

# How to work with duty













## Scope of this guide

This guide is focused on working with duties using the SAFE web application. If you want to learn about API interactions see [FRMSc API documentation](#) or [Apps](#).

You can create a new duty using the **Create Duty** form. You can access this form from the [Schedules](#) screen after you have created a schedule. You can also access it from the [fatigue chart](#) of the schedule. The control bar for duties in the fatigue chart, however, allows you to [do more](#) than just create a duty.



## Edit Duty

### Duty Details


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



### Sleep Details


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



 **Augmented Duty**
Clear 

On Duty Date ?


07/03/2024 

08  : 55 


08/03/2024 

05  : 25 

UTC  VNO  LEX



UTC  VNO  LEX



Save

Cancel

In this guide, we will learn how to manage duties using the web application.

## Add a duty

There are two ways to add duty to a schedule. See below for instructions on both.

### First duty in a schedule

#### **The workflow**

Creating duty is only a step in a larger workflow. The steps below isolate creating duty from that workflow. The following steps demonstrate duty creation process for users returning to create a duty in a roster.

To learn how to create a new duty as part of the entire workflow, see the Individual entry method in the [How to load data into SAFE](#) guide.

#### **Adding duty to a blank schedule?**

If you are returning to add first duty to a schedule, simply click on the [schedule's card](#) and follow the steps below.

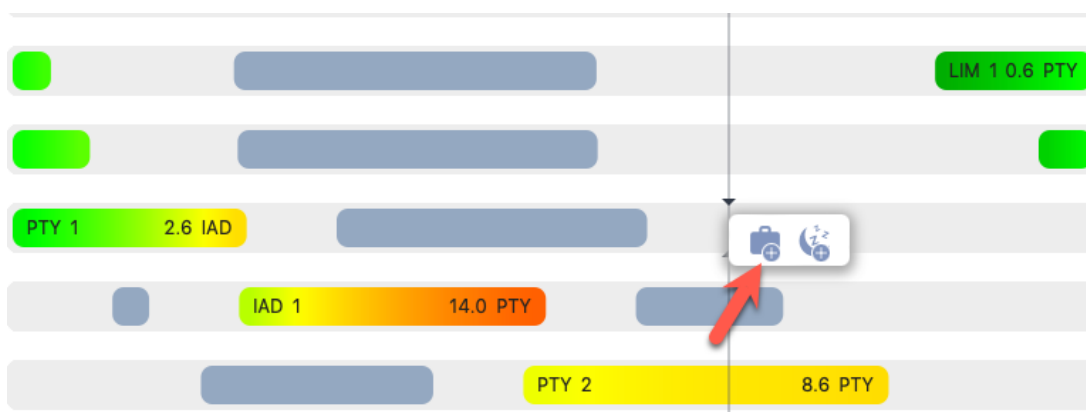
- [Create a schedule](#).
- The **Create Duty** form will appear. Enter the values in the properties. See [Duty properties](#) for more information on each property.

- Click **Create**. The schedule analysis screen and the schedule card will refresh and update. You can also continue further by adding [activities](#) and [sleep period](#) to the duty.

## Additional duties

To add additional duties to a schedule:


- Right click on a blank area of the [fatigue chart](#) and select **Create Duty**. A blank area is any region in the chart with the lightest shade of grey.



- The **Create Duty** form will appear. Enter the values in the properties. See [Duty properties](#) for more information on each property.
- Click **Create**. The schedule analysis screen and the schedule card will refresh and update. You can also continue further by adding [activities](#) and [sleep period](#) to the duty.

## Edit a duty

See [duty control bar](#).

 [How to edit duty?](#)



## Optimise rest

Until the recent past, long-haul duties were exclusively single sector flight. However, it has become common to fly 2 sectors with augmented crew which creates a requirement to place the automatically generated sleep periods using the sleep count, sleep order and sleep class properties within a chosen flight sector. The administrator can decide [the default sector](#) to add the sleep - either the longest sector or the shortest sector, or the first or the last sector. The optimise rest function lets you override the administrator default for the duty. To optimise rest, just click the Optimise Rest icon when it appears on the [duty control bar](#).

## Manage sleep period

You can easily identify a sleep period in the fatigue-chart. A sleep period is any region in the chart with the darkest shade of grey or the brightest shade of blue.

The darkest shade of grey indicates the sleep period calculated by the models. The models' automatic calculation is based on the sleep assumptions set up by the administrators. See the following video to learn how to add model-generated sleep.

