CrewMonitor User Manual

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Cherie Elpel	31 March 2014	1.0	First Draft
Bea Tabuñar	25 January 2016	6.6.0	First Draft
Bea Tabuñar	5 February 2016	6.6.0	Final
Bea Tabuñar	10 May 2016	6.6.0	Modified format
Bea Tabuñar	14 July 2016	6.6.8	Filter by omission
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Cy De Guzman	16 August 2017	7.1.0 R2	Operational Summary > Trade Approval – updated main screenshot, added Trade Approval section
Cy De Guzmn	11 July 2018	8.1.0	Ability to Control Data for Manual Swap Quota - Added *IncludeInManualSwapCount in Manual Swap Quota* table

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.

Table of Contents

What are merlot's applications?

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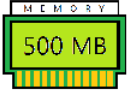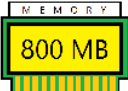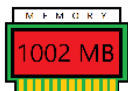
These are Framework Applications that will follow you throughout the merlot suite.

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
MEMORY 500 MB	Low (Green)	0MB-700MB
MEMORY 800 MB	Moderate (Yellow)	701MB - 1000MB
MEMORY 1002 MB	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

Memory Monitor
Consumption : 64 MB (65660 KB)
Level: Low
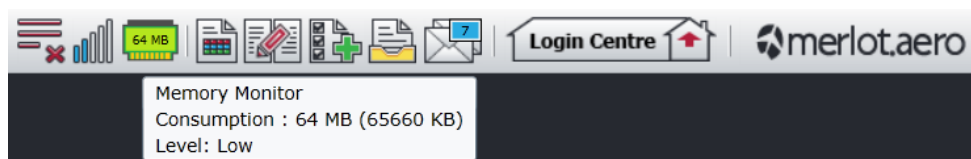
This icon is Ad Hoc Reports . Ad hoc reports are available in all the applications and modules across the merlot.aero suite while specific application reports are available in the Reports dropdown menu.

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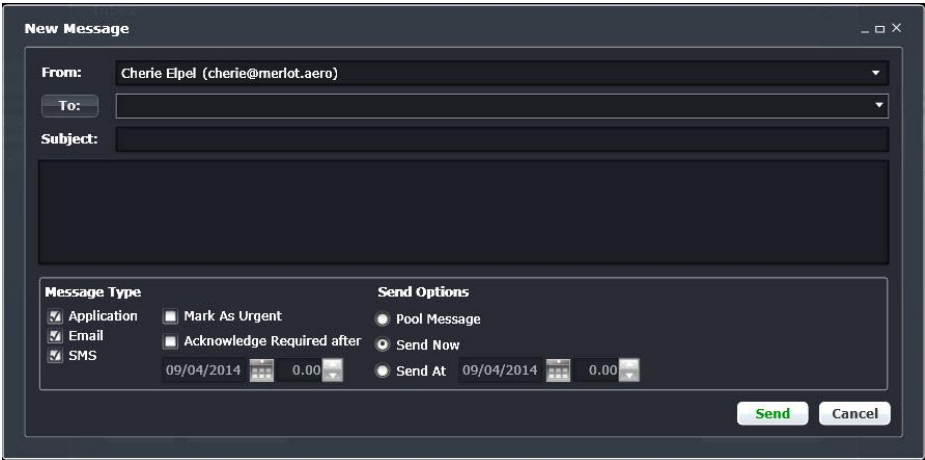
This icon allows you to navigate through the entire merlot.aero suite.

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*.
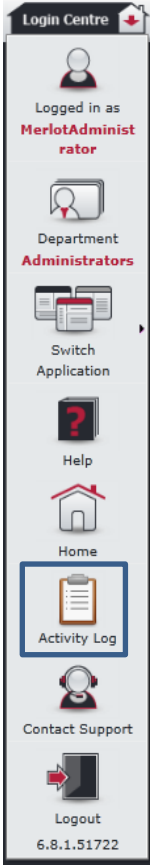
Example of a collapsed Activity Log form:
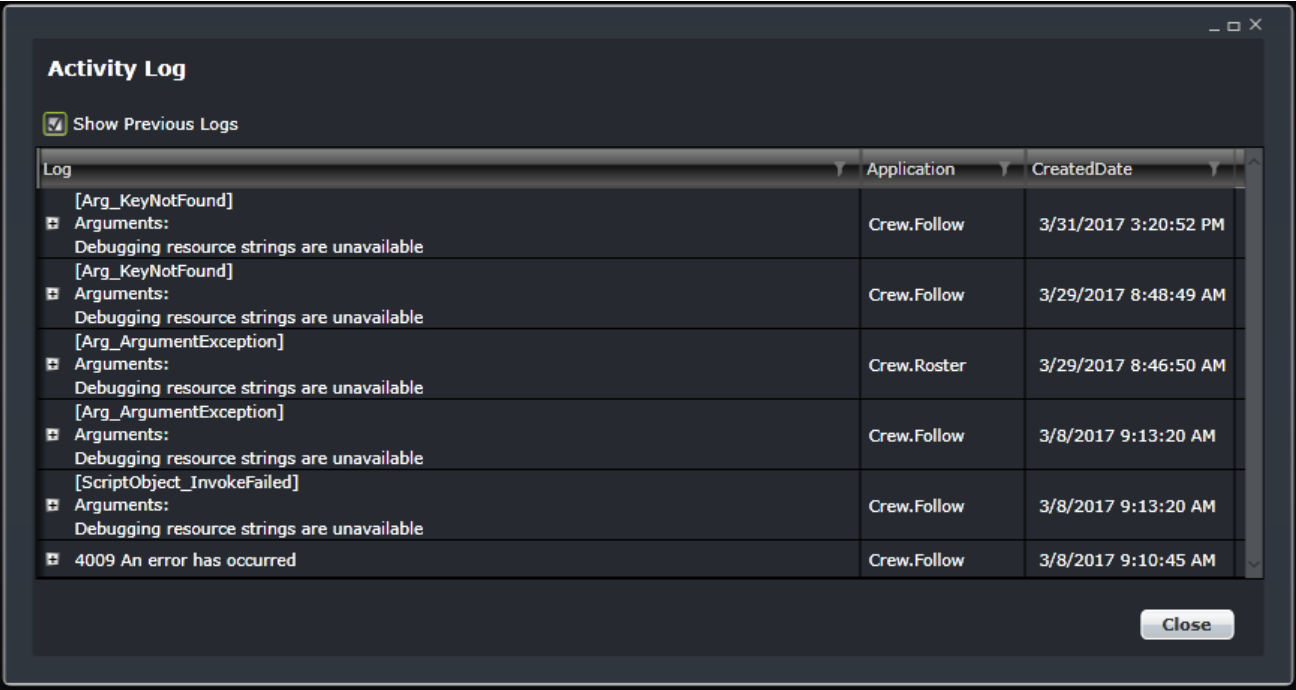
When a user expands the log value, the complete details of the selected UI error log will be displayed.

