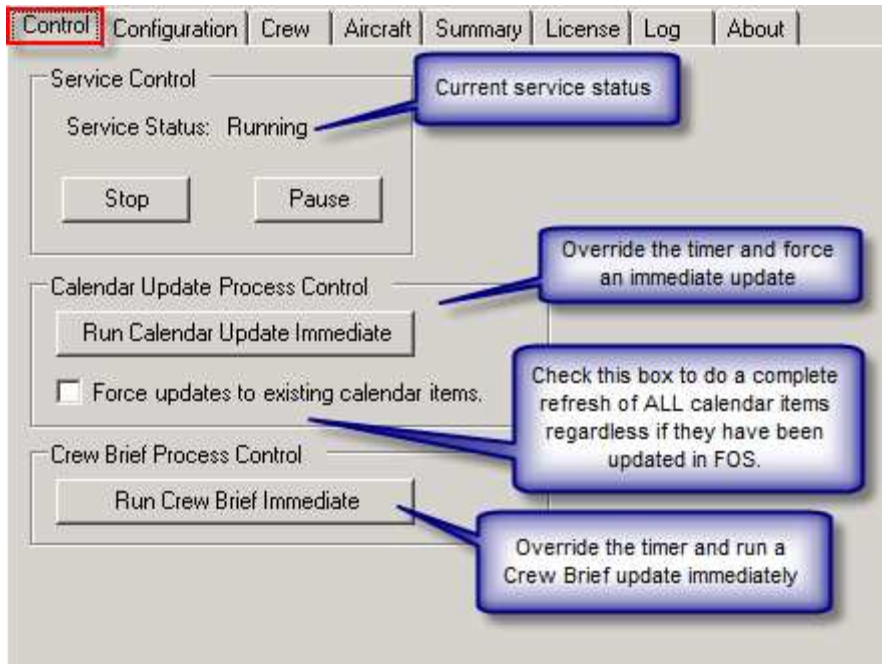
Calendar Update provides your operations department with two main features:

- Trip and Activity Information Distribution to Exchange (Outlook)
- Crew Brief Distribution and Acknowledgement Cycle (via Outlook)

This user's guide explains tab by tab the configuration and standard operation of Calendar Update. For details on Active Directory setup and Pervasive ODBC connections, contact Omniware directly.

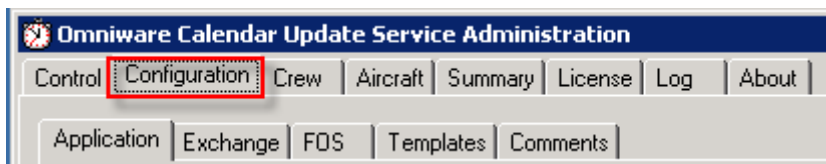
CONTROL TAB

This tab starts and stops the Calendar Update Windows Service. You can also do this through the Windows Management Console as you can with any other Windows Service.



Since Calendar Update is a Windows Service it can be automatically started by the operating system on a reboot. There is no need to log on to a Windows session to start this application unlike the FOS "Import.exe", "fosavail.exe" and FOS Interface.

CONFIGURATION TAB (WITH SUB-TABS)

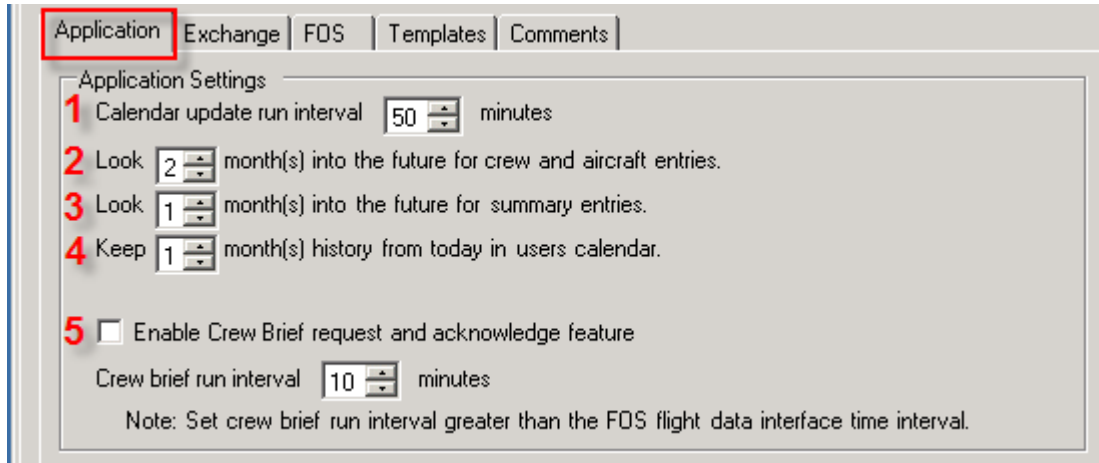


Once the installation of the service and the master Exchange account has been created it is time to configure Calendar Update. You may also need to make a few adjustments to FOS itself.

