

# MT SaaS Workforce Management Forecasting and Scheduling Guide

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# Contents

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<b>About this guide .....</b>	<b>12</b>
<b>Getting started with Forecasting and Scheduling .....</b>	<b>14</b>
Forecasting and Scheduling overview .....	15
Generating the schedule .....	17
Managing the schedule .....	19
<b>Campaigns and scheduling periods .....</b>	<b>20</b>
Campaigns and scheduling periods overview .....	21
Workflow: Define a campaign and scheduling period .....	22
Create a campaign .....	23
Campaign settings .....	23
Define initial settings for a scheduling period .....	25
Configure general settings and hours of operation .....	26
Scheduling period settings .....	27
Link queues to a scheduling period .....	28
Campaign queue settings .....	29
Overriding organizational work rules for a specific scheduling period .....	31
Set up work rules for a specific scheduling period .....	32
Assign a skill to employees for a scheduling period .....	33
Assign work rules to employees for a scheduling period .....	34
View time banks for a scheduling period .....	35
Adjust paid hours for time banks .....	36
Link employees to the scheduling period .....	38
Remove employees from a scheduling period .....	39
Add staffing profiles to a scheduling period .....	40
Staffing profile fields .....	41
Remove staffing profiles from a scheduling period .....	44
<b>Forecasts .....</b>	<b>45</b>
Generate a forecast for an immediate or deferred queue .....	46
Add historical data .....	47
Add historical weeks .....	47
Load a forecast profile .....	48
Import a forecast .....	48
Enter historical data manually .....	49
Set strategic forecast weight .....	49
Scale forecast data .....	50

---

Enter a shrinkage factor .....	51
Apply a modeling factor .....	51
Generate a forecast for an outbound queue .....	52
Generate a forecast for a project queue .....	53
Edit forecast data .....	54
Export forecast data .....	55
View an instance .....	56
View notes .....	57
Save a profile for the forecast .....	58
Fetch a backlog from the selected period .....	59
Enter a backlog manually .....	60
Set a reforecasted backlog .....	61
Backlog .....	62
<b>Service goals and requirements .....</b>	<b>63</b>
Set service goals .....	64
Service goals and queue behavior settings .....	65
Edit requirements .....	67
Scale requirements .....	68
Import service goals and requirements .....	69
Export service goals and requirements .....	70
<b>Allocations .....</b>	<b>71</b>
Export allocations .....	72
Import allocations .....	73
Set allocations across distributed queues .....	74
Allocate planned and projected values .....	75
<b>Backlog Age .....</b>	<b>76</b>
Specify backlog age .....	77
Backlog Age Template .....	78
Create a backlog age template .....	80
<b>Generating a schedule .....</b>	<b>81</b>
About the Generate Schedule option .....	82
Campaign or no campaign? .....	84
Select campaign data for schedules .....	85
Select no campaign for schedules .....	86
Generate the schedule automatically .....	87
Generate Schedule settings .....	89
Service level versus preferences .....	94
Analyze the schedule .....	96
Workflow: Import the schedule from an external source .....	97
Import outsourcer schedule .....	97

---

Generate the schedule for multiple scheduling periods .....	99
Scheduler setup settings .....	100
Schedule Run status fields .....	106
<b>Viewing a schedule .....</b>	<b>108</b>
About viewing the schedule .....	109
Schedule layer hierarchy .....	111
Components on the same and different layers .....	113
Employees adhere to the highest schedule layer .....	114
View the schedule .....	115
Zoom in and out of the schedule .....	118
View daily summary for employees .....	120
View paid hours on draft and published schedules .....	121
About time zones .....	123
View schedule in user or campaign time zone .....	124
View time zones for distributed campaigns .....	125
Find calendar data .....	126
Sort schedule attributes .....	127
Schedule attributes .....	127
View statistics .....	129
Inbound scheduling statistics .....	130
FTE Differential statistic .....	131
Configure FTE Differential threshold status .....	132
View FTE Differential threshold status .....	132
FTE Differential threshold parameters .....	133
Calculate and view resources information .....	135
Calculation details .....	136
General staffing .....	138
Full Time Equivalents (FTE) .....	139
View activity legend .....	141
Refresh schedules .....	142
<b>Editing a schedule .....</b>	<b>143</b>
Editing the calendar manually .....	145
Create a shift assignment .....	148
Shift assignment settings .....	149
Edit a shift assignment .....	151
Non-standard shift assignments .....	151
Best matched work rule for edited shift assignments .....	153
Create a shift event .....	154
Shift event settings .....	154
Edit a shift event .....	156
Optimized placement for shift events .....	156

---

Calendar, time off and unavailability events .....	158
Create a calendar event .....	160
Calendar event settings .....	161
Create a time-off event .....	163
Time off event settings .....	163
Make an employee absent for a shift .....	166
Create an unavailability event .....	168
Unavailability event settings .....	169
Attendees tab settings .....	170
Recurrence tab settings .....	171
Add a new assignment for a single employee .....	172
Edit single instance or recurring events .....	173
Edit single-instance events only .....	174
Copying and pasting assignments overview .....	175
Copy and paste scheduling assignments .....	176
Scheduling eLearning and Coaching assignments .....	178
Workflow: Schedule eLearning and Coaching assignments .....	178
Review eLearning and Coaching assignments .....	179
Set defaults for eLearning and Coaching assignments .....	180
Customize settings for eLearning and Coaching assignments .....	181
Apply settings for eLearning and Coaching assignments .....	182
Manage events tab settings .....	182
Edit events for eLearning and Coaching assignments .....	186
Move or resize scheduling components .....	188
Configure employee columns .....	189
Lock or unlock multiple components .....	191
Bulk Lock / Unlock settings .....	191
Phantom scheduling .....	193
Convert selected employees to phantoms .....	193
Convert all employees to phantoms .....	194
Example: Convert employee schedules to phantoms .....	195
Assign a phantom schedule to an employee .....	195
Remove all phantoms from workspace .....	196
Manage events by grouping schedule information .....	197
Mass Schedule Editor selection filters .....	198
Mass Schedule Editor columns .....	199
Scheduling classes .....	200
Create a class .....	201
Class attributes .....	202
Example: Defining class attributes .....	203
View and manage classes and class sessions .....	204
Create a class session for unassigned attendees .....	205

---

Edit a class .....	205
Delete a class .....	206
Edit a class session .....	206
Delete a class session .....	207
Locking and unlocking sessions and attendees .....	207
Lock and unlock all sessions for a class .....	208
Lock and unlock all attendees for a class .....	209
Lock and unlock all attendees for a session .....	210
Lock and unlock a session .....	210
Deleting components in WFM .....	212
Delete single components .....	213
Delete multiple components .....	214
Bulk Delete parameters .....	215
<b>Distributing a schedule .....</b>	<b>216</b>
Publish the schedule .....	217
Unpublish the schedule .....	219
Troubleshooting tips for schedule publishing .....	221
Revert the schedule .....	222
<b>Forecasting and scheduling scenarios .....</b>	<b>223</b>
Multi-contact scheduling .....	224
Workflow: Generate a schedule using multiple media types .....	224
Create activity with multiple media types .....	225
Create work rules based on multiple media activities .....	226
Create work patterns associated with multiple media types .....	227
Create a campaign for schedules associated with multiple media types .....	228
Generate a schedule associated with multiple media types .....	229
Skill-based scheduling .....	230
Workflow: Generate a schedule using skill-based scheduling .....	230
Create skills and link them to employees .....	230
Create a skill-based scheduling period .....	231
Link skills to queues .....	232
Generate a schedule for a skill-based scheduling period .....	233
Multi-site scheduling .....	234
Workflow: Generate a schedule for a distributed campaign .....	234
Create queues for a distributed campaign .....	235
Create distributed campaign with subcampaigns .....	236
Link subqueues, skills, and employees .....	237
Create forecast and define service goals for a distributed campaign .....	238
Allocate percentages for each work queue manually .....	239
Generate a schedule for a distributed campaign .....	239
Workflow: Generate a schedule for a virtual campaign .....	240

---

Create queues for a virtual campaign .....	240
Create a virtual campaign .....	241
Link queues, skills, and employees .....	241
Create forecast and define service goals for a virtual campaign .....	242
Generate a schedule for a virtual campaign .....	243
Intraday optimization .....	244
Workflow: Using Intraday optimization .....	245
Create an initial forecast .....	245
Generate and publish the schedule .....	246
Track deviations of key operational statistics .....	247
View trends .....	248
Configure trends .....	249
Reforecast data .....	249
Workflow: Adjust schedule with OT and VTO .....	250
Define OT extensions and VTO events .....	251
Define work patterns with OT and VTO options .....	252
Assign work patterns with OT and VTO options to employees .....	252
Set preferences for OT and VTO for each employee .....	253
Generate a schedule with OT and VTO scheduling options .....	254
Work queue hopping .....	255
Workflow: Generate a schedule using queue hopping .....	255
Set up a subordinate data source .....	256
Subordinate data sources .....	257
Create and assign skills for queue hopping .....	258
Create skill-dedicated activities for queue hopping .....	259
Create flexible shift events based on queue hopping activity .....	260
Link shifts to work patterns and work patterns to employees .....	261
Define campaigns and scheduling periods for queue hopping .....	262
Create a forecast and define service goals for queue hopping .....	263
Generate and refine a schedule using queue hopping .....	264
Workforce planning .....	265
Workflow: Create and use staffing profiles .....	266
Create a staffing profile .....	266
Add a staffing profile to the scheduling period .....	267
Schedule a staffing profile and create phantom schedules .....	268
View statistics using staffing profiles .....	269
Outbound scheduling .....	271
Workflow: Generate a schedule using outbound scheduling .....	271
Set up outbound work queues .....	272
Set up outbound skills .....	272
Set up work rules based on outbound activity .....	273
Create a campaign and scheduling period for outbound scheduling .....	274

Forecast each outbound work queue .....	275
Set service goals for each outbound work queue .....	276
Service goal tips for outbound queues .....	277
View FTE requirements for outbound scheduling .....	277
Generate a schedule with outbound work queues .....	278
View outbound media statistics .....	279
Outbound scheduling statistics .....	279
Time banking scheduling .....	282
Monthly scheduling .....	284
Workflow: Generate monthly schedules .....	284
Create monthly work patterns and assign to employees .....	285
Create monthly assignment rules and assign to employees .....	286
Set minimum and maximum monthly hours for employees .....	287
Create monthly campaign and scheduling period .....	288
Create forecast for monthly schedules .....	289
Generate monthly schedule .....	290
Campaign pooling .....	291
Workflow: Generate schedules for campaign pooling .....	292
Set up activities and work rules for pooling .....	292
Specify employees as poolers and assign work rules .....	293
Link poolers to a secondary campaign .....	294
Generate a schedule for the primary campaign .....	295
Generate a schedule for the secondary campaign .....	296
View poolers on the schedule .....	297
<b>Operations scheduling .....</b>	<b>298</b>
Operations workflow overview .....	299
Workflow: Generate a schedule for Operations queues .....	301
Create queues for Operations .....	302
Define and manage volume for Operations queues .....	302
Create activities for Operations .....	303
Create shift events for Operations .....	304
Create shifts and work patterns for Operations .....	305
Create a campaign and scheduling period for Operations .....	306
Create forecast for Operations root queue .....	307
Set deadline goals for Operations .....	308
Generate a schedule for Operations .....	308
Track volume, status, and history of work items .....	309
Example: Generating a Linked Queue Forecasting (LQF) schedule .....	310
Workflow: Generate a schedule for Project queues .....	312
Create a campaign and scheduling period for Projects .....	312
Create a forecast for a Project queue .....	313

---

Project forecast columns .....	315
Generate a schedule for Projects .....	315
Project queue staffing status .....	317
Configure Project queue threshold status .....	317
Calendar Queue Ribbon Color Configuration parameters .....	318
Forecasting and Scheduling Calendar Preferences Parameters .....	318
View Project queue status .....	319
Project queue status fields .....	320
Example: Viewing Project queue threshold status .....	321
View Project resources information .....	322
Operations terminology .....	323
<b>Troubleshooting schedule messages .....</b>	<b>324</b>
Schedule generation messages .....	325
General Issues .....	326
Assignment Rule Issues .....	330
Employee Issues .....	332
Queue Issues .....	335
Goal/Forecast Issues .....	337
Min/Max Hour Issues .....	338
Shift Issues .....	340
Shift Event Issues .....	342
Number of named employees Issues .....	343
Hours of Operations Issues .....	345
Event Issues .....	346
Attendee Issues .....	347
Preference Issues .....	348
Time Bank Issues .....	350
Additional Messages .....	351
<b>WFM Frequently Asked Questions (FAQs) .....</b>	<b>352</b>
Organization settings FAQs .....	353
Work rules FAQs .....	355
Employee FAQs .....	357
Campaign FAQs .....	360
Forecasting FAQs .....	362
Service level FAQs .....	364
Calendar FAQs .....	365
Importing data into Queue Analytics FAQs .....	369
<b>Preference-based scheduling .....</b>	<b>373</b>
Scheduling with preferences .....	374
Fixed constraints .....	376
Prioritized constraints and preferences .....	377

---

Schedule preferences methodology .....	378
Work pattern scheduling .....	378
Work pattern preferences .....	379
Start time and day off scheduling .....	380
Start time and day off preferences .....	381
Obstacles to preferences being granted .....	382
Sample preferences report .....	383

# About this guide

The *Workforce Management Forecasting and Scheduling Guide* provides detailed workflows and information about forecasting and generating a schedule that suits your organization.

### Intended audience

This guide is designed for:

- Anyone responsible for generating a schedule.
- Anyone responsible for creating a forecast, and defining service goals and requirements.
- Anyone responsible for troubleshooting issues with scheduling.

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## Document revision history

Revision	Description of changes
1.02	<p>Updates for <b>HFR7 710</b>:</p> <p>In <i>Editing a Schedule</i>, created a topic, <i>Configure employee columns</i>, which describes how to add employee data to the calendar by adding columns that display employee attributes next to the employee names.</p>
1.01	<p>In <i>Generate the schedule automatically</i>, added a note, indicating that when generating a schedule, the time that it takes to complete the schedule generation depends on multiple factors.</p>
1.00	<ul style="list-style-type: none"><li>• <i>Explore schedule scenarios in What If mode</i>: Removed this topic, as <b>What If</b> mode is <i>not</i> supported in a Cloud environment.</li><li>• <i>Branch Planning</i>: Removed this chapter, as Branch planning is <i>not</i> supported in a Cloud environment.</li></ul>

# Getting started with Forecasting and Scheduling

The Workforce Management (WFM) application uses work rules, campaign parameters, forecast data, service goals, and scheduling parameters to generate automatically an optimal schedule that fits your organization. If needed, you can also manually edit the schedule. When the schedule is finalized, you can publish it, making it available to managers and employees.

## Topics

Forecasting and Scheduling overview .....	15
Generating the schedule .....	17
Managing the schedule .....	19

# Forecasting and Scheduling overview

The Workforce Management (WFM) application uses work rules, campaign parameters, forecast data, service goals, and scheduling parameters to generate automatically an optimal schedule that fits your organization. If needed, you can also manually edit the schedule. When the schedule is finalized, you can publish it, making it available to managers and employees.

## Administration entities

In the **Work Administration** and **User Management** modules, work rules are defined and assigned to specific employees. Work rules, including shifts, shift events, VTO events and OT extensions, are assigned to work patterns. Work patterns, in turn, along with other work rules, are assigned to employees.

Employees are also assigned other types of work rules, such as minimum and maximum paid hours, pooling rules, assignment rules, rotations and time banks. For skill-based scheduling, employees are assigned skills, which define the required skills employees need to handle the workload.

## Scheduling entities

In the WFM **Forecasting and Scheduling** module, schedules are generated for a specific *campaign* and *scheduling period*.

A *scheduling period* is a specified period of time when selected employees target a specific workload. A *campaign* is a collection of scheduling periods. You define specific settings for each scheduling period, including the number of weeks and start date of the scheduling period, and the organizations to which the scheduling period is linked. You then link employees and work queues to the scheduling period.

When you generate the schedule, WFM creates schedules for all employees linked to the scheduling period. All of the work rules and skills assigned to these employees are incorporated into the schedule.

## Forecasting entities

Also in the WFM **Forecasting and Scheduling** module (under **Tactical Forecasts** and **Goals**), you define *forecast* data and *service goals*, which the scheduling engine takes into account when generating an optimal schedule.

A *forecast* estimates the required resources for a specific scheduling period based on historical data. The data in a forecast includes interaction and work volume, and Average Handling Time (AHT). Based on this data, you can build a forecast that is statistically probable for each work queue.

*Service goals* allow you to determine how quickly you want work to be handled. You can set the following service goals:

- *Service level*: Set percentage of interactions handled in a set unit of time
- *Average Speed to Answer (ASA)*: Average amount of time by which an employee must respond to a customer interaction or work unit
- *Deadline goal*: Specified time period within which work that has arrived must be completed (used in Operations environments)

The scheduling engine uses the forecast data and service goal requirements to generate a schedule with the assigned resources.

## Related topics

[Campaigns and scheduling periods](#), page 20

[Forecasts](#), page 45

[Service goals and requirements](#), page 63

[Generating a schedule](#), page 81

**Related information**

Set up work rules (*Workforce Management Administration Guide*)

# Generating the schedule

The goal of the WFM application is to create an optimal schedule for your organization. You can automatically generate a schedule based on specific work rules you define in the **Work Administration** module. The **Generate schedule** option is the recommended and optimal way to generate a schedule.

There are alternate ways to generate a schedule as well, including manually creating it using the Calendar, importing it from an external source, and generating the schedule for multiple scheduling periods as a batch operation.

## Automatically generate the schedule

If you create a schedule on a recurring basis, set up the WFM work rules using the **Work Administration** module. Then, generate the schedule from the **Forecasting and Scheduling** module.

Base your schedules on work queues, work rules, and skills that fit your organization and employees. These components do *not* typically change that often. Use them to generate schedules for different scheduling periods. They serve as templates from which you can make more updates from the calendar.

Once you set up the components, you can generate the schedule from the **Forecasting and Scheduling** module using the **Generate schedule** option. After the schedule is generated, you can manually update it with more shift assignments, shift events, calendar events, time-off events, unavailability events, and classes.

## Other ways to create the schedule

You can also create the schedule in the following alternate ways:

- **Manually create or edit the schedule:** After selecting the calendar data on the left pane (**Campaign**, **Dates**, **Employees** and **Queues**), you can manually add shifts, shift events, calendar, time-off and unavailability events, and classes on the calendar. Manually creating the *entire* schedule is a time-consuming process. Therefore, it is highly recommended to use the automatic **Generate schedule** option and make any needed manual updates.

To schedule calendar events, time off events, unavailability events, and classes, you *must* manually add them to the calendar. The manual method is also useful when you need to create non-standard shift assignments, or any schedule components that are *not* based on predefined work rules.

- **Import the schedule from an external source:** Outsourcers can create schedules externally, and you can import them back into the system. Schedule data can be shared with outsourcers to allow them to create the schedules. This capability is important for contact centers that share calls across their own sites and outsourced centers.

Using WFM, outsourcers export employee schedules as XML files using the adapter, *Generic - Outsourcer Staffing Profile Export*. Based on this data, outsourcers create schedules for the staff. Outsourcer schedules can then be imported back into WFM, using the adapter, *Generic - Outsourcer Staffing Profile Import*. You can manually import the schedules from the Forecasting and Scheduling module.

- **Generate the schedule for multiple scheduling periods:** You can set up and run campaign scheduling periods as a batch (multiple scheduling periods at the same time). This option is helpful for Regional Managers. If they set up multiple scheduling periods in multiple campaigns, they can generate the schedule for all of them at the same time.

## Related topics

[Managing the schedule](#), page 19

**Related information**

Workflow: Setting up scheduling components (*WFM Administration Guide*)

# Managing the schedule

After you have created your optimal schedule, you can view and analyze the data, make more updates, and finally publish it, which makes it available to managers and employees.

## View the schedule

The WFM application provides the ability for users to control their view of the schedule. You can view draft and published schedules, and adherence data all in one place. Zoom in and out of the schedule in hour, day, week or period views. View employee rows in a compressed, compact view or in the regular, standard view. View up to five layers of scheduling components on the calendar. In addition, you can view user and campaign time zones together.

## Edit the schedule

To add components that the scheduling engine does *not* add automatically by the **Generate schedule** option, manually edit the schedule. Before or after generating a schedule, you can manually add shift assignments and shift events. You can also add calendar events, time-off events, unavailability events, and classes. Once you have completed your updates, regenerate the updated schedule.

## Distribute the schedule

When the schedule is finalized, you can publish it. Publishing makes the schedule available to managers and employees.

If needed, you can unpublish the schedule. You can then make the required updates and republish the updated schedule. To overwrite the draft schedule with the last published schedule, revert to that schedule.

## Related topics

[Viewing a schedule](#), page 108

[Editing a schedule](#), page 143

[Distributing a schedule](#), page 216

# Campaigns and scheduling periods

A *scheduling period* is a specified period when defined employees target a specific workload. A *campaign* is a collection of scheduling periods. Schedules are generated for groups of employees who belong to a scheduling period.

### Topics

Campaigns and scheduling periods overview .....	21
Workflow: Define a campaign and scheduling period .....	22
Create a campaign .....	23
Define initial settings for a scheduling period .....	25
Configure general settings and hours of operation .....	26
Link queues to a scheduling period .....	28
Overriding organizational work rules for a specific scheduling period .....	31
Link employees to the scheduling period .....	38
Add staffing profiles to a scheduling period .....	40

# Campaigns and scheduling periods overview

A *scheduling period* is a specified period when defined employees target a specific workload. A *campaign* is a collection of scheduling periods. WFM generates schedules for groups of employees who belong to the same scheduling period.

Campaigns are *not* associated with time periods. A scheduling period is a container for a length of time and a start time for which to generate a schedule for a campaign.

## How are campaigns defined?

The system defines campaigns by:

- Organizations that contribute employees for the campaign
- Work queues that are handled for the campaign
- For skill-based campaigns only - skills needed for each work queue handled for the campaign

## When do you create separate campaigns?

Generally, create separate campaigns when:

- Employees are *not* scheduled together
- A different set of employees handles a separate set of interactions, and you want to report on each group individually

## More about scheduling periods

A scheduling period can be one week, multiple weeks, or one month.

Schedules are generated for groups of employees who belong to a scheduling period. Organizations are linked to a scheduling period. Only employees who belong to the linked organizations are available for scheduling.

## Related topics

[Workflow: Define a campaign and scheduling period](#), page 22

# Workflow: Define a campaign and scheduling period

Define a campaign, and then define the scheduling periods for the campaign. Link organizations, work queues, and employees to the scheduling period.



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## Workflow

**1** [Create a campaign](#), page 23

Create a campaign, which includes employees who contribute to one or more work queues, and are scheduled during the same time frame.

**2** [Define initial settings for a scheduling period](#), page 25

Define the initial settings for a scheduling period, including the number of weeks, start date, and the data on which the scheduling period is based. A scheduling period can be one week, multiple weeks, or one month.

**3** [Configure general settings and hours of operation](#), page 26

Configure general settings, including linking one or more organizations to the scheduling period. You can also set the hours of operation for the scheduling period.

**4** [Link queues to a scheduling period](#), page 28

Link work queues to a scheduling period. The work queues *must* belong to the organizations that are linked to the scheduling period. Each work queue can only be linked to *one* campaign in a specific scheduling period.

**5** Optional: [Overriding organizational work rules for a specific scheduling period](#), page 31

If needed, you can create exceptions to the organizational work rules by creating and assigning work rules for a *specific scheduling period only*. This option allows you to *override* organizational work rules for that scheduling period.

**6** [Link employees to the scheduling period](#), page 38

When you have finished configuring scheduling period parameters, you can link employees to the scheduling period.

**7** [Add a staffing profile to the scheduling period](#), page 267

Optional: You can add a staffing profile to a scheduling period. Staffing profiles describe the type of employee needed, their work patterns, and skills. Adding profiles to scheduling periods is similar to adding *employees* to scheduling periods.

## Related topics

[Generating a schedule](#), page 81

[Create monthly campaign and scheduling period](#), page 288

# Create a campaign

Create a campaign, which includes employees who contribute to one or more work queues, and who are scheduled during the same time frame.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Campaigns**, select **Settings**.
- 2 Select **Create Campaign**.
- 3 On the **Create Campaign** screen, complete the fields, and select **Save**.

The campaign appears under **Campaign Name** on the left side.

## What to do next

[Define initial settings for a scheduling period](#), page 25

## Related topics

[Campaign settings](#), page 23

[Workflow: Define a campaign and scheduling period](#), page 22

[Create monthly campaign and scheduling period](#), page 288

# Campaign settings

When creating a campaign, you need to complete fields that define the campaign.

Field	Description
Name	Defines the name of the campaign.
Description	Optional: Describes the campaign.
Time Zone	Sets the time zone of the campaign.
Week Start Day	Specifies the day of the week on which the campaign starts its work week.
Periodicity	Specifies the time period of the scheduling periods defined for the campaign: <ul style="list-style-type: none"><li>• <b>Weekly:</b> Campaign includes weekly scheduling periods.</li><li>• <b>Monthly:</b> Campaign includes monthly scheduling periods.</li></ul>
Month Start Day	

NOTE: The **Periodicity** and **Month Start Day** fields only appear if the *Monthly scheduling* feature is enabled by activating the **Monthly Forecast and Rules** license.

Field	Description
Day Boundary	Specifies the time at which one day is considered to end and the next to begin.
Distributed Campaign	Indicates whether a campaign is a distributed campaign. Distributed campaigns are campaigns that include distributed work queues. Distributed work queues are used in multi-site scheduling, where workload is allocated among the sites, regardless of employee availability. A predetermined percentage of interactions is routed to each site in each interval.



The calendar uses **Time Zone** and **Day Boundary** to determine to which day shifts belong. When *user* and *campaign* time zones are different, shifts appear to belong to the wrong day when viewing them in *user* time zone.

## Related topics

[Create a campaign](#), page 23

## Related information

Create a distributed or virtual work queue (*Workforce Management Administration Guide*).

# Define initial settings for a scheduling period

Define the initial settings for a scheduling period, including the number of weeks, start date, and the data on which the scheduling period is based.

## Before you begin

[Create a campaign](#), page 23

## Procedure

- 1 From the left side under **Campaign Name**, select the campaign for which you want to create a scheduling period.
- 2 Select **Create Scheduling Period**.
- 3 For **Number of Weeks**, specify the number of weeks in the scheduling period.
- 4 For **Start Date**, specify the start date of the scheduling period.
- 5 Under **Initialization Options**, specify how to create the data for the scheduling period:
  - **Create as empty**: Starts the scheduling period without including any previous data.
  - **Copy data from previous week(s)**: Copies the data from *previous consecutive weeks from a scheduling period* in this campaign. This option is *only* available if the previous weeks are the same length as the currently selected date range.
  - **Copy data from select period**: Copies the data from a *previous scheduling period* in this campaign. This option is *only* available if the selected scheduling period is the same length as the currently selected date range.
  - **Customize week selection**: Copies the data from a *previous specific week from a scheduling period* in this campaign. This option is *only* available if there is at least one other scheduling period in this campaign. You can choose scheduling period weeks for each week of the scheduling period. Between one and six weeks are displayed. All weeks default to the first week defined previous to this one.
  - **Copy employee Min/Max hours, skill, and work pattern assignments**: Copies this data to the new scheduling period, providing that you selected **Copy data from select period**.
- 6 Select **Save**.

The scheduling period appears under the selected campaign. You are now ready to configure the general settings and hours of operation for the scheduling period.

## What to do next

[Configure general settings and hours of operation](#), page 26

## Related topics

[Scheduling period settings](#), page 27

[Workflow: Define a campaign and scheduling period](#), page 22

# Configure general settings and hours of operation

Configure general settings and the hours of operation for the scheduling period.

## Before you begin

[Define initial settings for a scheduling period](#), page 25

## Procedure

- 1 Under **General Settings**, complete the fields for the entire scheduling period.
- 2 Determine the next step:
  - If the scheduling period has multiple weeks, proceed to [step 3](#).
  - If the scheduling period has only one week, proceed to [step 4](#).
- 3 For scheduling periods with multiple weeks, do one of the following:
  - To set *different* hours of operation *for each week* in the scheduling period:  
From the scheduling period drop-down menu on the top right part of the screen, select the first week for which you want to set the hours of operation. Alternatively, select the right and left arrows until the week you want is selected. After you set the hours of operation for the first week, select the following weeks in the same way and configure the hours accordingly.
  - To set the *same* hours of operation for all weeks in the *entire scheduling period*:  
Select the **zoom out** button (🔍). The dates for the entire scheduling period are selected. (To zoom in to view a specific week, select the **Zoom In** button (🔍) and select the week you want.) Alternatively, select the scheduling period from the drop-down list. Set the hours of operation for the entire scheduling period.
- 4 Under **Hours of Operation**, set the hours of operation accordingly for the selected dates.  
To switch between the Campaign or Organization time zone and the user time zone, select the **Show Time Zone** icon (🕒).
- 5 Select **Save**.



Asterisks indicate different days of operation for different weeks. Blank start time or end times indicate different hours of operation for that day.

## What to do next

[Link queues to a scheduling period](#), page 28

## Related topics

[Scheduling period settings](#), page 27

[Workflow: Define a campaign and scheduling period](#), page 22

## Scheduling period settings

When creating a scheduling period, you need to configure general settings and the hours of operation.

Field	Description
<b>General Settings</b>	
Description	Optional: Describes the campaign.
Time Zone	Sets the time zone of the campaign. This field is read-only. It is defined when the campaign is created.
Week Start Day	Specifies the start day of the campaign. This field is read-only. It is defined when the campaign is created.
Day Boundary	Specifies for the campaign the time at which one day is considered to end and the next to begin. This field is read-only. It is defined when the campaign is created.
Organization	Specifies the organizations associated with the campaign.
Skill Based	Indicates whether the scheduling period is skill-based, meaning that the work queues linked to the scheduling period require defined skills. To service the workload, assign these skills to the employees assigned to the scheduling period.
Use All Employees in Linked Organizations	Links <i>all</i> employees in the linked organizations (selected in <b>Organization</b> ) to the scheduling period. Alternatively, you can select <i>specific (not all)</i> employees from these organizations to be linked to the scheduling period from <b>Forecasting and Scheduling, Employees and Profiles</b> . If you want to select specific employees, leave this field blank and add the employees you want from the <b>Employees / Profiles</b> module.
Hours of Operation	Specifies the days and the time ranges for which employees are scheduled during the scheduling period. By default, the hours of operation are 7 days a week, 24 hours a day. You can make the hours different for each day, if needed. For scheduling periods with multiple weeks, you can set different hours of operation for each week. NOTE: If you link <i>multiple</i> organizations to your scheduling period, set the hours of operation to include the <i>earliest</i> to the <i>latest</i> time from any linked organization.

### Related topics

[Configure general settings and hours of operation](#), page 26

# Link queues to a scheduling period

Link work queues to a scheduling period. The work queues *must* belong to the organizations that are linked to the scheduling period. Each work queue can only be linked to *one* campaign in a specific scheduling period.

A scheduling period targets a specific workload. Work queues represent demand. They help us predict workload by multiplying the volume of customer interactions by their expected handling time. Therefore, once you set up scheduling periods, you need to link the relevant work queues to them.

## Before you begin

- For *weekly* scheduling periods: [Configure general settings and hours of operation](#), page 26
- For *monthly* scheduling periods: [Create monthly campaign and scheduling period](#), page 288

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Campaigns**, select **Queues**.
  - 2 Under **Campaign Name**, expand the campaign and select the scheduling period to which you want to link a work queue.  
Under **Campaign Queues**, the system displays any existing queues linked to the selected scheduling period.
  - 3 To add a queue to the scheduling period, select **Add Queue to Scheduling Period**.
  - 4 Select the queues you want and select **Add Selected Queues**.
-  If no queues appear in the list, verify that the work queues you want to link belong to the same organizations that are linked to the scheduling period.

  - 5 If needed and relevant, modify the values of the **Net Staffing** fields and the **Skill** field for the recently added queue.  
 For skill-based scheduling periods, enter a skill in the **Skill** field. Associate each work queue with a skill so that the scheduling engine knows which employees can service the workload.
  - 6 Select **Save**.  
To remove a linked queue, select it and select **Remove Queue from Scheduling Period**.

## What to do next

Optional: [Set up work rules for a specific scheduling period](#), page 32

Or

[Link employees to the scheduling period](#), page 38

## Related topics

[Campaign queue settings](#), page 29

## Campaign queue settings

When adding a work queue to a scheduling period, you can modify the **Skill** and **Net Staffing** fields, which further define the work queue for the scheduling period.

Field	Description
Name	Defines the name of the work queue. This field is read-only and defined when creating the work queue (under <b>Work Administration</b> , <b>Work Queues</b> , and <b>Settings</b> ).
Description	Optional: Describes the work queue. This field is read-only and defined when creating the work queue (under <b>Work Administration</b> , <b>Work Queues</b> , and <b>Settings</b> ).
Organization	Defines the owner organization of the work queue. This field is read-only and defined when creating the work queue (under <b>Work Administration</b> , <b>Work Queues</b> , and <b>Settings</b> ).
Media	Specifies the media for the work queue. This field is read-only and defined when creating the work queue (under <b>Work Administration</b> , <b>Work Queues</b> , and <b>Settings</b> ).
Type	Specifies the type of work queue: <b>Normal</b> , <b>Distributed</b> , <b>Virtual</b> , or <b>Process</b> . This field is read-only and defined when creating the work queue (under <b>Work Administration</b> , <b>Work Queues</b> , and <b>Settings</b> ).
Skill	If the campaign is skill-based, this field defines the required skill for the work queue. For skill-based scheduling periods, associate each work queue with a skill so that the scheduling engine knows which employees can service the workload. Only the skills owned by the selected organizations and their ancestors are available. There is a one-to-one relationship between work queues and skills. Each work queue can be associated with <i>one</i> skill only. However, the same skill can be assigned to more than one queue.

Field	Description
Net Staffing Least Time Interval	<p>Sets the frequency by which net staffing thresholds are marked on the net staffing ribbons on the calendar.</p>
	<p>Net staffing thresholds indicate whether the employee count is understaffed, overstaffed, or neutral at the time interval specified by this parameter.</p> <p>Possible values include:</p> <ul style="list-style-type: none"> <li>• <b>15 minutes:</b> Every <i>15 minutes</i>, net staffing ribbons are marked as overstaffed, understaffed, or neutrally staffed.</li> <li>• <b>Hours:</b> Every <i>hour</i>, net staffing ribbons are marked as overstaffed, understaffed, or neutrally staffed.</li> <li>• <b>Days:</b> Every <i>day</i>, net staffing ribbons are marked as overstaffed, understaffed, or neutrally staffed.</li> <li>• <b>Weeks:</b> Whole weeks are marked as overstaffed, understaffed, or neutrally staffed on the net staffing ribbons.</li> </ul>
Net Staffing Threshold Over	<p>Specifies the tolerance, or the maximum number of employees that cause <i>overstafing</i>, without displaying an overstaffed indication on the net staffing ribbon.</p> <p>For example, this field is set to <b>5</b> and <b>Count</b>. These values mean that the organization can be overstaffed by 1-5 employees <i>without</i> displaying an overstaffed indication on the net staffing ribbon.</p> <p>If this field is set to <b>10</b> and <b>Percent</b>, the organization can be overstaffed by 10% <i>without</i> displaying any overstaffed indication on the net staffing ribbon.</p>
Net Staffing Threshold Under	<p>Specifies the tolerance, or the maximum number of employees that cause <i>understaffing</i>, without displaying an understaffed indication on the net staffing ribbon.</p> <p>For example, this field is set to <b>7</b> and <b>Count</b>. These values mean that the schedule can be understaffed by 1-7 employees <i>without</i> displaying an understaffed indication on the net staffing ribbon.</p> <p>If this field is set to <b>15</b> and <b>Percent</b>, the schedule can be understaffed by 15% <i>without</i> displaying an understaffed indication on the net staffing ribbon.</p>

## Net staffing settings versus net staffing ribbons

*Net staffing statistics* show whether a specified time interval is understaffed or overstaffed, or is appropriately staffed.

*Net staffing ribbons* facilitate shift requests and changes. They appear below shift assignments on schedules.

Set net staffing parameters for the combined work queue (for non-skilled scheduling periods) or for each work queue (for skilled scheduling periods).

## Related topics

[Link queues to a scheduling period](#), page 28

# Overriding organizational work rules for a specific scheduling period

You can override organizational work rules and employee settings and create *exceptions* for a specific scheduling period only. *These settings are only relevant for that scheduling period.*

For example, set up shifts, shift events or work patterns for a scheduling period. Then, assign those work rules to some or all employees linked to that scheduling period. Assign skills and time banks to employees, which are *only* relevant for that *specific* scheduling period.

## Organizational settings versus exceptions for a scheduling period

You can set up work rules and employee settings on an organizational level, where you can use them for *any* campaign and scheduling period. Alternatively, you can define these settings for a specific scheduling period *only*.

The settings are similar in both cases. The main difference is the workspace from which you configure the settings on the WFO Portal. There are also some work rules you can *only* define on an organizational level, including rotations, assignment rules, and time banks.

## Organizational settings

Type of Setting	Workspace	Description
Work rules	Work Administration, Work Rules	Define the following work rules for organizations: <ul style="list-style-type: none"> <li>• Shifts</li> <li>• Shift events</li> <li>• VTO events</li> <li>• OT extensions</li> <li>• Work patterns</li> <li>• Project rules</li> <li>• Rotations</li> <li>• Assignment rules</li> <li>• Time banks</li> </ul>
Organization settings	Organization Management, Skills	Define skills for organizations.
Employee settings	User Management, Skills	Assign skills to employees.
Employee settings	User Management, Work Rules	Assign defined work rules to employees.

## Scheduling period exception settings

Type of Setting	Workspace	Description
Work rules	Forecasting and Scheduling, Work Rules	<p>Define the following work rules for a specific scheduling period:</p> <ul style="list-style-type: none"> <li>• Shifts</li> <li>• Shift events</li> <li>• VTO events</li> <li>• OT extensions</li> <li>• Work patterns</li> <li>• Project rules</li> </ul>
Employee settings	Forecasting and Scheduling, Employees, Skills	Assign skills to employees for a specific scheduling period.
Employee settings	Forecasting and Scheduling, Employees, Work Rules	Assign work rules to employees for a specific scheduling period.
Employee settings	Forecasting and Scheduling, Employees, Time Banks	Assign time banks to employees for a specific scheduling period.

### Related topics

[Set up work rules for a specific scheduling period](#), page 32

[Assign a skill to employees for a scheduling period](#), page 33

[Assign work rules to employees for a scheduling period](#), page 34

[View time banks for a scheduling period](#), page 35

## Set up work rules for a specific scheduling period

You can create work rules that *only* apply to a *specific* scheduling period. The work rules are listed with **Local** as the organization.



Skip this task if you are using organizational work rules only. This task is only relevant if you need to create exceptions for a specific scheduling period.

### Before you begin

[Link queues to a scheduling period](#), page 28

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Work Rules**, select the type of work rules you want to define for the campaign.  
For example, to define shifts for the campaign, under **Work Rules**, select **Shifts**.
- 2 From the left pane, select the campaign and scheduling period for which you want to create the work rule.

- 3 To create the work rule, select **Create**, and complete the fields for the specific work rule. For example, if you are in the **Shifts** workspace, select **Create** and complete the fields to create a shift for the scheduling period.
- 4 Select **Save**.  
The work rule appears for the selected scheduling period.

 When defining a work rule for a specific scheduling period, the value in the **Organization** field is **Local**.

### What to do next

[Link employees to the scheduling period](#), page 38

### Related topics

[Assign a skill to employees for a scheduling period](#), page 33

[Assign work rules to employees for a scheduling period](#), page 34

[View time banks for a scheduling period](#), page 35

## Assign a skill to employees for a scheduling period

Assign a skill to employees for a *specific scheduling period only*. Assigning skills to employees are done after you create the skills that parallel the skills needed to deal with the workload.

 Skills are required for skill-based scheduling. If you are *not* performing skill-based scheduling, you *do not* need to create skills.

### Before you begin

Create a skill or Import skills (*Workforce Management Administration Guide*)

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Employees**, select **Skills**.
- 2 From the left pane **Campaign** and **Period** fields, select the campaign and scheduling period for which you want to assign skills to employees.
- 3 Set the filters to display the employees for which you want to assign a skill, and select one or more employees.  
The **Skills Assignment** screen lists the current skills assigned to the selected employees.
- 4 To add a skill for the employees, under **Assigned**, select **Add**.
- 5 Select the skills you want to assign to one or more employees, and select **Add Selected Skills**.  
The system populates the skills on the **Skills Assignment** screen, under **Assigned**.
- 6 To enter data about the skill assignment, select the **Edit** icon  next to **Start Date / End Date**.  
The system displays a history of the skill assignment to the employee. The history includes the dates the skill was assigned, and the settings for those time periods.
- 7 For the current skill assignment, complete the fields on the bottom half of the **Skill** screen, and select **Set**.

- 8 On the Skills Assignment screen, select **Save**.

### Related information

Skills assignment details, history and current settings, proficiencies and priorities (*Workforce Management Administration Guide*)

## Assign work rules to employees for a scheduling period

Assign work rules to employees *for a specific scheduling period only*. These rules and parameters determine how an employee is scheduled.

### Before you begin

Define all relevant work rules - see Workflow: Set up work rules (*Workforce Management Administration Guide*)



You can *only* add pooling rules, assignment rules, and rotations to a work rule assignment on an organizational level for *all* campaigns (done using the **User Management** module). You *cannot* assign these rules to employees for a *specific scheduling period only* (done using the **Forecasting and Scheduling** module).

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Employees**, select **Work Rules**.
- 2 From the left pane **Campaign** and **Period** fields, select the campaign and scheduling period for which you want to assign work rules to employees.
- 3 Set the filters to display the employees for which you want to assign work rules, and select one or more employees.  
The **Work Rules Assignment** screen lists the current work rules assigned to the selected employees.
- 4 Select the employee or multiple employees for which you want to assign work rules:
  - To assign work rules to *one individual employee*, select the employee.
  - To assign the same work rules to *specific multiple employees*, select the ones you want and select **View**.
  - To assign the same work rules to *all displayed employees*, select **Select All**.*If you select multiple employees:* Only the fields for which all employees have the same value display a value. Fields with a different value for different employees are marked with an asterisk (\*).
- 5 On the **Work Rules Assignment** screen, define the **Hours** and the **Required Pay Period Hours** for the selected employees.
- 6 To add work patterns:
  - a. Expand **Work Patterns** and select **Add**.
  - b. From the **Work Pattern** screen, select the work patterns you want to add to the work rules assignment and select **Add Selected Work Patterns**.  
The selected work patterns are added to the work rule assignment.
  - c. To enter start and end effective dates each work pattern, select next to **Start Date / End Date**.

The system displays a history of the work pattern assignment to the employee. The history includes the dates the work pattern was assigned, and the settings for those time periods.

- d. For the current work pattern assignment, enter effective dates and preferences on the bottom half of the **Work Pattern** screen, and select **Set**.

You can also set a preference for the work pattern on the **Work Rules Assignment** screen, if needed.

**7** Review all assigned work rules to the selected employees, and make any required updates.

**8** Select **Save**.

The work rules are updated for the employees *for the selected scheduling period only*.

### Related information

Work rules assignment details, history, and required pay period hours (*Workforce Management Administration Guide*)

## View time banks for a scheduling period

You can view time banks that are assigned to a specific employee for a specific scheduling period.

