



# CrewRoster User Manual

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**merlot.aero**  
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			updated Complement list > Split
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Cy De Guzman	08 Mar 2018	7.3.1	Updated activity panel - main screenshot Updated filtering screenshot Added Retain layout on refresh in Criteria for Filter table Added new subtopic Retain Layout on Refresh
Cy De Guzman	11 July 2018	8.1.0	Include Out of Base Employees Filter for Crew Applications - updated the ff: allocation panel screenshot - UMAAllocationPanel Crew Selection - UMCrewselection crew selection table - added include out of base employees Applying a filter screenshot - UMapplyingfilters added 3.(Optional) To include out of base employees in the filter, enter a pairing type in the PairingType field. This will enable the Include out of base Employees option. in how a filter can be applied to the Allocation Gantt. removed The list of YUL CPT that are active between 01-31 January 2016, inclusively, are displayed in the filtered crew list. in how a filter can be applied to the Allocation Gantt. Applying a filter screenshot for #5 - UMapplyingfilters5 removed All 45 rosters will be displayed in the Allocation Gantt. Details on the Allocation Gantt will be discussed in a later section. Advanced Filters screenshot replaced Direct Open allocation gantt filters to allocation panel filters moved allocation filter to allocation gantt section renamed allocation filter to allocation gantt filter
Bea Tabuñar	11 July 2018	8.1.0	Updated colour definitions for Activity Panel > Flights tab
Cy De Guzman	11 July 2018	8.1.0	Updated colour definitions for Activity Panel > Pairings tab

**DISCLAIMER:**

This user guide is for training purposes only. The information contained in this user guide is current at the time of publication. It can be used to reference and may be subject to change.

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## What are merlot's applications?

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The merlot.aero suite is a complete organizational management solution offering all aspects of airline resource planning and control to ensure the safety, efficiency and quality of your crew and operational environment.

merlot.aero is a comprehensive suite of applications covering all aspects of your airline needs. It has been developed with the entire business process in mind, including the customer process from the moment ticket sales are planned until the point the passenger reaches their destination.

For your convenience, merlot applications are divided into two main categories:

- Aircraft Applications
- Crew Applications

There are a number of applications under these two main categories.

Aircraft applications include:

- AircraftSchedule
- AircraftFollow
- AircraftPortal
- AircraftMobile

Crew applications include:


- CrewPlan
- CrewBuild
- CrewRoster
- CrewPortal
- CrewMonitor
- CrewFollow
- CrewPayroll
- CrewMobile


## Framework Applications


The merlot.aero suite of applications eliminates the use of text commands by employing a Graphical User Interface (GUI). You are presented with the following options available in all applications across the merlot.aero suite.



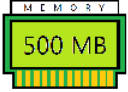
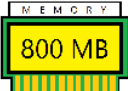
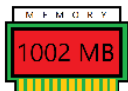
These are Framework Applications that will follow you throughout the merlot suite.

This icon is the Job Engine . If **red**, this means the job engine has stopped. If **green**, the job engine is running.

This icon  is the signal strength of your connection to the Internet.

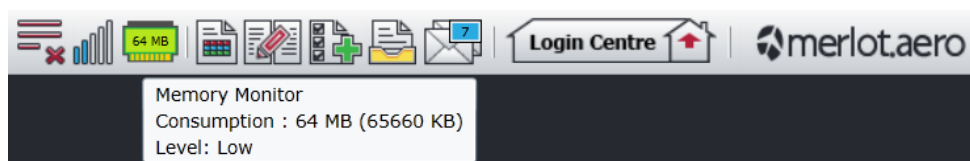
The Memory Monitoring tool  displays memory utilization for merlot applications in real time.

Memory utilization is displayed in three different levels:

Icon	Level	Range
	Low (Green)	0MB-700MB
	Moderate (Yellow)	701MB - 1000MB
	High (Red)	1001MB and above

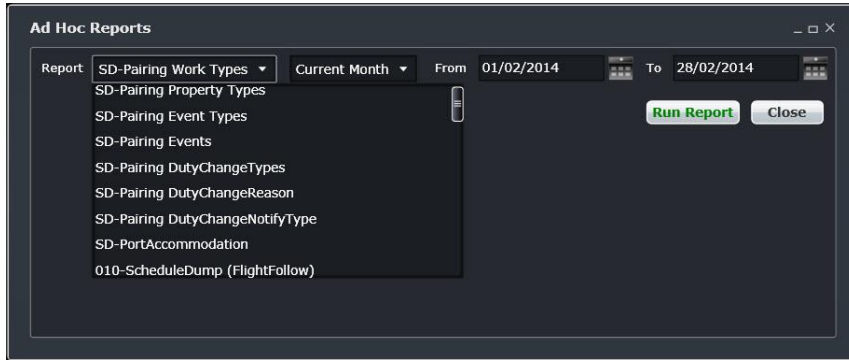
Hovering the mouse over the tool icon displays the following information:

- Icon label - Memory Monitor
- Memory consumption in MB with KB conversion e.g. 64 MB (65660 KB)
- Level of memory consumption e.g. Low

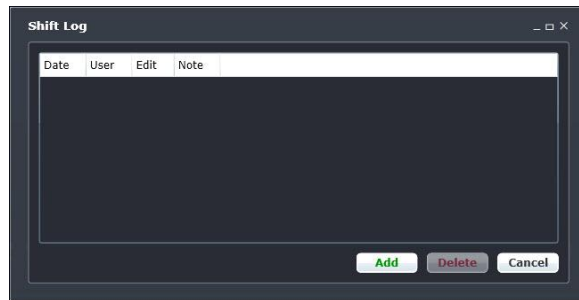




This icon is Ad Hoc Reports. Ad hoc reports are available in all the applications and modules across the merlot.aero suite while specific application reports are available in the Reports drop-down menu.



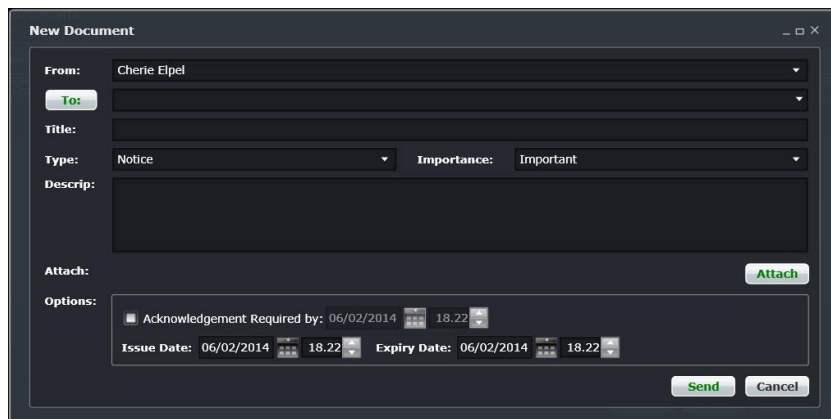
This icon is the Shift Log. You can add notes to the Shift Log for any system user to view.



This icon is to Add Task. Set a daily or one-time reminder for everyday activities (i.e.: Accommodation Check).

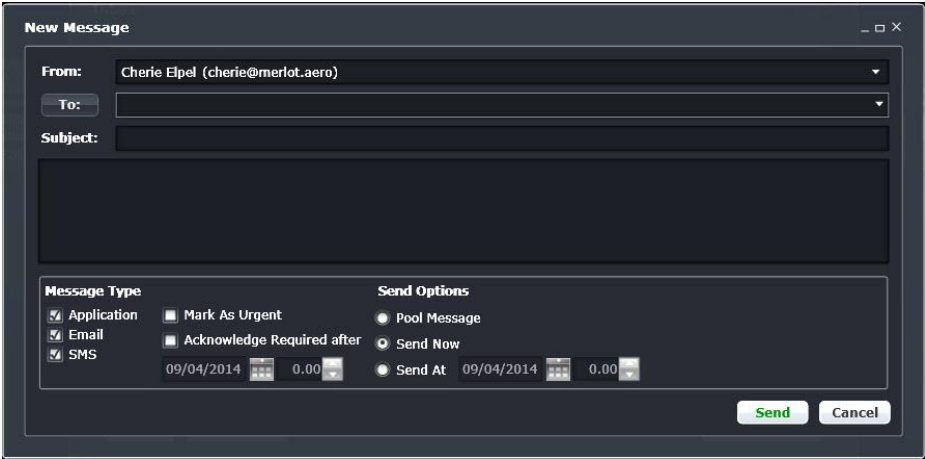


This is the send documents icon. Send a document to a crew member or to a fellow merlot.aero user.





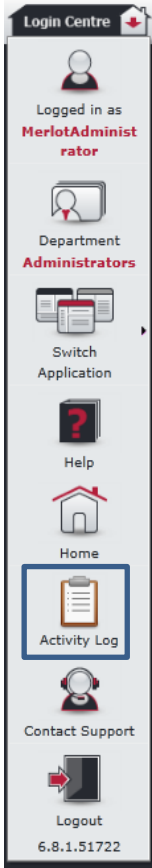
This is the mail icon. Send messages to crew or co-workers via SMS, email or directly within the merlot.aero suite.



This icon allows you to navigate through the entire merlot.aero suite.



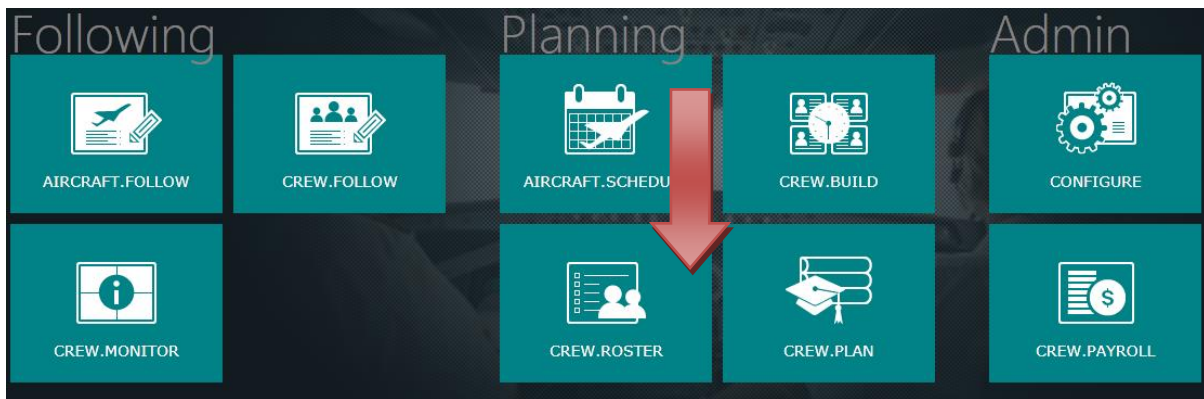
When the application setting *UseUIDebug* is set to True, the New Activity Log menu will be visible under the **Login Centre** and available for use. All incoming Merlot UI Error Logs will not be displayed in the existing error log in the application nor trigger the alert unless the error is related to *Insert/ Add/ Delete rows*.





## Logging into CrewRoster

With your merlot.aero credentials simply log in and select CrewRoster.



## What is CrewRoster?

---

The CrewRoster application allows the user to develop efficient crew rosters that achieve business goals while meeting the needs of the crew.

CrewRoster is where the roster is created for all crew members using a combination of flight pairings, check and training duties and standard pairings (i.e., days off, leave days, standby days, etc.). Roster periods are defined by each company. CrewRoster is also where crew requests are granted.

A roster is a defined period of time within which the crew member's work and non-work assignments are defined.

### CrewRoster Prerequisites

Prior to undertaking tasks in CrewRoster it is first necessary to define roster periods in the Configure application. Please refer to the Configure User Manual for more detail on this process.

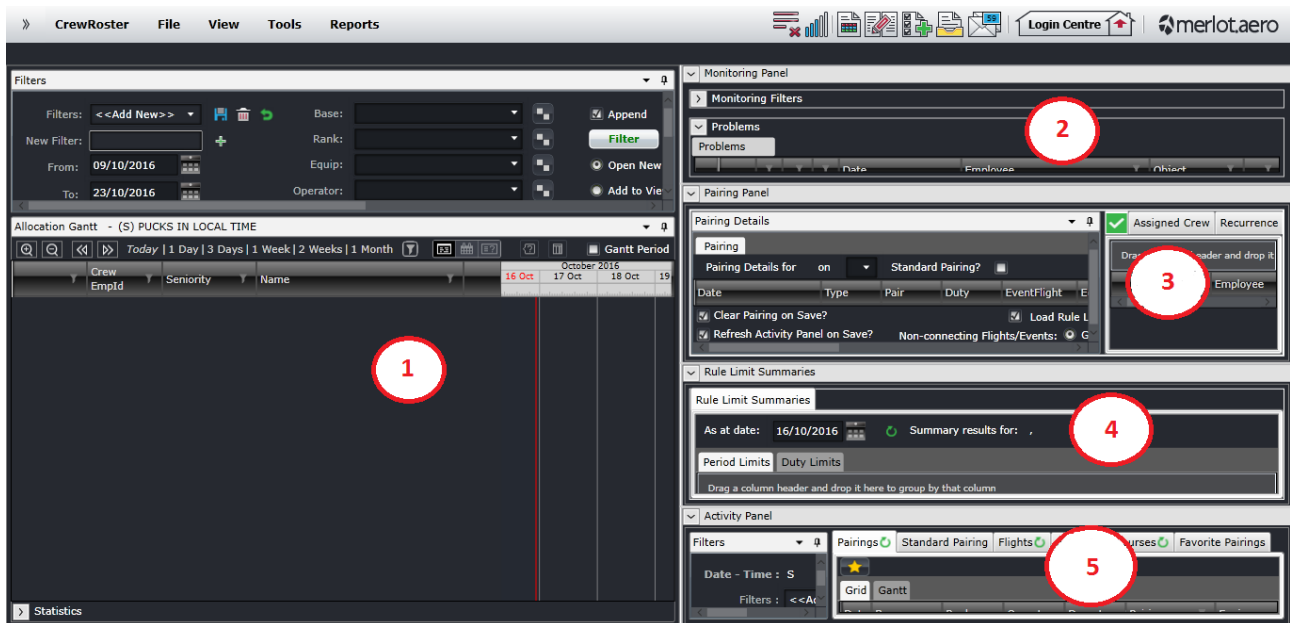
Tasks in AircraftSchedule take place before action in CrewRoster. The user imports a Standard Schedules Information Manual (SSIM) or creates a new schedule. Once all the flights are in the schedule, the schedule is marked active. Please refer to the AircraftSchedule User Manual for more information.

In CrewPlan, training and qualification events are pre-assigned for crew members. Please refer to the CrewPlan User Manual for more detail on this process.

CrewBuild enables the user to build pairings which are then assigned to crew in CrewRoster. It should be noted that users can also build pairings within CrewRoster.

## The Graphical User Interface (GUI)

The merlot.aero suite of applications eliminates the use of text commands by employing a Graphical User Interface (GUI). Let's explore the CrewRoster GUI:



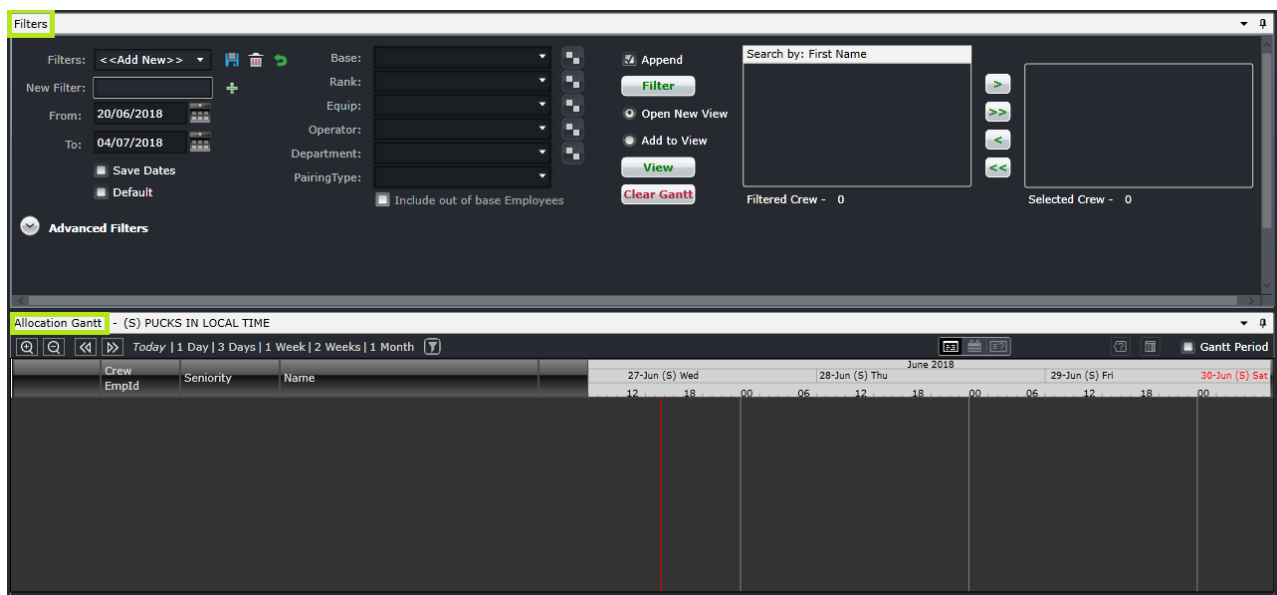
1. **Allocation Gantt:** Crew member assignments are displayed and allocated here
2. **Monitoring Panel:** Identify and monitor changes that could result in legal violations or problems
3. **Pairing Panel:** View and modify the details of the pairings
4. **Rule Limit Summaries:** Displays the cumulative flight and duty hours until a certain date
5. **Activity Panel:** List of pairings, flights and activities that can be allocated to the crew

The next sections provide users with an overview of merlot.aero application panel functionality in order to carryout CrewRoster tasks.



## Allocation Panel

To assign work to employees, there needs to be some way to view the employees and their availability over time. The Allocation Panel provides this view, which then allows the allocation of pairings from the Activity Panel to employees that are displayed, allows for re-assignment of work between employees, or removal or de-allocation of pairings from an employee's roster.



The Allocation Panel is divided into two parts: the filter and the Allocation Gantt. The filter allows users to select the crew rosters they would like to load into the Allocation Gantt. The Allocation Gantt displays the selected crew's roster and allows users to modify each as needed. Each part will be discussed in the next sections.

### Filter

At the top of the Allocation Panel is the filter. The purpose of the filter is to define the set of employees that will be displayed within the Allocation Panel. This filter does not affect the other panels.

When CrewRoster is opened, the basic filter is displayed and the advanced filters are collapsed.

The Filter for the Allocation Panel can be divided into three sections:

1. Filter dates
2. Crew selection
3. Advanced filters
4. Allocation filter

## Filter Dates

To allow users to specify and save filters, a Filters field and associated Save, Delete and Reset icon buttons as well as a Save Dates checkbox are provided above the drop-down calendars.

The Filters field is a combination of a drop-down lists that displays the previously saved filters, as defined by the user, along with template filters that apply to all users. There is also the ability to enter a new filter name in the New Filter field and to click the plus (+) icon to add the new filter.

The date range of the rosters to be viewed must be selected through the drop-down calendars provided.

- **From:** A date field. The start value of the date range
- **To:** A date field. The end value of the date range
- **Save Dates:** The selected date range will be the default date for the saved filter

**Note:** *The date controls throughout the merlot suite have built-in short-cuts. These shortcuts allow users to instantly select different date targets, such as the current day (T), or the start of a month (M), a quarter (Q) or a year (Y).*

The Save Dates check box allows the user to control whether a filter they define is set to a specific date range or if the selected filter inherits the current date range.

Part of the process when loading the Allocation Panel is to apply a default filter. This is to facilitate rapid filtering of displayed data to the data that the user refers to most frequently. To allow the user to set a default filter, the filter section contains a Default check box. When this button is clicked, the currently selected filter is saved as the default filter for the application.

When the Allocation Panel is loaded, it determines the current user and the application context and defaults to the relevant filter.

## Crew Selection



The second part of the filter is for crew selection. This has drop-down filter criteria on the left side and crew lists on the right side.

Each filter criterion is described below. This allows users to select a group of crew to display in the Allocation Gantt. Multiple selections can be made for each of the criterion below.

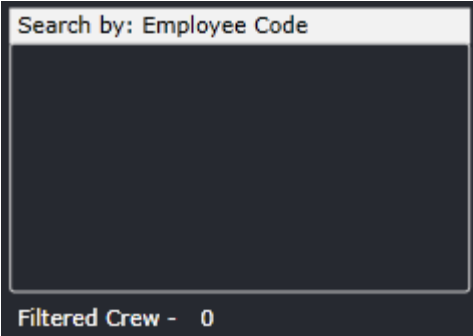
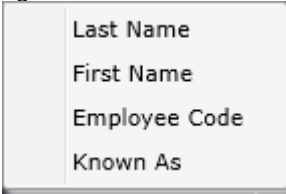

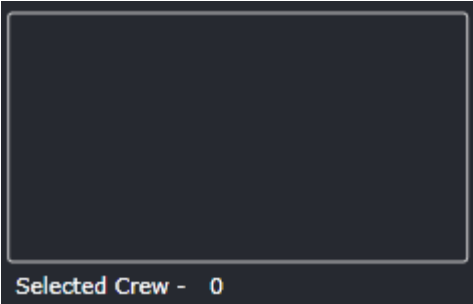
Field	Description
<i>Base</i>	A drop-down field that displays the active crew bases
<i>Rank</i>	A drop-down field that displays active ranks and / or rank groups
<i>Equip</i>	A drop-down field that displays the active aircraft or equipment types or groups that crew operate
<i>Operator</i>	The Operator drop-down menu filters the grid to show information based on selected airline operators
<i>Department</i>	A drop-down field that displays active departments. It is an area within an airline or company that is tasked with providing particular services of a similar type. For example, Flight Operations (i.e. the manning and operating of aircraft), Maintenance (ensure the aircraft are able to operate safely), Ramp (the parking and coordination of aircraft resupply between flights).
<i>Pairing Type</i>	A drop-down field that displays the kinds of pairings to be displayed. This looks at the pairing or duty on the day/s being searched. For example, if you select RES for 01 June, all RES duties on the 01 June will be displayed even if the pairing starts on 31 May.
<i>Include out of base Employees</i>	This filter option is enabled only when a pairing type is indicated in the <i>PairingType</i> field. When enabled, includes out of base employees assigned with a specific pairing type(s) on a wider date range.

The middle section has some buttons that control the way crew rosters are displayed in the Allocation Gantt.

Field	Description
<i>Append</i>	When this is selected, different crew selections can be added to the selected crew list (box at the right) even if the criteria changes. If this is not selected, the names in the selected crew list will be removed whenever any of the criteria is changed. This is selected by default.
<i>Filter</i>	This button takes the criteria on the right side and displays the crew names in the filtered crew list (box at the left).

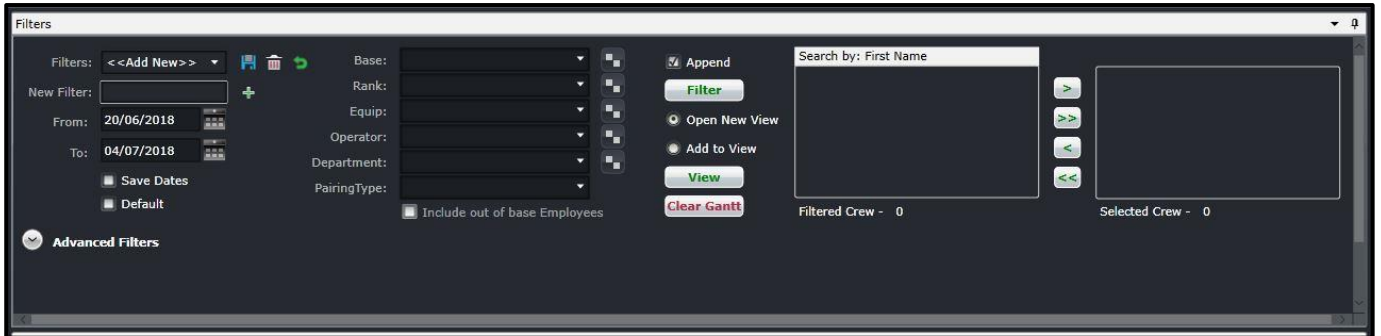
<i>Open New View / Add to View</i>	<p>Only one of these two options can be selected at one time. The selected option will be used when the View button is clicked.</p> <p>Open New View will remove any open rosters in the Allocation Gantt and display the rosters of the crew listed in the selected crew list. This is selected by default.</p> <p>Add to View will retain the open rosters and add the rosters of the crew listed in the selected crew list.</p>
<i>View</i>	This button takes the names on the selected crew list and displays their rosters in the Allocation Gantt.
<i>Clear Gantt</i>	This button removes all open rosters displayed in the Allocation Gantt.

The section to the right has the list of filtered and selected crew.

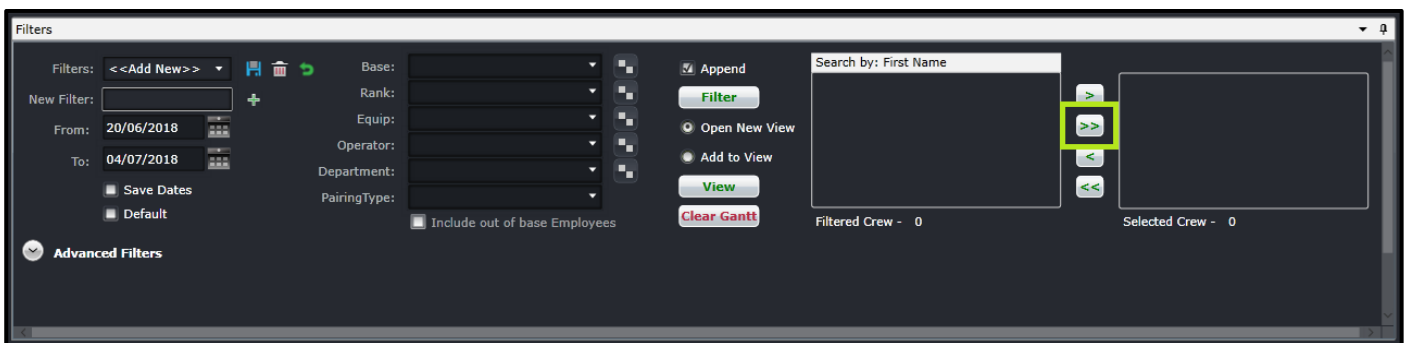
Field	Description
<p><i>Filtered Crew List</i></p> 	<p>A list of crew names based on the filter criteria. The list will appear only after the Filter button is clicked.</p> <p>The number at the bottom shows how many crew are in the filtered list.</p> <p>The header of the box shows how the crew list is sorted. By default, the list is sorted by employee code. To change the sorting, right click on the header and select your preferred sort option.</p> 
<p><i>Buttons</i></p> 	<p>The four buttons transfer the names from the filtered crew list to the selected crew list and vice versa. To do this, click on one name from either list and click the corresponding button.</p> <p>The single-arrow buttons move names to the left or right one by one. The double-arrow buttons move all names to the left or right.</p>
<p><i>Selected Crew List</i></p> 	<p>A list of selected crew taken from the filtered crew list. The box will have a list only if employee names are moved from the filtered crew list.</p> <p>The number at the bottom shows how many crew are in the selected crew list.</p>

## Applying a Filter

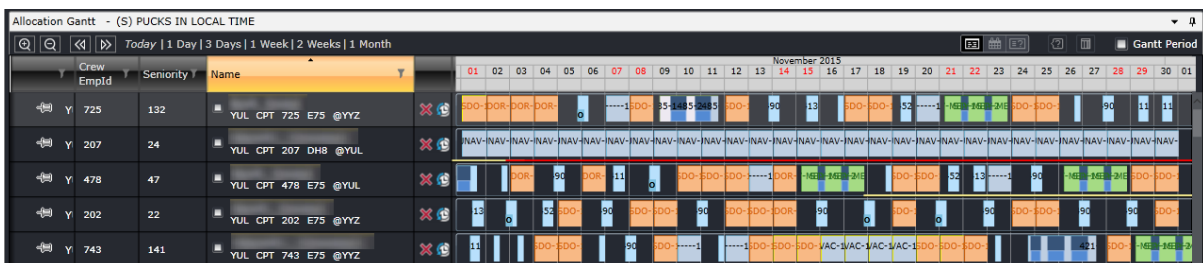
Below is an example of how a filter can be applied to the Allocation Gantt.



1. Select a date range or apply a saved filter.
2. Select the filter criteria that allows you to focus on the set of crew that you need to work on. For example, you can select to work on one base first and then select captains.
3. **(Optional)** To include out of base employees in the filter, enter a pairing type in the *PairingType* field. This will enable the **Include out of base Employees** option.
4. Click **Filter**.
5. Click on the double right arrow to bring all the names to the selected crew list.



6. Click **View**.



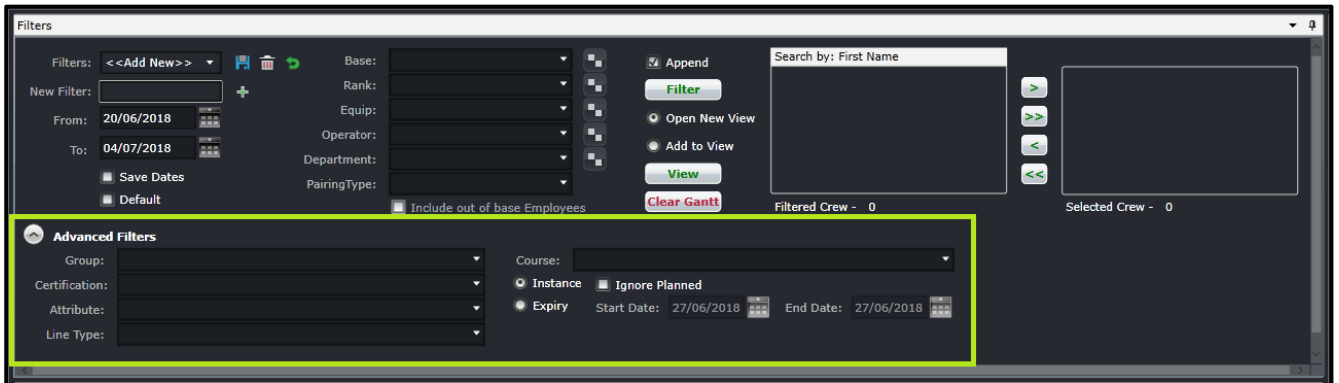
**Note:** If all fields are blank and Filter is selected, all active crewmembers for the selected date range will be displayed in the filtered crew list.

Rosters are loaded in the Allocation Gantt only if there is at least one crew in the selected crew list and when the View button is clicked.

There is an option to use exclude a criterion. For example, to load all activities except for FPG pairing type, select FPG and then Ctrl+click FPG. This will turn the selection red and the results will not include FPG.