The Configuration tab has five sub-tabs, each of which are explained below.

CONFIGURATION: APPLICATION SUB-TAB

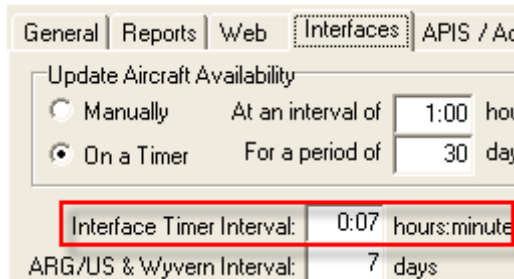
The Application tab contains the timer and error log settings for Calendar Update. It also contains the switch for the Crew Brief feature and how far back and into the future you wish to publish calendar items to Outlook.



1. Set your desired update interval. A typical number is every 60 minutes. The update may take anything from a few minutes to 10-12 minutes or more depending on the amount of calendars you connect to the system and the amount of data that is pushed through. We recommend you start with a number greater than 60 minutes and monitor the log to see how long the update takes before adjusting the interval down.
2. Set the number of months forward (future) you wish to publish for Crew and Aircraft calendars *
3. Set the number of months forward (future) you wish to publish for Summary type calendars *

** Note that the higher the number, the longer the update will take. It is advisable to keep these numbers as small as possible in order to not adversely affect performance.*

4. Set the number of months to keep as “history” in the calendars. Please note that updates only occur on future appointments and not to activities in the past. Past activities are for reference only and may not reflect what actually happened if details were adjusted after the trip or activity was completed.
5. Check the box to activate the Crew Brief feature of Calendar Update. The crew brief interval value must be set to a HIGHER number than the FOS Interface timer value. You can check this value in the Company settings of FOS on the “Interfaces” tab (see below).



For more on Crew Brief, refer to separate section at the end of the user's guide.

6. Logging Options. You can set multiple type of logging options for Calendar Update. Enter an e-mail address if you wish to send log messages to a specific recipient. A typical setup is displayed below.

Logging

Output error log entries in verbose format.

Output timing events to the log. (For debug statistics)

Check message types you wish sent to the Windows Event Log.

Errors Warnings Information

Check message types you wish sent to the admin email address.

Errors Warnings Information

Admin email address:

is@domain.com

CONFIGURATION: EXCHANGE SUB-TAB

This tab contains the settings that allow Calendar Update to connect to your Exchange mail server. Your Exchange Administrator will need to provide you with the Master Account user name, password and URL to your Exchange server.

1. Access the Exchange tab under the Configuration parent tab
2. Enter the Master Username
3. Enter the Master Password
4. Enter the Exchange server URL
5. Check "Using Forms Based Authentication" if applicable to your Exchange Server setup
6. Test the connection by entering a valid user name that the master account has access to (for example a crew member) and click Test Connection.

Omniware Calendar Update Service Administration

Control **Configuration** Crew Aircraft Summary License Log About

Application **Exchange** FOS Templates Comments

Exchange Settings

Master username Using Forms Based Authentication

Master password

Exchange URL
ex: http://mail.company.com/exchange/

Test username

Your Exchange Server administrator must complete the Exchange Server and Active Directory setup and configuration and provide the information in the next couple of steps before proceeding.

CONFIGURATION: FOS SUB-TAB

This tab contains the settings for how to connect Calendar Update to the FOS server. Your FOS server administrator will need to provide you with the necessary information to complete the setup.

1. Access the FOS sub- tab under the Configuration parent tab

The screenshot shows the 'FOS Settings' window with the following fields and values:

- SQL connection:** Server=fwgafos01;ServerDSN=FLTDATAUP
- Display Crew day for activities in UTC:**
- Activity values to exclude (ex: 1,3,4,106):** 4,5,7,30,106
- Crew groups to include (ex 1,2,3):** 1
- PIC values (ex 1,2,3):** 3
- SIC values (ex 1,2,3):** 4
- FA values (ex 1,2,3):** 22

Your FOS Server administrator must complete the FOS Server database connection setup and provide the information in the next couple of steps before proceeding.