### Before you begin

- Create or import a time bank - see *Workforce Management Administration Guide*
- Assign the time bank to the relevant employee - see *Assign work rules to employees* in *Workforce Management Administration Guide*

### Procedure

**1** Go to **Forecasting and Scheduling**. Under **Employees**, select **Time Banks**.

**2** From the **Campaign** field, select the campaign for which you want to view time banks.

**3** From the **Period** field, select the scheduling period for which you want to view time banks.

**4** From the employee list, select the employees for whom you want to view time banks for the selected scheduling period.

The time banks are displayed in the right pane for the selected employees.

**5** View the values for each period level:

- **Base Period**: Displays values for a 7-day period (typically) within the defined time frame of the time bank. The system divides the target hours for the time bank by the number of days defined in the time frame of the time bank. It then populates each **Base Period** with that number for the days in the period. Figures are rounded to the nearest 15 minutes.
- **Time Bank**: Displays values for the entire time frame of the time bank:

**6** View and understand the values:

- **Target**: Set number of hours for the time bank.

For **Time Bank**, the **Target** is the total number of hours for the time bank. For **Base Period**, the **Target** is the total number of hours for the time bank divided by the number of base periods. It is a read-only value and defined when creating or importing the time bank.

- **Paid**: Number of hours worked and used from the time bank. If manual adjustments have been made to this value, an asterisk (\*) appears after the value accordingly. For example: **37.40\***

indicates that the **Paid** value includes the number of hours worked in shifts *and* manual adjustments.

- **Balance: Paid - Target = Balance.** You *cannot* edit this value directly. When you edit the **Paid** values, the **Balance** recalculates accordingly. When the **Balance** is positive, the cell color is green. When the **Balance** is negative, the cell color is red.

**7** Note the following about viewing time bank hours:

- If you are viewing the *current* period, you can view values for **Target**, **Paid**, and **Balance**. If you are viewing a *future* period, there are *only* **Target** hours. **Paid** and **Balance** have no values, as the employee has *not* started using the time bank hours defined for the period.
- A number displayed in parentheses after a date on the date line indicates a partial week and the number of days in that partial week. For example: **12/31/2019 (2)** indicates it is a partial week that only includes two days.
- When a shift assignment spans a base period boundary, the following rule is used in counting the scheduled hours:
  - If the start date is in the base period, the whole shift length is counted toward that base period. Otherwise, it is *not* included at all for the base period.
  - If one time bank ends and another time bank starts in the scheduling period, the time bank shown depends on the navigation context. As you navigate day by day, the time bank grid is repopulated with the time bank that covers the current day. If you navigate week by week, the grid is repopulated with the time bank that covers the first day of the current week.

### What to do next

[Link employees to the scheduling period](#), page 38

### Related topics

[Adjust paid hours for time banks](#), page 36

### Related information

Time bank details, edit time bank base period hours (*Workforce Management Administration Guide*)

## Adjust paid hours for time banks

Adjust the paid or worked hours for time banks for specific base periods. You can either add or subtract hours for a period.

### Before you begin

[View time banks for a scheduling period](#), page 35

### Procedure

- 1 Go to the base period for which you want to adjust scheduling hours.
- 2 For that base period, select the value in the **Paid** field.
- 3 In the **Adjustments** field, type the value for which you want to adjust the paid or worked hours from the time bank.

To add hours to the paid value for this employee, type a positive number. To subtract hours, type a negative number.

The system adjusts the value and displays the result accordingly in the **Paid** field for the selected period. An asterisk (\*) appears after the value, indicating that there was a manual adjustment. The **Balance** is also adjusted, which is **Paid - Target** hours.

- 4 Select **OK**.

#### What to do next

[Link employees to the scheduling period](#), page 38

#### Related information

Time bank details (Workforce Management Administration Guide)

# Link employees to the scheduling period

Link employees to a scheduling period. You can link all or specific employees associated with the organizations defined for the scheduling period.

## Before you begin

- [Link queues to a scheduling period](#), page 28
- Verify that the employees you want to link to the scheduling period belong to the *same* organizations that are linked to the campaign. Under **Campaigns**, **Settings**, and **General Settings**, verify that the organizations displayed in the **Organization** field match the organizations of the employees.

## Procedure

- 1 Determine which employees you want to link to the scheduling period:
  - To link *all* employees belonging to all organizations defined for the scheduling period, proceed to [step 2](#).
  - To link *specific* employees from the organizations defined for the scheduling period, proceed to [step 3](#).
- 2 To link *all* employees from *all* organizations defined for the scheduling period:
  - a Go to **Forecasting and Scheduling**. Under **Campaigns**, select **Settings**.
  - b From the left pane, expand a campaign and select a scheduling period.
  - c Under **General Settings**, select **Use All Employees in Linked Organizations**.
  - d Select **Save**.
- 3 To link *specific* employees from the organizations defined for the scheduling period:
  - a Go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**.
  - b From **Campaign**, select the campaign to which you want to link employees.
  - c From **Period**, select the scheduling period in the campaign to which you want to link employees.  
If there are already employees linked to the selected scheduling period, they are displayed in the list. If no employees have been linked yet to the scheduling period, no employees are displayed.
  - d Select **Add Employee to SP**.

The employees displayed are associated with the organizations defined in the **Organization** field in the **Settings** workspace under **Campaigns**. You can *only* select employees associated with these organizations.

  - e Select the employees you want and select **Add**. To select all displayed employees, select **Select All**.
  - f Optional: To select employees who pool to the organizations linked to the campaign, select **Show Poolers** and select those employees.

The employees you selected are added to the scheduling period for the campaign.

## What to do next

Optional: [Add staffing profiles to a scheduling period](#), page 40

**Related topics**

[Scheduling period settings, page 27](#)

[Configure general settings and hours of operation, page 26](#)

## Remove employees from a scheduling period

If required, you can remove employees from a scheduling period after linking them.

**Before you begin**

[Link employees to the scheduling period, page 38](#)

**Procedure**

- 1 Go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**.
- 2 From **Campaign**, select the campaign from which you want to remove employees.
- 3 From **Period**, select the scheduling period in the campaign from which you want to remove employees.  
The employees linked to the selected scheduling period are displayed in the list.
- 4 From the employee list, select the employees you want to remove.
- 5 Select **Remove Employee from SP**.
- 6 To confirm removing the selected employees from the scheduling period, select **OK**.  
The employees are removed accordingly from the list.

**Related topics**

[Scheduling period settings, page 27](#)

[Configure general settings and hours of operation, page 26](#)

# Add staffing profiles to a scheduling period

You can add a *staffing profile* to a scheduling period, which is a type of schedule template or profile defined for a certain type of employee with specific skills and a work pattern. Adding profiles to scheduling periods is similar to adding *employees* to scheduling periods.

Only one profile is necessary for each type of employee. When you generate the schedule, the system creates the correct number of *phantom* schedules based on the profiles, according to your scheduling requirements. You can then assign a phantom schedule to actual employees, or convert an employee schedule to a phantom schedule.

## Before you begin

Create a staffing profile - see *Workforce Management Administration Guide*

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Staffing Profiles**, select **Staffing Profiles**.
- 2 From the left pane, expand the campaign and select the scheduling period to which you want to add staffing profiles.

- 3 Select **Add to SP**.

- 4 On the **Staffing Profiles** screen, select the staffing profiles you want to add and select **Save**.

The profiles are added accordingly for the selected scheduling period. The main details for the staffing profiles were defined when the staffing profiles were created in the **User Management** module, under **Staffing Profile**.

- 5 Optional. If you do *not* see the profile that you are looking for:

- Verify the organization with the profile you want to use is linked to the campaign:
  - Go to **Forecasting and Scheduling**.
  - Under **Campaigns**, select **Settings**.
  - Under **General Settings**, select the relevant organization in the **Organization** field.
- Verify that the profile is assigned to the organization linked to the campaign:
  - Go to **User Management**.
  - Under **Staffing Profile**, select **Staffing Profile**.
  - Verify that the relevant organization appears under the **Organization** field. If not, select to edit and change the value in the **Organization** field accordingly.

- 6 Determine how to handle the *ratio of employee types* for the staffing profile:

- To let the scheduling engine determine the optimal ratio of employee types, leave the default settings:
  - **Min Ratio** fields = 0%
  - **Max Ratio** fields = 100%
- To set an exact allocation for employee types, enter a specific value in the **Min Ratio** and **Max Ratio** fields.

For example, you want an allocation of exactly 60 percent of full-time employees. Enter **60** for both the **Min Ratio** and **Max Ratio** fields for the full-time profile. To enter an allocation of exactly 40 percent of part-time employees, type **40** for the **Min Ratio** and **Max Ratio** fields for the part-time profile.

- 7 If you are using team-based scheduling, set the *Team Size* for the staffing profile. If you are not using team based scheduling, leave *Team Size* as its default value of 1.
- 8 Determine how to handle the *number of employees* for the staffing profile:
  - To let the scheduling engine determine the optimal number of employees, leave the default settings:
    - **Min No** fields = **0**
    - **Max No** fields = **30000**
  - To set an exact number of employees for the profile, enter that number in both the **Min No** and **Max No** fields.
  - If you have set a value for *Team Size*, *Min No* and *Max No* must be multiples of *Team Size*, or 0. For example, if you set *Team Size* to 5, valid values for *Min No* and *Max No* would be 5 and 100.
- 9 To save any values you edited, select **Save**.

### Related topics

[Staffing profile fields](#), page 41

[Remove staffing profiles from a scheduling period](#), page 44

[Workforce planning](#), page 265

### Related information

Staffing profile details (*Workforce Management Administration Guide*)

## Staffing profile fields

When adding staffing profiles to a scheduling period, you can view read-only data about staffing profiles (defined when the staffing profile was created). You can also edit values for fields that determine how to handle the ratio of employee types and the number of employees for the specified scheduling period.

Field	Description
Profile Name	Descriptive name for the staffing profile. As staffing profiles are created for a specific type of employee with certain skills and work pattern, it is recommended to include these characteristics in the staffing profile name. <b>For example: Full-time, French, 8.5 hr</b>
Work Pattern	Work pattern on which the profile is based (defined when the profile was created in the <b>User Management</b> module under <b>Staffing Profile</b> ).
Organization	Organization to which the profile is associated (defined when the profile was created in the <b>User Management</b> module under <b>Staffing Profile</b> ).
Wage	Average wage for the profile (defined when the profile was created in the <b>User Management</b> module under <b>Staffing Profile</b> ).

Field	Description
Proficiency	<p>Required proficiency level for the profile (defined when the profile was created in the <b>User Management</b> module under <b>Staffing Profile</b>). The proficiency level is used when scheduling profiles for skill-based schedules.</p> <p>Possible values include:</p> <ul style="list-style-type: none"> <li>• <b>0.5:</b> Employee is <i>above average</i> at work. It takes them half as long as the defined Average Handle Time (AHT) to complete their work. The system considers this value as the work of two employees.</li> <li>• <b>1.0:</b> Employee is <i>average</i> at work. They complete their work within the Average Handle Time (AHT). The system considers this value as the work of one employee.</li> <li>• <b>2.0:</b> Employee is <i>below average</i> at work. It takes them twice as long as the defined Average Handle Time (AHT) to complete their work. The system considers this value as the work of one half of an employee.</li> </ul>
Chat Sessions	<p>Defined number of simultaneous chat sessions assigned to the staffing profile (defined when the profile was created in the <b>User Management</b> module under <b>Staffing Profile</b>).</p>
Assignment Rules	<p>Defined assignment rules associated with this staffing profile (defined when the profile was created in the <b>User Management</b> module under <b>Staffing Profile</b>).</p>
Skills	<p>Defined skills linked to this staffing profile (defined when the profile was created in the <b>User Management</b> module under <b>Staffing Profile</b>).</p>
Min. Ratio	<p>Specifies the <i>minimum percentage</i> this staffing profile makes up out of the <i>total percentage</i> of staffing profiles in the current scheduling period:</p> <ul style="list-style-type: none"> <li>• If you want the scheduling engine to have the flexibility to determine the optimal ratio of this staffing profile to the total profiles, set this field to 0%.</li> <li>• To set an exact allocation for this staffing profile, enter a specific value in this field.</li> </ul> <p>For example, you want this staffing profile to take up exactly 60% of the total staffing profiles in this scheduling period. Therefore, type <b>60</b> for the <b>Min. Ratio</b> field for this profile.</p>
	<p>If you enter an exact allocation in the <b>Min. Ratio</b> field for all staffing profiles for the current scheduling period, these values <i>cannot</i> add up to more than 100%. For example, you cannot enter a 40% <b>Min. Ratio</b> for the full-time staffing profile, and an 80% <b>Min. Ratio</b> for the part-time staffing profile.</p>

Field	Description
Maximum Ratio	<p>Specifies the <i>maximum percentage</i> this staffing profile makes up out of the <i>total percentage</i> of staffing profiles in the current scheduling period:</p> <ul style="list-style-type: none"> <li>If you want the scheduling engine to have the flexibility to determine the optimal ratio of this staffing profile to the total profiles, set this field to <b>100%</b>.</li> <li>To set an exact allocation for this staffing profile, enter a specific value in this field.</li> </ul> <p>For example, you want this staffing profile to take up exactly 40% of the total staffing profiles in this scheduling period. Therefore, type <b>40</b> for the <b>Max Ratio</b> field for this profile.</p>
	 If you enter an exact allocation in the <b>Maximum Ratio</b> field for all staffing profiles for the current scheduling period, these values <i>cannot</i> add up to less than 100%. For example, you <i>cannot</i> enter a 60% <b>Maximum Ratio</b> for the full-time staffing profile, and a 30% <b>Maximum Ratio</b> for the part-time staffing profile.
Min. No	<p>Specifies the <i>minimum number</i> this staffing profile makes up out of the <i>total number</i> of staffing profiles in the current scheduling period:</p> <ul style="list-style-type: none"> <li>If you want the scheduling engine to have the flexibility to determine the optimal number of this staffing profile (out of the total number of profiles), set the <b>Min. No</b> field to <b>0</b>.</li> <li>To set an exact number for this staffing profile, enter a specific value in the <b>Min. No</b> and <b>Max. No</b> fields.</li> </ul> <p>For example, if you want exactly 50 of this staffing profile, type <b>50</b> for <b>Min. No</b> and <b>Max. No</b> for this profile.</p>
Max. No	<p>Specifies the <i>maximum number</i> this staffing profile makes up out of the <i>total number</i> of staffing profiles in the current scheduling period:</p> <ul style="list-style-type: none"> <li>If you want the scheduling engine to have the flexibility to determine the optimal number of this staffing profile, set the <b>Max. No</b> field to <b>9999</b>.</li> <li>To set an exact number for this staffing profile, enter a specific value in the <b>Min. No</b> and <b>Max. No</b> fields.</li> </ul> <p>For example, if you want exactly 30 of this staffing profile, type <b>30</b> for the <b>Min. No</b> and <b>Max. No</b> fields for this profile.</p>
Total Profiles - Min. No	<p>Specifies the total <i>minimum</i> number of all staffing profiles for the current scheduling period.</p>
Total Profiles - Max. No	<p>Specifies the total <i>maximum</i> number of all staffing profiles for the current scheduling period.</p>

**Related topics**

[Add staffing profiles to a scheduling period](#), page 40

[Remove staffing profiles from a scheduling period](#), page 44

**Related information**

Staffing profile details (*Workforce Management Administration Guide*)

## Remove staffing profiles from a scheduling period

If required, you can remove staffing profiles from a scheduling period after adding them.

**Before you begin**

[Add staffing profiles to a scheduling period](#), page 40

**Procedure**

- 1 Go to **Forecasting and Scheduling**. Under **Staffing Profiles**, select **Staffing Profiles**.
- 2 From the left pane, expand the campaign and select the scheduling period from which you want to remove staffing profiles.
- 3 From the right pane, select the staffing profile you want to remove.
- 4 Select **Remove from SP**.
- 5 To confirm the deletion, select **OK**.

The system removes the staffing profile from the scheduling period.

**Related topics**

[Staffing profile fields](#), page 41

**Related information**

Staffing profile details (*Workforce Management Administration Guide*)

# Forecasts

Forecasts are used to predict the amount of work for an upcoming scheduling period based on historic statistical data.

When you create a forecast, it becomes your active forecast. You can set this forecast as the base forecast or save it as an instance to use later. The base forecast is used by the Calendar to generate a schedule. The active forecast is used by Queue Analytics to track the performance of queues. Queue Analytics lets you compare actual data from your automatic call distributor (ACD) against the forecasted data for that period.



Explore UI

## Topics

Generate a forecast for an immediate or deferred queue .....	46
Generate a forecast for an outbound queue .....	52
Generate a forecast for a project queue .....	53
Edit forecast data .....	54
Export forecast data .....	55
View an instance .....	56
View notes .....	57
Save a profile for the forecast .....	58
Fetch a backlog from the selected period .....	59
Enter a backlog manually .....	60
Set a reforecasted backlog .....	61
Backlog .....	62

# Generate a forecast for an immediate or deferred queue

A forecast predicts the amount of incoming work for a queue. The forecast is based on multiple weeks of historical contact/work volume and average handling time data. You can create a forecast for:

- Individual work queues
- Combined work queues

You can generate a forecast for media types such as phone, chat, voice-over-IP, face-to-face, email, fax, operations, callback, social post, and resolution. Some steps are optional. For example, you only need to set strategic forecast weight if you are importing data from the strategic planner.

The forecast takes into account the Shrinkage and Modeling Factor that have been defined for the scheduling period the forecast is being generated for.



Show Me

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecast**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Add data to the forecast by doing one of the following:
  - [Add historical weeks](#), page 47
  - [Load a forecast profile](#), page 48
  - [Import a forecast](#), page 48
  - [Enter historical data manually](#), page 49
- 4 Optional. If there is data for the scheduling period from the strategic planner, apply a weighting to this data on the Strategic tab on the details pane.
- 5 Optional. Scale all or part of the forecast data.  
If there is a known reason why the volumes may be increased or decreased for the scheduling period, you can uniformly scale the forecast data.
- 6 Optional. For deferred queues, select **Fetch Backlog**, to add backlog items to your forecast.
- 7 Optional. To save a copy of the forecast you are working on, select **Save as Instance**. Saving the forecast as an instance, makes it retrievable as an instance through the Forecasts selector.
- 8 Optional. To save the forecast as a profile, select **Save as profile** from the ribbon. Saving the forecast as a profile, allows you to load these weeks as a profile as the basis for a new forecast at another time.
- 9 Optional. To use the Forecast as the basis for generating the schedule in the Calendar, select **Set as Base**.

## Add historical data

The past performance of a queue can be a good indicator of future performance and used to create a forecast for upcoming activity. Use historical data such as volume and activity handling time as a basis for generating a forecast.

There are four ways to add historical data:

- [Add historical weeks](#), page 47  
Historical data for any queue is available in the system as historical weeks. Generate a forecast based on this data by adding historical weeks to your forecast. A weighting can be applied to any history week, which increases the effect it has on the forecast.
- [Load a forecast profile](#), page 48  
A forecast profile is a pattern of absolute or relative weeks of data that can be added to a forecast. Loading a profile provides a quick way to get a repeatable pattern of weeks within your forecast.
- [Import a forecast](#), page 48  
If you create a forecast in a third-party application, as long as it is in the correct format, you can import that data into forecast.
- [Enter historical data manually](#), page 49  
It is possible to create a forecast by adding data manually to the data table. You can add data by just typing the data in, or by pasting copied data into the data table.

## Add historical weeks

Historical data for any queue is available in the system as historical weeks. Generate a forecast based on this data by adding historical weeks to your forecast. A weighting can be applied to any history week, which increases the effect it has on the forecast.

If any period has been excluded from the forecast using notes in Queue Analytics, the data for those intervals in that period is set to zero. These intervals are ignored in any forecast calculation.

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecast**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Expand the details pane on the right and select the **History** tab.
- 4 On the History tab, to add data select **Add (+)**.
- 5 On the **Create new forecast from historic weeks** popup, specify one of the following:
  - Week, choose a full week from the calendar.
  - Custom week, define a full or partial week, specifying dates for each day selected.
  - Month, select the corresponding week to the one your are forecasting for, from a different month.
- 6 Select **Add week**.
- 7 To increase the effect that a specific history week has on the forecast, apply a weighting in the history weeks table. The weighting must be a value from 0 to 10.

## Related topics

[Save a profile for the forecast](#), page 58

## Load a forecast profile

A forecast profile is a pattern of absolute or relative weeks of data that can be added to a forecast. Loading a profile provides a quick way to get a repeatable pattern of weeks within your forecast.



In an MT SaaS environment, you can only see forecast profiles that you have created. You cannot see all forecast profiles created by other users in the system.

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select **Load Profile** on the ribbon.
- 4 On the **Load Profile** popup, select from the available profiles.
- 5 Select **Load profile**.

## Related topics

[Scale forecast data](#), page 50

## Import a forecast

If you create a forecast in a third-party application, as long as it is in the correct format, you can import that data into forecast.

If there is any data already in your forecast, importing data overwrites any existing data. The import setting disables the option of adding historical weeks.

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecast**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select **Import** on the ribbon.
- 4 Complete the parameters in the **Import** dialog:
  - **Import file name:** Browse to the data file.
  - **Data to import:** Select the statistics data to import.  
Data for a selected statistic can only be imported if it exists in the source file.
  - **Time interval:** Select between 15 min, 30 min, or 1 hour intervals.
  - **Number of lines to ignore from the start of file:** Specify the lines at the start source file that do not contain data. For example, ignore the first line, which could be the column header row.
  - **Delimiter:** Select whether the data in the file is tab or comma separated.
  - **Time zone:** Select between the time zone of the campaign or UTC.

- 5 Select **Import**.

#### Related topics

[Export forecast data](#), page 55

## Enter historical data manually

It is possible to create a forecast by adding data manually to the data table. You can add data by just typing the data in, or by pasting copied data into the data table.

Entering data manually removes the option of adding or importing historical weeks.

#### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecast**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Expand the details pane on the right and select the **Values** tab.
- 4 Enter values into the data table.
- 5 Select **Save**.

#### Related topics

[Scale forecast data](#), page 50

[Import a forecast](#), page 48

## Set strategic forecast weight

If you have strategic forecast data from the strategic planner, you can set a weighting factor to the data for Activity Handling Time and volume. The weighting factor determines the impact the strategic data has on the forecast when combined. The weight can be set to one or more queues.

#### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 On the details pane, select the **Strategic** tab.
- 4 Select either **Volume** or **Activity Handling Time** and enter a value of 0 to 100 for **Weight**.

#### Related topics

[Generate a forecast for an immediate or deferred queue](#), page 46

## Scale forecast data

To change the volume, connect rate, right party connect rate, and AHT totals while keeping the overall distribution of interactions, you can apply scaling. The scaling option is used to scale up or down the level of interactions forecasted.

Scaling can be applied to:

- The entire scheduling period.
- A single day.
- One or more selected intervals.

You can scale combined work queues or each work queue individually.

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Set the zoom level and select the period to scale.
- 4 Optional: To scale part of a day, open the Values tab on the details pane, and select the intervals you want to scale on the data table.
- 5 Select **Scale** on the ribbon.
- 6 On the **Scale** popup, select the data to scale  
The data depends on the queue type.
  - For immediate or deferred queues, you can scale Volume and Activity Handle Time.
  - For outbound queues, you can scale Connect Rate, Right Party Connect Rate, Activity Handle Time, or Right Party Connect Activity Handle Time.
- 7 Enter a new value in the **Scaled** or **% Change** column. When you press enter, the other column gets updated accordingly.  
If you are doing a partial scale on selected intervals, the data from those intervals is averaged together
- 8 To apply changes, select **Scale**.

### Example:

Due to a new product release, you expect volume to be 10% higher than the forecast currently displays. In this case, use scaling to apply a 10% increase to each interval throughout the scheduling period.

### Related topics

[Set strategic forecast weight](#), page 49

[Apply a modeling factor](#), page 51

## Enter a shrinkage factor

To take account of time that employees are not doing the work they were scheduled for, you can apply a shrinkage factor to your forecast. Shrinkage measures the time during which call agents are supposed to work but unavailable to take calls for some reason. These reasons include, team meetings, training, system downtime, holidays, breaks, and sickness. Shrinkage differs according to the type of business, time of the day and agent groups.

The shrinkage option is defined at the scheduling period level.

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select **Shrinkage** on the ribbon.
- 4 On the **Shrinkage** popup, enter the values in the table.
- 5 Select **Save**.

### Related topics

[Apply a modeling factor](#), page 51

## Apply a modeling factor

To balance the effect shrinkage has on a forecast, apply a modeling factor. While shrinkage is used to define the employees who are unable to handle interactions, modeling helps offset it. For example, supervisors or managers could step in to cover the work not being done by absent employees.

The modeling factor is applied to the entire scheduling period.

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select **Modeling Factor** on the ribbon.
- 4 On the **Modeling Factor** popup, enter the values in the table.
- 5 Select **Save**.

### Related topics

[Enter a shrinkage factor](#), page 51

# Generate a forecast for an outbound queue

The aim of a forecast is to predict the amount of incoming work for a queue. The forecast is based on multiple weeks of connect rate/right party connect rate and average handling time data. You can create a forecast for:

- Individual work queues
- Combined work queues

To generate a forecast for an outbound queue, not all steps in the process are compulsory. For example, you may only need to set scaling or add an outbound call list.

The forecast takes into account the Shrinkage and Modeling Factor that have been defined for the scheduling period the forecast is being generated for.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecast**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Add data to the forecast by doing one of the following:
  - [Add historical weeks](#), page 47
  - [Load a forecast profile](#), page 48
  - [Import a forecast](#), page 48
  - [Enter historical data manually](#), page 49
- 4 Optional. Create a call list on the **Lists** tab by doing the following:
  - a. Click Add (+) on the Lists tab.
  - b. Specify the start and end dates for the list by selecting the calendar icon in the table row for the list. These dates specify when the dialer can begin dialing the numbers on the list and when it must stop dialing.
  - c. Set the **Length**, which is the amount of numbers on the list.
  - d. Set the number of **Retries** allowed for each of the numbers on the list.If historical outbound call lists are contained in the history weeks that you add, they show up in the table on the Lists tab when the historical week is added. Remove any list using the delete icon.
- 5 Optional. Scale all or part of the forecast data.  
If there is a known reason why the volumes may be increased or decreased for the scheduling period, you can uniformly scale the forecast data.
- 6 Optional. To save a copy of the forecast you are working on, select **Save as Instance**. Saving the forecast as an instance, makes it retrievable as an instance through the Forecasts selector.
- 7 Optional. To save the forecast as a profile, select **Save as profile** from the ribbon. Saving the forecast as a profile, allows you to load these weeks as a profile as the basis for a new forecast at another time.
- 8 Optional. To use the Forecast as the basis for generating the schedule in the Calendar, select **Set as Base**.

# Generate a forecast for a project queue

To get non-volume-driven work done, add projects to the list. Project queues are used to include back-office operations into forecast.

You can create multiple entries for project work. The number of projects you can create depends on how much time you allocate to the projects and how much time is available in your scheduling period.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select **Add** on the ribbon.

As you add projects, the duration initially assigned to the project fills up any gaps in the scheduling period. The first project added initially takes up the whole scheduling period. You can only add a project between two existing projects, if there is a gap between them.

- 4 Select the newly added project, and select the calendar icon for that entry to adjust its duration.
- 5 On the **Dates** dialog, choose the start and end dates for the project.
- 6 In the **Total length** box, enter a decimal value for the number of hours.
- 7 Select **Save** on the ribbon.

# Edit forecast data

Sometimes there is a need to edit the forecast data manually. It could be the case that there are spikes in the data that need smoothing.

Data can be edited by making changes on the chart or editing the data table in the details pane. Dragging an interval on the chart updates the corresponding data in the data table.

Once you have manually edited the data on the forecast, you can no longer add or remove historical data to the week you have edited. You can also no longer modify the weighting for the edited week.

## Related topics

[Import a forecast, page 48](#)

[Enter historical data manually, page 49](#)

# Export forecast data

To make forecast data available to a third party application, export both volume and AHT to an external file for immediate and deferred queues. When exporting, you can select the time zone and time intervals of 15 minutes, 30 minutes, or 1 hour.

For an outbound queue, you can export connect rate, AHT, right party connect rate, and RPC activity handling time with intervals of 15 minutes, 30 minutes, 1 hour, or 1 day.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecast**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select the **Export** button on the ribbon.
- 4 Complete the parameters in the **Export** dialog:
  - **Export file name**: A .txt extension is automatically added to the specified file name.
  - **Data to export**: Select which data to export.
  - **Time interval**: Select between 15 mins, 30 mins, 1 hour, or 1 day intervals.
  - **Time zone**: Select between the time zone of the campaign or UTC.
  - **Delimiter**: Select whether the data is tab or comma separated.
- 5 Select **Export**.

## Related topics

[Import a forecast](#), page 48

# View an instance

Forecast instances are versions of a forecast that contain saved data. Once you have saved an instance, you can load and make it active at any time within the current campaign and scheduling period.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 From the **Forecast** filter pane on the left, select the instance.  
To edit the forecast instance you loaded, you must select **Active Forecast**. You can only edit the active forecast.

## Related topics

[Generate a forecast for an immediate or deferred queue](#), page 46

## View notes

A note can be attached to a scheduling period for a queue in Queue Analytics. For example, the queue may display non-typical behavior that needs highlighted. The note provides an explanation of, for example, a sudden increase in contact volume or why there is no data for a specified period. The data for this period can also be excluded from being used in the forecast.

If there are any notes attached to the data for the history weeks you are adding, these notes appear on the Notes tab on the details pane. The Notes tab is only available when there are notes to display. The notes are read-only.

# Save a profile for the forecast

To retrieve data from specific past weeks quickly, you can save regularly used date ranges as profiles. Only one week can be saved at a time.

Forecast profiles can be applied to any campaign in any scheduling period. It can be created for combined work queues as well as an individual work queue.



In an MT SaaS environment, you can only see forecast profiles that you have created. You cannot see all forecast profiles created by other users in the system.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 On the ribbon, select the **Save as** button, and the select **Profile**.
- 4 On the **Save as profile** popup, enter the name and description.
- 5 Optional: Select the **Save as relative weeks** check box.
- 6 Select **Save**.

## Example:

When you save the forecast profile, the absolute forecast is set by default. That means the profile is for a fixed period, for example, the weeks of 25 November and 2 December. But you can make it relative to the current date by saving as relative weeks, for example, the last week.

## Related topics

[Load a forecast profile](#), page 48

# Fetch a backlog from the selected period

By fetching a backlog from the selected period, you set the number of off-phone activities to handle in a scheduling period.

Backlog can be specified for any deferred media queue in the current scheduling period.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select **Fetch backlog** on the ribbon.
- 4 On the **Fetch backlog** popup, do the following:
  - a. Specify the box with the type required.
  - b. Select period.
  - c. Select date.
- 5 Select **Fetch**.

## Related topics

[Enter a backlog manually](#), page 60

[Set a reforecasted backlog](#), page 61

[Backlog](#), page 62

# Enter a backlog manually

To include the existing work in a scheduling period, specify the amount of work in the backlog field. Backlog can be specified for any deferred media queue in the current scheduling period.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Expand the details pane on the right.
- 4 On the **Backlog** tab, select the cell and enter data manually.
- 5 Select **Save**.

## Related topics

[Fetch a backlog from the selected period](#), page 59

[Set a reforecasted backlog](#), page 61

[Backlog](#), page 62

# Set a reforecasted backlog

To change planned non-phone workload in the middle of scheduling period, use a reforecasted backlog. You can make changes in the selected queue or combined queues even if the scheduling period has already started.

## Before you begin

You must have reforecast in Queue Analytics.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Expand the **Details pane** on the right.
- 4 On the Backlog tab, on the Reforecasted line, set date and start time.
- 5 Select **Save**.

## Example:

When you save the forecast as active, the statistics are recalculated and backlog is updated. Reforecasted backlog gets a part of the active forecast.

## Related topics

- [Enter a backlog manually](#), page 60  
[Backlog](#), page 62  
[Fetch a backlog from the selected period](#), page 59

# Backlog

Backlog is the amount of off-phone work that is already planned and needs to be completed in a specified scheduling period. Such items as emails, payment processing, account maintenance, and loan underwriting are contained in the backlog. Backlog items are considered inactive until the time comes for it to be scheduled. To make it active, you need to specify backlog items for any deferred media queue by following one of the ways:

- Enter a backlog manually in the details pane.
- Fetch a backlog from the selected period.

When the scheduling period has already started but some changes need to be made, you can specify an interim (reforecasted) backlog value in the middle of the scheduling period. After the reforecasted value is entered on the Forecast List tab of the details pane, the reforecasted value is summarized with the actual backlog value. In cases where multiple queues are specified, the reforecasted value is distributed to all queues.

## Related topics

[Fetch a backlog from the selected period](#), page 59

[Set a reforecasted backlog](#), page 61

[Enter a backlog manually](#), page 60

# Service goals and requirements

Service goals define the level of service your organization aims to deliver. Requirements for a scheduling period are calculated from the defined service goals along with the forecast and shrinkage for that period. These Full-Time Equivalents (FTE) requirements are the number of full-time employees required for the predicted volume of work to meet the defined service goals.



Explore UI

### Topics

Set service goals .....	64
Service goals and queue behavior settings .....	65
Edit requirements .....	67
Scale requirements .....	68
Import service goals and requirements .....	69
Export service goals and requirements .....	70

# Set service goals

You can set service goals for work queues to reflect the expected level of service at your company. The type of service goals you can set depends on the type of work queue. If you have the Modify Service Goals privilege, you can set service goals for immediate, deferred, and outbound queues. Service goals can be set for multiple queues, only when they are the same media type.

[Show Me](#)

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Goals & Requirements**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period** and **Queue**.
- 3 Select Period from the **day/week/period** zoom level at the upper-right of the summary table.  
Queue Behaviors can only be set for the entire scheduling period.
- 4 To set service goals and queue behaviors, expand the details pane.  
Then, from the Settings tab, complete the applicable parameters for your queue type.
- 5 To set service levels at a more granular level, select the **Intervals** tab, then enter values for any hour.
- 6 Once finished, select **Save** on the ribbon.

## Related topics

[Service goals and queue behavior settings](#), page 65

# Service goals and queue behavior settings

Settings available to define your service goals and set the queue behaviors depend on the media type of the queue. Some settings also depend on whether you are working in a skilled campaign or not.

## Service goals

Queue type	Service Goal Type	Description
Immediate	Service Level	Specify the % of Contacts that must be answered in the specified time.
	Average Speed to Answer	Define how quickly calls must be answered.
Deferred	Service Level	Specify the % of Contacts that must be answered in the specified time. Specify also whether this time is measured against working hours or actual hours.
	Deadline Goals	Specify the % of the volume of work that must be complete by the specified number of seconds.
Outbound	-	Specify the max number of dials expected per hour. Then specify the % of those dials you expect to connect successfully or those dials that connect successfully to the intended party.

## Queue behaviors

Setting	Service Goal Type
Quality Score goals	<p>You can specify that if possible, a queue must have a percentage of, or a number of employees with a specified minimum quality score.</p> <p>These scores are the scores assigned to agents by the Performance Management module.</p>

Setting	Service Goal Type
Priority level	<p>Set the priority level for a queue which can be used to determine how a multi-skilled employee gets assigned to a queue. When an employee is assigned to multiple queues, they get work from the queue with the highest priority. Where 1 is the highest.</p> <p>This setting is only available in a skilled campaign.</p>
Patience	<p>Define how long you expect customers to wait on this queue for a response.</p> <p>This setting is not available to an outbound queue.</p>
Reserve Threshold 1	<p>Define the time at which employees who have the appropriate first reserve skill for this queue, are assigned temporarily to help bring down wait times.</p> <p>This setting is only available in a skilled campaign.</p>
Reserve Threshold 2	<p>Define the time at which employees who have the appropriate second reserve skill for this queue, are assigned temporarily to help bring down wait times, if the wait time continues to extend past the first threshold set.</p> <p>This setting is only available in a skilled campaign.</p>

### Related topics

[Set service goals and requirements](#), page 1

# Edit requirements

Although the requirements data is calculated from the forecast and service goals, you can override these values. If you have the Modify Service Goals privilege, you can modify the calculated requirements data. Care must be taken when overriding the calculated requirements. Once modified, the requirements no longer get updated on any changes to the service goals or forecast.

Editing requirements is only possible in the following scenarios:

- In a skilled campaign, you have selected a single immediate queue.
- In a non-skilled campaign, you have selected a combined immediate or project queue.

You can remove any manual overrides to the requirements data, using **Restore**, meaning the requirements are calculated based on forecast and service goals.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Goals**, select **Goals & Requirements**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queue**.
- 3 Select the **day/week/period** zoom level.
- 4 Expand the details pane on the right and select the **Requirements** tab.
- 5 Modify the requirements as required on the data table.  
Discard any unsaved changes using **Revert**.
- 6 Select **Save** on the ribbon.  
Remove any overrides from the calculated requirements using **Restore**.

## Related topics

[Scale requirements](#), page 68

# Scale requirements

Although the requirements data is calculated from the forecast and service goals, you can override these values by applying a scaling factor. If you have the Modify Service Goals privilege, this allows you to apply a uniform increase to all or a selection of the calculated requirements. Care must be taken when overriding the calculated requirements. Once modified, the requirements no longer get updated on any changes to the service goals or forecast.

Scaling the requirements is only possible in the following scenarios:

- In a skilled campaign, you have selected a single immediate queue.
- In a non-skilled campaign, you have selected a combined immediate or project queue.

You can remove any manual overrides to the requirements data, using **Restore**, meaning the requirements are calculated based on forecast and service goals.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Goals & Requirements**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queue**.
- 3 Select the **day/week/period** zoom level.
- 4 Expand the details pane on the right and select the **Requirements** tab.
- 5 Optional: To scale only part of the period, select the intervals you want to scale.
- 6 Select **Scale**.
- 7 Enter a new value in the **Scaled** or **% Change** column. When the value changes, the other column gets updated accordingly.  
If you are doing a partial scale on selected intervals, the data from those intervals is added.
- 8 To apply the scaling, select **Save** on the Scale popup.
- 9 To apply the changes, select **Save** on the ribbon.

You can remove any overrides and return to the calculated requirements using **Restore**.

## Related topics

[Edit requirements](#), page 67

# Import service goals and requirements

When you have edited service goals or requirements data in a third-party application, you can import that data into the currently selected queue.

The file used to import data needs to have its values separated by comma or tab. The file extension can be either .csv, .txt or .tsv.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Goals & Requirements**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queue**.
- 3 Select the **Import** button on the ribbon.
- 4 Complete the parameters in the **Import** dialog:
  - **Import file name:** Browse to the data file.
  - **Data to import:** Select to import either Service Goals or Requirements data.  
Data for a selected statistic can only be imported if it exists in the source file.
  - **Time interval:** Select between 15 min, 30 min, or 1 hour intervals.
  - **Number of lines to ignore from the start of file:** Specify the lines at the start source file that do not contain data. For example, ignore the first line, which could be the column header row.
  - **Delimiter:** Select whether the data in the file is tab or comma separated.
  - **Time zone:** Select between the time zone of the campaign or UTC.
- 5 Select **Import**.

## Related topics

[Export service goals and requirements](#), page 70

# Export service goals and requirements

To make the service goals and requirements data available to an external system, export the currently selected data to a file. For the selected queue, all the data for the current scheduling period is included in the export.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Goals**, select **Goals & Requirements**.
- 2 From the filter pane on the left, select a **Campaign**, **Queue**, and **Scheduling period**.
- 3 Select the **Export** button on the ribbon.
- 4 Complete the parameters in the **Export** dialog:
  - **Export file name**: A .txt extension is automatically added to the specified file name.
  - **Data to export**: Select either Service Goals or Requirements.
  - **Time interval**: Select between 15 mins, 30 mins, 1 hour, or 1 day intervals.
  - **Time zone**: Select between the time zone of the campaign or UTC.  
In no campaign mode, data is exported in UTC, by default.
  - **Delimiter**: Select whether the data is tab or comma separated.
- 5 Select **Export**.

## Related topics

[Import service goals and requirements](#), page 69

# Allocations

Allocations are used to manage the forecast and distribution of work across distributed queues. A distributed queue is used in campaigns where calls are distributed across multiple sites using a percentage allocation method. This type of queue can only be added to a campaign that has at least one defined subcampaign.

Allocations also allow you to change the forecast for your distributed campaign. Changes made to the forecast are distributed to the subcampaigns based on the percentage allocations set.

## Topics

Export allocations .....	72
Import allocations .....	73
Set allocations across distributed queues .....	74
Allocate planned and projected values .....	75

# Export allocations

To make the allocations data available to an external system, export the currently selected distributed queues to a file. You can export both planned allocations and projected allocations data.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Allocations**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select the **Export** button on the ribbon.
- 4 On the **Export** popup, specify the settings:
  - **Export file name**: A .txt extension is automatically added to the specified file name.
  - **Data to export**: Select either Planned Allocations or Projected Allocations.
  - **Time interval**: Between 15 min, 30 min, or 1 hour intervals.
  - **Time zone**: Select between the time zone of the campaign or UTC.
  - **Delimiter**: Select whether the data is tab or comma separated.

## Related topics

[Import allocations](#), page 73

[Set allocations across distributed queues](#), page 74

# Import allocations

When you have edited allocations data in a third-party application, you can import that data into your distributed queues. You can import either the .txt or .csv files.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Allocations**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select the **Import** button on the ribbon.
- 4 On the **Import** popup, specify the settings:
  - **Import file name:** Browse to the data file.
  - **Data to import:** By default, all data is selected.
  - **Time interval:** Between 15 min, 30 min, or 1 hour intervals.
  - **Number of lines to ignore from the start of file:** Specify the lines at the start source file that do not contain data. For example, ignore the first line, which could be the column header row.
  - **Delimiter:** Select whether the data in the file is tab or comma separated.
  - **Time zone:** Select between the time zone of the campaign or UTC.
- 5 Select **Import**.

## Related topics

[Export allocations](#), page 72

[Set allocations across distributed queues](#), page 74

# Set allocations across distributed queues

For distributed queues, to generate a forecast, you can use allocations to model the split of incoming calls across the queues. You can specify the percentage allocation of incoming calls that each of the child queue receives.



Aggregated values in the allocations grid and summary table are calculated using a weighted average with forecast data. If a forecast has not yet been set for the selected queue, the aggregated totals may not add up to 100.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Allocations**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select **Day** as the zoom level.
- 4 Expand the **Details pane** on the right.
- 5 On the **Allocations** tab, do the following:
  - a. Select **Planned**.
  - b. Enter the percentage allocation values for each of the distributed queues.
- 6 Select **Save** to apply the allocation.

## Related topics

[Export allocations](#), page 72

[Import allocations](#), page 73

[Allocate planned and projected values](#), page 75

# Allocate planned and projected values

In Allocations, you set planned allocations as the distribution what you want to achieve for each queue for your forecast. Projected allocations are what the system predicts you will achieve, after the scheduler has run. If there is a large discrepancy between these values, you can make the planned allocations values equal to the values predicted by the scheduler.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Allocations**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Expand the **Details pane** on the right.
- 4 On the **Allocations** tab, select **All**.
- 5 Select **Allocate** on the ribbon.
- 6 Select **Save** on the ribbon.

After you select Allocate, the values in the Planned column are equal to the Projected column.

## Related topics

[Export allocations](#), page 72

[Import allocations](#), page 73

[Set allocations across distributed queues](#), page 74

# Backlog Age

Backlog Age allows users to specify how old their backlog is for work items. This feature allows users to define various age buckets and what percent of the backlog belongs to each of these age buckets.

You can associate backlog age distribution data at the beginning of a scheduling period to a selected deferred queue or to a group of multiple selected deferred queues. The dates of the backlog buckets are counted backward from the start date of the current scheduling period.