Example of an expanded Activity Log form:
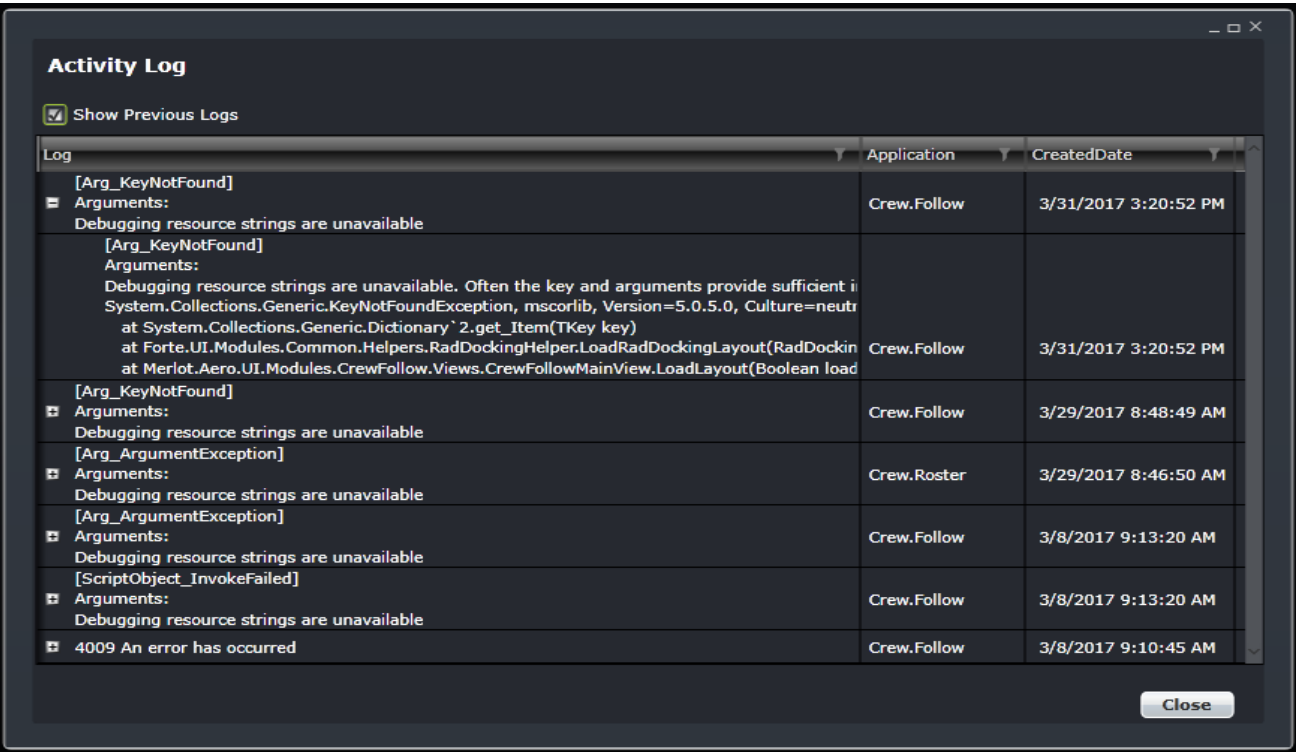
Logging into CrewMonitor

With your merlot.aero credentials, simply log in and select CrewMonitor.

What is CrewMonitor?

CrewMonitor identifies and monitors changes within merlot for disruptions that will impact pairings and pairing allocations to crew members.

CrewMonitor keeps the merlot user informed of allocation changes affecting crew so that necessary changes can be made in CrewFollow and/or CrewPlan. This application also gives the user available change options. The changes required may be necessary for regulatory or compliance reasons, ensuring full operational coverage of work and/or to improve the quality of work for crew members.

CrewMonitor Audience

CrewMonitor system users are airline employees who work as crew schedulers and crew planners as well as those employees who work day-to-day operations at scheduled airlines.

CrewMonitor customers using dual monitor work stations may view CrewMonitor and CrewFollow applications simultaneously. CrewMonitor functions as a clean, simple crew tracking tool, while CrewFollow has more complex capabilities for making crew changes.

CrewMonitor Prerequisites

Prior to undertaking tasks in CrewMonitor, it is first necessary to add new crewmember information and update existing crewmember information in Configure. See the Configure User Guide for more detail on this process.

Tasks in AircraftSchedule take place before action in CrewMonitor. 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. See the AircraftSchedule User Manual for more information.

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

The CrewBuild application enables the user to build pairings which are then assigned to crew member rosters in the CrewRoster application. See the CrewBuild User Manual for more detail on this process.

CrewFollow provides airlines with information to act on in response to crew disruptions resulting from (amongst other things) sickness, no shows and crew related aircraft disruptions on the day. See the CrewFollow User Manual for more information.

Note: CrewMonitor is actually a part of CrewFollow, however the CrewMonitor application is provided as a standalone application for operational convenience.

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 CrewMonitor GUI:
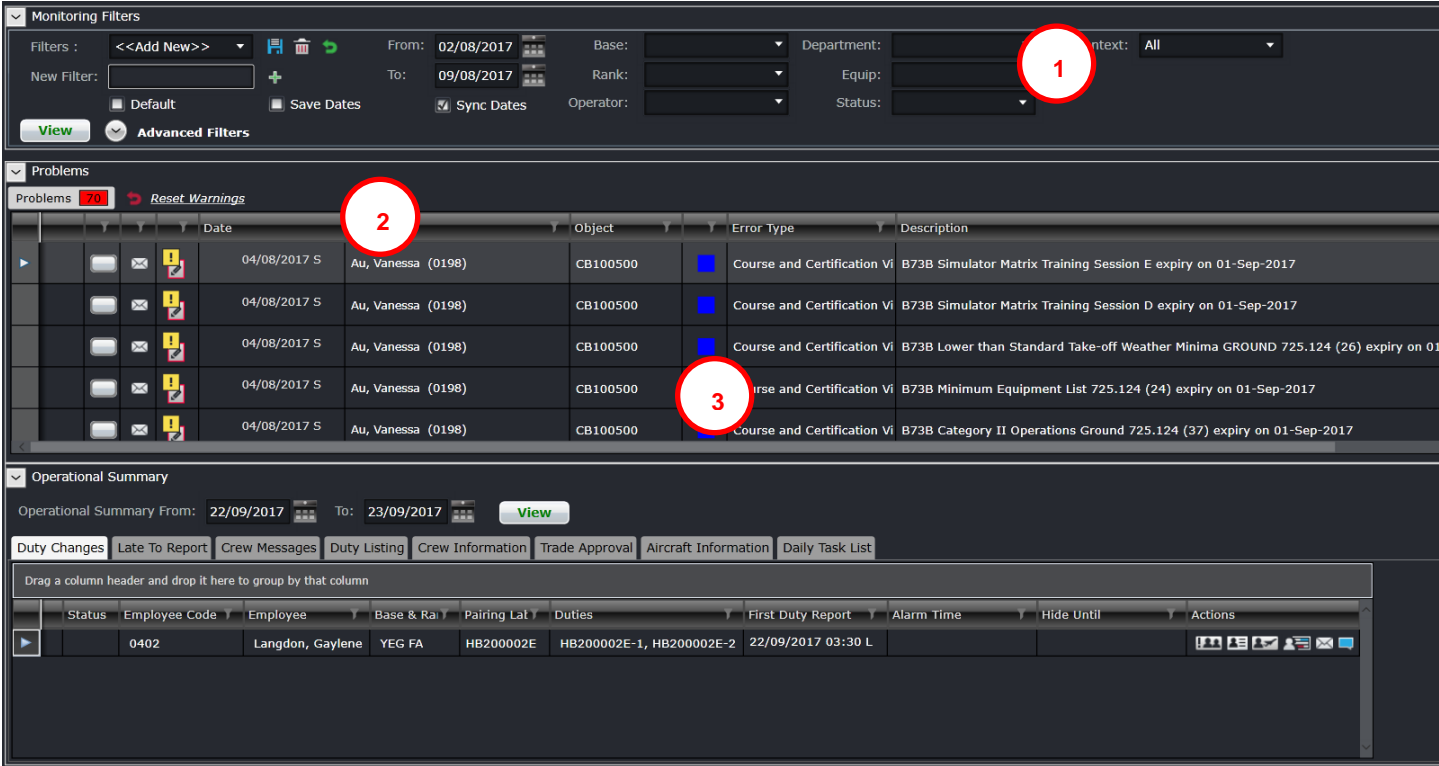
1. **Monitoring Filters Panel:** Set the criteria for the data you want to view in the Monitoring Panel, which includes the Problem Detection and Operational Summary sections
2. **Problems:** Part of the Monitoring Panel which enables users to identify and monitor changes that could result in legal violations or problems
3. **Operational Summary:** Part of the Monitoring Panel which is used to identify, and monitor actions required for the current and upcoming days' pairings, such as duty changes, no shows, and hotel and transport bookings.