## Advanced Filters



Advanced filters allow users to search for crew with more specific characteristics. This section is collapsed by default. The fields are described below:

Field	Description
<i>Group</i>	<p>Provides a list of employee profiles or groups. Selecting any group filters our crewmembers who belong to the group within the selected filter date range. Multiple groups can be selected.</p> <p>For example, crewmembers who have recently come on board can be grouped as Green or IOE. When either group is selected for the filter, crew with the Green or IOE profile for the filter date range will be listed in the filtered crew list.</p>
<i>Certification</i>	<p>Provides a list of certifications that crew can achieve. Certifications are qualifications taken on crew's own time. Examples of which are language speaking skills and medical. Certifications may or may not need to be renewed. Multiple certifications can be selected for the filter criteria.</p>
<i>Attribute</i>	<p>Provides a list of attributes or pre-defined characteristics of crew that can be used to require or restrict the number of crew in a flight or route. Multiple attributes can be selected for the filter criteria.</p> <p>For example, a crewmember can have a Mandarin-speaking attribute. In a flight going to any city in China, at least one Mandarin-speaking crew is required. The attribute of the crew is used to determine if that requirement has been met.</p>
<i>Line Type</i>	<p>A drop-down list of active line types.</p>
<i>Course</i>	<p>Provides a list of active courses. Multiple courses can be selected for the filter criteria. This option needs to be used with either option below:</p> <ul style="list-style-type: none"> <li>Instance – Crew who are taking the course within the filter date range will be displayed in the filtered crew list. If <i>Ignore Planned</i> is selected, the course pairings with Planned property will not be considered in the filter.</li> </ul>

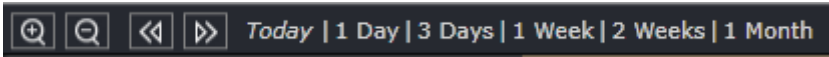
- Expiry – Crew who will expire for the selected course/s within the Start Date and End Date will be displayed in the filtered crew list

The same steps in Applying a Filter can be followed when using the advanced filter criteria.

### Allocation Gantt

The Allocation Gantt allows a user to have a visual representation of a crewmember’s roster. From this view, the users can identify how many days each crew is working and when they have a day off. Rest in between duties is also displayed. Each section is discussed below.

### Zoom and Navigation Options

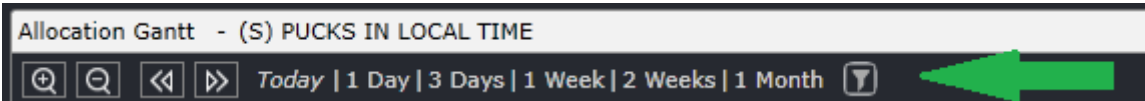


The Allocation Gantt can be resized to appear wider or narrower. The section at the top left has buttons that allow users to zoom in/out and navigate through the dates of the roster.

Field	Description
	Zoom in and zoom out. Zooming in expands the Gantt and zooming out makes it narrower.
	Scroll left and scroll right. Moves the Gantt left to an earlier date and time and right to a later date and time.
	Preset views. Click on any of the options to adjust the Gantt. <ul style="list-style-type: none"> <li>• Today – moves the view to the current date</li> <li>• 1 Day – adjusts the Gantt to a one-day view</li> <li>• 3 Days – adjusts the Gantt to a three-day view</li> <li>• 2 Weeks – adjusts the Gantt to a two-week view</li> <li>• 1 Month – adjusts the Gantt to a month-long view</li> </ul>

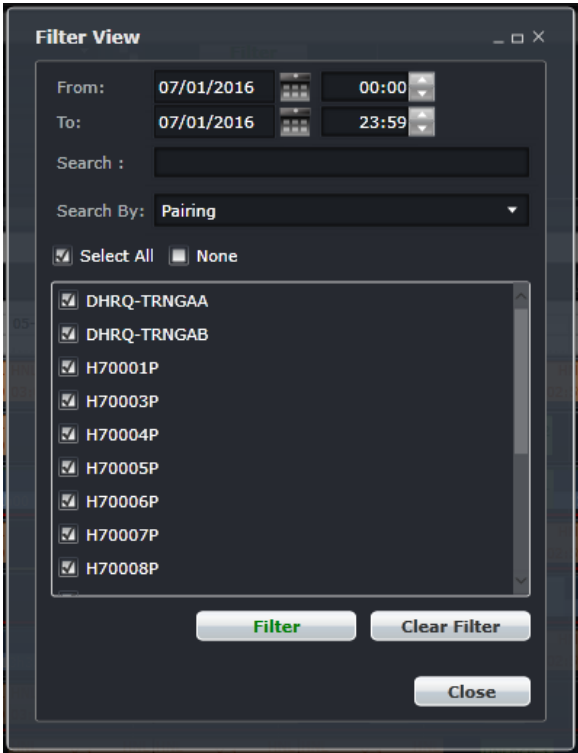
### Allocation Gantt Filter

When rosters are loaded in the Allocation Gantt, the content can be filtered even further. This can be done by clicking on the filter icon beside the zoom settings.



Click on the filter button to bring up the Filter View form. Alternatively, users can also use the Shift + L hotkey or double click the date on the Gantt timeline.

Using the button will set the default date range to the first day of the Allocation Gantt filter date range. The same thing is applied when using Shift + L, but if a pairing is selected upon using the hot key, the date range will be based on the selected pairing. The double-click option will take the date from the Gantt timeline.



The form contains the following fields:

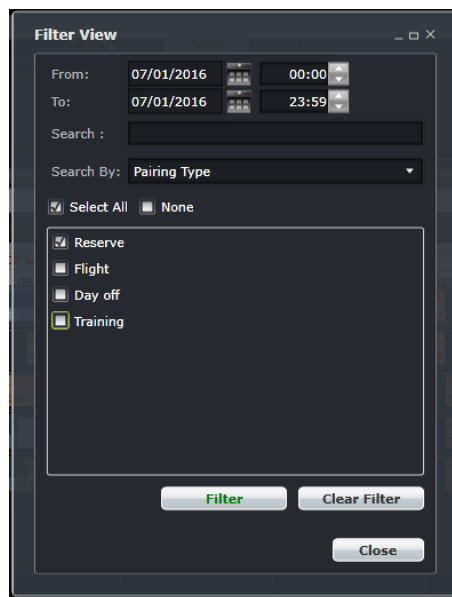
Field	Description
<i>From / To</i>	Date and time range of the filter. This defaults to the first day of the Allocation Gantt filter date range and follows the application's time mode.
<i>Search</i>	Accepts a set of characters that are part of a pair label or pair type. This is not case-sensitive.
<i>Search By</i>	Options include: <ul style="list-style-type: none"> <li>• Pairing - Default option. Filters the results based on pair labels.</li> <li>• Pair Type - Filters the results based on pair type</li> <li>• Flight - Filters the results based on flight number</li> </ul>
<i>Results Box</i>	Displays the results of the filter. Each result has a tick box that determines that the result is selected.
<i>Select All / None</i>	Select All ticks all the results and displays all of them in the Allocation Gantt. None will display rosters that do not have a pairing assigned on the selected day/s.
<i>Filter / Clear Filter</i>	The Filter button will apply the filter to the Allocation Gantt. The Clear Filter button will reset the filter to the default values without applying the previous filter criteria.



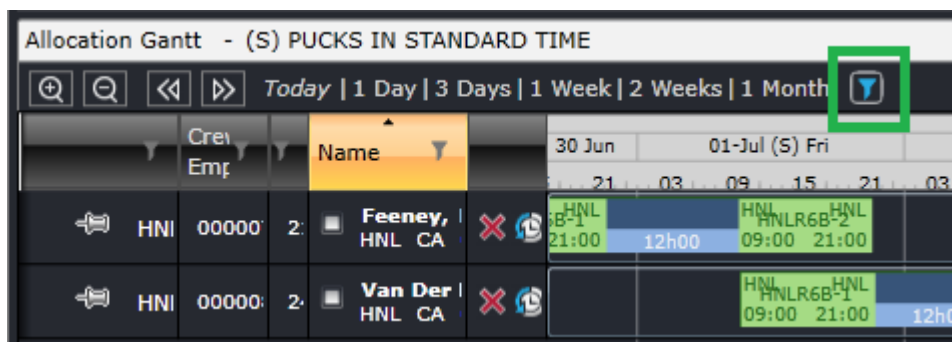
Close	This will close the form.
-------	---------------------------

If a user needs to isolate reserves for a certain date, the following steps must be followed:

1. Open the filter.
2. Ensure the date range is correct.
3. Select Pairing Type in the Search By option. The list of available pair types on the selected date/s will be displayed.
4. Select RES.
5. Click the Filter button then, click the Close button.

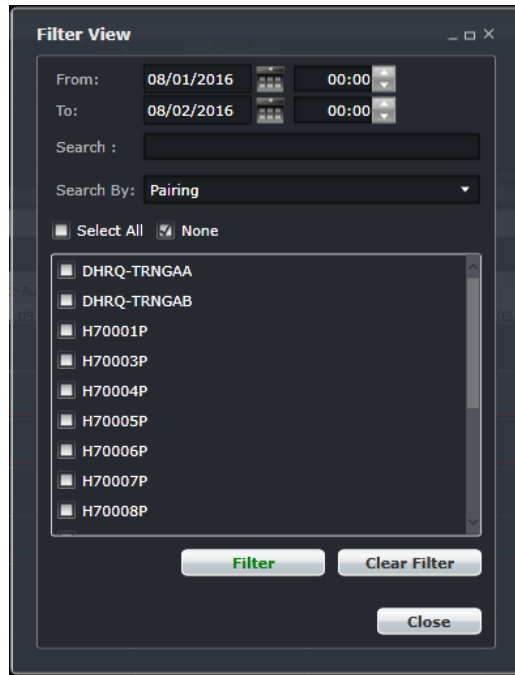


Rosters with RES pairings on the selected date/s are displayed. The filter icon turns blue if a filter is applied.



The filter can also be used to display rosters that have holes or days without pairings assigned.

1. Open the filter.
2. Ensure the date range is correct.
3. Select any Search By option.
4. Untick the Select All box and tick the None box.
5. Click the Filter button then, click the Close button.



Rosters without assignments on the selected date/s will be displayed.

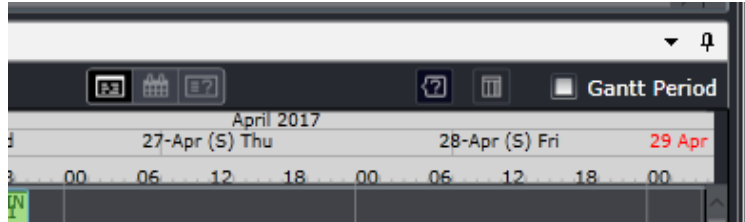
Allocation Gantt - (S) PUCKS IN STANDARD TIME

Today | 1 Day | 3 Days | 1 Week | 2 Weeks | 1 Month

	Cre	Emp		Name		31 Jul	01-Aug (S) Mon
						21	03 09 15 21
	HNI	00000	1:	Child, Bl HNL CA			
	HNI	00000	2:	Donley, I HNL CA			
	HNI	00000	2:	Feeney, I HNL CA			
	HNI	00000	1:	Lawrimo HNL CA			
	HNI	00000	4:	Placz, D HNL CA			
	HNI	00000	1:	Turkovic HNL CA			

Pinned rosters will not be affected by the filter and will still be displayed at the top of the Allocation Gantt.

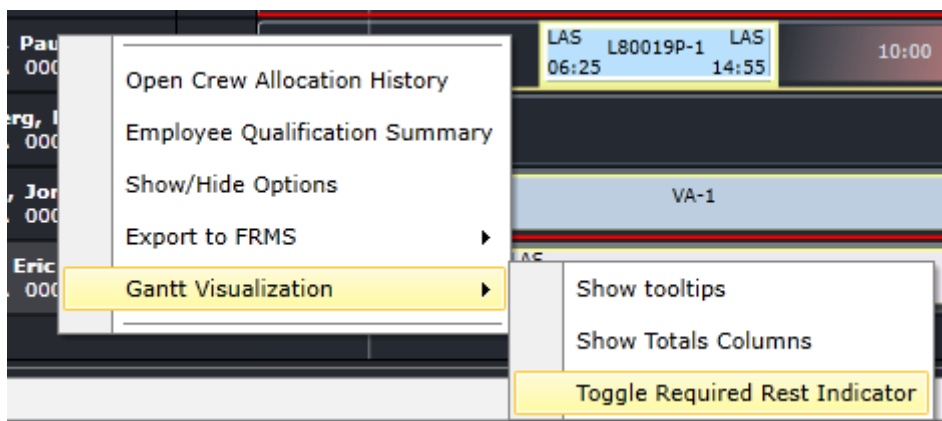
## Gantt Options



Towards the upper right corner of the Allocation Gantt are more options for the Gantt view.

Field	Description
<i>Normal, Pre-planned, Requested</i>	By default, normal pairings are displayed. If Pre-planned is selected, all pairings with the pre-planned property, like courses, will be isolated. If Requested is selected, all requested pairings or pairings that were granted from CrewPortal requests or bids will be isolated.
<i>Show Tooltips</i>	Displays the Flight/Duty details, Report/Release times and Assignment Properties when the mouse is hovered over a puck.
<i>Show Totals Column</i>	Displays Period totals.
<i>Gantt Period checkbox</i>	Isolates totals based on the Gantt period. This will be discussed later in this document.

Right-click anywhere on this bar to access the Gantt Visualization options.



### *Show Tooltips*

When selected, a tooltip will be displayed when hovering or clicking a pairing. It contains the name of the pairing, flight and duty times, report and release times, public comments for crew and pairing attributes.

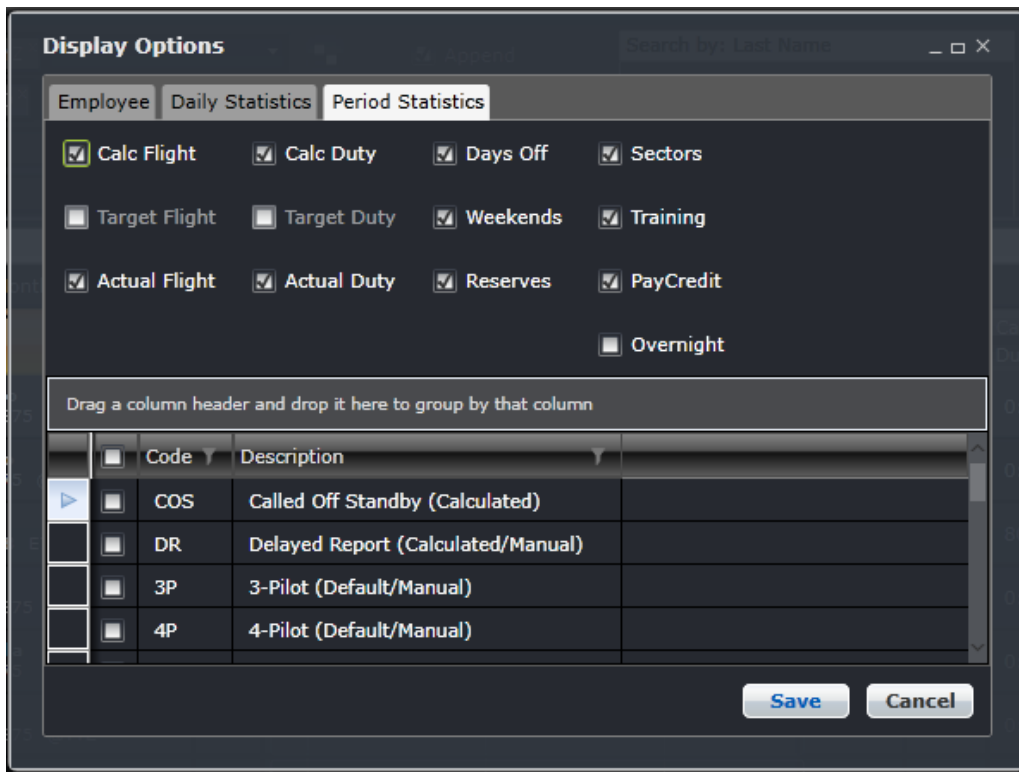
March 2016			
03-Mar (S) Thu	04-Mar (S) Fri	05-Mar (S) Sat	06-Mar (S) Sun
196G-1 24h46 MCNTLEI		SIN OFF-1 SIN 00:00 23:59	SIN REST-1 SIN 00:00 23:59
<b>C196G</b> Flight/Duty: 11:53 / 15:49 Report/Release: 00:15 L / 16:50 L Crew Public: Ng, (黄文品), CHECK FLIGHT Poh, (傅仪婷), CHECK FLIGHT Attributes: LATESTART, MSP, CHI, NON-LVO, TAO, LAY, EASY, INT			

**Show Totals Columns**

Clicking on the Show Totals Columns button displays several columns that tally how many pairings fulfill each column's characteristic. Each row corresponds to one roster. In the image below, rosters were open from the 16<sup>th</sup> to 31<sup>st</sup> of October and the first roster for that period has 4 days off and 2 weekends off in the schedule that is currently displayed.

Calc Flight	Actual Flight	Calc Duty	Actual Duty	Days Off	Weekend Off	Reserve	Sector	Training	Pay Credit
0:00	0:00	0:00	0:00	4	2	0	0	0	24:00
0:00	0:00	0:00	0:00	0	0	0	0	0	0:00
38:43	38:43	80:17	80:17	4	0	1	24	0	41:48
0:00	0:00	0:00	0:00	0	0	0	0	0	0:00
0:00	0:00	0:00	0:00	0	2	0	0	0	0:00
0:00	0:00	0:00	0:00	0	0	0	0	0	0:00
0:00	0:00	0:00	0:00	0	0	0	0	0	0:00
0:00	0:00	0:00	0:00	0	0	0	0	0	0:00

Users have the option hide or display certain columns. This can be done by right-clicking on any of the columns then selecting Show/Hide Options. Go to the Period Statistics tab. Select or deselect a column option then click the Save button.



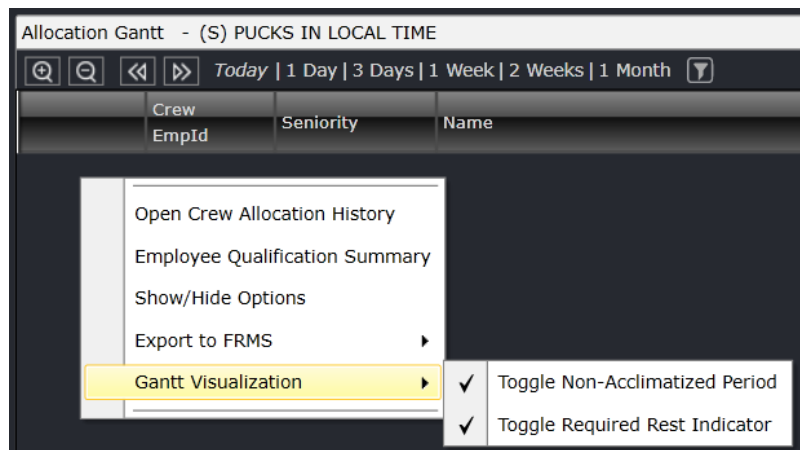
Column	Description
<i>Calc Flight</i>	Calculated flight time. If credit rules for flight time are applied, the total will be reflected here. Credit flight rules can be set up in Configure in the Flight and Duty Credit Rules screen under the Rules menu.
<i>Calc Duty</i>	Calculated duty time. If credit rules for duty time are applied, the total will be reflected here. Credit duty rules can be set up in Configure in the Flight and Duty Credit Rules screen under the Rules menu.
<i>Days Off</i>	Total number of days off based on the pair type RDO.
<i>Sectors</i>	Total number of operating sectors or flights. Deadhead and deadhead other events not included.
<i>Target Flight</i>	This column displays the target flight hours of the selected crew. This is based on the total credit flight hours for the roster period divided by the number of available man-days for the roster period.  To enable this option, set the user preference <i>DisablePeriodTarget</i> in Configure to True.
<i>Target Duty</i>	This column displays the target duty hours of the selected crew. This is based on the total credit duty hours for the roster period divided by the number of available man-days for the roster period.  To enable this option, set the user preference <i>DisablePeriodTarget</i> in Configure to True.
<i>Weekends</i>	Totals the number of weekends (Saturday and Sunday) in the open period.

<i>Training</i>	Number of training pairings for the roster based on pair types SIM and TRN
<i>Actual Flight</i>	Total flight hours without any credit rules applied.
<i>Actual Duty</i>	Total duty hours without any credit rules applied.
<i>Reserves</i>	Number of reserves in the period based on pair types RES and ARD
<i>PayCredit</i>	Total pay credits for the period
<i>Overnight</i>	Number of overnights or layover days
<i>Pairing Attributes</i>	This section contains a list of pairing attributes. Select the attributes to be monitored to display the column.

Trip rig credit rules can be applied to the Pay Credit column. If the pairing pay credit value is higher than the sum of the duties' pay credit, the difference, referred to as X, will be used. If the pairing on the last day of the date range finishes on the last day, the whole pay credit value is used. Otherwise, if the last pairing ends outside of the date range, X will not be counted for the part of the pairing within and outside of the date range.

For example, the date range is 01-30 June and the pairing on June 30 ends on 01 July with rig pay credit of 4:00 and sum of duty pay credit is 2:30. The difference, or X, is 1:30 or 1.5. For the date range, X will not be considered since the latest duty (01 July) is outside of the date range. If the date range for processing is 01 June to 31 July, X will be considered. The total pairing pay credits will be displayed in the Pay Credit total column.

### ***Toggle Non-Acclimatised Period***



When the Toggle Non-Acclimatized Period option is selected, the following will occur:

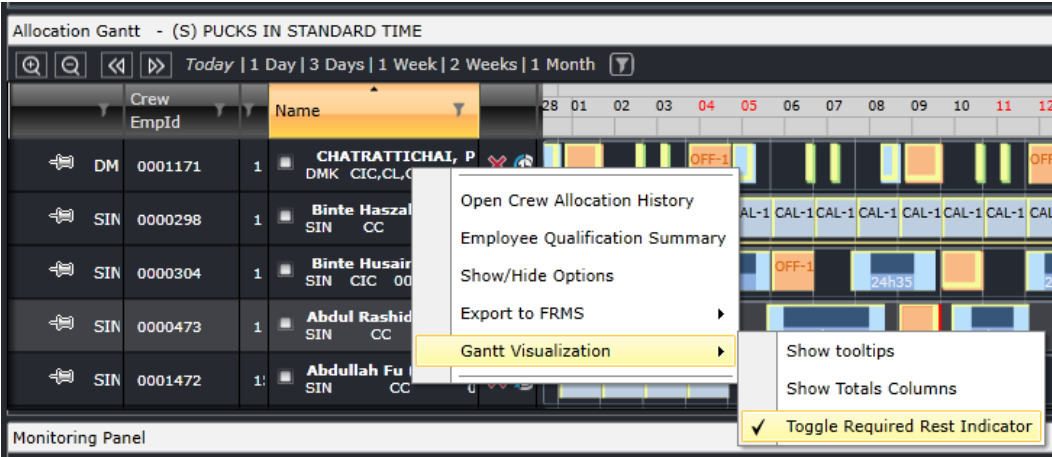
- Trigger the view of non-acclimatized periods in the Allocation Gantt;
- Hide the check icon when there are no non-acclimatized periods displayed in the Allocation Gantt;
- Display a check icon when non-acclimatized periods are displayed within the Allocation Gantt; and
- Display the non-acclimatization period lines.

### ***Toggle Required Rest Indicator***

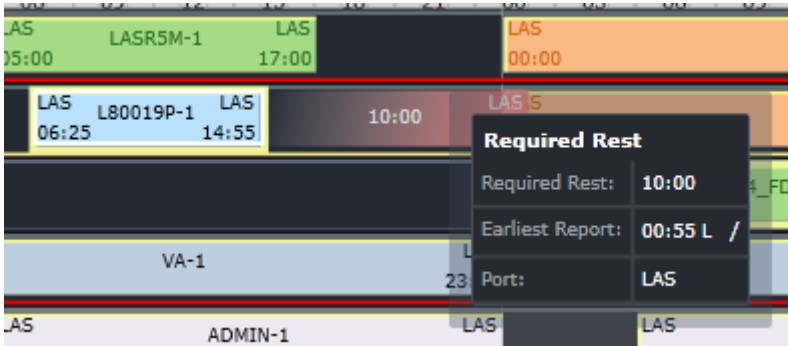
The Allocation Gantt displays an after-duty rest indicator to aid users monitor the amount of rest required for a crew after a duty.

To enable the After Duty Rest indicator:

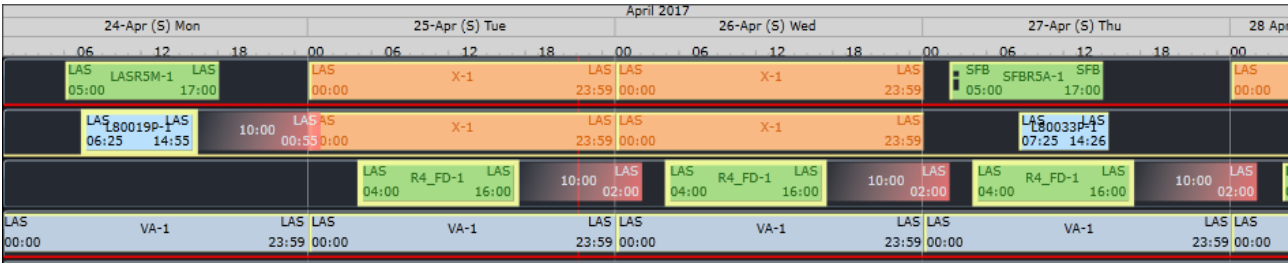
- Load crew rosters.
- Right-click the name of the crew.
- Enable Gantt Visualization > Toggle Required Rest Indicator.



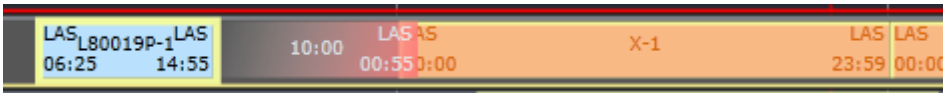
When the rest indicator is enabled, the Allocation Gantt tool tip will display the *Required Rest* information. A red haze is added after the duty puck. The required rest is displayed in the center. The rest port and the rest end time are placed at the end of the indicator. The rest end time is calculated as the sum of the release time and required rest time. Hovering the mouse over the indicator displays details of required rest.



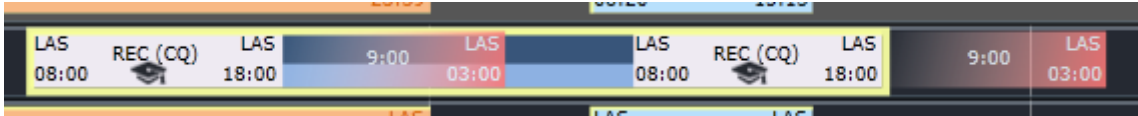
The Allocation Gantt after activating the After Rest Duty Indicator.



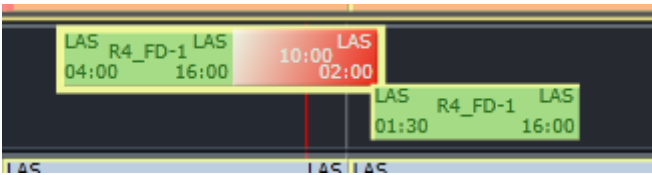
**Day Off**



**Multiple-day Pairing**



**Rest In Violation**



**Gantt Period**

The Totals columns in crew applications consider all days selected in the Allocation Panel filter. If the Gantt Period checkbox is selected, the totals will be based on the dates that are visible in the Allocation Gantt. For example, if the entire month of January was selected and the Totals columns are selected, the totals will be based on 01-31 January. If a 1-week view is selected and the Gantt Period checkbox is selected, the totals will be based on the 7 days displayed in the Allocation Gantt, specifically the duties that have the start of the day visible. If the user slightly moves the Gantt to hide the beginning of the first day, the calculation excludes the first day.

For example, the image below shows the totals from the 16<sup>th</sup> to the 22<sup>nd</sup>. Notice that there is only one rest day.

16-Aug (S) Tue	17-Aug (S) Wed	18-Aug (S) Thu	August 2016		19-Aug (S) Fri	20-Aug (S) Sat	21-Aug (S) Sun	22-Aug (S) Mon	Actual Flight	Actual Duty	Days Off	Reserve	Pay Credit
7686-1 13h17	7686-2 16h55	7686-3 16h55	YYZ SDO-1 00:00	YYZ	23:59	7618-1 16h33	7618-2 11h55	7618-3 11h55	30:12	48:39	2	0	30:12

As you scroll one day forward (17<sup>th</sup> to 23<sup>rd</sup>), the totals change with the addition of another rest day and the hiding of the first duty on the 16<sup>th</sup>.

17-Aug (S) Wed	18-Aug (S) Thu	19-Aug (S) Fri	August 2016		20-Aug (S) Sat	21-Aug (S) Sun	22-Aug (S) Mon	23-Aug (S) Tue	Actual Flight	Actual Duty	Days Off	Reserve	Pay Credit
7686-2 16h55	7686-3 16h55	YYZ SDO-1 00:00	YYZ	23:59	7618-1 16h33	7618-2 16h33	7618-3 16h55	YYZ SDO-1 00:00	25:46	41:21	2	0	25:46

If you prefer to include the first day in the totals even if only part of that day is visible, set the user preference *RollingTotalsPartialPairings* to True.



## Name Block

Crew EmpId	Sen	Name		28-Feb (Z) Tue	01-Mar (Z) Wed
000010604	392	Adams, Brian CA 000011109 320 @IWA Mixed	✕		
000011940	1064	Adams, Carl SFB FO 000008759 320 @SFB Pure	✕	PIT 04:59	
000011109	295	Adamson, Ruth PIT FA,FA,FA 000011940 320/757/M80 @LAS Reserve	✕	IWA 06:59	IWA 07:00 X-1

The left side of the Allocation Gantt has the name block. These columns have basic information about each crewmember and can be used to sort them. The **line type code** is displayed in the employee **Name** column, after the Sign-On port (if displayed) or the Equipment Group.

Select All

- 0000055
- 0000079
- 0000097
- 0000112

Show rows with value that

Contains

aA

And

Contains

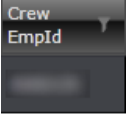
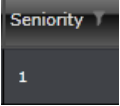
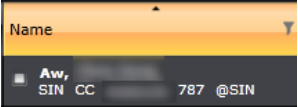

aA

Filter Clear Filter

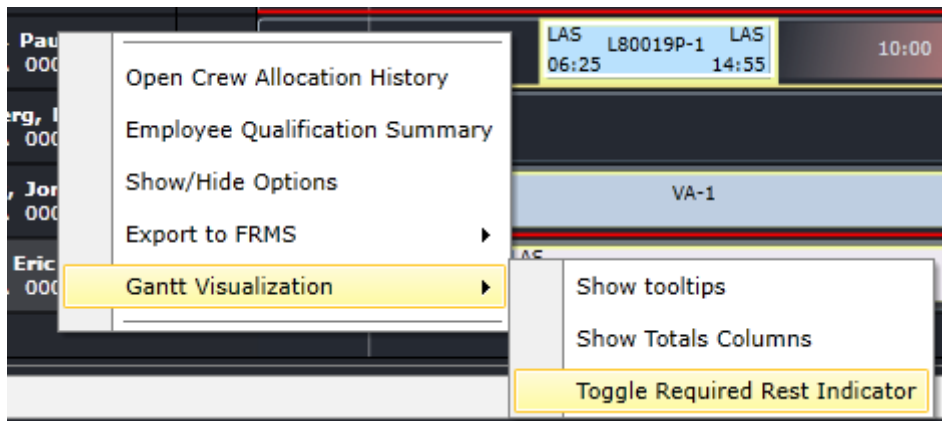
Each column has a filter icon (🔍) that when clicked will display a list of all the options available for the column and a filter to search for phrases within the entries.

Clicking on each column header arranges the displayed rosters according to that column. In the image above, the rosters are arranged alphabetically by name.

