

# Duty Types

## Work-flow to Use Duty Types

- » Use **Add Preference** to obtain a baseline dialog that sets Duty Types
- » Repeat **Add Preference** for additional instances of the baseline dialog

## Preference Overview

This preference defines all of the possible duty types over a 24 hour period. To achieve full coverage you will need to use multiple instances - for example, Morning, Noon, Night , ... . To ensure that you have no gaps, there is a small fall-back section appended to preference.

The preference defines duties by setting up time constraints for work time and splits. The penalty field for each duty functions as a "duty cost".

Duty type appears in the Drivers Gantt:

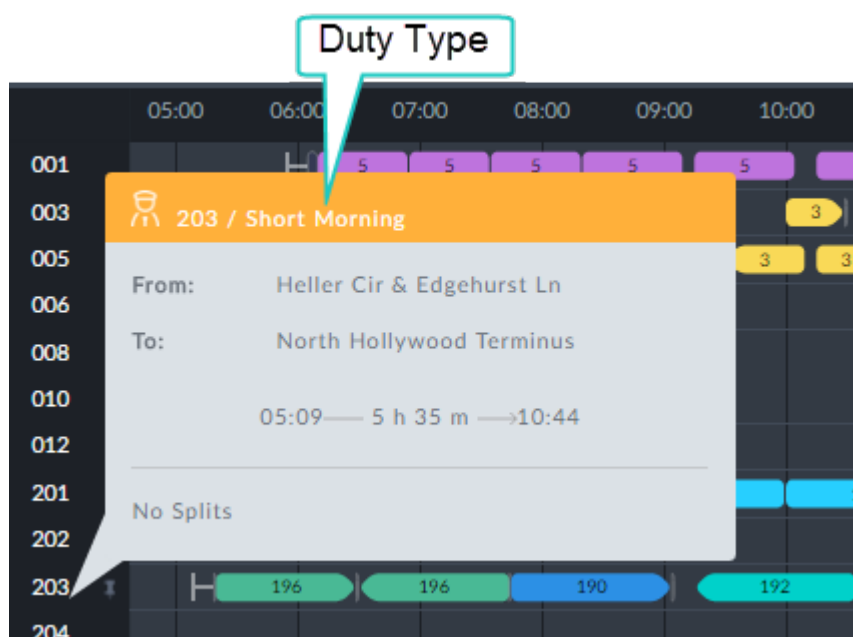


Figure 1-1: Duty Block information box showing the Duty Type

The Duty Types are intended to "guide" the Driver optimization. If it creates a duty that it cannot match with a Duty Type, it will use the fall-back.

## Add Preference Dialog

**Prerequisites:** None.

**Opening Dialog:**

**Duty Types 1**

Name

Description

Split ☐ No ☒ Yes ☐ Either

☐ Start 00:00 To: 00:00

☐ End 00:00 To: 00:00

☐ Paid 00:00 To: 00:00

☐ Work 00:00 To: 00:00

☐ Length 00:00 To: 00:00

☐ Duration 00:00 To: 00:00

☐ First run length 00:00 To: 00:00

Allowed ☐ No ☒ Yes

Penalty

Allowed ☐ No ☒ Yes

Penalty for other:

Figure 1-2: Duty Types - Full dialog

**Duty:** Enter a duty name. It appears in a Drivers Gantt information box as shown in **Figure 1-1** above. It also appears in the KPI histogram showing the number of duties by duty type. See **Distribution of Driver Duties by Duty Type**.

**Description** is optional.

Look at the right hand section of **Figure 1-1**:

☐ Start 00:00 To: 00:00

☐ End 00:00 To: 00:00

☐ Paid 00:00 To: 00:00

☐ Work 00:00 To: 00:00

☐ Length 00:00 To: 00:00

To enable any of these fields check the box to their left.



The following fields are expressed as ranges rather than as a single value reflecting the purpose of the preference: To Guide the Optimizer rather than set rules like in the **Work Limitation** preference.

**Start** is the clock time range within which the duty must commence. For example,

☒ Start

06 : 00

To:

13 : 00

**End** is the clock time range within which it must finish.

**Paid** is the paid time duration range of a duty.

**Work** is a range for the maximum duty shift time net of splits break time.

**Length** is a range for the maximum duty shift time including split break times.

Next, look at the left hand section of **Figure 1-1**:

**Split:** We can disallow a split break for thgis Duty Type by setting **Split** to No, resulting in a reduced display:

Name	Normal	<input type="checkbox"/> Start	06 : 00	To:	13 : 00
Description	Demonstration	<input type="checkbox"/> End	00 : 00	To:	00 : 00
Split	<input checked="" type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Either	<input type="checkbox"/> Paid	00 : 00	To:	00 : 00
Allowed	<input type="radio"/> No <input checked="" type="radio"/> Yes	<input type="checkbox"/> Work	00 : 00	To:	00 : 00
Penalty	300	<input type="checkbox"/> Length	00 : 00	To:	00 : 00

Figure 1-3: Reduced Duty Types display - no split

Setting **Split** to Either tells the Optimizer that we are indifferent to splits for this Duty Type.

Setting **Splits** to Yes opens a further display segment to specify the split details:

Split

☐ No   ☒ Yes   ☐ Either

☐ Start

00 : 00

To:

00 : 00

☐ End

00 : 00

To:

00 : 00

☐ Duration

00 : 00

To:

00 : 00

☐ First run length

00 : 00

To:

00 : 00

**Start** is the clock time range within which the split break time must commence. For example,

☒ Start

06 : 00

To:

13 : 00

**End** is the clock time range within which it must finish.

**Duration** is the time interval range for the split break time.

We do not want a split break before a minimum amount of work time - the first run length.

