

How to load data using SAFE web application

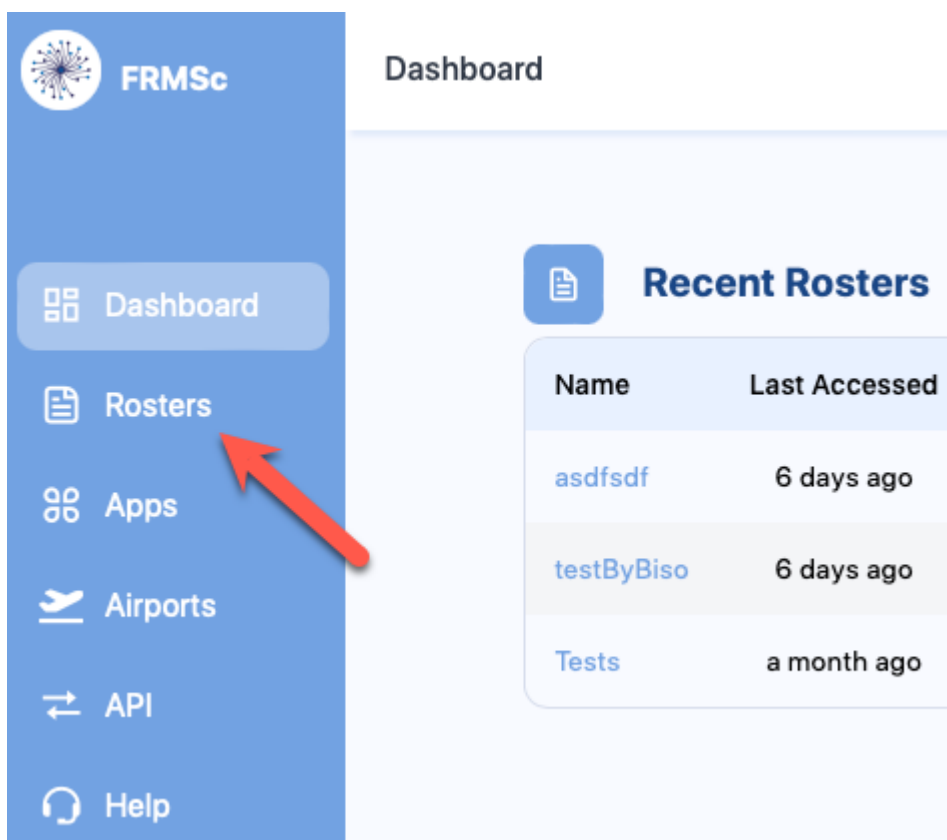
There are multiple ways to upload roster data to SAFE and CARE models. You can either setup [Apps](#), use SAFE web application, or call the [SAFE APIs](#) to load data into SAFE.

In this guide we will focus on loading roster files in SAFE and CARE format into SAFE using the SAFE web application. For this approach, you can choose between two methods - individual entry and bulk upload. This guide will walk you through both those methods in detail.

Individual entry

Individual entry is one of the easiest way to submit data to SAFE analysis. The step-by-step wizard will allow you to enter the roster data, limiting errors during data input. To manually submit individual roster entry into SAFE, follow the steps below:

1. Navigate to the [Rosters](#) screen using the menu panel.



2. Click **+ Create roster**

3. Click **Construct manually**

The screenshot shows the 'Create Roster' interface. On the left, a vertical progress bar indicates three steps: 1. Upload roster (active), 2. Roster details, and 3. Process roster. The main area is titled 'Upload roster' and contains two options:

- Construct with duties only**: Represented by an airplane icon. Description: 'Construct your roster by uploading duty details. You can still add activities to the roster manually.' Links: 'Example duty upload', 'Duty upload specification'.
- Construct with duty and activities**: Represented by a pulse icon. Description: 'Construct your roster by uploading duty and activity details for a more detailed analysis.' Links: 'Example activity upload', 'Activity upload specification'.

A red arrow points from the 'Construct with duty and activities' section to a blue button labeled 'Construct manually' at the bottom right.

4. The **Create Roster** form will appear. Enter relevant values in the available fields. Refer to the [Tables of properties](#) section below for more information.

5. Click **Next**

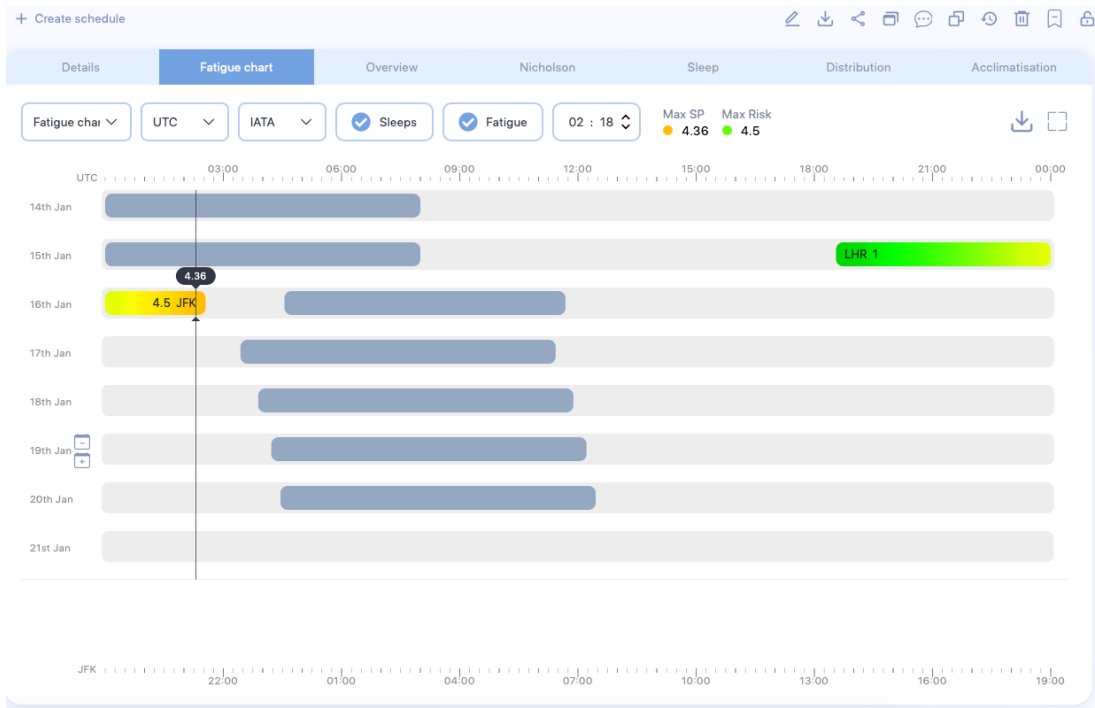
6. The **Create Schedule** form will appear. Enter relevant values in the available fields. Refer to the [Tables of properties](#) section below for more information.