Column	Description
<p><b>Base</b></p>	<p>This column contains a pin and the base of the crew. One or more rows can be pinned to isolate them to the top. This is helpful when comparing two rosters or swapping pairings between two crew. To unpin the row, click on the pin again.</p>

<p><b>Crew Empld</b></p> 	<p>This column contains the employee ID of each crewmember.</p>
<p><b>Seniority</b></p> 	<p>This column contains the seniority of the crewmember. Clicking once on the column header arranges the crew by seniority from lowest to highest. Clicking it again arranges the crewmember by seniority from highest to lowest.</p>
<p><b>Name</b></p> 	<p>This column displays the name of the crewmember. Under that are his rated base, rank, employee ID and equipment type, his current location and line type.</p> <p>There is a check box at the left side of each name. This is used to assign pairings to multiple crew and will be discussed in detail in a later section.</p>
<p><b>Action buttons</b></p> 	<p>The first button removes this crew from the Allocation Gantt. The second button opens the Crew Allocation History, which shows the changes made to the crewmember's roster. This only applies to published rosters and changes made in CrewFollow.</p>

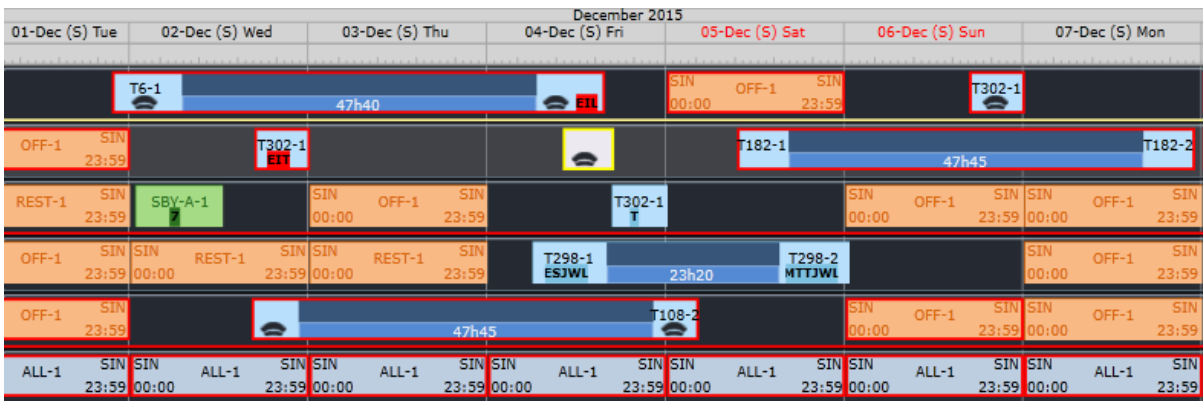
Users can also right click on the name to bring out more options:



Option	Description
<i>Open Crew Allocation History</i>	This brings out the Crew Allocation History form, which displays the changes made to the crew's roster.
<i>Employee Qualification Summary</i>	This brings out the summary of qualifications for the selected crew.
<i>Show/Hide Options</i>	This brings out the display options for the Allocation Gantt.


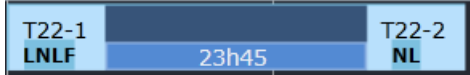
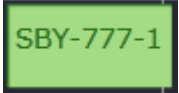
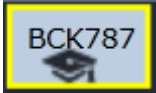
<i>Export to FRMS</i>	The option included here is SAFE, which is an FRMS provider. Once this is selected, the crewmember's roster will be exported to FRMS. The date range is based on the Allocation Panel filter.
<i>Gantt Visualization</i>	Presents options for <a href="#">tooltips and totals columns</a> .


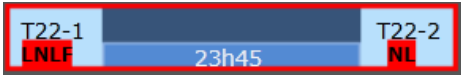
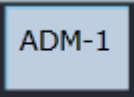
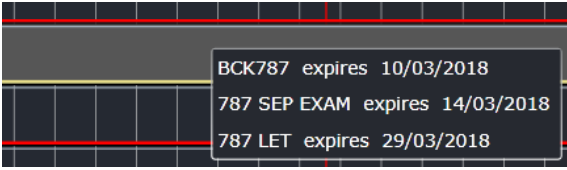
## Gantt Display



The Gantt display contains all the pairings assigned to crew. Each column represents one day and each row represents one crewmember. Users can scroll through the Gantt by clicking and dragging the timeline where the dates are displayed.

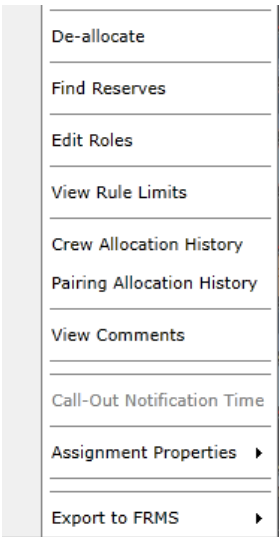
There are several symbols and colors in the Gantt. These are discussed below.

Column	Description
<i>Flight pairing</i>	 <p>A flight pairing has at least one operating flight. The pair label is displayed at the center. If the space permits, the report and release ports will be displayed on either side. This flight pairing lasts one day and starts and ends in the crew's base. By default, flight pairings are bright blue.</p>
<i>Multiple day flight pairing</i>	 <p>This is a flight pairing that lasts two days. Each block of work is a duty. This pairing contains two duties and has 23 hours and 45 minutes of rest in between.</p>
<i>Reserve</i>	 <p>This is a reserve pairing. By default, reserve pairings are green.</p>
<i>Training pairing, student</i>	 <p>This is a training pairing for a student. It is distinguished by the graduation cap under the pair label. Training pairings have yellow borders.</p>

<p>Training pairing, instructor</p>	 <p>This is a training pairing for an instructor. It is distinguished by the captain hat under the pair label. Training pairings have yellow borders.</p>
<p>Pairing with properties (preplanned, requested, etc.)</p>	 <p>Several pairings could have letters under the pair labels. These are the assignment properties, which indicate certain characteristics that crew schedulers need to be aware of. In the example above, the first duty has a late finish and has none-to-low visibility.</p>
<p>Ground pairings</p>	 <p>Ground pairings, or pairings that do not require operating flights, have a pale blue color.</p>
<p>Non-acclimatize period lines</p>	 <p>Non-acclimatized period lines are displayed in the Allocation Gantt to indicate non-acclimatized periods and duration for each crew.</p> <p>When the mouse is hovered over the non-acclimatized period line, a popup is displayed containing the date range of the period a crew is non-acclimatized for.</p>

Right Click Options - Pairing

More information and action options are available when you right click on a pairing. Note that the pairing must be left-clicked first before accessing the right-click options.



## De-allocate

This option removes the pairing from the crewmember's roster.

## Find Reserves

This displays the [Find Employee form](#) with preset filters for home and airport reserves that can replace the selected crew for that day.

**Find Employee**

Date From: 01/11/2018 Date To: 01/11/2018  Append

Emp Name:

Emp Code:

Flight:

**Advanced Filters**

Base: LAS  Operator:

Group:  Pairing:

Rank:  Pairing Type: FPG

Equip Group:  Match Type on all dates:

Department:  Certification:

Course:  Attribute:

Line Type:  Include out of base Employees

Drag a column header and drop it here to group by that column

EmpCode	Name	Department	Base   Rank	Pairing	Phone	Phone 2	Email	Actions
000011778	Angel, Lorraine Pure	Inflight	AVL   FA	L80146F	555-555-1212	555-555-1212 555-555-1212	email@email.com	<input type="button" value="📧"/> <input type="button" value="✉"/>
000004444	Usher, Andre Pure	Cockpit	LAS   CA	L80111P	555-555-1212	555-555-1212	email@email.com	<input type="button" value="📧"/> <input type="button" value="✉"/>
000004446	Caine, Robert Pure	Cockpit	LAS   CA	L80103P	555-555-1212		email@email.com	<input type="button" value="📧"/> <input type="button" value="✉"/>

It also displays the duties 3 days before and after the target date. Should the number of days need to be changed, Administrators can change the number in the user preferences *BackwardDaysDisplayed* and *ForwardDaysDisplayed*.

This function is more often used in CrewFollow where reserves are activated.

## Edit Roles

This is an alternative way of assigning roles in the Pairing panel. Both seats and roles can be updated in the form below.

### View Rule Limits

This option displays the crew's hours in the [Rule Limit Summaries](#).

### Crew Allocation History

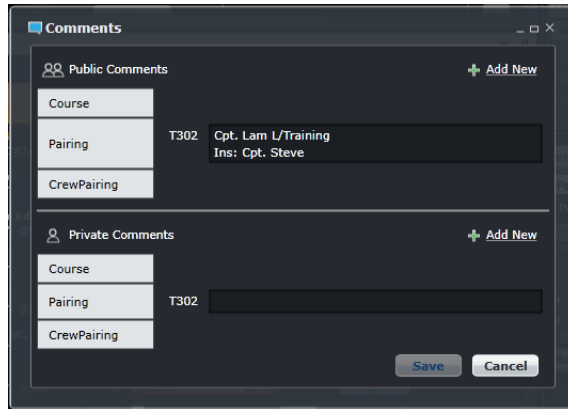
This form displays the history of the changes made to the crew member's roster including Assignment Property changes. The historical changes are kept track once the roster is published. Entries in gray are the originally assigned pairings, while entries in white are changes made in the live roster in CrewFollow.

### Pairing Allocation History

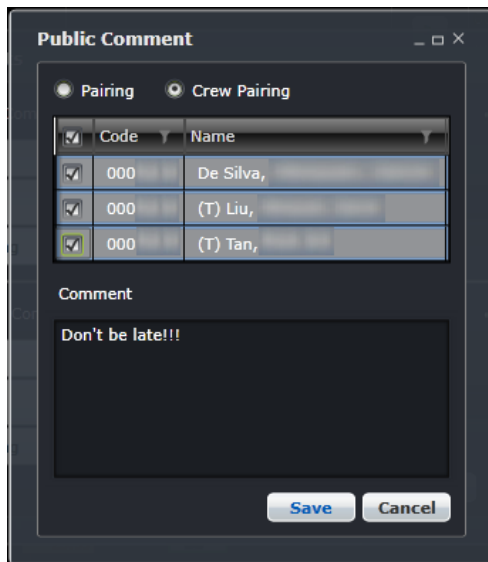
This form shows the history of changes made to the selected pairing including Assignment Property changes.

### View Comments

Public and private comments on the pairing can be added and viewed from here.

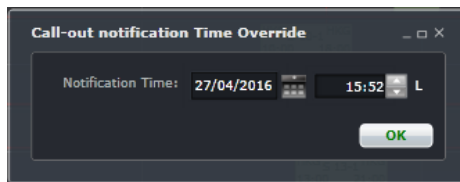


Comments can be added to multiple crew at the same time. Simply click on the Add New link in the public or private comments section, then select Crew Pairing. Select the crewmembers and enter the comment. Click **Save**.



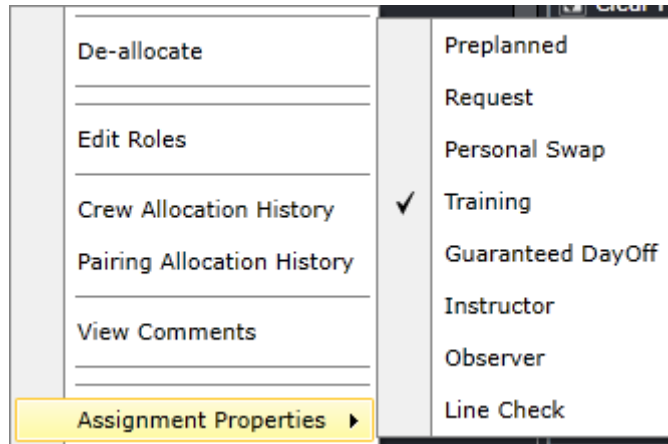
### ***Call-Out Notification Time***

This allows the user to adjust the time that the crewmember was called out from standby. The time is reflected in the crew's pairing.



### ***Assignment Properties***

Assignment properties can be selected and deselected from this list.

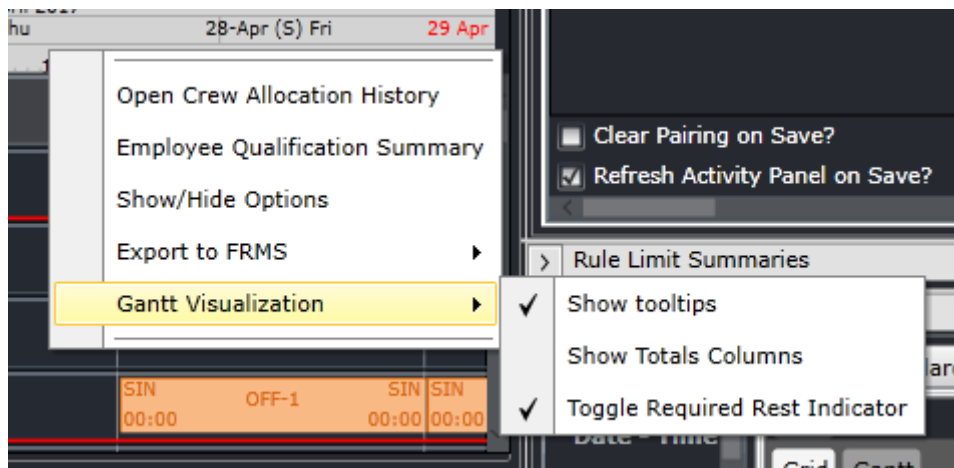


### ***Export to FRMS***

This allows the roster of the individual crew or the crew assigned to the pairing to be exported to an FRMS provider. See [Export to FRMS](#) for complete details.

### **Right Click Options – Allocation Gantt**

These options are available when you right click on a crew name, the timeline or the Totals Columns.



### ***Open Crew Allocation History***

The Crew Allocation History can only be accessed in the Allocation Gantt by right clicking on the name of the crew.

See [Crew Allocation History](#).



## ***Employee Qualification Summary***

This brings out the summary of qualifications for the selected crew.

Like the Crew Allocation History, the Employee Qualification Summary only displays by right clicking on the name of the crew in the Allocation Gantt.

## ***Show/Hide Options***

This brings out the display options for the Allocation Gantt.

## ***Export to FRMS***

See the [Export to FRMS](#).

## ***Gantt Visualization***

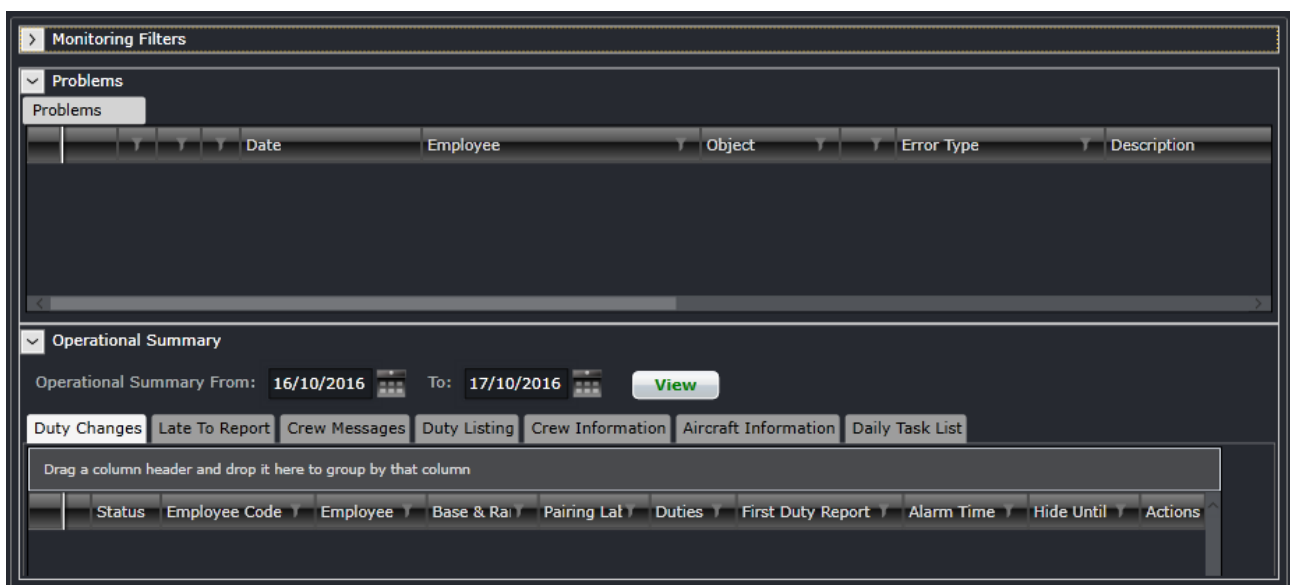
See [Gantt Options](#).

## Monitoring Panel

The Monitoring Panel is a core component of the crew applications as it provides the functionality that allows the user to be kept informed and up-to-date regarding changing information and consequential impacts on the operational assignments of employees. In short, the Monitoring Panel displays the information required to operationally manage employee assignments.

The different types of information displayed within the Monitoring Panel serves two main **purposes**:

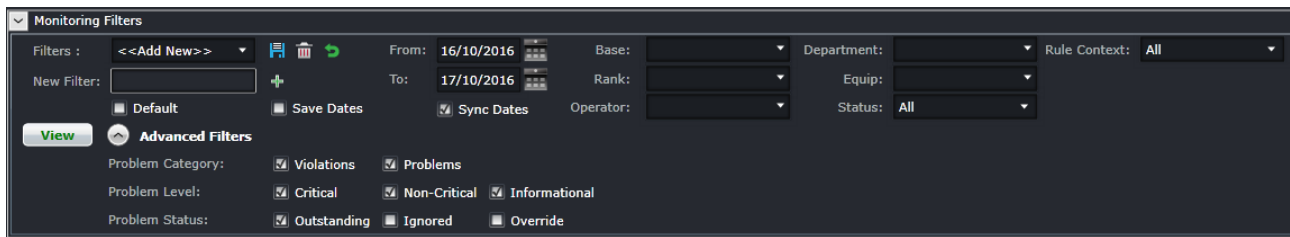
- Informs the user that modifications have been made that affect employee assignments in the operation and the effects of those modifications
- Provides lists of information that the user needs to action, or as an aid when working on other tasks, to ensure that all operational requirements are met. This means that all flights have the correct employees operating them and the employee assignments are valid and legal.



## Monitoring Filter Panel

The purpose of the filter section is to limit the operational information displayed, in this case, crew and problem detection information, to that which matches the filter criteria. This allows the user to focus on aspects of the day-to-day operation that they are responsible for.

Also to aid in the efficiency of using filters, default filters are defined in the Monitoring Filter Panel in the CrewPlan, CrewRoster and CrewFollow applications. In addition, users will be able to save filter criteria as named filters, and subsequently select and apply the saved filters. This allows for a quick and efficient means of switching between different sets of operational information.



The filter for the Monitoring Panel can be divided in the following sub-sections:

1. Date for Filter
2. Save a filter or reuse an existing filter
3. Set as a Default Filter
4. Criteria for Filter
5. Advanced Filters
6. View the data

## Date Filter

In order to view crew data in the Monitoring Panel, users must load the data for a specified date range by entering a date range into the date control. A drop-down calendar is provided to select the date.

- **From:** A date field. The start value of the date range
- **To:** A date field. The end value of the date range

The Operational Summary has a separate date filter that allows users to have a smaller range for that panel. Select Sync Dates to make sure both panels will follow the same date. If you would like to have a different date range for the Operational Summary panel, deselect Sync Dates.

**Note:** *The date controls throughout merlot suite have built-in short cuts. These short cuts allow users to instantly select different date targets, such as the current day (T), or the start of a month (M), a quarter (Q) or a year (Y).*

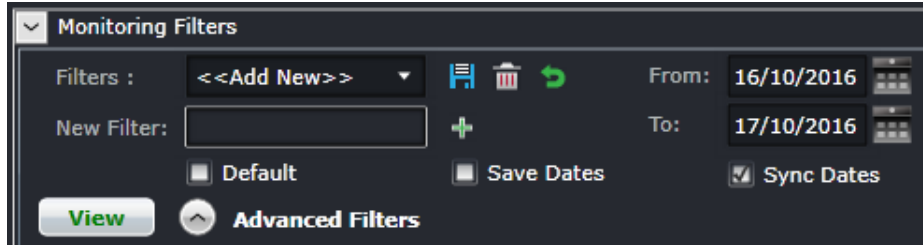
## Save a Filter or re-use an Existing Filter

To allow users to specify and save filters, the Filter Section has a Filters field and associated Save, Delete and Reset icon buttons as well as a Save Dates checkbox.

The Filters field is a combination of a drop-down lists that displays the previously saved filters, as defined by the user, along with template filters that apply to all users. There is also the ability to enter a new filter name in the New Filter field and to click the plus (+) icon to add the new filter.

The Save Dates check box allows the user to control whether a filter they define is set to a specific date time range or if the selected filter inherits the current date time range in the Monitoring Panel.

## Default Filter

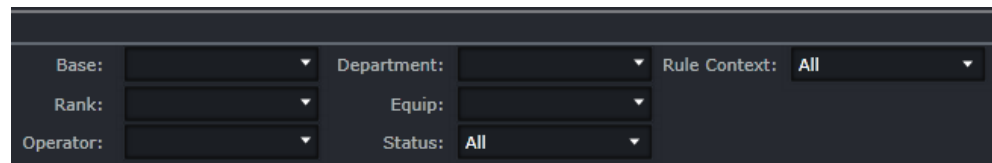


To speed up workflow processes, default filters may be set up in the Monitoring Filters Panel. The default filter facilitates the rapid filtering of the displayed data that the user refers to most frequently.

To allow the user to set a default filter, the filter section contains a Default check box. When this button is clicked, the currently selected filter is saved as the default filter for the application.

When the Monitoring Panel is opened, it determines the current user and the application context and defaults to the relevant filter.

## Criteria for Filters



The filter section contains the following criteria which are used to determine which data is displayed in the tabs in the Monitoring Panel:

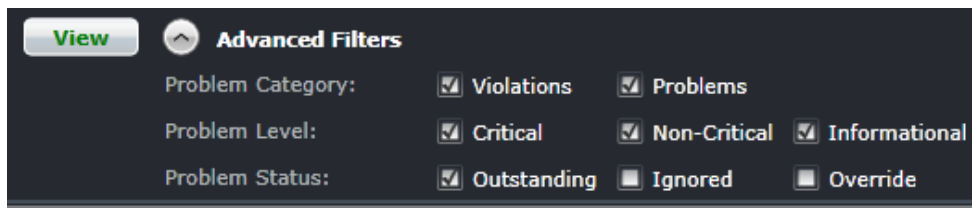
Field	Description
<i>Base</i>	A drop-down field that displays the active crew bases
<i>Rank</i>	A drop-down field that displays active ranks and / or rank groups
<i>Operator</i>	The Operator drop-down menu filters the grid to show information based on selected airline operators
<i>Department</i>	A drop-down field that displays active departments. It is an area within an airline or company that is tasked with providing particular services of a similar type. For example, Flight Operations (i.e. the manning and operating of aircraft), Maintenance (ensure the aircraft are able to operate safely), Ramp (the parking and coordination of aircraft resupply between flights).
<i>Equip</i>	A drop-down field that displays the active aircraft or equipment types or groups that crew operate
<i>Status</i>	Pairing status drop-down menu which includes All, Planned, Active, Provisionally Active options

<i>Rule Context</i>	A drop-down field for the applicability of violations. Options include All, Planning (violations from planning rules) and Active (violations for published rosters)
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There is an option to use exclude a criterion. For example, to load all activities except for FPG pairing type, select FPG and then Ctrl+click FPG. This will turn the selection red and the results will not include FPG.



## Advanced Filters



The Advanced Filters section of the Monitoring Filters Panel has numerous check boxes to control the level and status of violations and/or problems that the user would like to view in the Problems panel, including violation/problem level and status options.

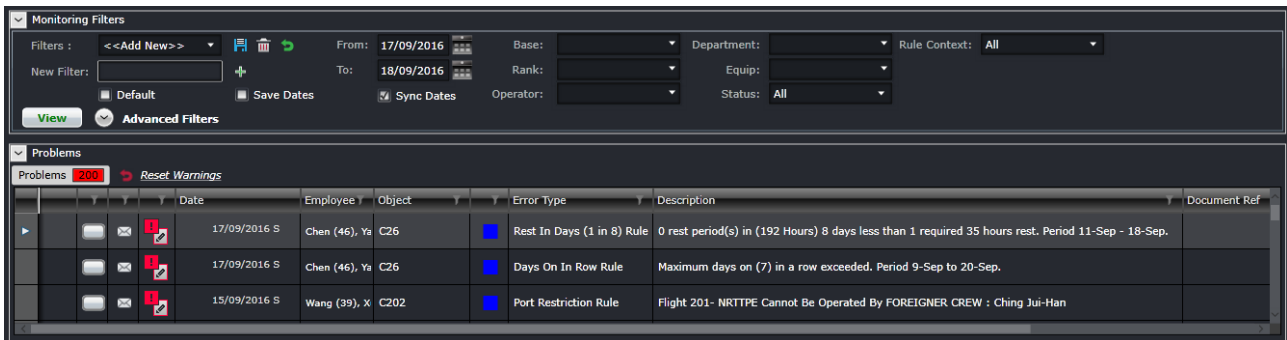
Advanced Filter	Description
<i>Problem Category</i>	Allows users to select to display Violations and/or Problems in the Problem panel.
<i>Problem Level</i>	<ul style="list-style-type: none"> <li>• Critical: The violation and/or problem must be addressed before crew can fly</li> <li>• Non-Critical: The violation and/or problem needs to be addressed, however it is not preventing crew from flying</li> <li>• Informational: Information is being provided regarding a pairing or crewmember</li> </ul>
<i>Problem Status</i>	<ul style="list-style-type: none"> <li>• Outstanding: The violation and/or problem has not been addressed yet</li> <li>• Ignored: The violation and/or problem has been ignored by a user and will only be re-assessed if the pairing is changed. User and time stamp information is recorded.</li> <li>• Override: The violation and/or problem has been determined as not being a problem or violation and is overridden by the user, generally a supervisor, with user and time stamp information recorded</li> </ul>

## View the Filtered Data

The View button applies the filter criteria and displays the resulting data in the Monitoring Panel tabs. Any modifications to the filter criteria need to be reapplied by clicking the View button.

## Problems Panel

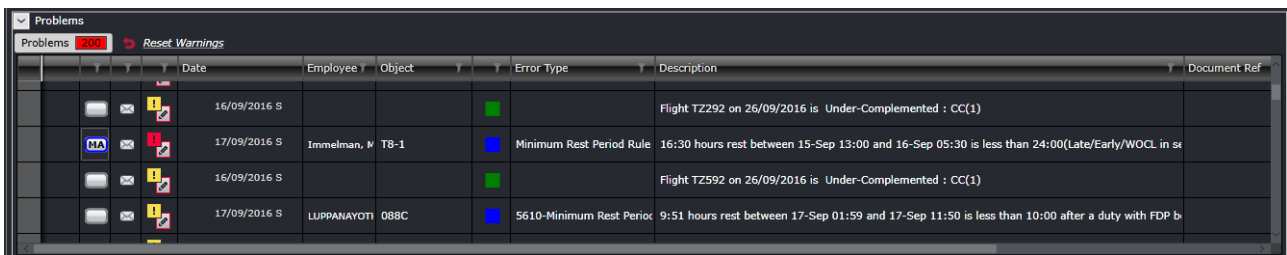
During the daily operation of the airline, changes will occur that impact crew assignments, in particular, flights and qualification modifications. These changes can result in assignments and pairings becoming illegal. As part of the merlot RulesEngine, there are routines that periodically and continually validate crew assignments and pairings against the configured rules of the airline. If these routines determine that an assignment or pairing is no longer valid, an exception will be generated for the illegality and that exception will be displayed within the Problems tab.



The Problem tab previously had violations and problems separated. They are now combined in order for users to manage them more easily.

Basically, violations and problems are different types of issues to be dealt with by the airline. A violation is any breach of a configured rule that has been generated by the merlot RulesEngine. Rules are generally configured to enforce published regulatory requirements from government agencies and other company rules as defined in the airline's operations manual. Problems are all other non-rule based exceptions generated by the Problem Detection Engine (PDE), such as incorrect report/release times, illogical flight/pairing data, and crew complement issues.

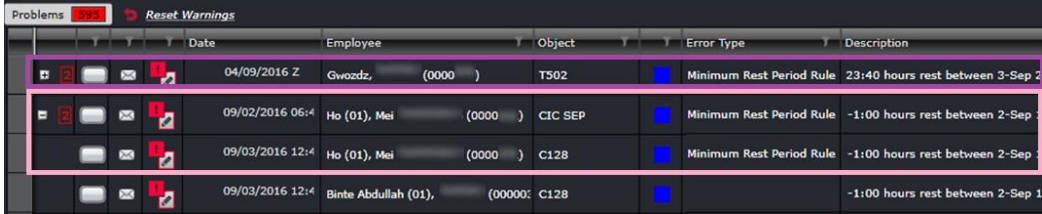
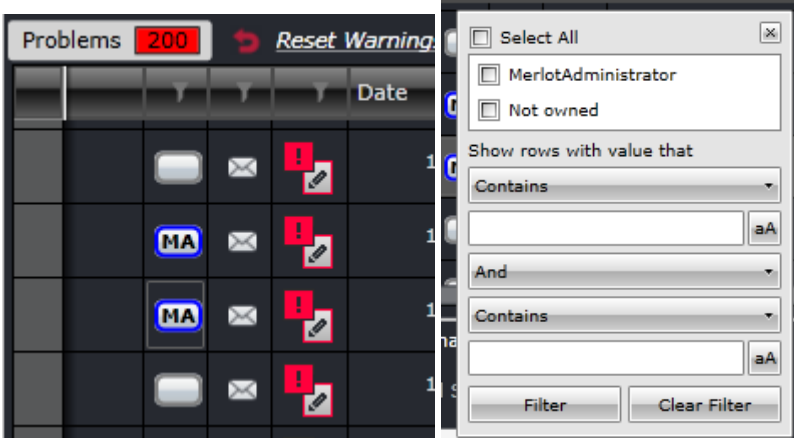
Sample problems are shown below for illustrative purposes.

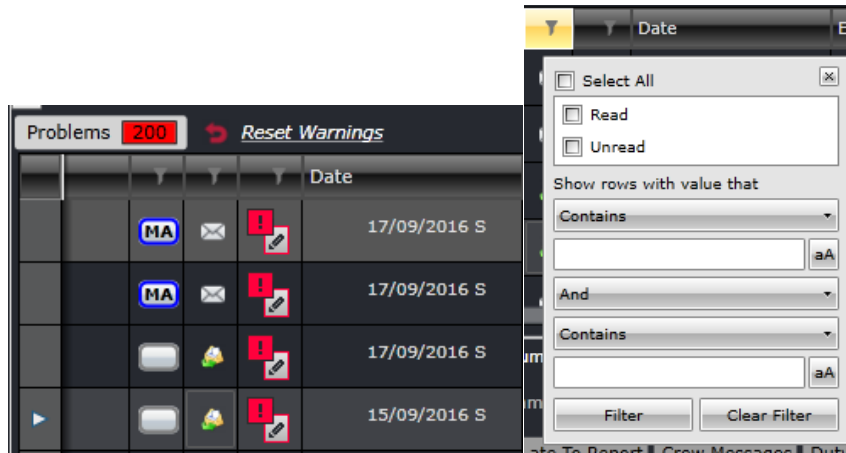


The image above shows 200 unread problems listed in the grid. The background of the number turns red if there is at least one unread problem. If all the problems have been read, the background will turn grey.