2. Enter the SQL connection string to the Pervasive Database
3. Check the box "Display Crew day for activities in UTC" if applicable [explain further]
4. **Activity values to exclude (act_type).** By default, Calendar Update is going to display all crew activity types. You are able to exclude certain types of activities by entering the corresponding "value" from the codes table. For example, if you wish to exclude "Layover Days" look up the value for this activity type in FOS:
 - 4.1. Access the FOS Crew Calendar Board
 - 4.2. Create a New Activity (right-click and select New Activity)
 - 4.3. Click on Activity Type **Activity Type:** to open the Codes table
 - 4.4. Find the Value for "Layover" and enter it in the Calendar Update field. If you wish to exclude multiple activity types simply separate the values with a comma.

Code	Description	Value	C
AVAL	Contract Crew Available	106	
DUTY	Flight Duty Period	1	
LAOV	Layover Day	5	
MEET	Meeting	16	
OFD	Office Duty	30	
OFF	Day Off	24	
POS	Position Crew (AP)	3	
PTO	Paid Time Off	17	
RLS	Released	102	
STBY	Standby CHARTER	25	

Please note, your table may contain different Codes, Descriptions and Values than this example.

4.5. Cancel all open windows – do not save changes

- Crew groups to include (group).** Calendar Update will automatically access your crew “roster” and populate the Crew table based on the included groups. Find the code values for the groups you wish to include from the Personnel database in FOS:

5.1. Access the Personnel database from the FOS Main Menu

5.2. Double-click and open any personnel record

5.3. On the Emp tab, click the Crew Group button (located near the center of the window)

Crew Group:

- Find the Value(s) for the Crew Groups you wish to include and enter them into the Calendar Update field. If you wish to exclude multiple activity types simply separate the values with a comma.

Code	Description	Value	Gr
	Blank Group	0	
CREW	FLIGHT CREW - OPS	1	
TECH	TECHNICAL SERVICES	2	
OTHR	OTHER/PART TIME	3	
CONT	CONTRACT FLIGHT CREW	7	

Please note, your table may contain different Codes, Descriptions and Values than this example.

5.5. Cancel all open windows – do not save changes

- PIC, SIC and FA Values (position).** In order for Calendar Update to properly display crewing [position] information, you must enter the corresponding values from the codes table.

6.1. Access the Personnel database from the FOS Main Menu

6.2. Double-click and open any personnel record

6.3. On the AC Qual tab open (or create a new) a record

6.4. Click on the Position button to open the table and find the values for the applicable positions

Code	Description	Value
	Not Assigned	0
CKAI	Check Airmen	1
CKFE	Check Engineer	10
CM	Cabin Manager	22
FME	Flight Mechanic	13
INST	Flight Instructor	2
PIC	PIC/ISC	3
SIC	SIC/GSC	4
TRNG	Pilot in Training	6
UNQL	No Longer Qualified	52

Please note, your table may contain different Codes, Descriptions and Values than this example.

6.5. Cancel all open windows without saving

CONFIGURATION: TEMPLATE SUB-TAB

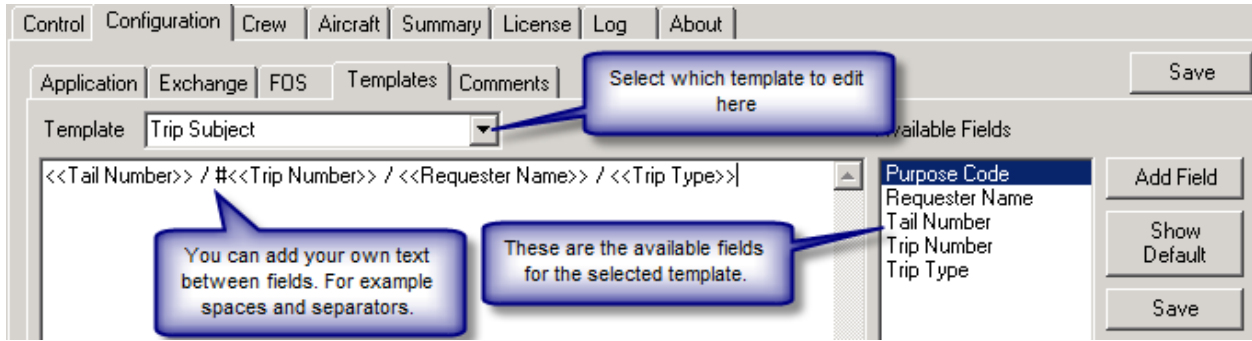
Under the Template tab you are able to edit the default composition of the calendar appointments that are created by Calendar Update. You are able to edit both the subject line and body of each type of appointment (Trips, Legs, Activities, Crew Briefs and Summaries)

In order to edit the Subject or Body of a particular appointment type simply select the appropriate template from the dropdown on the Configuration – Template tab. Available fields for the specific template type are available to the right and will be inserted at the cursor location when “Add Field” is pressed.