 [How to add model-defined sleep to a duty?](#) 

Users can also define sleep periods for duties. Such sleep periods appear in the brightest shade of blue to indicate the sleep is user-defined.



### Add user-defined sleep period

 [How to add user-defined sleep to a duty?](#) 

To add user-defined sleep period:

1. Right-click a duty and select **Create Sleep**.
2. The **Create Sleep** form appears. Enter appropriate values to the properties in this form. See [Sleep properties](#) for more information.
3. Click **Create**. The fatigue chart reloads and sleep is added to the duty. For the ease of visualisation, the region will be coloured in blue.

### Edit sleep period

 [How to edit sleep?](#) 

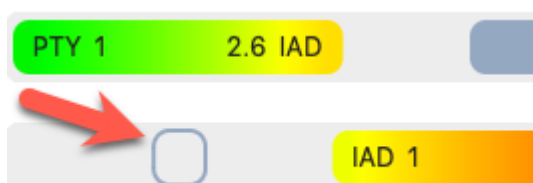
To edit a sleep period:

1. Right-click the sleep period and select **Edit Sleep**.
2. The **Edit Sleep** form appears. Enter appropriate values to the properties in this form. See [Sleep properties](#) for more information.
3. Click **Save** to keep the changes made to the sleep. The fatigue chart reloads, showing the changes.

### Delete sleep period

To delete a sleep period:

1. Right-click the sleep period and select **Delete Sleep**. A sleep period is any region in the chart with the darkest shade of grey.
2. A confirmation box appears, asking you to confirm your action. Click **Delete** to continue deleting the sleep period.
3. The fatigue chart reloads and the sleep period is removed from the duty. However, an outline (the same shade of colour, which it originally was in) appears over the removed sleep period.



If you right-click over the outline, you will see the **Restore Sleep** icon. Click on the icon to restore the deleted sleep period.

## Copy and paste duty

### ⚠ Limitations

- You can paste a duty once. After you click paste, the icon disappears from the control bar on the next right-click.
- You can't paste a duty over an existing duty. Such action shows an error and the **Paste Duty** icon disappears.

The **Copy Duty** icon lets you copy the information in a duty to the clipboard. You can then paste that information in a blank area within the fatigue chart. See below for step-by-step instructions.

1. Right-click a duty and select **Copy Duty**.
2. Move your cursor over to a blank area in the fatigue chart.
3. Right-click over the blank area and select **Paste Duty**. The schedule analysis screen will reload and the duty information will appear over the blank area.

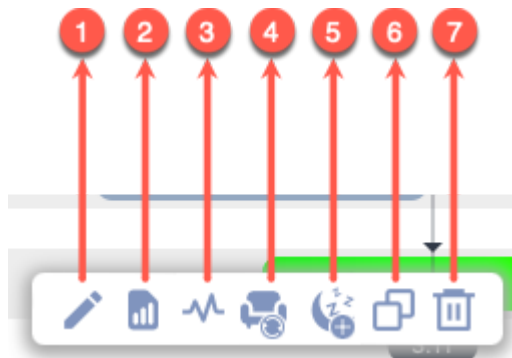


## Delete a duty

See [duty control bar](#).

## Access the duty control bar

The schedule control bar appears when you **right-click** on the fatigue chart over a duty entry. This control bar also features a rich set of icons that control various functionalities related to the duty.



1. The **Edit** icon lets you edit the duty properties. Click on this icon to open the **Edit Duty** form. See [Duty properties](#) for a list of properties that you can edit. After you have made your changes, click **Save** at the bottom of the form to keep your changes.



How to edit duty?



2. The **View Summary** icon lets you see the key statistical analysis of the duty. If you click on this icon, a pop-up screen will open showing the key statistics. See below for an image of the pop-up along with the description of each label (alphabetical).