Clicking the *Reset Warnings* link located next to the tab will reset the warnings so that any new information will be presented and is easily identifiable to users. Alternatively, click on the View button in the filter panel. Note also that the system automatically updates the information in this panel with an interval of 5 minutes.

The columns are described below:

Column	Description
Grouping	<p>Several instances of a problem can be logged against one crewmember. For example, an expiry violation that was not yet resolved was raised for each day that a crewmember worked. Having them separated can lead users to miss out on more urgent issues. These are now grouped together and can be collapsed/expanded. In the image below, the purple box shows a collapsed group of violations. The pink box shows the expanded violations.</p>  <p>Problems will be grouped together if the <i>BaseEmployeeRule</i> parameter <i>AllowMonitorGridCollapse</i> is set to True. This is set to False by default. This can be adjusted in Configure.</p>
Assignment	<p>Problems can now be “grabbed” by a user to signify that he is accountable for resolving the problem. By default, all problems have an empty square which means that the problem is unassigned. If a user clicks the box, he assigns the problem to himself and his initials will be placed on the square and the border will turn blue. Assignments of other users have a green border. In the example below, the initials are for Merlot Admin. Users cannot remove their assignments, but other users can reassign a problem to them by clicking on the same box. The column can also be filtered by clicking on the header.</p> 
Status	<p>This makes it easier to identify which problems have been read (📧). New problems added to the view are unread (✉️) by default. In the image below, the first two records are unread and the last two records are read. To mark a problem as read, double-click on the envelope icon. The user name and time stamp of reading a problem is recorded in the database. This column can be filtered by clicking on the header.</p>

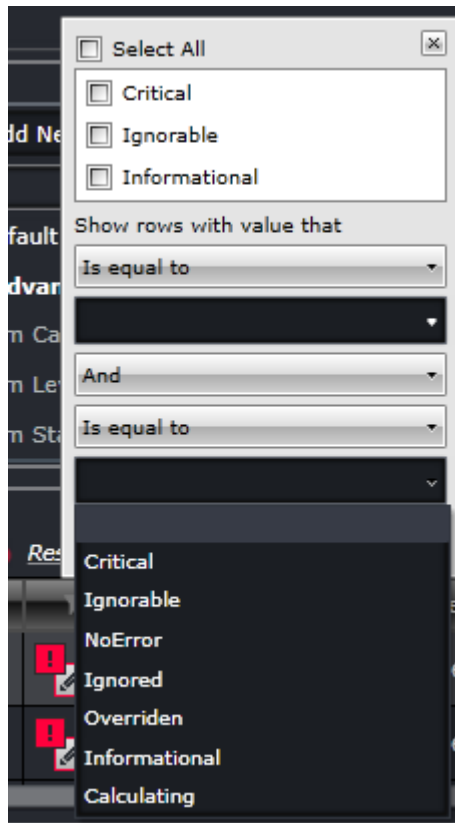


**Note:** New problems are displayed in bold. In the image below, the first problem is new and the second problem is pre-existing.

Error Type	Description
DaysOff In Weeks Rule	6 days off in 4 week period (10-Oct - 7-Nov) not achieved
Rest In Days (1 in 8) Rule	0 rest period(s) in (192 Hours) 8 days less than 1 required 35 hours rest. Period 10-Oct - 17-Oct.

*Severity*

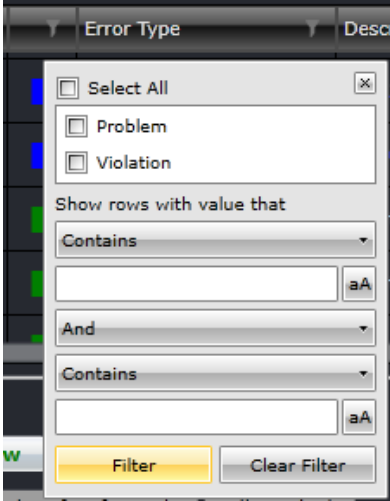

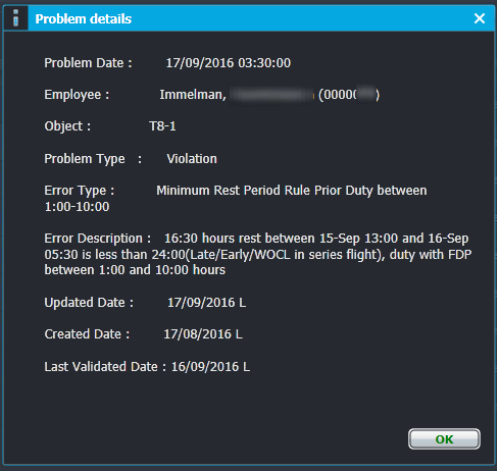

Displays the severity and behaviour of the problem. This column can be filtered by clicking on the header.



*Date*

Date of the duty that the problem is logged against.



<i>Employee</i>	Name of the crew with the problem
<i>Object</i>	Pairing or duty label associated with the problem
<i>Category</i>	<p>Determines if the record is a problem (green) or a violation (blue). This column can be filtered by clicking on the header.</p> 
<i>Error Type</i>	Name of the rule that was breached
<i>Description</i>	Problem message
<i>Document Ref</i>	Reference text pertaining to the rule (see Configure User Guide for setup instructions)
<i>Last Updated</i>	Date and time when the problem was last evaluated by the RulesEngine. If the date is too far in the past, the problem could be irrelevant and the panel needs to be refreshed
<i>Actions</i>	 <p><b>Open Problem</b> – Displays the details of a problem in a popup form.</p>   <p><b>View Employee Details</b> - Displays employee/crew information. Contact details can be retrieved from here. This applies to CrewRoster and CrewFollow only.</p>

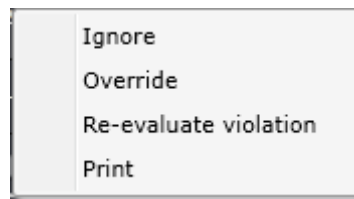


**Pairing Details** - Displays information on the pairing. This is handy when the user needs to relay pairing information to crew. This applies to CrewRoster and CrewFollow only.



**Open in Gantt** - Opens the crewmember's roster in the Allocation Gantt. This applies to CrewRoster and CrewFollow only.

Right-clicking on any column of a problem brings out the following options:



- **Ignore** – marks the problem is ignored by the user and hides the problem until reversed. The user name and timestamp are recorded in the database. Use this sparingly as it might lead to a compliance breach.
- **Override** – allows the user (with the appropriate security access) to override a violation and allow the affected crewmember to proceed with the duty. The user name, timestamp and comments are recorded in the database.
- **Re-evaluate violation** – triggers the RulesEngine to validate the corresponding duty and removes the violation if it is no longer applicable.
- **Print** – prints the violation in a PDF file or through a connected printer.

## Pairing Panel

The Pairing Panel is a core component of the merlot crew application as it is the only functionality that is used to create and modify pairings. Pairings are the key definitions of work which are assigned to crew members.

There are two primary purposes that the Pairing Panel can be used for:

- Creation of pairings by inserting groupings of flights and events together within a pairing
- Modification of existing pairings by changing the duties, flights and events that comprise a pairing



To be able to assign work to crew members, the individual work activities need to be grouped together into meaningful units of work. It is the Pairing Panel that provides the functionality to group flights and events together into duties, which then comprise a pairing. These pairings are the units of work that can be assigned to crew members.

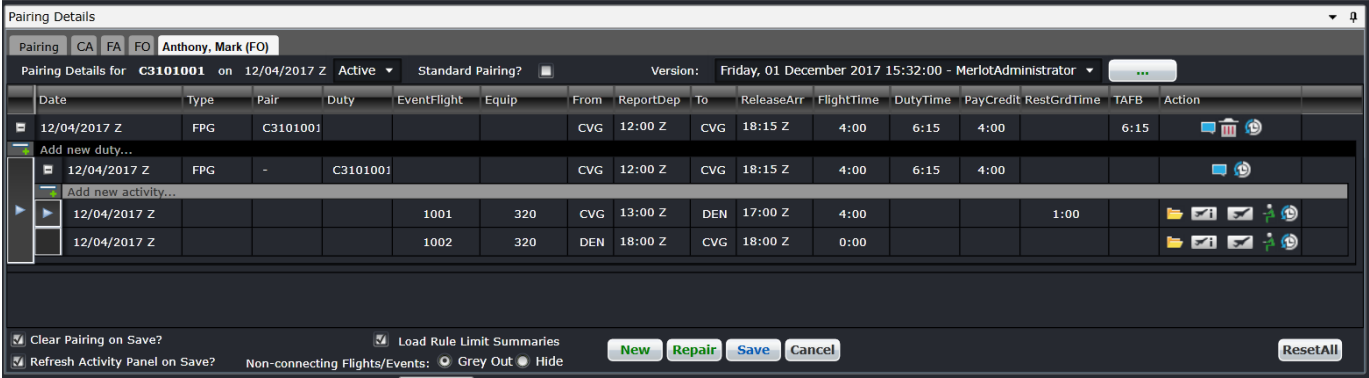
The Pairing Panel displays the data associated with a pairing that is in the process of being created, or an existing pairing. To display the information about a pairing in a logical and focused manner, the Pairing Panel contains the following main screen components or sections:

- **Pairing Details:** Lists the duties, flights and events that comprise the pairing, and when they commence
- **Exceptions (Tick/Cross):** Green-tick or red-cross to display pass/fail information of rules applied to the pairing
- **Assigned Crew:** Contains the list of crew members who have been assigned to the pairing
- **Recurrence:** The period and frequencies of the recurrence of the current pairing
- **Complement:** The number and types of crew members who are required to be assigned to the pairing
- **Attributes:** Additional ways to classify pairings

## Pairing Panel and Grid

This section contains details of the duties and the flights and events that when combined together define the work involved within the pairing. It also identifies the status of a pairing, whether a pairing is a Standard Pairing or not, and the pairing version.

Pairing Details Panel



Surrounding the Pairing Grid are fields and controls that provide general and configuration associated information about the pairing.

The pairing, duty and flight/event information is displayed to the user via a scrollable grid containing three different levels of data. These three levels are:

- Pairing:** The information displayed in the grid columns relate to the whole pairing. There will only be one pairing level row in the grid. The pairing level row will always be the first data row in the grid.

Date	Type	Pair	Duty	EventFlight	Equip	From	ReportDep	To	ReleaseArr	FlightTime	DutyTime	PayCredit	RestGrdTime	TAFB	Action
02/11/2015 L	FPG	TQ203490				YYZ	06:00 L	YYZ	17:04 L	8:57	16:20	0:00		35:04	[Icons]

- Duty:** The information displayed in the grid columns relate to the duty within the pairing. The duty is comprised of the flight and/or events on the subsequent grid rows up until the next duty row, or to the end of the row in the grid. Each duty represents the work required for one day, thus there can be one or more duty rows. For ease of managing the data within a pairing and allowing the user to focus on single duties at a time, the duty level is collapsible and expandable.

02/11/2015 L	FPG	-	TQ203490-1			YYZ	06:00 L	YHZ	11:56 L	3:11	4:56	0:00	18:44		[Icons]
02/11/2015 L				3490	DH4	YYZ	07:00 L	YOW	08:15 L	1:15			0:30		[Icons]
02/11/2015 L				3490	DH4	YOW	08:45 L	YHZ	11:41 L	1:56					[Icons]
02/11/2015 L				cocommodatio											[Icons]
03/11/2015 L	FPG	-	TQ203490-2			YHZ	06:40 L	YYZ	17:04 L	5:46	11:24	0:00			[Icons]
03/11/2015 L				3466	DH4	YHZ	07:40 L	YDF	09:42 L	1:32			0:43		[Icons]
03/11/2015 L				3467	DH4	YDF	10:25 L	YHZ	11:43 L	1:48			0:57		[Icons]
03/11/2015 L				3467	DH4	YHZ	12:40 L	YOW	14:06 L	2:26			1:54		[Icons]
03/11/2015 L				367 (DH)	736	YOW	16:00 L	YYZ	17:04 L	0:00					[Icons]

- Activities consisting of Flights and Events:** The information displayed in the grid columns relate to the individual flights or events within a duty.

02/11/2015 L				3490	DH4	YYZ	07:00 L	YOW	08:15 L	1:15			0:30		[Icons]
02/11/2015 L				3490	DH4	YOW	08:45 L	YHZ	11:41 L	1:56					[Icons]
02/11/2015 L				cocommodatio											[Icons]

The columns are described below:

Column	Description
--------	-------------

<i>Date</i>	Date of the pairing/duty/event
<i>Type</i>	Pairing or duty type
<i>Pair</i>	Name of the pairing, or pair label
<i>Duty</i>	Name of the duty, or duty label
<i>EventFlight</i>	Flight number or name of the event
<i>Equip</i>	Equipment type of the flight. This is blank if the event does not involve a flight
<i>From</i>	Departure port of the flight, or the location of the event
<i>ReportDep</i>	Report time of the duty, or the start time of the event
<i>To</i>	Arrival port of the flight, or the location of the event
<i>ReleaseArr</i>	Release time of the duty, or the end time of the event
<i>FlightTime</i>	If it is an operating flight, this holds the time from departure to arrival time. If credit flight time is required, it is applied in this field. The total flight time is displayed in the Duty and Pairing levels.
<i>DutyTime</i>	Duty time for each event. If credit duty time is required, it is applied in this field. The total duty time is displayed in the Duty and Pairing levels.
<i>PayCredit</i>	If pay credits are granted for the event, the value will be displayed. If you hover on the field, the pay credit, calculated credit and rig credit will be displayed.
<i>RestGrdTime</i>	Amount of time spent on the ground when not in flight.
<i>TAFB</i>	Time away from base. This is the total time from report time of the first duty to the release time of the last duty in the pairing.
<i>Action</i>	These action buttons are discussed in the Pairing Actions section.

**Additional note for PayCredit:** Trip rig credit rules can be applied to the Pay Credit column. If the pairing pay credit value is higher than the sum of the duties' pay credit, the difference, referred to as X, will be used. If the pairing on the last day of the date range finishes on the last day, the whole pay credit value is used. Otherwise, if the last pairing ends outside of the date range, X will not be counted for the part of the pairing within and outside of the date range.

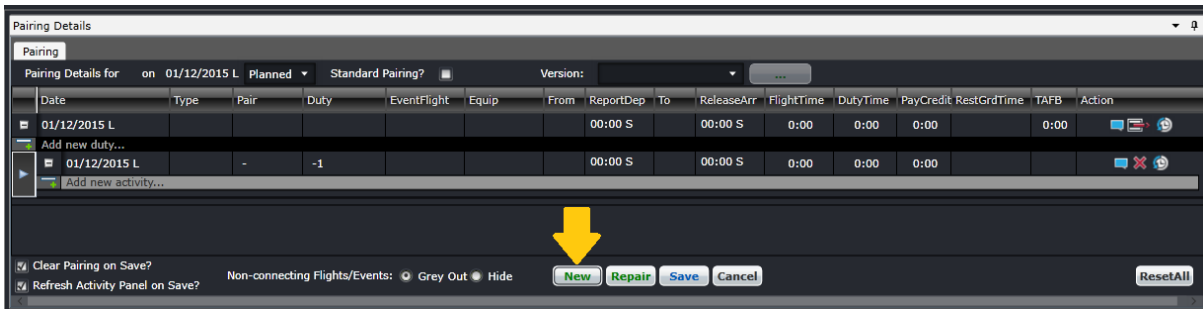
For example, the date range is 01-30 June and the pairing on June 30 ends on 01 July with rig pay credit of 4:00 and sum of duty pay credit is 2:30. The difference, or X, is 1:30 or 1.5. For the date range, X will not be considered since the latest duty (01 July) is outside of the date range. If the date range for processing is 01 June to 31 July, X will be considered. The total pairing pay credits will be displayed in the Pay Credit total column.

## Pairing Creation

The first step in creating a new pairing is to have a blank or empty Pairing Panel.

Click the **New** button at the bottom right of the pairing panel. This will clear the Pairing Panel of the previously displayed pairing information and will display:

- A single blank grid row at the pairing level in the pairing grid, and
- A single blank grid row at the duty/flight/event level in the pairing grid.

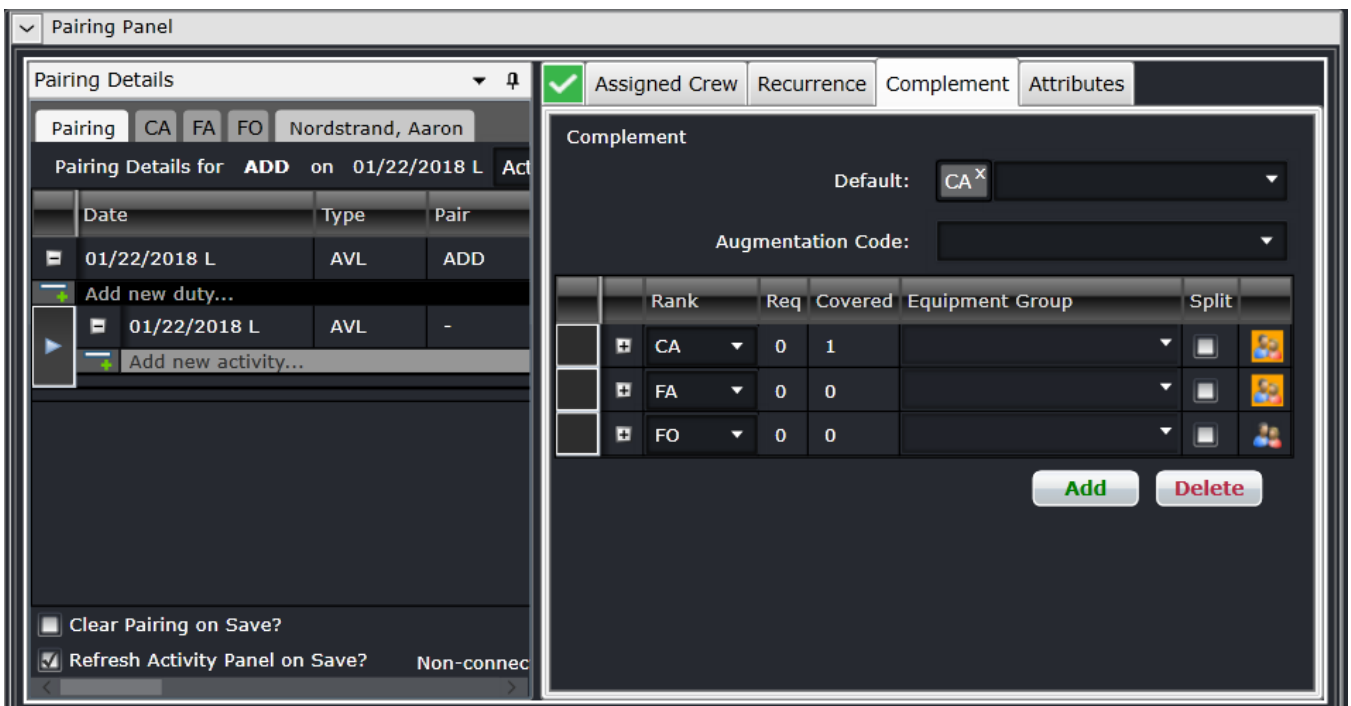


The date of the pairing you are building will initially be set at the first date defined by your Activity Filter. This can be amended as required to the correct date. Adding flights and events to the pairing will also adjust the date of the pairing, as needed.

The second step is to define what is required to occur as part of the pairing. There are two different and broad types of pairings, each with different purposes:

1. Pairings without flights/events: A definition of a period of work or non-work without any detail of what work is going to occur within that period. The majority of the pairings of this type are Standard Pairings, for example Days Off, Vacation and General Administration Days.
2. Pairings with flights/events: Pairings in which duties are defined containing the specific flights and/or events that determine what work is to occur during the pairing.

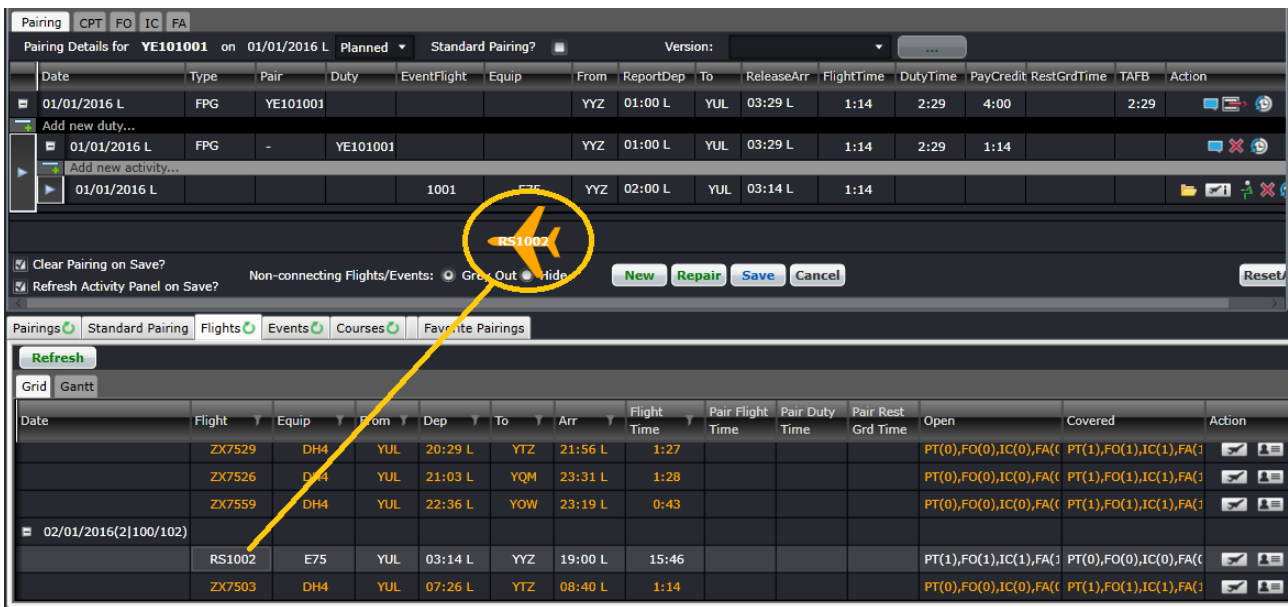
The third step is to ensure you have the complement defined for the pairing you are building. This is discussed further in the next section.



## Pairing Build

There are a number of different methods available that will insert flights and/or events into a pairing. These different methods are provided to give flexibility in terms of how users create pairings and allow for quicker creation of pairings by users who are familiar with the airlines flight schedule. The methods to insert flights and/or events into a pairing are the following:

1. Select/Drag/Drop flights from the Flights or Events tab of the Activity Panel
2. Manually enter a date and flight number
3. Manually enter a date and event name



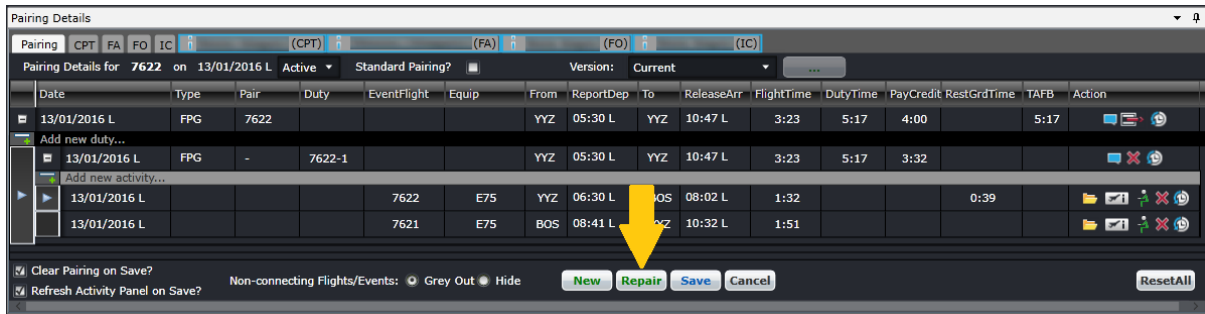
The above image shows dragging a flight from the Flight tab of the Activity Panel to the Pairing Panel.

Another option to add flights and events is to right click on the “Add new activity...” row and select to add a new flight, event or timed event. Go to the Creating Flights section for details on adding a flight.

**Note:** The report and release time of each duty that begins with a flight is automatically calculated based on the buffers set in Employee Report/Release Rules in Configure. If the duty begins with a deadhead other event, the report time buffer is based on the user preference DeadheadOtherReportMinutes. If the duty begins/ends with a timed event, the report/release time buffers are based on the user preferences DefaultReportMinutesBuffer and DefaultReleaseMinutesBuffer.

## Repair Pairings

When pairings are being created or modified, they will be validated against the rules that apply to ranks included in the pairing. Further changes to flights or events may cause a variety of issues to be introduced into existing pairings which require them to be modified to be legal. The Repair button will essentially update the report and release times, flight and duty times, rest ground time, time away from base (TAFB), credit times, pay credits and the sequence of events. Accommodation events will also be added if an overnight is required. These updates are necessary if a flight or event is retimed, delayed, added or removed.

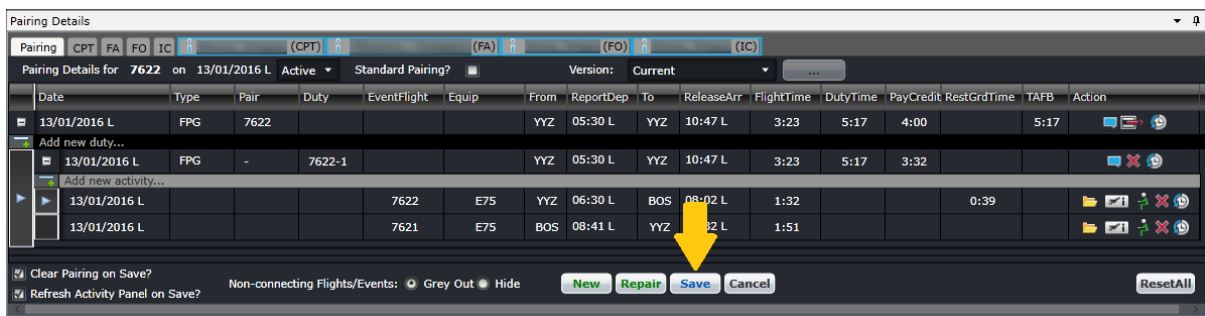


Click **Save**.

### Save Pairings


The user can save a pairing by:

- Clicking the **Save** button; or
- Choose the **File -> Save** menu item.




### Modify Pairings

An existing pairing can be changed by inserting or deleting flights and/or events from the pairing. The pairing can be loaded to the Pairing Panel by double clicking or dragging the pairing from the Pairing tab in the Activities panel. Flights and events can be added by double clicking or dragging the pairing from the Flights or Events tab, respectively. The user must click Save to commit the changes.

Events can be modified within the pairing by clicking on the  action button. Clicking this will bring out the Edit Event form.


Flights cannot be modified in CrewRoster. Users must modify flight information in AircraftFollow or AircraftSchedule.

Cancelled flights that are still contained in a pairing are grayed out and have the cancelled flight icon () beside the flight number. These flights can be removed from the pairing. See the next section for instructions.


If the first event of the duty is removed, the duty label is changed accordingly. If you need to have the duty label retained whenever the first event is removed, set the user preference *AutoUpdatePairingLabel* to False in Configure.



## Cancel Pairings

Pairings with initial publish or active state can be cancelled. This can be done by clicking **Cancel** . Pairings with crew assigned cannot be cancelled. Users are prompted to deallocate crew from a pairing first before proceeding to cancel. Cancelled pairings cannot be modified or assigned.

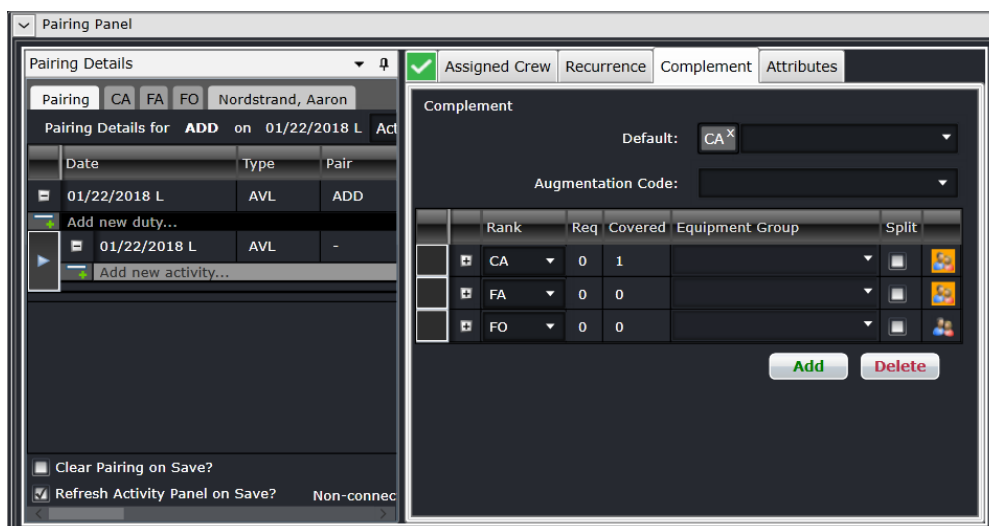
The cancellation of a pairing is reflected in the pairing version.

To reinstate a cancelled pairing, click **Reinstate** .

## Split Pairings

The split functionality is used when a crew is required to perform an activity other than his assigned duty.

The *Split* column in the *Assigned Crew* and *Complement* tabs allows splitting of duties and ranks. Splitting of duties with one assigned crew and rank complement with no assigned crew are also allowed.



When splitting a complement from a pairing with no crew, the following will apply:

- The selected complement will be in a separate pairing and will have the same required complement value
- If a new complement is added after the split, and another split was done, the newly added complement will be in a separate pairing
- When splitting all ranks, nothing will change, as it is a requirement that at least one complement remains with the original pairing
- When splitting both in the *Complement* and *Assigned Crew* tabs, all the selected complements will be considered
- No change will be applied when splitting a pairing with only one complement

If there are crew assigned to a rank, the following will apply after applying a split:

- The selected rank will be added to a pairing containing the same rank
- All crew assigned to a rank will be moved to a new pairing
- Split is not allowed if there is only one rank in the *Complement* tab
- When splitting all ranks, nothing will change as it is a requirement that at least one complement will remain with the original pairing


## Split Pairing Functionality Applied to Actual Scenarios

1. When splitting a pairing with an FO crew assigned, and there are other open rank complements i.e. CA and FA, the following will apply:
  - a. The FO rank complement and the FO crew will be in a separate new pairing;
  - b. The original pairing will drop the FO tab and the FO crew, given that they are already included in a new pairing; and
  - c. Changes such as adding more flights, or a deadhead assignment to the original or the new pairing will be allowed without affecting each other.
  
2. When splitting a CA rank complement from a pairing with no crew assigned to it, and only open rank complements i.e. 1 FO 3 FA, the following will apply:
  - a. The CA rank complement will be assigned to a separate new pairing with the correct number of required complements;
  - b. The original pairing will drop the CA rank complement and will retain the FO and FA rank complements;
  - c. Changes such as adding more flights, or a deadhead assignment to the original or the new pairing will be allowed without affecting each other.



All split activities done in the *Assigned Crew* and *Complement* tabs will be reflected in the Activity Panel.

## Delete Events and Pairings

To remove a flight or event from a pairing:

1. Go to the Pairing tab. (This cannot be done on a rank tab or a crew tab).
2. Click on the  action button on the row of the flight/event to be removed.
3. Click **Save**.