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.

Filters for the Monitoring Panel are divided into the following sub-sections:

1. Date 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

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 dropdown calendar is provided to select the date.

- **From** - the start value of the date range
- **To** - the end value of the date range

The Operational Summary panel 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 Monitoring Filters panel has a *Filters* field and associated **Save**, **Delete** and **Reset** icons as well as a *Save Dates* checkbox.

The *Filters* field is a combination of a dropdown 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 users to control whether a defined filter 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 a user refers to most frequently.

To allow the user to set a default filter, the filter section contains a *Default* check box. When this is selected, the currently selected filter is saved as the default filter for the application.
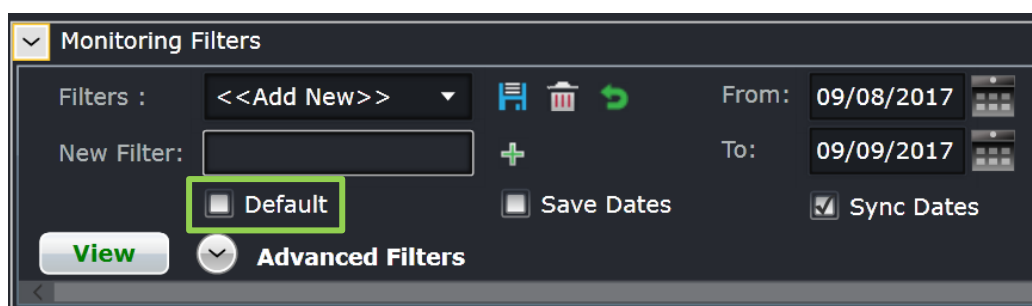
When the Monitoring Panel is opened, it determines the current user and the application context and defaults to the relevant filter.

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
Base	A dropdown field that displays the active crew bases
Rank	A dropdown field that displays active ranks and / or rank groups
Operator	The Operator dropdown menu filters the grid to show information based on selected airline operators
Department	A dropdown 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).
Equip	A dropdown field that displays the active aircraft or equipment types or groups that crew operate
Status	Pairing status dropdown menu which includes All, Planned, Active, Provisionally Active options
Rule Context	A dropdown field for the applicability of violations. Options include All, Planning (violations from planning rules) and Active (violations for published rosters)

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 a user would like to view in the Problems panel, including violation/problem level and status options.

Advanced Filter	Description
Problem Category	Allows users to select to display Violations and/or Problems in the Problem panel.
Problem Level	• **Critical:** The violation and/or problem must be addressed before crew can fly • **Non-Critical:** The violation and/or problem needs to be addressed, however it is not preventing crew from flying • **Informational:** Information is being provided regarding a pairing or crewmember
Problem Status	• **Outstanding:** The violation and/or problem has not been addressed yet • **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. • **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

View 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 button.

Problems Panel

During daily operations of an airline, changes will occur that impact 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 Panel.

The tab displays violations and problems collectively.

Basically, violations and problems are different types of issues to be dealt with by an 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.
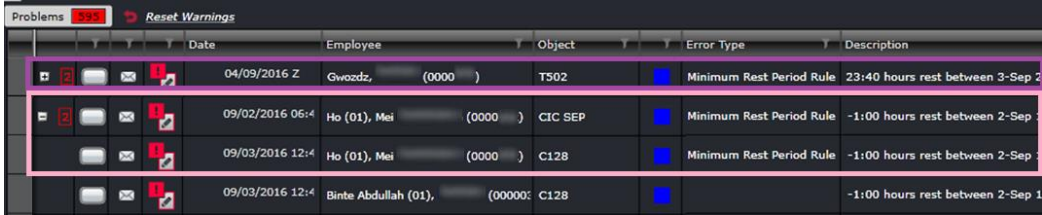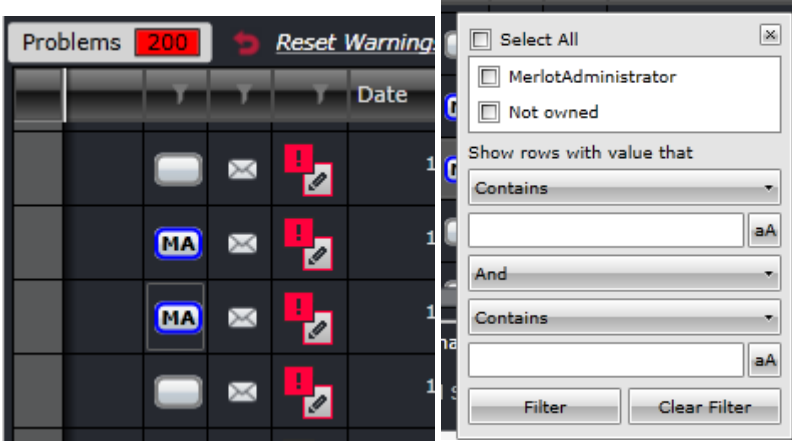
Sample problems are shown below for illustrative purposes.

The image above shows 9 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 View in the filter panel. Note also that the system automatically updates the information in this panel with an interval of 5 minutes.

The *Problems* panel columns are described below:

Column	Description
Grouping	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. Problems will be grouped together if the *BaseEmployeeRule* parameter *AllowMonitorGridCollapse* is set to True. This is set to **False** by default and can be adjusted in Configure.
Assignment	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.
Status	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.
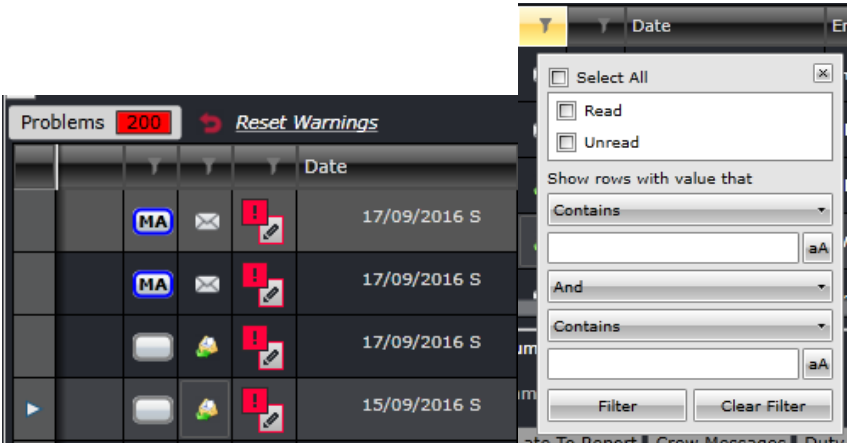
Note: *New problems are displayed in bold. In the image below, the first problem is new and the second problem is pre-existing.*

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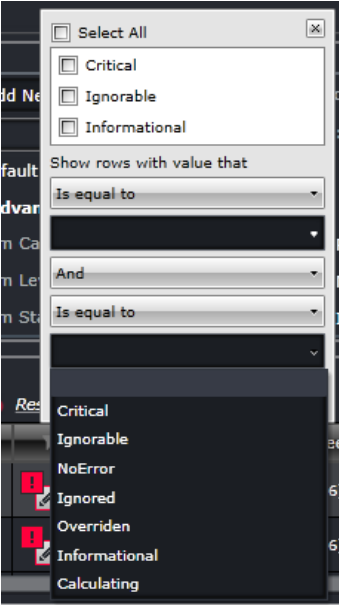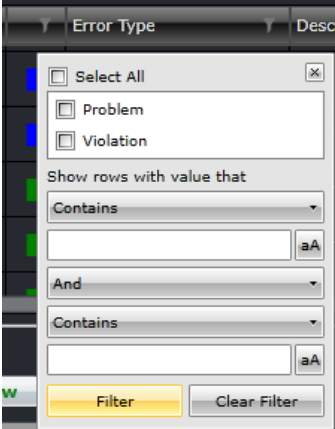
Error Type	Name of the rule that was breached
Description	Problem message
Document Ref	Reference text pertaining to the rule (see Configure User Guide for setup instructions)
Last Updated	Date and time when the problem was last evaluated by the *RulesEngine*. If the date is too far in the past, the problem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

View Employee Details - Displays employee/crew information. Contact details can be retrieved from here. This applies to CrewRoster and CrewFollow only.