7. Click **Submit**.

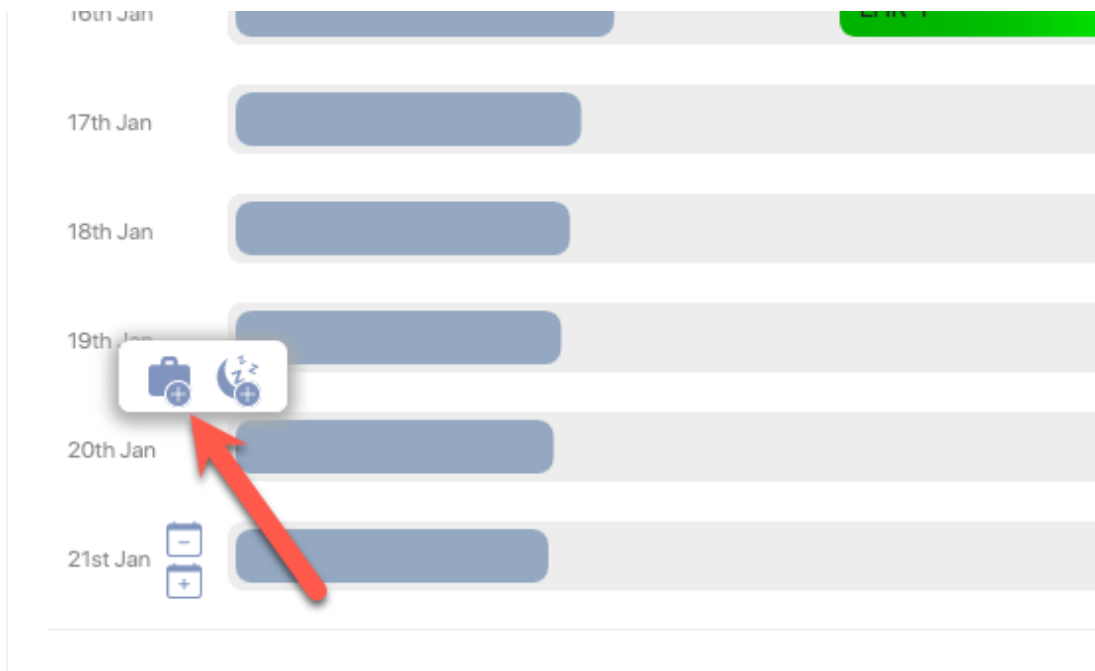
8. The **Create Duty** form will appear. Enter relevant values in the available fields. Refer to the [Tables of properties](#) section below for more information.

9. Click **Create**

10. The Fatigue chart will start showing immediately.

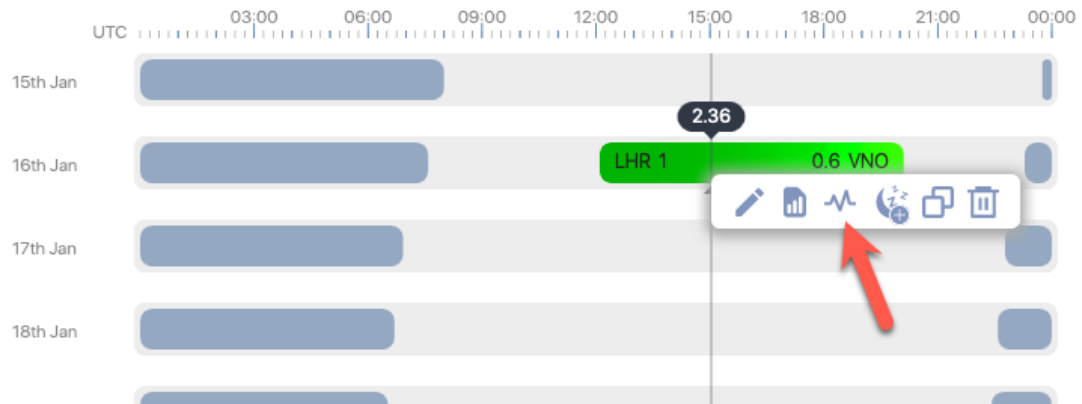


To add more duties to a schedule, right click on the day and select **Create Duty**. Repeat Step 8 to create duty.



To add additional schedules for more personnel, click **+ Create Schedule** located above the chart.

11. Right click on the duty and select **Activities** to start adding activities to the duty.



12. The **Activities** pop-up form will appear. Click on the + icon.

The screenshot shows the 'Activities' pop-up form. The form has a blue header with the title 'Activities' and a close button (X) in the top right. Below the header, there is a '+' icon in the top left and a 'Duty start' label. The main area of the form contains a table with time slots and values:

Time	Activity	Value
12:00	Check in	2.25
		2.25
13:00		2.25
		2.26
		2.26
		2.27
14:00		2.28
		2.29

13. The **Create Activity** form will appear. Enter relevant values in the available fields. Refer to the [Tables of properties](#) section below for more information.

14. Click **Create** and close the **Activities** pop-up. The Fatigue chart will update. Continue adding more activities and duty to refine the results.