Trip Subject
Trip Body
Leg Subject
Leg Body
Activity Subject
Activity Body
Crew Brief Body
Summary Subject
Summary Body By Tail Number
Summary Body By Leg

The following templates are available for editing

You can add your own text or separators between field names to create an easy to read format. Field names are denoted with << >> characters surrounding the field name, for example <<Tail Number>>. Do not add characters “inside” the << >> as this will render the field name unrecognizable by Calendar Update.



1. Add Field: position the cursor at the desired location in the template (left pane), highlight the field name (right pane) and click Add Field.
2. Show Default: brings up the default formatting for the selected template that you can copy and paste back in should you wish to revert back to “factory settings”.
3. Save: saves the edits made to the templates.

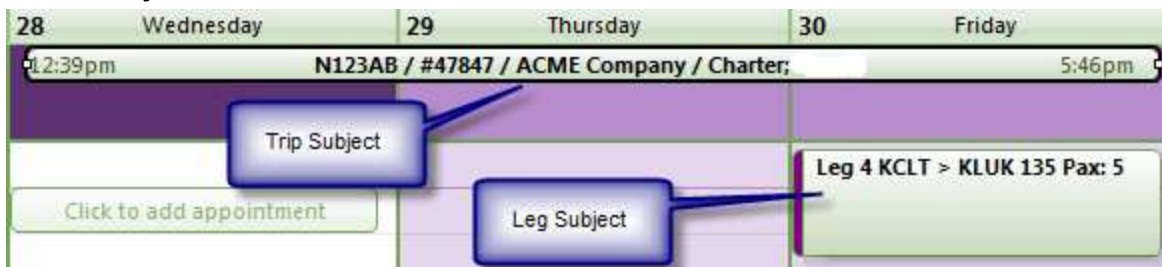
Below is an example of where the Trip and Leg Subjects would show up in the Outlook Calendar. The examples below are using templates that have been modified from the default settings. For example, the Trip Subject default template is:

- <<Tail Number>> / #<<Trip Number>> / <<Requester Name>> which produces this subject line: **N123AB / #47847 / ACME Company**

The template was edited to include the Trip Type code at the end of the line and looks like this:

- <<Tail Number>> / #<<Trip Number>> / <<Requester Name>> / <<Trip Type>> which produces this subject line: **N123AB / #47847 / ACME Company / Charter**

Screenshot from Outlook Calendar:



Body and Subject templates are edited using the same principle. However, Body templates usually contain a lot more information. Therefore many more field names are available from FOS. The list of field names on the right correspond to the same field names in FOS with two exceptions: Departure Services and Arrival Services. These are special fields for Calendar Update that assembles all the information put in under the “Services” tab for a leg in FOS. You can control this content as well (refer to the section on Arrival / Departure Services Comments further back in this users guide)

Leg Body Template:

Last Update: <<Last Update DateTime>>

=== LEG INFO ===

Tail Number: <<Tail Number>>

Trip Number: <<Trip Number>>
 Leg Number: <<Leg Number>>
 Approval: <<Approval Code>>

PIC/SIC/FA: <<PIC>> / <<SIC>> / <<FA>>

REG: <<Regulation>>
 DIST: <<Distance>>
 EFT: <<EFT>> EBT: <<EBT>>

DEP: <<Depart Date Local>> <<Depart Time Local>> (L) <<Depart Time GMT>> (Z)
 <<Depart Airport ICAO>> - <<Depart Airport Name>>

ARR: <<Arrive Date Local>> <<Arrive Time Local>> (L) <<Arrive Time GMT>> (Z)
 <<Arrive Airport ICAO>> - <<Arrive Airport Name>>

=== PAX MANIFEST ===

<<Pax Manifest>>

=== LEG COMMENTS ===

< CREW COMMENT >
 <<Crew Comments>>

< PAX COMMENT >
 <<Pax Comments>>

Approval Code
 Arrival Services
 Arrive Airport ICAO
 Arrive Airport Name
 Arrive Date GMT
 Arrive Date Local
 Arrive Time GMT
 Arrive Time Local
 Crew Comments
 Depart Airport ICAO
 Depart Airport Name
 Depart Date GMT
 Depart Date Local
 Depart Time GMT
 Depart Time Local
 Departure Services
 Distance
 EBT
 EFT
 FA
 Last Update DateTime
 Leg Number
 Pax Comments
 Pax Manifest
 PIC
 Regulation
 SIC
 Tail Number
 Trip Number

To see the “result” of your editing you will need to log on to an Outlook Calendar that receives this information and open the appointment. Below is an example of what the above Leg Body Template would look like inside the appointment body:

Last Update: 12.04.2007 22:29(Z)
 === LEG INFO ===
 Tail Number: N123AB

Trip Number: 48615
 Leg Number: 2
 Approval: RELEASED

PIC/SIC/FA: MOSD/WARD/
 REG: 135
 DIST: 663NM
 EFT: 02:11 EBT: 02:23

DEP: 12.05.07 07:00 (L) 12:00 (Z)
 KHPN - WESTCHESTER COUNTY

ARR: 12.05.07 09:23 (L) 14:23 (Z)

KPDK - DEKALB-PEACHTREE

=== PAX MANIFEST ==

Barker, Rachel

Smith, John (Lead)

Smith, Jane

=== LEG COMMENTS ==

< CREW COMMENT >

This is a leg crew comment

< PAX COMMENT >

This is a leg pax comment

=== DEP SERVICES ==

< FUELER/FBO >

KHPN : AVITAT WESTCHESTER : 914-428-3730

PRIST ADDITIONAL \$0.04

\$225 (waived with 300 gal fuel)

\$250 RON ramp (waived with 1000 gal fuel)

The information contained in the
Departure Services section is assembled in
one field name (Departure Services) and
can be controlled from the Configuration
– Comments tab

ALWAYS USE UVAIR CARD HERE.

OPEN FUEL RELEASE SENT THRU UVAIR<Fuel Vendor AIRFUEL INTERNATIONAL: 1+\$4.96

11/27/07>

< CATERING >

KHPN : RUDYS INFLIGHT CATERING : 201-727-1122 Requested Catering: Ordered Bagels w/
cream cheese, lox, fresh sliced fruit tray TO BE IN PLACE @ 0600 HPN/ AVITAT W/PHIL@
RUDYS.

TAIL# 123AB DIRECT BILL

CREW: PLEASE ENSURE STARBUCKS COFFEE FROM FLIGHTWORKS HANGAR IS ON BOARD.

=== ARR SERVICES ==

< FBO >

KPDK : ATLANTIC AVIATION : 770-454-5000

FKA MERCURY AIR

LANDING/RAMP FEE:140 DOLLARS

HANDLING FEE:

WAIVED IF:70 GAL PURCHASED

RICHARD THACKER IS CONTACT FOR TERMINAL AREA.

770-454-5062 FAX

*** ONLY USE MULTISERVICE AT THIS LOCATION**

DO NOT USE CONTRACT FUEL

The information contained in the Arrival
Services section is assembled in one field
name (Arrival Services) and can be
controlled from the Configuration –
Comments tab

RICHARD WAIVES HANDLING FEES AT THIS FACILITY
 WHEN ARRANGING FUEL, PLEASE USE MULTISERVICE
 .80 CENTS OFF POSTED RETAIL PER RICHARD SPOKE W/ANDREA
 19CP 12/04/07 14:03

END OF SAMPLE LEG BODY

Hints:

- Keep rows as short as possible if you are trying to accommodate Mobile Devices. Because of the screen width of Windows Mobile, BlackBerry, Treo's and SmartPhones are limited, word wrapping occurs when rows contain too many characters and can become hard to read.
- Use clear separator characters for your section headers and add an extra row to break sections apart for ease of reading.

CONFIGURATION: COMMENTS SUB-TAB (DEP & ARR COMMENTS)

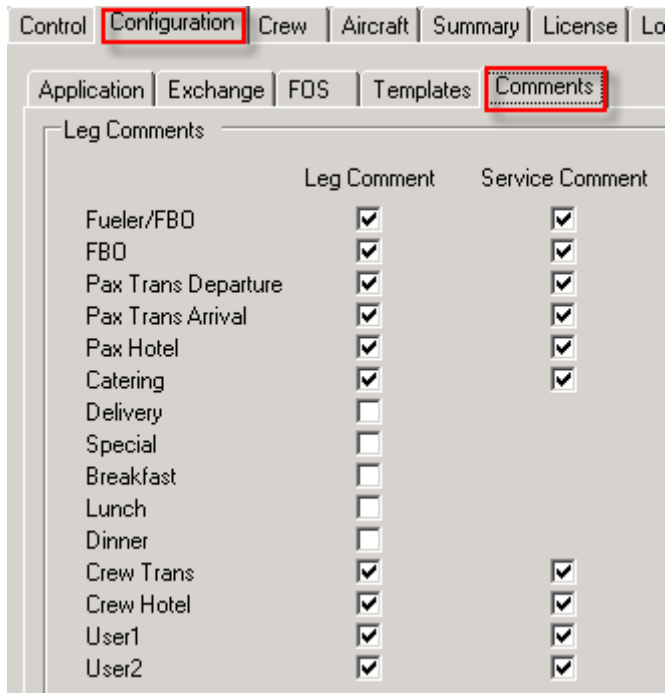
This tab contains the settings for what should be included in the field names