There are two ways to delete a pairing:



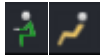



1. From the Pairing Panel, click the  action button on the pairing level; or
2. From the Activities Panel, click the  action button on the row of the pairing.

## Pairing Actions

Each of the rows within the Pairing Details grid has different actions that can be performed on them dependent of the rows data level. The pairing action icons are as follows:

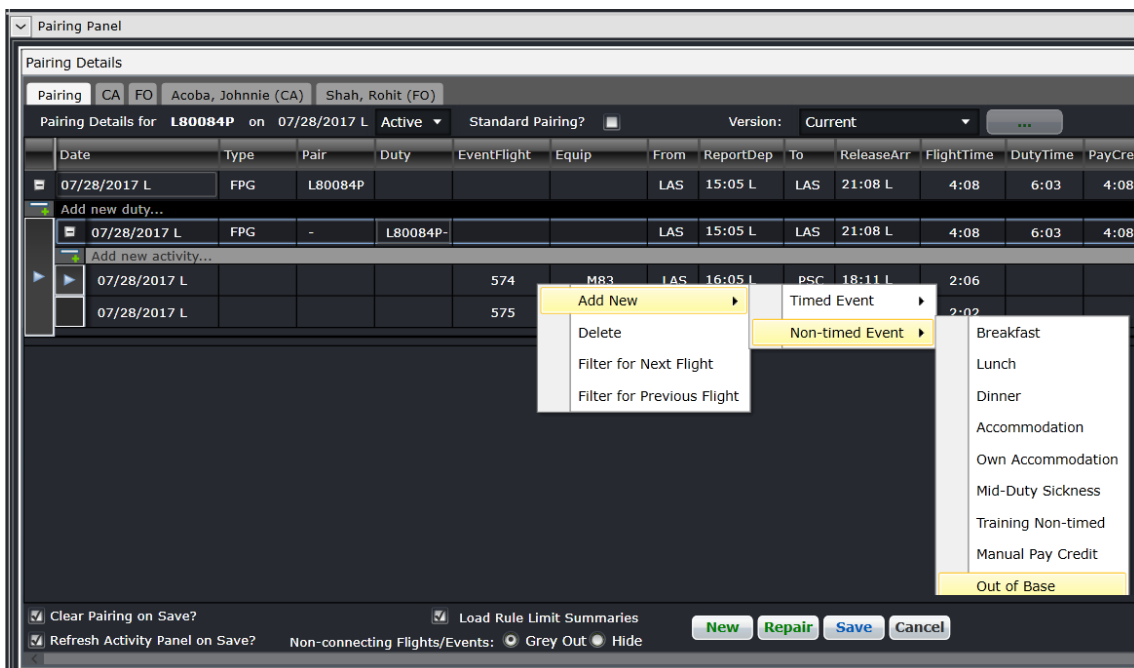


Action Button	Description
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	Edit. This can be used with timed events only.
	Flight Information. Opens the Flight Information Window that displays flight details
	Toggle Operational/Non-operational State. Either of these icons are displayed on flights only. If crew is set to operate for the flight, the green icon is displayed. If crew is set to deadhead on the flight, the yellow icon is displayed. Click on the icon to switch between either options.
	Delete event. Removes the flight or event from the pairing.
	View History. Displays the historical changes on the event, duty or pairing.
	Move Up/Down. Moves an untimed event up or down.

## Right Click Features

Additional features are available to the user in the grid view, by right clicking on a selected row.



The following options are available from the right click menu:

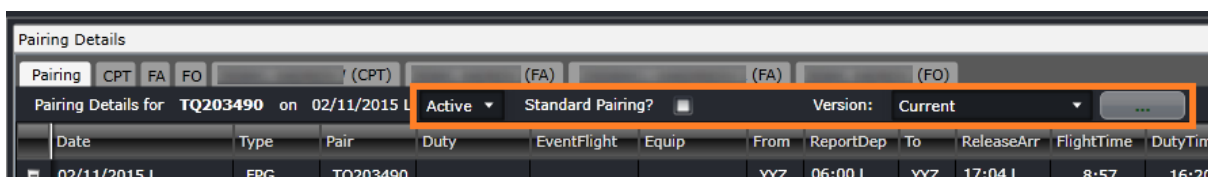
Option	Description
<i>Add New</i>	Allows users to add a Timed or a Non-timed event.
<i>Delete</i>	Deletes an event.
<i>Filter for Next Flight</i>	Filters for the next possible flights.

Option	Description
<i>Filter for Previous Flight</i>	Filters for previous flights.

### Other Pairing Panel Options

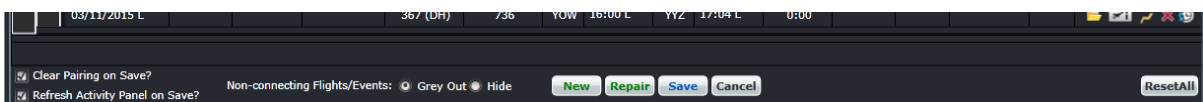
There are more controls around the pairing grid that are essential to roster planning.

These are the options at the top of the Pairing Details panel.



- **Status** – This drop-down list has the options Planned and Active. Planned pairings are not yet available for crew viewing while active pairings have been published for operations and crew. Publishing a roster automatically changes the status to active.
- **Standard pairing selector** – selecting the tick box turns the pairing to a standard pairing.
- **Version** – This drop-down list has the versions of the pairing since it was published. To view a previous version of the pairing, select the version and click on the [...] button beside it. A prompt will appear asking if that version will be loaded. This is available only for pairings published from CrewRoster.

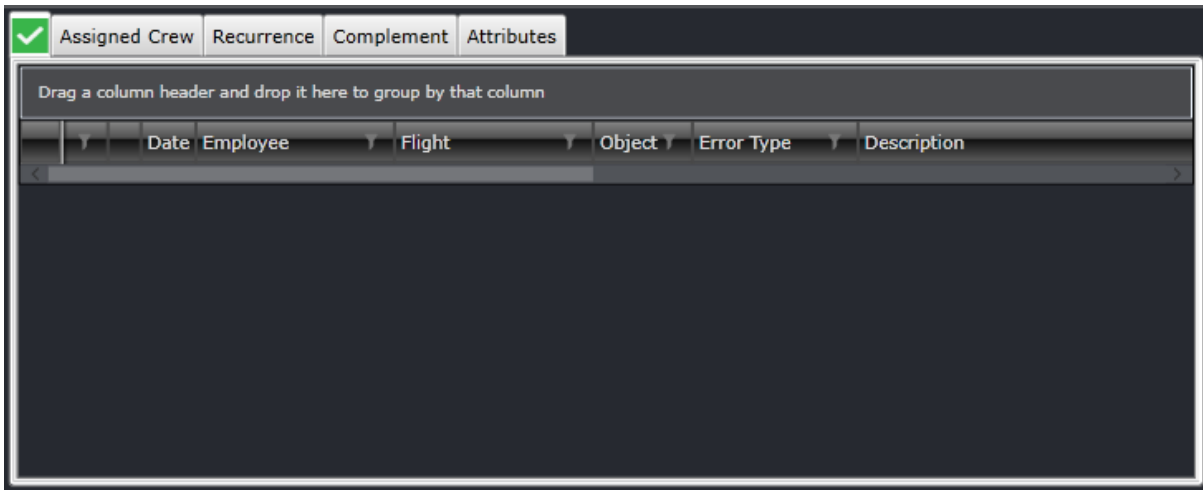
These are the options at the bottom of the Pairing Details Panel.







- **Clear Pairing on Save?** – When selected, this option clears the Pairing Details Panel after the Save button is clicked.
- **Refresh Activity Panel on Save?** – When selected, this option refreshes all the loaded tabs of the Activity Panel after the Save button is clicked.
- **Non-connecting Flights/Events** – When there are flights or events that do not match the previous arrival port or the next departure port, that event can be greyed out or hidden.
- **Reset All** – this sets the options above to the default values.

## Pairing Exceptions




The Pairing Exceptions tab displays the results of rule validation for a selected pairing. It displays both pass and fail results for each rule.



When a pairing is created or loaded, the icon on the tab changes to reflect the status of rule validation. These are described below:

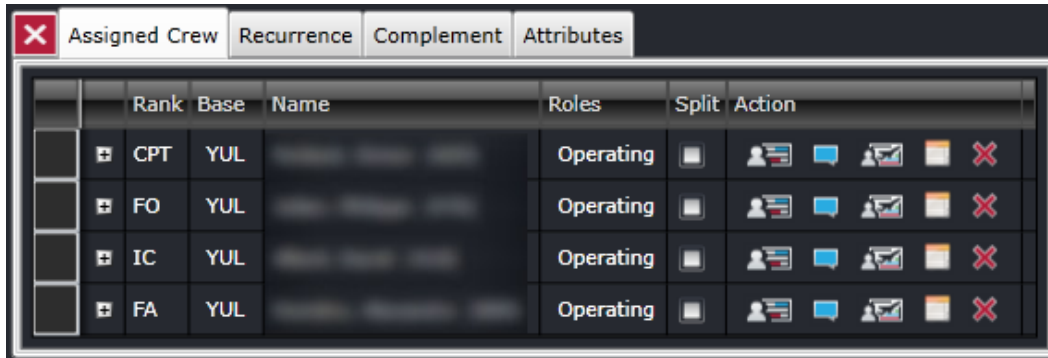
Action Button	Description
	All rules have been satisfied. No rules have been breached.
	Pairings are currently being validated.
	There is at least one rule breach.
	There is at least one ignorable violation.

Having the green icon for all pairings is ideal. If the red icon appears, it is best to address the issue as soon as possible to avoid legality issues on the day of operations. Depending on the severity and behavior of the rules that are set in Configure, the changes to pairings can be saved despite existing violations.



Violation Icon	Description
	Critical. The violation is causing the crew to operate illegally. It needs to be addressed immediately.
	Ignorable. This serves as a warning to the user. The crew is not yet operating illegally.
	Critical – Override. The violation is critical but can be overridden by a supervisor or under captain’s discretion.


## Assigned Crew

The Assigned Crew section of the Pairing Panel displays the crew who are allocated to the selected pairing. The allocated crew are displayed within a simple grid that is view only apart from the Action buttons.




The Assigned Crew grid consists of the following columns:


Column	Description
<i>Rank</i>	The rank of the crewmember. If the crewmember is rated for two or more ranks, the rank can be set for that pairing from this field.
<i>Base</i>	Home base of the crewmember
<i>Name</i>	Name of the crewmember
<i>Roles</i>	Roles of the crewmember for the pairing, which can include Operating, Non-Operating, Student and Instructor
<i>Split</i>	<p>The split functionality is used when a crew is required to perform an activity other than his assigned duty.</p> <p>The <i>Split</i> column in the <i>Assigned Crew</i> allows splitting of duties. For example, a crew needs to deadhead from YYZ to YUL before he can operate on the first flight which departs from YUL.</p> <p>Splitting of duties with one assigned crew is also allowed.</p> <p>To split a pairing, click on the tick box on the selected crew member's row, then click <b>Save</b>.</p>
<i>Action</i>	<p>Set of action buttons:</p> <p> <b>View Pairing Allocations</b> – opens the crewmember's roster in the Allocation Gantt. This can be used in CrewPlan, CrewRoster and CrewFollow only.</p> <p> <b>View Comments</b> – opens the Comments form where public and private comments can be added to pairings. Public comments can be seen by crew in the employee reports and by users in the crew applications, while private comments can only be seen by users in the crew applications.</p>



**View Employee Pairing Details** – Switches to the crewmember’s tab in the Pairing Panel



**Pairing Properties** – Opens the Properties tab for the crew’s pairing. This is displayed in the expansion below the crewmember line



**Deallocate Pairing** – Removes the pairing from the crewmember

The **[+]** button to the left of the crewmember name displays more tabs that provide more information on the crew’s pairing.

- **Times** – displays the report, release and duty times of the whole pairing (first row) and each duty (succeeding rows). It also displays any pay credits applied to the pairing or duty, the time away from base, standby time (if the crewmember was called out from standby), delay time, notified time for corresponding duty changes. All the fields in this tab can be modified except for Date, Pairing/Duty, DutyTime and Taftb. The Reset button will revert all changes back to the original values.

FO		YYZ		Operating							
Times		Events		Allowances/Expenses		Seat/Roles		Properties			
Date	Pairing/Duty	Report	Release	DutyTime	PayCredit	Taftb	StandBy	Delayed	Notified	Reset	
▶ 01/11/2015 L	7428	06:30 L	10:21 L	3:51(+2)		3:51(+2)					↻
01/11/2015 L	7428-1	06:30 L	14:43 L	8:13			00:00 S				↻
02/11/2015 L	7428-2	05:30 L	18:15 L	12:45							↻
03/11/2015 L	7428-3	05:10 L	09:21 L	4:11							↻

- **Events** – Lists down all the events included in the pairing. This allows bookings to be associated to accommodation, deadhead and transport events. Users can declare the booking status, provider of the booking and the reference. This information will be relayed to the crew through the employee reports.

FO		YYZ		Operating							
Times		Events		Allowances/Expenses		Seat/Roles		Properties			
Date	Pairing/Duty	Event	Port	BookingStatus	Provider	BookingReference	Reset				
▶ 01/11/2015 L	7428-1	7428	YYZ	▼	▼		↻				
01/11/2015 L	7428-1	7433	DCA	▼	▼		↻				
01/11/2015 L	7428-1	7470	YYZ	▼	▼		↻				
01/11/2015 L	7428-1	Accommodation	EWR	No Booking	▼		↻				
02/11/2015 L	7428-2	7469	EWR	▼	▼		↻				

- **Allowances/Expenses** – Displays allowances and expenses recorded against the pairing. Manual allowances can be added by clicking on the New button. The allowances are added to the pairing once allowances are generated in CrewPayroll.

The screenshot shows the 'Allowances/Expenses' tab with a table of financial entries. The table has columns for Date, Duty, Allowance, Type, Value, Currency/Unit, Status, and Comment. There are five rows of data, all with a 'Pending' status. At the bottom, there are 'New' and 'Delete' buttons.

Date	Duty	Allowance	Type	Value	Currency/Unit	Status	Comment
01/09/2015 L	7468-1	Flight Credit	Flight Credit	4.73	Credit	Pending	
01/09/2015 L	7468-1	Per Diem Duty USD	Per Diem Duty U	14.01	USD	Pending	
01/09/2015 L	7468-1	Per Diem Overnight USD	Per Diem Overni	73.15	USD	Pending	
02/09/2015 L	7468-2	Flight Credit	Flight Credit	4.92	Credit	Pending	
02/09/2015 L	7468-2	Per Diem Duty USD	Per Diem Duty U	15.38	USD	Pending	

- Seat/Roles – allows users to assign the seat and role of the crewmember for each event in the pairing. Seats and roles are set up in Configure.

The screenshot shows the 'Seat/Roles' tab with a table of crew assignments. The table has columns for Date, Pairing/Duty, Event, Seats, and Roles. There are four rows of data, all with 'Operating' roles. The 'Seats' column contains '<none>' for all entries.

Date	Pairing/Duty	Event	Seats	Roles
01/11/2015 L	7428-1	7428	<none>	Operating <sup>x</sup>
01/11/2015 L	7428-1	7433	<none>	Operating <sup>x</sup>
01/11/2015 L	7428-1	7470	<none>	Operating <sup>x</sup>
02/11/2015 L	7428-2	7469	<none>	Operating <sup>x</sup>

- Properties – allows users to assign Properties, which are characteristics of a pairing that require considerations on reassignment, payroll, and other operational consequences.

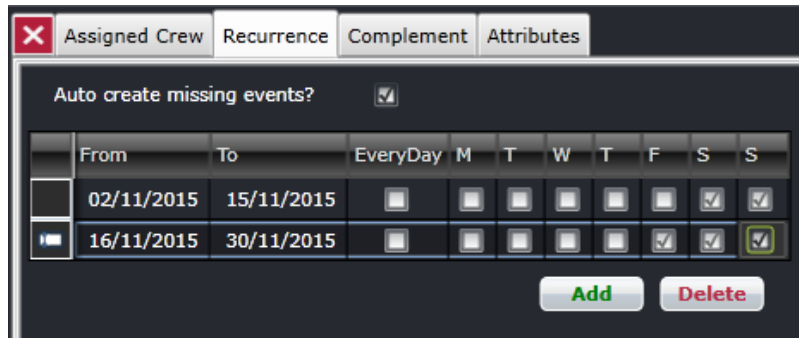
The screenshot shows the 'Properties' tab with a table of assignment options. The table has columns for Property and Comment. There are five rows of data, each with a checkbox in the 'Property' column and an empty 'Comment' column.

Property	Comment
<input type="checkbox"/> Preplanned	
<input type="checkbox"/> Request	
<input type="checkbox"/> Personal Swap	
<input type="checkbox"/> Overtime	
<input type="checkbox"/> Compensate DayOff	

## Pairing Recurrence

The *Recurrence* tab allows users to create identical pairings based on a repeating pattern over a specified date range.





This tab has a simple grid that allows users to specify the date range and the days of the week for the recurrence. To apply recurrence throughout the week, select the *EveryDay* checkbox.

The following columns in the tab are described below:

- **From** - The start date of the recurrence.
- **To** - The end date of the recurrence.
- **EveryDay** - Automatically applies the recurrence on all the days of the week.
- **M, T, W, T, F, S, S** - The days of the week.

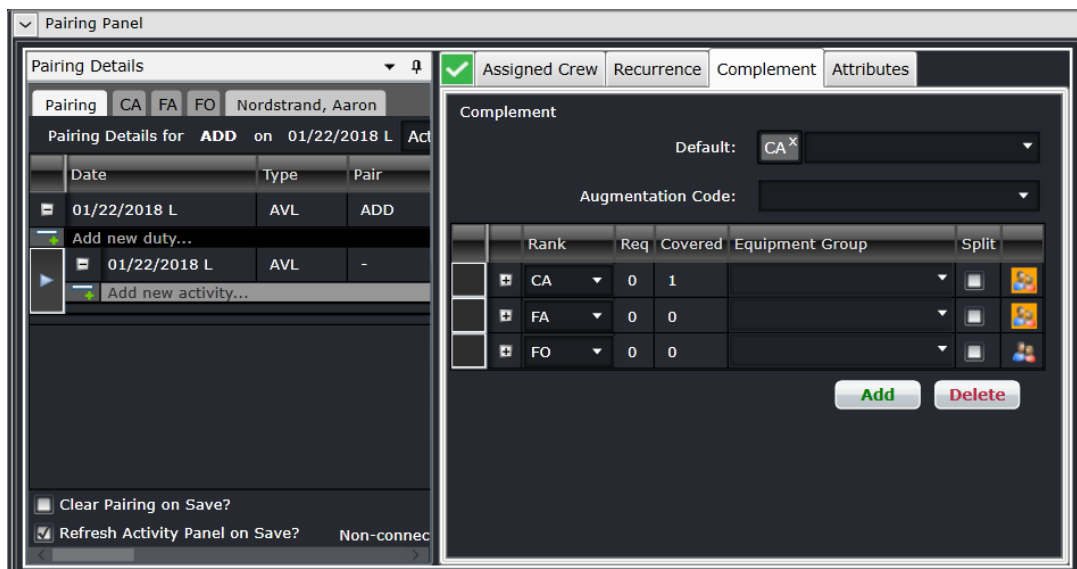
To add a new recurrence definition to a new or existing pairing, click **Add**.

To remove recurrence, select one or multiple rows then click **Delete**.

Click **Save** in the Pairing panel to apply changes.

## Complement

A pairing complement is the number of crew from different ranks required to operate a pairing. By default, the pairing complement follows the complement of the flights in the pairing. The complement can be modified as needed.



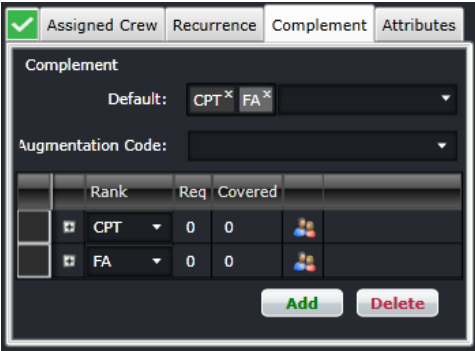
The Complement Grid is where the actual required complement of the pairing is defined. This grid consists of the following columns:

- **Rank:** The employee rank from which this pairing needs a certain number of employees allocated. This column will always be non-editable.
- **Req:** The required number of the employees of the associated rank that are needed to operate the pairing. This column is always editable
- **Covered:** The number of employees of the associated rank that have been allocated to this pairing. This column will always be non-editable
- **Equipment Group** – The type of equipment group associated with the rank.
- **Split** – The split functionality is used when a crew is required to perform an activity other than his assigned duty. The Split column in the *Complement* tab allows splitting of complement ranks. Splitting of ranks with no assigned crew are also allowed.

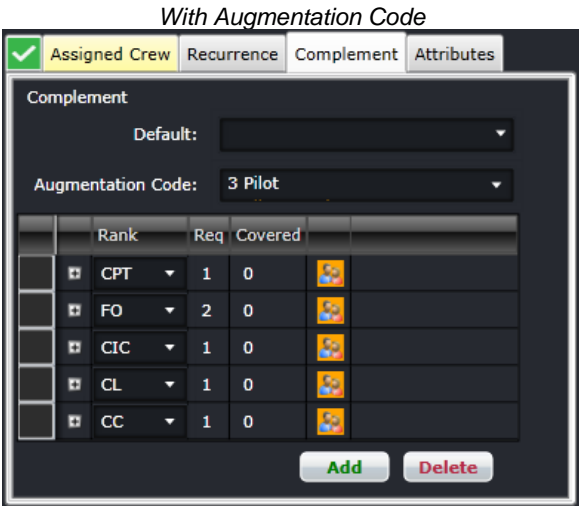
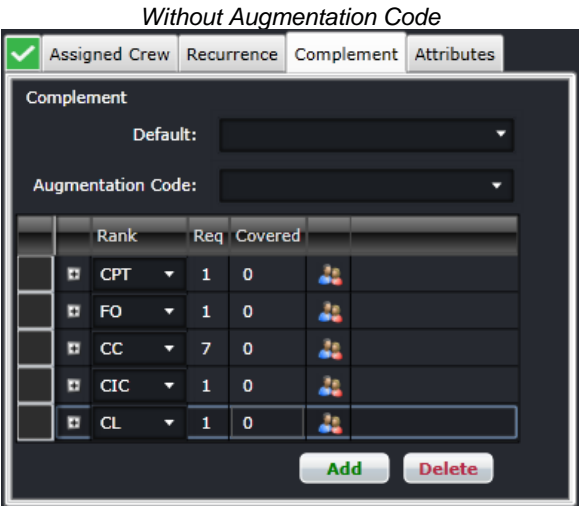
Clicking the (+) at the left of the rank expands the rank with more details similar to the Assigned Crew tab.

The other elements in this tab include:

- **Default:** This drop-down field contains active ranks where multiple selections can be done. If at least one rank is selected, all newly created pairings will have the selected ranks added with 0 Req.



- **Augmentation Code:** This drop-down field provides preset complements that are variations of the default equipment complement. These are needed for operations that require more crew. The options are set up in Configure.



- **Add button:** Adds another row.
- **Delete:** Removes the selected row.

Changes to the Complement tab need to be saved by clicking on the Save button in the Pairing Panel.

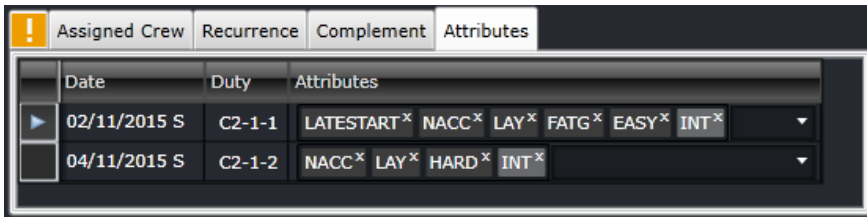
Even though there is a defined Default Complement associated with the Pairing Panel, and requirements are calculated from the availability of Flights / Events within the Pairing, there are a number of occasions when the user will need to modify the complement to something other than the default. The user can manually set or change the required value in the rows in the Complement Grid. To add a requirement for a particular rank that is not displayed in the Complement Grid, click **Add** and select an additional rank to be inserted into the Grid.

## Pairing Attributes

Attributes are additional ways to classify pairings. These are described and used the same as the attributes for employees or equipment types. Attributes are also used in payroll generation, rule validation and roster optimization.

Multiple attributes can be assigned for each duty in a pairing by selecting the option/s from the Attributes drop-down list, then clicking on the Save button in the Pairing Panel. Attributes are set up in Configure.

In the example below, duty C2-1-1 has the attributes LATESTART (Late Start), NACC (Non acclimatized), LAY (Layover pairing), FATG (Fatigue-inducing), EASY and INT (International).



Date	Duty	Attributes
02/11/2015 S	C2-1-1	LATESTART <sup>x</sup> NACC <sup>x</sup> LAY <sup>x</sup> FATG <sup>x</sup> EASY <sup>x</sup> INT <sup>x</sup>
04/11/2015 S	C2-1-2	NACC <sup>x</sup> LAY <sup>x</sup> HARD <sup>x</sup> INT <sup>x</sup>

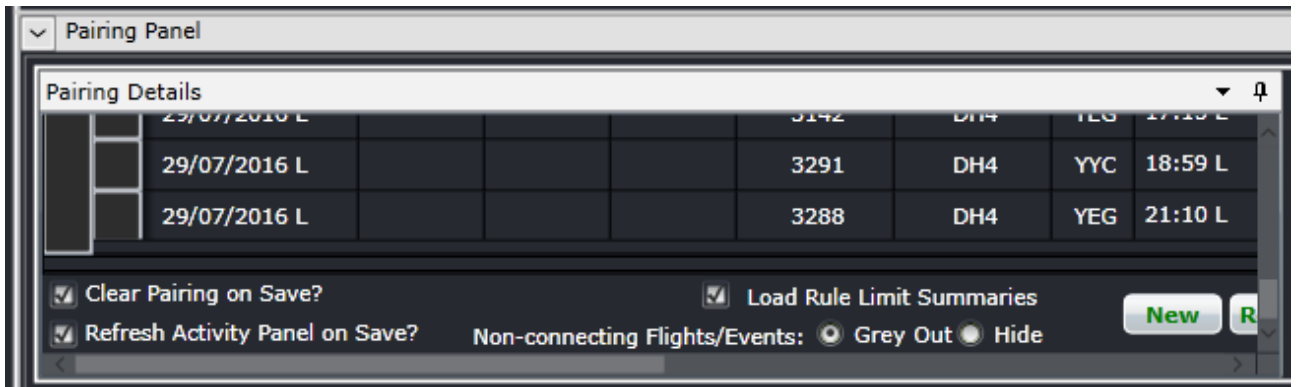
Pairing attributes are set up in Configure.

## Rule Limit Summaries

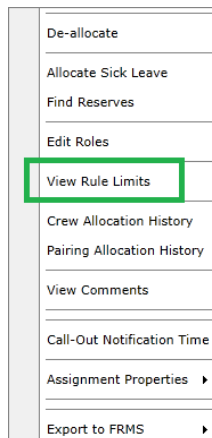
The Rule Limit Summaries panel helps users determine if a crewmember is nearing their allowed flight and duty hour limits. This panel uses the RulesEngine in determining each output to ensure that the same logic for rule validation is used.

To display a crewmember's hours, choose any of the following options:

1. The *Load Rule Limit Summaries* in the Pairing Panel is selected by default. This automatically updates the Rule Limit Summaries whenever the pairing is loaded, refreshed or saved.



2. Clicking on another crewmember's tab in the Pairing Panel will load that crewmember's data in the Rule Limit Summaries panel. This also relies on the *Load Rule Limit Summaries* option.
3. Double clicking on a pairing in the Monitoring Panel, specifically on a violation or problem related to a crewmember.
4. Right-click on a pairing and select *View Rule Limits*.



The **As at date** defaults to the date of the selected pairing. Hours are counted from that date going backward. The date can also be changed by using the calendar option on its right side. It also has a refresh button (🔄) that can be used if changes were made to the crew's pairings. It also shows which crewmember's summary is displayed.

There are two tabs in this panel. The first one is for Period Limits. This tab contains the summaries for rolling limit rules only i.e. Flight Hours in Days, Duty Hours in Months, etc.

Name	Type	Limit	Period	Actual	Available	Actual Period	Reference
Flight Hours In Hours (168 Hours) Rule	Rolling	40:00	168 Days	17:57	22:03 ▲	22/07/2016 - 29/07/2016	
Flight Hours In Hours (2160 Hours) Rule	Rolling	300:00	2160 Days	179:14	120:46 ▲	30/04/2016 - 29/07/2016	
Flight Hours In Hours (720 Hours) Rule	Rolling	120:00	720 Days	78:19	41:41 ▲	29/06/2016 - 29/07/2016	
Flight Hours In Hours (8760 Hours) Rule	Rolling	1200:00	8760 Days	730:01	469:59 ▲	30/07/2015 - 29/07/2016	

The second tab is for Duty Limits. This tab contains the summaries for flight time rules, FDP rules and duty time rules. The columns in both tabs can be sorted and filtered like in other panels.

Name	Type	Limit	Actual	Available	Actual Period	Reference
Max Flight Duty Period (24 Hour) Planning Rule	Duty	13:30	13:56	0:26 ▼	28/07/2016 - 28/07/2016	

The columns in these panels are the following:

Field	Description
Status	Displays if the rule was passed (legal) or failed (illegal). This follows the same logic as the violations in the Monitoring Panel.
Name	Rule name, as set up in Configure.
Type	Shows if the rule's validation period is based on a rolling period (Rolling) or calendar days (Calendar).
Limit	The threshold or maximum limit of the rule.
Period	The validation period for the rule, in Hours/Days/Months/Years.
Actual	The actual number of hours in hh:mm format.
Available	The amount of time before the limit will be reached. If the available amount is below the limit, a green arrow will be displayed beside it. If the available amount is equal to the limit, no

	arrow is displayed. If the actual time is over the limit, the variance will be displayed along with a red arrow.
<i>Actual Period</i>	The dates of the validation period i.e. 01/01/2016 - 31/01/2016.
<i>Reference</i>	Client Reference for the rule as set up in Configure.

**Note:** Rules involving flight hours, duty hours and FDP time have the rule parameter *IncludeInRuleLimitSummaries* with value set to *True*. This parameter controls which rules are included for display in the panel.

# Activity Panel

The Activity Panel defines all the work to be completed by crew. It contains lists of created pairings and lists of all the flights and activities that have been or can be incorporated into the pairings. The Activity Panel is used to view open, covered, and over-covered pairings and flights, to create new events and to assist in creating and amending pairings.



To assign work to crewmembers, individual work activities should be grouped together into meaningful units of work and a list of available work then needs to be generated. This information is provided by the Activity Panel, which lists the work activities in the Flights and Events tabs, and then lists the created work in the Pairings and Standard Pairing tabs.

Any changes made in the Activity Panel will require a re-filter to view them. To do this, simply click **View**.

## Filtering

The Activity Panel has an associated filter, which can be used to limit the activity information displayed to that which matches the filter criteria. To aid the user in determining how much work is required to be created and allocated, the Activity Panel contains filters that are applied to the data on the tabs. These filters allow the user to focus on particular sets of data and to view the data that has been created or allocated, and/or work still requiring creation or allocation.

The Filter for the Activity Panel can be divided in the following sub-sections:

- Date and Time Filter
- Save a Filter or re-use existing Saved Filter
- Set Default Filter
- Criteria for Filter
- View the Data

## Date and Time

In order to view crew data in the Activity Panel, users must load the data for a specified date range by entering a date range into the date control. A drop-down calendar is provided to select the date.