Bulk upload

i Example CSV or Microsoft Excel (.xlsx) files

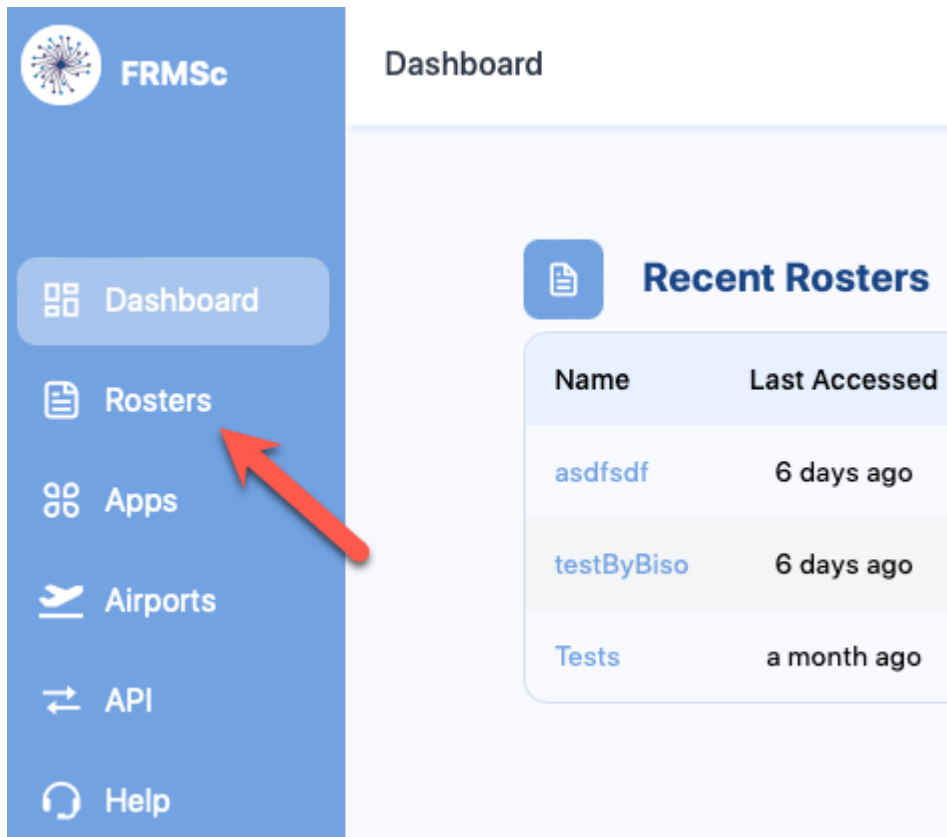
Download the example files for Duty ([csv](#) and [.xlsx](#)) and Activities ([csv](#) and [.xlsx](#)) [here](#).

Alternatively, you can view the order and column names of the files in the [Duty file specification](#) and the [Activity file specification](#) sections. You can also see [Where to get file formats document](#) to learn about additional places you get the file formats from.

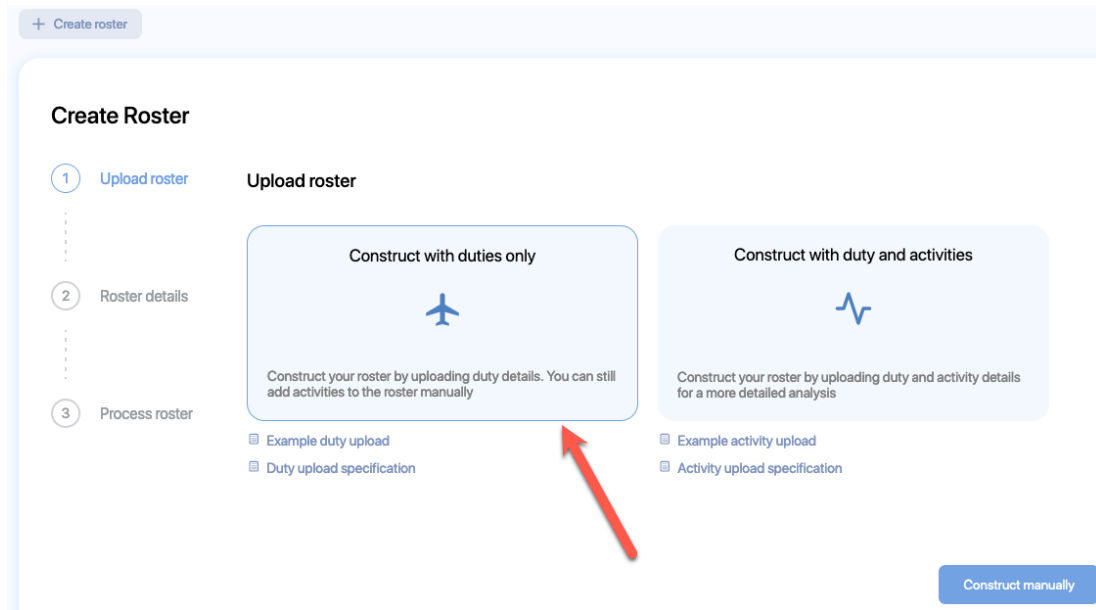
Bulk entry is one of the fastest way to submit data to SAFE and CARE using the web UI. Using the CSV or Microsoft Excel file, you can submit multiple schedules data at once, reducing the time taken to enter the data manually. To submit bulk roster entries into SAFE web UI, follow the steps below:

Construct with duties only

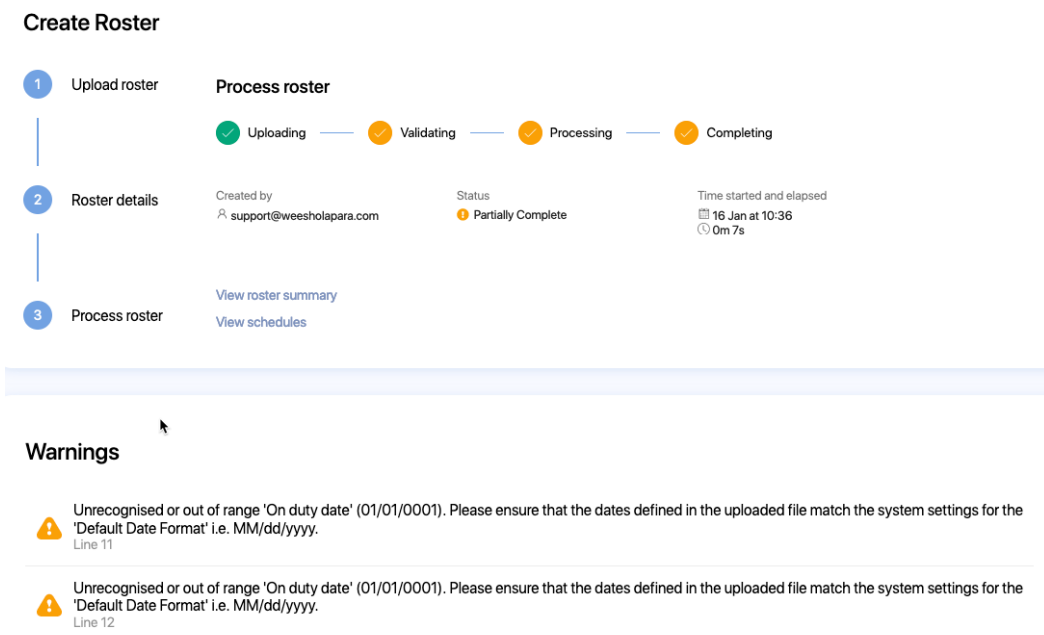
1. Navigate to the [Rosters](#) screen using the menu panel.