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 crew member'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
Override
Re-evaluate violation
Print
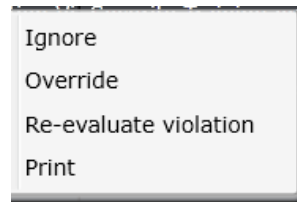
- **Ignore** – Marks the problem is ignored by the user and hides the problem until reversed. The user name and timestamp are recorded in the database. Use this sparingly as it might lead to a compliance breach.
- **Override** – Allows the user (with the appropriate security access) to override a violation 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.

Operational Summary Panel

The Operational Summary Panel has a set of important operational tabs displayed. Each of the tabs is refreshed periodically to ensure that the information displayed is current.

The date range in this panel copies the date range in the Monitoring Panel filter by default. If Sync Dates is not selected, the Operational Summary date range can have different dates that will allow users to have a smaller set of data to work with in this panel.

Each of the Operational Summary tabs is discussed separately below.

Duty Changes

The *Duty Changes* tab displays all the duty change notifications created by users when they modified crew's pairings. These notifications have not been acknowledged by crew yet. This tab allows the user to view all the duty changes that crew have yet to acknowledge and to manually contact employees, if necessary, to ensure they are aware of the changes to their roster. This ensures the operation is not disrupted due to crew failing to report for the assigned duties.

Duty change notifications are removed from this tab when the crewmember acknowledges it in CrewPortal or CrewMobile. Alternatively, users can mark the duty change as acknowledged after discussing with the crewmember.

The *Duty Changes* tab columns are described below.

Column	Description
Status	Displays an icon if the duty change has gone past the alarm time or hide time ⬛ This appears if the Alarm time is up 🔒 This appears if the notification is past the Hide time
Employee Code	Crewmember's ID
Employee	Crewmember name
Base & Rank	Crewmember's base and rank
Pairing Label	Name of the affected pairing
Duties	Duties included in the pairing
First Duty Report	Report time of the first duty in the pairing
Alarm Time	Sets a certain time for users to be alerted if the duty change has not been acknowledged by the crewmember
Hide Until	Sets a certain time when the duty change notification will be made visible to crew in CrewPortal and CrewMobile
Actions	Set of action buttons, discussed in the next section

Right Click for Actions

Mark Change as Acknowledged

View Employee Details

Pairing Details

Open in Gantt

Send Message

View Comments

Print

Action Icons
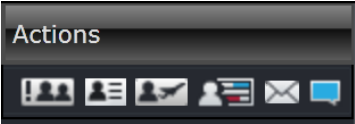
Actions

To allow the user to manage duty changes, the following actions can be performed on a selection of duty changes, via right click or by use of the appropriate Action icon (Action icons are described from left to right):

Column	Description
Mark Change as Acknowledged	The user can contact the crewmember and inform him of the duty change. Afterwards, the user can use this to mark the notification as acknowledged on the crewmember's behalf
View Employee Details	Displays employee/crew information. Contact details can be retrieved from here
Pairing Details	Displays information on the pairing. This is handy when the user needs to relay pairing information to crew
Open in Gantt	Opens the crewmember's roster in the Allocation Gantt. This applies to CrewFollow only.
Send Message	Opens the New Message box for the user to create and send a message to the crewmember
View Comments	Displays the public and private comments for the pairing

Late to Report

The *Late to Report* tab displays the list of crew who have not signed-in for their duty for the selected dates.

The Late to Report columns are described below:

Column	Description
Date	Date of the duty
Employee Code	Crewmember's ID
Employee	Crewmember name
Base & Rank	Crewmember's base and rank
Duty	Name of the affected pairing

Report (S)	Report time of the duty in Standard time, or the time zone of the company's main office
Local Report (L)	Report time of the duty in Local time, or the time zone of the port where the crewmember is
Late Value	Amount of time the crewmember is late
First Activity	Report time of the duty in Zulu time
Actions	Set of action buttons, discussed in the next section

Right Click for Actions

Action Icons

To allow the user to manage duty changes, the following actions can be performed on a selection of duty changes, via right click or by use of the appropriate Action icon (Action icons are described left to right):

Column	Description
Manual Report	This allows the user to report for the duty on the crewmember's behalf. The user can enter the exact report time and add a comment indicating why the crewmember was late.
Failed to Report	This allows the user to mark the crew as a no-show. A reserve or standby will eventually need to be called out.
Open in Gantt	Opens the crewmember's roster in the Allocation Gantt. This applies to CrewFollow only.
View Employee Details	Displays employee/crew information. Contact details can be retrieved from here
Send Message	Opens the New Message box for the user to create and send a message to the crewmember
Print	Prints a list of the records currently displayed

Crew Messages

Messages can be sent to crew via email, SMS or via CrewPortal. They are displayed until they are read and acknowledged by the crew.

The Crew Messages columns are described below:

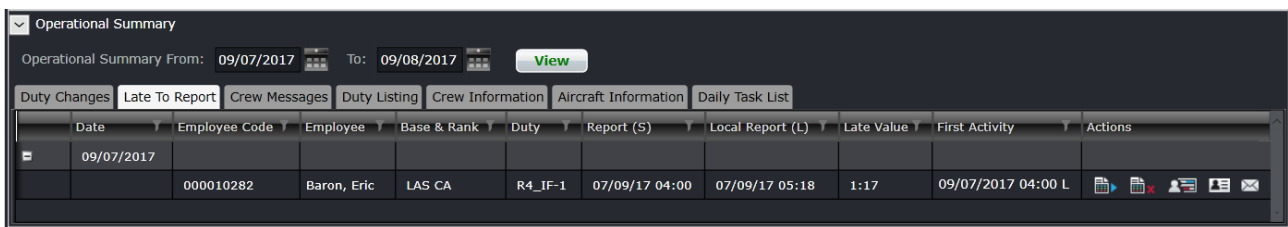| Column	Description
Date	Date when the message was created
Status	Indicator if the message has been read or not
Sent As	Messaging option selected. Options are Application Message, SMS or Email
Importance	The selected Importance level of the message
Employee Code	Crewmember's ID
Employee	Crewmember name
Base & Rank	Crewmember's base and rank
Sent By	Name and email address of the sender
Subject	Message subject
Read	Timestamp when the message has been read by crew. This applies to application messages only.
Acknowledged	Timestamp when the message has been acknowledged by crew. This applies to application messages only.

Right Click for Actions

Action Icons

To allow the user to manage crew messages, the following actions can be performed on a selection of messages, via right click or by use of the appropriate Action icon (Action icons are described left to right):

Column	Description
Print	Prints a list of the records currently displayed
View Message	Displays the body of the message
Mark as Acknowledged	The user can mark the message as acknowledged only if the crew has read the message
View Employee Details	Displays employee/crew information. Contact details can be retrieved from here

Duty Listing

The *Duty Listing* tab provides a list of crew assigned with standby and administrative duties. This allows the users to quickly identify any possible replacement crew during disruption.