- Arrival Services and
- Departure Services

By checking the boxes corresponding to the information you wish to display in the Arrival and Departure Services sections, the comments are assembled into one single field name. You can select to include the Leg Comment for the particular service and also the Service Comment. The Service Comment is the "static" comment about the service provider you are used to seeing in the gray comment box on the Leg Services tab (see screenshot)



In addition to the FOS Leg Services Comments you can also include the fields that are available under the [Leg] Catering tab. Below is a screenshot of the Configuration | Comments tab in Calendar Update.



Both Departure and Arrival Comment content is controlled from here. Calendar Update will determine if the data should be put in the Departure or Arrival section based on the leg service Dep/Arr radio button service selection in FOS itself.

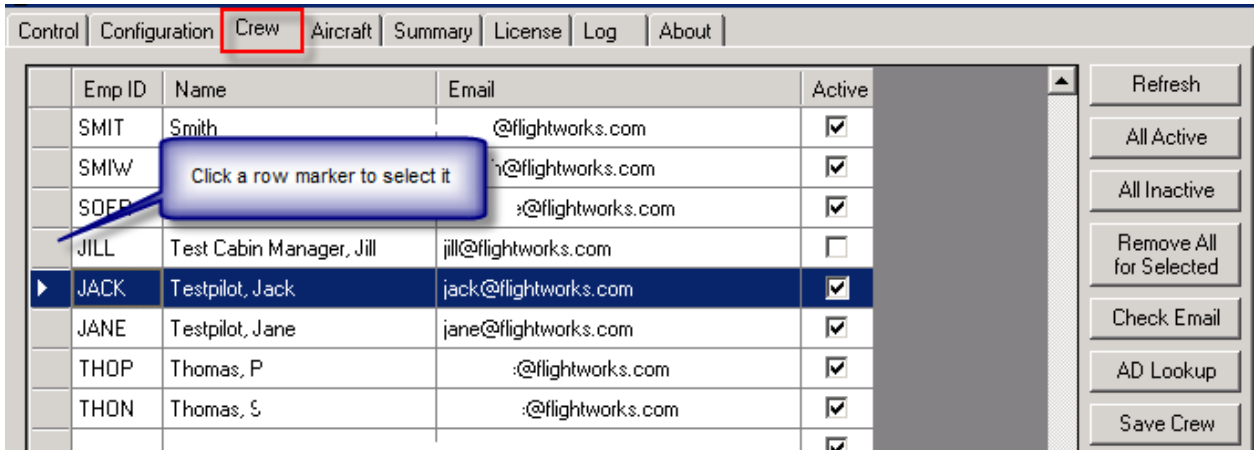


CREW TAB

The crew roster will populate automatically based on the Crew Groups you included under the Configuration – FOS Sub-Tab settings. Once you open this tab it may take a few seconds for the pane to refresh and display the crew members.

- **Email Addresses:** Calendar Update retrieves the crew e-mail address from the FOS | Personnel | Office E-mail field. FOS must be updated with this information for Calendar Update to work.
- **Active:** Calendar Update will only push information to calendars checked Active
- **Refresh Button:** simply refreshes the crew roster with updated information from FOS. For example you may have added an e-mail address in FOS. In order to see it in Calendar Update refresh the screen.
- **All Active:** checks the Active box for ALL at once
- **All Inactive:** unchecks the Active box for ALL at once
- **Remove All for Selected:** removes all Calendar Update related Outlook appointments from the selected crew members Outlook Calendar