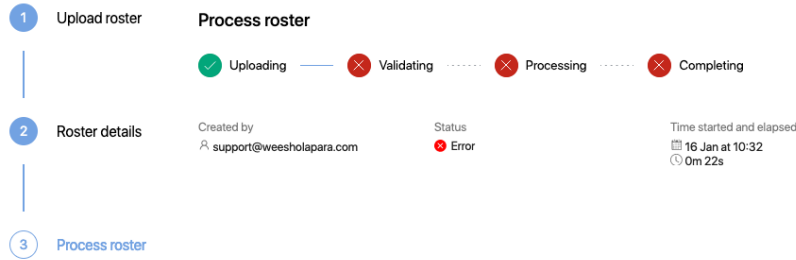
2. Click **+ Create roster**
3. Click **Construct with duties only**



4. The file explorer opens. Navigate to the location of the CSV or Microsoft Excel (.xlsx) file that has roster data with duties and select it.
5. The **Create Roster** form will appear. Enter relevant values in the available fields. Refer to the [Tables of properties](#) section below for more information.
6. Click **Next**
7. The roster data will start processing.
 - If any errors or warnings are found on the file, they will be listed at the bottom of the **Process roster** screen. You will also receive an email notification with the list of errors you need to resolve.



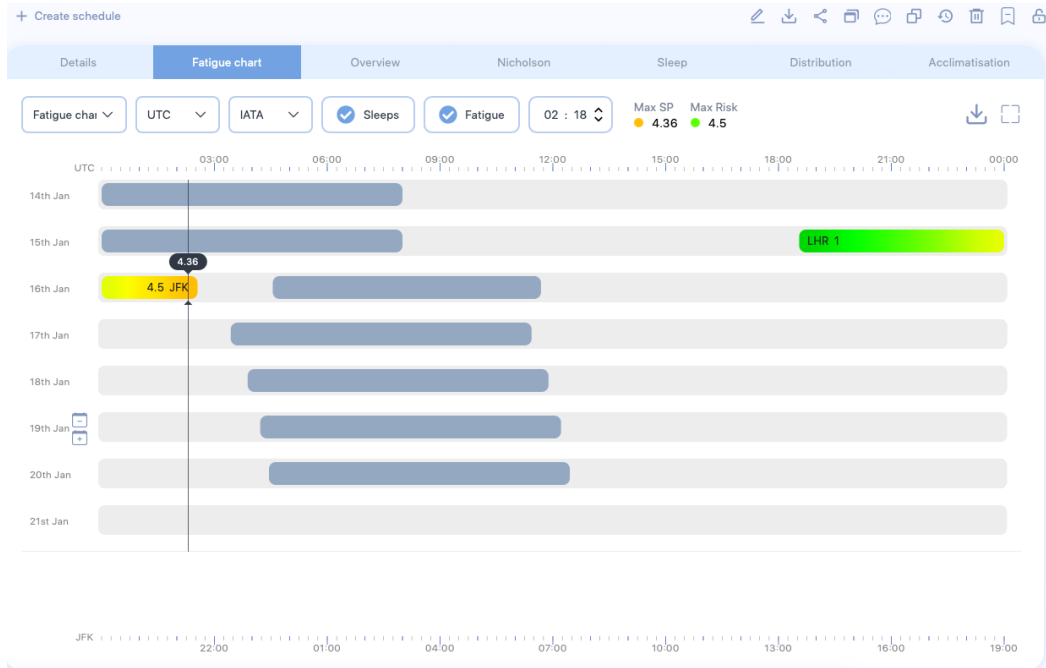
Create Roster



Errors

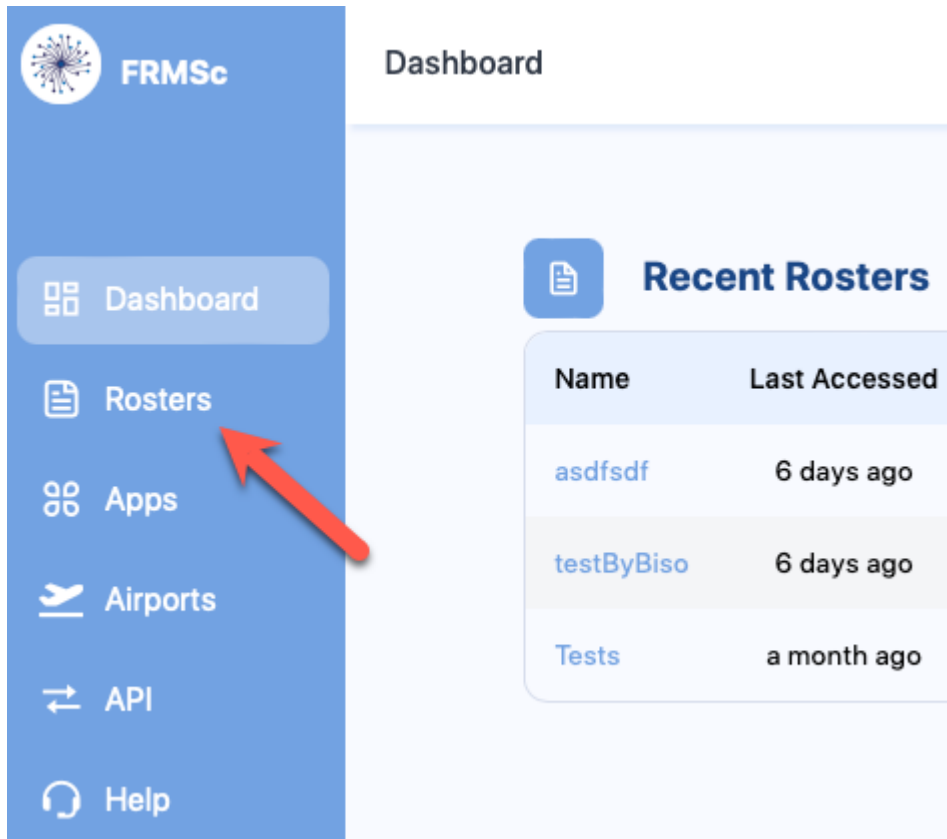
✘ The 'Off duty date' (06/05/2023 04:07 (UTC)) cannot be before the 'On duty date' (15/01/2024 19:45 (UTC)).