The Scheduling algorithm uses the Backlog Age data to help prioritize work in the current scheduling period. The Backlog Age data provides more accurate service level projections for the work that is scheduled to be completed.

The Backlog Age distribution proportions for each bucket can be auto populated from Work Item Tracking (WIT) data or entered manually by the user.

## Topics

Specify backlog age .....	77
Backlog Age Template .....	78
Create a backlog age template .....	80

# Specify backlog age

You can group backlog work items by age, which allows the scheduler to prioritize the work in the current scheduling period. Create buckets for different periods in the past. You can set the proportion of work items assigned to each bucket manually. The distribution can be defined automatically using Work Item Tracking (WIT) data, which sets the proportion for each bucket.

You define the age for each bucket by setting a start and end interval for the period covered. The interval start and end times are relative to the start of the scheduling period. The values set for the interval are in the units defined (days or weeks) and are counted backward from the start of scheduling period. For example, to create a bucket for the week before the scheduling period, set the start interval as 1 and the end interval as 7.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Backlog Age**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select **Create** and specify the settings:
  - **Backlog template**: Select either a pre-defined template from the backlog age template page or custom.
  - **Backlog bucket unit**: Select either days or weeks as the unit of the intervals.
  - **Auto populate proportion**: Select either disabled, to enter values manually, or from WIT, which means the proportions are set automatically from the WIT data.
- 4 Select **Add** and specify the settings:
  - **Backlog bucket name**: Enter a name for the bucket.
  - **Interval start**: A number for the start of the interval.
  - **Interval end**: A number for the end of the interval.

The interval numbers are relative to the start of the scheduling period, and the interval moves backward from the start day or week. The number is based on the unit defined in **Backlog Bucket Unit**.
  - **Proportion**: Enter the proportion number to be assigned to each bucket. The total proportion for all the buckets must equal 100 percent.
- 5 Select **Save**.

## Related topics

[Create a backlog age template](#), page 1

# Backlog Age Template

The following table describes the buttons and fields used to create a Backlog Age Template:

Element	Description
Name	Enter the Name to be used for the new template.
Backlog Bucket Unit	Select either Days or Weeks from the drop-down list
Auto Populate Proportion	Select option to auto populate the proportions of the Backlog Bucket(s). If "Auto populate from WIT" is selected, it sets up the option to have the backlog populated from WIT. If the "disabled" option is selected, the proportion will be manually provided in the Backlog Bucket Name section.
Backlog Bucket Name	Provide the name of the selected Bucket
Interval Start	Provide a number to start the interval (either days or weeks based on the Backlog Bucket Unit). This number should be relative to the start of the scheduling period, and the interval will move backwards from the start day or week. For example, if the bucket unit is days, the first bucket Interval Start can have a value of "1" to indicate the first interval. However, there are other cases, where the first interval can start on a different day.
Interval End	Enter the unit number where the interval should end. For example, if the bucket unit is days and should represent a week, the first bucket Interval End should have a value of "7" to represent the last day. If the backlog bucket should contain aged items from a certain day and up (for example, a particular bucket should contain items greater than 28 days), then leave this field blank.
Proportion	Enter the proportion number to be assigned to each bucket name. The total proportion for all of the bucket names should equal 100 percent.
Add	Click this button to add the new Bucket to the template
Delete	Click this button to Delete the selected Bucket
Save	This button located in the bottom right-hand corner of this window allows the new configuration of the Bucket(s) to be saved

Element	Description
Revert	Clicking this button will undo the changes made to the Bucket(s) on this window from the last saved state
Delete	Click this button in the bottom right-hand corner of this window to Delete the template being created on this page.

**Related topics**

[Create a backlog age template](#), page 80

# Create a backlog age template

You can create a template for your backlog age buckets which can be reused when setting the backlog age for different scheduling periods, meaning you do not have to define your buckets each time.

Templates are associated with the campaign specified in the filter pane. Templates created under the selected campaign can only be used for this particular campaign.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Backlog Age Template**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 Select **Create** and specify the settings:
  - **Backlog template**: Select either a pre-defined template from the backlog age template page or custom.
  - **Backlog bucket unit**: Select either days or weeks as the unit of the intervals.
  - **Auto populate proportion**: Select either disabled, to enter values manually, or from WIT, which means the proportions are set automatically from the WIT data.
- 4 Select **Add** and specify the settings:
  - **Backlog bucket name**: Enter a name for the bucket.
  - **Interval start**: A number for the start of the interval.
  - **Interval end**: A number for the end of the interval.  
The interval numbers are relative to the start of the scheduling period, and the interval moves backward from the start day or week. The number is based on the unit defined in **Backlog Bucket Unit**.
  - **Proportion**: Enter the proportion number to be assigned to each bucket. The total proportion for all the buckets must equal 100 percent.
- 5 Select **Save**.

## Related topics

- [Specify backlog age](#), page 77  
[Backlog Age Template](#), page 78

# Generating a schedule

Generate a schedule automatically for a specific campaign and scheduling period. The Workforce Management (WFM) application uses defined work rules, forecast data, and scheduling parameters to generate an optimal schedule that fits your service level requirements.

Alternatively, you can generate a schedule using other methods. You can import it from an external source. You can also run multiple campaign scheduling periods as a batch, which allows you to generate schedules for multiple scheduling periods at the same time.

## Topics

About the Generate Schedule option .....	82
Campaign or no campaign? .....	84
Generate the schedule automatically .....	87
Analyze the schedule .....	96
Workflow: Import the schedule from an external source .....	97
Generate the schedule for multiple scheduling periods .....	99

# About the Generate Schedule option

The Workforce Management (WFM) application uses defined work rules, manual updates, forecast data, service goals, and the scheduling parameters set on the **Generate Schedule** screen to generate an optimal schedule.



Explore UI

## Generate Schedule behavior

The **Generate Schedule** option allows you to define which scheduling components can be optimized for the updated schedule. For example, you can define whether the scheduling engine can add or remove shifts, and schedule shift events and calendar events.

If you define that specific components can be scheduled, the scheduling engine can change previously scheduled components and replace them with other components. For example, select to add shifts and calendar events. The scheduling engine can then add a shift and a calendar event for an employee who previously did *not* have these components scheduled.

## Locked scheduling components are not optimized

The scheduling engine does *not* change *locked* elements. For example, if a shift is locked, the scheduling engine leaves the shift as is.

The scheduling engine makes other modifications on top of the shift but *cannot* change locked elements *in any way*. Whenever you make manual changes to components on the calendar, they are locked by default. (If needed, you can easily unlock most locked events.) The scheduling engine schedules around the locked elements, and determines what other changes satisfy the service goals.



One component that always stays locked and *cannot* be unlocked is a *custom shift*, which is a shift created manually and *not* based on any defined work rule.

## Calendar events: Floating events can be moved, but single instances cannot be moved

The scheduling engine does *not* move single instances of calendar events. For example, if a manager schedules a team meeting on Tuesday at 3:00 PM, the scheduling engine does *not* move this event.

There is no *explicit* locking for single-instance calendar events. However, it is as if these types of events are locked because there is no alternative event to put in their place.

For *floating* calendar events, you use a template to define the possible times an event *can* be scheduled. For example, you define that a one-hour mentoring session can start at 1:00 PM on Monday, 2:00 PM on Wednesday, or 1:00 PM on Friday.

You manually enter these options when setting up this floating calendar event. The system initially places an instance of this event on the calendar. When the scheduling engine runs, it is free to move the floating calendar event to another time, based on the template definition.

Alternatively, you can also manually place a calendar event instance at another time on the schedule and lock this change. In this case, the scheduling engine does *not* attempt to reschedule this event.

**Cannot select Generate schedule in No Campaign mode**

When working in *no campaign* mode, the **Generate schedule** option is unavailable. You can manually update the Calendar, but you *cannot* automatically generate schedules.

**Related topics**

[Generate the schedule automatically, page 87](#)

[Generate Schedule settings, page 89](#)

# Campaign or no campaign?

Typically, you work on schedules for a specific campaign and scheduling period. Alternatively, you can view and do manual updates for all schedules across all campaigns by *not* selecting a campaign. This view is called **No Campaign** mode.

Depending on your specific business needs, you can work in either campaign mode or **No Campaign** mode. When you want to optimize shift placements in the schedule after you create a campaign and scheduling period, it is recommended to work in campaign mode. If you have *not* yet created campaigns and scheduling periods, you can work in **No Campaign** mode. When you create a shift in **No Campaign** mode, the shift is *not* linked to any scheduling period and is *not* included in any campaign.

When you select a campaign and scheduling period, all calendar features are available. You do most of your work in this mode. In **No Campaign** mode, you can see schedules from all campaigns at once, and also schedules *not* associated with *any* campaigns. This mode is useful for managers who *only* have access to editing schedules for employees in their *specific* organizations, but *not* to the entire campaign. For this reason, it is a flexible viewing and editing mode. However, there are specific features that are *not* available in this mode.

## Limited functionality in No campaign mode

Note the following while working in **No Campaign** mode:

- The system displays all schedules in the *user* time zone (of the logged in user), and not in *campaign* time zone.
- You *cannot* display, recalculate, and analyze statistics.
- You *cannot* generate schedules.
- You *cannot* analyze schedules.
- You *cannot* access the Group Adherence dialog to authorize or unauthorize adherence exceptions for a specific date and time range, and group of employees.
- You *cannot* import outsourcer schedules.
- You can *only* make manual updates on the Calendar.
- You *cannot* create floating calendar events.
- You *cannot* schedule eLearning and Coaching calendar events.
- You *cannot* create and manage classes.
- You *cannot* view Resources Information.
- You *cannot* add poolers and phantoms to the schedule.
- The hours of operation are based on the organization of each displayed *employee*, and *not* on the organization of any specific *campaign*. Therefore, the hours of operation can vary between employees displayed in the list (depending on the organizations to which they are associated).

## Example: Hours of operation based on organization of employee in no campaign mode

- Joe Smith works for an organization where the hours of operation are from 7:00 AM - 6:00 PM.
- Carly Brown works for an organization where the hours of operation are from 5:00 AM - 9:00 PM.
- In **No Campaign** mode:
  - Joe's schedule shows that the hours from midnight - 7:00 AM and 6:00 PM - midnight are blocked out.

- Carly's schedule shows that the hours from midnight - 5:00 AM and 9:00 PM -midnight are blocked out.

### Related topics

[Select campaign data for schedules](#), page 85

[Select no campaign for schedules](#), page 86

## Select campaign data for schedules

To generate, view, or update schedules, select a campaign, scheduling period, employees, and queues from the left pane.

### Before you begin

[Workflow: Define a campaign and scheduling period](#), page 22

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left pane, select **Campaign**, and select the campaign you want.  
To pin the left pane, select the pin icon in the right corner of the pane.
- 3 From **Dates**, select the scheduling period you want.
- 4 From **Employees**:
  - a. Select the employees you want from the selected scheduling period by pointing to each employee and selecting the check box that appears. To select *all* employees, select the **Employees** check box.  
If you select the **Employees** check box and then decide to select specific employees only, clear the **Employees** check box first, and then select the employees you want.  
You can also select an existing employee filter or create a new one. You can sort employees by name, and select one, multiple or all employees.
  - b. To select employees who can pool into the organization of the selected campaign, expand **Poolers** and select the employees you want. To select all poolers, select the check box next to **Poolers**.
  - c. To select phantom schedules, expand **Phantoms** and select the defined phantom schedules you want. To select all phantoms, select the check box next to **Phantoms**.
- 5 From **Work Queues**, select the queue you want.  
To view and manage queue statistics and the scheduling status for projects, you *must* select a specific queue. You can only select *one* queue for each scheduling period.
- 6 Select **Apply**.  
The relevant scheduling and adherence data appears, according to the parameters you selected, and user privileges.

### Related topics

[Campaign or no campaign?](#), page 84

[Select no campaign for schedules](#), page 86

[View the schedule](#), page 115

### Related information

View adherence data (*Workforce Management Tracking Guide*)

## Select no campaign for schedules

To generate, view, or update schedules, you can decide *not* to select a specific campaign and scheduling period. In **No Campaign** mode, you can select specific dates, and the employees for whom you want to work with schedules.

### Procedure

1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.

2 From the left pane, select **Campaign**, and select **No Campaign**.

To pin the left pane, select the pin icon in the right corner of the pane.

3 From **Dates**:

- To select a predefined time frame (such as **Today**, **Tomorrow**, and **Next Week**), from **Period**, select the time frame you want.

The system automatically updates the **Start** and **End** fields according to your selection.

- To select a specific date range, select **Custom** and set the date range you want in the **Start** and **End** fields.

4 From **Employees**, select the employees you want.

You can select an existing employee filter or create a new one. You can sort employees by name, and select one, multiple or all employees.

**!** In **No Campaign** mode, you *cannot* select **Poolers** or **Phantoms** from the **Employees** filter, and you *cannot* select queues from the **Work Queues** filter.

5 Select **Apply**.

The relevant scheduling and adherence data appears, according to the parameters you selected, and user privileges.

### Related topics

[Campaign or no campaign?, page 84](#)

[Select campaign data for schedules, page 85](#)

[View the schedule, page 115](#)

### Related information

View adherence data (*Workforce Management Tracking Guide*)

# Generate the schedule automatically

You can generate a schedule automatically using the **Generate schedule** option from the Calendar. Using this option, you can determine whether the scheduling engine can add or remove shifts, update calendar events, or add OT extensions and VTO events. You can also define whether to ignore schedule warning messages while scheduling is in progress.



Show Me

## Before you begin

- Define work rules and skills, and assign to employees (*Workforce Management Administration Guide*)
- Define [Forecasts](#), page 45 and [Service goals and requirements](#), page 63
- [Select campaign data for schedules](#), page 85

## Procedure

- 1 From **Home**, select **Generate Schedule**.



The **Generate Schedule** option is *only* available if you have selected a campaign and scheduling period.

- 2 From the **Scheduling** tab under **Dates**, select to generate the schedule for the *entire* scheduling period, or for *specific dates within* the current scheduling period.
- 3 To allow the scheduling engine to *add* shift assignments, from **Assignments**, select **Add shifts**.
- 4 To allow the scheduling engine to *remove* shift assignments, select **Remove shifts**.  
To prevent the scheduling engine from removing shift assignments, do *not* select **Remove shifts**.
- 5 Determine what to do:
  - If you selected **Add shifts**, **Remove shifts**, or both of these options, **Shift events** is automatically selected and *cannot* be unselected. The concept is that if you want to add or remove shifts, the shift events associated with those shifts *must* also be added or removed.
  - If you did *not* select **Add shifts** and **Remove shifts**, and you do *not* want to reschedule shift events either, unselect **Shift events**. This option is also relevant if you want to schedule OT extensions but you do *not* want to include shift events in the extensions. (To select **OT extensions**, see [step 7](#).)
  - If you did *not* select **Add shifts** and **Remove shifts**, but want to reschedule shift events, select **Shift events**. The scheduling engine can move the times for the shift events, change the activity, delete shift events, or add shift events.
- 6 To allow the scheduling engine to add calendar events (such as floating events and classes):
  - a. Select **Calendar events**.
  - b. From the drop-down list, select the type of calendar events (based on the activity) that you want the scheduling engine to schedule:
    - For all types of calendar events, select **All Activities**.

- To select a specific calendar event, select it accordingly from the list (such as **Coaching**, **Learning Break**, **Supervisor Meeting**).
- 7 To schedule OT extensions, select **OT extensions** and complete the remaining options.
- 8 To schedule VTO events, select **VTO events** and complete the remaining options.



To select **OT extensions** or **VTO events**, unselect **Add shifts** and **Remove shifts**. OT extensions and VTO events are add-ons to shifts. The scheduling engine *cannot* add or update these add-ons and also add new shifts or remove existing ones at the same time.

- 9 From **Warnings**, select the relevant options to determine how to handle warning messages that appear while the schedule is being generated.
- 10 Select the **Preferences** tab, and complete the fields on this tab.  
On the **Preferences** tab, set the amount of time the scheduling engine spends on generating the schedule, which employees to schedule and service level preferences.
- 11 When all parameters are set, select **Generate**.  
While the schedule is running, a blue progress bar circles the **Generate Schedule** icon, indicating the progress of the schedule generation.



When generating a schedule, the time that it takes to complete the schedule generation depends on multiple factors, including the number of employees being scheduled, the number of queues and skills being forecast, and the complexity of the model configuration. When including phantom schedules, the schedule generation time can be even *longer*. The extended time for phantom schedules is due to a significantly larger set of options involved in generating an optimal schedule.

- 12 The next steps depend on whether you selected the options under **Warnings**:
- If you selected the *ignore schedule warning* options under **Warnings**, the system continues to generate the schedule and displays it when it is complete. It does *not* stop generating the schedule to display the warning messages.
  - If you did *not* select either of these options, an orange icon with an exclamation point appears in the center of the **Generate Schedule** icon. To view the messages, select this icon. The system pauses the schedule creation process while you are viewing this screen. To continue the schedule creation process, select **OK**.



While the system is generating the schedule, the following options are unavailable from the Details pane:

- The cards are in read-only mode.
- The **Add** button is unavailable.
- The **Additional Details** icon is unavailable.

## Related topics

[Generate Schedule settings](#), page 89

[About the Generate Schedule option](#), page 82

[Service level versus preferences](#), page 94

[Troubleshooting schedule messages](#), page 324

## Generate Schedule settings

When generating a schedule, you need to complete fields that define the assignments you want to schedule, how to manage warning messages, and your schedule preferences.

### Scheduling tab

Field	Description
<b>Dates</b>	
Current scheduling period	Generates the schedule for the entire current scheduling period.
Custom range (From / To)	Generates the schedule for a specific date and time range within the current scheduling period.
<b>Assignments</b>	
Add shifts	Allows the scheduling engine to add shift assignments to the schedule.
Remove shifts	Allows the scheduling engine to remove shift assignments from the schedule.  Note: <ul style="list-style-type: none"> <li>• If selected, employees who previously had shifts on the schedule could end up having days off. You are allowing the scheduling engine to have this flexibility to generate an optimal schedule.</li> <li>• If <i>not</i> selected, the scheduling engine <i>cannot</i> leave any employee <i>without</i> a shift on a day that they previously had a shift on their schedule. It can still move shifts, change their lengths, change activities, or even delete shifts and replace them with other shifts.</li> </ul>

Field	Description
Shift events	<p>Allows the scheduling engine to add shift events to the schedule (such as lunches, breaks, or meetings).</p> <p>Note the following:</p> <ul style="list-style-type: none"> <li>If you selected <b>Add shifts</b>, <b>Remove shifts</b>, or both of these options, <b>Shift events</b> is automatically selected and <i>cannot</i> be unselected. The concept is that if you want to add or remove shifts, the shift events associated with those shifts <i>must</i> also be added or removed.</li> <li>If you did <i>not</i> select <b>Add shifts</b> and <b>Remove shifts</b>, and you do <i>not</i> want to reschedule shift events, unselect <b>Shift events</b>. This option is also relevant if you want to schedule OT extensions but you do <i>not</i> want to include shift events in the extensions.</li> <li>If you did <i>not</i> select <b>Add shifts</b> and <b>Remove shifts</b>, but want to reschedule shift events, select <b>Shift events</b>. The scheduling engine can move the times for the shift events, change the activity, delete shift events, or add shift events.</li> </ul>
Calendar events	<p>Allows the scheduling engine to add calendar events to the schedule (including eLearning and Coaching floating calendar events and classes). You can select calendar events associated with any activity (<b>All Activities</b>). You can also select to schedule calendar events associated with specific activities (such as <b>Coaching</b> or <b>Learning Break</b>).</p>
OT extensions	<p>Allows the scheduling engine to schedule Overtime (OT) extensions, which are added <i>before</i> or <i>after</i> a shift to <i>extend</i> employee work time. If you select this option, set the following:</p> <ul style="list-style-type: none"> <li><b>Before:</b> Allows scheduling OT extensions <i>before</i> shifts.</li> <li><b>After:</b> Allows scheduling OT extensions <i>after</i> shifts.</li> <li><b>Maximum hours:</b> Defines the maximum number of hours of OT extension time that can be added to all employees being scheduled (according to the current filters).</li> </ul>
VTO events	<p>Allows the scheduling engine to schedule Voluntary Time Off (VTO) events. VTO events are added at the <i>beginning</i> or <i>end</i> of an employee shift to <i>reduce</i> employee work time. If you select this option, set the following:</p> <ul style="list-style-type: none"> <li><b>Beginning:</b> Allows scheduling VTO events at the <i>beginning</i> of shifts.</li> <li><b>End:</b> Allows scheduling VTO events at the <i>end of</i> shifts.</li> <li><b>Maximum hours:</b> Defines the maximum number of hours of VTO event time that can be added to all employees being scheduled (according to the current filters).</li> </ul>

Field	Description
Reschedule shift start times	Allows the scheduling engine to move the start times of shifts within the same day. The shift length does not change, and any activities that are part of the shift also do not change. Selecting <b>Reschedule shift start times</b> deselects the <b>Add shifts</b> , <b>Remove shifts</b> , <b>OT extensions</b> , and <b>VTO events</b> options, if selected. Selecting any of these options, results in <b>Reschedule shift start times</b> being deselected.
<b>Warnings</b>	
Ignore initial schedule warnings and continue scheduling	Indicates that you want to ignore <i>initial</i> warning messages that appear while the schedule is being generated.
Ignore secondary schedule warnings and continue scheduling	Indicates that you want to ignore <i>more</i> warning messages that appear while the schedule is being generated.



Both of the warning message options allow you to bypass the warning message screens when scheduling. These settings are useful when you are generating a schedule that takes a significant amount of time to complete, allowing unattended operation.

## Preferences tab

Field	Description
Scheduling time	

Field	Description
Amount of time to spend scheduling	<p>Defines the relative amount of time the scheduling engine spends on generating an optimal schedule:</p> <ul style="list-style-type: none"> <li>• <b>Normal:</b> Scheduling engine spends enough time to generate a good schedule.</li> <li>• <b>Advanced:</b> Scheduling engine spends more time than the <b>Normal</b> amount to generate the schedule, attempting to resolve conflicts and rule violations.</li> </ul> <p>After the scheduling engine has generated at least one possible schedule, the system prompts you to determine how to proceed:</p> <ul style="list-style-type: none"> <li>• <b>Save schedule:</b> Scheduling engine stops scheduling and saves the current schedule.</li> <li>• <b>Continue:</b> Scheduling engine continues scheduling to generate a more optimal schedule.</li> <li>• <b>Cancel:</b> Scheduling engine cancels the scheduling process and does <i>not</i> save any schedule.</li> <li>• <b>Schedule until interrupted:</b> Scheduling engine continues to refine the schedule until the process is manually stopped.</li> </ul> <p>If this parameter is set to <b>Normal</b> or <b>Schedule until interrupted</b>, the system does <i>not</i> prompt you to select further options. It completes the scheduling process, as defined by the relevant parameter.</p>
<b>Employees</b>	
Staffing preference	Indicates whether you prefer understaffing or overstaffing, based on a sliding scale.
Schedule at least this number of employees	Specifies the minimum number of employees that must be scheduled. The scheduling engine never schedules fewer than this number of employees.

Field	Description
Employees to schedule	<p>Specifies the type of employees to schedule:</p> <ul style="list-style-type: none"> <li>• <b>Filtered employees only:</b> Only employees that match the current filters are scheduled. Staffing profiles are ignored.</li> <li>• <b>Employees only</b> (default): Only employees linked to the current scheduling period are scheduled. Staffing profiles are ignored.</li> <li>• <b>Staffing profiles only:</b> Only staffing profiles are scheduled. The scheduling engine implements goal seeking to add enough phantom employees to meet the required skills and the service levels that are set.</li> <li>• <b>Employees and staffing profiles:</b> Employees are scheduled, and then phantom employees are created and scheduled as necessary to meet required skills and the service levels that are set.</li> </ul> <p>NOTE: If the current employee schedules are <i>locked</i>, their portion of the schedule is unchanged and phantom employees are added to the existing schedule. If the current employee schedules are <i>unlocked</i>, they are scheduled first, and then phantom employees are added to the schedule.</p>
Employee preferences	<p>Determines whether the scheduling engine uses employee preferences when generating the schedule:</p> <ul style="list-style-type: none"> <li>• <b>No preferences:</b> Preferences are ignored when scheduling.</li> <li>• <b>Preferences by ranking:</b> Preferences are used, based on ranking for employees defined in the <b>User Management</b> module, under <b>Employees and Profiles</b>.</li> <li>• <b>Preferences by seniority:</b> Preferences are used, based on the employee start date.</li> <li>• <b>Preferences by seniority / ranking:</b> Preferences are used, based on a combination of seniority and ranking.</li> </ul>
Service level versus preferences	Indicates whether service level or user preferences is favored, based on a sliding scale.
<b>Service level</b>	

Field	Description
Service level	<p>Indicates how the scheduling engine defines the service level for the schedules, based on a sliding scale:</p> <ul style="list-style-type: none"> <li>• <b>Low (consistent)</b>: The scheduling engine aims for an overall <i>lower</i> but <i>consistent</i> service level, favoring less variance and creating a smoother curve.</li> <li>• <b>High (inconsistent)</b>: The scheduling engine aims for an overall <i>higher</i> but <i>less consistent</i> service level, favoring better overall service but allowing poor service during some time periods. This option allows spikes in the service level.</li> </ul>
Minimize class sessions over service level	<p>Indicates whether the scheduling engine minimizes the number of class sessions (at the expense of the service level):</p> <ul style="list-style-type: none"> <li>• If selected: <ul style="list-style-type: none"> <li>• Scheduling engine fills up all sessions with the maximum number of attendees.</li> <li>• Many employees are in classes at the same time, but there are fewer classes in the schedule. Therefore, it does not happen that often that many employees are unavailable because they are in classes.</li> </ul> </li> <li>• If not selected: <ul style="list-style-type: none"> <li>• Maximum number of class sessions are created (given the constraint for the minimum number of attendees).</li> <li>• Fewer employees are in classes at the same time, but there are more classes in the schedule. Therefore, it happens more frequently that employees are unavailable because they are in classes, but fewer employees are unavailable due to classes.</li> </ul> </li> </ul>

### Related topics

[Generate the schedule automatically](#), page 87

[About the Generate Schedule option](#), page 82

[Service level versus preferences](#), page 94

## Service level versus preferences

To override the service level and guarantee some employees their preferences, use the **Service level versus preferences** scale on the **Generate Schedule** screen (**Preferences** tab).

When the scale is set *all the way to the left* toward **Service level**, preferences are only given to employees if the service level allows it. No special consideration is given to any employee other than the typical swapping to reach an optimal schedule.

### Move Service level versus preferences one notch to the right

To guarantee that the top 1 percent of your employees receive the top 1 percent of their preferences, move this bar one notch to the right. However, this action does *not* guarantee any other employees get any of their preferences. It also does *not* mean that employees lower on the scale will *not* receive their preferences; they will still be assigned, if possible.

It behaves in this way even if service level is impacted. In cases where these employees would have received their preferences anyway, the impact on service level is minimal. However, there could be significant impact in situations where the employees would not typically have received their preferences. Unfortunately, it is impossible to determine ahead of time the impact of guaranteeing preferences to some employees.

### Move Service level versus preferences further to the right

As you move the slider bar to the right, you are *guaranteeing* that more people get more of their preferences.

For example, moving it one notch to the right guarantees that the top 1 percent of people get their top 1 percent of preferences. Moving it two notches to the right guarantees the top 2 percent receive the top 2 percent of their preferences. Moving it three notches to the right guarantees the top 3 percent receive the top 3 percent of their preferences.

### Hard constraints still override employee preferences

Even if the scale is set all the way to the right, which can guarantee *some* employees their preferences, the scheduling engine *cannot* assign shifts that override hard constraints.

For example, your most senior person requests a start time of 9 am but is not available to start work until 10 am. The scheduling engine *cannot* assign the employee a 9 am shift, regardless of the position of the scale.

### Related topics

[Generate Schedule settings](#), page 89

[Generate the schedule automatically](#), page 87

[Preference-based scheduling](#), page 373

# Analyze the schedule

You can view all scheduling conflict messages for *all* users all at once in one message. Some of these messages are employee-related issues, and some are more general scheduling issues.

An analysis performs all the scheduling tasks *except for the actual creation of the schedule*. You can either resolve these conflicts *before* or *after* generating a schedule.



The analyze process can take a long time.

## Procedure

**1** From **Tools**, select **Analyze schedule**.

The system begins the process of reviewing the schedule for conflicts and displays a circular process icon during this time. This process can take a long time, depending on the number of conflicts and other factors.

When the results are ready to be viewed, the blue circular icon changes to an orange exclamation point, indicating that the Analyze process is complete and the results are ready for review.

**2** To review the schedule conflict messages, select the orange exclamation point.

The system displays a list of messages, which indicate different conflicts in the current schedule.

**3** When you are finished reviewing the message, select **OK**. To export the messages to a file for later review, select **Export**.

To run a new analysis on the schedule conflicts, repeat [step 1](#).

## Related topics

[Generate the schedule automatically](#), page 87

[Troubleshooting schedule messages](#), page 324

# Workflow: Import the schedule from an external source

Outsourcers create schedules externally, and you can import them back into the system. Schedule data can be shared with outsourcers to allow them to create the schedules. This capability is important for contact centers that share calls across their own sites and outsourced centers.

Using WFM, outsourcers export employee schedules as XML files using the adapter, *Generic - Outsourcer Staffing Profile Export*. Based on this data, outsourcers create schedules for the staff. Outsourcer schedules can then be imported back into WFM, using the adapter, *Generic - Outsourcer Staffing Profile Import*. You can manually import the schedules from the Forecasting and Scheduling module.

## Related topics

[Generate the schedule automatically](#), page 87

[Generate the schedule for multiple scheduling periods](#), page 99

## Import outsourcer schedule

After the outsourcer creates the schedule, you can then import it into the system by manually importing the outsourcer schedule in the Forecasting and Scheduling module.

Imported outsourcer schedules appear on the calendar as phantom schedules (based on defined staffing profiles) named after the organization that is imported. These schedules are locked.

### Before you begin

- [Select campaign data for schedules](#), page 85

### Procedure

- 1 From **Tools**, select **Import Schedule**.
- 2 From the **Organization** drop-down field, select the organization into which you want to import the outsourcer schedule.

**!** Only organizations that are configured to import outsourcer schedules can be imported.

- 3 From the **Start** and **End** fields, specify the date range for which you want to import data.
- 4 Select **Save**.

The following occurs:

- The system triggers an import of the available staffing profile information using the adapter by the application server.
- The adapter parses the XML file created by the outsourcer and extracts the staffing profiles.
- The profiles are returned to the application server, which saves them in the database.
- The system then refreshes the screen with the imported profiles. All profiles are imported as phantoms with names in the following format:

**ImportedStaffing <number>, <organization\_name>**

Where:

- <number> is an arbitrary number
- <organization\_name> is the name of the organization specified during the import operation.

The imported profiles are locked.

# Generate the schedule for multiple scheduling periods

You can set up and generate the schedule for multiple scheduling periods as a batch process.



This option is helpful for Regional Managers. If they set up multiple scheduling periods in multiple campaigns, they can generate the schedule for all of them at the same time.

## Before you begin

Verify that the user who is doing this task has the permission, **Schedule for Multiple Campaigns**. This permission is automatically applied to the **Retail Regional Manager** role.

To assign this permission to a user role:

- 1 Go to **User Management**. Under **Security**, select **Roles Setup**.
- 2 Select the **Role Name** of the user, and **View/Edit Role**.
- 3 Under **Privilege**, go to **Forecasting and Scheduling**, **Schedule Viewing**, **Edit Forecasting and Scheduling Calendar**.
- 4 Select **Schedule for Multiple Campaigns**, and select **Save**.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Schedule Run**.
  - 2 From **Select date range**, enter the date range for the scheduling periods that you want to run simultaneously.
  - 3 Under **Campaign Name**, select the scheduling periods for which you want to set up scheduling:
    - To select multiple scheduling periods one at a time, press **<Ctrl>** and select the scheduling periods you want.
    - To select multiple scheduling periods all at once, select the scheduling period at the top of the list. Press **<Shift>**, and select the scheduling period at the bottom of the list.
    - To select all scheduling periods in all campaigns displayed for the date range provided, select **Select All**.
  - 4 Select **View**.
  - 5 From the right pane, select the scheduling periods for which you want to set up and run schedules.
  - 6 Select **Set up scheduling**.
  - 7 On the **Scheduler Setup** screen, complete the fields.
  - 8 To run the schedules, select **Initiate Scheduling**.
- The system starts generating the schedules for the selected scheduling periods. Information about the schedule run is displayed in the right pane.
- 9 To check the status of the schedule generation, view the data in the **Progress** and **Status** fields.

## Related topics

[Scheduler setup settings](#), page 100

[Schedule Run status fields](#), page 106

## Scheduler setup settings

When generating the schedule for multiple scheduling periods, you need to complete the settings on the **Scheduler Setup** screen.

Field	Description
<b>Day(s) to schedule</b>	
Schedule all periods	<p>Indicates whether you want to generate schedules for all selected scheduling periods.</p> <p>To generate a schedule for specific dates, do <i>not</i> select this option. Enter a date range in <b>Schedule date range</b>.</p>
Schedule date range	<p>Allows you to generate schedules for a specific date and time range.</p> <p>Enter the date and time, or select the calendar icon and enter the date and time range you want accordingly. The scheduling engine generates schedules for this date and time range only.</p>
<b>Rescheduling options</b>	
Shift assignments	<p>When rescheduling, indicates whether you want to:</p> <ul style="list-style-type: none"> <li>• <b>Schedule:</b> Schedules shift assignments for employees currently assigned to the scheduling period.</li> <li>• <b>Add:</b> Adds more employees to the schedule with shift assignments.</li> <li>• <b>Remove:</b> Allows the scheduling engine to remove shift assignments from the schedule:           <ul style="list-style-type: none"> <li>• If selected, employees who previously had shifts on the schedule can end up having days off. You are allowing the scheduling engine to have this flexibility to generate an optimal schedule.</li> <li>• If <i>not</i> selected, any employee who currently has a shift scheduled on any day does <i>not</i> get that day off. The scheduling engine can change or move the shift, change the duration, or change activities. It can also delete this shift and replace it with another shift. However, it <i>cannot</i> leave the employee <i>without</i> a shift on a day that they previously had a shift on their schedule.</li> </ul> </li> </ul> <p>NOTE: To add or remove shift assignments, you need to select <b>Schedule</b> as well. Once you select <b>Schedule</b>, you can select <b>Add</b>, <b>Remove</b> or both options.</p>

Field	Description
Schedule shift events	<p>Allows the scheduling engine to add shift events to the schedule (such as lunches, breaks, or meetings).</p> <p>Note the following:</p> <ul style="list-style-type: none"><li>When <b>Add</b>, <b>Remove</b>, or both of these options for <b>Shift assignments</b> are selected, <b>Schedule shift events</b> is always selected. It <i>cannot</i> be unselected. The concept is that if you want to add or remove shifts, the shift events associated with those shifts <i>must</i> also be added or removed.</li><li>If you do <i>not</i> select <b>Add shifts</b> or <b>Remove shifts</b>, you can either select or <i>not</i> select this option.</li><li>If you select this option and do <i>not</i> select <b>Add</b> or <b>Remove</b> for <b>Shift assignments</b>, the scheduling engine does <i>not</i> add, remove, or reschedule any shifts. It can, however, reschedule the shift events. The scheduling engine can move the times for these events, change the activity, delete shift events, or add shift events.</li></ul>

Field	Description
Schedule calendar events	<p>Allows the scheduling engine to add calendar events to the schedule (such as floating calendar events and classes). You can select calendar events associated with any activity (<b>All Activities</b>). You can also select to schedule calendar events associated with specific activities (such as <b>Coaching</b> or <b>Learning Break</b>).</p> <p>The scheduling engine does <i>not</i> move single instance calendar events. For example, a manager schedules a team meeting on Tuesday at 3:00 PM. The scheduling engine does <i>not</i> move this event.</p> <p>You cannot <i>explicitly</i> lock single-instance calendar events. However, it is as if these types of events are locked because there is no alternative event to put in its place.</p> <p>For <i>floating</i> calendar events, you use a template to define the possible times an event <i>can</i> be scheduled. For example, you define that a one-hour mentoring session can start at 1:00 PM on Monday, 2:00 PM on Wednesday, or 1:00 PM on Friday.</p> <p>You manually enter these options when setting up this recurring calendar event. The application initially places an instance of this event on the calendar, but it is <i>not</i> locked there. When the scheduling engine runs, it is free to move the floating calendar event to another time, based on the defined floating event.</p> <p>Alternatively, you can also go in manually and place the calendar event instance at another time on the schedule and lock this change. In this case, the scheduling engine does <i>not</i> attempt to reschedule this event.</p>
OT / VTO scheduling	<p>Allows the scheduling engine to schedule Overtime (OT) extensions and Voluntary Time Off (VTO) events.</p> <p>When this option is selected, you can edit values for the <b>OT / VTO parameters</b>.</p>

### Scheduling using agent preferences

Field	Description
Use preferences	<p>Determines whether the scheduling engine uses employee preferences when generating the schedule:</p> <ul style="list-style-type: none"> <li>• <b>No preferences:</b> Preferences are ignored when scheduling.</li> <li>• <b>Preferences by ranking:</b> Preferences are used, based on ranking for employees defined in the <b>User Management</b> module, under <b>Employees</b> and <b>Profiles</b>.</li> <li>• <b>Preferences by seniority:</b> Preferences are used, based on the employee start date.</li> <li>• <b>Preferences by seniority / ranking:</b> Preferences are used, based on a combination of seniority and ranking.</li> </ul>
Favor	Indicates whether service level or user preferences is favored, based on a sliding scale.
<b>Scheduling algorithm behavior</b>	
Staffing	Indicates whether you prefer understaffing or overstaffing, based on a sliding scale.
Service Level	<p>Indicates how the scheduling engine defines the service level for the schedules, based on a sliding scale:</p> <ul style="list-style-type: none"> <li>• <b>Minimize spikes:</b> The scheduling engine aims for an overall <i>lower</i> but <i>consistent</i> service level, favoring less variance and creating a smoother curve.</li> <li>• <b>Maximize overall (weekly):</b> The scheduling engine aims for an overall <i>higher</i> but <i>less consistent</i> service level, favoring better overall service but allowing poor service during some time periods. This option allows <i>spikes</i> in the service level.</li> </ul> <p>To indicate whether the scheduling engine favors <b>Minimize spikes</b> or <b>Maximize overall (weekly)</b>, select the markers on the scale. If you select the middle of the scale, the scheduling engine favors both equally, and schedules accordingly.</p>

Field	Description
Minimize Class Sessions over Service Level	<p>Indicates whether the scheduling engine minimizes the number of class sessions (at the expense of the service level):</p> <ul style="list-style-type: none"> <li>If you select this option, the scheduling engine fills up all sessions with the maximum number of attendees. Many employees are in classes at the same time, but there are fewer classes on the schedule. In this case, it does <i>not</i> happen that often that many employees are unavailable because they are in classes.</li> <li>If this option is <i>not</i> selected, the scheduling engine maximizes service level. The maximum number of class sessions are created (given the constraint for the minimum number of attendees). Fewer employees are in classes at the same time, but there are more classes on the schedule. Therefore, it happens more frequently that employees are unavailable because they are in classes, but fewer employees are unavailable due to classes.</li> </ul>
Schedule at least __ agent(s)	<p>Specifies the minimum number of employees that must be scheduled. The scheduling engine never schedules fewer than this number of employees.</p>
<b>Time to schedule</b>	
Amount of time to spend scheduling	<p>Indicates the amount of time you want to spend on generating schedules:</p> <ul style="list-style-type: none"> <li><b>Normal:</b> The scheduling engine spends enough time to provide a good schedule.</li> <li><b>Advanced:</b> The scheduling engine spends more time attempting to resolve conflicts and rule violations before generating a good schedule.</li> <li><b>Schedule until interrupted:</b> The scheduling engine continues to refine the schedule until you manually stop the process.</li> </ul>
Agents to schedule	<p>Specifies the type of employees to schedule:</p> <ul style="list-style-type: none"> <li><b>Employees only</b></li> <li><b>Staffing profiles only</b></li> <li><b>Employees and staffing profiles</b></li> </ul>
<b>OT / VTO parameters</b>	

Field	Description
Add OT	<p>Allows the scheduling engine to schedule Overtime (OT) extensions. OT extensions are added <i>before</i> or <i>after</i> a shift to <i>extend</i> employee work time.</p> <p>If you select this option, set the following:</p> <ul style="list-style-type: none"> <li>• <b>Before shift:</b> Allows scheduling OT extensions <i>before</i> shifts.</li> <li>• <b>After shift:</b> Allows scheduling OT extensions <i>after</i> shifts.</li> </ul>
Add VTO	<p>Allows the scheduling engine to schedule Voluntary Time Off (VTO) events. VTO events are added at the <i>beginning</i> or <i>end</i> of an employee shift to <i>reduce</i> employee work time.</p> <p>If you select this option, set the following:</p> <ul style="list-style-type: none"> <li>• <b>To start of shift:</b> Allows scheduling VTO events at the <i>beginning</i> of shifts.</li> <li>• <b>To end of shift:</b> Allows scheduling VTO events at the <i>end</i> of shifts.</li> </ul>
Total maximum hours	<p>Defines the maximum number of hours of OT extension time or VTO event time that can be added to all employees being scheduled.</p> <p>If you select this option, set the following:</p> <ul style="list-style-type: none"> <li>• <b>OT:</b> Defines the maximum number of hours of OT extension time that can be added to all employees being scheduled.</li> <li>• <b>VTO:</b> Defines the maximum number of hours of VTO event time that can be added to all employees being scheduled.</li> </ul>
<b>Schedule warnings</b>	
Ignore warnings and continue scheduling	<p>Determines which warning messages to ignore during schedule generation:</p> <ul style="list-style-type: none"> <li>• <b>Initial:</b> Indicates that you want to ignore <i>initial</i> warning messages that appear while the schedule is being generated.</li> <li>• <b>Secondary:</b> Indicates that you want to ignore <i>more</i> warning messages that appear while the schedule is being generated.</li> </ul>

## Related topics

[Generate the schedule for multiple scheduling periods](#), page 99

## Schedule Run status fields

After generating the schedule for multiple scheduling periods, the system displays status information on the **Schedule One or More Campaigns** screen.

Field	Description
Campaign	Displays the campaign for the scheduling period to be scheduled.
Scheduling Period	Displays the scheduling period to be scheduled.
Scheduler	Displays the user name of the scheduler.
Progress	Displays the progress of the schedule generation for the scheduling period. Once it is completed, you can select <b>Analyze</b> to display schedule warning messages for all employees.
Status	Displays the scheduling status for the scheduling period, which can be one of the following: <ul style="list-style-type: none"> <li>• <b>Pending:</b> First status to appear once the scheduler has been initiated, but it has <i>not</i> yet started running.</li> <li>• <b>Started:</b> Once the scheduler runs, the status changes from <b>Pending</b> to <b>Started</b>.</li> <li>• <b>Completed:</b> Once the scheduler has processed the schedule successfully, the status changes to <b>Completed</b>.</li> <li>• <b>Canceled:</b> This status is displayed if you select <b>Cancel</b> for the scheduling period.</li> <li>• <b>Failed:</b> This status is displayed if the schedule fails during processing the schedule:               <ul style="list-style-type: none"> <li>• <b>(1):</b> Indicates that the schedule run failed for the <b>Scheduler Start</b> event.</li> <li>• <b>(2):</b> Indicates that the schedule run failed for the <b>Scheduler End</b> event.</li> </ul> </li> </ul> During <b>Scheduler Start</b> and <b>Scheduler End</b> events, there are many status messages that can be displayed (including Loading Employee Information, Loading Shift, and Resetting Calendar Information).
Analyze	Triggers the <b>Analyze Schedule</b> operation for scheduling periods with a <b>Status</b> of <b>Completed</b> . This process displays various conflicts in the schedule, including scheduling conflicts, minimum / maximum hour issues, assignment rule conflicts.