- **From:** A date field. The start value of the date range
- **To:** A date field. The end value of the date range
- **Save Dates:** The selected date range will be the default date for the saved filter

**Note:** The date controls throughout the merlot suite have built-in short-cuts. These shortcuts allow users to instantly select different date targets, such as the current day (T), or the start of a month (M), a quarter (Q) or a year (Y).

## Save Filter or Re-use an Existing Filter

To allow users to specify and save filters, the Filter Section has a Filters field and associated Save, Delete and Reset icon buttons as well as a Save Dates checkbox.



The Filters field is a combination of a drop-down lists that displays the previously saved filters, as defined by the user, along with template filters that apply to all users. There is also the ability to enter a new filter name in the New Filter field and to click the plus (+) icon to add the new filter.

The Save Dates check box allows the user to control whether a filter they define is set to a specific date and time range or if the selected filter inherits the current date time range in the Monitoring Panel.

## Set as a Default Filter

Part of the process when opening the Activity Panel, is to apply a default filter. This is to facilitate rapid filtering of displayed data to the data that the user refers to most frequently.

To allow the user to set a default filter, the filter section contains a Default check box. When this button is clicked, the currently selected filter is saved as the default filter for the application.

When the Activity Panel is opened, it determines the current user and the application context and defaults to the relevant filter.

## Criteria for Filter

The Filter section contains the following criteria which are used to determine which data is displayed in tabs on the Activity Panel:

Field	Description
<i>Base</i>	A drop-down field that displays the active crew bases
<i>Rank</i>	A drop-down field that displays active ranks and / or rank groups
<i>Equip</i>	A drop-down field that displays the active aircraft or equipment types or groups that crew operate
<i>Pairing Type</i>	A drop-down field that displays the kinds of pairings to be displayed
<i>Operator</i>	The Operator drop-down menu filters the grid to show information based on selected airline operators
<i>Department</i>	A drop-down field that displays active departments. It is an area within an airline or company that is tasked with providing particular services of a similar type. For example, Flight Operations (i.e. the manning and operating of aircraft), Maintenance (ensure the aircraft are able to operate safely), Ramp (the parking and coordination of aircraft resupply between flights).
<i>Status</i>	Pairing status drop-down menu which includes All, Planned, Active, Provisionally Active options
<i>Retain layout on refresh</i>	This checkbox prevents the grid from returning to the default values.
<i>Open</i>	This checkbox indicates that the displayed data must include all open pairings or flights. Resulting pairings and flights are colored in white (no assignments yet) or light blue (partially covered)

<i>Covered</i>	This checkbox indicates that the displayed data must include all covered pairings or flights. Resulting flights and pairings are colored in orange
<i>Over-covered</i>	This checkbox displays pairings and flights that are over-covered or have more crew members on the pairing than the crew complement requires. Resulting flights and pairings are colored in red
<i>Pairings</i>	This checkbox indicates if pairings will be loaded or not
<i>Events</i>	This checkbox indicates if events will be loaded or not
<i>Flights</i>	This checkbox indicates if flights will be loaded or not
<i>Include Cancelled</i>	This checkbox indicates if cancelled flights will be loaded or not

**Note:** By leaving a field Blank in any filter panel, you are asking for all options in that field to be included.

There is an option to use exclude a criterion. For example, to load all activities except for FPG pairing type, select FPG and then Ctrl+click FPG. This will turn the selection red and the results will not include FPG.



## Applying the Filter

A **View** button is included as part of the Filter section to give the user control over when filter criteria are applied to the data they are viewing in the Activity Panel tabs. This allows them to make multiple modifications to filter criteria and then have these modifications applied to displayed data at the same time.

Any changes made in the Activity Panel will require a re-filter to view them. To do this click on the **View** button, or to refresh the view of an individual tab, click on the green circular arrow on the tab.

### **Retain Layout on Refresh**

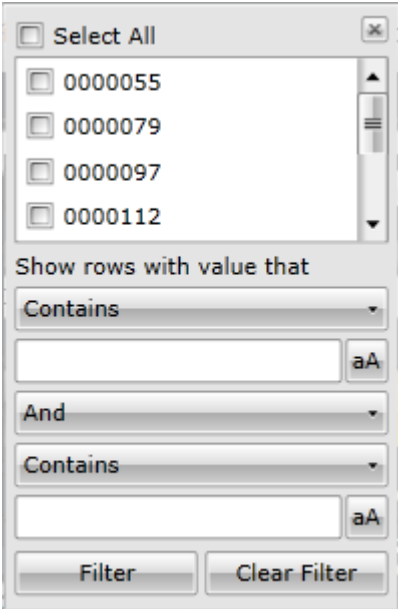
Filtering either on Pairings > Grid or Flights > Grid, with the *Retain layout on refresh* checkbox on, will keep the following data after a refresh:

- Expanded dates;
- Filtered values in a column;
- Order of data sorted in a column;
- Number of rows; and
- Row values.

When new dates are added to the filter and previously filtered dates are still included, all the previously loaded data will still be displayed with the new set of data. But if the previously loaded dates are no longer included in the new filter, the previously loaded data will not be included in the display.

Data loaded within the two grids will be retained if the checkbox is selected, even if one of the grids is hidden.

Tab Filters



Within a filtered set of data, a user may need to be filter through the results. A **Search Filter** is available at the top of most columns, which enables the user to narrow down the filter even further. For example, if you want to view certain flights, or equipment type, or a particular departure port, then you could click on the filter as shown in the red square below. You can use one of the commands on this added filter to narrow your filter results.

Pairings

Date	Pairing	Equip	Type	From	Report	To	Release	Pair TAFB	Pair Flight Time	Pair Dub Time	Pay Credit	Open	Covered	Attribute	Action
01/11/2015(0 26 26)	TQ403490	73W / DH4	FPG	YYZ	06:00 L	YYZ	10:13 L	4:13(+3)	14:57	3:08(+1)	0:00	CPT(0),FA(0),FO(0)	CPT(1),FA(2),FO(1)		✕
	TQ303415	DH4	FPG	YYZ	06:55 L	YYZ	15:14 L	8:19(+2)	14:15	4:25(+1)	0:00	CPT(0),FA(0),FO(0)	CPT(1),FA(2),FO(1)		✕
	CB300545A	73W / DH4	FPG	YYC	06:00 L	YYC	11:50 L	5:50(+2)	10:55	2:52(+1)	0:00	CPT(0),FA(0),FO(0)	CPT(1),FA(2),FO(1)		✕
	CB300545	73W / DH4	FPG	YYC	06:00 L	YYC	17:15 L	11:15(+2)	15:41	3:43(+1)	0:00	CPT(0),FA(0),FO(0)	CPT(1),FA(2),FO(1)		✕
	CQ303296	736 / DH4	FPG	YYC	06:45 L	YYC	13:41 L	6:56(+2)	14:19	2:15(+1)	0:00	CPT(0),FA(0),FO(0)	CPT(1),FA(2),FO(1)		✕
	CQ203270	DH4	FPG	YYC	07:10 L	YYC	18:15 L	11:05(+1)	8:27	20:15	0:00	FA(0)	FA(1)		✕
CQ303270	DH4	FPG	YYC	07:10 L	YYC	16:20 L	9:10(+2)	9:37	20:43	0:00	CPT(0),FA(0),FO(0)	CPT(1),FA(2),FO(1)		✕	



The Pairings tab displays the data associated with previously created and defined pairings. By default, pairings are grouped by date. Beside the date is a set of numbers that determine the number of open and actual pairings for the day.

01/11/2015(X|Y|Z)


In the example above, X is the number of open pairings. Y is the number of partially or fully covered pairings. Z is the number of pairings for the day.

The columns in the Grid tab are detailed below:

Column	Description
Date	Date of the pairing
Pairing	Name of the pairing, or the pairing label

<i>Equip</i>	The required equipment type/s for the flights in the pairing
<i>Type</i>	Pairing type
<i>From</i>	Port where the pairing begins. This is where crew needs to report from
<i>Report</i>	Report time for the pairing
<i>To</i>	Port where the pairing ends. This is where crew will be released from
<i>Release</i>	Release time for the pairing
<i>Pair TAFB</i>	Time away from base (TAFB). This is calculated as the difference between release time of the last duty in the pairing and the report time of the first duty in the pairing
<i>Pair Flight Time</i>	Total flight time within the pairing
<i>Pair Duty Time</i>	Total duty time within the pairing
<i>Pay Credit</i>	Total pay credit for the pairing
<i>Open</i>	Displays the number of crew required for the pairing. The numbers are broken down per rank.
<i>Covered</i>	Displays the number of crew that are already assigned to the pairing. The numbers are broken down per rank.
<b>Column</b>	<b>Description</b>
<i>Attribute</i>	Displays an attribute or a set of attributes assigned to the pairing. Attributes determine a specific description of the pairing such as Easy/Hard, Domestic/International, etc. These are set up in Configure.
<i>Action</i>	Set of action buttons:  Delete Pairing – click this button to delete the pairing  Allow Personal Swaps – determines if this pairing can be swapped or traded with another crewmember

The different colors used for each pairing are:

- White signifies an open pairing, or no crew have been assigned to the pairing.
- Light blue signifies a partially covered pairing, or some crew have been assigned to the pairing.
- Orange signifies a covered pairing, or the pairing has all the crew required.
- Red signifies an over-covered pairing, or there are too many crew assigned to the pairing
- Grey signifies a pairing with a cancelled flight. The cancelled flight icon () also appears beside the pairing name.

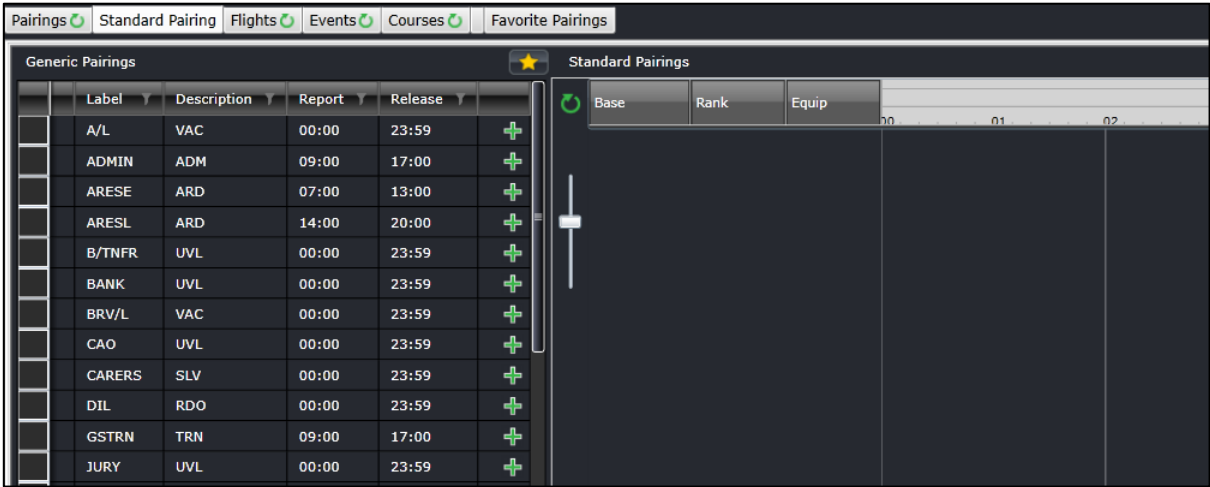
The Gantt tab is intended to display the pairings in a Gantt view. It will be available in the future.

The flight designator can be displayed or hidden by setting the user preference *ShowDesignator* to True or False, respectively, in the Configure application. Also, the IATA code for the designator is displayed by default. If the airline requires ICAO codes throughout the application, please contact Customer Support.

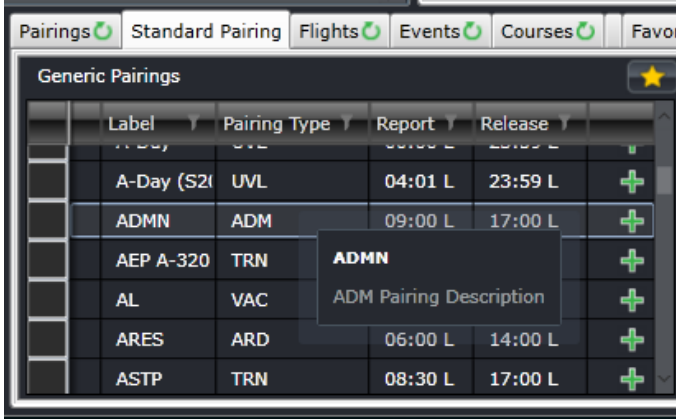
**Standard Pairing**

Standard Pairings are the predefined non-flight pairings that can be allocated to crew and can be assigned on any day. These can be assigned to any crewmember regardless of rank and equipment type.

The Generic Pairings are built in the Standard Pairing tab of the Activity Panel, so you do not need to build a new pairing every time you need one. These have been predefined in Configure. These Generic Pairings can be inserted into a Flying Pairing (FPG) or assigned directly to crew in CrewPlan, CrewRoster and CrewFollow.



Each pairing can be configured to display a longer description when the mouse hovers on it. This makes it easier for users to know what each standard pairing is for.



The Standard Pairings are displayed so that they can be allocated to employees in the Allocation Panel, or incorporated into other pairings created in the Pairing Panel. It does not require the filter for pairings. All generic pairings set up in Configure are displayed. The pair types under the Description column are listed below.

Pair Type	Definition
ADM	Administration. Used for employees who will perform administrative duties in an office. Time spent is included in the employee’s duty time unless specified otherwise.

ARD	<i>Airport reserve or standby.</i> Standby time spent in the airport. Crew may be required to sign on at the airport. Time spent is included in the employee's duty time whether called out or not, unless specified otherwise.
AVL	<i>Available day.</i> A placeholder in a crew's roster that indicates that the crew is not required to work on this day but can be assigned work later on. Time spent in this pairing may be included in the employee's duty time unless specified otherwise.
CFP	<i>Course Flight Placeholder</i> (for Optimiser use only). This is used as a placeholder for potential course or training assignments.
DHD	<i>Deadhead.</i> This is used for duties that have deadhead or deadhead other events only. Time spent in this pairing may be included in the employee's duty time unless specified otherwise.
FPG	<i>Flight pairing.</i> This is the default option for pairings that have at least one operating flight.
GRD	<i>Ground activity.</i> Similar to administration pairings, this pairing is used for work in the airport, i.e. doing engine tests. Time spent is counted against duty time.
HOL	<i>Public holiday.</i> This is a non-work pairing and does not add any duty or flight time against the crew.
OPD	<i>Obligation to Perform.</i> OPDs is similar to an Available day (AVL) with reference to validating rules and utilization of preferences. Pairings such as ROE and ADD are categorized under this pairing type.
RDO	<i>Rostered day off.</i> This is a non-work pairing and does not add any duty or flight time against the crew. For days off rules, this is the primary pair type considered by the rule when validating the roster.
RES	<i>Home reserve or standby.</i> Standby time spent at home or in a suitable accommodation. This may or may not be included in the duty time of the crew, depending on the regulatory rule requirements.
SIM	<i>Simulator training.</i> This is a work pairing used to identify training or instruction in a simulator. Time spent is counted as duty time.
SLV	<i>Sick leave.</i> This is assigned to crew who call in sick or have planned medical appointments.
SOC	<i>Subject to Operational Clearance.</i> This is a placeholder for crew who were previously considered illegal or not fit to fly. Crew will only be allowed to operate once they are cleared by the airline.
TRN	<i>Ground training.</i> This is a work-pairing signifying training on ground (does not require any flying). Time spent is considered as duty time.
UVL	<i>Unavailable day.</i> This is a non-work pairing used as a placeholder for crew who are not available to work on the day. This is not considered as a day off, unless specified otherwise.
VAC	<i>Vacation.</i> This is a non-work pairing that represents a crew's vacation or personal holiday.

## Flights


The Flight tab displays the data associated with flights from the published flight schedules. By default, flights are grouped by date. Beside the date is a set of numbers that determine the number of open and covered flights for the day.




01/11/2015(X|Y|Z)

In the example above, X is the number of open flights. Y is the number of partially or fully covered flights. Z is the number of flights for the day.


Date	Flight	Equip	From	Dep	To	Arr	Onward Flight	Flight Time	Pair Flight Time
07/12/2017(5/2/7)									
	G43000	M82	PIE	12:30 Z	MSP	15:30 Z	G43001	3:00	
	G43500	320	PIE	13:00 Z	ABE	17:00 Z	G43501	4:00	
	G4570	752	LAS	15:00 Z	HNL	21:16 Z		6:16	
	G43001	M82	MSP	16:15 Z	PIE	17:30 Z		1:15	
	G43501	320	ABE	18:00 Z	PIE	21:00 Z		3:00	
	G4571	752	HNL	22:16 Z	LAS	03:59 Z		5:43	
	G41922	319	VPS	23:30 Z	PIT	01:35 Z		2:05	

The columns are detailed below:

Column	Description
<i>Date</i>	Date of the flight
<i>Flight</i>	Designator and flight number
<i>Equip</i>	Equipment type of the flight
<i>From</i>	Departure port
<i>Dep</i>	Departure time
<i>To</i>	Arrival port
<i>Arr</i>	Arrival time
<i>Flight time</i>	Difference between on chocks and off chocks
<i>Pair Flight Time</i>	Total flight time within the pairing
<i>Pair Duty Time</i>	Total duty time within the pairing
<i>Pair Rest Grd Time</i>	Total pay credit for the pairing
<i>Onward Flight</i>	Displays succeeding flights numbers
<i>Open</i>	Displays the number of crew required for the flight. The numbers are broken down per rank.
<i>Covered</i>	Displays the number of crew that are already assigned to the flight. The numbers are broken down per rank.
<i>Action</i>	Set of action buttons:  Flight Follow Complement Delta – Displays the complement for the selected flight.

	Crew Assigned to Flight – Displays the operating and deadheading crew in the selected flight.
	Pairings covering the flight – Displays the pairings that has the selected flight included.
	Flight information – Displays detailed information on the selected flight, similar to AircraftFollow's Flight Information Window.

The different colors used for each pairing are:

- White signifies an open pairing, or no crew have been assigned to the pairing.
- Light blue signifies a partially covered pairing, or some crew have been assigned to the pairing.
- Orange signifies a covered pairing, or the pairing has all the crew required.
- Red signifies an over-covered pairing, or there are too many crew assigned to the pairing
- Grey signifies a pairing with a cancelled flight. The cancelled flight icon () also appears beside the pairing name.

The Gantt tab is intended to display the pairings in a Gantt view. It will be available in the future.

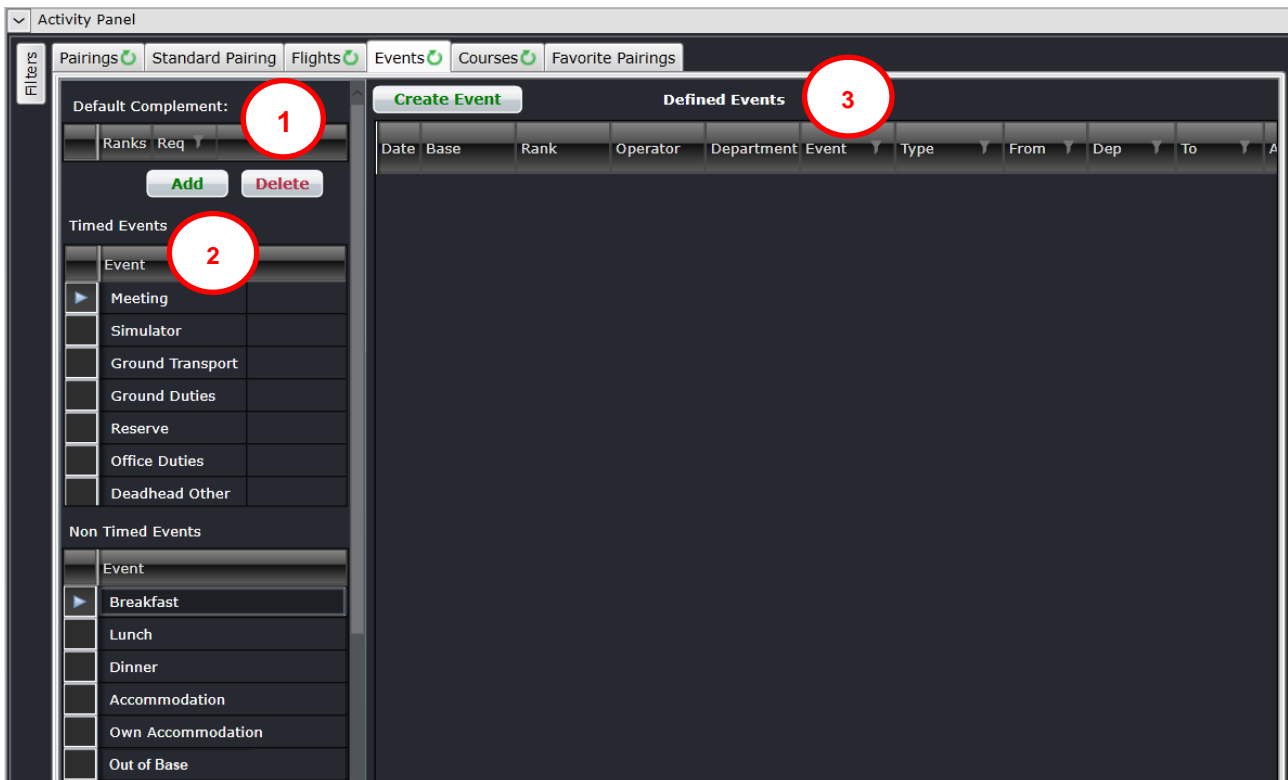
The flight designator can be displayed or hidden by setting the user preference *ShowDesignator* to True or False, respectively, in the Configure application. Also, the IATA code for the designator is displayed by default. If the airline requires ICAO codes throughout the application, please contact Customer Support.

## Events

An event is an activity within a pairing and is not an active flight.

The Events tab contains the list of previously created existing timed events which can be inserted into pairings in a similar way to flights. It also contains lists of the configured generic types of both timed and non-timed events that can be added into pairings. The Events tab also provides the functionality to allow timed events to be created that can later be inserted into pairings, as well as the ability to modify and delete existing timed events (for the rest of this section unless otherwise specified, the term event will be used to refer to existing created timed events).



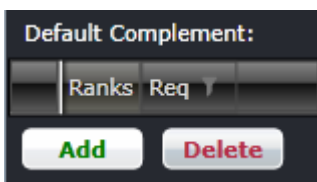


The Events tab contains 3 main screen components or sections:

1. **Default Complement Grid** - Defines the default complement for newly created events
2. **Generic Event Lists** - Two simple scrollable lists containing timed and non-timed events
3. **Defined Events** - Where the data matching the filter criteria is displayed

## Default Complement Grid

This section allows the user to define the complement for any events that are created directly from this instance of the Activity Panel. By default, when the Activity Panel is open the Default Complement Grid will default to empty.

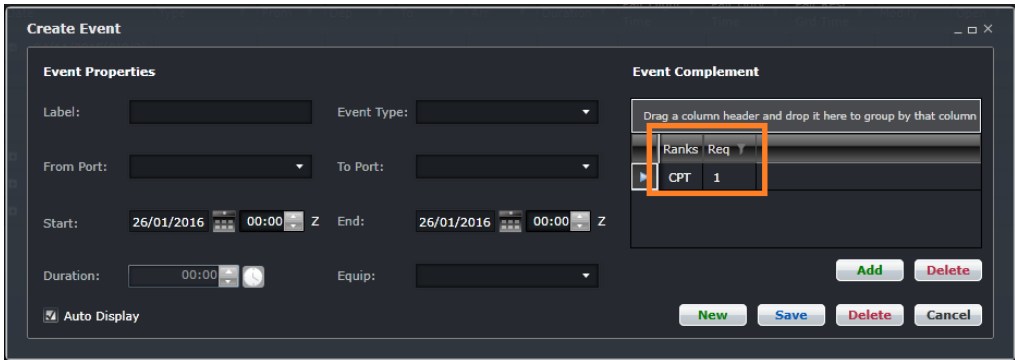


### To add a complement:

1. Click **Add**.
2. Select a rank from the drop-down field in the *Ranks* column.
3. Enter the number of crew required for the selected rank under the *Req* column. The changes are automatically saved.

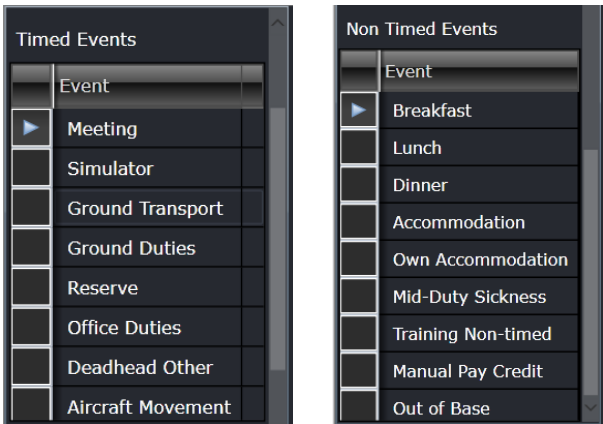


The complement will be automatically added when a new event is created. Details of which will be discussed in the next sections.



### Generic Event List

The Generic Event list consist of two lists. The first list has all the configured timed events and the second list has all the configured non-timed event types within the merlot system. These events can be added into any pairing to indicate non-flying activities that crew need to accomplish. In doing so, the user is prompted to enter any necessary information required to include an event of that type within the pairing.



### Defined Events

This is a very simple text based grid presentation of the events that match the applied filter criteria. The columns are described below:

Column	Description
--------	-------------

<i>Date</i>	Date of the flight
<i>Type</i>	Event type, as described in the list of timed and non-timed events
<i>From</i>	Departure port
<i>Dep</i>	Departure time
<i>To</i>	Arrival port
<i>Arr</i>	Arrival time
<i>Duration</i>	Length of time for the event
<i>Pair Flight Time</i>	Total flight time within the pairing
<i>Pair Duty Time</i>	Total duty time within the pairing
<i>Pair Rest Grd Time</i>	Total pay credit for the pairing
<i>Modify</i>	A button that allows users to modify details of the event
<i>Open</i>	Displays the number of crew required for the event. The numbers are broken down per rank.
<i>Covered</i>	Displays the number of crew that are already assigned to the event. The numbers are broken down per rank.

## Creating and Modifying Events

In addition to allowing the creation of new events, a Create Event button is included. If the user has the Create security privilege granted to the Activity Panel – the Create Event button icon will be enabled. When a new timed event is created, the Create Event form is displayed to allow the entry of the information required to define a timed event.

The Event Form is comprised of two sections:

- **Event Properties:** This section located on the left side of the form contains all of the specific fields required to detail the characteristics of the event.
- **Event Complement:** This section in a grid on the right side of the form defines the number of each rank of crew member required for the event. If the Default Complement is set in the Events tab, it will be applied here.

This form also has Save and Cancel buttons. When **Save** is clicked the information entered in the form is saved into the event table either as new record, or as an updated existing record. Then the form is closed.

When **Cancel** is clicked, the form is closed with the information entered in the form not being saved. If **Cancel** is clicked during dragging / inserting the timed event into a pairing, then that insertion will also be cancelled.

When an event is being modified, the form will be populated with information about the timed event. This same event form is used to modify existing created timed events. To modify an event, click on the **Yellow Folder** under the Modify column. If you want to include an event into a pairing, drag it to the Pairing Panel as if you were adding a flight.

The fields in the *Create Event* and *Edit Event* forms are described below:

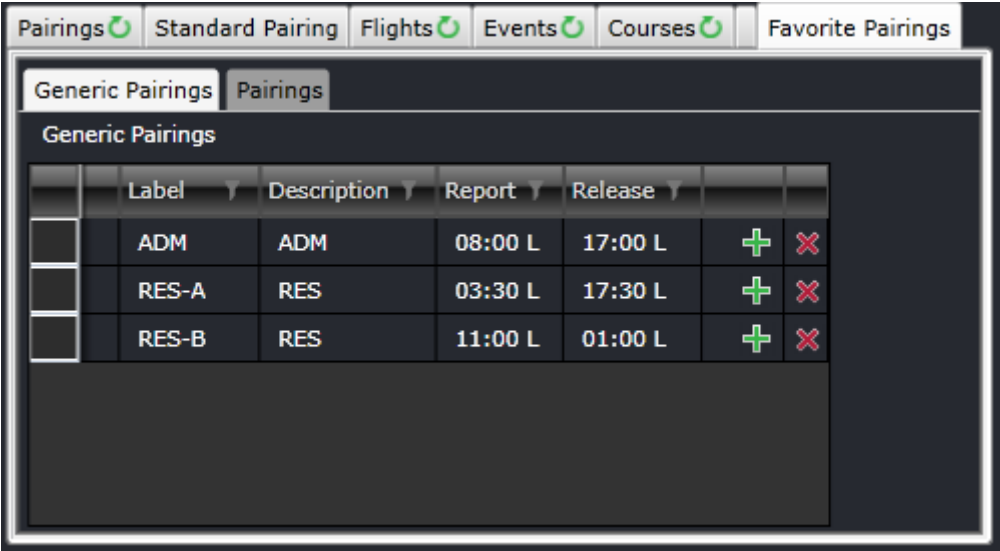
Column	Description
<i>Label</i>	Name of the event
<i>Event Type</i>	Event type, as described in the list of timed and non-timed events
<i>From Port</i>	Departure port
<i>To Port</i>	Arrival port
<i>Start</i>	Departure time
<i>End</i>	Arrival time
<i>Duration</i>	Length of time for the event
<i>Equip</i>	Equipment type if the event occurs in an aircraft (deadhead other, simulator)

## Courses


The Courses tab is intended to display the course instances that occur on the selected filter date range. This will be available in the future.

## Favorite Pairings

The Favorite Pairings tab holds a list of pairings from the Pairings and Standard Pairings tabs marked as favorite.



**To include a pairing in the Favorites tab:**

- 1. Select a pairing from the Pairings or Standard Pairing tab.
- 2. Click on the  button.  
The pairing will be listed under the Favorite Pairings tab.

## CrewRoster Specific Tasks

This section provides an overview of CrewRoster specific tasks. Some of these tasks might not apply to your airline.

### Tasks prior to crew roster publication:

- Crewmembers bid for pairings in CrewPortal.
- All changes to crew and pre-assignments such as vacations and training must be finalized and allocated to crew's rosters.
- Crew bids are allocated in CrewRoster. The Allocate Employee Request form is used to allocate crew requests prior to roster publication.
- [Assign](#) pairings and events to crew's rosters.
- [Validate](#) rosters to check for problems and illegalities.

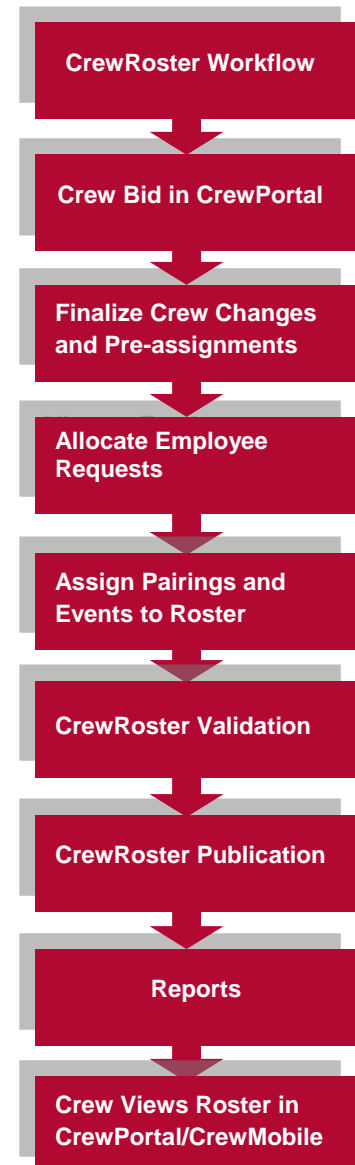
### Tasks during roster publication:

Once the roster has been validated, the roster is published using the [Publish](#) form.