To allow flexibility in how the duties in the Duty List are viewed and managed, display of information in the Duty Listing tab can be modified based on the configuration options/ functionality.
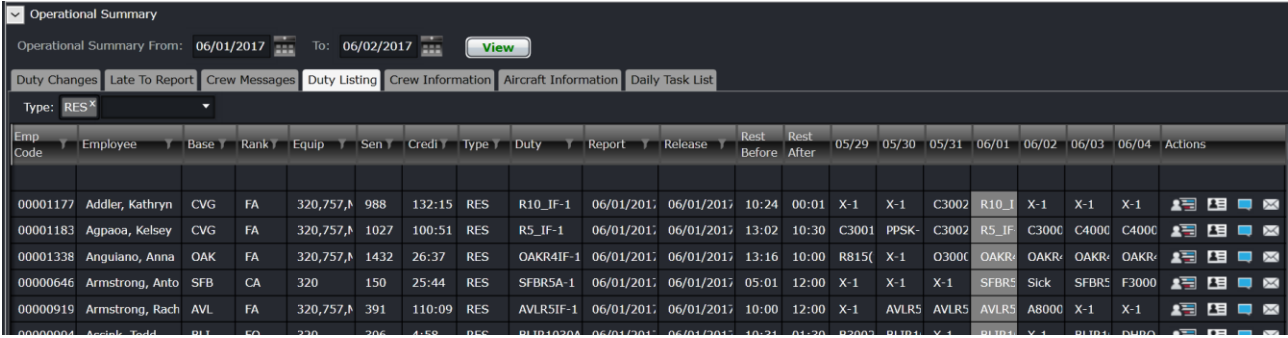
The Duty Listing columns are described below:

Column	Description
Date	Date of the duty
Employee Code	Crewmember's ID
Employee	Crewmember name
Base	Crewmember's base
Rank	Crewmember's rank
Equip	Crewmember's rated equipment types

Sen	Seniority
Credit	Credit duty hours for the duty
Type	Pairing type
Duty	Name of the duty, or duty label
Report	Report time of the duty
Release	Release time of the duty
Rest Before	Amount of rest prior to the duty
Rest After	Amount of rest after the duty
Dates	The duties one day before and five days after are displayed. The highlighted column is the selected date.
Actions	Set of action buttons, discussed in the next section

Right Click for Actions

Print

Open in Gantt

View Employee Details

View Comments

Send Message
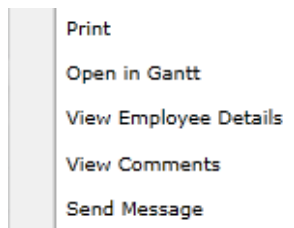
Action Icons
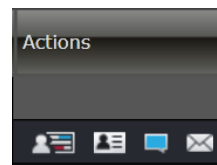
Actions

This tab is informational and no modifications can be made on it. The following actions can be performed on a duty via right click or by use of the appropriate Action icon (Action icons are described left to right):

Column	**Description**
Print	Prints a list of the records currently displayed
Open in Gantt	Opens the crewmember's roster in the Allocation Gantt. This applies to CrewFollow only.
View Employee Details	Displays employee/crew information. Contact details can be retrieved from here
View Comments	Displays the public and private comments for the pairing
Send Message	Opens the New Message box for the user to create and send a message to the crewmember

Crew Information

The *Crew Information* tab provides information about crew logistics such as accommodation, transportation, and deadhead details for the dates selected in the Monitoring Panel Filter criteria.

Accommodation

The *Accommodation* tab holds details on crew's hotel requirements. If a crewmember's duty has an Accommodation event, a corresponding row will appear in the tab, which can also be accessed in the Pairing Details panel in CrewRoster and CrewFollow.

The Accommodation columns are described below:

Column	Description
Date	Date of the duty
Employee Code	Crewmember's ID
Employee	Crewmember name
Base & Rank	Crewmember's base and rank
Port	Port where the accommodation is required
Duty	Name of the duty, or duty label

Required From	Release time of the duty that brings the crew to that port
Required To	Report time of the next duty
Hotel	Name of the hotel. The list of options is taken from Configure
BookingStatus	Booking status options include Not Booked, Booked, Pending Confirmation, Cancelled, Not Required, Pending Cancellation, No Booking
BookingReference	Text field where booking references can be entered
Hotel Phone	Hotel phone number. This is taken from Configure
Hotel Email	Hotel email address. This is taken from Configure
Hotel Address	Hotel address. This is taken from Configure
Actions	Set of action buttons, discussed in the next section

Right Click for Actions

Print

Open in Gantt

View Employee Details

View Comments

Send Message
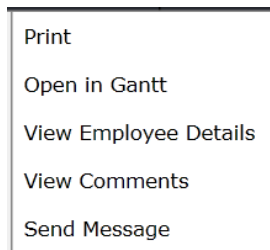
Action Icons
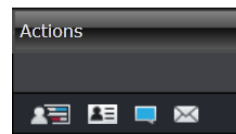
Actions

Accommodation records cannot be removed from the tab. The following actions can be performed on a record via right click or by use of the appropriate Action icon (Action icons are described left to right):

Column	Description
Print	Prints a list of the records currently displayed
Open in Gantt	Opens the crewmember's roster in the Allocation Gantt. This applies to CrewFollow only.
View Employee Details	Displays employee/crew information. Contact details can be retrieved from here
View Comments	Displays the public and private comments for the pairing
Send Message	Opens the New Message box for the user to create and send a message to the crewmember

Deadhead

The *Deadhead* tab holds details on crew's deadheading requirements. If a crewmember's duty has deadhead or deadhead other event, a corresponding row will appear in the tab, which can also be accessed in the *Pairing Details* panel in CrewRoster and CrewFollow.

The Deadhead columns are described below:

Column	Description
Date	Date of the duty
Employee Code	Crewmember's ID
Employee	Crewmember name
Base & Rank	Crewmember's base and rank
Duty	Name of the duty, or duty label
PNR	Passenger Name Record. Referencing the flight that the crewmember is deadheading on
Event	Name of the event, or event label for deadhead other events
Flight	Flight number if it is a deadhead within the airline
From	Departure time
To	Arrival time
Provider	Provider of the deadhead flight – Own Accommodation (provided by crew) or Airline
BookingStatus	Booking status options include Not Booked, Booked, Pending Confirmation, Cancelled, Not Required, Pending Cancellation, No Booking
BookingReference	Text field where booking references can be entered
Actions	Set of action buttons, discussed in the next section

Right Click for Actions

Action Icons

Print

Open in Gantt

View Employee Details

View Comments

Send Message
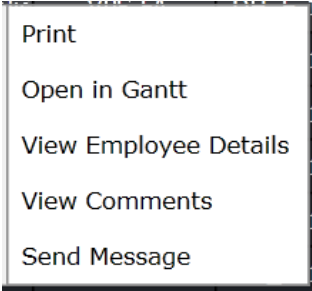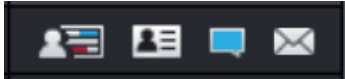
Deadhead records cannot be removed from this tab. The following actions can be performed on a record via right click or by use of the appropriate Action icon (Action icons are described left to right):

Column	Description
Print	Prints a list of the records currently displayed
Open in Gantt	Opens the crewmember's roster in the Allocation Gantt. This applies to CrewFollow only.
View Employee Details	Displays employee/crew information. Contact details can be retrieved from here
View Comments	Displays the public and private comments for the pairing
Send Message	Opens the New Message box for the user to create and send a message to the crewmember