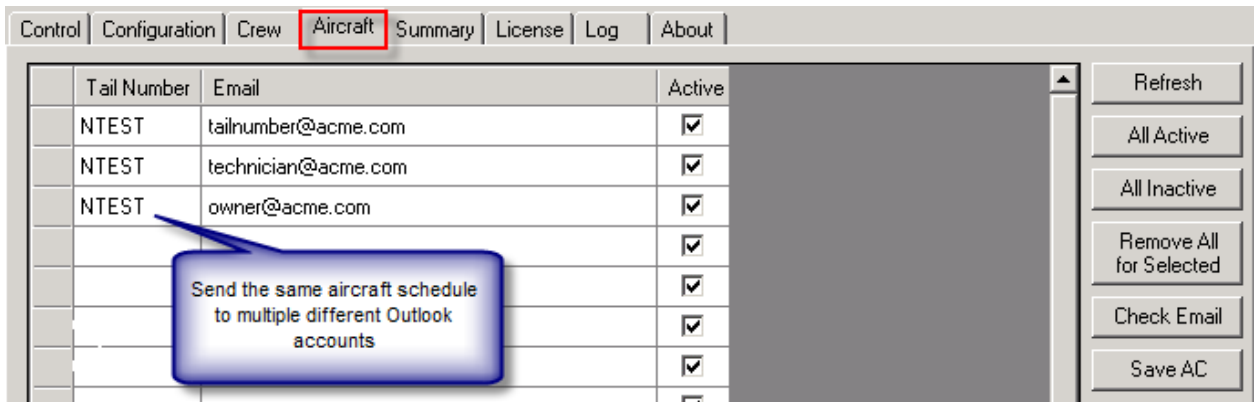
- **Check Email:** check to see if Calendar Update has the appropriate access rights to the selected crewmembers mailbox in Active Directory. Helpful for troubleshooting purposes.
- **AD Lookup:** returns Active Directory information for the selected crewmember. Helpful for troubleshooting purposes.
- **Save Crew:** saves the changes you made to any Active / Inactive checkboxes



AIRCRAFT TAB

The Aircraft Tab is designed to contain “destination Email addresses” for aircraft schedules. Unlike the Crew tab that is populated automatically, the Aircraft tab must be built manually. You can push an aircraft calendar to one or many different Email accounts.

For example: you may have a specific technician responsible for a specific aircraft. You may also have an aircraft owner (with an Outlook account on your server) for the same aircraft. You can send the aircraft schedule to both Outlook accounts. You may also have an Outlook Calendar setup for the aircraft itself that you allow certain users access to see. In this example you are pushing the same aircraft’s schedule to three different Outlook calendars.



For the buttons on the right, see the Crew Tab section.

SUMMARY TAB

Summary calendars are also called “Executive View” calendars. This type of push will take a group of aircraft and publish a more summarized style of calendar entry to a particular Outlook account. Instead of creating Trip and Leg appointments, a summary calendar creates ONE appointment per day (per Group) in the Outlook calendar to keep clutter at a minimum. The formatting of the appointment body is up to you (see section Configuration | Template Sub-Tab)

Example 1:

The CEO wants to know what the fleet is doing but does not necessarily want/need/have access to the FOS system itself due to its complexities. In addition, publishing the fleet schedule to the Exchange Server automatically means the CEO will see the appointments in Outlook. Further, if the CEO has a PDA that synchronizes with the server, he has a snapshot of the fleet at any given time on any given day from any location.

Example 2:

Your Charter On-Call person wants to, through Outlook Web Access or the on-call Blackberry/Windows Mobile PDA, easily see the fleet activity for the 135 aircraft in order to answer after hours calls and not have to start the VPN, open Terminal Services/Citrix, log on to FOS and open the schedule board.

In both cases you will simply create groups containing the appropriate tail numbers. For instance, to accommodate the CEO, create a group called “All Aircraft”. To satisfy the Charter rep, create a group called “135 Aircraft”. Add the appropriate tail numbers to the respective groups and publish the groups to the users Outlook account. A specific group can be published to multiple accounts.

Screenshot Sample:

Control Configuration Crew Aircraft Summary License Log About				
	Group Name	Sort Type	Email	Active
	RYY FLEET by Leg	Leg Date	user1@flightworks.com	<input type="checkbox"/>
	RYY FLEET by Trip	Tail Number	user2@flightworks.com	<input type="checkbox"/>
▶	CHARTER Fleet by Trip	Tail Number	charter@flightworks.com	<input checked="" type="checkbox"/>

Aircraft Groups:

First you need to create a group that contains the aircraft you wish to publish.

1. Click Edit Groups
2. From here you can Edit an existing group or add a new group. Aircraft within a group is visible in the lower pane.

3. When finished adding/editing groups, click Close to return to the Summary tab

Once the group is created you can now add it to the list, select a Sort Type and which e-mail account to publish the calendar to.