The screenshot shows a duty card with a green header 'LIM 1 0.6 PTY'. The card contains the following data:

<b>a</b>	Crew	CC	Top of 1st climb	NA	<b>e</b>
<b>b</b>	Sectors	1	Top of last descent	NA	<b>f</b>
<b>c</b>	Start of duty	2.21	Max KSS	3.70	<b>g</b>
<b>d</b>	End of duty	3.70	Risk	0.6	<b>h</b>

- a. The number of crew members in this duty
  - b. The total number of sectors flown
  - c. The fatigue score at the start of the duty
  - d. The fatigue score at the end of the duty
  - e. The fatigue score at the top of the first climb
  - f. The fatigue score at the top of the last descent
  - g. The maximum fatigue score during this duty. This score is based on the scale the company administrator has set.
  - h. The total risk score for this duty.
3. The **Activities** icon lets you view the **Activities** form. You can use this form to add or remove any activity from the duty. See [How to work with activities](#) for more information.
  4. The **Optimise Rest** icon only appears if a duty has [an activity](#) that lasted more than 3 hours. A click on this icon automatically generates sleep periods for the duty. See [Optimise rest](#) to learn more.
  5. The **Create Sleep** icon lets you view the **Create Sleep** form and add a user-defined sleep period to a duty. See [Add sleep](#) to learn more.
  6. The **Copy Duty** icon lets you copy the information in this duty to the clipboard. See [Copy and paste duty](#) to learn more.



How to copy duty?







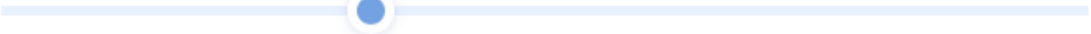
7. The **Delete Duty** icon lets you remove the duty from the schedule and the fatigue chart. If you click on this icon, you will be prompted to confirm your action. If you confirm the delete action, the duty will be deleted from your instance and the fatigue chart will reload.

## Table of properties

## Duty properties

## Edit Duty

### Duty Details

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

### Sleep Details ⬆

Sleep Count: <span>?</span>	Sleep Class: <span>?</span>
1 <span>▼</span>	Class 1 (Bunk) <span>▼</span>
Sleep Order: <span>?</span>	
1st <span>▼</span>	

**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

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"> <li>• Normal Long-Haul Pattern 1 or 2 sleep periods</li> <li>• ULR Pattern 1 or 2 sleep periods, short service</li> <li>• ULR Pattern 1 sleep period, 50% cruise phase</li> <li>• ULR Pattern Main Crew 1 or 2 sleep periods</li> </ul> <p>See <a href="#">Cabin Crew Sleep Pattern</a> 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"> <li>• Class 1 - Bunk</li> <li>• Class 2 - Cabin seat: 40 degrees or more recline</li> <li>• Class 3 - Flight deck seat</li> <li>• Class 4 - Economy seat: Less than 40 degrees recline</li> <li>• Class 5 - Jump seat</li> </ul>
	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 <a href="#">Partial Augmentation</a> for more information on augmented duty.
	Off Duty Date Time 	The date and time the cabin crew ended their augmented duty. See <a href="#">Partial Augmentation</a> 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"> <li>• Select UTC, if the date and time you entered is in UTC.</li> </ul>

		<ul style="list-style-type: none"> <li>Select the appropriate airport short codes, if the date and time you entered is in the airport's local time.</li> </ul>
	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 <a href="#">In-duty rest</a> for more information on rest period.
	First rest end date time 	The date and time the cabin crew ended their first rest. See <a href="#">In-duty rest</a> 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"> <li>Select UTC, if the date and time you entered is in UTC.</li> <li>Select the appropriate airport short codes, if the date and time you entered is in the airport's local time.</li> </ul>
	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.

## Sleep properties

### Create Sleep ✕

**Sleep Start Date** ?

28/12/2023
📅
20
:
24
↕

UTC  PTY ↔

**Sleep End Date** ?

28/12/2023
📅
20
:
54
↕

UTC  PTY ↔

**Nearest Airport** ?

✈️ MPTO PTY  
**Tocumen International**  
 PANAMA CITY, Panama

Create
Cancel

Property	Description
Sleep Start Date Time	The date and time the schedule started their sleep opportunity.
Sleep End Date Time	The date and time the schedule ended their sleep opportunity.
Time zone selector check boxes	<p>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.</p> <ul style="list-style-type: none"> <li>Select UTC, if the date and time you entered is in UTC.</li> <li>Select the appropriate airport short codes, if the date and time you entered is in the airport's local time.</li> </ul>
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 start or end airport that is nearest to this sleep opportunity. You cannot change this property.

**Property****Description**

The nearest airport is determined by the position of your cursor on the fatigue chart when you add a new sleep.

- If your cursor is over a duty bar, the nearest airport is the departure airport of that duty.
- If your cursor is between two duties, the nearest airport is the departure airport of the next duty.
- If your cursor is after a duty, the nearest airport is the arrival airport of your last duty.