Transport

The *Transport* tab holds details on crew's transport requirements. If a crewmember's duty has a ground transport event, a corresponding row will appear in the tab, which can also be accessed in the Pairing Details panel in CrewRoster and CrewFollow.
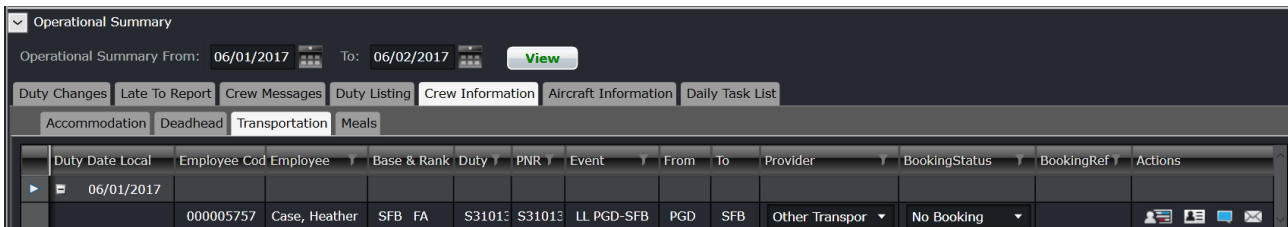
The Transport columns are described below:

Column	Description
Date	Date of the duty
Employee Code	Crewmember's ID
Employee	Crewmember name
Base & Rank	Crewmember's base and rank
Duty	Name of the duty, or duty label
PNR	Passenger Name Record. Referencing the transport that the crewmember is traveling on
Event	Name of the event, or event label for deadhead other events
From	Departure time
To	Arrival time
Provider	Provider of the transport – Own Accommodation (provided by crew) or Airline
BookingStatus	Booking status options include Not Booked, Booked, Pending Confirmation, Cancelled, Not Required, Pending Cancellation, No Booking
BookingReference	Text field where booking references can be entered
Actions	Set of action buttons, discussed in the next section

Right Click for Actions

Open in Gantt

View Employee Details

View Comments

Send Message
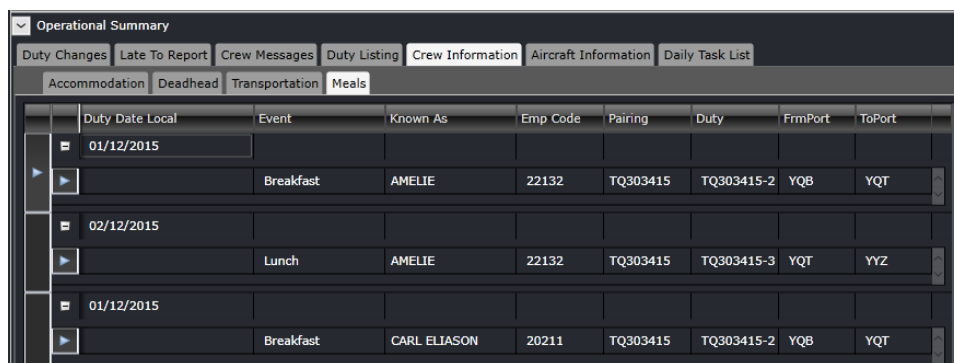
Print

Action Icons

Transportation records cannot be removed from this tab. The following actions can be performed on a record via right click or by use of the appropriate Action icon (Action icons are described left to right):

Column	Description
Print	Prints a list of the records currently displayed
Open in Gantt	Opens the crewmember's roster in the Allocation Gantt. This applies to CrewFollow only.
View Employee Details	Displays employee/crew information. Contact details can be retrieved from here
View Comments	Displays the public and private comments for the pairing
Send Message	Opens the New Message box for the user to create and send a message to the crewmember

Meals

The *Meals* tab holds details on crew's meal requirements. If a crewmember's duty has a meal event, a corresponding row will appear in the tab, which can also be accessed in the Pairing Details panel in CrewRoster and CrewFollow.

The Meals columns are described below:

Column	Description
Duty Date Local	Date of the duty, in local time
Event	Meal event name
Known As	Name of crew
Pairing	Name of the pairing, or pair label

Duty	Name of the duty, or duty label
FromPort	Departure port
ToPort	Arrival port

Right Click for Actions

Meal records cannot be removed from this tab. The following actions can be performed on a record via right click or by use of the appropriate Action icon (Action icons are described left to right):

Column	Description
Print	Prints a list of the records currently displayed
Open in Gantt	Opens the crewmember's roster in the Allocation Gantt. This applies to CrewFollow only.
View Employee Details	Displays employee/crew information. Contact details can be retrieved from here
View Comments	Displays the public and private comments for the pairing
Send Message	Opens the New Message box for the user to create and send a message to the crewmember

Trade Approval

Crew schedulers manually approve and reject swaps in the *Trade Approval* tab. This tab is displayed when the user preference *AllowSwapManualApproval* is to True in Configure.
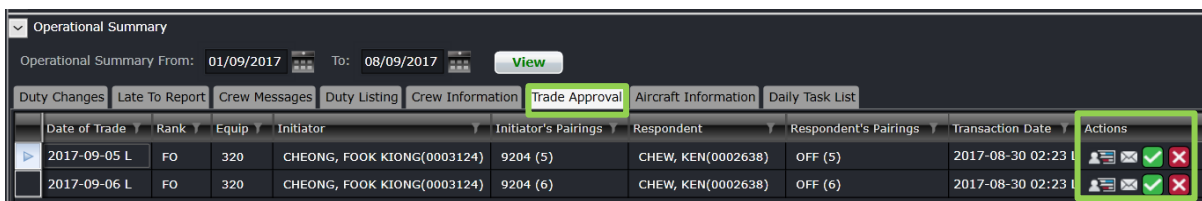
The Trade Approval columns in the tab are described below:
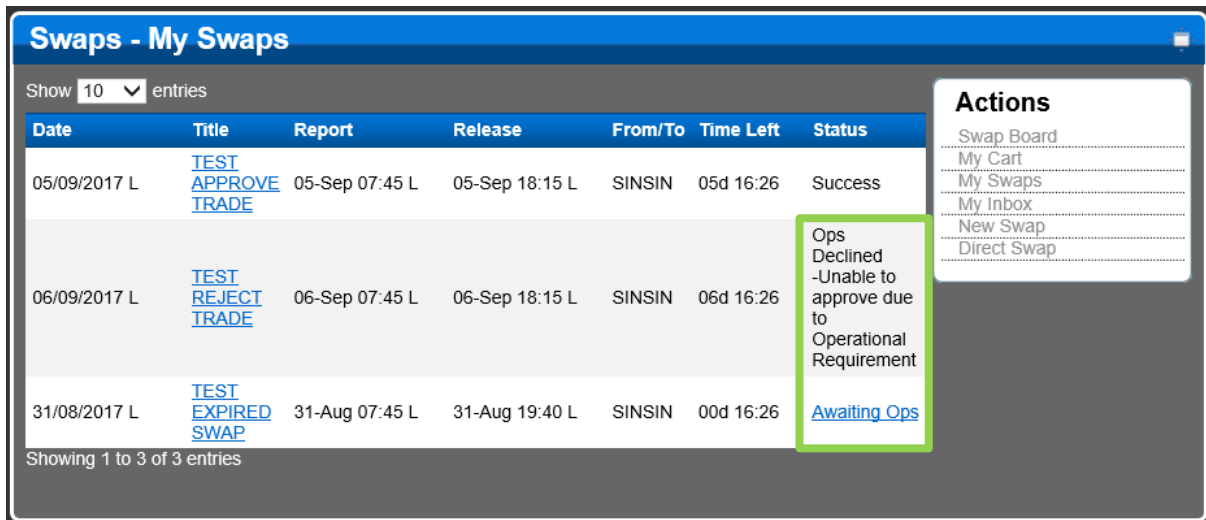
Field	Description
Date of Trade	The date of the first pairing up for trade.
Rank	Rank of the pairing pushing up for trade.