### Tasks after roster publication:

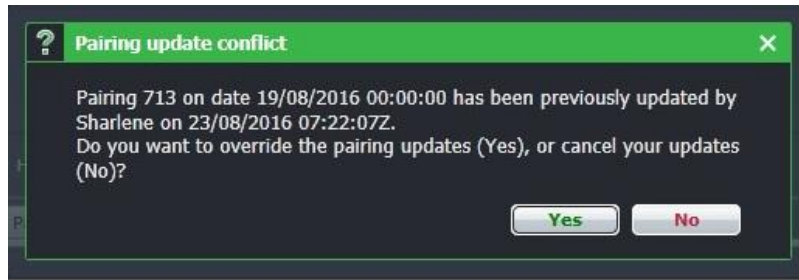
After publishing, crewmembers can view the live roster in the CrewPortal and CrewMobile. Send a message to crewmembers notifying them of the new schedule.

Send out reports, as needed. Crew roster specific reports are available under the Reports tab.



## CrewRoster Actions

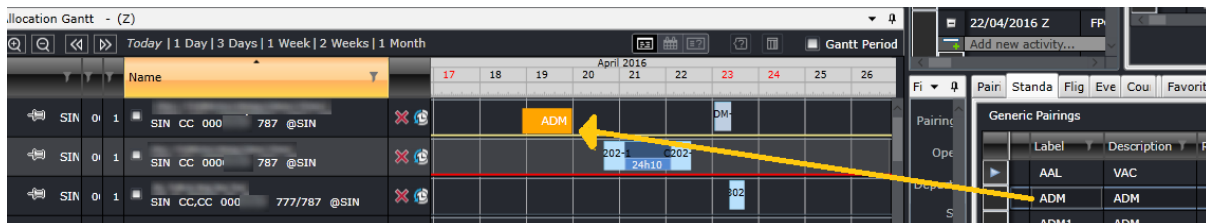
Pairings and rosters can be viewed by multiple users at any time. Users with the required access rights can also make changes to pairings and rosters. In some cases, a pairing that is in view could be updated by another user or process. If the user viewing the pairing attempts to change it based on the outdated version in view, a Pairing Update Conflict popup will be displayed.





Selecting Yes will override the changes made by the other user or process. Selecting No will discard the current user's changes and the user must reload the pairing and apply the changes again.

## Assign Pairings

Pairings can be assigned to crew by selecting the pairing from the Pairing Panel and then dragging it to the roster of the designated crewmember. The pairings can be from the Pairings or Standard Pairings tab.



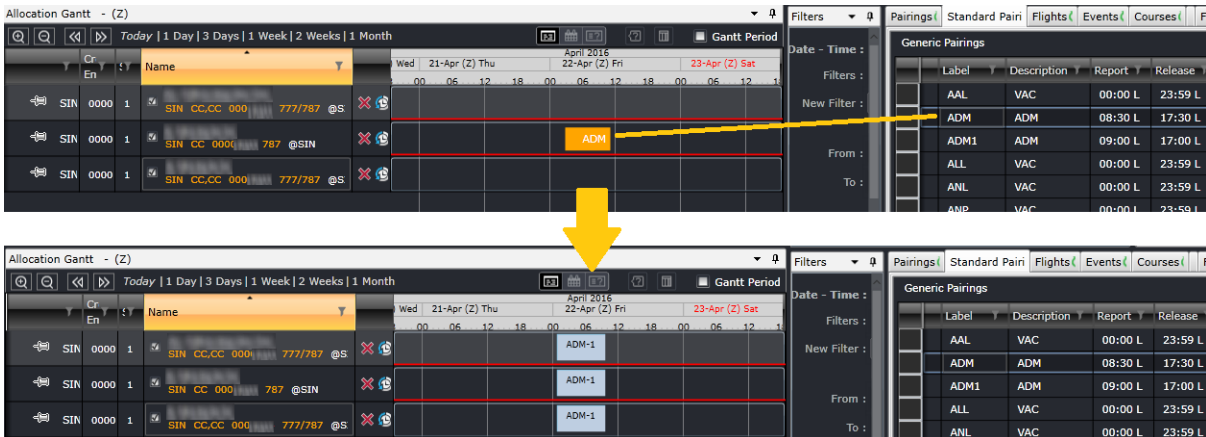
When assigning a standard pairing, make sure that the pairing is assigned under the correct date. Standard pairings have the default report and release times but not the dates, unlike built pairings.

Every time a pairing is assigned or modified, the pairing and roster will be validated. If a violation is detected, it will be displayed in the Pairing Exceptions tab symbolized by  or . If the violation requires an override, the form will pop up and the user or his supervisor can override the violations as needed.

## Multiple Crew Assignment

A pairing can be assigned to multiple crew at the same time. This is helpful when all complements (pilots and cabin crew) are to be filled up through pairing assignment. This can also be used when a set of crewmembers will be assigned the same pairing on the same day, i.e. a number of reserves for one day.

The checkbox on the left side of the crew's name allows for multiple crew assignment. Select the checkboxes for all the crew who will be assigned the same pairing. This will turn the crew's names orange. Click and drag the pairing from the Pairing Panel to one of the crew's rosters and drop the pairing.



Deselect the checkboxes before assigning another pairing.

## Multiple Day Assignment

A standard pairing can be assigned to one crewmember for more than one day. This is helpful when a crewmember goes on a long absence (vacation, maternity leave, sabbatical, etc.).

To assign multiple pairings, click on the **Shift** button, then click and drag the standard pairing towards any day on the crewmember's roster. Release the **Shift** button and the mouse button. A calendar will pop up. Select the correct year. Use the **Shift** or **Ctrl** buttons when selecting dates. **Shift** highlights dates from the first selection to the next selection. Use this when the pairing must be assigned to consecutive days. **Ctrl** allows you to pick several days with gaps in between.



This option can only be used for standard pairings and can be used to assign the standard pairings to days that are not currently viewed in the Gantt.

## De-allocating Pairings

To de-allocate or remove a pairing from a crewmember's roster, click on the pairing to select it. Right-click on it then select De-allocate Pairing. The pairing will be removed from the roster and if it is a non-standard pairing, it will be reflected in the Pairing tab as partially covered.



To remove several pairings from one or more crew, select all the pairings by using **Shift** + click, then right-click on one of the selected pairings and select De-allocate Pairing.

## Moving Pairings

A pairing can be reassigned from one crewmember to another instead of de-allocating it from one crewmember then assigning to the other. This can be done when the receiving crewmember does not have a pairing on the same day. Simply click and drag the pairing from the currently assigned crewmember to the receiving crewmember. A prompt confirming the change will appear. Click Yes to proceed or No to cancel.

**Tip:** Pin the rosters of both crew to make it easier to drag the pairings.

## Swapping Pairings

Pairings that are assigned to crew can be interchanged instead of de-allocating and re-allocating both. This can be done by swapping the pairings. Press **Shit + Ctrl** then click and drag the pairing from the first crewmember over the pairing of the second crewmember. A prompt confirming the change will appear. Click Yes to proceed or No to cancel.

**Tip:** Pin the rosters of both crew to make it easier to swap the pairings.

## Managing Statistics and Targets

The Statistics section allows you to set your target work and vacation activities per base/workgroups. This is commonly used to set Reserve Activity targets and Annual Leave / Day Off limits.

### Calculations of Daily Targets

When you filter for and subsequently open a group of crew and choose to expand the Daily Statistics (which is collapsed by default), if the target totals have not been calculated for the filtered period, a message will prompt the user with the following text:

*"Target statistics haven't been calculated for all or part of the open period. Do you want to calculate them now?" The user is provided with Yes and No buttons.*

After selecting Yes, the application calculates the Daily Statistics, based on values entered in Configure, for the employee groups which are filtered in the Allocation Gantt.

Statistics	65	65	65	65	65	64	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Employees	65	65	65	65	65	64	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Flight Pairi	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Annual Lea	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Days Off	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Reserves	0/0	0/0	0/0	-1/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Training	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0

Options:

- Limit to Selection
- Show Remaining
- Show Allocated

Operator: North Base: YEG Rank: CPT Equip: Sub: <none> Attr:

Buttons: Cancel, Apply

You will now see a menu option in the Tools menu called **Calculate Target Statistics**. This menu allows the user to manually calculate, or recalculate the target statistics for a specific period using the following controls to determine the relevant employee groups:

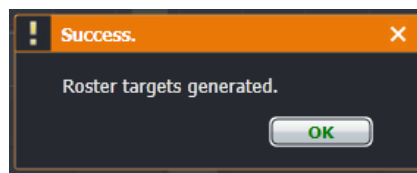
To complete the Calculate Target Statistics form:

1. Select the From and To Date Range for statistical calculation
2. Select applicable Criteria (Operator, Base, Rank, Equip, Sub, Attr)

**Note:** Sub = Course, Certification, Attribute, Group

3. If the Overwrite Existing check box is selected, the criteria in the Allocation Panel will be overwritten with the newly calculated information.
4. Click the **Calculate** button, or the **Cancel** button to close the form without generating action

Clicking the Calculate button generates the following response:



Roster target information generated is populated in the Statistics area of the Allocation Gantt.

The application now shows both the allocated/remaining number of entities for each of the total types, as well as a target value which is taken from the calculated values.

The calculated values are stored in the database and can be updated manually by the user by double-clicking the appropriate total cell for the day and type or by right-clicking from the day and type cell and selecting the Edit Target option from the right click context menu. This renders the Edit Target dialog form where the user can edit the target value.

Daily target statistics are the allowable number of pairings which should be allocated on a given day in order to maintain a balanced allocation pattern. These targets are generally determined during a manpower planning process; however, the standard totals are massaged by the roster planners during the build process.

In order to determine target statistics for each daily category use the following methodology:

- **Employees** – the total number of displayed active employees for the day
- **Flight Pairings** – target is the total number of flight pairings that can be allocated for the day
- **Reserves** – the target number of reserves for the day
- **Days Off** – the target number of days off for the day
- **Annual Leave** – the target number of annual leaves for the day
- **Training** – the target number of training pairings for the day

In order to determine actual statistics for each daily category use the following methodology:

- **Employees** – the total number of displayed active available employees that do not have assigned pairings for the day
- **Flight Pairings** – the total number of allocated flight pairings allocated for the day.

- **Reserves** – the total number of allocated reserves for the day
- **Days Off** – the total number of days off allocated for the day
- **Annual Leave** – the total number of annual leaves assigned for the day
- **Training** – the total number of training pairings assigned for the day

## Planned Sickness

Sick days are usually recorded in CrewFollow as they are reported to Crew Scheduling. In cases where crew are unavailable for a future date due to medical reasons, sick days can be added to the roster. This can be done by assigning the standard pairing that best represents this event.

## Managing Crew Requests

If crew are given access to request for pairings in the next roster, the requests need to be processed before the rest of the pairings are assigned. To do this, make sure first that the bid period is closed.

Go to Tools then select Allocate Employee Requests. Select the department, base and rank of the group of crew to work on. Select the Roster Period and Request Profile. Click Allocate Requests to proceed or Cancel to close the form.

Requested pairings that are granted will be presented with a red border.

To review a crewmember's requests and entitlement ledger, click on the name of the crewmember from the Allocation Gantt. Click on Schedule then select Roster Request to review their requests and Entitlements to review their annual leave ledger.

Operator	Base	Rank	Entitlement Type	Date	Pairing	Credit	Debit	Balance	Expiration	Comm	Updated By	Updated Date
			Annual Leave			28	0	28				
TZ	SIN	CPT	Annual Leave	14/02/2016		0	1				MerlotSystemUser	28/12/2015 10:5
TZ	SIN	CPT	Annual Leave	15/02/2016		0	1				MerlotSystemUser	30/10/2015 15:3
TZ	SIN	CPT	Annual Leave	31/03/2016		-2	0				MerlotAdmin	12/01/2016 08:3
TZ	SIN	CPT	Annual Leave	01/04/2016		28	0				MerlotAdmin	29/12/2015 06:3

## Menu Options

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### File Menu

**Reset Layout** brings all the panels back to their default sizes and positions.

### View Menu

The View menu contains time mode options.



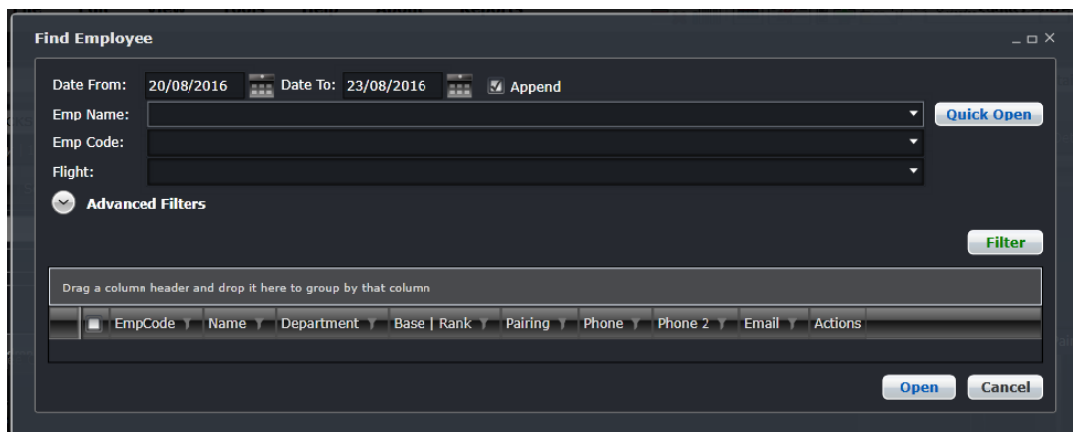
- Zulu (Z): Zulu time is known as Greenwich Mean Time (GMT)
- Port (L): Port time is local time in the departure or arrival port of the flight
- Standard (S): Standard time is local time at your company headquarters

### Tools Menu

#### Direct Open

Direct Open is a tool that allows users to search for specific crewmembers. This works similar to the Allocation Panel filter, but it presents more information about each crew member and allows for faster searching. This comes in a **Basic** view and an **Advanced** view.

The **Basic** view below can be accessed by using the hot key **Ctrl + F** from the Allocation Gantt, or going to the Tools menu then selecting Direct Open.



Field	Description
<i>Append</i>	Selecting this will add the rosters of the selected crew to your current view in the Allocation Gantt. If this is not selected, the current view will be replaced by the results of this search.
<i>Date From Date To</i>	The dates on top default to the current date in Standard time mode. Searching for crew is limited to actively rated crew within the entered date range.
<i>Emp Name</i>	Enter the first few letters of an employee's last name to bring out a list of suggestions.
<i>Emp Code</i>	Enter the first few characters of an employee's code or ID to bring out a list of suggestions.
<i>Flight</i>	Enter the flight number for the selected date range. Entering the first few numbers will bring out a list of suggestions. The crew assigned to the selected flight will be included in the search results.
<i>Quick Open button</i>	Click this button to display the rosters of the searched crew in the Allocation Gantt
<i>Filter button</i>	Click this button to display the details of the searched crew in the grid below the button.

The *Emp Name*, *Emp Code* or *Flight* field can be used independently of each other. Selecting at least one option from one of them will bring search results. Multiple entries can be entered for each field.

The search results in the Find Employee form display the crew member's employee code, name, department, base and rank, pairings for the next 4 days, phone numbers and email address. The action buttons to the right allow the user to view the employee details and to send the employee a message.

The search results can also be ranked by column by clicking on the column header. They can also be filtered further using the filter icon (🔍) in each column. If the *Advanced* section (Ctrl-A) or the chevron button is not expanded, no loading of data for the pairing filter will take place. Setting the End date to the same date will not load pairing and flight data and setting the End date to a different date will only load flight data once.

When accessing the *Advanced* section or the chevron button is expanded, the loading of filters will only be processed once.

The **Advanced Filters** view can be accessed by using the hot key **Ctrl + A** from the Allocation Gantt, or going to the Tools menu then selecting Direct Open and clicking on the Advanced Filters button.

Field	Description
<i>Base</i>	A drop-down field that displays the active crew bases
<i>Group</i>	Provides a list of employee profiles or groups. Selecting any group filters our crew members who belong to the group within the selected filter date range. Multiple groups can be selected.  For example, crew members who have recently come on board can be grouped as Green or IOE. When either group is selected for the filter, crew with the Green or IOE profile for the filter date range will be listed in the filtered crew list.
<i>Rank</i>	A drop-down field that displays active ranks and / or rank groups
<i>Equip Group</i>	A drop-down field that displays the active aircraft or equipment types or groups that crew operate
<i>Department</i>	A drop-down field that displays active departments. It is an area within an airline or company that is tasked with providing particular services of a similar type. For example, Flight Operations (i.e. the manning and operating of aircraft), Maintenance (ensure the aircraft are able to operate safely), Ramp (the parking and coordination of aircraft resupply between flights).
<i>Course</i>	Provides a list of active courses. Multiple courses can be selected for the filter criteria.
<i>Line Type</i>	A drop-down field that displays active line types.
<i>Operator</i>	The Operator drop-down menu filters the grid to show information based on selected airline operators.
<i>Pairing</i>	A drop-down field that displays all pairings.

<i>Pairing Type</i>	A drop-down field that displays the kinds of pairings to be displayed. This looks at the pairing or duty on the day/s being searched. For example, if you select RES for 01 June, all RES duties on the 01 June will be displayed even if the pairing starts on 31 May.
<i>Match Type on all dates</i>	If selected, this will display only the crew with pairings that match the selected Pairing Type and on the selected dates.
<i>Certification</i>	Provides a list of certifications that crew can achieve. Certifications are qualifications taken on crew's own time. Examples of which are language speaking skills and medical. Certifications may or may not need to be renewed. Multiple certifications can be selected for the filter criteria.
<i>Attribute</i>	Provides a list of attributes or pre-defined characteristics of crew that can be used to require or restrict the number of crew in a flight or route. Multiple attributes can be selected for the filter criteria.  For example, a crew member can have a Mandarin-speaking attribute. In a flight going to any city in China, at least one Mandarin-speaking crew is required. The attribute of the crew is used to determine if that requirement has been met.
<i>Include out of base Employees</i>	Displays all duties for pairings indicated in the <i>Pairing Type</i> field for the indicated date in any port.
<i>Base</i>	A drop-down field that displays the active crew bases

## Update Pairing Status

The *Update Pairing Status* form is used to activate pairings created in CrewBuild, CrewPlan and CrewRoster.

The form uses filters to locate the pairings and options within the Pairing Grid to activate the Pairings.

### To complete the Update Pairing Status form:

1. Select the From and To Date Time Range of the desired pairing.

2. Select the *Save Filter Dates* check box to save the filter Date Time data.  
Alternatively, select an existing filter from the Filters drop down menu.
3. Select applicable Criteria (*Base, Rank, Equip*).
4. Select *All, Planned, Active* or *Initial Publish* from the *Status* drop down menu.
5. Click **Apply** to filter selected criteria.  
The Pairing Grid on the right-hand side will display the filtered results.
6. Select the desired Pairing type (*Planned, Active* or *Provisionally Active*) from the *Update All* drop down menu.
7. Click **Apply** to activate the desired pairings.
8. Click **Save** to save the activated pairings or **Cancel** to close the form without generating action.

## Planned, Initial Publish and Active Pairing Status

Planned is the default status of a pairing when you create a pairing in the period prior to publication. Planned pairings are visible only to users in CrewBuild, CrewRoster and CrewPlan.

Initial published pairings consist of pairings or rosters that have been initially published. Crew members within the **Schedule Adjustment Period (SAP)** are able to view and perform trades before the final release.

Active status refers to published pairings that system users and crew members can view in the system as live pairings or events.

## Validate Rosters

Roster validation takes place prior to publishing a crew roster. This ensures that the selected rosters are validated against all the rules applicable to the crew. A message will be sent to the user's inbox once validation is finished. It will indicate if there are violations raised.

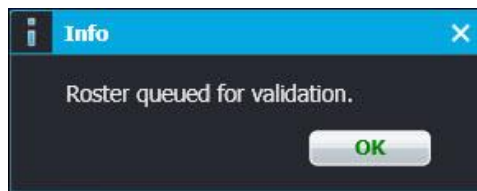


The *Validate Rosters* form is comprised of three sections which include: *Date Range*, *Criteria* and *Select Employees*.

## To complete the form:

1. Select the date range to be validated.
2. Select the applicable criteria (*Profile*, *Rank*, *Pair Type*, *Equip*, *Base*). If these fields are blank, all crew will be included in the validation process.
3. Select *Show unpublished crew*, *Show pre-published crew* or *Show published crew* as applicable.
4. Click **Filter**.
5. In the *Filtered Crew* box, select crew members by highlighting a name or group of names and move them to the *Selected Crew* section using the arrow buttons (>,>>).
6. Click **Evaluate** to submit the roster for validation, or **Cancel** to close the form without generating action

The following message appears to inform the user that the roster is queued for validation.



## Unpublished, Pre-published and Published Crew

Unpublished rosters are made up of planned pairings. Pre-published rosters are viewable only to system users and not the crew members. Published crew rosters are live in the system and viewable by system users and crewmembers.

## Publish Rosters

### Initial Publish

The Initial Publish feature of CrewRoster allows crew members within the **Schedule Adjustment Period (SAP)** to do the following:

- View initially published employee rosters; and
- Perform trades before the final release.

### To initially publish rosters:

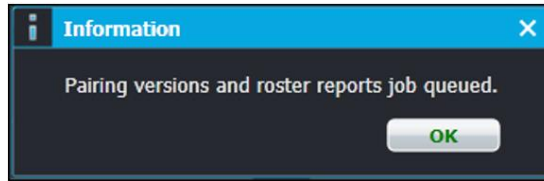
1. Select **Initial Publish** from Tools > Publish Rosters.

**Note:** This is only visible if both **X** and **V** access are activated in Configure > User Security.

The *Initial Publish Rosters* window will be displayed.

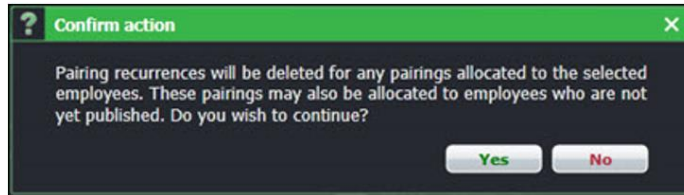
2. Select the date range to be published.
3. Select the applicable criteria (*Profile, Rank, Pair Type, Equip, Base*). If these fields are blank, all crew will be included in the publication.
4. Select *Show initial published crew* checkbox.
5. Click **Filter**.
6. In *Select Employees > Crews*, select the crew members by highlighting the name or group of names and move them to the *Selected Crew* section using the arrow buttons (>,>>).
7. Proceed by doing either of the following:
  - a. Click **Initial Publish** to submit the roster for publication; or
  - b. Click **Cancel** to close the form without generating action.

If you select **Initial Publish**, a notification will be generated.



8. Click **OK**.

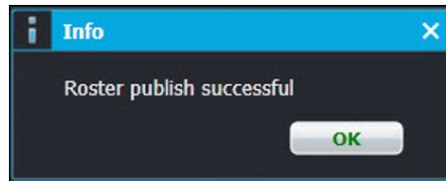
A Confirm action message will be displayed.



9. Proceed by doing either of the following:

- Click **Yes** to confirm; or
- Click **No** to close the form without generating action.

A notification will be displayed confirming initial roster publication.



## Final Publish

The *Final Publish Rosters* form allows a user to publish rosters.

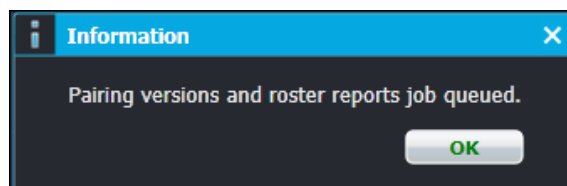
A screenshot of the 'Final Publish Rosters' form. The form has a dark grey background and a blue header. It is divided into three main sections: 'Date Range', 'Criteria', and 'Select Employees'. The 'Date Range' section includes 'From' and 'To' date pickers, and 'Previous day(s)' and 'Future day(s)' spinners. The 'Criteria' section includes dropdown menus for 'Operator', 'Base', 'Rank', 'Equip', 'Profile', and 'Pair Type', along with checkboxes for 'Show unpublished crew', 'Show initial published crew', 'Show published crew', and 'Delete pairing recurrence'. The 'Select Employees' section features two lists of crew members with arrows for moving items between them. At the bottom, there are 'Final Publish' and 'Cancel' buttons.

The form is comprised of three sections which include: *Date Range*, *Criteria* and *Select Employees*.

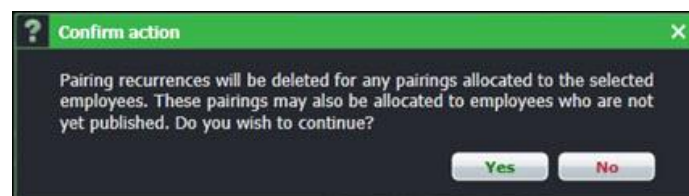
## To complete the form:

1. Select the date range to be validated.
2. Select the applicable criteria (*Profile, Rank, Pair Type, Equip, Base*). If these fields are blank, all crew will be included in the validation process.
3. Select *Show unpublished crew, Show initial published crew* or *Show published crew* as applicable.
4. Select *Delete pairing recurrence* to unlink the instances of recurred pairings. This will allow users to modify pairings without affecting its other instances.
5. Click **Filter**.
6. In the *Filtered Crew* box, select crew members by highlighting a name or group of names and move them to the *Selected Crew* section using the arrow buttons (>,>>).
7. Click **Final Publish** to submit the roster for validation, or **Cancel** to close the form without generating action.

If you select **Final Publish**, a notification will be generated.

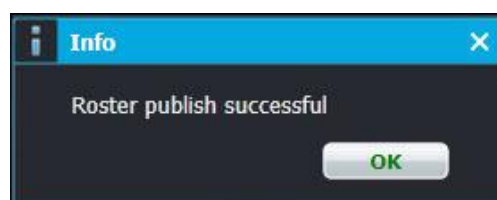


8. Click **OK**.  
A Confirm action message will be displayed.



9. Proceed by doing either of the following:
  - a. Click **Yes** to confirm; or
  - b. Click **No** to close the form without generating action.

A notification will be displayed confirming initial roster publication.



10. Click **OK**.

## Differentiate Initial Published, Published, Pre-published and Unpublished Crew

Initial published rosters allow crew members to access initially published employee rosters and perform trades before the final release.

If you publish rosters and you need to make changes, you can only filter for crew who have published rosters and then re-publish them. This allows you to make urgent changes straight after roster publication and does not require the republication of ALL rosters. The Final Publish roster feature will release rosters to CrewFollow and CrewPortal. Rosters released to CrewPortal are released to crew members by the JobEngine.

The Pre-publish feature enables you to publish rosters for the crew scheduling departments using CrewFollow only. The pre-published rosters are not published to the CrewPortal or CrewMobile for employee viewing.

**Note:** You are only able to publish rosters for crew who have duties allocated to them over the applicable date range.

## Allocate Employee Requests

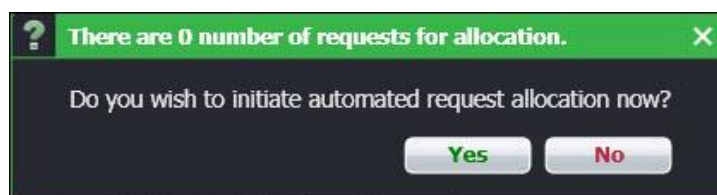
The Allocate Employee Request form allows the user to allot employee requests for the roster period. These requests such as days off and vacation are crew requests selected through the CrewPortal.



The Allocate Employee Request form is comprised of drop-down menus with two sections including: Criteria and Period.

To complete the form:

1. Select applicable Criteria (Department, Base and Rank).
2. Select the Roster Period Date Range from the drop-down list.
3. Select the desired Request Profile such as Day off Requests (shown above).
4. Click the **Allocate Requests** button to Allocate Requests or the **Cancel** button to close the form without generating action.



5. Click **Yes** to initiate automated request allocation.

## Calculate Target Statistics

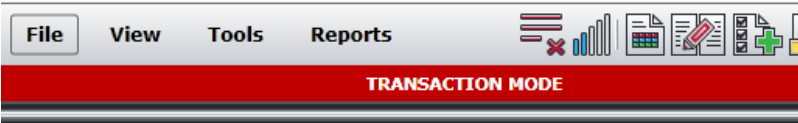
This allows users to set the target statistics for pairings within a roster period. This is discussed in Managing Statistics and Targets.

### Transaction Mode

Transaction Mode provides a playpen or "what if" capability in modifying rosters. If you don't like the changes you just made, you can simply cancel it and the roster will return to its original state.

To start Transaction Mode, go to the Tools menu and choose Transaction Mode.

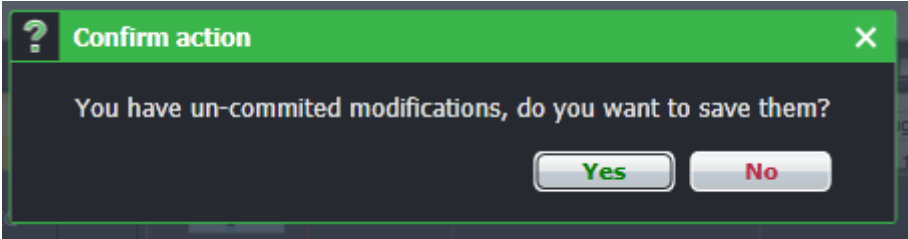
Once selected, you will notice a red bar across the application under the menu bar indicating that you are in transaction mode.



When you are finished, you can choose to Save it or Cancel these changes.

These three menu commands are related to each other:

- **Immediate Save Mode** – this is the default option when using CrewFollow. If you select this while in transaction mode, you will be asked if you want to save or discard your changes before going back to Immediate Save Mode.



- **Save/Commit Transaction** – commits the changes made and returns CrewFollow back to Immediate Save Mode.
- **Cancel Transaction** – discards any changes made and returns CrewFollow back to Immediate Save Mode.

While in transaction mode, the Activity Panel will display the *Transaction mode tab changes* as soon as one roster or pairing change is made.

A screenshot of the Activity Panel. At the top, there are several tabs: 'Transaction mode chang', 'Pairings', 'Standard Pairin', 'Flights', 'Events', and 'Courses'. Below the tabs is a header area with the text 'Drag a column header and drop it here to group by that column'. Below that is a table with the following columns: 'Sequer', 'Date', 'Employee', 'Ref', and 'Description'. The table contains six rows of data.