Field	Description
Cancel	<p>Cancels a scheduling period only when it is in a <b>Pending</b> status. When you select the <b>Cancel</b> button, the value in the Status field changes to <b>Canceling</b>.</p> <p>NOTE: This option is <i>not</i> available when running the schedule for one scheduling period on the Calendar.</p>

### Related topics

[Generate the schedule for multiple scheduling periods, page 99](#)

[Analyze the schedule, page 96](#)

# Viewing a schedule

The WFM application provides the ability for users to control their view of the schedule. Depending on user privileges, you can view draft and published schedules, and adherence data all in one place. Zoom in and out of the schedule in hour, day, week or period views. View employee rows in a compressed, compact view or in the regular, standard view. View up to five layers of scheduling components on the calendar. In addition, view user and campaign time zones together.

## Topics

About viewing the schedule .....	109
Schedule layer hierarchy .....	111
View the schedule .....	115
Zoom in and out of the schedule .....	118
View daily summary for employees .....	120
View paid hours on draft and published schedules .....	121
About time zones .....	123
Find calendar data .....	126
Sort schedule attributes .....	127
View statistics .....	129
Calculate and view resources information .....	135
View activity legend .....	141
Refresh schedules .....	142

# About viewing the schedule

The WFM application provides the ability for users to control their view of the schedule.

When you generate the schedule, the system populates the calendar with shift assignments, shift events, and other scheduling components for the selected group of employees in the selected scheduling period.

Visually, the schedule is made up of rectangles of different colors and sizes. The color represents the *activity* associated with the component (defined in the **Work Administration** module). The length of the rectangle represents the *duration* of the component.

## Example: Viewing a shift on the calendar

The details of a shift are the following:

- The name (work rule) of the shift is **Full-time, 8 hrs.**
- The activity is **Immediate**.
- The activity defines the shift, which appears in a predefined color. The color for **Immediate** is defined as dark blue.
- The shift is eight hours long.

Therefore, a long, dark blue rectangle spanning a duration of eight hours appears on the schedule. When you point to the shift, the shift name, activity, time frame, and duration appear.

## Example: Viewing a shift event on the calendar

The details of a shift event are the following:

- The name (work rule) of the shift event is **Morning break, 1/2 hr.**
- The activity is **Break**.
- The activity defines the shift event, which appears in a predefined color. The color for **Break** is defined as pink.
- The shift event is one half hour.

Therefore, small, pink rectangles spanning an interval of 30 minutes appear for that shift within the dark blue rectangle.

A lock icon on a component indicates that a component is locked. The scheduling engine *cannot* move locked components during rescheduling.

## View draft and published schedules, and adherence data all in one place

Depending on user privileges, you can view draft and published schedules, and adherence data for each employee. You can expand and collapse employee rows to view *all* of this data, or just the first row (the draft schedule, by default). You can also select to view just the draft and published schedules, just adherence data, or all schedules and adherence data for all employees.

## Zoom in and out of the schedule in hour, day, week or period views

You can view the schedule in different time resolutions - by hour, day, week or period. This allows you to see *more* details spanning a *shorter* period (**Hours** or **Day** views), and *fewer* details spanning a *longer* period (**Week** or **Period** views). You can also jump to a specific day in **Hours** or **Day** views, and to a specific week in **Week** view.

### View employee rows in compact or standard views

You can increase or decrease the size of employee rows by selecting (or not selecting) to view the rows in **Compact** view. **Compact** view makes the rows smaller in size.

### Show profile pictures of employees

You can decide to display or hide the employee pics next to the employee names on all rows by selecting **Show profile picture**. Even when this option is *not* selected, you can still view employee pictures on the details pane when you select components on the calendar.

### View user and campaign time zones together

By default, you view schedule data in the time zone of the campaign. You can also select to view data in the defined time zone of the logged in user by selecting **User time zone**. This option displays both the campaign time zone and the user time zone in separate rows on the header of the schedule. When viewing the schedule in user time zone, assignments on the calendar and the cards on the details pane are displayed in the user time zone.

### View up to five layers of scheduling components

You can see easily every layer on the schedule, including shift assignments and unavailability events, working and non-working shift events, calendar events and time off events. Layering allows you to see what is underlying the event, which makes it easier to assess whether the event needs to be deleted or moved. For adherence purposes, employees *must* adhere to the highest layer on their schedules.

### Viewing schedules and adherence data

Note the following about viewing schedules and adherence data:

- If you have already generated a schedule or added components manually for employees for this scheduling period, *draft* schedules are displayed for the relevant employees.
- If you have already *published* a schedule for employees for this scheduling period, *published* schedules are displayed for the relevant employees.
- If you have *not* yet generated or published a schedule for employees for this scheduling period (or added components manually on the calendar), only employee names and pictures are displayed in a list.
- Adherence rows can be displayed for the relevant employees (named **Primary**, **Adherence** and **Secondary**, by default).

### Related topics

[View the schedule](#), page 115

[Zoom in and out of the schedule](#), page 118

[Schedule layer hierarchy](#), page 111

### Related information

View adherence data (*Workforce Management Tracking Guide*)

# Schedule layer hierarchy

A scheduling component is shown as a *layer* on a shift. The schedule can display up to five layers of scheduling components. Layering allows the scheduler to see what is underlying the event, which makes it easier to assess whether the event needs to be deleted or moved. For adherence purposes, employees *must* adhere to the highest layer on their schedules.

The layer of the component depends on the component type. Components on the same layer *cannot* overlap. Components on different layers can overlap.

## Higher-level layers take precedence over lower-level layers

The higher-level layers always take precedence over the lower-level layers. For example, time off events take precedence over every other layer, as the employee is unavailable to work.

### Schedule layers

Layer 5	Time Off Events	Sick		
Layer 4	Calendar Events	Meeting      Training		
Layer 3	Non-working Shift Events	Break	Lunch	Break
Layer 2	Working Shift Events	Project      Research		
Layer 1	Shift Assignments & Unavailability Events	Phone      Unavailable		

Layer	Component	Description
1	Shift Assignments	Defines the main activity the employee is doing while working that day. An employee can only be assigned <i>one</i> shift each day. Shifts can be assigned by defining shift work rules using the <b>Work Administration</b> module, or manually on the calendar (using the <b>Add</b> menu).
1	Unavailability Events	Indicates that the employee is unavailable to work during this specified duration. No shift assignment can be scheduled during this time frame.  For example, an employee has a regular medical appointment from 3:00 - 5:00 PM every Wednesday. Create an unavailability event for that time frame, so that no shift is scheduled for the employee during that time.  Unavailability events can <i>only</i> be assigned manually on the calendar (using the <b>Add</b> menu).

Layer	Component	Description
2	Working Shift Events	<p>Defines activities that are considered work activities and <i>can only occur during a shift</i>, but they are not the main activities of the shift.</p> <p>For example, a shift is associated with the activity, <b>Phone</b>. A working shift event can be associated with the activities <b>Project</b> or <b>Research</b>. Therefore, most of the day the employee assigned the <b>Phone</b> shift is working on the phone. During the scheduled <b>Project</b> or <b>Research</b> shift event, however, they are doing these work activities for the specified duration.</p> <p>Working shift events can be assigned by defining shift event work rules using the <b>Work Administration</b> module, or manually on the calendar (using the <b>Add</b> menu).</p> <p>The activity used for working shift events must have the following parameters selected:</p> <p>In <b>Work Administration, Activities</b> under <b>Scheduling Usage</b> on the <b>Activity Details</b> screen:</p> <ul style="list-style-type: none"> <li>• <b>Use in Shift (Primary Activity)</b></li> <li>• <b>Use in Shift Event</b></li> </ul> <p>If you want the activity to be used for a calendar event, select <b>Use in Calendar Event</b>.</p>
3	Non-working Shift Events	<p>Defines activities that can only occur during a shift, but are <i>not</i> considered work activities. Common examples include breaks, lunches, or meetings.</p> <p>For example, a shift is associated with the activity, <b>Immediate</b>. A non-working shift event can be associated with the activity, <b>Break</b>. Therefore, most of the day the employee assigned the <b>Immediate</b> shift is working on incoming customer requests. During the scheduled <b>Break</b> shift event, however, they are taking a break for the specified duration.</p> <p>Non-working shift events can be assigned by defining shift event work rules using the <b>Work Administration</b> module, or manually on the calendar (using the <b>Add</b> menu).</p> <p>The activity used for non-working shift events must have the following parameters selected:</p> <p>In <b>Work Administration, Activities</b> under <b>Scheduling Usage</b> on the <b>Activity Details</b> screen:</p> <ul style="list-style-type: none"> <li>• <b>Use in Shift (Primary Activity)</b> is <i>not</i> selected</li> <li>• <b>Use in Shift Event</b> is selected</li> </ul> <p>If you want the activity to be used for a calendar event, select <b>Use in Calendar Event</b>.</p>

Layer	Component	Description
4	Calendar Events	<p>Defines activities that can be single-instance or recurring events, and can have one or multiple attendees. Examples of calendar events are meetings or training sessions.</p> <p>Calendar events can occur <i>within or outside</i> of a shift. They exist independently from shifts or unavailability events.</p> <p>Calendar events can <i>only</i> be added manually on the calendar (using the <b>Add</b> menu).</p>
5	Time Off Events	<p>Specifies a duration when an employee is not working for a specific reason. Examples of activities for time off events include PTO, Jury Duty, Sick, and Vacation. Time off events are scheduled <i>on top of</i> shifts. The concept is that the employee was originally scheduled to work, and but now <i>cannot</i> work for a specified reason.</p> <p>This layer takes precedence over all other layers, as the employee is <i>not</i> available to work.</p> <p>Time off events can <i>only</i> be added manually on the calendar (using the <b>Add</b> menu).</p>

### Related topics

[Components on the same and different layers](#), page 113

[Employees adhere to the highest schedule layer](#), page 114

[View the schedule](#), page 115

## Components on the same and different layers

Components on the same layer on the schedule *cannot* overlap, whereas components on different layers *can* overlap.

### Example: Components on the same layer cannot overlap

A time-off event is associated with the activity, **Sick**. That component is on layer 5. You *cannot* schedule another time-off event associated with the activity, **Vacation**, during the same time frame as **Sick**.

### Example: Components on different layers can overlap

- From 8:00 AM - 5:00 PM, schedule a shift assignment called **Full-time, 8 hrs**. This component exists on layer 1.
- From 9:00 - 11:00 AM, schedule a calendar event associated with the activity, **Meeting**, which exists on layer 4.
- From 10:15 - 10:30 AM, schedule a non-working shift event associated with the activity, **Break**, which exists on layer 3.
- From 1:00 - 2:00 PM, schedule a working shift event associated with the activity, **Research**, which exists on layer 2.

- An employee calls in sick that day. You schedule the time-off event, **Sick**, which exists on layer 5. This event takes precedence over the other events, as the employee is *not* available to work.

### Related topics

[Schedule layer hierarchy](#), page 111

[Employees adhere to the highest schedule layer](#), page 114

[View the schedule](#), page 115

## Employees adhere to the highest schedule layer

When components on different layers on the schedule overlap in time, employees *must* adhere to the assignment on the highest layer.

For example, a shift assignment is on schedule layer 1. Calendar events are on layer 4. When the calendar event is scheduled, the employee *must* adhere to the activity of the *calendar event*, and *not* the activity of the *shift*.

### Example: Adhering to the highest layer assignments

Define the following:

- Shift from 9:00-5:00 PM - Answer phones
- Working shift event from 11:00-3:00 PM - Research project
- Non-working shift event from 12:00-1:00 PM - Lunch
- Calendar event from 12:30-1:30 PM - Team meeting

Based on these defined layers of events, employees are evaluated for adherence based on the following schedule:

- 9:00-11:00: Phone work
- 11:00-12:00: Research
- 12:00-12:30: Lunch
- 12:30-1:30: Team meeting
- 1:30-5:00: Phone work

### Related topics

[Schedule layer hierarchy](#), page 111

[Components on the same and different layers](#), page 113

[View the schedule](#), page 115

# View the schedule

View the schedule for a selected campaign (or no campaign), scheduling period or dates, employees, and a work queue (for scheduling periods only). You can view information about the scheduling components in multiple ways.

## Before you begin

- [Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

 To view draft schedules, published schedules, and adherence data, the relevant user privileges need to be enabled. For more information, see the *Roles and Privileges Reference Tool*.

## Procedure

- 1 Depending on user privileges, you can view the following for every employee on the schedule:
  - **Draft schedule:** Displays the schedule that is currently in progress and has *not* yet been published. This is your working schedule, to which you can add, edit and remove scheduling components.
  - **Published schedule:** Displays the current published schedule. This is the schedule against which adherence data is measured. This schedule is always displayed in read-only mode. You *cannot* make any updates to this schedule, but you can always publish the draft schedule, which then becomes the updated published schedule.
  - **Primary time record:** Displays the actual work done by the employee. Data for this row usually comes from an Automated Call Distributor (ACD) that is loaded automatically into the system.
  - **Adherence:** When defined adherence thresholds are exceeded and the recorded activities (on the primary time record row) are *not* the same or mapped to the scheduled activities on the Published schedule, this gap is displayed on the Adherence row as an *adherence exception*.
  - **Secondary time record:** Displays an extra record of actual work done by the employee. The Desktop & Process Analytics (DPA) product generates the data for this time record. It monitors the employee desktop.
- 2 Filter your view of the employee rows:
  - To view *all* of this data, or just the first row (the draft schedule, by default), expand or collapse the employee rows.
  - From **View**, from the **View** drop-down menu:
    - To view all schedules and adherence data for all employees, select **All**.
    - To view the draft and published schedules *only*, select **Draft Schedule**.
    - To view the published and adherence rows *only*, select **Adherence**.
- 3 To increase the size of all employee rows so that they appear larger, from **View**, unselect **Compact view**.

By default, **Compact view** is selected. This option *decreases* the size of all employee rows. Unselecting this option *increases* the size of all rows.
- 4 To show profile pictures of employees next to the employee names on all rows, from **View**, select **Show profile picture**.

Even when this option is *not* selected, you can still view employee pictures on the details pane when you select the employee row.

- 5 To show conflict prompts that appear while editing a scheduling component, from **View**, select **Show conflict prompts**.

If you do *not* select this option, scheduling conflict messages will not appear while editing scheduling components, but you can still view them by clicking the orange notification bubble on each employee profile picture. These messages will also still appear when generating or analyzing the schedule.

- 6 While viewing the schedule in campaign mode only, to view user time zone along with the campaign time zone, from **View**, select **User time zone**.

The system displays an extra row beneath the campaign time zone, showing the time zone of the logged in user. You can still view the campaign time zone on the top row, and the corresponding times of the user time zone beneath it.

- 7 For a specific employee, point to the shift assignment.

A tooltip appears, displaying:

- Name or work rule of the shift
- Name of the activity with which the shift is associated
- Time frame of the shift
- Shift duration in parentheses

- 8 In the same way, point to any shift events associated with the shift.

A tooltip appears, displaying:

- Name or work rule of the shift event
- Name of the activity with which the shift event is associated
- If the shift event is *not* defined as a **Paid** event, **Unpaid** appears next to the activity name
- Time frame of the shift event
- Shift event duration in parentheses

- 9 Point to any other events (calendar, time off and unavailability events, or classes) on the schedule.

The tool tip displays similar information about each event. You can view up to five layers of scheduling components, all of the layers on the calendar. The different layers include shift assignments and unavailability events, working and non-working shift events, calendar events and time off events.

- 10 Select an employee row.

The details pane slides over from the right, showing information about the component on the **Schedule**, **Published** and **Adherence** tabs. The information includes the activity, time frame, duration, and name of the work rule. To pin the details pane, select the pin icon in the right corner.

- 11 To view schedule conflict messages for any employee, select the orange notification bubble on the employee profile picture. (If there are *no* conflicts, these orange notification bubbles do *not* appear.)

The system displays all scheduling conflicts for that specific employee. Take note of the conflicts and resolve accordingly. To close this window, select **OK**.

## Related topics

[Zoom in and out of the schedule](#), page 118

[View daily summary for employees](#), page 120

[About viewing the schedule](#), page 109

[Schedule layer hierarchy](#), page 111

[Troubleshooting schedule messages](#), page 324

**Related information**

[View adherence data \(\*Workforce Management Tracking Guide\*\)](#)

[Activity display names for Desktop Monitoring \(\*Workforce Optimization System Administration Guide\*\)](#)

# Zoom in and out of the schedule

You can zoom in and out of the schedule to view different levels of time granularity. To see *more* details spanning a *short* period, zoom in to the **Hours** or **Day** views. To see *fewer* details spanning a *longer* period, zoom out to the **Week** or **Period** views.

In **Hours** and **Day** views, you can view components of *any* duration (at least one-minute long). In **Week** view, you can view components with durations of *three* hours or longer. In **Period** view, you can view components with durations of *five* hours or longer. In every resolution (or zoom level), you can view shifts and unavailability events, regardless of duration.

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- 1 To view the smallest time granularity for the schedule, select **Hours**.

In this view, you can view components of any duration (at least one-minute long). The system displays a zoomed-in view of every hour in the selected day. Each hour is divided into 15-minute intervals. This view allows you to view easily all scheduling components with short durations.

- 2 To view a slighter larger time granularity than the hourly view, select **Day**.

The system displays the schedule for the selected day. This view is a more zoomed-out view of the hourly view, but you can still view all components of any duration (at least one-minute long). To see every component of any duration clearly, use **Hours** or **Day** view. To scroll to another day in **Hours** or **Day** view, select the **Next** and **Previous** arrows.

- 3 To zoom out even more and view the schedule by the week, select **Week**.

In this view, the system only displays components with durations of *three* hours or longer. To scroll to another week in **Weeks** view, select the **Next** and **Previous** arrows.

- 4 To view the largest time granularity for the schedule, select **Period**.

**Period** view allows you to view an entire scheduling period at a glance, without having to navigate to a different view. It also provides easier access to the fish-eye view for any day in a multi-week scheduling period. In this view, the system only displays components with durations of *five* hours or longer.

- 5 To display a fish-eye view of a selected day while in **Week** or **Period** view, point to the day header for the day you want and select the arrow.

The system displays the day view for the selected day. Fish-eye view allows you to easily see the detailed, hourly schedule of any day while in **Week** or **Period** view. The day header is pinned open automatically, allowing you to scroll through the hours in that day and still see the day you are viewing. To close this view, select the **x** icon on the header.

- 6 To go to a specific day or week:

- To go to a specific day in **Hours** or **Day** view, select the **Jump To** icon and select the day.
- To go to a specific week in **Week** view, select the **Jump To** icon and select the week.



In **Week** and **Period** views, the system does *not* display the gap period between shifts (the line between a shift and an OT extension). In **Period** view, the **Jump To** icon is *not* displayed.

**Related topics**

[View the schedule](#), page 115

[About viewing the schedule](#), page 109

# View daily summary for employees

You can view a summary of the schedule for multiple, selected employees for a selected day. This summary allows you to view details about shifts and other scheduling components for multiple employees at the same time.

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- 1 Select **Hours** or **Day** view.
- 2 Select the **Jump To** icon, and select the day you want.
- 3 Select the employees for which you want to view a schedule summary.
- 4 View the summary:
  - The header on the right pane displays the number of selected employees. For example: *4 employees selected*. If only one employee is selected, the header displays the employee name.
  - The system displays data for each employee for the selected *day*. The data includes each shift, shift event, and other events, and the activity, time period, and duration of each one.

For example, for Mike Smith, the summary displays:

**Full time 8 hrs, Immediate**

**9:00 AM - 5:00 PM (8:00)**

**In-house training, Coaching**

**11:00 AM - 1:00 PM (2:00)**

**1hr Lunch, Lunch**

**1:00 - 2:00 PM (1:00)**

## Related topics

[Zoom in and out of the schedule](#), page 118

[View the schedule](#), page 115

[View paid hours on draft and published schedules](#), page 121

# View paid hours on draft and published schedules

You can view details about paid hours for single or multiple employees on draft and published schedules. You can view this data for a selected week, or for the entire scheduling period.

You can view details about activities, and the number of regular working hours, overtime, and paid time off. When a *single* employee is selected, you can also view details about each event for each day in the selected time period.



Unpaid hours are *not* included in the values displayed in this view. For example, if there is an unpaid time off event, those hours are *not* included in the **Time off** column.



Show Me

## Before you begin

[Select campaign data for schedules, page 85](#) or [Select no campaign for schedules, page 86](#)

## Procedure

- 1 From the calendar, select **Week** or **Period** view.
- 2 Optional. If you selected **Week** view and you have selected a multi-week period, use the **Jump To** feature to go to the week you want.
- 3 Select the employees for whom you want to view paid hours.  
You can select a single employee, or multiple employees. If you select a *single* employee, you can view additional details about each event for each date in the selected period. If you select multiple employees, you can view the summary of paid hours only.
- 4 From the Details pane, do one of the following:
  - To view details about paid hours on the draft schedule, select the **Schedule** tab (default tab).
  - To view details about paid hours on the published schedule, select the **Published** tab.
- 5 View the summary of paid hours for the selected employees:

- a. Under **Paid Activities** on the color-coded graph, hover over each colored block to view the activity.

The activities are listed on the graph in alphabetical order. The tooltip displays how many events are on based on the activity for the selected time period (week or period), and the total number of hours for each activity.

If the activity is used in an overtime component (overtime extension, shift or shift event), the tooltip displays the number of overtime components and the total number of overtime hours. If the activity is *not* used in any overtime components, nothing appears on the second line of the tooltip.

For example:

**6 Immediate events: 28:05**

**3 Overtime: 06:00**

or with no overtime:

**3 Lunch events: 04:25**

- b. Underneath the graph, view the **Total Paid Hours** for the selected time period.
- c. Under **Total Paid Hours: <total number of paid hours>**, view the breakdown of this value by viewing the regular working hours (non-overtime hours), overtime and *paid* time off for the selected period.

For example:

**Regular: 70.0 | Overtime: 14.9 | Time off: 0:45**

- 6 If you selected a *single* employee only, view the details of paid hours for each day for that employee:
  - a. For each date, view the time range of the shift including OT extensions, and the number of hours of *paid* time off (if exists).

For example:

**Mon 10/4 08:00 AM - 05:00 PM 1:00**

This indicates that on Monday, October 4th, the shift including OT extensions is on the schedule from 8:00 AM to 5:00 PM. The number of paid time off on Monday is 2 hours.

- b. To view the time frame of the paid time off event, hover over the value under the **Time Off** column.

The system displays the paid time off event time range, and the duration.

For example, the **Time Off** value is 1.00 hrs. When you hover over this value, you see the following:

**11:30 PM - 12:00 AM (0:30)**

**12:30 AM - 01:00 AM (0:30)**

This indicates that on Monday, October 4th, there were 2 paid time off events of 30 minutes each - one scheduled from 11:30 PM - 12:00 AM, and one from 12:30 AM - 1:00 AM.

- c. To view detailed information about each event on a specific date, click the arrow next to the date.

The system displays each event, along with the following details: the activity of the event, the scheduled time range, the duration, and the work rule. The system also opens this day in fish-eye view, from which you can view details of the events on the schedule.

The following is an example of what is displayed in the Details pane when you click the arrow on a date:

**Immediate**

**07:00 AM - 04:00 PM (9:00 hrs)**

**ACME fulltime**

In this example, the event is a shift based on the **ACME fulltime** work rule and the **Immediate** activity. It is scheduled from 7:00 AM to 4:00 PM, and the duration is 9 hours.

## Related topics

[View daily summary for employees](#), page 120

# About time zones

By default, you view data on the calendar in the time zone of the *campaign*. In campaign mode only, you also have the option of viewing data in the time zone of the logged in *user*.

When viewing the schedule in *user time zone*, calendar assignments, tool tips, and data on the details pane are displayed in the *user* time zone. Headers and groupings on the details pane still appear in the *campaign* time zone.

## Dates in Campaign time zone as Nominal dates

Every campaign is created with a time zone and day boundaries that determine the *nominal* date. In other words, the *campaign* time zone dictates the *nominal* date and time. In *user* time zone, data is displayed in the time zone of the logged in user, but the *nominal* dates and times appear as the headers and groupings on the calendar.

The nominal date allows Resource Planners and Supervisors in different locations and time zones to align to an official common date. The nominal heading removes any ambiguity and lack of consistency over which assignments are scheduled for which days.

### Example: Nominal dates displayed when user time zone is selected

For example:

- The selected *campaign* is in UTC time zone.
- The time zone of the logged-in *user* is EST.
- By default, all of the data on the calendar is displayed in UTC time zone (time zone of the campaign).
- Select **User time zone**.
- The display of the calendar changes accordingly:
  - The first header row beneath the name of the campaign and dates displays the heading, **Campaign time zone**. It indicates the time zone of the campaign (such as GMT), and displays the time and dates in that time zone.
  - An additional header row appears beneath the **Campaign time zone**, displaying the user time zone. It indicates the time zone of the logged in user, and displays the time and dates in that time zone.
  - All calendar assignments, tool tips, and data on the details pane are displayed in the *user* time zone. Headers and groupings on the details pane still appear in the *campaign* time zone.
  - For example, a shift starts on Monday at 10:00 PM EST, which is Tuesday at 3:00 AM UTC. Therefore, when you point to the shift on the calendar, the tool tip displays the shift starting at 10:00 on Monday. However, when viewing the details pane, Tuesday shows in the date column header (in **Week** and **Period** views), and in the grouping there. The reason is because Tuesday is the nominal date. Monday is the date according to the user time zone.

## Related topics

[View schedule in user or campaign time zone](#), page 124

[View time zones for distributed campaigns](#), page 125

## View schedule in user or campaign time zone

You can switch between viewing data on the calendar in *user* or *campaign* time zone on the calendar.

By default, when viewing the schedule in *campaign mode*, you view the schedule in the *campaign time zone*. To see all data in the time zone of the logged in user, you can select to show the user time zone. In *user* time zone, data is displayed in user time zone, but the campaign *nominal* dates and times appear as headers and groupings on the calendar.



When viewing the schedule in **No Campaign** mode, you can *only* view the schedule in user time zone.

### Before you begin

To verify or update the time zone of the logged in user:

- 1 From the upper right corner, select the user name and select **Preferences** from the drop-down list.
- 2 From **My Preferences**, select the **General** tab.
- 3 From the **Time Zone** field, verify or update the time zone of the user accordingly, and select **OK**.  
The system refreshes the data on the calendar to reflect any updates to the user time zone.

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.

- 2 From the left pane **Campaign** filter, select a campaign accordingly.

If **No Campaign** is selected, the schedule is *only* displayed in user time zone. There is *no* option to select user time zone and to view both user and campaign time zones on the calendar.

- 3 Note the campaign time zone in the top row of the calendar.

By default, all data on the calendar is displayed in the campaign time zone.

- 4 From **View**, select **User time zone**.

The first header row beneath the name of the campaign and dates displays the heading, **Campaign time zone**. It indicates the time zone of the campaign (such as GMT), and displays the time and dates in that time zone.

An additional header row appears beneath the **Campaign time zone**, displaying the *user* time zone. It indicates the time zone of the logged in user, and displays the time and dates in that time zone.

When you point to assignments on the calendar (such as shifts or shift events), the tool tip displays the assignments in the *user* time zone. Times are also displayed in user time zone on the details pane. However, the date headers and groupings on the details pane are displayed in the *campaign* (or *nominal*) time zone.

- 5 To revert to only viewing schedule data in *campaign* time zone, unselect **User time zone**.

The system removes the user time zone row, and displays all schedule data in the campaign time zone.

### Related topics

[About time zones](#), page 123

[View time zones for distributed campaigns](#), page 125

# View time zones for distributed campaigns

View user and campaign time zones for distributed campaigns.

When the *subcampaigns* have a different time zone than their *parent* campaign, the time zone of the *parent* campaign is the campaign time zone. The scheduling periods are created in the parent campaign. The scheduling periods have time ranges defined by the time zone and day boundaries of the parent campaign.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From **Campaign**, do one of the following:
  - To view the schedule for the parent campaign and all of its subcampaigns, select the parent campaign.
  - To view the schedule for a subcampaign only, select the subcampaign from the list.
- 3 Select the remaining filters, as needed (**Employees** and **Queues**).  
If you selected the parent campaign in **Step 2**, you can see employees *from all subcampaigns*. If you selected a subcampaign, you can only see employees from that subcampaign.
- 4 Select **Apply**.  
By default, the schedule is displayed in *campaign* time zone. For the parent campaign and its subcampaigns, the campaign time zone is displayed in the time zone of the *parent* campaign. For subcampaigns *only*, the campaign time zone is the time zone of the *subcampaign*.
- 5 From **View**, select **User time zone**.  
The tool tips, details pane, and dialog windows are all displayed in the *user* time zone. The date header (in **Week** and **Period** views), and the grouping on the details pane are all displayed in *campaign (nominal)* time zone.

## Related topics

[View schedule in user or campaign time zone](#), page 124

[About time zones](#), page 123

# Find calendar data

You can find all types of events, activities, and shift assignments on the calendar, either within the current scheduling period or within a custom time period.



Show Me

## Before you begin

[Select campaign data for schedules, page 85](#) or [Select no campaign for schedules, page 86](#)

## Procedure

- 1 From the **Tools** menu, select **Find**.
- 2 From **Event type**, select the types of events you want to find on the calendar.
- 3 From **Dates**, select whether to find the scheduling components within the current scheduling period, or within a custom date range.
- 4 From **Activities**, select the activities you want to find.
- 5 From **Shift assignments**, select the shift assignments (work rules) you want to find.
- 6 Select **Find**.  
The system maintains the color shading of the components you selected to find. The scheduling components you did *not* select are displayed in a gray color.
- 7 To revert the schedule to its state before you selected to find components, return to the **Find** screen and select **Clear and exit**.

## Related topics

[Schedule layer hierarchy, page 111](#)

# Sort schedule attributes

You can sort the calendar by various schedule attributes, in ascending or descending order.

## Procedure

- 1 From **Tools**, from the **Sort by** drop-down list, select the attribute by which you want to sort calendar data.  
The system sorts the data on the calendar according to your selection.
- 2 To view the schedules of the sorted attribute in ascending or descending order, select **Ascending** or **Descending** next to the **Sort by** list.

For example, you selected to sort by **Published Shift Start**. By default, the schedule displays the schedule according to the *earliest* shift start time on the published schedules (**Ascending** order). To flip the view so that the *latest* shift start time on the published schedules appears at the top, select **Ascending** again. The data is now sorted in **Descending** order.

## Related topics

[Schedule attributes](#), page 127

# Schedule attributes

From the **Sort by** drop-down list, select a specific attribute by which to sort the draft schedules, published schedules, or adherence status.

Cell heading	Cell heading
Last name	Sorts by the last name of the employees in the list.
Draft shift start	Sorts by <i>start</i> time of the shift on the <i>draft</i> schedules.
Draft shift end	Sorts by <i>end</i> time of the shift on the <i>draft</i> schedules.
Draft shift length	Sorts by <i>duration</i> of the shift on the <i>draft</i> schedules.
Draft shift type	Sorts by the shift name (work rule) on the <i>draft</i> schedules.
Published shift start	Sorts by <i>start</i> time of the shift on the <i>published</i> schedules.
Published shift end	Sorts by <i>end</i> time of the shift on the <i>published</i> schedules.
Primary shift start	Sorts by <i>start</i> time of the shift on the <i>primary</i> time records.
Primary shift end	Sorts by <i>end</i> time of the shift on the <i>primary</i> time records.

Cell heading	Cell heading
Adherence status	<p>Sorts by the percentage of employee adherence, as displayed in the <b>Week</b> and <b>Period</b> views.</p> <p>For example, John Smith has 87% adherence. Kate Summer has 53% adherence. If you select to sort by this attribute in ascending order, Kate is listed first, and then John.</p> <p>Employees who do <i>not</i> have adherence due to no published schedules appear at the bottom of the sort list.</p>

### Related topics

[Sort schedule attributes](#), page 127

[View the schedule](#), page 115

### Related information

View adherence data (*Workforce Management Tracking Guide*)

# View statistics

You can view forecasted and required staffing and service level statistics for queues on the calendar.

For most statistics, you can compare the forecasted and required values. Based on this comparison, you can add or delete employee schedules, change the forecast or requirements, or make other valuable staffing decisions for your organization.

## Before you begin

[Select campaign data for schedules](#), page 85



To view statistics for a specific queue, you must select the queue from the **Work Queues** left pane filter. To select a queue from this filter, you *must* select a campaign and scheduling period. (You *cannot* select a queue in **No Campaign** mode.)

## Procedure

- 1 From the **Work Queues** left pane filter, select the queue for which you want to view statistics (or verify that queue is already selected).
- 2 From the **Statistics** menu, select the statistics for which you want to compare the forecasted and required values for the campaign.  
Every statistic you select appears under the **Statistics** area at the bottom of the screen. The intervals for which statistics appear depends on the selected time resolution (**Hours**, **Day**, **Week** or **Period**).
- 3 From the **Statistics** area at the bottom, select the arrow next to the name of a statistic to expand it and view the data.  
On the **Statistics** bar, the **Summary** displays the queue for which the statistics are being displayed. It also displays a summary of the values for the displayed statistics.  
The system displays a graph of the **Forecasted** and **Required** values. The **Forecasted** values are displayed in gray, shaded blocks. A straight black line represents the **Required** values. To view both values, point to different time intervals on the graph.
- 4 Note the following about the displayed statistics:
  - For *almost all* statistics, the values displayed in the cells for each time interval are the **Forecasted** values. The one exception is for the **FTE Differential** statistic, where the value displayed is the *difference* between the **Forecasted** and **Required** values.
  - For the **FTE Differential** statistic *only*, a color-coded line for each time interval indicates the status of the tolerance threshold between the **Forecasted** and **Required** values.
  - *Not all* statistics have both **Forecasted** and **Required** values. Some *only* have **Forecasted** values. For example, **Volume**, **Activity Handling Time**, and **Staffing** *only* have **Forecasted** values. **Service Level**, **Average Speed to Answer (ASA)**, and **FTE Differential** have both **Forecasted** and **Required** values.
  - If the scheduling period is *not* distributed and the ASA service goal has been set, the statistics include **ASA Forecast** and **ASA Required**.
  - If the scheduling period is *not* distributed and contains a Deferred or Outbound queue, the **Backlog** statistic is included.
  - If the scheduling period is *not* distributed and contains an Outbound queue, the following statistics are displayed: **Connects Forecast** and **RPC Forecast**.

- 5** Note the following about calculating statistics:
  - If the calendar has been updated *after* you select to display statistics that affect the schedule, select **Recalculate Statistics** to get updated data.
  - The values for **Volume** and **Activity Handling Time** come from the Forecasts module and are dynamically updated. For these statistics, you do *not* need to select **Recalculate Statistics** to get updated data.
  - All other forecasted statistics are calculated based on the forecasted **Volume**, **Activity Handling Time**, the requirements, and the schedules. The required values come from the **Service Goals** and **FTE Requirements** modules.
- 6** Determine the next step:
  - If the **Forecasted** values are considerably *higher* than the **Required** values (exceeding the thresholds), you can *delete* some of the employee schedules. You can also change the forecast or requirements, or update other settings.
  - If the **Forecasted** values are considerably *lower* than the **Required** values (exceeding the thresholds), you can *add* more employee schedules. You can also change the forecast or requirements, or update other settings.

### Related topics

[Inbound scheduling statistics](#), page 130

[Outbound scheduling statistics](#), page 279

[FTE Differential statistic](#), page 131

## Inbound scheduling statistics

There is a standard set of statistics that handle the traditional, in-bound calls handled by call centers. Using these statistics, you can see what your service levels are in various time intervals throughout a day. You can view statistics for every 15-minute interval, or for an entire day in a week or scheduling period.

Statistic	Example	Range	Data Source (Module)	Description
Volume	40 (units)	0–100,000	Forecast	Number of calls in a specific time interval.
Service level	80%	0–100%	Goals and Requirements	Set percentage of customer interactions handled in a set unit of time.
Activity handling time	120 (time units)	0–999 minutes	Forecast	Amount of time of an average customer interaction in a defined time interval (up until the resolution).

Statistic	Example	Range	Data Source (Module)	Description
Average speed to answer	30 (time units)	0–100 minutes	Calendar	Average amount of time a customer is waiting before receiving a response in the defined time interval.
Staffing	30 (time units)	0–100,000	Calendar	Number of people who are currently working in the defined time interval.
Occupancy	34%	0–100%	Calendar	Percentage of people who are currently <i>occupied</i> , or who are engaged in customer phone interactions, in the defined time interval.
FTE differential	-43 (units)	-10,000–10,000	Goals and Requirements	Difference between the forecasted and required number of people needed to work to meet the defined service levels.

### Related topics

[View statistics](#), page 129

[FTE Differential statistic](#), page 131

[Outbound scheduling statistics](#), page 279

## FTE Differential statistic

When viewing the **FTE Differential** statistic on the calendar, a threshold status is displayed. This status shows whether the difference between the **Forecasted** and **Required** values for each time interval is *within*, *above*, *below*, or *far below* the defined threshold.

The color-coded status bar for this statistic provides an overview of how well the schedule covers forecast requirements. It highlights periods with significant understaffing or overstaffing. This visualization allows you to monitor and adjust staffing levels, as required.

### Configuring the FTE Differential statistic

Before viewing this statistic on the calendar, you need to configure two sets of parameters:

- Define values for the parameters that define the tolerance percentages for the forecasted and required values for the **FTE Differential** statistic
- Define the colors you want to represent the thresholds you defined for the **FTE Differential** statistic

### Related topics

[Configure FTE Differential threshold status](#), page 132

[FTE Differential threshold parameters](#), page 133

[View FTE Differential threshold status](#), page 132

## Configure FTE Differential threshold status

Configure parameters that define the tolerance percentages for the values displayed for the **FTE Differential** statistic. Then, select the colors you want to represent the thresholds. These colors appear when you select to view the status of the **FTE Differential** statistic on the calendar.

### Procedure

- 1 Enter values for the parameters that define the tolerance percentages for the forecasted and required values for the **FTE Differential** statistic:
  - a. Go to **Organization Management**. Under **Hierarchies**, select **Organization Settings**.
  - b. From the **Calendar Queue Ribbon Color Configuration** section, enter values for the parameters.
- 2 Define the colors you want to represent the thresholds you defined for the **FTE Differential** statistic:
  - a. From the logged in user name, select **Preferences**.
  - b. From **My Preferences**, select **Workforce Management**.
  - c. From **Forecasting and Scheduling Calendar**, select the *color* to be displayed for each parameter.

### Related topics

[FTE Differential threshold parameters](#), page 133

[View FTE Differential threshold status](#), page 132

## View FTE Differential threshold status

After configuring the thresholds for the FTE Differential statistic, you can view the color-coded status bar when you select it under the **Statistics** tab.

The visual display of this statistic provides a quick, easy-to-understand overview of how well the schedule covers forecast requirements, highlighting periods with significant understaffing or overstaffing. This visualization allows you to easily and adjust staffing levels, as required.

### Before you begin

[Configure FTE Differential threshold status](#), page 132

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 Select a campaign, scheduling period, and queue for which you want to view statistics.
- 3 Under **Statistics**, select **FTE Differential**.
- 4 Determine the time resolution for which you want to view statistics (**Hours**, **Day**, **Week** or **Period**).
- 5 From the **Statistics** tab on the bottom of the screen, select the arrow next to **FTE Differential**.

For the **FTE Differential** statistic *only*, a color-coded line for each time interval indicates the status of the tolerance threshold between the **Forecasted** and **Required** values.

### Example: Viewing FTE Differential threshold status

- 1 Set the **Contact queue above requirements tolerance (%)** to 10%.
- 2 Set the **Contact queue below requirements tolerance (%)** to -10%.
- 3 Select to view the schedule in the **Hours** resolution.
- 4 From 8:00 AM - 9:00 AM on Monday, Feb. 25th, the **Forecasted** value for **FTE Differential** is 8%. This value is *less* than the percentage defined for **Contact queue above requirements tolerance (%)**, and *more* than the percentage defined for **Contact queue below requirements tolerance (%)**.
- 5 The color displayed on the line is the color selected by the **Queue Within Tolerance Color** parameter under **Preferences**, which is green.

#### Related topics

[FTE Differential threshold parameters](#), page 133

## FTE Differential threshold parameters

When configuring the threshold for the **FTE Differential** statistic, set the parameters that define the tolerance percentages for the forecasted and required values. Then, set the parameters that define the *colors* you want to represent the thresholds you defined.

### Calendar Queue Ribbon Color Configuration Parameters

These parameters define the tolerance percentages for the forecasted and required values for the **FTE Differential** statistic.

These parameters are set in:

**Organization Management, Hierarchies**, and **Organization Settings**, in the **Calendar Queue Ribbon Color Configuration** section.

Parameter	Description
Contact queue above requirements tolerance (%)	Defines the percentage <i>above which</i> the <i>forecasted</i> value for the FTE Differential statistic is considered to be <i>above</i> the <i>required</i> value.
Contact queue below requirements tolerance (%)	Defines the percentage <i>below which</i> the <i>forecasted</i> value is considered to be <i>below</i> the <i>required</i> value.

### Forecasting and Scheduling Calendar Preferences Parameters

These parameters define the *colors* you want to represent the thresholds you defined for the **FTE Differential** statistic by the **Calendar Queue Ribbon Color Configuration** parameters.

These parameters are set in:

**Preferences, My Preferences, Workforce Management**, in the **Forecasting and Scheduling Calendar** section.

Parameter	Description
Queue Within Tolerance Color	Color displayed if the <i>forecasted</i> value is <i>less</i> than the percentage defined for <b>Contact queue above requirements tolerance (%)</b> and <i>more</i> than the percentage defined for <b>Contact queue below requirements tolerance (%)</b> .
Queue Above Tolerance Color	Color displayed if the <i>forecasted</i> value is equal to or <i>higher</i> than the percentage defined for <b>Contact queue above requirements tolerance (%)</b> .
Queue Below Tolerance Color	Color displayed if the <i>forecasted</i> value is equal to or <i>lower</i> than the percentage defined for <b>Contact queue below requirements tolerance (%)</b> .
Queue Far Below Tolerance Color	Color displayed if the <i>forecasted</i> value is <i>twice the value</i> of the percentage defined for <b>Contact queue below requirements tolerance (%)</b> .

### Related topics

[Configure FTE Differential threshold status](#), page 132

[View FTE Differential threshold status](#), page 132

# Calculate and view resources information

You can calculate what your Full-Time Equivalents (FTEs), costs, and staffing levels would be based on the calculation of specific variables. Then, you can update your schedule to fit your requirements. (FTE measures the contribution of work of every employee on a work queue.)

The variables include:

- Number of shifts per week
- Average hours and paid hours per shift
- Average hours spent on responding to customer interactions
- Hourly wages

## Example: Calculate resources information

For example, you currently have seven shifts per week in the schedule. You want to see how much it would cost you to increase the number of shifts to ten per week. By changing the value of **Shifts per week** from **7** to **10**, the values under **Full-Time Equivalents** and **Costs** change accordingly. You can play with this value until you get to the numbers that suit your requirements.