- Resolve the errors and warnings and upload again or view the schedules to fix the errors using the web UI.
8. After the processing is complete, a fly-out banner will appear on the top right of the screen. You will also receive an email notification to indicate successful completion. Click
- **View roster summary** to view roster summary
 - **View schedules** to view the schedules and fatigue charts

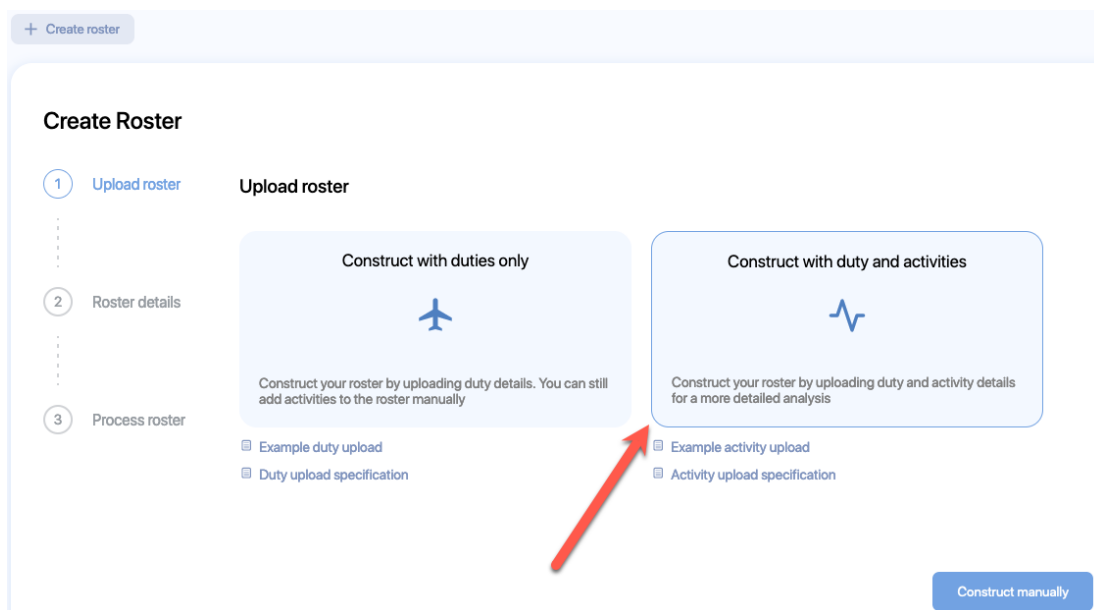


Construct with duties and activities

1. Navigate to the [Rosters](#) screen using the menu panel.



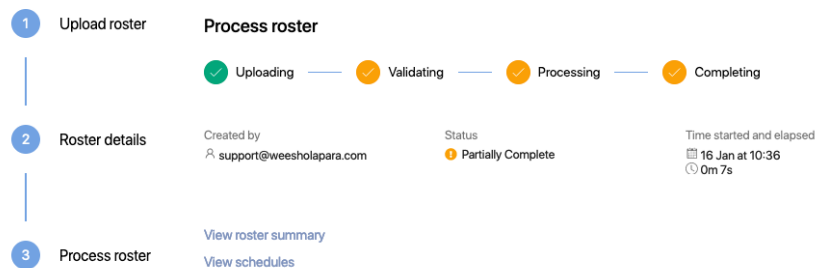
2. Click **+ Create roster**
3. Click **Construct with duties and activities**





4. The file explorer opens. Navigate to the location of the CSV or Microsoft Excel (.xlsx) file that has roster data with duties and select it.

5. The **Activity upload** dialog appears. Click **Ok** to continue.
6. The file explorer opens. Navigate to the location of the CSV or Microsoft Excel (.xlsx) file that has roster data with activities and select it.
7. The **Create Roster** form will appear. Enter relevant values in the available fields. Refer to the [Tables of properties](#) section below for more information.
8. Click **Next**
9. The roster data will start processing.
 - If any errors or warnings are found on the file, they will be listed at the bottom of the **Process roster** screen. You will also receive an email notification with the list of errors you need to resolve.

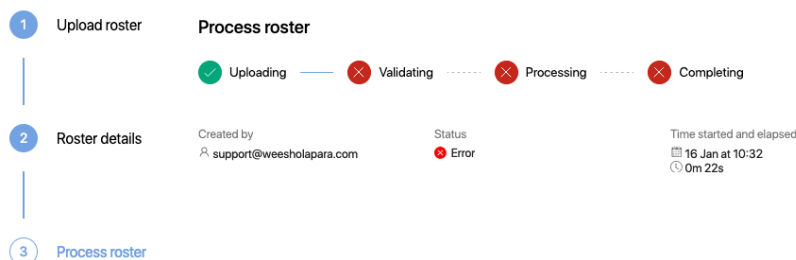
Create Roster




Warnings

-  Unrecognised or out of range 'On duty date' (01/01/0001). Please ensure that the dates defined in the uploaded file match the system settings for the 'Default Date Format' i.e. MM/dd/yyyy.
Line 11
-  Unrecognised or out of range 'On duty date' (01/01/0001). Please ensure that the dates defined in the uploaded file match the system settings for the 'Default Date Format' i.e. MM/dd/yyyy.
Line 12