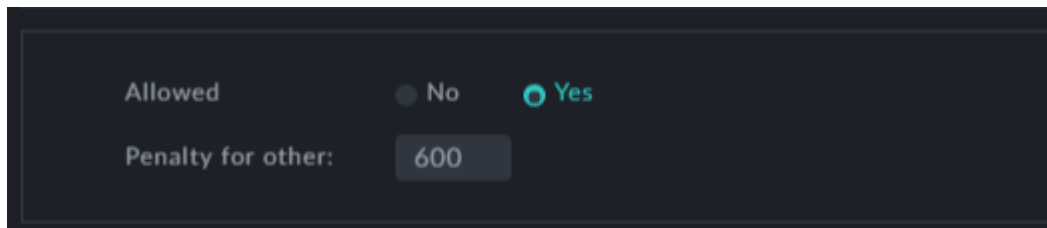
**First run length** provides range for this Duty Type.

**Allowed** is set to Yes by default. It directs the Optimizer to allow this Duty Type when it can make a match. Setting it to No, directs the optimizer to disallow a duty matching this Duty Type.

**Penalty:** The penalty is the cost of using this Duty Type.


#### The fall-back Display:

The fall-back section appears at the bottom of all instances of this preference. It is the small panel at the bottom of **Figure 1-1**:



The screenshot shows a dark-themed control panel. At the top, the word 'Allowed' is followed by two radio buttons: 'No' (unselected) and 'Yes' (selected, highlighted in green). Below this, the text 'Penalty for other:' is followed by a text input field containing the number '600'.

It is a default duty type to fill out gaps in any 24 hour period. You can prevent its use by setting **Allowed** to No. You can also set a penalty for using it.

**Note**

Disallowing the fall-back is not advised.

Here is what the fall-back looks like at the end of an actual Duty Types Preference:

Duty Types 9

Name

Other Short

Description

Split

☐ No
☒ Yes
☐ Either

Allowed

☐ No
☒ Yes

Penalty

700

Start

00 : 00

To:

00 : 00

End

00 : 00

To:

00 : 00

Paid

00 : 00

To:

00 : 00

Work

☒

00 : 00

To:

02 : 59

Length

00 : 00

To:

00 : 00

Duty Types 10

Name

Long

Description

Split

☐ No
☒ Yes
☐ Either

Allowed

☐ No
☒ Yes

Penalty

300

Start

00 : 00

To:

00 : 00

End

00 : 00

To:

00 : 00

Paid

00 : 00

To:

00 : 00

Work

☒

12 : 01

To:

16 : 00

Length

00 : 00

To:

00 : 00

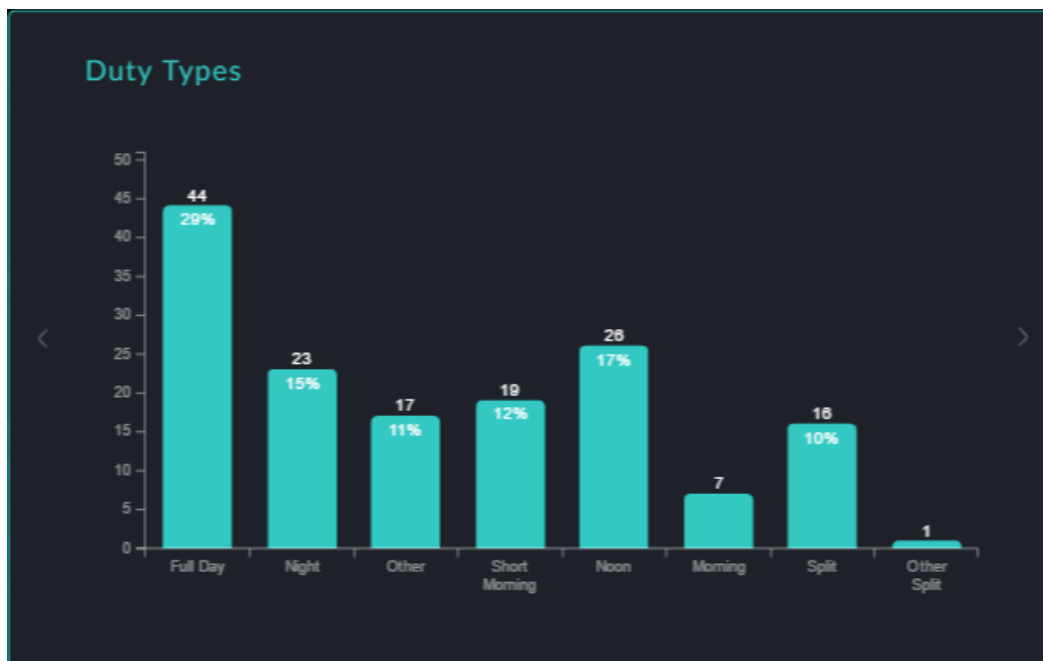
Allowed

☐ No
☒ Yes

Penalty for other:

600

This particular schedule uses eight out of 10 named Duty Types, which appear in the Duty types KPI Histogram (see [Distribution of Driver Duties by Duty Type](#)):



#### Points to note:

- » You may create additional instances of this preference for different Duty Types. However, there are no Edit Filters and you should take care to ensure consistency

between instances.

- » There are currently no additional Optibus templates available