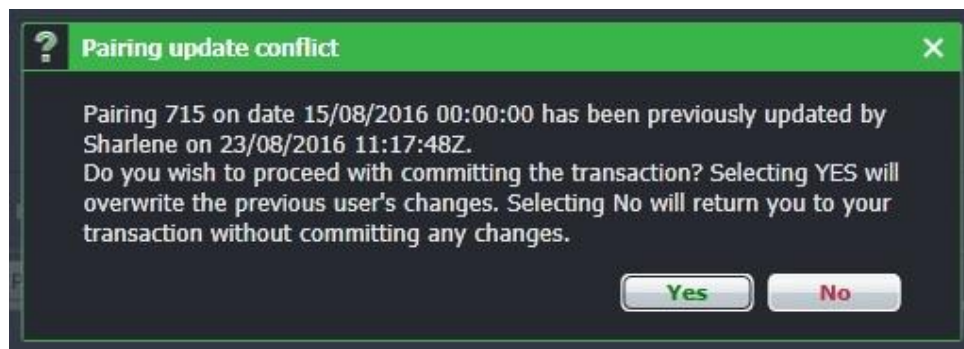
Sequer	Date	Employee	Ref	Description
1	06/08/2016 L		273	Pairing Allocated
2	06/08/2016 L		ADMN	Pairing Allocated
3	06/08/2016 L		S 8	Pairing De-allocated
4	06/08/2016 L		273	Pairing Modified
5	06/08/2016 L		1007	Pairing Modified
6	06/08/2016 L		2322	Pairing Modified

The tab contains the following columns:

Column	Description
<i>Sequence</i>	The order in which the change was made
<i>Date</i>	Date of the affected pairing
<i>Employee</i>	Name of the employee assigned to the pairing. If this is blank, it means multiple employees are affected or an unassigned pairing was changed
<i>Ref</i>	Pairing name. Clicking on the pairing name will load it in the Pairing Details Panel.
<i>Description</i>	Indicates if the pairing was allocated, de-allocated, modified or created, or when a flight complement is modified

The number of changes made is displayed on the left side of the tab. The Activity Panel filter will not affect the contents of this tab. Once transaction mode is committed or saved, the tab and its contents will disappear.

If an updated pairing in transaction mode was updated by another user or process before the current transaction was committed, a Pairing Update Conflict popup will be displayed. This allows the user to choose what to do with the updates.



Selecting **Yes** will override the changes made by the other user or process. Selecting **No** will discard the current user's changes and the user must reload the pairing and apply the changes again.



## Export Roster Files

Rosters can be exported to an XML file for creating the next month's roster in the Optimiser Suite. This form is used the same way as Validate Rosters and Publish Rosters. The user will receive a message once the export has finished.

## Import Roster Solution

The Import Roster XML tool allows the user to import the optimized roster in the form of an XML file.

### To complete the form:

1. Enter a solution name in the Name field.
2. Click Browse and look for the XML file on your desktop or other destination. Select the file and click the **Open** button.
3. If applicable, select one or more ranks from the drop-down list to import the roster for that rank only.  
If Rank is unselected, all ranks are included in the request
4. Click the **Import** button to import the file, or the **Cancel** button to close the form without generating action.
5. Click **Yes** on the Confirm action dialog box, after confirming the requested information is correct, or click **No** to cancel the request and close the dialog box without generating action
6. You will receive a message once the roster has been imported.

Once the file is imported, the rosters are ready to be modified, validated or published.

## Delete Imported Solutions

Solution Name	Period From	Period To	File Name	Imported At	Status
IC YUL	31/07/2014	31/08/2014	Schedule_IC_YUL.XML	07/08/2014 05:33 L	Active
FA YYZ	31/07/2014	31/08/2014	Schedule_FA_YYZ.XML	07/08/2014 07:50 L	Active

There are instances when several roster files are imported for the same period. It can get confusing which one is the latest one unless it is determined by the solution name or file name. One option to clean up solutions is to delete them.

Enter the date range that the solution covers then click **Search**. Click on the solution and click **Delete**.

Select *Include Deleted Solutions* if you need to backtrack on previously imported solutions, deleted or not.

## Delete Pairing Recurrence

The Delete Pairing Recurrence form is used to delete recurred pairings. This is commonly used when the flight schedule changes after pairings have been created.

To complete the Delete Pairing Recurrences form:

1. Select From and To dates of the recurred pairings.
2. Click the **OK** button to delete pairing recurrences or the **Cancel** button to close the form without generating action

A message will indicate that pairings for the specified date range have been successfully deleted.

In terms of best practices, pairing recurrences that are no longer needed, should be deleted prior to roster publishing.

## Export to FRMS

This option allows users to send roster information to a third party fatigue risk management system (FRMS), where rosters can be analysed through fatigue management models instead of work-rest limits managed by rules. The only FRMS that can process merlot.aero data is FRMSc's SAFE. Select this option to proceed with the export.

### To export crew rosters to an FRMS:

1. Select the date range to be exported.
2. Select the number of days prior to the period that needs to be included.
3. Select the applicable criteria (Profile, Rank, Pair Type, Equip, Base). If these fields are blank, all crew will be included in the validation process.
4. Select *Show unpublished crew*, *Show pre-published crew* or *Show published crew* as applicable.
5. Click the **Filter** button.  
The filtered crew information will display in the Select Employees section's Filtered Crew box.
6. In the Crews box, select crew members by highlighting a name or group of names and move them to the Selected Crew section using the arrow buttons (>,>>).
7. Click the **Export** button to submit the roster for validation, or the **Cancel** button to close the form without generating action

Access to this form is controlled by user security option *FRMSSAFESTandardExport*. Before exporting data to SAFE, review the user preferences *FRMSSAFEPairingTypes* and *FRMSDefaultPriorDays* and the job configuration for *FRMSSAFEExportJob*.

Real-time validation with an FRMS is not yet covered at this time.

## Reports

### Aircraft Landing Count Report

merlot.aero-Configure - Count Aircraft Landing								
Operator Code	Port	Dec 2014	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 2015	Total
Company Limited	DMK		4	3	18	9	11	45
	ICN			4	9			13
	KIX				2			2
	NRT	1	1		7	7		16
	ROW					2		2
	SIN						11	11
	<b>Total :</b>		<b>1</b>	<b>5</b>	<b>7</b>	<b>36</b>	<b>18</b>	<b>22</b>
Pte Ltd	ANC					1		1
	BFI					1		1
	DMK		29	26	33	39	28	155
	HKG		22	24	26	28	27	127
	ICN		13	12	13	13	13	64

### Crew Assessment Form Report

merlot.aero-Flight Crew Assessment Form						Sim Y1D First Officer		
Flight Crew Name			Company Number		Rank			
<input type="text"/>			<input type="text" value="152939"/>		<input type="text" value="First Officer"/>			
Date		Variant	Sim No.	Recurrent	Other			
<input type="text" value="31/Jul/2014"/>		<input type="text" value="B738"/>	<input type="text" value="Y1D"/>	<input type="text" value="X"/>	<input type="text"/>			
An/Line	F/Up	Other						
<input type="text"/>	<input type="text"/>	<input type="text"/>						
Technical Conditions			SIG	MOD	LOW	Weather Conditions		
<input type="text"/>			<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
Assessment Items			CHECK ITEM		R	GRADING	PERF MARKERS	
1 Preflight						n/a		
2 Taxi						n/a		
3 Take Off						n/a		

## Crew Assessment Summary Report

merlot.aero-Flight Crew Assesment Summary From 02-Oct-2014 To 02-Oct-2014							
Operator	Base	Rank	Employee	Grade			N/A
				Sum	Average	Deviation	
QF	AKL	CPT	[REDACTED]	50	3.85	0.38	24
All Employees :				50	3.85	0.38	24

04-Dec-2014-3:49:56 AM-v6.2.2.38895 powered by www.merlot.aero Page 1 Of 1

## Crew Reserve Details Report

merlot.aero- Crew Reserve Report									
From Date	01Mar16	From Time	00:01 LT	OPTR	0	EQUIP	0	PRNGN	14,2
To Date	31Mar16	To Time	23:59 LT	Station	0	POSTN	0		
OPTR	STATION	EQT	POSTN	TIME	ID	NAME	TEL		
[REDACTED] Company Limited	DMK	777	CC	12:00 / 23:59	0001000	ALISA [REDACTED]	099-362-		
		777	CC	12:00 / 23:59	0001000		099-362-		
		777	CC	00:00 / 11:59	0001000		099-362-		
		777	CC	00:00 / 11:59	0001000		099-362-		
		777	CC	14:00 / 23:59	0001000		099-362-		
		777	CC	12:00 / 23:59	0001000		099-362-		
		777	CC	12:00 / 23:59	0001000		099-362-		
		777	CC	12:00 / 23:59	0001000		099-362-		
		777	CC	14:00 / 23:59	0001000		099-362-		
		777	CC	12:00 / 23:59	0001000		099-362-		
		777	CC	12:00 / 23:59	0001000		099-362-		
		777	CC	00:00 / 11:59	0001113	API [REDACTED]	090-663-		

## Document/Message Acknowledgment Report

Scoot Pte Ltd										
merlot.aero - Document / Message Acknowledgement Report										
01-Mar-2016 to 07-Mar-2016										
Operator	Subject / Title	Message / Document	Crew Name	Base	Rank	EQPT	Issue / Sent By	Issue / Sent	Acknowledged	Acknowledgement Received
XW	CSC 021-2016 New Appoint for AM In-Flight Sales and Crew Service	Document	AIEMMUANG, THREEERAT (0001282)	DMK	CC	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			AKKARAKITTICHOKE, PEERADA (0001092)	DMK	CL	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			AKKATHIN, SINICHAR (0000978)	DMK	CC	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			ANGSUSING, PATCHANON (0001275)	DMK	CC	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			ANUSATHIT, PUNNAPA (0001286)	DMK	CC	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			BOONSARNG, RATIMA (0000966)	DMK	CC	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			BORRISUTSAWAT, ARRIYA (0001154)	DMK	CC	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			BUATHONG, JINDA (0001269)	DMK	CC	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			BUTRSIKHAO, RATTHANAN (0001105)	DMK	CC	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			BUTRSIKHAO, RATTHANAN (0001105)	DMK	SNY	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			CHABKLINHOM, ANGKHANA (C000033)	DMK	CL	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			CHAIHONG, SINEENAD (0001278)	DMK	CC	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	
			CHAIYARAJ, PEERAYA (0000853)	DMK	CC	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	Yes	09-Mar-2016 13:12:06 Z
			CHAIYARAJ, PEERAYA (0000853)	DMK	SNY	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	Yes	09-Mar-2016 13:12:06 Z
			CHANANITHAM, NITHCHA (0001117)	DMK	CC	777	Rachada Ngurnsod	02-Mar-2016 11:08:49 Z	No	

## Employee Bid Report/Results

Currently not in use

## Employee Bid Satisfaction Report

Currently not in use

## Employee Briefing Report

merlot.aero-Employee Briefing Report									
10-Jul-2017 to 15-Jul-2017									
Name:	Justin, Andres	EmpCode:	000011431	Rank:	CA	Base:	LAS		
Attributes:									
Pairing	Duty	Date	From	Sign On	To	Sign Off	Flight Time	Duty Time	
PPSK	PPSK-1	10-Jul-17	LAS	07:00 Z	LAS	06:59 Z	+1 00:00	00:00	
Out of Base	Out of Base-1	11-Jul-17	LAS	07:00 Z	LAX	07:00 Z	+1 00:00	00:00	
MT/PC	MT/PC-1	11-Jul-17	LAS	20:00 Z	LAS	01:00 Z	+1 00:00	05:00	
MT/PC	MT/PC-2	12-Jul-17	LAS	20:00 Z	LAS	01:00 Z	+1 00:00	05:00	
LASR1030M	LASR1030M-1	13-Jul-17	LAS	17:30 Z	LAS	05:30 Z	+1 00:00	00:00	
L8100430	L8100430-1	14-Jul-17	LAS	23:49 Z	LAS	04:43 Z	+1 02:36	04:54	
GOLD	GOLD-1	15-Jul-17	LAS	07:00 Z	LAS	06:59 Z	+1 00:00	00:00	
Duty Label: PPSK-1		Duty Date: Monday, 10-Jul-2017							
Comments:									
[Individual]: 07/09- lm at 2105pdt...HC 7/9 PPSK R1030 per Ernie Nevin..DM									
Duty Label: Out of Base-1		Duty Date: Tuesday, 11-Jul-2017							
Duty Label: MT/PC-1		Duty Date: Tuesday, 11-Jul-2017							

## Employee Expiry Report

merlot.aero-Crew Pre Plan - Expiries Report		07-Apr-2016 to 14-Apr-2016					
Employee Code	Course Name / Certification	Base Rank	First Passed	Last Passed	Next Planned	Expires	
NokScoot Airlines Company Limited							
CHIMIN, ORSINI TEHEIARI							
0000988	NCT PGT (RT1)	DMK FO	11 Oct 2015	11 Oct 2015		11 Apr 2016	
Choo, Wai Chiong (Zhu WeiZhang)							
0001021	NCT LANDING	DMK FO		10 Mar 2016		10 Apr 2016	
0001021	NCT PGT (RT1)	DMK FO	14 Oct 2015	14 Oct 2015		14 Apr 2016	
KUANKRUE, PORAMIN							
0000907	NCT PGT (RT1)	DMK FO	14 Oct 2015	14 Oct 2015		14 Apr 2016	
LAOHASUWANNARAT, SONGSAK							
0000883	NCT PGT (RT1)	DMK FO	14 Oct 2015	14 Oct 2015		14 Apr 2016	
RATIWIYAPONG, PAIBOOL							
0000918	NCT PGT (RT1)	DMK FO	11 Oct 2015	11 Oct 2015		11 Apr 2016	

## Employee Group Roster Report

merlot.aero - Group Roster Report		ALL-ALL		01/Jan/2016 to 31/Jan/2016																											
01-Jan	02-Jan	03-Jan	04-Jan	05-Jan	06-Jan	07-Jan	08-Jan	09-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	
[Detailed roster data including flight numbers, times, and crew assignments]																															
24-Feb-2016-11:31:26 PM-v6.6.0.46507 powered by www.merlot.aero Page 1 Of 34																															

## Employee Roster Report

merlot.aero-Employee Roster Report													Print				
Name:		Tai-Kun Chen										CPT SIN					
Employee Code:		0004338										1/May/2017 to 31/May/2017					
Day	Date	Duty	Property	From	Report	To	Release	Scheduled	Route	Block	Flight Time	Duty Time	TAFB Time	Rest Time	Sector(s)/Event(s)	Allowances	
Mon	29-May	L	952-1	SIN	03:00	L	HKG 09:00	L	2:30		3:30	6:00	34:40	23:30	952 SIN 4:00 L DMK 5:30 L OP 953 DMK 6:30 L HKG 8:30 L OP - HKG <Accom>		
Comment:		[Profile] CPT (T) Chen Tao (0003227) operating flights 952/953 is member of LOW EXPERIENCE TECH CREW															
Tue	30-May	L	952-2	HKG	08:30	L	SIN 13:40	L	3:40		3:40	5:10			954 HKG 9:30 L SIN 13:10 L OP		
Comment:		[Profile] CPT (T) Chen Tao (0003227) operating flights 954 is member of LOW EXPERIENCE TECH CREW															
Totals:								6:10		7:10		11:10		34:40			
19-Jun-2017 13:24 (SIN) - v1.0.0.54250 powered by www.merlot.aero																	

Line type codes are displayed inside a parenthesis in the Employee Roster Report header.

Active employee profiles are displayed last in the sequence of values for the report's *Comment* section and a line will be displayed separately for every active profile in a flight.

**Additional note for PayCredit:** Trip rig credit rules can be applied to the Pay Credit column. If the pairing pay credit value is higher than the sum of the duties' pay credit, the difference, referred to as X, will be used. If the pairing on the last day of the date range finishes on the last day, the whole pay credit value is used. Otherwise, if the last pairing ends outside of the date range, X will not be counted for the part of the pairing within and outside of the date range.

For example, the date range is 01-30 June and the pairing on June 30 ends on 01 July with rig pay credit of 4:00 and sum of duty pay credit is 2:30. The difference, or X, is 1:30 or 1.5. For the date range, X will not be considered since the latest duty (01 July) is outside of the date range. If the date range for processing is 01 June to 31 July, X will be considered. The total pairing pay credits will be displayed in the Pay Credit total column.

Employee Roster Report (batch)

merlot.aero-Employee Roster Report												
Name: SON [redacted] FO DMK											Print	
Employee Code: 000 [redacted]											1/Apr/2016 to 30/Apr/2016	
Day	Date	Duty	From	Report	To	Release	Scheduled Route Block	Flight Time	Duty Time	TAFB Time	Sector(s)/Event(s)	Allowances
Fri	01-Apr L	SCRTY	DMK	09:00 L		12:00 L			3:00	3:00	SCRTY DMK 9:00 L DMK 12:00 L	
Comment: [Training]: Course: SCRTY   Students: POR, [redacted], POO, [redacted], Wai, [redacted], SON, [redacted]												
Fri	01-Apr L	NCTDG	DMK	13:00 L		17:00 L			4:00	4:00	DMK 13:00 L DMK 17:00 L	
Comment: [Training]: Course: NCTDG   Students: SON, [redacted], Wai, [redacted], TRAI, [redacted], POO, [redacted], POR, [redacted]												
Sat	02-Apr L	REST-1	DMK									
Sun	03-Apr L	182T-1	DMK	02:10 L	TPE	08:35 L	3:45	4:02	5:25	35:39	182 DMK 3:03 L TPE 8:05 L OP - TPE Monarch Skyline Hotel	
Mon	04-Apr L	182T-2	TPE	08:50 L	DMK	13:49 L	3:25	4:07	5:59		181 TPE 10:12 L DMK 13:19 L OP	
Tue	05-Apr L	088T-1	DMK	12:20 L		23:52 L	8:00	8:09	11:32	11:32	088 DMK 13:19 L NKG 18:06 L OP 087 NKG 20:00 L DMK 23:22 L OP	

Original Rostered Hours Report

Original Rostered Hours Report											
Previous Month		From	01/04/2016	To	30/04/2016	Operator	Select All	Base	Select All	Employees	Chan Wai Kee
EmployeeCodes		Select All	Rank		Select All	Include Planned Roster Totals and Comparisons					
<input type="button" value="Run Report"/> <input type="button" value="Print"/> <input type="button" value="Export to PDF"/> <input type="button" value="Export to Excel"/> <input type="button" value="Close"/>											
Drag a column header and drop it here to group by that column											
Base	Rank	CreditFlightSum	CreditDutySum	ActualFlightSum	ActualDutySum	RosteredCreditFlightSum	RosteredCreditDutySum	RosteredActualFlightSum	RosteredActualDutySum		
SIN	CPT	64:14	133:54	64:14	143:29	65:10	114:45	67:35	116:15		

Port Currency Report

merlot.aero - Port Currency Report (Achieved)						
Rank Group	Rank	Port	Employee	Flight	Date	Days
Flight Crew						
FO						
OOL						
			[redacted]	6	13-Mar-2016	25

07-Apr-2016-12:59:05 PM-v6.6.0.46633 powered by www.merlot.aero Page 1 Of 1

Route Currency Report

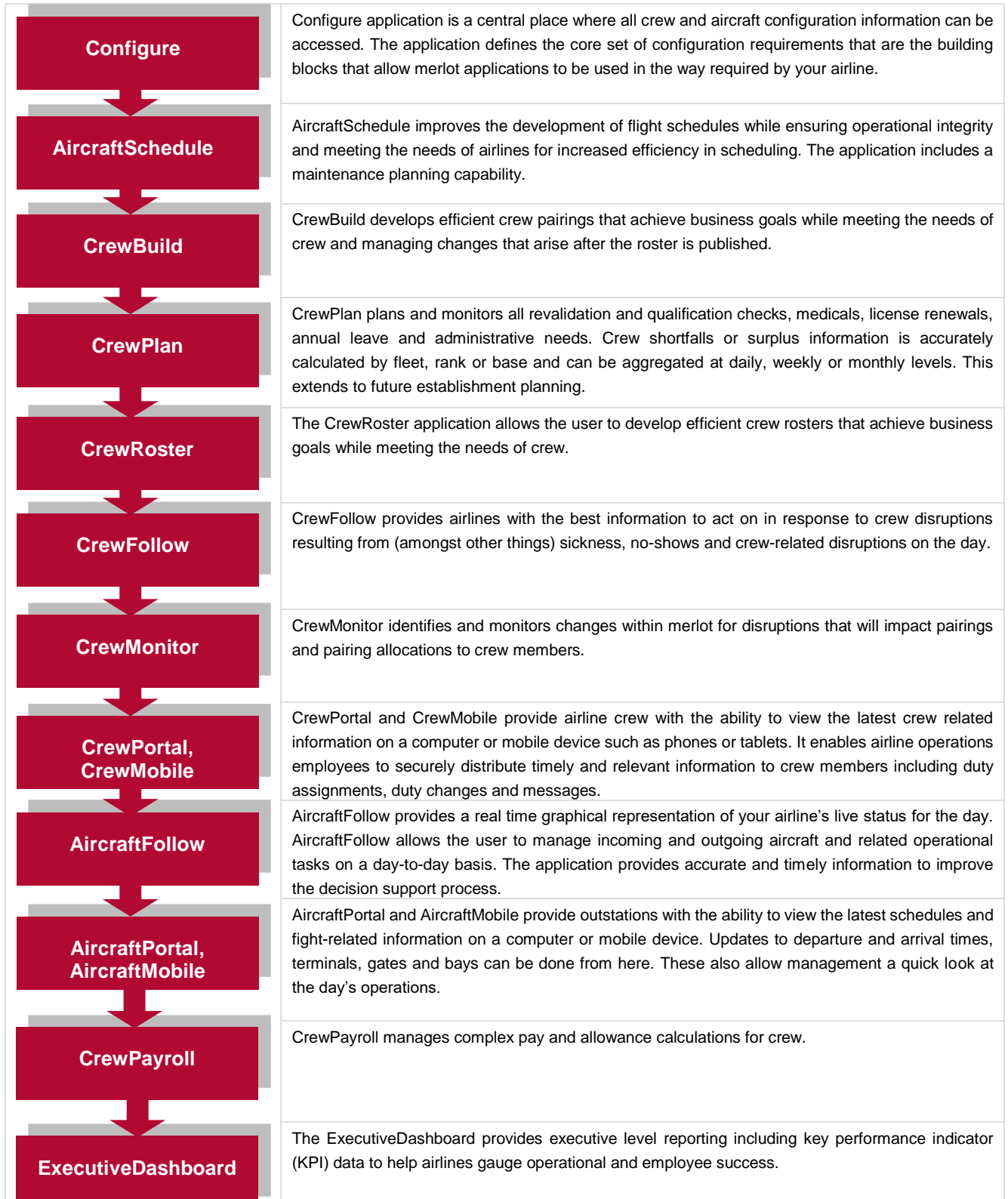
Currently not in use



## Seat Report

merlot.aero- Seat Report 01-Apr-2016 to 07-Apr-2016										
Pairing	Name	Emp Code	Rank	Report Date	Pairing Duty	RHS	LHS	JS	FA	PAX
T108	Abh [REDACTED]	000 [REDACTED]	FO	01/04/2016	T108-1		4:52			
	Abh [REDACTED]	000 [REDACTED]	FO	02/04/2016	T108-2		5:16			
	[REDACTED] Chua	000 [REDACTED]	CPT	01/04/2016	T108-1	4:52				
	[REDACTED] Chua	000 [REDACTED]	CPT	02/04/2016	T108-2	5:16				
	Vivian [REDACTED]	000 [REDACTED]	FO	01/04/2016	T108-1			4:52		
	Vivian [REDACTED]	000 [REDACTED]	FO	02/04/2016	T108-2			5:16		
					<b>Total</b>	<b>10:08</b>	<b>10:08</b>	<b>10:08</b>		
T108-1	David [REDACTED]	000 [REDACTED]	CPT	06/04/2016	T108-1-1		4:43			
	Nikhil [REDACTED]	000 [REDACTED]	FO	06/04/2016	T108-1-1			4:43		
	Jian [REDACTED]	000 [REDACTED]	SO	06/04/2016	T108-1-1	4:43				
					<b>Total</b>	<b>4:43</b>	<b>4:43</b>	<b>4:43</b>		

## Application Flow Diagram



## CrewRoster Glossary

Term	Definition
Base	The port to which crewmembers are expected to commence and finish their tasks / activities.
Block Hour	<p><i>Also called block time, blocks or flight hours</i></p> <p>The time from the moment the aircraft door closes at departure of a flight until the moment the aircraft door opens at the arrival gate following its landing. Block hours are the industry standard measure of aircraft utilization (see above). Many airlines consider a block hour to be from the time the chocks are removed from the wheels of a departing aircraft, after doors have been closed, until the time the chocks are put in place at the wheels after arrival at the airport gate before the doors are opened.</p>
Broken Pairing	<p>A pairing that has any of the following characteristics:</p> <ul style="list-style-type: none"> <li>• does not return to its start location;</li> <li>• has events that conflict with the previous or next event's port; or</li> <li>• has overlapping events within it.</li> </ul> <p>Note that there are other types of exceptions that indicate problem pairings, but these are broken in terms of structure rather than rule limits.</p>
Company Pairing	<p><i>Also called Generic Pairing, Ground Pairing, Non-flight Pairing, Standard Pairing</i></p> <p>These are pre-defined non-flight pairings that can be allocated to crew. Examples of these are: Administration Days, Days Off, Annual Leave and Sick Leave. Also known as Standard Pairing or Generic Pairing.</p>
Company Time	This refers to the time at which the pairing or event is occurring converted to the company's base or headquarters location
Covered Pairing	A pairing that has all complements filled.
Crew	A specific type of employee required for flight operations. This term is interchangeable with <i>employee</i> .
Crew Complement	The number and types of crew required for a pairing.
Crew Flow	The sequence of flights and events contained within a crew's duty. This may or may not be aligned to aircraft sequence.
Currency Requirements	<p><i>Also called recency requirements</i></p> <p>Pilots need to meet certain currency requirements in order to remain legal to operate. These can include instrument currency, night currency, various approach currencies, etc.</p>
Department	The areas within an airline or company that are tasked with providing particular services of a similar type. For example, in an airline there are Flight Operations (i.e. the manning and operating of aircraft), Maintenance (ensure the aircraft were able to operate safely), and Ramp (the parking and coordination of aircraft resupply between flights).
Duty	A grouping of flights and / or activities that can be performed legally by a crew member during one work period. One or more duties combined together define a pairing.
Employee	The generic term for people who are trained to perform specific tasks/activities. Within Flight Operations, the employees are generally referred to as crew or crewmembers; and within Maintenance, the employees are generally referred to as engineers, mechanics, avionic technicians etc.
Equalisation	The concept that over a particular period of time, each crewmember will have similar types of assignments during the period as the other crew members within their rank / group.
Equipment Group	The grouping of a similar set of equipment types. For example, a 737 which could be comprised of 733 and 734 equipment types.

	This can also be used as a reference to indicate the equipment types that a crewmember is legal to operate on as part of his rating. <i>Also called aircraft type.</i>
Equipment Type	Model of the aircraft. A specific type of aircraft that has distinct characteristics, for example a 733 or 734.  This can also be used as a reference to indicate the equipment types that a crewmember is legal to operate on as part of his rating. <i>Also called sector</i>
Flight	The transport taken from a departure point to an arrival point.
Flight Complement	The number and types of crew required to operate a flight.
Flight Pairing	A pairing that contains at least one operating flight.
Gantt	A Gantt chart, commonly used in project management shows you what has to be done in terms of activities, tasks and events and when in terms of scheduled dates and time.
Ground Pairing	A pairing that contains only ground activities. No operating or deadheading flights are included.
Local Time	The time at the location at which the pairing or event is occurring. If the location is the same or in the same time zone as the company base or headquarters location this time will be the same as the company value.
Open Pairing	A pairing that has at least one complement still requiring a crew member to be assigned.
Open Time Drop	A type of trade where a crewmember is able to "drop" a pairing from his roster into a list of open pairings and replace that pairing with a day off
Open Time Pickup	An under-complemented pairing that a crew member is able to "pick up" (exchange for a day off or reserve) or swap with (exchange for another operating pairing)
Pairing	The generic unit of work and non-work that can be assigned to a crew member. A pairing is comprised of none, one or more flights and/or activities grouped together into one or more duties. A pairing may span over multiple days. One or more duties combined together define a pairing.  A pairing is from home base to home base so it can encompass a number of duties each with individual report and release times. In this way pairings can span a single or multiple days. Pairings are usually built for all crew that carry out identical work. For instance the Captain, the First Officer and the Flight Attendants, who all stay together, will be on the same pairing. To ensure consistency and simplicity of allocation a Pairing will be the only unit of activity that can be assigned to a crew member. There are some exceptions to this but in general this concept applies across the suite of applications.
Pairing Complement	The required number of employees of each rank that are needed to fully operate that pairing.
Port	An airport or station <i>Also called port recency</i>
Port Currency	Some ports are categorized to have a more difficult method of landing and takeoff. For these ports, pilots are required to operate to and from the port more frequently, thus they need to be current for the port. In some cases, they need to land and takeoff once every 90 days.
Problem	Non-rule based exceptions generated by the Problem Detection Engine (PDE), such as incorrect report/release times, illogical flight/pairing data, and crew complement issues.
Puck	The graphical representation of a flight or pairing in a Gantt chart.
Rank	The core qualification that an employee holds which defines the level/type of tasks and activities they can perform. For example Captain, First Officer, Flight Attendant.
Rating (or Type Rating)	Defines the combination of equipment and position that personnel can legally operate. In merlot, the characteristics that define a rating are: Rank, and Equipment Group.

RDO	<p><i>Rostered Day Off</i></p> <p>A day in a roster period that an employee doesn't have to work. An employee's day off can be paid or unpaid, depending on how RDOs are set out in an award or registered agreement.</p>
Roster	A roster is simply a defined period of time within which the crew member's work and non-work assignments are defined.
Roster Period	The date range in which a set of work and other activities is to be performed
Route	A course between two ports, for example BNE-SYD
Route Currency	<p><i>Also called route recency</i></p> <p>Some routes are categorized to have a more difficult operation. For these ports, pilots are required to operate the route more frequently, thus they need to be current for the port. In some cases, they need to operate the route once every 90 days.</p>
User	A person who has access to view and/or modify data in the system
Violation	Any breach of a configured rule that has been generated by the merlot RulesEngine. Rules are generally configured to enforce published regulatory requirements from government agencies and other company rules as defined in the airline's operations manual.
Violation Behavior	<p>This determines what can be done to a violation once it is flagged. This works in conjunction with violation severity.</p> <ul style="list-style-type: none"> <li>• Inviolate - does not allow the assignment to push through no matter what</li> <li>• Override - if the user has the appropriate security rights, he can override the violation</li> <li>• Override Disrupt - if the user has the appropriate security rights, he can override the violation only if the flight is in disrupt</li> <li>• Track - the user can proceed with the roster changes but the violation is retained for tracking purposes. The violation will not have a pop up, but will be visible in the Violation Panel.</li> <li>• Ignore - the violations are retained in the Violation Panel</li> </ul>
Violation Override	<p>This determines how a violation should be overridden</p> <ul style="list-style-type: none"> <li>• Management - the credentials of a management-level user must supply his credentials when overriding the violation</li> <li>• Supervisor - a supervisor must supply his credentials when overriding the violation</li> <li>• Extension - a user with override rights must supply his credentials when overriding the violation which consequentially allows an extension to the flight hours, duty hours and/or flight duty period</li> <li>• Discretion - signifies that the violation will be overridden based on the captain's discretion</li> </ul>
Violation Severity	<p>This determines how a violation is presented</p> <ul style="list-style-type: none"> <li>• Critical - the violation must be addressed. Otherwise, the crew is illegal to fly</li> <li>• Ignorable - the violation can be addressed later and will not prevent the crew from reporting for a duty</li> <li>• Informational - the rule breach is for informational purposes only</li> <li>• Passed - the rule is not breached and nothing has to be done</li> </ul>

Notes