Create Roster



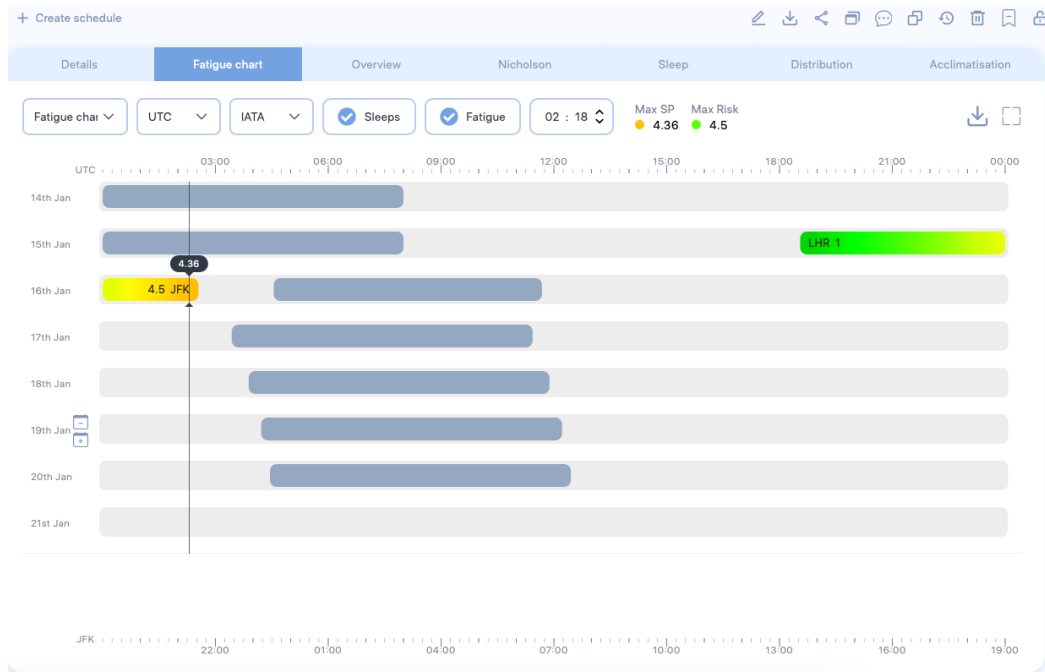
Errors

-  The 'Off duty date' (06/05/2023 04:07 (UTC)) cannot be before the 'On duty date' (15/01/2024 19:45 (UTC)).
Line 1

- Resolve the errors and warnings and upload again or view the schedules to fix the errors using the web UI.

10. After the processing is complete, a fly-out banner will appear on the top right of the screen. You will also receive an email notification to indicate successful completion. Click

- **View roster summary** to view roster summary
- **View schedules** to view the schedules and fatigue charts



Tables of properties

Roster properties

Create Roster

1 Upload roster

2 Roster details

3 Process roster

Roster details

Name: ✓

Visibility: ▼

Tags:

Property (* required)	Description
Name *	The name of the schedule. Usually the identifier of the pilot or the crew member e.g., employee number
Visibility	If other users should not be able to see the roster, choose Private else choose Public
Tags	The label attached to the Roster which can be used to group rosters together.

Schedule properties

Create Schedule



Schedule details

Name:

Pilot1

Rank:

Captain

Base Airport:



EGLL LHR

London Heathrow

LONDON, United Kingdom

Preparation Time:

1 hour



Crew Type:

Pilot



Submit

Cancel













Property (* required)	Description
Name *	The name of the schedule. Usually the name of the pilot or the crew member.
Rank	A label for indicating the rank of the pilot or the crew member.
Base Airport *	The homebase airport of the pilot or the crew member. Click on the airport name to view a text box. Type ICAO, IATA, or FAA airport codes in the text box and choose the airport from the drop down.

Preparation time	The time required to prepare after waking from a main sleep.
Crew Type*	The type of personnel. Choose between Pilot or Cabin crew.

Duty properties

Edit Duty

Duty Details

Duty Type ?	Crew Composition ?
<input type="text" value="Active duty"/>	<input type="text" value="Cabin Crew"/>
On Duty Date ?	Off Duty Date ?
<input type="text" value="07/03/2024"/>  <input type="text" value="22"/>   : <input type="text" value="25"/>  	<input type="text" value="08/03/2024"/>  <input type="text" value="05"/>   : <input type="text" value="25"/>  
<input checked="" type="checkbox"/> UTC <input type="checkbox"/> VNO <input type="checkbox"/> LEX <input checked="" type="checkbox"/> ⇄	<input type="checkbox"/> UTC <input type="checkbox"/> VNO <input checked="" type="checkbox"/> LEX <input checked="" type="checkbox"/> ⇄
Start Airport ?	End Airport ?
 EYVI VNO Vilnius International VILNIUS, Lithuania	 KLEX LEX Blue Grass LEXINGTON, United States
Commute Time ?	Fleet ?
<input type="text" value="1 hour"/>	<input type="text"/>
Sector Count: ?	Cabin Crew Sleep Pattern ?
<input type="text" value="2"/>	<input type="text" value="Normal Long Haul Pattern 1 or 2 s"/>
Workload ?	
<input type="range" value="0"/>	
standard duty workload flying this number of sectors (no change)	
Rest Definition ?	
<input type="text" value="Define sleep count, order and class with augmented duty"/>	

Sleep Details

Sleep Count: ?	Sleep Class: ?
<input type="text" value="1"/>	<input type="text" value="Class 1 (Bunk)"/>
Sleep Order: ?	
<input type="text" value="1st"/>	

Augmented Duty
Clear

On Duty Date ?

07/03/2024

08

:

55

UTC
 VNO
 LEX

Off Duty Date ?

08/03/2024

05

:

25

UTC
 VNO
 LEX

Save

Cancel



Cabin crew properties

Some of the properties shown below are exclusive to cabin crew i.e., the **Create Duty** form will not show some of the following properties for Pilots. Such properties will have the symbol - - next to the property name.