### Before you begin

[Select campaign data for schedules](#), page 85

### Procedure

- 1 From the **Tools** menu, select **Resources Information**.  
By default, the **Calculation details** tab is selected.
- 2 To view how FTE, costs and staffing resources are impacted by different variables, under the **Inputs** section, enter values in the relevant fields.  
The values in the read-only fields are *automatically* updated, based on the values you enter in the **Input** fields.
- 3 Under **Full-Time Equivalents**, view the updated values of all FTEs, and all FTEs that are *needed* (according to the current forecast and defined service level).
- 4 Under **Costs**, view the updated total cost of all FTEs, and all FTEs that are *needed* (according to the current forecast and defined service level).
- 5 Select the **General staffing** tab.
- 6 View the updated staffing information on this tab.
- 7 To update the values for the variables, repeat step 2 as much as needed.
- 8 To close the **Resources Information** screen and return to the calendar, select **Close**.

### Related topics

[Full Time Equivalents \(FTE\)](#), page 139

[Calculation details](#), page 136

[General staffing](#), page 138

## Calculation details

On the **Calculation details** tab, enter values for the **Input** fields. Then, view the impact of these variables under **Full-Time Equivalents**, **Costs**, and **Projects** on this tab. View the staffing requirements on the **General staffing** tab.



Data about projects is only displayed if project queues are linked to the current scheduling period.

Field	Description
<b>Inputs</b>	
Shifts per week	Number of shifts per week for a full-time equivalent (FTE) employee.
Average hours per shift	Average number of hours of each shift.
Average paid hours per shifts	Average number of <i>paid</i> hours of each shift.
Average hours answering contacts per shift	Average number of hours spent responding to customer requests during each shift.
Wage per hour	Average hourly salary.
<b>Full-Time Equivalents</b>	
Based on current schedule	Total number of all FTEs on the current schedule.
Based on forecast and service level requirements	Total number of all FTEs needed, according to the current forecast and defined service level.
<b>Costs</b>	
Based on current schedule	Total cost of all FTEs on the current schedule.
Based on forecast and service level requirements	Total cost of all FTEs needed, according to the current forecast and defined service level.
<b>Projects</b>	Describes the current staffing status of any existing project queues.
Project queue name	Name of the project queue

Field	Description
Start date	Start date of the project queue in the current scheduling period.
End date	End date of the project queue in the current scheduling period.
Employees scheduled	Number of employees currently scheduled for the project queue in the current scheduling period.
Requested (hrs)	<p>Forecasted number of hours it takes employees working on this project work queue to process the required amount of work within the specified time period.</p> <p>This value is calculated by multiplying the number of hours required for each historical week by the weight for that week. The result is then divided by the sum of the weights.</p> <p>This value is displayed in two decimal places. For example, 20.25 represents 20 hours and 15 minutes.</p> <p>The source of this value is the <b>Total Length (hours)</b> column from the Forecast module.</p>
Scheduled (hrs)	Total number of scheduled hours of the project queue during its defined date range.
Over / Under (hrs)	<p>Difference between the values in the <b>Requested (hrs)</b> and <b>Scheduled (hrs)</b> fields.</p> <p>If the value for <b>Requested (hrs)</b> is <i>more</i> than the value for <b>Scheduled (hrs)</b>, then the project queue is understaffed in hours.</p> <p>If the value for <b>Requested (hrs)</b> is <i>less</i> than the value for <b>Scheduled (hrs)</b>, then the project queue is overstaffed in hours.</p> <p>If this value is minimal, then no or few adjustments need to be made to the staffing numbers for the project queue.</p>
Cost	Calculated by multiplying the wage of each employee by the number of hours they are scheduled to work on the project queue.

## Related topics

[Calculate and view resources information](#), page 135

[Full Time Equivalents \(FTE\)](#), page 139

[General staffing](#), page 138

[View Project resources information](#), page 322

## General staffing

On the **General staffing** tab, view the impact of the **Input** values on the staffing requirements.



Data about staffing profiles is only displayed if staffing profiles are defined and included in the current scheduling period.

Field	Description
<b>Based on current schedule</b>	
Maximum concurrent employees per interval	Maximum number of employees who are scheduled to work during the same time interval in the current scheduling period. For example, 9 employees are scheduled to work between 9:00-9:30 on Tuesday of the one-week scheduling period. There are <i>no</i> other time intervals during the scheduling period during which <i>more than 9</i> employees are scheduled. The maximum concurrent employees per interval for the scheduling period are 9.
Minimum concurrent employees per interval	Minimum number of employees who are scheduled to work during the same time interval in the current scheduling period. For example, 2 employees are scheduled between 12:00-12:15 on Wednesday of the first week of the scheduling period. There are <i>no</i> other time intervals during the scheduling period during which <i>fewer than 2 employees</i> are scheduled. The minimum concurrent employees per interval for the scheduling period are 2.
Scheduled paid hours	Number of paid hours scheduled for all employees and phantoms during the entire scheduling period.
Hours scheduled answering contacts	Number of scheduled hours during which employees and phantoms respond to customers during the entire scheduling period.
<b>Based on forecast and service level requirement</b>	
Staffing hours	Total required Full Time Equivalent (FTE) hours for the entire scheduling period.
<b>Staffing profiles</b>	
Profile name	Name of each staffing profile, and the last names of each employee using the phantom schedules based on these profiles.

Field	Description
# On schedule	Number of phantom schedules based on the staffing profile that are currently on the schedule.
% scheduled	Percentage of employees using the phantom schedule based on this staffing profile.
# FTE	Number of Full-Time Equivalents (FTEs) using this profile.
Cost	Total cost of the FTEs, determined by using the hourly wage set for the profile.

### Related topics

[Calculate and view resources information](#), page 135

[Full Time Equivalents \(FTE\)](#), page 139

[Calculation details](#), page 136

## Full Time Equivalents (FTE)

*Full Time Equivalent* or *FTE* measures the contribution of work of every employee on a work queue.

FTE does *not* necessarily equal the number of employees who are working on a queue. Staffing measures *how many people* are working on a specified work queue. FTE measures *how much work* is being done on a specified work queue.

### Example: One employee = 2.0 FTE for two queues

- An employee, Carol Smith, has the skills to handle two work queues.
- Queue 1 and Queue 2 both have a service goal of 80% in 20 seconds and have equal priority.
- Carol answers each call within the service goal on each work queue. Therefore, Carol has contributed the *same* amount of work as *two* skilled employees for the combined queue.
- The FTE for the combined queue is 2.0.

For Queue 1, Carol contributes 1.0 FTE. For Queue 2, Carol contributes 1.0 FTE. Therefore, the total FTE for the combined queue is 2.0 FTE.

### Example: One employee = 1.4 FTE for two queues

- An employee, Joe Lane, has the skills to handle two work queues.
- Queue 1 and Queue 2 both have a service goal of 80% in 20 seconds. Queue 1 has priority over Q2.
- Joe answers some calls within the service goals. Some calls Joe does *not* answer within the service goals. Therefore, Joe has contributed *less* work than two skilled employees for the combined queue.
- The FTE for the combined queue is 1.4.

For Queue 1, Joe contributes 0.8 FTE. For Queue 2, Joe contributes 0.6 FTE. Therefore, the total FTE is 1.4 (0.8 + 0.6).

**Related topics**

[Calculate and view resources information](#), page 135

[Calculation details](#), page 136

[General staffing](#), page 138

# View activity legend

For quick reference, you can display a legend of the activities used in the current scheduling period.

## Before you begin

[Select campaign data for schedules](#), page 85

## Procedure

### 1 Select Legend.

A list of activities used in the current scheduling period and their color representations are displayed.  
The colors of the activities are defined in the **Work Administration** module.

### 2 To add an activity to the legend, add an event or shift with a different activity.

## Related information

Activity details (*Workforce Management Administration Guide*)

# Refresh schedules

You can easily refresh data on the schedule. Refreshing data is helpful if multiple users are working on the same schedule simultaneously, and you want to view the most updated data.

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- 1 From **Home**, select **Refresh Schedules**.

The system refreshes the data for all schedules.

## Related topics

[About viewing the schedule](#), page 109

# Editing a schedule

To add components that the scheduling engine does *not* add automatically by the **Generate schedule** option, or to edit component attributes, you can manually edit the schedule.

Before or after generating a schedule, you can manually add and edit shift assignments and shift events. You can also add and edit calendar events, time-off events, unavailability events, and classes. Once you have completed your updates, regenerate the updated schedule.

## Topics

Editing the calendar manually .....	145
Create a shift assignment .....	148
Create a shift event .....	154
Calendar, time off and unavailability events .....	158
Create a calendar event .....	160
Create a time-off event .....	163
Create an unavailability event .....	168
Attendees tab settings .....	170
Recurrence tab settings .....	171
Add a new assignment for a single employee .....	172
Edit single instance or recurring events .....	173
Edit single-instance events only .....	174
Copying and pasting assignments overview .....	175
Scheduling eLearning and Coaching assignments .....	178
Move or resize scheduling components .....	188
Configure employee columns .....	189
Lock or unlock multiple components .....	191
Phantom scheduling .....	193
Manage events by grouping schedule information .....	197

Scheduling classes .....	200
Deleting components in WFM .....	212

# Editing the calendar manually

Manually editing the schedule allows you to add components to the schedule that the scheduling engine does *not* add automatically from the **Generate Schedule** option. You can also edit attributes for existing scheduling components.



Show Me

You can add and edit shift assignments, shift events, calendar events, time-off events, unavailability events, and classes. When adding events, you can add them as single instances, or set up recurring events. To define possible dates and times for *calendar events*, define them as *floating*. When you generate the schedule, the scheduling engine then determines the best time to schedule these calendar events.



If another schedule is being generated for another user in campaign mode using the same employees and overlapping dates, you *cannot* edit the schedule.

## Types of events on the schedule

You can schedule different types of events manually on the calendar.

Type of event	Description	Examples
Single instance	Events that occur on a one-time basis. These events can include calendar, time off, and unavailability events, and custom shifts and shift events.  NOTE: You can also create recurring events for calendar, time off and unavailability events.	<ul style="list-style-type: none"><li>One-time only HR training session on Tuesday from 9:00 - noon.</li><li>Special, one-time only supervisor meeting</li></ul>
Recurring events	Events that occur more than once on a fixed schedule.	Team meeting that occurs every Monday, Wednesday, and Friday morning from 9:00-9:30 AM every week.

Type of event	Description	Examples
Floating events	<p>Calendar events for which you define possible days and times for the events to occur. Floating events are useful when you need to schedule calendar events that can be scheduled on a variety of days and times, but you prefer the scheduling engine to optimize the event scheduling.</p> <p>When you generate the schedule, the scheduling engine schedules the event at an optimal time within the specified date and time range.</p>	A 30-minute coaching session that can occur anytime between 10:00 AM and noon on Wednesday, or between 9:00 AM and 11:00 AM on Friday.
Recurring floating events	Calendar events that occur <i>more than once</i> within a defined range of possible times.	A 30-minute coaching session that can occur anytime between 10:00 and noon on Wednesday, or between 9:00 AM and 11:00 AM on Friday every week.
Unavailability events	<p>Events that indicate when an employee is unavailable for scheduling.</p> <p>The scheduling engine does <i>not</i> schedule a shift that overlaps with an unavailability event. Further, you <i>cannot</i> manually edit a shift or an unavailability event so that they overlap.</p>	<ul style="list-style-type: none"> <li>• An employee has a medical appointment at 1:00 on Friday, and can return to work at 3:30 PM. The unavailability event is scheduled from 1:00-3:30 PM on Friday.</li> <li>• An employee has to leave at 4:00 PM every day to pick up a child from day care. The unavailability event is scheduled from 4:00 until closing.</li> </ul>
Time off events	<p>Events used to plan and track planned time off for employees.</p> <p>To avoid the approval process associated with time-off requests made through the time-off management functionality, create time-off events directly in the calendar.</p>	<ul style="list-style-type: none"> <li>• Vacation</li> <li>• Sick</li> <li>• Jury Duty</li> <li>• Medical</li> </ul>

Type of event	Description	Examples
Classes	<p>Calendar events that serve as coaching or training sessions for selected employees.</p> <p>You can create classes for a specific date and time range, and for specific employees. You can also specify the minimum and maximum number of sessions and attendees for each class.</p>	Any coaching or training session

### Related topics

- [Create a shift assignment](#), page 148
- [Create a shift event](#), page 154
- [Create a calendar event](#), page 160
- [Create a class](#), page 201
- [Create a time-off event](#), page 163
- [Create an unavailability event](#), page 168

# Create a shift assignment

You can manually add a shift assignment for a specific employee on the calendar.

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- 1 Select the employee for whom you want to create a shift assignment.
- 2 From the details pane, select **Add**, and then select **Shift**.
- 3 From the **Shift** field, select the defined work rule for the shift.

When you select the work rule, the **Activity**, **Start** and **End** times, and **Duration**, are automatically populated with the values defined for the work rule (in the **Work Administration** module).

To adhere to the work rule definition, do *not* edit these fields.

If you do edit these fields, the system displays a message, indicating that the assignment does *not* match the work rules for the shift. When you select **Save**, the system prompts you to select another work rule that best matches the attributes you updated. You can either select the alternate work rule, or create a non-standard shift. If you create a non-standard shift, the system saves the shift assignment, but it is locked and *cannot* be unlocked. (The **Locked** option is selected and unavailable.) The only way to unlock the shift is to change back the attributes to adhere to the work rule again.

- 4 You can edit the following fields, while still adhering to the work rule:
  - **Comment:** Provides a free text field to add notes about the shift assignment.
  - **Locked:** Prevents the scheduling engine from moving the shift assignment when rescheduling.
  - **Overtime:** Indicates whether the *entire shift* is considered an overtime shift.
  - **Extension before / Extension after:** Adds an OT extension before or after the shift.
- 5 To save your settings for the shift, select **Save**.

## Related topics

[Shift assignment settings](#), page 149

[Edit a shift assignment](#), page 151

[Non-standard shift assignments](#), page 151

[Best matched work rule for edited shift assignments](#), page 153

## Shift assignment settings

When creating or editing a shift assignment, you can view or update attributes that define the shift assignment.

- !** To create a standard shift (recommended), do *not* modify the **Activity**, **Start**, **End** and **Duration** fields on the **Shift Assignment** screen. These attributes for the work rule are defined in the **Work Administration** module. If you change these attributes, you will create a non-standard shift. It will be locked on the calendar and can only be unlocked if you change back the attributes to match the original work rule.

Field	Description
Shift	<p>Indicates the work rule for the shift.</p> <p>The work rules displayed in the drop-down field are defined in the <b>Work Administration</b> module (under <b>Work Rules</b>, <b>Shifts</b>) for the selected organization.</p>
Activity	<p>Specifies the activity with which the shift is associated.</p> <p>The activities displayed in the drop-down field are defined in the <b>Work Administration</b> module (under <b>Activities</b>, <b>Activities</b>) for the selected organization.</p>
Start	<p>Defines the start date and time of the shift.</p> <p>The possible start times of the shift are defined in <b>Work Administration</b> module (under <b>Work Rules</b>, <b>Shifts</b>) for the selected organization.</p>
End	<p>Defines the end date and time of the shift.</p> <p>When you update this field, the system updates the <b>Duration</b> field automatically.</p>
Duration	<p>Defines the length of the shift. The maximum duration of a shift is 36 hours.</p> <p>The duration of the shift is defined in the <b>Work Administration</b> module (under <b>Work Rules</b>, <b>Shifts</b>) for the selected organization.</p> <p>When you update this field, the system updates the <b>End</b> field automatically.</p>
Time zone	Read-only field that reflects the currently selected time zone setting (either <b>user</b> or <b>campaign</b> time zone).
Comment	Provides a free text field to add notes about the shift assignment.

Field	Description
Locked	<p>Indicates whether the shift is locked.</p> <p>To prevent the scheduling engine from moving shifts during rescheduling, lock the shifts.</p>
Overtime	<p>Indicates whether the <i>entire shift</i> is considered an overtime shift. Overtime shifts are different from non-overtime shifts with overtime <i>extensions</i> (OT extensions).</p> <p>When this field is selected, the OT extension fields are <i>not</i> available, as the <i>whole shift</i> is considered an overtime shift.</p> <p>Shifts can be one of the following:</p> <ul style="list-style-type: none"> <li>• Not overtime <i>without</i> OT extensions</li> <li>• Not overtime <i>with</i> OT extensions</li> <li>• Entire shift is overtime (and therefore <i>cannot</i> have OT extensions)</li> </ul>

#### Extension before and Extension after

OT extension	<p>Defines the name of the OT extension.</p> <p>You can either select a predefined OT extension, or add a <i>custom</i> OT extension. To add a custom extension, remove the text in this field and select the required activity (in the <b>Activity</b> field).</p> <p>The predefined OT extension names displayed in the drop-down field are defined in the <b>Work Administration</b> module (under <b>Work Rules, OT Extensions</b>) for the selected organization.</p>
Activity	<p>Defines the activity of the OT extension.</p> <p>The activities displayed in the drop-down field are defined in the <b>Work Administration</b> module (under <b>Activities, Activities</b>) for the selected organization.</p> <p>If you select a defined OT extension, the activity defined for that extension is displayed in this field.</p>
Duration	<p>Defines the length of the OT extension in the time format, HH:MM.</p> <p>The maximum duration of an OT extension is 24 hours.</p>
Gap	Defines the amount of time between the end or beginning of a shift and the OT extension.

#### Total duration of an assignment cannot exceed 36 hours

An assignment includes the duration of a shift + gap duration + durations of the OT extensions. The total duration of an assignment *cannot* exceed 36 hours.

For example:

- 1 Create a shift with a duration of 30 hours.
- 2 In **Extension before**:
  - a. For **Gap**, enter **2**.
  - b. For **Duration**, enter **5**.

The total assignment duration is 37 hours, which exceed the 36 maximum total amount. The system displays an error message, and prompts you to update the values to equal 36 hours in total.

### Related topics

[Create a shift assignment](#), page 148

[Edit a shift assignment](#), page 151

[Non-standard shift assignments](#), page 151

[Best matched work rule for edited shift assignments](#), page 153

## Edit a shift assignment

You can change the shift assignment, if needed.

### Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

### Procedure

- 1 Double-click the shift assignment you want to edit.
- 2 On the **Shift Assignment** screen, update the relevant fields and select **Save**.



Alternatively, you can edit the shift details from the details pane. From the calendar, select the shift assignment. From the details pane, edit the main shift details and select **Save**. To access all fields on the **Shift Assignment** screen for editing, select the **Additional Details** icon.

### Related topics

[Shift assignment settings](#), page 149

[Non-standard shift assignments](#), page 151

[Best matched work rule for edited shift assignments](#), page 153

## Non-standard shift assignments

It is recommended to create standard shifts, which are shifts based on defined work rules that adhere to their work rule definitions. When you generate the schedule, the scheduling engine provides an optimal placement for these (unlocked) shifts in the schedule, according to your defined service goals. To meet specific scheduling requirements, however, you can also create non-standard shifts on the calendar.

There are two types of non-standard shifts, and each one is created and managed differently on the calendar:

- Custom shifts: A *custom* shift is when you create a shift manually *without* basing the shift on any defined work rule.

- Shifts that do *not* adhere to the work rule: These shifts are based on a defined work rule, but then you update the attributes of the shift assignment so that they *no longer match* the defined work rule.

### Creating standard shifts (recommended)

Most shifts are standard shifts, for easy management and schedule optimization. For these shifts, select a defined work rule from the **Shift** drop-down menu, and *maintain the remaining attributes for the shift* (such as **Activity** and **Duration**). You are free to lock or unlock these shifts, as desired.

### Custom shifts

Custom shifts are *not* based on *any* work rule. The system creates these shifts when you *do not* select a defined work rule from the **Shift** drop-down menu. You leave this field blank, and then set your own work rule definitions (such as **Activity** and **Duration**). On the calendar, the tool tip displays **<custom shift>** for these shifts, and is always locked (and *cannot* be unlocked). Once you save this shift, you need to manually create everything else associated with the shift - including shift events.

### Shifts that do not adhere to the work rule

These shifts are based on a defined work rule with different attributes than the work rule. The system creates these shifts when you select a defined work rule from the **Shift** drop-down menu, but then *update any of the remaining attributes for the shift* (such as **Activity** and **Duration**).

The system displays a message, indicating that the shift does *not* match the work rules for the defined shift. When you select to save the shift, the system finds another defined work rule that best matches the updated attributes, and prompts you to either replace the shift with the best match or keep the current work rule.

If you select to keep the current work rule, the work rule name is the same, but the attributes do *not* adhere to the work rule. This shift is locked. The only way you can unlock the shift is to change back the attributes to re-adhere to the defined work rule.

### Which attribute updates create non-standard shifts?

Shifts no longer match the defined work rule if one or more of the following is true:

- Start time of one or more shift events does *not* match the defined shift event work rules.
- Shift start time does *not* match the defined shift work rule.
- One or more shift events has a different paid status than the defined shift event work rules.
- One or more shift events was deleted, changing the defined linked shift events for the shift.
- Shift length was changed and does *not* match the defined shift duration for the work rule.
- Shift activity was changed and does *not* match the defined shift activity for the work rule.
- Shift was created manually and does not match a defined shift work rule.



Once shifts become non-standard shifts, they are locked. *Custom* shifts are always locked, and *can never* be unlocked. To unlock a shift that does *not* adhere to the work rule, change back the attributes to adhere again to the defined work rule.

### Related topics

[Best matched work rule for edited shift assignments](#), page 153

## Best matched work rule for edited shift assignments

When you try to change the attributes of a shift assignment, the system finds another defined work rule that *best matches* the updated attributes. It then prompts you to either replace the shift with the best match, or keep the current work rule.

For example, you define a shift based on the shift work rule, **Full time 8hr**. You now change the duration of the shift to be 4 hours instead of 8 hours. When you save the shift assignment, the system prompts you to select the shift work rule, **Part time 4hr**, which best matches the updated attributes.

If you keep the current work rule, the shift becomes a non-standard shift. It is locked until you change the attributes to re-adhere to the work rule. Locked shifts *cannot* be moved (and therefore optimized) by the scheduling engine. Therefore, it is recommended to select the work rule that best matches the updated attributes.

### How the system finds the best matched work rule

To come up with the best matched work rule, the system searches specific attributes in the following sequence:

- 1 First, the system attempts to find the work rule that best matches the current *duration*. It looks for a template with a duration that is either *under* or *matching* the desired duration, without going *over* it.
- 2 If there are multiple work rules with the desired duration, the system looks for the work rule that matches the current *activity*. The activity *also* needs to be linked to one of the *work patterns* of the employee.
- 3 If there is no work rule that matches *both the activity and the work pattern*, the system finds the work rule that matches the *activity*.
- 4 If there is no template that matches the activity, the system finds the work rule that matches the *work pattern*.
- 5 If it still does *not* find a matching work rule with these values, the system uses any work rule with one of the closest durations.

### Existing shift events replaced by new shift events

When you change the work rule for a shift (either explicitly or by accepting the best matched template), the system replaces all existing shift events of the new template, whether they are locked or unlocked.

There is one exception to this rule. If an existing shift event is locked and that shift event also belongs to the new template, the shift event remains locked and in its place, while the other existing shift events are deleted. In addition, the corresponding shift event from the new template is skipped when placing shift events in the shift.

The system determines whether an existing locked shift event matches a shift event in the new template by comparing the *activity* and *duration* of the shift event. If both are equal, they are considered a match.

### Related topics

[Non-standard shift assignments](#), page 151

[Create a shift assignment](#), page 148

[Edit a shift assignment](#), page 151

# Create a shift event

Create a working or non-working shift event during a defined shift on the calendar. For example, you can add a lunch, break, or research project for a defined shift.



Shift events *must* occur during a defined shift. You *cannot* create shift events independently of shifts.

## Before you begin

[Create a shift assignment](#), page 148

## Procedure

- 1 From the calendar, select the shift assignment for which you want to create a shift event.

**!** To create a shift event, you *must* select the shift assignment itself and *not* the employee row. Shift events are linked to shifts only.
- 2 From the details pane, select **Add**, and then select **Shift event**.
- 3 From the **Shift event** field, select the defined work rule for the shift event.

When you select the work rule, the remaining fields are automatically populated with the values defined for the work rule (in the **Work Administration** module).

To adhere to the work rule definition, do *not* edit these fields. (The only exception is the **Locked** field, which you can select and unselect, as needed.)

If you do edit these fields, the system saves the shift event but it is locked and *cannot* be unlocked. (The **Locked** option is selected and unavailable.) The only way to unlock the shift event is to change back the attributes to adhere to the work rule again.
- 4 To save your settings for the shift event, select **Save**.

## Related topics

[Shift event settings](#), page 154

[Edit a shift event](#), page 156

[Optimized placement for shift events](#), page 156

# Shift event settings

When creating or editing a shift event, you can view or update attributes that define the shift event.



To create a standard shift event (recommended), only modify the **Shift event** and **Locked** fields on the **Shift Event** screen. The **Shift event** field selects the work rule for the shift event. The remaining attributes for the work rule are defined in the **Work Administration** module. If you change these attributes, you will create a non-standard shift event. It will be locked on the calendar and can only be unlocked if you change back the attributes to match the original work rule.

Field	Description
Shift event	<p>Specifies the work rule for the shift event.</p> <p>The work rules displayed in the drop-down field are defined in the <b>Work Administration</b> module (under <b>Work Rules, Shift Events</b>) for the selected organization.</p>
Activity	<p>Specifies the activity with which the shift event is associated.</p> <p>The activities displayed in the drop-down field are defined in the <b>Work Administration</b> module (under <b>Activities, Activities</b>) for the selected organization.</p>
Start	<p>Defines the start time of the shift event.</p> <p>The start time rules of the shift event are defined in the <b>Work Administration</b> module (under <b>Work Rules, Shift Events</b>) for the selected organization.</p> <p>The date part of this field is read-only, as the shift event <i>must</i> occur during the same date as the shift.</p>
End	<p>Defines the end time of the shift event.</p> <p>The date part of this field is read-only, as the shift event <i>must</i> occur during the same date as the shift.</p> <p>When you update this field, the system updates the <b>Duration</b> field automatically.</p>
Duration	<p>Defines the length of the shift event.</p> <p>The duration of the shift event is defined in the <b>Work Administration</b> module (under <b>Work Rules, Shift Events</b>) for the selected organization.</p> <p>When you update this field, the system updates the <b>End</b> field automatically.</p>
Time zone	<p>Read-only field that reflects the currently selected time zone setting (either <b>user</b> or <b>campaign</b> time zone).</p>
Locked	<p>Indicates whether the shift event is locked.</p> <p>To prevent the scheduling engine from moving shift events during rescheduling, lock the shift events.</p>
Paid	<p>Indicates whether the shift event is a paid activity.</p> <p>The option is defined by the <b>Paid</b> field in the <b>Work Administration</b> module (under <b>Work Rules, Shift Events</b>) for the selected organization.</p>

## Related topics

[Create a shift event](#), page 154

[Edit a shift event](#), page 156

[Optimized placement for shift events](#), page 156

## Edit a shift event

You can change a shift event, if needed.

### Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

### Procedure

- 1 Double-click the shift event you want to edit.
- 2 On the **Shift Event** screen, update the relevant fields and select **Save**.



Alternatively, you can edit the shift details from the details pane. From the calendar, select the shift event. From the details pane, edit the main shift event details and select **Save**. To access the **Shift Event** screen, select the **Additional Details** icon.

### Related topics

[Shift event settings](#), page 154

[Optimized placement for shift events](#), page 156

## Optimized placement for shift events

When adding new shift events or moving existing shift events, the system moves the shift event to the optimal placement within the shift. This optimization is based on the FTE Differential status. However, it is done differently, depending on whether the shift event is a *working* or *non-working* shift event.

### Working and non-working shift events

*Working* shift events are associated with activities that are considered work activities, but are *not* the main activities of the shift.

For example, a shift is associated with the activity, **Phone**. A *working shift event* can be associated with the activities **Project** or **Research**. An employee scheduled for this shift is mainly working on the phones, but during these working shift events, does a special project or research. For working shift events, the parameter, **Use in Shift (Primary Activity)**, is selected for the activity of the shift event.

*Non-working* shift events are associated with activities that occur during a shift, but are *not* considered work activities. Common examples include breaks or lunches. For non-working shift events, the parameter, **Use in Shift (Primary Activity)**, is *not* selected for the activity.

### Optimal placement of shift events based on FTE Differential

When adding new or moving existing shift events, the system optimizes shift event placement based on the *FTE Differential* status.

The considerations are different, depending on whether the shift event is a working or non-working shift event:

- The system attempts to place *non-working* shift events (like **Break** or **Lunch**) when the corresponding FTE Differential values are the *highest* (overstaffed periods). It still adheres to the shift event start and end time parameters and spacing rules. This feature ensures that service goals are still being met during time intervals where some employees are *not* working.
- The system attempts to place *working* shift events (like **Project** or **Research**) when the corresponding FTE Differential values are the *lowest* (understaffed periods). It still adheres to the shift event start and end time parameters and spacing rules. This feature ensures that employees are still working when needed during a shift, even though they are not working on the main activity for the shift.

### Related topics

[Create a shift event](#), page 154

[Edit a shift event](#), page 156

# Calendar, time off and unavailability events

Calendar, time off and unavailability events are handled in a similar way on the calendar.

Calendar, time off and unavailability events:

- Are all manually created
- Can all be defined as single instances or recurring events
- Can all have multiple attendees for each event

*Only calendar events can be defined as floating events*, where you specify the possible days and range of start times of the event. When you generate the schedule, the scheduling engine then places the events during the optimal time (as long as the floating events are *not locked*).

## Single instance vs. recurring events

You can either create a single *instance*, or a *series* or *recurring* events for calendar, time off and unavailability events.

A single instance of an event occurs *one time only*. Recurring events *recur* according to a defined cycle. (For example, a recurring event can occur every Wednesday from 10:00-11:00 AM.).

## Example: Unavailability event as a single instance and recurring event

An employee has a doctor appointment on a specific Monday from 2:00-3:00 PM. Therefore, create a single *instance* of an unavailability event based on the **Medical** activity for that employee on that day.

Another employee has medical appointments at the same time every week during the scheduling period. Therefore, create *recurring* unavailability events based on the **Medical** activity for that employee that recurs for that time frame every day of that week.

## Example: Time off event as a single instance and recurring event

An employee calls in sick. Therefore, create a single *instance* of a time-off event based on the **Sick** activity for that employee on that day.

Another employee has Jury Duty for the next week. Therefore, create *recurring* time-off events based on the **Jury Duty** activity for that employee that recurs every day of that week.

## Example: Calendar events as a single instance and recurring event

You want to schedule a one-time group meeting on a specific Tuesday from 9:00-10:00 AM. Therefore, create a single *instance* of a calendar event based on the **Meeting** activity for that event.

You also want to create a recurring group meeting every second Tuesday within the scheduling period from 9:00-10:00 AM. Therefore, create *recurring* calendar events that recur every two weeks on a Tuesday from 9:00-10:00 AM.

## Multiple attendees

You can add multiple attendees to calendar, time off and unavailability events.

For example, there are three employees who are unavailable every afternoon between 3:00-4:00 PM for the current scheduling period. You can schedule an unavailability event for those employees based on the **General unavailability** activity for that time period.

You can also add multiple employees to time off events. For example, if multiple employees are sick on the same day, you can add those employees to the time off event.

You can add multiple employees to calendar events as well. For example, for a meeting calendar event, you can add all employees on a specific team to the meeting.

### Floating calendar events

You can schedule a *floating* calendar event, where you specify the possible days and range of start times of the event. For example, you can define that a calendar event can be scheduled to start either on Monday from 9:00 - 11:00 AM or on Wednesday from 1:00 - 4:00 PM. The scheduling engine finds the best day and start time within that selected time frame when service levels are impacted the least.



You can select for a calendar event to be both *recurring* and *floating*.

### Related topics

[Create a calendar event](#), page 160

[Create a time-off event](#), page 163

[Create an unavailability event](#), page 168

# Create a calendar event

Create a calendar event on the schedule. Calendar events can be single-instance or recurring events, and can have one or multiple attendees. Examples of calendar events are meetings or training sessions.



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Unlike shift events, calendar events can occur *outside* defined shifts. For example, a phone shift is scheduled from 9:00-5:00 PM. You can schedule a team meeting from 8:30-9:00 AM before the start of the shift.

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- 1 Select the employees for whom you want to create the calendar event.
- 2 From the details pane, select **Add**, and then select **Calendar event**.
- 3 On the **Calendar Event** screen, complete the fields.
- 4 To create a series of calendar events (instead of a single instance), select **Recurring** and specify the dates, times, weekly cycle, and days the event recurs in the series.
- 5 To specify a possible range of dates and times for the event, select **Floating** and specify the dates, possible days and range of start times for the calendar events.
- 6 If you select both **Recurring** and **Floating**, the tab changes to **Recurring Floating**. Specify the dates, weekly cycle, and possible days and range of start times for the calendar events.



To give the scheduling engine flexibility for scheduling floating (or recurring floating) events, it is recommended to select multiple days when the event *can* be scheduled. When you generate the schedule, however, the scheduling engine only schedules the event on *one* of the selected days.

- 7 To add multiple employees to the event, select the **Attendees** tab and select the relevant employees for the event.
- 8 To save your settings for the calendar event, select **Save**.

## Related topics

[Calendar event settings](#), page 161

[Recurrence tab settings](#), page 171

[Attendees tab settings](#), page 170

[Edit single instance or recurring events](#), page 173

[Edit single-instance events only](#), page 174

## Calendar event settings

When creating or editing a calendar event, you can view or update attributes that define the calendar event.

Field	Description
Activity	<p>Specifies the activity with which the calendar event is associated.</p> <p>The activities displayed in the drop-down field are defined in the <b>Work Administration</b> module (under <b>Activities, Activities</b>) for the selected organization.</p>
Start	Defines the start date and time of the calendar event.
End	<p>Defines the end date and time of the calendar event.</p> <p>When you update this field, the system updates the <b>Duration</b> field automatically.</p>
Duration	<p>Defines the length of the calendar event.</p> <p>When you update this field, the system updates the <b>End</b> field automatically.</p>
Time zone	Read-only field that displays the time zone of the campaign or organizations for which the calendar event was defined (according to left filter settings).
Comment	Provides a free text field to add notes about the calendar event.
Recurring	<p>Determines whether the calendar event is a <i>recurring</i> event (occurs <i>more than once</i>). If this option is <i>not</i> selected, the calendar event is a single instance (occurs <i>only once</i>).</p> <p>When this parameter is selected, the <b>Recurrence</b> tab is displayed.</p>
Floating	<p>Determines whether the calendar event is a <i>floating</i> event, where you can specify the possible days and range of start times of the event. The scheduling engine finds the optimal day and start time within the selected time frame when service levels are impacted the least.</p> <p>When this parameter is selected, the <b>Floating</b> tab is displayed.</p> <p>When editing (<i>not creating</i>) a floating calendar event, the <b>Locked</b> option is displayed. This option allows you to prevent the scheduling engine from moving the event when you select to generate the schedule automatically.</p>

Field	Description
Overlap rule	Defines whether the calendar event occurs during a shift: <ul style="list-style-type: none"><li>• <b>Can occur anytime:</b> Indicates that the calendar event can occur during or outside a shift.</li><li>• <b>Should occur during shift:</b> Indicates a preference for the calendar event to occur during a shift.</li></ul>

## Related topics

[Create a calendar event](#), page 160

[Edit single instance or recurring events](#), page 173

[Edit single-instance events only](#), page 174

[Attendees tab settings](#), page 170

[Recurrence tab settings](#), page 171

# Create a time-off event

You can create a time-off event for employees. These events can be used to plan and track planned time off, such as vacations.

You can create time-off events directly in the calendar to avoid the approval process associated with time-off requests made through the **Request Management** module.

## Before you begin

- [Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86
- If you want to make an employee absent for a shift (because they are sick, for example), see [Make an employee absent for a shift](#), page 166

## Procedure

- 1 Select the employees for whom you want to create the time-off event.
- 2 From the details pane, select **Add**, and then select **Time off**.
- 3 On the **Time Off Event** screen, complete the fields.
- 4 To create a series of time-off events (instead of a single instance), select **Recurring** and specify the dates, times, weekly cycle, and days the event recurs in the series.
- 5 To add multiple employees to the time-off event, select the relevant employees on the **Attendees** tab.
- 6 To save your settings for the time off event, select **Save**.

## Related topics

[Time off event settings](#), page 163

[Recurrence tab settings](#), page 171

[Attendees tab settings](#), page 170

[Edit single instance or recurring events](#), page 173

[Edit single-instance events only](#), page 174

# Time off event settings

When creating or editing a time off event, you can view or update attributes that define the time off event.

Field	Description
Activity	Specifies the activity with which the time-off event is associated. The activities displayed in the drop-down field are defined in the <b>Work Administration</b> module (under <b>Activities, Activities</b> ) for the selected organization.
Start	Defines the start date and time of the time-off event.

Field	Description
End	Defines the end date and time of the time-off event. When you update this field, the system updates the <b>Duration</b> field automatically.
Duration	Defines the length of the time-off event. When you update this field, the system updates the <b>End</b> field automatically.
Time zone	Read-only field that reflects the currently selected time zone setting (either <b>user</b> or <b>campaign</b> time zone).
Comment	Provides a free text field to add notes about the time-off event.
Recurring	Determines whether the time-off event is a recurring event (occurs <i>more than once</i> ). If this option is <i>not</i> selected, the time-off event is a single instance (occurs <i>only once</i> ). When this parameter is selected, the <b>Recurrence</b> tab is displayed.

Field	Description
Linked to underlying shift assignment	<p>Links the time-off event to the shift assignment that occurs during the same time period.</p> <p>If you move a shift to a different time when this option is selected, the system moves the time-off event relative to the update.</p> <p>For example, a shift is scheduled from 9:00 AM-5:00 PM. The time-off event is scheduled from noon-2:00 PM, starting 3 hours after the shift start, and ending 5 hours after the shift start. If you move the shift to 8:00 AM-4:00 PM, the time-off event moves to 11:00 AM-1:00 PM, which still starts 3 hours after the shift start, and ends 5 hours after the shift start.</p> <p>If you do <i>not</i> select this option, and you move a shift to a different time, the time-off event does <i>not</i> move from its scheduled time.</p>

**NOTE:** To link a time-off event to a shift, the *entire* time-off event *must* occur *within* the time period of the shift. For example, a shift is scheduled from 10:00 AM-4:00 PM. The time-off event is scheduled from 3:00 PM-5:00 PM. You *cannot* link the time-off event to the shift because the time period falls *outside* the duration of the shift.

Note the following when you select this option:

- The **Recurring** option is unavailable. You *cannot* link the time off event to a shift, and make it recurring at the same time.
- You can *only* select *one* employee for the time off event. Each shift assignment is linked to *one* employee, so this option does *not* apply to multiple employees.
- In order to link the time off event to the employee, the employee *must* have a shift assignment scheduled for the day of the time-off event.
- As stated above, the *entire* time-off event *must* occur *within* the time period of the shift.

### Time off effect on scheduling

Do not force the shift and time off to overlap	<p>Defines that the time-off event and the shift <i>do not have to</i> overlap on the schedule.</p> <p>This setting gives the scheduling engine the flexibility to use or not use paid time off for the selected employees.</p>
--	---

Field	Description
Force shift and time-off to overlap for 0:00	<p>Defines the time period that the time-off event <i>must</i> overlap the shift on the schedule. You can define that the <i>entire</i> time-off event overlaps with the shift, or just a <i>portion</i> of the time-off event overlaps with the shift.</p> <p>This setting forces the scheduling engine to use the paid time off for the selected employees.</p> <p>The time values for this option are dictated by the <b>Duration</b> of the time off event. For example, if the duration of the time off event is 2 hours, the values for this option are 0:00 - 2:00.</p> <p>If you want the time off event to cover the entire shift for that day:</p> <ul style="list-style-type: none"> <li>Determine the hours of the shift. (<i>For example: 8:00-5:00 PM</i>).</li> <li>In the <b>Start</b> and <b>End</b> fields of the time off event, enter the same hours as the shift. (<i>For example: 8:00-5:00 PM</i>).</li> <li>Select <b>Force shift and time-off to overlap for</b>, and select the same amount of time as the <b>Duration</b> of the time off event. (<i>For example: 9:00</i>).</li> </ul>

### Related topics

[Create a time-off event](#), page 163

[Edit single instance or recurring events](#), page 173

[Edit single-instance events only](#), page 174

[Attendees tab settings](#), page 170

[Recurrence tab settings](#), page 171

[Make an employee absent for a shift](#), page 166

## Make an employee absent for a shift

You can select to make an employee absent for a shift. The system creates a time-off event during the entire duration of the shift (including OT extensions, if applicable). You can then specify the time off activity, or reason for the absence (such as Jury Duty, No Show, Personal Day, Sick, or Vacation).

### Before you begin

- [Select campaign data for schedules](#), page 85
- If you want to create a planned time off event (for employee vacations, for example), see [Create a time-off event](#), page 163.

### Procedure

- Select the shift for which you want to make an employee absent.
- From the **Schedule** tab on the details pane, select the **Make Absent** drop-down menu and select the reason for the absence.

The system creates a time-off event during the entire duration of the shift. If there is an OT extension, the time-off event extends during the duration of the OT extension.

**Related topics**

[Time off event settings](#), page 163

[Edit single-instance events only](#), page 174

# Create an unavailability event

You can create an unavailability event for employees, which is a special type of event that indicates an employee is unavailable for scheduling.

For example, an employee is unavailable due to medical reasons from 8:00-10:00 AM. You can create an unavailability event for that employee during that time period.



The scheduling engine does *not* schedule a shift that overlaps with an unavailability event. You also *cannot* manually edit a shift or an unavailability event so that they overlap.

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- 1 Select the employees for whom you want to create the unavailability event.
- 2 From the details pane, select **Add** and then select **Unavailability**.
- 3 On the **Unavailability Event** screen, complete the fields.
- 4 To create a series of unavailability events (instead of a single instance), select **Recurring** and specify the dates, times, weekly cycle, and days the event recurs in the series.
- 5 To add multiple employees to the unavailability event, select the relevant employees on the **Attendees** tab.
- 6 To save your settings for the unavailability event, select **Save**.

## Related topics

[Unavailability event settings](#), page 169

[Recurrence tab settings](#), page 171

[Attendees tab settings](#), page 170

[Edit single instance or recurring events](#), page 173

[Edit single-instance events only](#), page 174

## Unavailability event settings

When creating or editing an unavailability event, you can view or update attributes that define the unavailability event.

Field	Description
Activity	Specifies the activity with which the unavailability event is associated. The activities displayed in the drop-down field are defined in the <b>Work Administration</b> module (under <b>Activities, Activities</b> ) for the selected organization.
Start	Defines the start date and time of the unavailability event.
End	Defines the end date and time of the unavailability event. When you update this field, the system updates the <b>Duration</b> field automatically.
Duration	Defines the length of the unavailability event. The maximum duration of an unavailability event is 480 hours. When you update this field, the system updates the <b>End</b> field automatically.
Time zone	Read-only field that reflects the currently selected time zone setting (either <b>user</b> or <b>campaign</b> time zone).
Comment	Provides a free text field to add notes about the unavailability event.
Recurring	Determines whether the unavailability event is a recurring event (occurs <i>more than once</i> ). If this option is <i>not</i> selected, the unavailability event is a single instance (occurs <i>only once</i> ). When this parameter is selected, the <b>Recurrence</b> tab is displayed.

### Related topics

[Create an unavailability event](#), page 168

[Edit single instance or recurring events](#), page 173

[Edit single-instance events only](#), page 174

[Attendees tab settings](#), page 170

[Recurrence tab settings](#), page 171

# Attendees tab settings

The **Attendees** tab allows you to select and edit employees for calendar, time off and unavailability events.