Equip Type	The equipment type of the pairing originally assigned to the initiator.
Initiator	The name of the employee initiating the direct trade, or initially posted the trade on the trade board. The format will be Last Name, First Name.
Initiator's Pairing(s)	The pairing(s) currently assigned to the initiator, up for direct or indirect trade.
Respondent	The name of the employee that is the target of a direct trade, or placing an offer for a trade on the trade board. The format will be Last Name, First Name.
Respondent's Pairing(s)	The pairing(s) currently assigned to the respondent, up for direct or indirect trade.
Transaction Date	Direct Trade: The date/time that a trade was approved by both employees, and submitted for OPS approval listed as per the time mode of the module
Actions	The following *Trade Approval* actions are described below: **View in Gantt** - Loads both crew mentioned in the trade. **Message** - Includes both crew mentioned in the trade in the "TO" field of the message. **Approve** – Approves a trade. **Reject** – Rejects a trade.

Users can sort and filter data in all the columns within the tab except the *Action* column.

Manual Approval Process

Two new status labels are now displayed in CrewPortal > My Swaps, *Awaiting Ops* and *Ops Declined*.

Swaps - My Swaps

Show 10 entries

Date	Title	Report	Release	From/To	Time Left	Status
05/09/2017 L	TEST APPROVE TRADE	05-Sep 07:45 L	05-Sep 18:15 L	SINSIN	05d 16:26	Success
06/09/2017 L	TEST REJECT TRADE	06-Sep 07:45 L	06-Sep 18:15 L	SINSIN	06d 16:26	Ops Declined -Unable to approve due to Operational Requirement
31/08/2017 L	TEST EXPIRED SWAP	31-Aug 07:45 L	31-Aug 19:40 L	SINSIN	00d 16:26	Awaiting Ops

Showing 1 to 3 of 3 entries

Actions
Swap Board
My Cart
My Swaps
My Inbox
New Swap
Direct Swap

After a direct or an indirect swap is accepted by a crew, the system automatically classifies the swap by tagging it as *Awaiting Ops* and holds the approval. Once a swap is approved, the status will change to *Success*.

When a swap is approved in CrewFollow, the system will notify the user by displaying the message below:
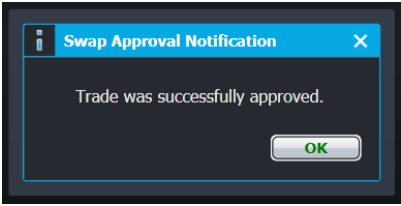
In the event of a violation, upon approval of a swap, a warning will be displayed.
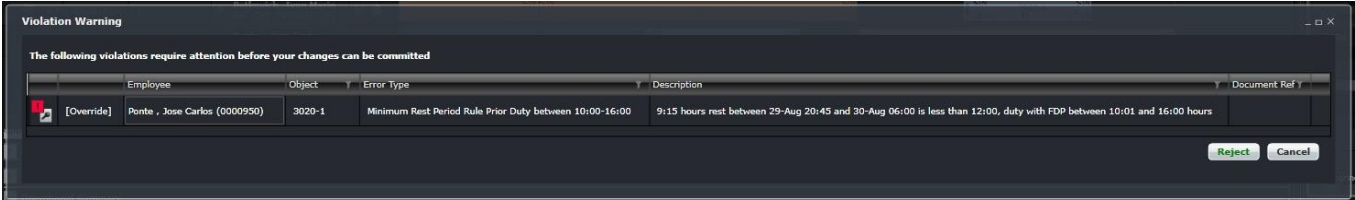
Users can either *Reject* a swap approval or *Cancel* the violations within the swap. If a user rejects a swap, the status will update to *Ops Declined* and a *Trade Rejection Reason* window will be displayed.

Manual Swap Quota

To limit the number of swap requests from each crew, airline administrators can setup the number of swaps for manual approval using the following user preferences. The quota applies both to the swap initiator and the respondent crew.

User Preference	Value	Description
ManualSwapQuotaPeriod	**1** (Default) – Applies to Roster Period	The period the manual swap quota will apply to.
	2 – Applies to Calendar Month	
ManualSwapQuotaNumber	**NULL** (Default)	The number of allowable swap requests for manual approval. A null or blank value indicates unlimited swaps.
IncludeInManualSwapCoun - This user preference is only applicable when the existing *AllowSwapManualApproval* user preference is set to **True**.	***OnlyManuallyApprovedSwaps*** (Default)	When calculating for the swap quota, the system will only consider manually approved swaps.
	ManuallyApprovedAndRejectedSwaps	When calculating for the swap quota, the system will consider both manually approved and rejected swaps.

The following applies when Manual Swap Quota is setup:

- Only swaps that are tagged as *Awaiting Ops* will be counted;
- Deleted swap requests prior to admin approval and rejected swaps due to a rule violation will not be counted against the quota.

Crew members who already reached the quota will receive a notification saying, *"Cannot submit swap/trade due to maximum quota of << Manual Swap Quota Number >> reached for this <<Roster period/ Calendar Month>>"* when attempting to submit a swap request.
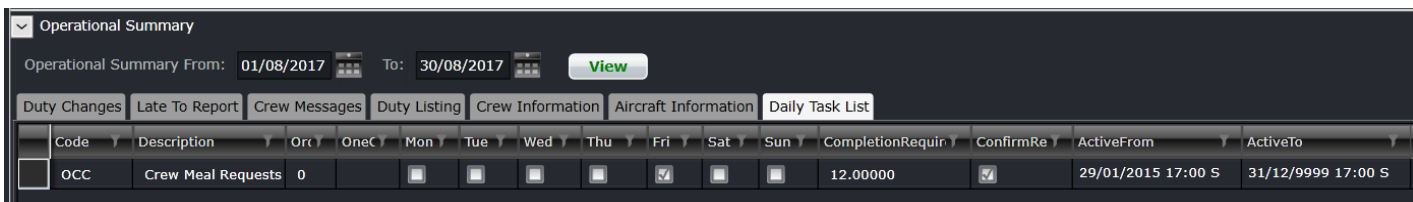
Aircraft Information List

The Aircraft Information List tab is part of future development in CrewMonitor.

Daily Task List

Operationally, there are number of tasks that are required to be performed daily by individual users or groups of users to ensure the smooth running of an operation. Often, these tasks need to be completed by a certain time of the day.

To help the Operations Department manage these daily tasks, users can define task lists that can apply to different sets of users. When the user displays the *Daily Task List* tab, they will see the tasks they are required to complete during their shift.

	Code	Description	Or	One	Mon	Tue	Wed	Thu	Fri	Sat	Sun	CompletionRequir	ConfirmRe	ActiveFrom	ActiveTo
	OCC	Crew Meal Requests	0		☐	☐	☐	☐	☑	☐	☐	12.00000	☑	29/01/2015 17:00 S	31/12/9999 17:00 S

Where there are multiple users responsible for the completion of tasks, all those users will see the same task in their task lists and any of them will be able to complete it. When the list is displayed, the tasks displayed are tasks where the user is included as part of the responsible list of the associated task group. By default, only those tasks for the current date will be displayed. However, the user will be able to select to view their task list for different dates, by adjusting the date of the list.

To allow the user to manage their task list, actions listed can be performed on selected items on the list. The user can use standard *<Ctrl + Shift >* click functionality to be able to select multiple displayed pairings. These actions are triggered using the *Right Click* menu options or appropriate icons.

The completion date-time and the user who completed the task are recorded. Once the task has been completed, it will be displayed in the list to allow other users who share the responsibility for the task to see who completed the task and when it was completed.

Display of the information in the tab can be modified based on the configuration options/ functionality to allow flexibility in how the tasks in the list are viewed and managed.

Changing Time Mode

To access the View menu, select **View** and click an option from the dropdown menu.