Section	Property (* required)	Description
General	Duty type*	Choose the type of duty from the dropdown.
	Crew composition	Select the number of pilots in the flight from the dropdown or select 9 for cabin crew.
	On duty date and time*	The duty start date. Use the date time controls to set the date and time.
	Off duty date and time*	The duty end date. Use the date time controls to set the date and time.
	Time zone selector check boxes*	The time zone which the duty times are based on. Check the box that indicates the timezone.
	Time zone lock check boxes	Select this property if you want the web application to automatically convert your entered dates and times to








file:///home/vsts/work/1/s/site/guides/uiworkflow/tmpwg50qyre.html

15/25

	match your time zone selection when swapping between UTC and local time zones.
Start Airport*	The airport where the duty started. Default is the base airport. To change the airport, click on the airport name to view a text box. Then, type ICAO, IATA, or FAA airport codes and choose the airport from the drop down.
End Airport*	The airport where the duty ended. Default is the base airport. To change the airport, click on the airport name to view a text box. Then, type ICAO, IATA, or FAA airport codes and choose the airport from the drop down.
Commute Time	Select the time taken to commute to the duty. Default value is 1 hour.
Fleet	A label you can use to indicate the aircraft being used.
Sector Count	Select the number of flights in the duty. Default value is 1.
Cabin Crew Sleep Pattern 	<p>Select one of the following sleep patterns for the cabin crew.</p> <ul style="list-style-type: none"> • Normal Long-Haul Pattern 1 or 2 sleep periods • ULR Pattern 1 or 2 sleep periods, short service • ULR Pattern 1 sleep period, 50% cruise phase • ULR Pattern Main Crew 1 or 2 sleep periods <p>See Cabin Crew Sleep Pattern to learn more.</p>
Workload	Move the seeker bar horizontally to increase or decrease the workload in percentage increments (decrement) from the normal workload (workload=0) for the duty. Workload can be increased up to 100% of the normal workload (100= twice the normal workload level) or decreased by 50% of normal workload (-50 = half the normal workload)
Rest Definition 	Select the method SAFE and CARE must use to calculate sleep periods. Depending on your selection additional properties will appear on this form.

- Selecting **Define sleep count, order and class** will show the *Sleep Details* section below this property.
- Selecting **Define sleep count, order and class with augmented duty** will show the *Sleep Details* and *Augmented Duty* sections below this property.
- Selecting **Define rest periods** will show *Rest Period* section below this property. It will also hide the *Sleep Details* and *Augmented Duty* sections if they were showing below this property.

Sleep Details	Sleep Count 	The number of sleeps a cabin crew had during their duty.
	Sleep Class 	The class where the cabin crew slept. Select: <ul style="list-style-type: none"> • Class 1 - Bunk • Class 2 - Cabin seat: 40 degrees or more recline • Class 3 - Flight deck seat • Class 4 - Economy seat: Less than 40 degrees recline • Class 5 - Jump seat
	Sleep Order 	The rank, which the crew member slept in.
Augmented Duty	On Duty Date Time 	The date and time the cabin crew started their augmented duty. See Partial Augmentation for more information on augmented duty.
	Off Duty Date Time 	The date and time the cabin crew ended their augmented duty. See Partial Augmentation for more information on augmented duty.
	Time zone selector check boxes 	Select the time zones for the sleep start and end date times. You will see a separate set of time zone selector check boxes below Sleep Start Date Time and Sleep End Date Time. Selecting time zone for Sleep Start Date Time or Sleep End Date Time doesn't automatically select the time zone for corresponding Sleep End Date Time or Sleep Start Date Time. <ul style="list-style-type: none"> • Select UTC, if the date and time you entered is in UTC.

		<ul style="list-style-type: none"> Select the appropriate airport short codes, if the date and time you entered is in the airport's local time.
	Time zone lock check boxes 	Select this property if you want the web application to automatically convert your entered dates and times to match your time zone selection when swapping between UTC and local time zones.
Rest Period	Sleep Class 	The place where the cabin crew slept.
	First rest start date time 	The date and time the cabin crew started their first rest. See In-duty rest for more information on rest period.
	First rest end date time 	The date and time the cabin crew ended their first rest. See In-duty rest for more information on rest period.
	Time zone selector check boxes 	Select the time zones for the duty start and end date times. You will see a separate set of time zone selector check boxes below On Duty Date Time and Off Duty Date Time. Selecting time zone for Sleep Start Date Time or Sleep End Date Time doesn't automatically select the time zone for corresponding Sleep End Date Time or Sleep Start Date Time. <ul style="list-style-type: none"> Select UTC, if the date and time you entered is in UTC. Select the appropriate airport short codes, if the date and time you entered is in the airport's local time.
	Time zone lock check boxes 	Select this property if you want the web application to automatically convert your entered dates and times to match your time zone selection when swapping between UTC and local time zones.
	Add second rest 	Click on this link if you want to add second rest date and times. A click on this link will produce additional properties for second rest. These properties and their selections are very similar to the first rest. See above for details.

Activity properties



Create Activity

Activity Details

Activity Type: ? Description: ?

Activity Start: : ? Activity End: : ?

UTC LHR Time zone lock UTC LHR Time zone lock

Nearest Airport ?

EGLL LHR
London Heathrow
 LONDON, United Kingdom

Property (* required)	Description
Activity type *	Choose the type of activity from the dropdown. Click here to see the available types.
Description	Add a short description about or comment on the activity.
Activity start date and time *	The activity start date. Use the date time controls to set the date and time.
Activity end date and time *	The activity end date. Use the date time controls to set the date and time.
Time zone selector check boxes *	The time zone which the activity times are based on. Check the box that indicates the timezone.
Time zone lock check boxes	Select this property if you want the web application to automatically convert your entered dates and times to match your time zone selection when swapping between UTC and local time zones.

Nearest airport⁺ The airport that is nearest to this activity. You can not change this property. The nearest airport for any activity is the departure airport of the duty it belongs to.

Duty file specification

The table below shows a list of columns you can include in the CSV or Microsoft Excel file. The columns must be in the same order as listed below.

You can omit the column titles. In such case, the order in which the column titles are listed below will be assumed. You can send multiple rows at a time.

Date format

We have set the date format to DD/MM/YYYY below. This can be changed to MM/DD/YYYY from the [Settings](#) page.

ColumnName (⁺ required)	Format	Description
Reference ⁺	Text	A free-text property usually used to indicate a pilot. Use pilot's name or ID.
OnDutyDate ⁺	Date (DD/MM/YYYY)	The duty start date.
OnDutyTime ⁺	Time (hh:mm)	The duty start time.
StartAirport ⁺	Text	The airport at which the duty started. Send ICAO, IATA, or FAA airport codes or a combination of these codes.
OffDutyDate ⁺	Date (DD/MM/YYYY)	The duty end date.
OffDutyTime ⁺	Time (hh:mm)	The duty end time.
EndAirport ⁺	Text	The airport at which the duty ended. Send ICAO, IATA, or FAA airport codes or a combination of these codes.