The employees displayed on the **Attendees** tab are the employees and poolers who match the current left pane filter settings, under **Employees**.

Field	Description
First name	Displays the first name of the employee.
Last name	Displays the last name of the employee.
Organization	Displays the organization of the employee.

To add *all* employees in the list, select the box next to the **Last name** column. (To remove all employees from the list, select this box again.)

You can sort by the **Last name**, **First name**, and **Organization** columns in ascending or descending order.

## Related topics

[Calendar event settings](#), page 161

[Time off event settings](#), page 163

[Unavailability event settings](#), page 169

# Recurrence tab settings

The Recurrence tab allows you to define the recurrence of a calendar, time off, and unavailability event. To view this tab, select the parameter, **Recurring** on the **Calendar Event**, **Time Off Event** and **Unavailability Event** screens.

Field	Description
Start	Indicates the <i>first</i> date in the date range for the event, and the <i>start</i> time of the event on each day the event occurs.
End	Indicates the <i>last</i> date in the date range for the event, and the <i>end</i> time of the event on each day the event occurs.
Recurs every __ week(s)	Defines the weekly cycle for the calendar event, or how often the event recurs. For example, if you want the calendar event to recur every 3 weeks, enter 3 in this field.
Occurs on	Defines the days of the week on which the calendar event occurs.

## Related topics

[Calendar event settings](#), page 161

[Time off event settings](#), page 163

[Unavailability event settings](#), page 169

# Add a new assignment for a single employee

You can add a new assignment on any empty space on the schedule for a single employee in either **Hours** or **Day** view.



Show Me

## Before you begin

[Select campaign data for schedules, page 85](#) or [Select no campaign for schedules, page 86](#)

## Procedure

- 1 Select either **Hours** or **Day** view.
- 2 For the employee you want, determine what assignment you want to add:
  - If you want to add a *shift, calendar event, class, time off or unavailability event*, double-click *on any empty space on the schedule* (where no assignment exists).
  - If you want to add a *shift event*, double-click on the white space *over a shift assignment*. You can select any 15-minute time interval to create the new assignment.
- 3 From the **New Assignment** dialog, select the assignment you want to create:
  - Shift
  - Shift event
  - Calendar event
  - Class
  - Time off
  - Unavailability
- 4 Select **Add**.
- 5 From the dialog that opens, create the assignment you selected.

## Related topics

[Shift assignment settings, page 149](#)

[Shift event settings, page 154](#)

[Calendar event settings, page 161](#)

[Time off event settings, page 163](#)

[Unavailability event settings, page 169](#)

# Edit single instance or recurring events

You can edit the various attributes of a calendar event, time off event or unavailability event. The attributes include the activity, start and end time, duration, and other attributes. You can edit a single instance of an event, or the entire event series.

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- 1 Double-click the event you want to edit.
- 2 Determine the next step:
  - If the event is non-recurring (single instance), the system opens the event screen. Proceed to [step 3](#).
  - If you selected to edit a recurring event, select one of the following options and then select **Edit**:
    - **Just this instance**: The system only updates the *instance* you selected (within the series). It does *not* update the remaining events in the series.
    - **Entire series**: The system updates *all events* in the entire series (including past and future instances).
    - **Entire series from this point on**: The system updates the currently selected instance in the series and all instances *from that point onward* (in the future). It does *not* update past instances in the series.



If you select **Entire series from this point on**, you are dividing the event series into two separately managed series. All of the instances *before* the selected instance are included in *one* series. All of the instances *from the selected instance and all future instances* are included in another series. Therefore, if you select to edit the event series from *before* the selected instance, those updates do *not* affect the event series from the selected instance and all future instances.

- 3 From the event screen, edit the fields you want and select **Save**.

If you want to lock a floating calendar event (so that the schedule engine *cannot* move it), select **Locked**.

## Related topics

[Calendar event settings](#), page 161

[Time off event settings](#), page 163

[Unavailability event settings](#), page 169

[Edit single-instance events only](#), page 174

# Edit single-instance events only

If you want to edit single-instance events *only* (*not* recurring events), you can edit these events from the details pane. You *cannot* edit an entire event series from the details pane.

If you want to edit only one instance from a recurring event series, you can also do that using the details pane. When you do this, the single instance then becomes an *exception* to the event series.

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- 1 From the calendar, select the event you want to edit.
- 2 From the details pane, edit the main event details and select **Save**.

To access all fields for the calendar event, select the **Additional Details** icon.



If you select to edit a recurring event, when you select **Save**, the system prompts you that if you continue to save your changes, it will only save the *selected instance* and *not* the *entire event series*. The instance then becomes an *exception* to the series and is managed separately from it. In the future, any updates you make to the series will *not* affect this instance.

## Related topics

[Calendar event settings](#), page 161

[Time off event settings](#), page 163

[Unavailability event settings](#), page 169

[Edit single instance or recurring events](#), page 173

# Copying and pasting assignments overview

You can copy single instance scheduling components from the calendar, and paste them into another valid place on the schedule.

You can copy components from **Hours** or **Day** views, or fish-eye view in **Week** or **Period** view. You can paste the components *on any day* in the *current* scheduling period, or in a *different* scheduling period of the *same or different* campaign.

## Copying calendar events, time off events and unavailability events

When you copy and paste a *calendar* event from one employee to another for the *same* date and time interval, the system adds the employee as an additional attendee to the original event. If the calendar event is pasted to a *different* date and time, the system does *not* add the employee as an attendee of the original event. In this case, a new calendar event with the copied values is added to the schedule with the new employee as the only attendee.

If you copy and paste a *time off* or *unavailability* event from one employee to another for the *same* date and time interval, a *new* time off or unavailability event with the copied values is added to the schedule *with the new employee as the only attendee*. It does *not* add the employee as an additional attendee to the original event. The reason for this behavior is that typically time off and unavailability events are scheduled for a single attendee.

## Copying shifts

When you copy and paste shifts, the OT extensions and the shift events of the shifts are copied over *as is*. The system does *not* optimize these components when pasted into the new time interval.

## Copying and pasting assignments to a different scheduling period or campaign

If you copy an assignment from one scheduling period and want to paste it to a different scheduling period (either in the same or different campaign), the copy / paste workflow and behavior is slightly different.

When you are in Paste mode and click outside of the calendar, you automatically exit Paste mode. Therefore, after selecting **Copy**, first navigate to the scheduling period you want, and then select **Paste**.

In addition, when you click to paste the assignment in the scheduling period, the system pastes it as a *new* assignment with *only one attendee*. In this scenario, the employee does *not* get added to the existing assignment.

## Related topics

[Copy and paste scheduling assignments](#), page 176

# Copy and paste scheduling assignments

In **Hours** or **Day** views, and in fish-eye view in **Week** or **Period** views, you can copy a single-instance assignment from the calendar and paste it into another valid time interval for the same employee, or for a different employee. You can paste the components *on any day* in the *current* scheduling period, or in a *different* scheduling period of the *same or different* campaign.



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For example, you can copy a shift, which includes OT extensions and shift events, from one employee to another. You can also copy an unavailability event from one time interval for an employee, and copy it to another time interval for the same employee.



In **Week** or **Period** views, you can *only* copy and paste assignments *to and from* fish-eye view. In addition, you *cannot* copy individual shift events, classes, recurring events, floating events, or recurring floating events. If you copy a shift, and the shift includes shift events and OT extensions, those components are copied along with the shift.

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- 1 Select one of the following views from which to copy components:
  - **Hours** view
  - **Day** view
  - Fish-eye view in **Week** or **Period** views
- 2 From an employee row, select the assignment you want to copy (shift, time off event, calendar event, etc.).
- 3 From **Home**, select **Copy**. Alternatively, click **<Ctrl> + <C>**.  
If you copy an assignment and then edit it, your updates are *not* captured in the copied assignment. To include your updates, copy the updated assignment again *before* pasting it on the schedule.
- 4 Optional. If you are pasting the assignment to a different scheduling period, go to that scheduling period.



If you paste an assignment to a *different* scheduling period or campaign, the system pastes it as a *new* assignment with *only one attendee*. In this scenario, the employee does *not* get added to the existing assignment.

- 5 From **Home**, select **Paste**. Alternatively, click **<Ctrl> + <V>**.  
When you select **Paste**, the assignment is in Paste mode, which means that it is ready to be pasted to a selected place on the schedule. The assignment appears in its original shape and color, outlined by a dotted line.
- 6 Move the assignment to where you want to paste it on the schedule.

When you move your cursor around the schedule, the shape of the selected assignment has a dotted border. You can only paste the assignment in a *valid* place on the schedule. A paste is valid when it does *not* overlap with another scheduled component on the same scheduling layer. (For example, you *cannot* paste a shift on top of another shift. In another example, you *cannot* paste a shift during a time interval that overlaps with an unavailability event.)

When you move the assignment over an *invalid* slot, a forbidden symbol (red circle with a line through it) appears, the dotted border appears in red, and the system blocks the paste. When you move the assignment over a *valid* slot, the dotted border of the assignment appears in blue, indicating that you are allowed to paste the assignment in that slot.

- 7 To paste the assignment on the schedule, click the left mouse button in the slot you want.

You can only paste assignments at 5-minute intervals on the schedule. For example, you can paste the assignment at 5:00 PM or 5:05 PM, but *not* at 5:02 PM.



To exit Paste mode, click the <Esc> key or click outside of the schedule.

## Related topics

[Copying and pasting assignments overview](#), page 175

# Scheduling eLearning and Coaching assignments

You can schedule eLearning and Coaching assignments as floating calendar events on the calendar.

Users of the eLearning and Coaching applications define Coaching sessions or eLearning lesson assignments to employees. There are key parameters that define each assignment, including the employee, due date, duration, and whether the assignment needs to be scheduled on the WFM calendar. Users can define whether they want to schedule the assignment for a specific time, or whether they want WFM to optimize the date and time.

From the Calendar, you can view these assignments and determine whether you want to create floating calendar events for them during the *current* scheduling period. You can also determine whether employees fulfill the assignment *entirely* or *partially* during the current scheduling period. By setting the maximum time for each event, you can limit the amount of time employees are working on these assignments at one time.



The **eLearning & Coaching Calendar Assignments** feature is available in campaign mode *only*. It is *not* available in **No Campaign** mode.

## Example: Create calendar events for eLearning and Coaching assignments

- 1 From the Coaching application, Joann Smith was assigned a *3-hour* Coaching session.
- 2 For the current scheduling period, you only want to assign Joann 2 hours of Coaching session time during shifts. In addition, you do *not* want each Coaching session event to exceed *one half hour*.
- 3 From the Calendar on the **eLearning and Coaching Calendar Assignments** screen, assign the following floating calendar events for the assignment:
  - **Time to schedule:** 2:00 (two hours)
  - **Max time per event:** 0:30 (one half hour)

The WFM application then schedules four calendar events within the selected time frame of one half hour each. These events fulfill the 2-hour schedule setting for the current scheduling period. The remaining one hour for the assignment displays in the **Total remaining** field, and has the **Create event** action for future scheduling periods.

## Related topics

[Workflow: Schedule eLearning and Coaching assignments](#), page 178

# Workflow: Schedule eLearning and Coaching assignments

When scheduling events for eLearning and Coaching assignments, you can set scheduling defaults for all assignments and customize individual assignments. If needed, you can also delete scheduled events for assignments. When you are ready, you can apply updates to specific or all assignments.



Show Me

## Before you begin

[Select campaign data for schedules](#), page 85

## Workflow

### 1 [Review eLearning and Coaching assignments](#), page 179

To determine for which eLearning and Coaching assignments you need to create events, review the list of assignments in the calendar.

### 2 [Set defaults for eLearning and Coaching assignments](#), page 180

Define scheduling settings for floating calendar events that apply to *all* assignments. This option allows you to create events in bulk, to prevent creating events with the same settings manually for each individual assignment.

### 3 [Customize settings for eLearning and Coaching assignments](#), page 181

Define scheduling settings for floating calendar events that apply to *specific* assignments. This option allows you to customize settings that are only relevant for an individual assignment.

### 4 [Apply settings for eLearning and Coaching assignments](#), page 182

After you set defaults and customize the relevant assignments, apply your changes. This action schedules the floating calendar events. To optimize scheduling for these events, generate the schedule. When deleting events, this action deletes scheduled events for assignments.

### 5 [Edit events for eLearning and Coaching assignments](#), page 186

After creating calendar events for an eLearning and Coaching assignment, you can edit one or more events created for the assignment.

## Related topics

### [Scheduling eLearning and Coaching assignments](#), page 178

## Review eLearning and Coaching assignments

To determine for which eLearning and Coaching assignments you need to create events, review the list of assignments in the calendar.

## Procedure

### 1 From **Tools**, select **eLearning & Coaching**.

By default, the **Manage events** tab is selected. The system displays all eLearning and Coaching assignments that need to be completed. Each assignment is displayed on a separate row, even if the assignment is for the *same* employee. (Employees can have multiple assignments that need to be completed.) If an employee has *no* assignments to be completed, they are *not* displayed on this screen.

### 2 Determine the actions to take for each assignment by sorting on the **Action** column or selecting the action from the **Filter by:** drop-down menu:

- **All:** All assignments (no filter).
- **Create:** Assignments for which you need to create floating calendar events.
- **Delete :** Assignments for which you need to delete events.
- **None:** Assignments for which no action is needed.

### 3 Review any existing conflicts and resolve accordingly:

- **Outside shift:** Assignments that have events scheduled outside of a shift.
- **Time off:** Assignments that have events scheduled during a time off event.

- **Multiple:** Assignments that have at least one **Time off conflict** and one **Outside shift conflict**.
- 4 Note the following for each assignment:
- In the **Allocation (min)** field, the system lists the time that has *already been scheduled*, out of the *total required time* for the assignment. For example, 15/30 indicates that out of the total required time of one half hour, 15 minutes have already been scheduled. To fulfill the assignment, schedule another 15-minute event.
  - The **Due Date** column indicates the time by which the assignment needs to be completed. This date helps you determine whether to schedule the full duration of the assignment in the current scheduling period.
- 5 To view all information about a specific assignment, select a row.
- 6 On the right details pane, view the additional details about the assignment.



If any conflicts exist for the event, a **Conflicts** icon appears next to the **Start time** column under **Scheduled events**.

### What to do next

[Set defaults for eLearning and Coaching assignments](#), page 180

Or

[Customize settings for eLearning and Coaching assignments](#), page 181

### Related topics

[Manage events tab settings](#), page 182

[Edit events for eLearning and Coaching assignments](#), page 186

## Set defaults for eLearning and Coaching assignments

You can define scheduling settings for floating calendar events that apply to *all* assignments. This option allows you to create events in bulk so that you do *not* need to create events manually for each individual assignment.

### Before you begin

[Review eLearning and Coaching assignments](#), page 179

### Procedure

- 1 From the eLearning & Coaching Calendar Assignments screen, select the **Defaults** tab.
- 2 Under **Summary**, set the following defaults:
  - a. From **Max time to schedule**, set the *maximum* amount of time to schedule for *each assignment*.  
For example, to ensure that employees do *not* work on each assignment for more than an hour, set this field to 1:00 (one hour).
  - b. From **Max time per event**, set the *maximum* amount of time of *each calendar event* created for the assignment.  
For example, to make sure that each calendar event does *not* exceed one half hour, set this field to 0:30 (30 minutes).

- 3 Under **Start Time Range**, select the possible days and range of start times to schedule the floating calendar events.

For example, you can select Monday from 12:00-2:00 PM, Tuesday from 1:00-3:00 PM and Thursday from 2:00 - 4:00 PM. When you generate the schedule, the scheduling engine schedules the events on one or more of these days and starts the events within these time ranges.



To provide the most flexibility for the scheduling engine to schedule the events at optimal times in the schedule, do *not* change the defaults for any of these parameters.

#### What to do next

[Customize settings for eLearning and Coaching assignments](#), page 181

Or

[Apply settings for eLearning and Coaching assignments](#), page 182

## Customize settings for eLearning and Coaching assignments

Define scheduling settings for floating calendar events that apply to *specific* assignments. This option allows you to customize settings that are *only* relevant for an individual assignment.

#### Before you begin

[Set defaults for eLearning and Coaching assignments](#), page 180

#### Procedure

- 1 Select the **Manage events** tab.
- 2 Highlight the row of the assignment that you want to customize.
- 3 From the top of the right details pane, unselect **Use defaults**.  
In the **Customized** column, a blue dot appears. The system applies the scheduling settings specified for the assignment, and *not* the settings defined by the **Defaults** tab.
- 4 Under **Total remaining**, note the remaining amount of time needed to schedule events for the assignment.
- 5 In **Time to schedule**, select the amount of time you want to schedule for the assignment in the current scheduling period.
- 6 In **Max time per event**, set the maximum amount of time of each floating calendar event.
- 7 From **Start Time Range**:
  - a. Set the date range within which you want the events to be scheduled.
  - b. Select the days and start time ranges for which you want to create the events.

#### What to do next

[Set defaults for eLearning and Coaching assignments](#), page 180

Or

[Apply settings for eLearning and Coaching assignments](#), page 182

**Related topics**

[Manage events tab settings](#), page 182

## Apply settings for eLearning and Coaching assignments

After you set defaults and customize the relevant assignments, apply your changes. This action sets the floating calendar events on the schedule at one of the selected days and times. To optimize scheduling for these events, generate the schedule. When deleting events, this action deletes scheduled events for assignments.

**Before you begin**

- [Set defaults for eLearning and Coaching assignments](#), page 180
- [Customize settings for eLearning and Coaching assignments](#), page 181

**Procedure**

1 For the assignments for which you want to apply changes, select the **Update** check box on the right side.

2 From the right pane on the bottom, select **Apply**.

The system applies the specified updates. For assignments for which events need to be created, it places the floating calendar events on the schedule. The duration of each event does *not* exceed the value you set for **Max time per event**. The total duration of all events equals the value you set in **Time to schedule**.

For assignments for which you selected to delete events, it deletes the events.

3 When you have finished with all updates and want to close this screen, select **Close**.

4 To optimize the scheduling of the floating calendar events, select **Home**, and select **Generate Schedule**.

The scheduling engine schedules the events at an optimal placement within the specified time periods.

**Related topics**

[Manage events tab settings](#), page 182

## Manage events tab settings

The **Manage Events** tab on the eLearning & Coaching Assignments screen displays detailed information about each eLearning lesson assignment and Coaching session.

Field	Description
<b>Left pane</b>	
Employee	Name of the employee who needs to complete the assignment (either in eLearning or Coaching).

Field	Description
Assignment	Description of the assignment (taken from the Coaching or eLearning applications).
Allocation (min)	Displays the amount of time scheduled for the assignment, out of the total required time needed to complete the assignment. For example, 15/30 means that out of 30 minutes required for the assignment, 15 minutes have been scheduled. To complete the scheduling for this assignment, schedule another 15-minute event.
Action	<p>Defines the actions to take for each assignment, including:</p> <ul style="list-style-type: none"> <li>• <b>Create:</b> Create new floating calendar events for the assignment.</li> <li>• <b>Delete:</b> Delete one or more existing floating calendar events for the assignment.</li> <li>• <b>None:</b> All events have been created to complete the assignment. There is no required action.</li> </ul>
Conflicts	<p>Indicates whether there is a scheduling conflict with the event:</p> <ul style="list-style-type: none"> <li>• <b>Time off conflict:</b> A time off event currently overlaps the eLearning and Coaching event. The time off event can either fully or partially overlap the eLearning and Coaching event.</li> <li>• <b>Outside shift conflict:</b> The eLearning and Coaching event is <i>not</i> completely within a shift boundary. In other words, at least some of the event's time is scheduled outside of a shift.</li> <li>• <b>Multiple conflicts:</b> There is at least one <b>Time off conflict</b> and one <b>Outside shift conflict</b> with the eLearning and Coaching event.</li> </ul>
Priority	Priority of the assignment (taken from the Coaching or eLearning applications).
Due Date	Latest date the requirement can be scheduled (taken from the Coaching or eLearning applications).

Field	Description
Customized	<p>Indicates whether the <b>Use defaults</b> check box is selected for the assignment:</p> <ul style="list-style-type: none"> <li>Nothing: If <b>Use defaults</b> is selected, the settings in the <b>Defaults</b> tab apply to this assignment. The assignment is <i>not</i> customized.</li> <li>Blue dot: If <b>Use defaults</b> is <i>not</i> selected, the settings in the <b>Defaults</b> tab do <i>not apply</i> to this assignment. Any settings defined in the details pane apply to the assignment. Therefore, the assignment is customized according to these settings.</li> </ul>
Apply	<p>Determines whether the updates are applied to the assignment. If this check box is selected, all relevant updates are applied to the assignment.</p>
<b>Right pane</b>	
Use defaults	<p>Indicates whether the scheduling settings on the <b>Defaults</b> tab apply to the assignment:</p> <ul style="list-style-type: none"> <li>If this box is selected, the settings on the <b>Defaults</b> tab apply to the assignment.</li> <li>If this box is <i>not</i> selected, the settings on the <b>Defaults</b> tab do <i>not</i> apply to the assignment. The updates you make in the fields on this pane apply to this assignment <i>only</i>.</li> </ul>
<b>Summary</b>	
Total required	Total amount of time needed to complete the assignment.
Already scheduled	Total amount of time scheduled for this requirement in <i>all</i> scheduling periods (including previous and the current scheduling periods).
Other scheduling periods	Amount of time already scheduled for this requirement in <i>previous</i> scheduling periods only.
This scheduling period	Amount of time scheduled for this requirement in the <i>current</i> scheduling period.
Total remaining	Amount of time that needs to be scheduled to complete this requirement.

Field	Description
Time to schedule	<p>Amount of time to schedule for the assignment in the current scheduling period.</p> <p>You can schedule the total remaining time or less for the assignment. Any remaining time is carried over to be scheduled for a future scheduling period. For example, if the total remaining time is 30 min, you can schedule 15 min for the current scheduling period. For the next scheduling period, 15 min will display in the <b>Total remaining</b> field.</p>
Max time per event	<p>Maximum amount of time of each floating calendar event.</p> <p>For example, you set the <b>Time to schedule</b> to <b>0:30</b> (30 minutes). You do <i>not</i> want each calendar event scheduled for this assignment to last longer than 15 minutes. Therefore, set <b>Max time per event</b> to <b>0:15</b> (15 minutes). The system then creates two floating calendar events, each one set to 15 minutes.</p>
<b>Start Time Range</b>	<p>Specifies the days and start time ranges for which you want to create the events.</p> <p>For example, if you want to schedule events on Monday, Tuesday and Thursday, select these days. If you want all events to start between 2:00-5:00 PM, set this time range.</p> <p>By default, the date range is limited to the current scheduling period. You can shorten it to a shorter date range <i>within</i> the scheduling period. However, you <i>cannot</i> set a date range that is <i>outside</i> the current scheduling period.</p>

## Calendar Events

Conflicts	If there is a scheduling conflict with the event, a conflicts icon appears next to the <b>Start time</b> column. Possible values include <b>Time off conflict</b> , <b>Outside shift conflict</b> , or <b>Multiple conflicts</b> .
Start time	Specifies the start date and time for the scheduled event for this assignment.
Duration	Specifies the duration of the scheduled event for this assignment.
Lock/Unlock icon	Locks or unlocks the event scheduled for this assignment.
Delete icon	Deletes the event scheduled for this assignment.
Edit icon	Allows you to edit the event scheduled for this assignment.

Field	Description
<b>Source</b>	
Type	Defines the application from which the assigned was defined - either Coaching or eLearning.
Status	Status of the assignment, which is set in the eLearning and Coaching applications.

### Related topics

[Review eLearning and Coaching assignments](#), page 179

[Customize settings for eLearning and Coaching assignments](#), page 181

[Apply settings for eLearning and Coaching assignments](#), page 182

[Edit events for eLearning and Coaching assignments](#), page 186

## Edit events for eLearning and Coaching assignments

After creating calendar events for an eLearning and Coaching assignment, you can edit one or more events created for the assignment. You can either edit the event directly from the calendar, or from the **eLearning & Coaching** dialog.

### Before you begin

[Apply settings for eLearning and Coaching assignments](#), page 182

### Procedure

- 1 Do one of the following:
  - To edit the event from the calendar, double-click the event and proceed to [step 6](#).
  - To edit the event from the eLearning & Coaching dialog, proceed to [step 2](#).
- 2 From **Tools**, select **eLearning & Coaching**.
- 3 From the **Manage Events** tab, select the assignment you want to edit.
- 4 From the right pane, scroll down to the **Calendar Events** section.
- 5 For the event you want to edit, select the **Edit** icon (next to the **Delete** icon).
- 6 On the Calendar Event screen, update the relevant fields and select **Save**.

The Calendar Event screen for events created for eLearning or Coaching assignments is *similar* to the Calendar Event screen for editing any other calendar event. The difference is that there is *no Recurring* option and **Overlap rules** for eLearning and Coaching events. In addition, the list of attendees for the eLearning and Coaching events is read-only.



There is *no* visual differentiation on the calendar between events created from the eLearning & Coaching dialog to fulfill eLearning or Coaching assignments, and regular calendar events that are linked to **Coaching** or **Learning Break** activities. When you select to edit an event and **Recurring** and **Overlap rules** are *not* present, the event was created to fulfill eLearning or Coaching assignments.

### Related topics

[Calendar event settings](#), page 161

[Manage events tab settings](#), page 182

# Move or resize scheduling components

You can change the duration and time frame of components by moving or resizing them. You can either use the details pane or the dialog windows to make these changes, or you can use the mouse to make these updates.

*Moving* moves the *entire* component to a different time frame during the selected day. *Resizing* shortens or lengthens the time frame by changing the start or end time.

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- 1 From the calendar, select the shift or event that you want to move or resize.
- 2 Do one of the following:
  - To *move* a scheduling component, select, click and drag it to the time frame you want.
  - To *resize* a scheduling component, point to either end of it (start or end) until a side arrow appears. Select and slide the arrow to make the component longer or shorter on either side. For example, this option allows you to easily change a shift start or end time to be a specific number of hours later or earlier.
- 3 To verify that the moving or resizing was updated, do one or both of the following:
  - Point to the component on the calendar and verify that the duration and time frame have changed according to your update.
  - Select the component and view the update on the details pane.

## Related topics

[Edit a shift assignment](#), page 151

[Edit a shift event](#), page 156



If you resize a shift to make the start time later (moving the arrow to the right), you *cannot* go past the first shift event. Shift events *cannot* exist on their own. Therefore, moving the shift start time to occur *after* the first shift event is *not valid*.

# Configure employee columns

You can add employee data to the calendar by adding columns that display employee attributes next to the employee names.

## Source for Employee Attributes

The source for most of the employee attributes are similarly-named fields in the **Profiles** and **Work Rules** workspaces in the **User Management** module (**User Management**, **Employees**, **Profiles** and **User Management**, **Employees**, **Work Rules**).

There are two attributes that are available with the **Monthly Forecast and Rules** license only (the source for these attributes is in **User Management**, **Employees**, and **Monthly Hours**):

- **Minimum Monthly Hours**
- **Maximum Monthly Hours**

There are also attributes that do *not* have a system source. The values for these attributes are calculated in real time when you add them to the calendar.

They include the following attributes:

- **Scheduled SP Draft Hours**
- **Scheduled Weekly Draft Hours**

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- 1 From **View**, select **Configure Employee Columns**.
- 2 From the **Configure Employee Columns** screen, select up to *five* attributes *in the order that you want the attributes to appear* on the calendar. Note that your privileges determine which attributes are displayed in the list.

When you select an attribute, the system puts that attribute towards the top of the list. The order number is based on the order you selected the attribute. For example, the third attribute you select has an order number of 3.

**!** You cannot change the order of an attribute once you select it. To reorder the attributes, unselect all of them and start again.
- 3 Note the following about selecting attributes from this screen:
  - By default, the system sorts the attribute list by attribute name (ascending alphabetically). You can sort by the **Order** or **Attribute** column in ascending or descending order by selecting the relevant column.
  - Once you select five attributes, you *cannot* select any additional attributes.
  - If you select five attributes and want to change your selection, unselect the attributes you do *not* want and select the attributes you want.
  - You can quickly unselect all of the attributes you have selected by selecting the check box next to the **Attribute** column. However, you *cannot* select attributes by selecting this check box again.
- 4 Select **Save**.

The attributes appear as columns next to the employee names in the order you specified. The data for each column is populated accordingly.

- 5 Once the employee columns are displayed, you can do the following:

- To change the width of each column, hover over the column border and double click to resize the column.

The system cycles through small, medium and large sizes of the column. To select a different size, continue to double click until you access the size you want.

- To hide all of the columns, from **View**, unselect **Show columns**. You can show all columns again by selecting this check box again.
- To edit or remove specific or all columns, from **View**, select **Configure Employee Columns**, remove and add the columns you want, and select **Save**.

### Related information

Work rules history and current settings (*Workforce Management Administration Guide*)

Work rules assignment details (*Workforce Management Administration Guide*)

# Lock or unlock multiple components

You can bulk lock or unlock multiple components simultaneously. You can lock or unlock shifts, shift events, floating calendar events and class sessions, and project events for a specific time period.

Locking assignments is useful when you do *not* want to move the events when you reschedule. To give the scheduling engine the flexibility of moving events, unlock them.



To lock or unlock an *individual* component, select the component and select the **Lock/Unlock** icon from the details pane.

## Procedure

- 1 From **Home**, select **Bulk Lock/Unlock**.
- 2 From **Dates**, select the date range for which you want to lock or unlock scheduling components.
- 3 From **Components**, select the components you want to lock or unlock (including shifts, shift events, floating calendar events or project events).
- 4 Do one of the following:
  - To lock the selected components, select **Lock**.
  - To unlock the selected components, select **Unlock**.



You *cannot* unlock non-standard shifts or shift events. If you want to unlock shifts or shift events that do *not* adhere to the work rule, you must update the assignments so that they re-adhere. You can then unlock them. You *cannot* unlock custom shifts that are *not* based on any work rule.

## Related topics

[Bulk Lock / Unlock settings](#), page 191

[Non-standard shift assignments](#), page 151

## Bulk Lock / Unlock settings

When you select **Bulk Lock / Unlock** from **Home**, complete the fields to lock or unlock scheduling components.

Field	Description
<b>Dates</b>	
Current scheduling period	Locks or unlocks components for the current scheduling period.
Current week	Locks or unlocks components for the current week.

Field	Description
Custom range	Locks or unlocks components for a specific date and time range within the scheduling period.
<b>Components</b>	
Shift assignments	Locks or unlocks shift assignments. When this option is selected, you can select <b>Shifts only</b> , or <b>Shifts and shift events</b> . By default, <b>Shifts only</b> is selected.
Shifts only	Locks or unlocks shifts only. When this option is selected, only the shifts themselves are locked or unlocked. All assignments linked to the shifts (such as shift events or calendar events) are <i>not</i> affected by this setting.
Shifts and shift events	Locks or unlocks shifts and shift events. When this option is selected, both the shifts and the shift events linked to the shifts are locked or unlocked.
Floating events / sessions	Locks or unlocks floating calendar events and class sessions (which are also managed as floating calendar events). When this option is selected, you can also select <b>Project events only</b> , which allows you to change the lock status of calendar events based on project activities.
Project events only	Locks or unlocks calendar events based on project activities.

### Related topics

[Lock or unlock multiple components, page 191](#)

# Phantom scheduling

A *phantom* schedule, defined by the ghost icon, is a schedule based on a defined *staffing profile*. Staffing profiles are a type of schedule template defined for a certain type of employee with specific skills and a work pattern.

Staffing profiles are defined in the **User Management** module. You can then assign them to a scheduling period, and include them when you generate the schedule (by the **Employees to schedule** parameter).

When the scheduling engine generates the schedule, the staffing profile becomes a phantom schedule. Phantom schedules appear on the calendar, but are *not* linked to any employees, by default. You can determine whether to include them in the workspace from the **Employees** left pane filter (by selecting phantom schedules from the **Phantoms** filter).

Phantom schedules are useful when you want to add more people to the same scheduling period and use the same schedule for all or some of the employees.

Using phantom scheduling, you can:

- *Convert all or specific employee schedules to phantom schedules*: Turning employee schedules into phantom schedules allows you to apply the same schedule to other employees in the current scheduling period.
- *Assign a specific phantom schedule to an employee*: You can assign a phantom schedule created by including staffing profiles when generating the schedule, or by converting an existing employee schedule into a phantom schedule.
- *Remove all phantom schedules from the workspace*: If needed, you can select to remove all phantom schedules from the workspace.

## Related topics

[Convert selected employees to phantoms](#), page 193

[Convert all employees to phantoms](#), page 194

[Example: Convert employee schedules to phantoms](#), page 195

[Assign a phantom schedule to an employee](#), page 195

[Remove all phantoms from workspace](#), page 196

[Workforce planning](#), page 265

## Convert selected employees to phantoms

You can convert one or more employee schedules into phantom schedules. Turning employee schedules into phantom schedules allows you to apply the same schedule to other employees in the current scheduling period.

This option is useful if you need to add more people to the same scheduling period, and want to use the same schedule for all of them.

### Procedure

- 1 From the calendar, select the employees whose schedules you want to convert to phantom schedules.
- 2 From **Tools**, select **Convert Selected to Phantom**.



As displayed in the system message, the system *only* converts the shift and linked shift events of the employee schedules. It does *not* convert calendar, time off or unavailability events to the phantom schedule. Therefore, if the employees had calendar, time off or unavailability events in their schedules, those components still appear in the employee rows (but are *not* part of the phantom schedules).

- 3 At the system prompt, select **Convert** to convert the employee schedules.

The system converts the schedules of the selected employees into phantom schedules. It names the phantom schedules with the employee schedule work rule name, and a sequential number. The employee rows still appear in the schedule, but the employees no longer have schedules.

There are now new, additional phantom schedules on the calendar. You can view these new phantoms from the left pane **Phantoms** filter.

### Related topics

[Convert all employees to phantoms](#), page 194

[Example: Convert employee schedules to phantoms](#), page 195

[Assign a phantom schedule to an employee](#), page 195

[Remove all phantoms from workspace](#), page 196

[Workforce planning](#), page 265

## Convert all employees to phantoms

You can convert *all* employee schedules into phantom schedules. This option allows you to use the phantom schedules for other employees in the same scheduling period.

### Procedure

- 1 From **Tools**, select **Convert All to Phantom**.



As displayed in the system message, the system *only* converts the shift and linked shift events of the employee schedules. It does *not* convert calendar, time off or unavailability events to the phantom schedule. Therefore, if the employees had calendar, time off or unavailability events in their schedules, those components still appear in the employee rows (but are *not* part of the phantom schedules).

- 2 At the system prompt, select **Convert** to convert all employee schedules to phantoms.

The system converts the schedules of *all* employees into phantom schedules. It names the phantom schedules with the employee schedule work rule names, and sequential numbers. The employee rows still appear in the schedule, but the employees no longer have schedules.

There are now new, additional phantom schedules on the calendar. You can view these new phantoms from the left pane **Phantoms** filter.

### Related topics

[Convert selected employees to phantoms](#), page 193

[Example: Convert employee schedules to phantoms](#), page 195

[Assign a phantom schedule to an employee](#), page 195

[Remove all phantoms from workspace](#), page 196

[Workforce planning](#), page 265

## Example: Convert employee schedules to phantoms

When you select to convert employees into phantom schedules, the system names the phantom schedules according to a specific naming convention. The phantom schedule names are the work rule name, comma, and a sequential number.

### Example: Phantom schedule names

Two employees have shifts based on the work rule, **8hr shift 1hr lunch**.

When you convert their schedules into phantoms, the following phantom schedules are created:

- **8hr shift 1hr lunch, 1**
- **8hr shift 1hr lunch, 2**

### Related topics

[Convert selected employees to phantoms](#), page 193

[Convert all employees to phantoms](#), page 194

## Assign a phantom schedule to an employee

You can assign a phantom schedule to an employee who does *not* yet have a schedule, or to an employee who already has a schedule, overwriting their existing schedule.

Phantom schedules are created by including staffing profiles when generating the schedule, or by converting an existing employee schedule into a phantom schedule.

### Before you begin

- [Workflow: Create and use staffing profiles](#), page 266
- As described in [Schedule a staffing profile and create phantom schedules](#), page 268 verify that the phantom schedule you want to assign is displayed on the calendar (from the left pane, select **Employees, Phantoms**, and the phantom schedule you want).

### Procedure

- 1 From the calendar, select a phantom schedule that you want to assign to an employee.
- 2 From **Tools**, select **Assign Phantom Schedule**.
- 3 From the **Assign Phantom Schedule** screen, select the employee to whom you want to assign the phantom schedule.

You can only select one employee. To filter this list by employees who already have a schedule and those who do *not* have a schedule, select the relevant option from the **Filter** drop-down menu. You can also see which employees have a schedule by the **Has Schedule** column on this screen.

- 4 Select **Assign**.

The system assigns the phantom schedule to the selected employee. The phantom schedule itself is no longer displayed on the calendar.

### Related topics

- [Convert selected employees to phantoms](#), page 193
- [Convert all employees to phantoms](#), page 194
- [Remove all phantoms from workspace](#), page 196
- [Workforce planning](#), page 265

## Remove all phantoms from workspace

If needed, you can remove all phantom schedules currently displayed in the workspace.

This action does *not* permanently remove all phantoms from the system. You can always select to add any existing phantom schedules back to the calendar by selecting them from the left pane **Phantoms** filter.

### Procedure

- 1 From **Tools**, select **Remove All Phantoms**.
- 2 At the system prompts, select **Remove** to remove all phantom schedules currently in the workspace.  
The system removes all phantom schedules currently displayed in the workspace. It does *not* remove all phantoms generated for the current scheduling period. To view phantom schedules, select the **Phantoms** filter from the left pane.

### Related topics

- [Convert selected employees to phantoms](#), page 193
- [Convert all employees to phantoms](#), page 194
- [Assign a phantom schedule to an employee](#), page 195
- [Workforce planning](#), page 265

# Manage events by grouping schedule information

The Mass Schedule Editor allows you to add, edit, or delete scheduled events by filtering and grouping calendar information. This grouping allows you to make multiple edits for scheduled events.

## Adding and editing events in the Mass Schedule Editor

You can add non-recurring (single instance) calendar, time off and unavailability events with one attendee *only*. In addition, you can add shifts *without* OT extensions and shift events.

You can edit recurring events by selecting **Related** from the **Group By** field. Once you edit the recurring event, you *cannot undo* the edited recurring events or the recurring event series.



You *cannot* view or edit recurring floating calendar events in the Mass Schedule Editor.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Mass Schedule Editor**.
- 2 From **Selection Filters** on the left pane, select the employees, date range, and events for which you want to view and manage scheduled events.
- 3 Select **View**.  
The system displays scheduled events according to the selected filters.
- 4 To further group the list according to different attribute, from the **Group By** field, select the relevant attribute.  
For example, you can group the events by **Employee Name** or **Employee ID**.
- 5 Determine the next step:
  - To *add* an event: Select **Add**, complete the fields, and select **Update**.
  - To *edit* an existing event:
    - Select the event you want to edit, complete the fields, and select **Edit**.
    - Edit the start date and time, duration, and activity and select **Update**.
  - To *delete* an existing event:
    - Select the event you want to delete and select **Delete**.
    - At the prompt, select **Yes** to delete the event.

## Related topics

[Mass Schedule Editor selection filters](#), page 198

[Mass Schedule Editor columns](#), page 199

## Mass Schedule Editor selection filters

To determine what information displays in the **Mass Schedule Editor** pane, use the **Selection Filters** in the left pane.

Field	Description
Employee filter	Allows you to select employees for which you want to view scheduled events. Select an existing filter or create a new one.
From / To	Defines the date range for which you want to view scheduled events.
Events	Defines the type of scheduled events you want to view: <ul style="list-style-type: none"><li>• <b>All:</b> Displays all types of scheduled events.</li><li>• <b>Shifts Only:</b> Displays shifts only</li><li>• <b>Shifts and Shift Events:</b> Displays shifts and shift events only</li><li>• <b>Calendar Only:</b> Displays calendar events only</li></ul>
View	Displays the events in the right pane according to the selected filters.

### Related topics

[Manage events by grouping schedule information](#), page 197

[Mass Schedule Editor columns](#), page 199

### Related information

Creating an employee filter (*Workforce Optimization Getting Started Guide*)

## Mass Schedule Editor columns

From the Mass Schedule Editor, you can view details about multiple events, and sort by each column.

Column	Description
Group By	<p>Groups the events in the list by the selected attribute:</p> <ul style="list-style-type: none"> <li>• <b>No Grouping:</b> Displays the events in a flat list with no grouping by any attribute.</li> <li>• <b>Related:</b> Groups by calendar, shifts, or shift events set at the same date and time.</li> <li>• <b>Employee Name:</b> Groups by employee name</li> <li>• <b>Employee ID:</b> Groups by Employee ID in numeric order</li> <li>• <b>Event Type:</b> Groups by the type of event (such as shift, shift event, and calendar event)</li> <li>• <b>Activity:</b> Groups by the activity of the event</li> <li>• <b>Start Time:</b> Groups by start date and time (in chronological order)</li> <li>• <b>Duration:</b> Groups by length of event</li> </ul>
Employee Name (Filter)	Name of the employee scheduled for the event.
Employee Id	ID of the employee scheduled for the event.
Event Type	Type of the event (including <b>Shift, Shift Event, Calendar Event, Time Off, Unavailability</b> ).
Activity	Activity of the event (such as <b>Meeting, Lunch, Answer Calls, Immediate</b> ).
Start Date	Start date and time of the event.
Duration (in min)	Duration (in minutes) of the event.
Status	State of the update in the Mass Schedule Editor ( <b>Successful</b> or <b>Unsuccessful</b> )

### Related topics

[Manage events by grouping schedule information](#), page 197

[Mass Schedule Editor selection filters](#), page 198

# Scheduling classes

You can schedule classes for employees, which are typically used for any type of employee training.

Classes are managed as floating calendar events. When you generate the schedule, the system schedules classes at an optimal time, minimizing disruption to the service level.



When employees attend a class, it removes them from their primary shift activity. Therefore, schedule sessions during periods of overstaffing.

## Class attributes

Consider the following factors when defining class attributes for classes:

- **Number of sessions**
  - How many class sessions are required to satisfy the employee demand for this class?
  - For each class session, there is an implied cost. In this case, it can be necessary to minimize the number of sessions.
  - Employees are *not* always available at the same time; therefore, additional sessions can be required.
- **Number of attendees per session**
  - If you place all employees into a single session, it can be damaging to the service level. In this case, smaller and more sessions are required for fewer attendees.
  - Assign employees to the same session whose shifts are scheduled at the same time, and who are available at the same time.
  - Room size and seating limitations can dictate the number of attendees for each class session.
  - Some training classes are more effective with a specific number of attendees. Therefore, set the minimum and maximum number of attendees to fit these training requirements.
- **Number of simultaneous sessions**

This class attribute prevents sessions from overlapping one another. It is meant to model resource constraints. For example, if only one instructor is available to teach a class, you *cannot* schedule simultaneous sessions. However, if there are multiple instructors and enough rooms, you can schedule more than one session at the same time.

## Related topics

[Create a class](#), page 201

[View and manage classes and class sessions](#), page 204

[Locking and unlocking sessions and attendees](#), page 207

## Create a class

Create a class on the schedule for specific employees. Each class and its sessions are scheduled as floating calendar events. You can define specific attributes for the class, including the minimum and maximum number of sessions, attendees per session, and simultaneous sessions.