You can adjust your application time mode through the **Time Mode** option. Select from *Time Mode* drop-down menu.
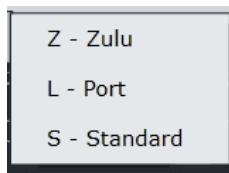
- Zulu (Z): Zulu time is known as the Greenwich Mean Time (GMT)
- Port (L): Port time is local time in the departure or arrival port of the flight
- Standard (S): Standard time is local time at your company headquarters

Click on the desired time format to display in Operational Summary > Monitoring Panel.
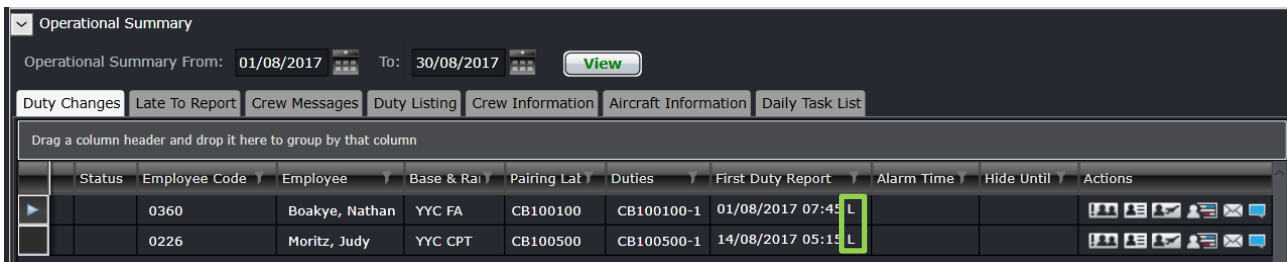
In the example shown above, the First Duty Report time is shown in Port time, signified by the letter (L).

Note: *If the airline fully operates in Zulu, the user preference OperatingTimeMode in Configure is set to Zulu. CrewMonitor will filter all data based on Zulu time.*

CrewMonitor Specific Tasks

CrewMonitor tasks occur during day-to-day operation of flights, after crew rosters are published. CrewMonitor is dedicated to monitoring crew, whereas actual change management pertaining to crew takes place in CrewFollow and/or CrewPlan.

This section provides an overview of CrewMonitor specific tasks in a step-by-step format.

1. Filter crew for specified date range and other crew criteria you want to monitor and include advanced filtering for problems and violations as needed

2. Address problems and violations

3. Monitor Operational Summary Panel tabs (detailed below)

4. Contact crew regarding unacknowledged duty changes

5. Contact late to report crew

6. Replace crew as needed using crew on the Duty Listing tab, make changes in the CrewFollow application

7. Complete items on the Daily Task List tab

CrewMonitor Workflow

Filter Crew to Monitor

Address Problems and Violations

Monitor Operational Summary Panel Tabs

Follow-up Duty Changes Unacknowledged

Contact Late to Report Crew

Replace Crew as Needed

Complete Daily Task List

Application Flow Diagram

Configure	Configure application is a central place where all crew and aircraft configuration information can be accessed. The application defines the core set of configuration requirements that are the building blocks that allow merlot applications to be used in the way required by your airline.
AircraftSchedule	AircraftSchedule improves the development of flight schedules while ensuring operational integrity and meeting the needs of airlines for increased efficiency in scheduling. The application includes a maintenance planning capability.
CrewBuild	CrewBuild develops efficient crew pairings that achieve business goals while meeting the needs of crew and managing changes that arise after the roster is published.
CrewPlan	CrewPlan plans and monitors all revalidation and qualification checks, medicals, license renewals, annual leave and administrative needs. Crew shortfalls or surplus information is accurately calculated by fleet, rank or base and can be aggregated at daily, weekly or monthly levels. This extends to future establishment planning.
CrewRoster	The CrewRoster application allows the user to develop efficient crew rosters that achieve business goals while meeting the needs of crew.
CrewFollow	CrewFollow provides airlines with the best information to act on in response to crew disruptions resulting from (amongst other things) sickness, no-shows and crew-related disruptions on the day.
CrewMonitor	CrewMonitor identifies and monitors changes within merlot for disruptions that will impact pairings and pairing allocations to crew members.
CrewPortal, CrewMobile	CrewPortal and CrewMobile provide airline crew with the ability to view the latest crew related information on a computer or mobile device such as phones or tablets. It enables airline operations employees to securely distribute timely and relevant information to crew members including duty assignments, duty changes and messages.
AircraftFollow	AircraftFollow provides a real time graphical representation of your airline's live status for the day. AircraftFollow allows the user to manage incoming and outgoing aircraft and related operational tasks on a day-to-day basis. The application provides accurate and timely information to improve the decision support process.
AircraftPortal, AircraftMobile	AircraftPortal and AircraftMobile provide outstations with the ability to view the latest schedules and fight-related information on a computer or mobile device. Updates to departure and arrival times, terminals, gates and bays can be done from here. These also allow management a quick look at the day's operations.
CrewPayroll	CrewPayroll manages complex pay and allowance calculations for crew.
ExecutiveDashboard	The ExecutiveDashboard provides executive level reporting including key performance indicator (KPI) data to help airlines gauge operational and employee success.

CrewMonitor Glossary

Term	Definition
AOC	*Air Operator's Certificate* *Also referred to as Operator or Operator Code* The AOC is the approval granted by a national aviation authority (NAA) to an aircraft operator to allow it to use aircraft for commercial purposes. This requires the operator to have personnel, assets and system in place to ensure the safety of its employees and the general public.
Base	The port to which crewmembers are expected to commence and finish their tasks / activities.
Block Hour	*Also called block time, blocks or flight hours* 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. 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.
Broken Pairing	A pairing that has any of the following characteristics: • does not return to its start location; • has events that conflict with the previous or next event's port; or • has overlapping events within it. Note that there are other types of exceptions that indicate problem pairings, but these are broken in terms of structure rather than rule limits.
Company Pairing	*Also called Generic Pairing, Ground Pairing, Non-flight Pairing, Standard Pairing* 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.
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.
Covered Sector	A flight that has been assigned to a pairing.
Crew	A specific type of employee required for flight operations. This term is interchangeable with *employee*.
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	*Also called recency requirements* 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.
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).

Designator	Unique alphanumeric code given to distinguish each airline, or operations within an airline
Disruptions	Operational events that occur on or around the day of operation that result in the need to modify pairings that could lead to breaching compliance rules. Disruptions can be manifested as a flight delay, diversion, return or cancellation. Some causes of disruption are air traffic, weather and technical problems.
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.
Duty Change	An update to a published pairing where the history of changes for a duty are recorded.
Duty Change Notification	Whenever an assigned published pairing or duty is modified, the assigned crew need to be notified of the change to ensure they made aware of the latest version of the pairing. This is referred to as a duty change notification and is sent to crew via CrewPortal and CrewMobile.
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.
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.
Equipment Type	*Also called aircraft 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.
Flight	*Also called sector* 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.
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 Sector	*Also called unpaired flight* A flight that has not been assigned to a pairing.
Paired Flight	A flight that has been added or assigned to a 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
Port Currency	*Also called port recency* 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.
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.
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	*Also called route recency* 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.
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	This determines what can be done to a violation once it is flagged. This works in conjunction with violation severity. • Inviolate - does not allow the assignment to push through no matter what • Override - if the user has the appropriate security rights, he can override the violation • Override Disrupt - if the user has the appropriate security rights, he can override the violation only if the flight is in disrupt • 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. • Ignore - the violations are retained in the Violation Panel
Violation Override	This determines how a violation should be overridden • Management - the credentials of a management-level user must supply his credentials when overriding the violation • Supervisor - a supervisor must supply his credentials when overriding the violation • 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

	• Discretion - signifies that the violation will be overridden based on the captain's discretion
Violation Severity	This determines how a violation is presented • Critical - the violation must be addressed. Otherwise, the crew is illegal to fly • Ignorable - the violation can be addressed later and will not prevent the crew from reporting for a duty • Informational - the rule breach is for informational purposes only • Passed - the rule is not breached and nothing has to be done

Notes