Sectors	Number	The number of flights in duty. Default value is 1.
CrewComposition	Number	Send <ul style="list-style-type: none"> • 2 for 2 Pilots • 3 for 3 Pilots • 4 for 4 Pilots • 9 for Cabin Crew Default value is 2.
SleepCount	Number (0-2)	The number of sleeps the pilot or the crew member slept on duty.
SleepOrder	Number (1-3)	The rank, which the pilot or the crew member slept in. Send <ul style="list-style-type: none"> • 1 for First • 2 for Second • 3 for Third
SleepClass	Number (1-5)	Send <ul style="list-style-type: none"> • 1 for Class 1 - Bunk • 2 for Class 2 - Cabin seat: 40 degrees or more recline • 3 for Class 3 - Flight deck seat • 4 for Class 4 - Economy seat: Less than 40 degrees recline • 5 for Class 5 - Jump seat
HomeBase ⁺	Text	Send ICAO, IATA, or FAA airport codes or a combination of these codes. Default value is Start airport code.
TimeReference ⁺	Number (0-2)	The reference time zone. Send <ul style="list-style-type: none"> • 0 for UTC • 1 for Base airport timezone • 2 for Local timezone
OnPartialAugmentDate	Date (DD/MM/YYYY)	The time at which the pilot or the crew member started their partial augmentation.

OnPartialAugmentTime	Time (hh:mm)	The time at which the pilot or the crew member started their partial augmentation.
OffPartialAugmentDate	Date (DD/MM/YYYY)	The date on which the pilot or the crew member ended their partial augmentation.
OffPartialAugmentTime	Time (hh:mm)	The time at which the pilot or the crew member ended their partial augmentation.
FirstRestStartDate	Date (DD/MM/YYYY)	The date on which the pilot or the crew member started their first rest.
FirstRestStartTime	Time (hh:mm)	The time at which the pilot or the crew member started their first rest.
FirstRestEndDate	Date (DD/MM/YYYY)	The date on which the pilot or the crew member ended their first rest.
FirstRestEndTime	Time (hh:mm)	The time at which the pilot or the crew member ended their first rest.
SecondRestStartDate	Date (DD/MM/YYYY)	The date on which the pilot or the crew member started their second rest.
SecondRestStartTime	Time (hh:mm)	The time at which the pilot or the crew member started their second rest.
SecondRestEndDate	Date (DD/MM/YYYY)	The date on which the pilot or the crew member ended their second rest.
SecondRestEndTime	Time (hh:mm)	The time at which the pilot or the crew member ended their second rest.
SplitShift	Number (0-1)	Indicates whether the pilot or crew member had rested in between flight. Send <ul style="list-style-type: none"> • 0 for True • 1 for False
DutyType	Number (1-3)	The type of duty. Send <ul style="list-style-type: none"> • 1 for worked duty • 2 for worked duty with split shift

		<ul style="list-style-type: none"> • 3 for standby duty
Fleet	Text	A free-text property used to indicate fleet message.
Rank	Text	A free-text property used to indicate a pilot's rank.
Workload	Number	<p>When the sector count is 0, send</p> <ul style="list-style-type: none"> • 0 for no activity, i.e. doing nothing but not sleeping • 10 for average workload on a typical single-sector duty. Equivalent to workload prior to being able to change workload • 20 for average workload on a typical four-sector duty • 30 for very high workloads • 40 for exceptionally high workloads only seen occasionally • 50 for extremely high workloads only rarely seen <p>When the sector count is more than 0, send</p> <ul style="list-style-type: none"> • -50 for half the workload of standard flying this number of sectors • 0 for standard duty workloads flying this number of sectors. Equivalent to workload prior to being able to change workload • 100 for double the workload of standard flying this number of sectors
CrewPrepTime	Number	The time taken for crew to prepare. Value indicates minutes. Default value is 60 minutes.
DutyCommuteTime	Number	The time taken to commute to the duty. Value indicates minutes. Default value is 60 minutes.

CabinCrewSleepPattern	Number (0-3)	Send <ul style="list-style-type: none"> • 0 for Normal Long-Haul Pattern 1 or 2 sleep periods • 1 (ULR Pattern 1 or 2 sleep periods, short service) • 2 (ULR Pattern 1 sleep period, 50% cruise phase) • 3 (ULR Pattern Main Crew 1 or 2 sleep periods) <p>Default value is 0. See Cabin Crew Sleep Pattern to learn more.</p>
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Activity file specification

The table below shows a list of columns you can include in the CSV or Microsoft Excel file. The columns must be in the same order as listed below.

You can omit the column titles. In such case, the order in which the column titles are listed below will be assumed.

Matching date times

Start and end times for activities should be within the start and end times for the duty.

ColumnName (⁺ required)	Format	Description
Reference ⁺	Text	A free-text field usually used to indicate a Activity. Use pilot's name or ID. Ensure that the name of the pilot matches the names in the duty file.
ActivityStartDate ⁺	Date (DD/MM/YYYY)	The activity start date.
ActivityStartTime ⁺	Time (hh:mm)	The activity start time.

ActivityEndDate ⁺	Date (DD/MM/YYYY)	The activity end date.
ActivityEndTime ⁺	Time (hh:mm)	The activity end time.
ActivityType ⁺	Text	Send one of the following <ul style="list-style-type: none"> • Check in • Flight • Waiting time • Time at hotel • Positioning • Commuting • Simulator duty • Ground duty • Check out
Description ⁺	Text	A free text field to explain the activity.
TimeReference ⁺	Number (0-2)	Send <ul style="list-style-type: none"> • 0 for UTC • 1 for Base • 2 for Local
StartAirport ⁺	Time (hh:mm)	The airport at which the activity started. Send ICAO, IATA, or FAA airport codes or a combination of these codes.
EndAirport ⁺	Text	The airport at which the activity ended. Send ICAO, IATA, or FAA airport codes or a combination of these codes.
Homebase ⁺	Text	The pilot's or the crew member's home airport. Send ICAO, IATA, or FAA airport codes or a combination of these codes. Default value is Start airport code.