Show Me

### Before you begin

[Select campaign data for schedules](#), page 85

### Procedure

- 1 From the calendar, select the employees to whom you want to assign the class.
- 2 From the details pane on the right side, select **Add**, and then select **Class**.
- 3 Select the **Attendees** tab, and verify that the selected employees are the ones who you want to attend the class.  
The full list displayed under **Attendees** includes all of the employees who match the current **Employees** filter. The selected employees are the attendees for the class. You can select additional employees to the class, or remove employees from the class by selecting and unselecting the relevant ones. To select all employees in the list, select the check box next to the **Last name** column.
- 4 Complete the fields for the class in the middle pane (including **Name**, **Activity**, **Duration**, **Comment** and the **Overlap Rule**).

From the tree directory on the left side of the **Classes** screen, the system creates a new class entity with the label, **New class**. You can change the name of the class by modifying the **Name** field.

These fields are similar to the fields on the Calendar Event screen. The **Duration** field indicates the default duration of each *session*. You can modify this for one or multiple sessions, if needed. The **Start** and **End** date and time range fields are unavailable in this pane. You can schedule floating calendar events from the **Floating** tab in the third pane.

- 5 From the **Floating** tab, enter the date range and the days and start time range during which you want to schedule the class.

The system manages class sessions as floating calendar events in the schedule. When you save your settings, the system places the events on the first available slots within the specified date and time range. When you generate the schedule, the scheduling engine optimizes the placement of the class and sessions within the selected range.

- 6 From the **Class attributes** tab, enter the values for the number of class sessions and attendees.

When you start updating these settings, the system validates your selections against the selected attendees in the **Attendees** tab. It then displays the relevant messages, indicating whether you need to add time slots or adjust class attributes.

- 7 Select **Save**.

The system:

- Saves the class with the defined name in the directory tree, and saves the class attributes, attendees, and floating calendar event settings.

- Creates **Unassigned** underneath the class. When first creating a class, no attendees are **Unassigned**. They are all assigned to a class session. **Unassigned** serves as a type of holding place while moving attendees around between sessions.
- Creates the class sessions in the directory tree underneath **Unassigned**, named by the date and time of the session.
- Places the attendees in the relevant sessions, according to the availability in their schedules. (This is later optimized when you generate the schedule.)
- Places the floating calendar events of the sessions on the schedule for the selected attendees. (This is also optimized when you generate the schedule.)

8 To create additional classes, repeat [Step 2-step 7](#) for every class you want.

### Related topics

[Calendar event settings](#), page 161

[Class attributes](#), page 202

[Example: Defining class attributes](#), page 203

[View and manage classes and class sessions](#), page 204

## Class attributes

When creating or editing a class, you can view or update attributes that define the class.

Field	Description
<b>Number of sessions</b>	
Minimum	Minimum number of sessions for the class.
Maximum	Maximum number of sessions for the class.
<b>Number of attendees per session</b>	
Minimum	Minimum number of attendees for each session of the class.
Maximum	Maximum number of attendees for each session of the class.
<b>Number of simultaneous sessions</b>	
Maximum	Maximum number of sessions in a class that have the same date and start time. For example, this is useful when there are multiple trainers and rooms, allowing you to conduct multiple group training sessions at the same time.

### Related topics

[Create a class](#), page 201

[Example: Defining class attributes](#), page 203

## Example: Defining class attributes

When defining class attributes, consider the type of class you are creating, number of attendees, and the requirements for each class session.

### Example: Defining a class

For example, you want to create a one-time training class. Each employee can only attend one session for the class. The total number of Sales employees is 24. Due to seating limitations in the available rooms, you need to make sure each session does *not* have more than 12 attendees. However, you want to make sure there are at least 6 attendees in each session to make the training effective. As there are two trainers for the class and just enough rooms, you can schedule two training sessions at the same time.

Therefore, set the following for this class:

- 1 From the **Attendees** tab, select the 24 employees for which you want to schedule the class.



You can also select the employees you want from the calendar (before accessing the **Classes** screen), and the application automatically selects those employees as class attendees.

- 2 From **Class attributes** for this class, select the following:

- **Number of sessions:**

- **Minimum:** 2

Because the maximum attendees per session is 12, the system needs to create a minimum of 2 sessions to include a total of 24 employees.

- **Maximum:** 4

Because the minimum attendees per session is 6, the system could create a maximum of 4 sessions to include a total of 24 employees.

- **Number of attendees per session:**

- **Minimum:** 6

According to your requirements, you want to make sure *at least* 6 people are in each training session, so set the minimum number of attendees per session to 6.

- **Maximum:** 12

The seating limitations require that you schedule *no more than* 12 attendees per session, so set the maximum number of attendees to 12.

- **Number of simultaneous sessions:**

- **Maximum:** 2

As you have two trainers and enough rooms, set the maximum number of simultaneous sessions to 2. This option allows the scheduling engine to schedule two sessions at the same time.

### Related topics

[Create a class](#), page 201

[Class attributes](#), page 202

# View and manage classes and class sessions

After creating classes (and their sessions), you can view details about each one. You can move an attendee to a different session within the same class. You can also move attendees out of *all* sessions, while still keeping them assigned to the class. This is useful when trying to figure out the sessions for each class, and which attendees attend which sessions.

## Before you begin

[Create a class](#), page 201

## Procedure

- 1 To view details about a class:
  - a. From the **Classes** screen on the left pane, select the class you want.
  - b. View the defined settings for the class, including the fields in the middle pane, and the settings on the tabs in the right pane (**Attendees**, **Floating** and **Class Attributes**).
- 2 From the left pane, click the arrow next to the class name to expand it.  
**Unassigned** appears, which holds any attendees of the class who are *not* currently assigned to a class session. Underneath **Unassigned**, the sessions appear, named by the date and time of the session. For example, 10/14/2019, 08:00 AM is the name of a session that starts on 10/14/2019 at 8:00 AM. Underneath the sessions, the names of the attendees in the session appear.
- 3 To view details about a class session:
  - a. Select the session.
  - b. View the defined settings for the specific class session, including the **Activity**, **Start** and **End** date and time, and **Duration** in the middle pane, and the list of attendees assigned to the session in the right pane.
- 4 To move attendees from one session to another, drag and drop the attendee names from the source session to the target session.  
The selected attendees are now placed in the target session. When you save and close the **Classes** window, the floating calendar events are updated on their schedules accordingly.
- 5 To move an attendee out of *all* class sessions, drag and drop the attendee name from the source session to **Unassigned**. The selected attendee is still assigned to the class, but *not* to any session.
- 6 When you are ready, drag and drop the attendee name from **Unassigned** to the relevant session.
- 7 Select **Save** and **Close**.

The floating calendar events are updated on their schedules accordingly.



When moving attendees in and out of sessions, you are changing the number of attendees for each session. If the updated numbers contradict the minimum and maximum **Number of attendees per session** attribute, the system displays a conflict message. At this point, either move the attendees to match the parameters or update the parameters to match the updated number of attendees. You *cannot* remove the last attendee from a session (at least one attendee per session is required.)

## Related topics

[Create a class session for unassigned attendees](#), page 205

[Edit a class](#), page 205

[Edit a class session](#), page 206

## Create a class session for unassigned attendees

After creating a class with defined sessions, you can manually create additional sessions for the class.



You can only do this when you move attendees to the **Unassigned** folder.

### Before you begin

[Create a class](#), page 201

### Procedure

- 1 From **Tools**, select **Classes**.
- 2 On the **Classes** screen in the left pane, click the arrow for the class to which you want to add sessions.
- 3 From an existing session, drag and drop the attendees you want to **Unassigned**.
- 4 Select **Create Session**.  
The **Attendees** tab on the right pane only displays employees currently in **Unassigned**.
- 5 From the **Attendees** tab, select the employees you want to include in the new session.  
You do *not* need to include all employees currently in **Unassigned**; just the ones you want to assign to the new session.
- 6 Optional. If needed, update any fields you want for the new session (such as **Activity**, **Start** and **End** date and time, **Duration** and **Comment**).  
The **Name** field is unavailable for sessions. You can only provide a name for classes. Sessions are named with their scheduled start date and time.
- 7 Select **Save**.  
The system saves the new session in the left pane with the updated list of attendees.

### Related topics

[Edit a class](#), page 205

[Edit a class session](#), page 206

[View and manage classes and class sessions](#), page 204

## Edit a class

After creating a class, you can edit the descriptive fields and attributes for the class.

### Procedure

- 1 From **Tools**, select **Classes**.
- 2 From the left panel on the **Classes** screen, select the class you want to edit.
- 3 Edit any fields for the class (such as the list of attendees, floating date and time range, attributes, and other fields).
- 4 Select **Save**.



When you edit a class and save changes, the system completely overwrites all settings with your updates and reschedules all sessions. Anything scheduled previously for that class is lost. You need to generate the schedule again to optimize class sessions in the schedule.

- 5 At the confirmation, select **Yes** to proceed with your changes.

As a result of your updates, the system overwrites the previous updates with the updated settings.



You *must* save any changes made to a class *before* making any other updates on the **Classes** screen, or the system will not save your changes. For example, if you change the Class attributes or add attendees, select **Save** *before* selecting a class session to edit it.

- 6 To optimize class sessions, from **Home**, select **Generate Schedule**.

The system generates an updated schedule, including optimizing the schedule for class sessions.

#### Related topics

[Edit a class session](#), page 206

## Delete a class

If needed, you can delete a class. Deleting a class removes the class and its sessions from the Classes screen, and the class events from the calendar.

#### Procedure

- 1 From **Tools**, select **Classes**.
- 2 From the left panel on the **Classes** screen, select the class you want to delete.
- 3 Select **Delete**.
- 4 At the prompt, select **Yes** to delete the class.

The system deletes the class.

#### Related topics

[Delete a class session](#), page 207

## Edit a class session

After creating a class, you can edit the fields and attributes for a specific session.

#### Procedure

- 1 From **Tools**, select **Classes**.
- 2 From the left panel on the **Classes** screen, click the arrow for the **Class** and select the session you want to edit.
- 3 Edit any available fields for the class (such as the list of attendees, activity, start and end date and time, and other fields).



When you edit a class session and save changes, the system completely overwrites all settings with your updates and reschedules all sessions. Anything scheduled previously for that session is lost. You need to generate the schedule again to optimize class sessions in the schedule.

**4 Select Save.**

As a result of your updates, the system overwrites the previous updates with the updated settings. If you removed any attendees, the system places them in **Unassigned** when you save your changes.



You *must* save any changes made to a class session *before* making any other updates on the **Classes** screen, or the system will not save your changes. For example, if you change the **End** time of a session, select **Save** *before* selecting the class to edit Class attributes.

**Related topics**

[Edit a class](#), page 205

## Delete a class session

If needed, you can delete a session of a class. Deleting a session removes the session from the class, and the scheduled class session from the calendar.

**Procedure**

- 1 From **Tools**, select **Classes**.
- 2 From the left panel on the **Classes** screen, select the class session you want to delete.
- 3 Select **Delete**.
- 4 At the prompt, select **Yes** to delete the class session.

The system deletes the class session, and all attendees are moved to **Unassigned**.

**Related topics**

[Delete a class](#), page 206

## Locking and unlocking sessions and attendees

You can lock and unlock sessions and attendees for classes. Similar to any other scheduling component, the lock status specifies whether the scheduling engine can move the class component when generating a schedule.

You can still manually move components, regardless of their lock status. Locking and unlocking is only used to either prevent or allow the scheduling engine to move components for schedule optimization purposes.

### Locking and unlocking sessions

You can lock or unlock all sessions for a class:

- *Locking* sessions prevents the scheduling engine from moving the date and time of all sessions for a class.

- *Unlocking* sessions gives the scheduling engine the flexibility of moving the sessions in order to generate an optimal schedule.

You can also lock and unlock a specific session:

- *Locking* a session prevents the scheduling engine from moving the date and time of that specific session.
- *Unlocking* a session gives the scheduling engine the flexibility of moving the session in order to generate an optimal schedule.

Locking and unlocking sessions does *not* affect the lock status of *attendees*. It only locks or unlocks the date and time of sessions. If sessions are locked and attendees are unlocked, the scheduling engine does *not* change the date and time of the session, but it can move around attendees from one session to another to generate an optimal schedule.

### Locking and unlocking attendees

You can lock or unlock attendees for an entire *class*:

- If you *lock* all attendees for a class, the system locks everything related to the class, including the dates and times of *all* sessions and *all* attendees assigned to *each* session. The scheduling engine *cannot* move anything related to the class the next time you generate the schedule.
- If you *unlock* all attendees for a class, the scheduling engine has the flexibility of moving both sessions and attendees.

You can lock or unlock attendees for a specific *session*:

- If you *lock* all attendees for a specific session, the system locks the dates and times of the specific *session*, and the attendees for that specific session. The scheduling engine *cannot* move anything related to that session the next time you generate the schedule.
- If you *unlock* attendees for a specific session, the scheduling engine has the flexibility of moving the date and time of that session, and it can move the attendees to a different session.



Unlocking attendees for a specific session does *not automatically* unlock that session. For each session you want to unlock, you need to unselect the **Locked** check box.

### Related topics

- [Lock and unlock all sessions for a class](#), page 208
- [Lock and unlock all attendees for a class](#), page 209
- [Lock and unlock all attendees for a session](#), page 210
- [Lock and unlock a session](#), page 210

## Lock and unlock all sessions for a class

You can lock and unlock all sessions for a class.

*Locking* sessions prevents the scheduling engine from moving the date and time of all sessions for a class. *Unlocking* sessions gives the scheduling engine the flexibility of moving the sessions in order to generate an optimal schedule.

### Procedure

- 1 From **Tools**, select **Classes**.

- 2 From the left panel on the **Classes** screen, select the class for which you want to lock or unlock all sessions.
  - 3 In the middle pane, select one of the following options:
    - **Lock all sessions:** When you generate the schedule, the scheduling engine does *not* move the set date and time for any sessions for the class.
    - **Unlock all sessions:** When you generate the schedule, the scheduling engine has the flexibility to move the set date and time for any sessions for the class.
- The system locks or unlocks sessions accordingly.

#### Related topics

[Locking and unlocking sessions and attendees, page 207](#)

[Lock and unlock all attendees for a class, page 209](#)

[Lock and unlock all attendees for a session, page 210](#)

[Lock and unlock a session, page 210](#)

## Lock and unlock all attendees for a class

You can lock and unlock all attendees for an entire class.

If you *lock* all attendees for a *class*, it locks everything related to scheduling for the class - the dates and times of *all* sessions and *all* attendees assigned to *each* session. If you *unlock* attendees for a class, the scheduling engine has the flexibility of moving both sessions and attendees.

#### Procedure

- 1 From **Tools**, select **Classes**.
  - 2 From the left panel on the **Classes** screen, select the *class* for which you want to lock or unlock all attendees.
  - 3 In the middle pane, select one of the following options:
    - **Lock all attendees:** When you generate the schedule, the scheduling engine does *not* move the dates and times of *all* sessions and *all* attendees assigned to *each* session.
    - **Unlock all attendees:** When you generate the schedule, the scheduling engine has the flexibility to optimize the dates and times of *all* sessions and *all* attendees assigned to *each* session.
- Unlocking all attendees for a class does *not* automatically unlock any sessions. To unlock sessions, unselect the **Locked** checkbox for each session you want to unlock.

The system locks or unlocks attendees accordingly for the class. If you locked attendees, a lock icon appears next to the attendee name within the class sessions.

#### Related topics

[Locking and unlocking sessions and attendees, page 207](#)

[Lock and unlock all sessions for a class, page 208](#)

[Lock and unlock all attendees for a session, page 210](#)

[Lock and unlock a session, page 210](#)

## Lock and unlock all attendees for a session

You can lock and unlock all attendees for a specific session.

If you *lock* all attendees for a specific *session*, it locks the dates and times of the specific *session*, and the attendees for that specific session. If you *unlock* attendees for a session, the scheduling engine has the flexibility of moving the date and time of the session, and the attendees to a different session.

### Procedure

- 1 From **Tools**, select **Classes**.
- 2 From the left panel on the **Classes** screen, select the *session* for which you want to lock or unlock all attendees.
- 3 In the middle pane, select one of the following options:
  - **Lock all attendees:** When you generate the schedule, the scheduling engine does *not* move the dates and times of the specific *session*, and the attendees for that specific session.
  - **Unlock all attendees:** When you generate the schedule, the scheduling engine has the flexibility to optimize the dates and times of the specific *session*, and the attendees for that specific session.  
Unlocking all attendees for a session does *not* automatically unlock the specific session. To unlock the session, unselect the **Locked** checkbox.

The system locks or unlocks attendees accordingly for the session. If you locked attendees, a lock icon appears next to the attendee name within the class sessions.

### Related topics

[Locking and unlocking sessions and attendees](#), page 207

[Lock and unlock all sessions for a class](#), page 208

[Lock and unlock all attendees for a class](#), page 209

[Lock and unlock a session](#), page 210

## Lock and unlock a session

You can lock and unlock a specific session.

*Locking* a session prevents the scheduling engine from moving the date and time of that specific session. *Unlocking* a session gives the scheduling engine the flexibility of moving the session in order to generate an optimal schedule.

### Procedure

- 1 From **Tools**, select **Classes**.
- 2 From the left panel on the **Classes** screen, select the *session* you want to lock or unlock.
- 3 In the middle pane, select one of the following options:
  - To lock the selected session, select the **Locked** checkbox.
  - To unlock the selected session, do *not* select the **Locked** checkbox.
- 4 Select **Save**.

The system locks or unlocks the session accordingly.

**Related topics**

- [Locking and unlocking sessions and attendees, page 207](#)
- [Lock and unlock all sessions for a class, page 208](#)
- [Lock and unlock all attendees for a class, page 209](#)
- [Lock and unlock all attendees for a session, page 210](#)

# Deleting components in WFM

Depending on the component you delete in the WFM application, the system handles the deletion differently. Specific components are deleted immediately from the database. Other components are *not* removed from the database, but are inactive from a specified date.

## Components deleted immediately from the database

These components are deleted immediately and completely from the database:

- Campaigns
- Scheduling periods
- Organization link to scheduling period
- Queue link to a scheduling period (automatically deletes the forecast for the queue)
- Queues (queues are deleted in the Integration Server)
- Shift event link to a shift
- Shift link to a work pattern
- Weeks in the **Forecast** module

## Components deleted by inactivating them from a selected date

The following components are deleted by inactivating them from a specified date:

- Shifts
- Shift events
- Work patterns
- Employees (by setting an end date)

When you delete these components, they are *not* removed from the database and they are *not* automatically unlinked from any other components.

If you are viewing the application in a time frame *before* the deletion occurred, you can see the component that you deleted. For example, if you delete a shift on 06/10/19 and view a scheduling period for 05/21/19, you can see the deleted shift.

If you are viewing the application in a time frame *after* the deletion occurred, you *cannot* see the deleted component. For a scheduling period, the time frame is any *week* after the deletion. For an organization, it is any *day* after the deletion occurs.

If the deleted component was associated with another component before the deletion, the system provides a visual cue. For example, a shift deleted on 04/23/19 is displayed in gray in any work patterns to which it was linked. It is *not* removed from that work pattern, but it is *not* scheduled.

## Related topics

[Delete single components](#), page 213

[Delete multiple components](#), page 214

## Related information

Cleaning up skills, work rules, and queues (*Workforce Management Administration Guide*)

Deleting an organization and employees (*Workforce Optimization User Management Guide*)

# Delete single components

You can delete a single component on the calendar. For calendar, time-off, or unavailability events, you can delete a single instance, or the entire series for recurring events.

## Procedure

- 1 Select the component you want to delete.
- 2 Press the **<Delete>** key. Alternatively, from the **Schedule** tab on the details pane, select the **Delete** icon.
- 3 Do one of the following:
  - If you selected a shift, shift event or single instance of an event, select **Yes** to confirm the deletion of the event.
  - If you selected a calendar, time off or unavailability event with multiple attendees, select one of the following:
    - **Delete the event for all attendees:** The system deletes the event for *all* attendees assigned to the event. This option removes the event entirely from the schedule.
    - **Remove the selected attendee from the event:** The system only deletes the event from the schedule of the selected attendee. In other words, it removes this employee as an attendee for the event.
  - If you selected to delete a *recurring* event, select to delete one of the following and select **OK**:
    - **Just this instance:** The system only deletes the *instance* you selected (within the series). It does *not* delete the remaining events in the series.
    - **Entire series:** The system deletes *all events* in the entire series (including past and future instances).
    - **Entire series from this point on:** The system deletes the currently selected instance in the series and all instances from that point onward (in the future). It does *not* delete past instances in the series.



If you select **Entire series from this point on**, you are dividing the event series into two separately managed series. All of the instances *before* the selected instance are included in *one* series. All of the instances *from the selected instance and all future instances* are included in another series. Therefore, this option only deletes the event series from the selected instance and all future instances.

## Related topics

- [Delete multiple components](#), page 214  
[Deleting components in WFM](#), page 212

# Delete multiple components

You can delete selected components from schedules for specific employees and dates. This option allows you to delete multiple components for one or more employees simultaneously.

## Before you begin

[Select campaign data for schedules](#), page 85



The **Bulk Delete** option is available in campaign mode *only*. It is *not* available in **No Campaign** mode.

## Procedure

- 1 From the calendar, determine the components you want to delete, and for which dates and employees.
- 2 From the left pane **Employees** filter, select the employees for whom you want to delete components, and select **Apply**.  
The selected employees appear on the calendar. You can *only* delete components for employees who appear on the calendar.
- 3 From the calendar, select the employees for whom you want to delete components.
- 4 From **Home**, select **Bulk Delete**.
- 5 From **Employees** on the right side of the screen, select the employees for whom you want to delete components.  
The employees you selected from the calendar are already selected. You can change this selection, as needed. To select employees on *all* pages, select **All pages** and select the relevant employees. To *only* select employees from the *current* page displayed on the calendar, select **Current page** and select the relevant employees.
- 6 From **Dates**, select the date range for which you want to delete components:
  - To delete components for the current scheduling period, select **Current scheduling period**.
  - To delete components for specific days and times, select **Custom**. In the **Start** and **End** fields, enter the dates and times accordingly.
- 7 From **Components to delete**, select to delete shifts with OT extensions, OT extensions only, or project rule events.
- 8 Select **Delete**.



Once you select to delete the selected components, they will be permanently removed, and you will *not* be able to undo this action.

- 9 At the prompt, select **Yes** to delete the selected components permanently.

## Related topics

[Bulk Delete parameters](#), page 215

[Deleting components in WFM](#), page 212

[Delete single components](#), page 213

## Bulk Delete parameters

Complete the parameters to specify the components you want to delete from employee schedules, and the dates for which the deletion is effective.

Field	Description
<b>Dates</b>	
Current scheduling period	Deletes components from the draft schedule for the <i>entire</i> current scheduling period.
Custom	Deletes components from the draft schedule for specified dates <i>within</i> the current scheduling period.
<b>Components to delete</b>	
Shifts and overtime extensions	Deletes shift assignments <i>and</i> any linked Overtime (OT) extensions.
Overtime extensions only	Deletes Overtime (OT) extensions <i>only</i> (and not the linked shifts).
Project events only	Deletes shift events linked to <b>Project</b> activities.
<b>Employees</b>	
Allows you to select one or multiple employees, for which the deletion of components is effective. To select <i>all</i> displayed employees, select the box to the left of the <b>Last name</b> column. (To unselect all displayed employees, clear this box.)	

### Related topics

[Delete multiple components](#), page 214

# Distributing a schedule

When the schedule is finalized, you can publish it. Publishing makes the schedule available to managers and employees.

If needed, you can unpublish the schedule. You can then make the required updates and republish the updated schedule. To overwrite the draft schedule with the last published schedule, revert to that schedule.

## Topics

Publish the schedule .....	217
Unpublish the schedule .....	219
Troubleshooting tips for schedule publishing .....	221
Revert the schedule .....	222

# Publish the schedule

When the draft schedule is finalized, you can publish it. Once a schedule is published, you can make further changes to the draft and then just publish those changes as well to update the published schedule.

You can publish the entire draft schedule, or just time-off events.

Publishing makes the schedule available to:

- Managers for viewing personal and group schedules, and monitoring adherence
- Employees for viewing their own schedules and for performing shift swapping



Show Me

## Before you begin

[Select campaign data for schedules](#), page 85 or [Select no campaign for schedules](#), page 86

## Procedure

- From the left pane **Employees** filter, select the employees for whom you want to publish components, and select **Apply**.  
The selected employees appear on the calendar. You can *only* publish schedules for employees who appear on the calendar.
- From the calendar, select the employees for whom you want to publish schedules.
- From **Tools**, select **Publish**.
- From **Employees** on the right side of the screen, select the employees for whom you want to publish schedules.  
The employees you selected from the calendar are already selected. You can change this selection, as needed. To select employees on *all* pages, select **All pages** and select the relevant employees. To *only* select employees from the *current* page displayed on the calendar, select **Current page** and select the relevant employees.
- From **Dates**, select the date range for which you want to publish draft schedules:
  - To publish draft schedules for the current scheduling period, select **Current scheduling period**.
  - To publish updates made to draft schedules for specific days and times, select **Custom**. In the **Start** and **End** fields, enter the dates and times accordingly.
- From **Components to publish**, select one of the following:
  - To publish the entire draft schedule, select **All**.
  - To publish time-off events only, select **Time-off events only**.
- Select **Publish**.  
The **Published Schedule** row is updated with the selected components for the selected employees. You can also view the published schedule for the selected employees from the **Published** tab on the details pane.

## Related topics

[Unpublish the schedule](#), page 219

[Revert the schedule](#), page 222

# Unpublish the schedule

If you published the schedule and want to make more changes before making it available to employees, you can unpublish the current schedule. You can unpublish schedules for specific dates and employees.

Unpublishing makes the schedule *unavailable* for viewing or shift swapping. When employees try to view schedules for dates that are *not* published, a message is displayed, stating that the schedules are *not* published.

-  Note the following about unpublishing schedules:

- Once you unpublish a schedule, you can *no longer* revert to that published schedule. Therefore, if the draft schedule is different, you have no general fallback to the old published one.
- Unpublishing could result in time-off allocations being released. This action can have other implications, such as impacting the approval of new requests.

## Before you begin

[Publish the schedule](#), page 217

## Procedure

- From the left pane **Employees** filter, select the employees for whom you want to unpublish components, and select **Apply**.  
The selected employees appear on the calendar. You can *only* unpublish schedules for employees who appear on the calendar.
- From the calendar, select the employees for whom you want to unpublish schedules.
- From **Tools**, select **Unpublish**.
- From **Employees** on the right side of the screen, select the employees for whom you want to unpublish schedules.  
The employees you selected from the calendar are already selected. You can change this selection, as needed. To select employees on *all* pages, select **All pages** and select the relevant employees. To *only* select employees from the *current* page displayed on the calendar, select **Current page** and select the relevant employees.
- From **Dates**, select the date range for which you want to unpublish schedules:
  - To unpublish schedules for the current scheduling period, select **Current scheduling period**.
  - To unpublish the schedule for specific days and times:
    - Select **Custom**.
    - In the **Start** and **End** fields, enter the **dates** and **times** accordingly.
- Select **Unpublish**.  
A warning message appears, prompting you to confirm unpublishing the schedule.  
Note the following about the unpublish action *before* selecting **OK**:
  - Once you unpublish a schedule, you can *no longer* revert to the published schedule. Therefore, if the draft schedule is different, you have no general fallback to the old published one.
  - Unpublishing could affect pending and new time-off allocations.
- Once you are sure that you want to unpublish a schedule, select **OK**.

**Related topics**

[Revert the schedule](#), page 222

# Troubleshooting tips for schedule publishing

There are tips related to schedule publishing and unpublishing that could help you publish or unpublish schedules effectively and accurately.

## Schedules published in non-contiguous weeks

If schedules are published in non-contiguous weeks, it can cause problems when employees submit time-off requests.

To prevent issues with time-off requests:

- Only publish schedules for contiguous scheduling periods.
- Unpublish cleanly. Leave no spare weeks published when unpublishing. In *no campaign* mode, the unpublish date can span a long period (for example, from January 1, 2018 to December 31, 2090).

## Deleting a scheduling period from a campaign

Before deleting a scheduling period, do the following to prevent issues with time-off requests:

- 1 Unpublish the campaign scheduling period.
- 2 Clear all employee schedule assignments from the calendar.
- 3 Close and delete the scheduling period. (You *cannot* delete an open scheduling period).

## Related topics

[Publish the schedule](#), page 217

[Unpublish the schedule](#), page 219

# Revert the schedule

To take the last published schedule and write it back to the draft schedule, revert to that schedule. You can revert the published schedule for specific dates and employees.



Use this feature cautiously. It replaces *all* changes you have made to the calendar since the schedules were last published.

## Before you begin

[Publish the schedule](#), page 217

## Procedure

- From the left pane **Employees** filter, select the employees for whom you want to revert published schedules, and select **Apply**.

The selected employees appear on the calendar. You can *only* revert published schedules for employees who appear on the calendar.

- From the calendar, select the employees for whom you want to revert published schedules.

- From **Tools**, select **Revert**.

- From **Employees** on the right side of the screen, select the employees for whom you want to revert published schedules.

The employees you selected from the calendar are already selected. You can change this selection, as needed. To select employees on *all* pages, select **All pages** and select the relevant employees. To *only* select employees from the *current* page displayed on the calendar, select **Current page** and select the relevant employees.

- From **Dates**, select the date range for which you want to revert published schedules to draft schedules:

- To revert published schedules for the current scheduling period, select **Current scheduling period**.
- To revert published schedules for specific days and times:
  - Select **Custom**.
  - In the **Start** and **End** fields, enter the **dates** and **times** accordingly.

- Select **Revert**.

A warning message appears, prompting you to confirm reverting published schedules.

Note the following about the revert action *before* selecting **OK**:

- When you revert a published schedule, you are overwriting the draft schedule with the current published schedule.
- The revert option removes all updates made to the draft schedule since the last time you published the schedule.

- Once you are sure that you want to revert a published schedule, select **OK**.

## Related topics

[Unpublish the schedule](#), page 219

# Forecasting and scheduling scenarios

The WFM application supports diverse environments with specific business needs. By enabling special licenses and parameters and adhering to defined workflows, WFM can help you achieve the customized goals of your organization.

## Topics

Multi-contact scheduling .....	224
Skill-based scheduling .....	230
Multi-site scheduling .....	234
Intraday optimization .....	244
Work queue hopping .....	255
Workforce planning .....	265
Outbound scheduling .....	271
Time banking scheduling .....	282
Monthly scheduling .....	284
Campaign pooling .....	291

# Multi-contact scheduling

In a multi-contact environment, employees respond to customers through various communication channels, such as email, web chat, and Voice over IP (VoIP).

## Media types and queues

Some organizations require employees to respond to customers through various media. The WFM application helps managers schedule employees who can handle customer interactions using different media types.

The WFM application associates each media type with a queue. You can also associate a skill with various media, including phone, email, fax, web chat, call back and Voice over IP (VoIP).

Different media are categorized with different *answering types*, depending on the urgency of the response:

- **Immediate:** Answered when the request arrives. If it is not answered within a certain time, customers abandon the interaction. Includes phone, chat, and VoIP.
- **Deferred:** Answer can be delayed for a later time. Includes email, fax, and callback.

Deferred media do *not* have an **Abandon** parameter, but instead have a **Backlog**. **Backlog** is a group of interactions left over from previous intervals that still need to be answered. Deferred media typically have a longer service level and handling times, typically measured in hours or even days.

## Multi-contact routing

In WFM, you can model three different types of multi-contact routing:

- 1 **Dedicated employee groups model:** Each media has a group of employees who handle only that media and do *not* handle interactions from any other queue. While there can be skill-based routing *within each media*, there is no mixing of interactions *between* the media.
- 2 **Media hopping:** Each employee works with one media type for a length of time, and then switches to another type. While employees can work with more than one *media type* during the day, they *cannot* work with more than one *answer type* at any time.
- 3 **True blending:** Employees can be routed interactions from *any media at any time*. For example, an employee can be handling a phone call, then an email message, and then another phone call.

## Related topics

[Workflow: Generate a schedule using multiple media types](#), page 224

# Workflow: Generate a schedule using multiple media types

To respond to customers through various communication channels, generate a schedule with multiple media types associated with activities.

## Workflow

- 1 [Create activity with multiple media types](#), page 225  
Create an activity and associate it with multiple media types.
- 2 [Create work rules based on multiple media activities](#), page 226  
Create shifts and shift events based on the activities you associated with multiple media types.

**3** [Create work patterns associated with multiple media types](#), page 227

Create work patterns that include the shifts (and linked shift events) based on the activities associated with the multiple media types. Then, link employees to the work patterns.

**4** [Create a campaign for schedules associated with multiple media types](#), page 228

Create a campaign and scheduling period for schedules associated with multiple media types.

**5** [Generate a schedule associated with multiple media types](#), page 229

Generate a schedule for employees linked to work patterns that have shifts, shift events, and other work rules based on the activities with multiple media types.

### Related topics

[Multi-contact scheduling](#), page 224

## Create activity with multiple media types

Create an activity and associate it with multiple media types.

Using these activities, you can create multiple shifts and shift events. For example, after defining these types of activities, you can create an **Email Only** shift and a **Phone + VoIP** shift with a 1-hour **Email** shift event.

### Before you begin

Create work queues, as required (**Work Administration**, **Work Queues**, and **Settings**)

### Procedure

**1** Go to **Work Administration**. Under **Activities**, select **Activities**.

**2** From the left pane, select the organization for which you want to create the activity.

Make sure you select the *same* organization to which the employees belong who will be responding to customers through various communication channels.

**3** Select **Create Activity**.

**4** In the **Name** field, enter a name for the activity.

**5** Associate the activity with queues:

- Select **Work Queue Hopping**.
- From **Work Queues**, select the queues to which you want to associate the activity.

**6** Do *not* select the following parameters:

- **Time Off**
- **Use in Calendar Event**
- **Unavailability**

**7** From the **Media**, select the **Edit** icon.

**8** From the **Available Media** column, select the media types you want and select the **Assign right** arrow to define them as **Assigned Media**.

This option allows employees to work with different combinations of media. For example, create a **Phone + VoIP** activity and an **Email Only** activity.

**9** Select **Set**.

The multiple media types appear in the **Media** field.

- 10 Under **Scheduling Usage**, select one or both of the following parameters:
  - To use the activity in shifts *and* shift events, select **Use in Shift (Primary Activity)**. The **Use in Shift Event** parameter is automatically selected.
  - To use the activity in shift events *only*, select **Use in Shift Event**.
- 11 Complete any remaining fields for the activity and select **Save**.
- 12 For any additional activities you want to associate with multiple media types, repeat step 3 - step 11.

#### What to do next

[Create work rules based on multiple media activities](#), page 226

#### Related information

Create an activity (*Workforce Management Administration Guide*)

## Create work rules based on multiple media activities

Create shifts and shift events based on the activities you associated with multiple media types.

#### Before you begin

[Create activity with multiple media types](#), page 225

#### Procedure

- 1 Go to **Work Administration**. Under **Work Rules**, select **Shift Events**.
- 2 From the left pane, select the organization for which you want to create a shift event.  
Make sure you select the *same* organization for which you created the activities.
- 3 Select **Create**.
- 4 In the **Name** field, enter a name for the shift event.
- 5 From the **Activity** field, select the activity you associated with multiple media types.
- 6 Complete the remaining fields, and select **Save**.  
You have now created a shift event based on the activity.
- 7 Under **Work Rules**, select **Shifts**.
- 8 From the left pane, select the organization for which you want to create a shift.  
Make sure you select the *same* organization for which you created the activities and shift events.
- 9 Select **Create**.
- 10 In the **Name** field, enter a name for the shift.
- 11 From the **Activity** field, select the activity you associated with multiple media types.
- 12 Under **Shift Events**, select **Add**.
- 13 Add the shift events you created to the shift, and select **Add Selected Shift Events**.



You *cannot* use the same activity for a linked shift event that you used for the shift. The primary work of the shift is always different than its shift events.

- 14** Complete the remaining fields, and select **Save**.

You have now created a shift event based on the selected activity.

### What to do next

[Create work patterns associated with multiple media types](#), page 227

### Related information

Set up work rules (*Workforce Management Administration Guide*)

## Create work patterns associated with multiple media types

Create work patterns that include the shifts (and linked shift events) based on the activities associated with the multiple media types. Then, link employees to the work patterns.

### Before you begin

[Create work rules based on multiple media activities](#), page 226

### Procedure

- 1** Go to **Work Administration**. Under **Work Rules**, select **Work Patterns**.
- 2** From the left pane, select the organization for which you want to create a work pattern.  
Make sure you select the *same* organization to which the employees you want to link the work pattern are associated (and for which you created the activities, shifts and shift events).
- 3** Select **Create**.
- 4** In the **Name** field, enter a name for the work pattern.
- 5** On the **Work Patterns** screen, complete the fields.
- 6** Under **Work Days / Consistency > Shift**, select **Add**.
- 7** From the **Shift Details** screen, select the shifts based on the activities associated with the multiple media types, and select **Add Selected Shifts**.  
The added shifts include their linked shift events.
- 8** Select **Save**.
- 9** Go to **User Management**. Under **Employees**, select **Work Rules**.
- 10** From the left pane, select the employees to whom you want to link the work pattern.



Make sure the employees you select belong to the *same* organization to which you linked the work pattern. Otherwise, the work pattern will *not* be available to select to the work rule assignment.

- 11** Expand **Work Patterns** and select **Add**.
  - 12** From the **Work Pattern** screen, select the work patterns you want to add to the work rules assignment and select **Add Selected Work Patterns**.
  - 13** Select **Save**.
- The selected employees are now linked to the work patterns that include shifts and shift events based on activities associated with multiple media types.

**What to do next**

[Create a campaign for schedules associated with multiple media types](#), page 228

**Related information**

Set up work rules (*Workforce Management Administration Guide*)

## Create a campaign for schedules associated with multiple media types

Create a campaign and scheduling period for schedules associated with multiple media types. Then, link the relevant employees to the scheduling period.

**Before you begin**

[Create work patterns associated with multiple media types](#), page 227

**Procedure**

- 1 Go to **Forecasting and Scheduling**. Under **Campaigns**, select **Settings**.
- 2 Select **Create Campaign**, complete the fields, and select **Save**.
- 3 Select **Create Scheduling Period**, complete the fields, and select **Save**.
- 4 Note the following when defining a scheduling period:
  - Make sure you link an organization to the scheduling period.
  - If you create a skill-based campaign (by selecting **Skill Based**), you *must* create and link skills to the relevant employees.
  - To link *all* employees of the linked organizations (defined by the **Organization** field), select **Use All Employees in Linked Organizations**.
- 5 Under **Campaigns**, select **Queues**.
- 6 Under **Campaign Name**, expand the campaign and select the scheduling period to which you want to link a work queue.
- 7 To add a queue to the scheduling period, select **Add Queue to Scheduling Period**.



If the queue does *not* appear in the list, make sure the same organization linked to the work queue is linked to the scheduling period.

- 8 Select the queues you want and select **Add Selected Queues**.
- 9 Select **Save**.
- 10 If you want to add *selected* employees from the linked organizations (if you didn't select **Use All Employees in Linked Organizations**):
  - a. Under **Employees**, select **Profiles**.
  - b. Select the campaign and scheduling period to which you want to link employees, and select **Add Employee to SP**.

The employees displayed are associated with the organizations defined in the **Organization** field in the **Settings** workspace under **Campaigns**. You can *only* select employees associated with these organizations.

- c. Select the employees you want and select **Add**.

The employees are assigned the work patterns that have shifts, shift events, and other work rules based on the activities with multiple media types.

### What to do next

[Generate a schedule associated with multiple media types](#), page 229

### Related topics

[Workflow: Define a campaign and scheduling period](#), page 22

## Generate a schedule associated with multiple media types

Generate a schedule for the employees linked to work patterns with work rules based on activities associated with multiple media types.

### Before you begin

- [Create a campaign for schedules associated with multiple media types](#), page 228
- Create a forecast and define service goals, as you would for any campaign (see [Workflow: Set service goals and Forecasts](#), page 45)

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left pane filters, select the campaign and scheduling period you created to support multiple media type scheduling components.
- 3 From **Home**, select **Generate Schedule**.
- 4 Set all parameters, and select **Generate**.

The WFM application schedules employees to meet the forecasted contact volume and service goals *for each queue*. Schedules are optimized to ensure that you have the right mix of employees available at any time.

### Related topics

[Generate the schedule automatically](#), page 87

# Skill-based scheduling

You can generate a schedule for employees with skills to handle the workload. You can associate those skills with your employees, and then link the skills to your queues.

Skill definitions can be expanded to include the media associated with a skill.

When you generate the schedule, the scheduling engine schedules the right number of people with the right skills at the right times.

## Related topics

[Workflow: Generate a schedule using skill-based scheduling](#), page 230

## Related information

Workflow: Set up skills (*Workforce Management Administration Guide*)

## Workflow: Generate a schedule using skill-based scheduling

Determine the skills your organization requires, link those skills and the appropriate media to your employees, and link the skills to your queues.

### Workflow

- 1 [Create skills and link them to employees](#), page 230

Create skills with the appropriate media, and link the skills to employees.

- 2 [Create a skill-based scheduling period](#), page 231

Create a campaign, and a *skill-based* scheduling period for the campaign. You can either link *all* or *specific* employees (with the linked skills) from the organizations defined for the scheduling period.

- 3 [Link skills to queues](#), page 232

After you have created a skill-based scheduling period, assign queues to it. Determine the skill required to answer each type of contact, and associate that skill with the incoming contact queues.

- 4 [Generate a schedule for a skill-based scheduling period](#), page 233

Generate a schedule, which schedules the right number of people with the right skills at the right time.

## Related topics

[Skill-based scheduling](#), page 230

## Related information

Workflow: Set up skills (*Workforce Management Administration Guide*)

## Create skills and link them to employees

Create skills with the appropriate media, and link the skills to employees.

### Procedure

- 1 Go to **Organization Management**. Under **Employee Attributes**, select **Skills**.

- 2 Select **Create Skill** and complete the fields for the skill you want to create.
- 3 For **Media Type**, select the media required for the skill.  
For example: **Phone**, **Email**, and **Chat**.
- 4 Select **Save**.  
The skill is saved with the selected media.
- 5 Go to **User Management**. Under **Employees**, select **Skills**.
- 6 From the left pane, select one or more employees for which you want to assign skills.
- 7 To link the skill to the employees, under **Assigned**, select **Add**.
- 8 Select the skills you created, and select **Add Selected Skills**.
- 9 On the Skills Assignment screen, select **Save**.  
The employees are now linked to the selected skills.

#### What to do next

[Create a skill-based scheduling period](#), page 231

#### Related information

Workflow: Set up skills (*Workforce Management Administration Guide*)

## Create a skill-based scheduling period

Create a campaign, and a *skill-based* scheduling period for the campaign. You can either link *all* or *specific* employees (with the linked skills) from the organizations defined for the scheduling period.

#### Before you begin

- [Create skills and link them to employees](#), page 230
- Create work rules and assign them to employees, as you would for any schedule (see *Workflow: Set up work rules*, *Workforce Management Administration Guide*)

#### Procedure

- 1 Create a campaign:
  - a. Go to **Forecasting and Scheduling**. From **Campaigns**, select **Settings**.
  - b. Select **Create Campaign**.
  - c. Complete the fields for the campaign and select **Save**.  
The campaign appears under **Campaign Name** on the left side.
- 2 Select **Create Scheduling Period**.
- 3 Complete the initial settings and select **Save**.
- 4 Under **General Settings**, select **Skill Based**.
- 5 Determine the next step:
  - To link *all* employees from all linked organizations to the campaign, select **Use All Employees in Linked Organizations**. Complete the remaining fields and select **Save**.
  - To link *specific* employees (to whom you have linked the skills), you can add those specific employees in [step 6](#).