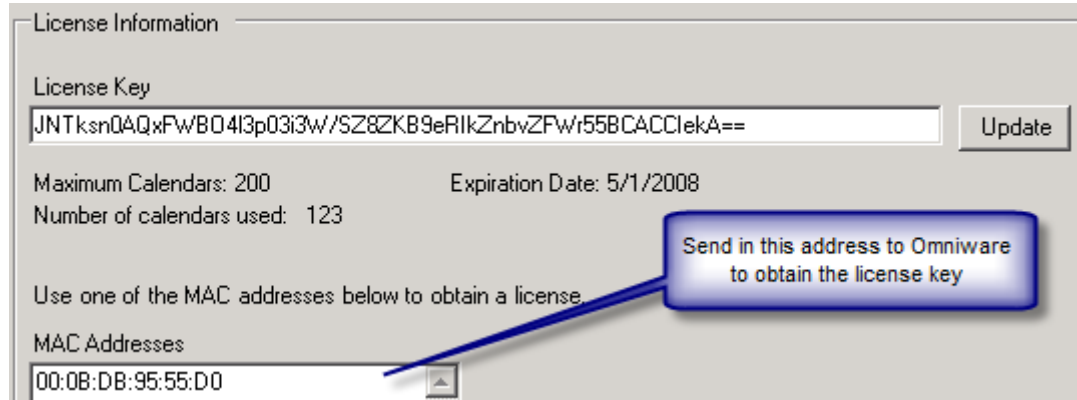
The Sort Type determines which template Calendar Update will use for the appointment.

- Leg Date sorting uses the Summary Body by Leg template and organizes the appointment body by events in chronological order
- Tail Number sorting uses the Summary Body by Tail Number template and organizes the appointment body by aircraft, then chronologically

Remember: you can publish more than one group to a single e-mail account. You can also reuse a group for multiple e-mail accounts.

LICENSE TAB

The license tab displays you current license status. You must obtain a license key from Omniware, Inc. by supplying the MAC address of the network card for the PC or server Calendar Update is installed on.



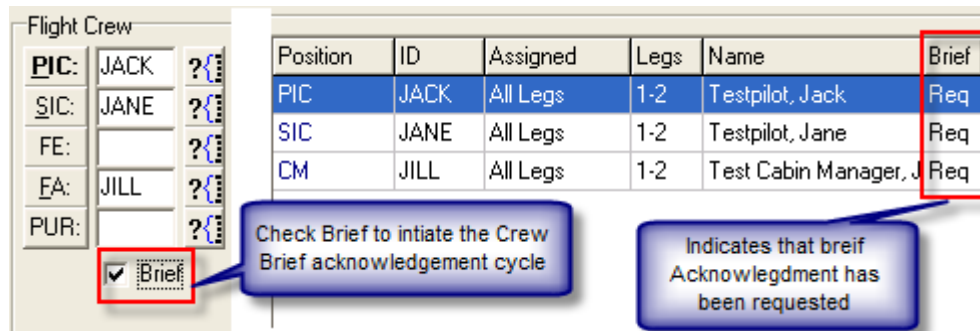
LOG TAB

The log tab simply displays the Calendar Update application log. The log is valuable for troubleshooting purposes.

CREW BRIEF

The Crew Brief functionality leverages the “Brief” function within FOS to allow your operations department to make sure crew members know of upcoming trips by returning a confirmation that they have received the information about a particular trip. The procedure for this is going to vary from operator to operator but one common scenario is that the operations office advises crew of the next day’s activities via phone or e-mails with read receipts to ensure the confirmation loop is closed.

Calendar Update with Brief turned on can automate this process for you. When ready to “release” a brief, simply check the Brief box inside the trip in FOS.



The Brief column on the right indicates the current status of the Crew Brief cycle. The different status levels are:

- (Blank): Crew Brief has not been initiated
- **Req** (Requested): Crew Brief has been initiated, a request for acknowledgement has been released to Calendar Update for e-mail queuing
- **Sent** : the Brief was successfully sent and created an appointment in the Outlook Calendar for the crew member
- **Ack** (Acknowledged): the Brief has been acknowledged by the crew member
- **Prob** (Problem): the brief was either Rejected or returned as Tentative by the crew member

Position	ID	Assigned	Legs	Name	Passport	Brief
PIC	JACK	All Legs	1-2	Testpilot, Jack		Ack
SIC	JANE	All Legs	1-2	Testpilot, Jane		Prob
CM	JILL	All Legs	1-2	Test Cabin Manager, J		Prob

Crew acknowledged the brief

Crew rejected trip brief

Should trip details change to the degree that a re-brief is required, simply uncheck the Brief checkbox and recheck it. The status will be reset to Req and the cycle starts over.

There are features in FOS itself that can help you monitor Crew Briefs with e-mail alerts and warnings prior to departure if crew briefs have not yet been acknowledged. Please refer to FOS technical support for these features.

Depending on your update cycles for both Calendar Update Crew Brief and the FOS Interface timer, the complete cycle for crew briefs to be Requested, Sent and Acknowledged will vary. Do not set the Calendar Update Crew Brief timer to a value lower than the FOS Interface timer value. This will cause problems with duplicate crew brief requests and will cause confusion.

The Crew Brief appointment contains only the trip number and no additional data. Please advise crew members to view trip/leg details in the actual trip and leg appointments.