- 6 To link *specific* employees (with the linked skills) from the organizations defined for the scheduling period:
- Go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**.
  - Select the campaign and scheduling period to which you want to link employees.
  - Select **Add Employee to SP**.
- The employees displayed are associated with the organizations defined in the **Organization** field in the **Settings** workspace under **Campaigns**. You can *only* select employees associated with these organizations.
- Select the employees you want and select **Add**.

#### What to do next

[Link skills to queues](#), page 232

#### Related topics

[Workflow: Define a campaign and scheduling period](#), page 22

## Link skills to queues

After you have created a skill-based scheduling period, assign queues to it. Determine the required skill, and associate that skill with the incoming contact queues.

#### Before you begin

[Create a skill-based scheduling period](#), page 231

#### Procedure

- Go to **Forecasting and Scheduling**. From **Campaigns**, select **Queues**.
- Under **Campaign Name**, expand the campaign and select the scheduling period to which you want to link a work queue.
- To add a queue to the scheduling period, select **Add Queue to Scheduling Period**.
- Select the queues you want and select **Add Selected Queues**.
- On the **Campaign Queues** screen, enter a skill in the **Skill** field for each queue.  
Associate each work queue with a skill so that the scheduling engine knows which employees can service the workload.
- Select **Save**.



Make sure that you selected the **Skill Based** option for the scheduling period. You can only define or edit the skill for the selected queue if this option is enabled.

#### What to do next

[Generate a schedule for a skill-based scheduling period](#), page 233

#### Related topics

[Workflow: Define a campaign and scheduling period](#), page 22

# Generate a schedule for a skill-based scheduling period

Generate a schedule, which schedules the right number of people with the right skills at the right time.

## Before you begin

- [Link skills to queues](#), page 232
- Create a forecast and define service goals, as you would for any campaign (see [Workflow: Set service goals and Forecasts](#), page 45)

 To use skill-based scheduling, you *must* create forecasts and service goals for each queue you are scheduling.

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left pane filters, select the campaign and scheduling period you created to support skill-based scheduling.
- 3 From **Home**, select **Generate Schedule**.
- 4 Set all parameters, and select **Generate**.  
WFM schedules employees with the required skills to meet the forecasted contact volume and service goals *for each queue*. Schedules are optimized to ensure that you have the right mix of employees available at any time.

## Related topics

[Generate the schedule automatically](#), page 87

# Multi-site scheduling

The WFM application supports multi-site operations that share calls, but do *not* have a virtual environment. This capability allows you to create *centralized forecasts* and *distributed schedules*. Typically, a multi-site environment uses a static call allocation that can vary throughout the day. It can be adjusted to compensate for variations in the original plan.



To support multi-site operations, your site must have a **Multi-Site Scheduling** license.

## Virtual and distributed campaigns

There are two types of campaigns supported by multi-site operations:

- *Virtual campaign*: All sites handle the workload. Interactions are routed dynamically *wherever employees are available*. Only certain types of ACDs support dynamic distribution, such as Cisco, Genesys, Avaya BSR, and Look Ahead Interflow. You can only add a virtual queue to a stand-alone campaign. Campaigns that are subcampaigns or that have subcampaigns *cannot* have virtual queues.
- *Distributed campaign*: Workload is allocated among the sites *regardless of employee availability*. A pre-determined percentage of interactions is routed to each site in each interval. Distributed campaigns have main or parent campaigns, and subcampaigns associated with the main campaigns.

When scheduling a distributed campaign, the scheduling engine schedules shifts for all *subcampaigns* to best meet the distributed campaign's forecasts, and returns the recommended allocation.

Forecasted service levels are not generated when scheduling a distributed campaign. To forecast service levels for these campaigns, select to generate or analyze a schedule, or recalculate statistics at the *subcampaign* level.

## Virtual and distributed queues are parent queues

In both virtual and distributed campaigns, multiple physically separate sites share a workload. The data can then be combined into a summary (parent) work queue.

You can create either *distributed* or *virtual* queues as parent queues. You then need to map *normal* or *process* child queues to the parent queue.

## Related topics

[Workflow: Generate a schedule for a distributed campaign](#), page 234

[Workflow: Generate a schedule for a virtual campaign](#), page 240

## Workflow: Generate a schedule for a distributed campaign

Generate a schedule for a distributed campaign, for which interactions arrive and are routed among the sites based on a *pre-determined percent allocation*.

Distributed queues allow the workload to be allocated among the sites regardless of employee availability. A pre-determined percentage of interactions is routed to each site in each interval. Distributed queues *can only be added to a campaign that has at least one defined subcampaign*.

Forecasting and service goals are set on the parent work queue, and allocated to the child work queues. Scheduling is done for the child work queues. The forecast is created centrally and allocated *among* the sites, whereas the schedule is generated for *each* site.

## Workflow

### 1 [Create queues for a distributed campaign](#), page 235

Create the required normal queues and distributed queues. Then, map the normal queues to the distributed queues.

### 2 [Create distributed campaign with subcampaigns](#), page 236

Create the distributed (parent) campaign, and then create the required subcampaigns.

### 3 [Link subqueues, skills, and employees](#), page 237

Link work queues, skills, and employees to each *subcampaign* (not to the distributed parent campaign). After work queues, skills and organizations are linked to the subcampaigns, they are displayed in the settings for the distributed campaign.

### 4 [Create forecast and define service goals for a distributed campaign](#), page 238

Create a forecast and set service goals for the *parent* distributed work queue.

### 5 [Allocate percentages for each work queue manually](#), page 239

You can enter percent allocations manually for each work queue. Allocations must total 100%, and can be imported or exported.

If you know the allocation percentages, enter them manually. If you do *not* know the allocation percentages, generate a schedule for the distributed campaign and accept the allocation percentages that are calculated for the schedule.

### 6 [Generate a schedule for a distributed campaign](#), page 239

Generate a schedule for each subcampaign for the distributed campaign, as you would schedule for a regular campaign.

## Related topics

### [Multi-site scheduling](#), page 234

## [Create queues for a distributed campaign](#)

Create the required normal queues and distributed queues. Then, map the normal queues to the distributed queues.

## Procedure

### 1 Create a *normal* queue:

- a. Go to **Work Administration**. Under **Work Queues**, select **Settings**.
- b. Select the organization for which you want to create the queue, and select **Create work queue**.
- c. To create the required normal work queues, complete the fields with **Type** set to **Normal**.
- d. Select **Save**.
- e. Go to **Work Queue Group Mapping**, and map the normal queues to the relevant data sources.

### 2 Create a *distributed* queue:

- a. Go back to **Settings**. Select **Create work queue** again.

- b. To create the required distributed work queues, complete the fields with **Type** set to **Distributed**.
  - c. Select **Save**.
- 3** Map the normal (child) queues to the distributed (parent) queue:
- a. Go to **Work Administration**. From **Work Queues**, select **Parent Work Queue Mapping**.
  - b. Select the distributed (parent) queue you created, and select **Edit Work Queue**.
  - c. Assign the normal (child) queue you created to the **Mapped Work Queues** column.
  - d. Select **Save Mapping**.

### What to do next

[Create distributed campaign with subcampaigns](#), page 236

### Related information

Workflow: Set up work queues for multi-site operations (*Workforce Management Administration Guide*)

## Create distributed campaign with subcampaigns

Create the distributed (parent) campaign, and then create the required subcampaigns.

A *parent* campaign generally represents an entire collection of interactions, and the employees from all sites who respond to these interactions. The *subcampaigns* are used to represent employees who log into a specific ACD.

Distributed queues *can only be added to a campaign that has at least one defined subcampaign*.

### Example: Subcampaigns in different time zones

If any subcampaigns are in different time zones, translate the hours into the time zone of the distributed parent campaign. The hours of operation need to include *all* the hours that *all* branches are open.

For example:

- Your company has a branch on the East Coast, and a branch on the West Coast of the United States.
- For the parent campaign, you have set the time zone to PST.
- Both branches are open from 8 am to 5 pm, Monday to Friday.
- There is a three-hour difference between the East Coast and the West Coast. The East Coast branch is open from 5 am to 2 pm, which is 8 am to 5 pm on the West Coast (PST). The West Coast branch has the same hours as the parent campaign (8 am to 5 pm PST).
- Set the hours of operation as 5 am to 5 pm, Monday to Friday. It includes the hours that the East Coast branch is open at the beginning of *their* day (in PST). These hours of operation also include the hours that the West Coast branch is open at the end of *their* day (in PST).

### Before you begin

[Create queues for a distributed campaign](#), page 235

### Procedure

- 1** Go to **Forecasting and Scheduling**. Under **Campaigns**, select **Settings**.
- 2** Select **Create Campaign**.
- 3** Complete the fields on this screen.

**4** Select **Distributed Campaign**, and select **Save**.

The system creates the distributed (parent) campaign.

**5** Select **Create Sub Campaign**.

The values set for the **Week Start Day** (or **Month Start Day** for monthly scheduling periods) and **Day Boundary** are inherited from the parent campaign.

**6** Complete the remaining fields and select **Save**.

The system creates the subcampaign.

**7** To create a second subcampaign, select the distributed campaign name from the left pane and repeat [step 5 - step 6](#).



You need to create at least two subcampaigns for a scheduling period.

**8** To create a scheduling period, select the distributed campaign name from the left pane and select **Create Scheduling Period**.

**9** Complete the fields for the scheduling period and select **Save**.

The system creates the scheduling period and displays it underneath the subcampaigns in the left pane.

**10** To create multiple scheduling periods, repeat [step 8 - step 9](#).

Any scheduling period you create for the distributed campaign is *automatically propagated to its existing subcampaigns*. Scheduling periods are managed for each *subcampaign* (*not* the parent campaign). You link queues, skills, and employees to each one.

For example, you can link certain queues, skills and employees to the scheduling period from May 1-May 10 for Sub-Campaign A. Then, if needed, you can link different queues, skills, and employees to the scheduling period from May 1-May 10 for Sub-Campaign B.



If you delete a scheduling period, it deletes the period *from every subcampaign* of the distributed campaign. If you do *not* want to schedule a subcampaign for a specific week, change the hours of operation so that the subcampaign is *not* open during that week.

## What to do next

[Link subqueues, skills, and employees](#), page 237

## Related topics

[Campaign settings](#), page 23

## Link subqueues, skills, and employees

Link work queues, skills, and employees to each *subcampaign*. After work queues, skills and organizations are linked to the subcampaigns, they are displayed in the settings for the distributed campaign.

For each subcampaign, link it to the appropriate subqueues and skills. For each organization you link to each subcampaign, add the relevant employees.

## Before you begin

[Create distributed campaign with subcampaigns](#), page 236

## Procedure

- 1 Link a work queue to each scheduling period for each subcampaign:
  - a. Go to **Forecasting and Scheduling**. From **Campaigns**, select **Queues**.
  - b. Under **Campaign Name**, expand the parent campaign and the subcampaign, and select the scheduling period to which you want to link work queues.
  - c. To add a queue to the scheduling period, select **Add Queue to Scheduling Period**.
  - d. Select the queues you created for the distributed campaign and select **Add Selected Queues**.
  - e. Select **Save**.
- 2 Optional. For skill-based campaigns, enter a skill in the **Skill** field for each queue.  
If the main distributed campaign is skill-based, all subcampaigns are skill-based. Link the appropriate skill to each work queue.
- 3 Select **Save**.
- 4 For each organization you linked to each subcampaign, add the relevant employees to the subcampaigns:
  - a. Go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**.
  - b. From the left pane, select the subcampaign and the employees you want to add.
  - c. Select **Add Employee to SP**.

## What to do next

[Allocate percentages for each work queue manually](#), page 239

## Related topics

[Campaign settings](#), page 23

[Link queues to a scheduling period](#), page 28

[Link employees to the scheduling period](#), page 38

## Create forecast and define service goals for a distributed campaign

Create a forecast and set service goals for the *parent* distributed work queue.

If you use historical weeks, the historical data is actually the aggregation of data from the child distributed work queues. The forecast flows down to the child work queues in each subcampaign. Service goals flow down to the child work queues in each subcampaign.

## Before you begin

[Link subqueues, skills, and employees](#), page 237

## Procedure

- 1 Create a forecast for the *parent* distributed work queue:
  - a. Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
  - b. Create a forecast.
- 2 Create service goals for the *parent* distributed work queue:
  - a. Go to **Forecasting and Scheduling**. Under **Goals**, select **Service Goals**.
  - b. Enter service goals for the campaign.

## Related topics

[Forecasts](#), page 45

[Service goals and requirements](#), page 63

## Allocate percentages for each work queue manually

You can enter percent allocations manually for each work queue. Allocations must total 100%, and can be imported or exported.

If you know the allocation percentages, enter them manually. If you do *not* know the allocation percentages, generate a schedule for the distributed campaign and accept the allocation percentages that are calculated for the schedule.

### Before you begin

[Link subqueues, skills, and employees](#), page 237

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Distributed Allocation**.
- 2 From the filter pane on the left, select the subcampaign, scheduling period, and work queue for which you want to enter percent allocations.
- 3 Expand the **Details pane** on the right.
- 4 From the **Allocations** tab, enter the percentage, and select **Allocate** on the ribbon.

### What to do next

[Generate a schedule for a distributed campaign](#), page 239

## Related topics

[Set allocations across distributed queues](#), page 74

## Generate a schedule for a distributed campaign

Generate a schedule for each subcampaign for the distributed campaign, as you would schedule for a regular campaign.

You can schedule maintenance tasks that you would typically schedule in a regular campaign. These tasks include adding events, adjusting schedules, locking or unlocking schedules, and adding Overtime (OT) or Voluntary Time Off (VTO).

### Before you begin

[Allocate percentages for each work queue manually](#), page 239

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left pane filters, select the campaign and scheduling period you created to support distributed campaign scheduling components.
- 3 From **Home**, select **Generate Schedule**.
- 4 Set all parameters, and select **Generate**.

WFM schedules employees with the required skills to meet the forecasted contact volume and service goals *for each queue*. Schedules are optimized to ensure that you have the right mix of employees available at any time.

### Related topics

[Generate the schedule automatically](#), page 87

## Workflow: Generate a schedule for a virtual campaign

Generate a schedule for a *virtual* campaign. In virtual campaigns, interactions are routed *dynamically* among the sites, usually to the site that can provide the best service.

All sites handle the workload for virtual queues. Interactions are routed dynamically wherever employees are available. You can add this type of queue only to a stand-alone campaign. Campaigns that are subcampaigns or that have subcampaigns *cannot* have virtual queues.

Forecasts and schedules are created centrally, as if the multiple sites were operating as a single site with one shared workload.

### Workflow

1 [Create queues for a virtual campaign](#), page 240

Create the required normal queues and virtual queues. Then, map the normal queues to the virtual queues.

2 [Create a virtual campaign](#), page 241

Create a campaign and link virtual parent work queues to the scheduling period.

3 [Link queues, skills, and employees](#), page 241

Link work queues, skills, and employees to the virtual campaign.

4 [Create forecast and define service goals for a virtual campaign](#), page 242

Create a forecast and define service goals for the virtual work queue.

5 [Generate a schedule for a virtual campaign](#), page 243

Generate a schedule for the virtual campaign, as you would schedule for a regular campaign.

### Related topics

[Multi-site scheduling](#), page 234

## Create queues for a virtual campaign

Create the required normal queues and virtual queues. Then, map the normal queues to the virtual queues.

### Procedure

1 Create a *normal* queue:

- a. Go to **Work Administration**. Under **Work Queues**, select **Settings**.
- b. Select the organization for which you want to create the queue, and select **Create work queue**.
- c. To create the required normal work queues, complete the fields with **Type** set to **Normal**.

- d. Select **Save**.
  - e. Go to **Work Queue Group Mapping**, and map the normal queues to the relevant data sources.
- 2** Create a *virtual* queue:
- a. Go back to **Settings**. Select **Create work queue** again.
  - b. To create the required distributed work queues, complete the fields with **Type** set to **Virtual**.
  - c. Select **Save**.
- 3** Map the normal (child) queues to the virtual (parent) queue:
- a. Go to **Work Administration**. From **Work Queues**, select **Parent Work Queue Mapping**.
  - b. Select the virutal (parent) queue you created, and select **Edit Work Queue**.
  - c. Assign the normal (child) queue you created to the **Mapped Work Queues** column.
  - d. Select **Save Mapping**.

#### What to do next

[Create a virtual campaign](#), page 241

#### Related information

Workflow: Set up work queues for multi-site operations (*Workforce Management Administration Guide*)

## Create a virtual campaign

Create a campaign and link virtual parent work queues to the scheduling period.

#### Before you begin

[Create queues for a virtual campaign](#), page 240

#### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Campaigns**, select **Settings**.
- 2 Select **Create Campaign**, and complete the fields.
- 3 Select **Create Scheduling Period**, and complete the scheduling period settings accordingly.

#### What to do next

[Link queues, skills, and employees](#), page 241

#### Related topics

[Campaign settings](#), page 23

## Link queues, skills, and employees

Link work queues, skills, and employees to the virtual campaign.

#### Before you begin

[Create a virtual campaign](#), page 241

**Procedure**

- 1 From **Campaigns**, select **Queues**.
  - 2 Under **Campaign Name**, expand the campaign and select the scheduling period to which you want to link a work queue.
    - a. To add the virtual parent queue to the scheduling period, select **Add Queue to Scheduling Period**.
    - b. Select the virtual queue you want and select **Add Selected Queues**.
    - c. Select **Save**.
  - 3 Optional. For skill-based campaigns, link skills to the virtual queues:
    - a. On the **Campaign Queues** screen, enter a skill in the **Skill** field for each queue. Associate each work queue with a skill so that the scheduling engine knows which employees can service the workload.
- !** To define or edit a skill for a work queue, make sure to select the **Skill Based** option for the scheduling period. You can *only* add a skill for the selected queue if this option is enabled.
- 4 For each organization you linked to the campaign, add the relevant employees to the subcampaigns:
    - a. Go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**.
    - b. From the left pane, select the campaign and the employees you want to add.
    - c. Select **Add Employee to SP**.

**What to do next**

[Create forecast and define service goals for a virtual campaign](#), page 242

**Related topics**

[Campaign settings](#), page 23

[Link queues to a scheduling period](#), page 28

[Link employees to the scheduling period](#), page 38

## Create forecast and define service goals for a virtual campaign

Create a forecast and define service goals for the virtual work queue.

**Before you begin**

[Link queues, skills, and employees](#), page 241

**Procedure**

- 1 Create a forecast for the *virtual* work queue:
  - a. Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
  - b. Create a forecast.
- 2 Define service goals for the *virtual* work queue:
  - a. Go to **Forecasting and Scheduling**. Under **Goals**, select **Service Goals**.
  - b. Enter service goals for the campaign.

**What to do next**

[Generate a schedule for a virtual campaign](#), page 243

**Related topics**

[Forecasts](#), page 45

[Service goals and requirements](#), page 63

## Generate a schedule for a virtual campaign

Generate a schedule for the virtual campaign, as you would schedule for a regular campaign.

**Procedure**

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left pane filters, select the campaign and scheduling period you created to support virtual campaign scheduling components.
- 3 From **Home**, select **Generate Schedule**.
- 4 Set all parameters, and select **Generate**.

WFM schedules employees with the required skills to meet the forecasted contact volume and service goals *for each queue*. Schedules are optimized to ensure that you have the right mix of employees available at any time.

**Related topics**

[Generate the schedule automatically](#), page 87

# Intraday optimization

Intraday optimization allows you to run your operations more effectively and efficiently by responding to and adjusting for variations.

Intraday optimization allows you to:

- 1 Identify the variations.

Identify and be alerted to variations from the plan. Variations can include changes in call volume, handle time, service level deviations, and staffing variations. Alerts can include email messages, or a Queue Analytics statistics view that automatically refreshes.

- 2 Understand the reason for the variation.

Use a Queue Analytics statistics view to understand the current and potential future impacts. This view provides information, such as staffing numbers for skills-based environments, and future-looking trend lines.

- 3 Resolve the situation.

After being alerted to an issue, resolve these issues by comparing call arrivals and handle time trends and your base forecast. Reforecast to see the potential future effects if these trends continue. You can then publish a revised forecast to modify the schedule.

With this new forecast, you can then take corrective actions, such as:

- Canceling certain activities
- Adding overtime (OT)
- Asking people to take voluntary time-off (VTO) as appropriate

## Active, base, and saved forecasts

A key concept in intra-day optimization is understanding the different types of forecasts:

- **Active forecast:** The forecast that is currently loaded in the Forecast module. It is the forecast that is used to generate staffing requirements, and the forecast that is viewable in Queue Analytics. When you save it, the system updates Queue Analytics with any changes made to the active forecast.
- **Base forecast:** Forecast used when you generate and publish schedules. You can make any forecast the base forecast by selecting **Base** for that forecast.
- **Saved forecast:** Any active forecast can be made a saved instance for later viewing or use. You can create an unlimited number of forecast instances, but it is *not* required.

## Include backlog data in forecasts

Backlog refers to interactions that have not yet been handled. These interactions are still waiting in the work queue before the beginning of the scheduling period.

Backlog interactions remain in the work queue until they are handled. These interactions include email or back-office work (such as payments, order, and claims processing, load underwriting, and account maintenance).

## Related topics

[Workflow: Using Intraday optimization](#), page 245

## Workflow: Using Intraday optimization

You can run your operations more effectively and efficiently by responding to and adjusting for variations on an intra-day basis. By identifying the variations and analyzing trends, you can resolve the issues.

### Workflow

**1** [Create an initial forecast](#), page 245

Create an initial forecast and select it as the *base* forecast, which is the forecast used when you generate and publish schedules.

**2** [Generate and publish the schedule](#), page 246

Generate the schedule based on the *base* forecast, and then publish it.

**3** [Track deviations of key operational statistics](#), page 247

For the purposes of intra-day optimization, you need to be alerted of potential problems. Configure *campaign rules*, which track the deviation of operational statistics from the forecast, goal, or a specified range of values.

**4** [View trends](#), page 248

View trending to assess the impact if the issue persists.

Trends are based on the actual data for your queue. They offer a view on predicted performance over the coming period. Comparing the trends for your actual performance against your forecasted performance can offer a view on how accurate your forecast is.

**5** [Reforecast data](#), page 249

If there is a large deviation between the trend for your actual data and the active forecast, you can reforecast. Reforecasting gives you forecast data which is closer to the actual performance data.

Rerefcasting turns the trend data, which is a projection of the actual data, into forecast data. You can save this new forecast as an instance and edit it using the forecast module.

**6** [Workflow: Adjust schedule with OT and VTO](#), page 250

Make the revised forecast the actual forecast. Use this updated forecast to update the schedule, including adding Overtime (OT) and Voluntary Time Off (VTO) events for specific employees.

## Create an initial forecast

Create an initial forecast and select it as the *base* forecast, which is the forecast used when you generate and publish schedules.

### Procedure

**1** Create a forecast and select it as the base forecast:

- a. Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- b. From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- c. Select **Base** on the ribbon.

**2** Incorporate actual or forecast backlog data in your forecasts:

- a. Select **Fetch backlog** on the ribbon.

- b. On the **Fetch backlog** popup, select to get the actual or forecasted backlog data from a selected scheduling period.
  - c. Select **Ok**.
- 3** Specify an interim backlog value in the middle of a scheduling period for a queue or combined queue:
- a. Expand the details pane on the right.
  - b. Select the cell and enter data manually.
  - c. Select **Save**.
- 4** Note the following:
- When the forecast profile is created from Queue Analytics and loaded in the Forecast module, the *interim* backlog value is populated with the *actual* backlog value. If the actual backlog does *not* exist for the current time, select the most recent actual backlog.
  - The interim backlog for a combined queue distributes proportionally to individual queues (like the starting backlog for combined queues). According to the actual individual backlog distribution, the system distributes the starting or interim backlog at the combined queue.
  - If the actual backlog at the individual queues is zero, which could happen for a starting backlog, there is an even distribution among the individual queues.
  - The interim backlog setting, by default, propagates to the entire queue list. You can overwrite the interim backlog for a specific queue or combined queue by customizing the setting for that queue.
  - The next time you generate the schedule, the backlog is reset to the specified interim backlog for that time. Schedules are then generated based on those values.

### What to do next

[Generate and publish the schedule](#), page 246

### Related topics

[Set a base forecast](#)

[Fetch a backlog from the selected period](#), page 59

[Enter a backlog manually](#), page 60

## Generate and publish the schedule

Generate the schedule based on the *base* forecast, and then publish it.

### Before you begin

[Create an initial forecast](#), page 245

### Procedure

- 1** Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2** From the left pane filters, select the relevant campaign and scheduling period.
- 3** From **Home**, select **Generate Schedule**.
- 4** Set all parameters, and select **Generate**.

The system generates the schedule based on the base forecast. The scheduling engine uses the work rules, work patterns, and the scheduling parameters set on the **Generate Schedule** screen to generate an optimal schedule.

**5** From **Tools**, select **Publish**.

Publishing makes the schedule available to:

- Managers for viewing personal and group schedules, and monitoring adherence
- Employees for viewing their own schedules and shift swapping

**What to do next**

[Track deviations of key operational statistics](#), page 247

**Related topics**

[Generate the schedule automatically](#), page 87

[Publish the schedule](#), page 217

## Track deviations of key operational statistics

For the purposes of intra-day optimization, you need to be alerted of potential problems. To this end, configure *campaign rules*, which track the deviation of key operational statistics from the forecast, goal, or a specified range of values.

**Campaign alert types**

To alert you of problems, you can configure three types of campaign alerts:

- **Actual statistics vs. goal**: Allows you to compare the actual service level or average speed to answer with the respective goal.
- **Actual statistics vs. forecast**: Allows you to compare various different statistics, such as abandons, service level and backlog, with their forecasted values.
- **Actual statistics out of range**: Allows you to compare various different statistics, such as abandons, service level, and backlog, with a value range that you specify.

**Before you begin**

[Generate and publish the schedule](#), page 246

**Procedure**

- 1 Go to **Tracking**. Under **Notifications**, select **Campaign Rules**.
- 2 On the **Campaign Alert Rules** screen, select **Create**.
- 3 From the **Rule** drop-down field, select one of the following:
  - **Actual Statistics vs. Goal**
  - **Actual Statistics vs. Forecast**
  - **Actual Statistics Out of Range**
- 4 Complete the remaining fields on the screen, and select **Save**.
- 5 Repeat step 1-step 4 for the remaining campaign alert types.



If a rule is created for a *combined* queue, it always applies to *all queues in that campaign*. The rule applies to all queues, even if the queues linked to that campaign change in the future. If a rule is created for an *individual* queue, it always applies to each *specific queue*. The rule applies to each queue, even if the queue is unlinked from the campaign and linked to a new campaign.

## What to do next

[View trends](#), page 248

## Related information

Campaign alert rule types (*Workforce Optimization Framework Administration Guide*)

# View trends

Trends are based on the actual data for your Queue and offer a view on predicted performance over the coming period. Comparing the trends for your actual performance against your forecasted performance, can offer a view on how accurate your forecast is.

Configure Trends allows you to configure various characteristics of the Trend. Trend data is only available on the following statistics:

- Volume
- Activity Handling Time
- Staffing
- Average Speed to Answer
- Volume Handled
- Full Time Equivalents
- Service Level
- Backlog
- Abandons
- Occupancy

## Before you begin

[Track deviations of key operational statistics](#), page 247

## Procedure

- 1 Go to **Tracking**. Under **Queue Analytics**, select **Queue Analytics**.
- 2 Select **Trend** in the View Options.

## What to do next

[Reforecast data](#), page 249

## Related topics

[Configure trends](#), page 249

## Related information

Trend Convergence Effects (*Workforce Management Tracking Guide*)

## Configure trends

You can configure the characteristics of the trend data that is shown for the statistics displayed on the Queue Analytics screen. The trend is a projection of short-term future performance based on the past actual data. For the past data, you can determine how far back to start the trend calculation from. If there are periods of non-typical operation, exclude up to two of these periods to avoid skewing the trend calculation.

### Before you begin

You can only configure trends when you are viewing the current scheduling period.

### Procedure

- 1 Go to **Tracking**. Under **Queue Analytics**, select **Queue Analytics**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 On the **Tools** tab, select **Configure Trends**.
- 4 Set the date and time for the start of the trend calculation, using the **Base from** fields.
- 5 Specify when the trend calculation ends using **End time**. The default value is the end of the current day.  
If you choose **Time from now**, specify the end time in days, hours, and minutes.
- 6 Specify the **Convergence** which determines how the trend tracks against the forecasted data.
- 7 Expand the trend calculation to include non-working hours in by deselecting **Trend calculation based on Working Hours only**.
- 8 Exclude up to two time periods from the trend calculation using the **Exclude** section. Use the date and time pickers to set the excluded periods.
- 9 Select **Apply** to save the configuration.

### Related topics

[View trends](#), page 248

## Related information

Trend Convergence Effects (*Workforce Management Tracking Guide*)

## Reforecast data

If there is a large deviation between the trend for your actual data and the active forecast, you can reforecast. Reforecasting gives you forecast data which is closer to the actual performance data.

Rerefcasting turns the trend data, which is a projection of the actual data, into forecast data. You can save this new forecast as an instance and edit it using the forecast module.

### Before you begin

- [View trends](#), page 248

You can only Reforecast if the following conditions are met:

- Trend is selected in the Display Options.
- A campaign and a scheduling period must be selected. The scheduling period must include the current day.
- The selected Statistics View contains both Call Volume and Average Handling Time.
- There must be actual and forecast data for the queue, it cannot be empty.
- The selected queue or any of the queues in a combined queue cannot be:
  - An outbound phone queue or a project queue.
  - The child of a distributed queue or a virtual queue.
- Your role has been assigned the *Reforecast* privilege.

### Procedure

- 1 Go to **Tracking**. Under **Queue Analytics**, select **Queue Analytics**.
- 2 From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3 On the **Tools** tab, select **Reforecast**.
- 4 On the **Reforecast** dialog, provide a name and select the data to save with the forecast.
- 5 Select **Save**, to save the forecast as an instance.

At this point, you have a forecast saved as an instance which can be opened in the Forecast module.

### What to do next

[Workflow: Adjust schedule with OT and VTO](#), page 250

### Related topics

[View trends](#), page 248

[Configure trends](#), page 249

### Related information

Trend Convergence Effects (*Workforce Management Tracking Guide*)

## Workflow: Adjust schedule with OT and VTO

Use the updated forecast to update the schedule, including adding Overtime (OT) and Voluntary Time Off (VTO) events for specific employees.

To resolve understaffing or overstaffing issues, you can have people work Overtime (OT) or take Voluntary Time Off (VTO) to compensate for the staffing misalignment. You can also cancel specific activities in the schedule.

### Before you begin

[Reforecast data](#), page 249

### Workflow

- 1 [Define OT extensions and VTO events](#), page 251

To extend the work time of an employee, define Overtime (OT) extensions. To reduce the work time of an employee, define Voluntary Time Off (VTO) events.

**2** [Define work patterns with OT and VTO options](#), page 252

After defining OT extensions and VTO events, define work patterns with these options.

**3** [Assign work patterns with OT and VTO options to employees](#), page 252

After defining work patterns with OT and VTO options, assign work patterns with these options to employees.

**4** Optional: [Set preferences for OT and VTO for each employee](#), page 253

You can set employee preferences for assigning OT and VTO options. For example, maybe an employee prefers to work overtime after their regular shift, but not before. Maybe another employee prefers to have VTO after their shift, but not before.

**5** [Generate a schedule with OT and VTO scheduling options](#), page 254

Once you set up OT and VTO scheduling options, you can generate a schedule that assigns OT and VTO to employees as needed.

#### Related information

Managing overstaffing and understaffing (*Workforce Management Administration Guide*)

## Define OT extensions and VTO events

To extend the work time of an employee, define Overtime (OT) extensions. To reduce the work time of an employee, define Voluntary Time Off (VTO) events.

#### Procedure

**1** Create a VTO event:

- a. Go to **Work Administration**. Under **Work Rules**, select **VTO Events**.
- b. Select **Create**.
- c. Complete the fields on the VTO Events screen and select **Save**.

**2** Create an OT extension:

- a. Go to **OT Extensions**.
- b. Select **Create**.
- c. Complete the fields on the OT Extensions screen and select **Save**.

#### What to do next

[Define work patterns with OT and VTO options](#), page 252

#### Related information

VTO event details and OT extension details (*Workforce Management Administration Guide*)

## Define work patterns with OT and VTO options

Link the OT extensions and VTO events to work patterns.

### Before you begin

[Define OT extensions and VTO events](#), page 251

### Procedure

- 1 Go to **Work Patterns**.
- 2 Select **Create**.
- 3 To add a VTO event:
  - Under **VTO Events**, select **Add**.
  - Select a VTO event you created and select **Add Selected VTO Events**.
- 4 To add an OT extension:
  - Under **OT Extensions**, select **Add**.
  - Select an OT extension you created and select **Add Selected OT Extensions**.
- 5 To save the work pattern, select **Save**.

### What to do next

[Assign work patterns with OT and VTO options to employees](#), page 252

### Related information

Create a work pattern (*Workforce Management Administration Guide*)

## Assign work patterns with OT and VTO options to employees

After defining work patterns with OT and VTO options, assign the work patterns to specific employees.

You also need to set limits to OT and VTO for each employee. These limits allow the manager to specify the minimum and maximum number of hours of OT and VTO for an employee for each day and week.

### Before you begin

[Define work patterns with OT and VTO options](#), page 252

### Procedure

- 1 Go to **User Management**. Under **Employees**, select **Work Rules**.
- 2 From the left pane, select the employees to whom you want to link the work pattern.
- 3 Under **Work Patterns**, select **Add**.
- 4 Select the work pattern you created and select **Add Selected Work Patterns**.
- 5 Specify the daily and weekly maximum amount of overtime and voluntary time off for each employee by setting the following parameters:
  - **Maximum OT Per Day**
  - **Maximum VTO Per Day**
  - **Maximum OT Per week**

- **Maximum VTO Per Week**

### What to do next

[Set preferences for OT and VTO for each employee](#), page 253

### Related information

Work patterns history (*Workforce Management Administration Guide*)

## Set preferences for OT and VTO for each employee

Optionally, you can set employee preferences for assigning OT and VTO options. For example, an employee prefers to work overtime before their regular shift, but not after it.

Set the preferences for specific employees, and the scheduling engine sets priorities on the preferences when generating the schedule.

### OT and VTO assigned to employees based on preferences and rank (seniority)

When preferences are used, overtime and voluntary time off are assigned to employees based on their preferences and their rank (or seniority), using the following hierarchy:

- 1 OT and VTO are first assigned to employees who prefer them and have a high rank.
- 2 OT and VTO are assigned to employees who prefer them and have a lower rank.
- 3 OT and VTO are then assigned to employees who have indicated no preference toward either.
- 4 If OT and VTO are still needed, they are assigned to employees who do not prefer them and have a lower rank.
- 5 If OT and VTO are still needed, they are assigned to employees who do not prefer them and have a higher rank.

Employees who do not prefer them can still be assigned them (although it is less likely for high-ranked employees).



To ensure that *no* overtime is assigned to employees who do *not* prefer it, go to **User Management, Employees, Work Rules**. Assign these employees **0** weekly and daily maximum OT and VTO hours.

Alternatively, filter the employee list by the employees who prefer overtime. The system then generates the schedule for those employees *only*.

### Before you begin

[Assign work patterns with OT and VTO options to employees](#), page 252

### Procedure

- 1 Go to **User Management**. Under **Employees**, select **Schedule Preferences**.
- 2 From the left pane, select one or more employees for which you want to set preferences.
- 3 For **Over Time and Voluntary Time Off Preference**, select **No Preference**, **Prefer**, or **Do not prefer** for the following:
  - **Over Time Before Shift**
  - **Over Time After Shift**

- **Voluntary Time Off at Shift Start**
- **Voluntary Time Off at Shift End**

4 Select **Save**.

#### What to do next

[Generate a schedule with OT and VTO scheduling options](#), page 254

#### Related information

Define employee preferences (*Workforce Management Administration Guide*)

## Generate a schedule with OT and VTO scheduling options

Generate a schedule using the OT extensions and VTO events you created to accommodate your revised active forecast.

#### Before you begin

[Set preferences for OT and VTO for each employee](#), page 253

#### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left pane filters, select the relevant campaign and scheduling period.
- 3 From **Home**, select **Generate Schedule**.
- 4 On the **Scheduling** tab under **Assignments**, select **OT extensions** and **VTO events**, and the relevant parameters for each.
- 5 Select **Generate**.

The system generates the schedule based on the OT and VTO parameters you specified.



You can also manually add OT extensions or VTO events to a schedule after it is generated:

- For *OT extensions*, select to edit the shift assignment and add an OT extension in the **Extension before** and **Extension after** sections.
- For *VTO events*, select the shift assignment, select **Make Absent**, and select **Voluntary Time Off**. A graphical marker (by default a black bar) overlays the shift assignment to indicate the VTO event.

#### Related topics

[Generate the schedule automatically](#), page 87

[Generate Schedule settings](#), page 89

[Shift assignment settings](#), page 149

[Make an employee absent for a shift](#), page 166

# Work queue hopping

Work queue hopping is when employees are scheduled to work on *different* work queues at *different* times, rather than several work queues *at the same time*. WFM has a separate optional license for its queue hopping feature.

## Example: Work queue hopping

- A group of employees have **Sales** as their *primary* skill, and handle calls from the **Sales** work queue.
- The same group of employees has **Customer Service** as their *secondary* skill, and handle calls from the **Customer Service** work queue.
- Employees find it difficult to take the Customer Service and Sales calls during the same time interval because the Customer Service call type is complex.
- Work queue hopping is utilized to schedule Sales time and Customer Service time as *separate blocks of time* within the employee schedules.

## Why use queue hopping?

- **Capacity tracking**

Some centers and outsourcers need to track the exact capacity they have for a specific queue at a specific time. This tracking prevents worrying about the capacity being split up among numerous skills.

- **Context-switching difficulties**

Employees find it difficult to switch between certain complex tasks, so solid blocks of scheduled time are preferred.

- **Technological limitations**

It is not feasible to route from any skill due to the ACD or dialer, or the use of multiple ACDs and dialers.

- **Software or workstation limitations**

As a result of mergers and acquisitions, employees must use a different application and computer to work on a workload they are skilled to do.

- **Emergency response team approach**

Some centers move lower skilled employees to take a different set of calls during emergency situations, such as an exceptionally high volume on one queue.

## Related topics

[Workflow: Generate a schedule using queue hopping](#), page 255

# Workflow: Generate a schedule using queue hopping

To generate a schedule that uses queue hopping, there are specific parameters and components used to facilitate employees working on different work queues at different times.

## Types of work queue hopping environments

Typically, work queue hopping environments fall into one of these two categories:

- Employees have more than one ACD ID, and each ACD ID represents a different set of skills
- Employees who only have one ACD ID, but switch between skills

## Workflow

1 [Set up a subordinate data source](#), page 256

Use subordinate (child) data sources for employees who work on different work queues at different times of the day.

2 [Create and assign skills for queue hopping](#), page 258

Create skills and link them to employees, as you would for any campaign.

3 [Create skill-dedicated activities for queue hopping](#), page 259

Create skill-dedicated activities to account for the blocks of time that employees are spending on the secondary work queue.

4 [Create flexible shift events based on queue hopping activity](#), page 260

Create a flexible shift event based on the queue hopping activity. Then, link the shift event to a shift.

5 [Link shifts to work patterns and work patterns to employees](#), page 261

Link the shifts that have the flexible shift events to work patterns. Then, assign the work patterns to employees.

6 [Define campaigns and scheduling periods for queue hopping](#), page 262

Define a skill-based scheduling period. Then, link the primary work queue and all secondary work queues to the scheduling period.

7 [Create a forecast and define service goals for queue hopping](#), page 263

Create a forecast and service goals for all work queues defined in the campaign and linked to the scheduling period.

8 [Generate and refine a schedule using queue hopping](#), page 264

Generate a schedule. To suit your queue hopping requirements, you can manually edit the attributes of shift events, or create new non-working or working shift events.

## Related topics

[Work queue hopping](#), page 255

[Subordinate data sources](#), page 257

## Set up a subordinate data source

Use subordinate (child) data sources for employees who work on different work queues at different times of the day.

### Procedure

1 Create a parent data source:

- Depending on your requirements, select **Integration Management** or **Recording Management**.
- From **Data Sources**, select **Settings**.
- Select **Create Data Source**.

- d. To create the **Phone** or **Collection** data source you want to serve as the parent, complete the fields.
  - e. In the **Name** field, enter a name for the data source.
  - f. From the **Data Source Parent** drop-down field, verify that **No Parent** is selected.
  - g. Select **Save**.
- 2** Create a subordinate (or child) data source:
- a. Select **Create Data Source**.
  - b. To create the **Phone** or **Collection** data source you want to serve as the subordinate or child data source, complete the fields.
  - c. In the **Name** field, enter a name for the data source.
  - d. From the **Data Source Parent** drop-down field, select the parent data source you created in step 1.
  - e. Select **Save**.
- In the left pane, the subordinate or child data source is nested beneath the parent data source.
- 3** Link the subordinate data source to employees:
- a. Go to **Integration Management** or **Recording Management**.
  - b. From **Data Sources**, select **Employees**.
  - c. Select the subordinate data source to which you want to map employees.
  - d. Select **Add Employee Mapping**, and select the employees you want.
  - e. Select **Add**.
- The selected employees are now mapped to the data source.
- 4** Assign an ACD/processing system ID to each employee who is participating in work queue hopping for each subordinate data source.
- For example, Valerie Jones handles calls from the **Sales** queue (linked to the **Sales** activity) and the **Customer Service** queue (linked to the **Customer Service** activity). When Valerie works on the **Sales** work queue, Valerie logs in with the ACD logon, **ACD1\_Sales**. When Valerie works on the **Customer Service** work queue, Valerie logs in with the ACD logon, **ACD1\_CustomerService**.

### What to do next

[Create and assign skills for queue hopping](#), page 258

### Related information

Creating a parent-child relationship between data sources (*Workforce Optimization System Administration Guide*)

Mapping employees to data sources (*Workforce Optimization System Administration Guide*)

## Subordinate data sources

Subordinate data sources are relevant for environments where employees have more than one ACD ID, and each ACD ID represents a different set of skills.

These data sources are *not* relevant for environments where employees only have one ACD ID, but switch between skills. For these sites, employees are reskilled for small blocks of time or even for a few days.

Supervisors log into an ACD interface, and manually turn on and off employee skills to control the calls that are routed to employees.

### **Subordinate data sources in Contact Center and Back-Office environments**

For *contact center* environments, subordinate data sources accommodate employees who have multiple ACD log on IDs for each of their queue hopping activities.

For *back-office* environments, subordinate data sources accommodate employees who have multiple processing system ID logins.

### **Subordinate data sources have own activity mappings**

When you assign a data source to an employee, you can specify which subordinate data source is being assigned. These subordinate data sources have their own activity mappings, which act as overrides to the primary activity mapping.

Adapters and interfaces for *Streaming Time Collection* and *Historical Time Collection* use the ACD logon ID to determine which subordinate data source to use. They also figure out the mappings for the activity to be used for the time entry.

### **Impact on Scorecards**

If you use a subordinate data source, Scorecards only pulls data from the primary ACD ID.

### **Related topics**

[Set up a subordinate data source](#), page 256

## Create and assign skills for queue hopping

Create skills and link them to employees, as you would for any campaign.

### **Before you begin**

[Set up a subordinate data source](#), page 256

### **Procedure**

- 1 Go to **Organization Management**. Under **Employee Attributes**, select **Skills**.
- 2 Select **Create Skill**.
- 3 Complete the fields on the **Skill** screen, and select **Save**.
- 4 Go to **User Management**. Under **Employees**, select **Skills**.
- 5 From the left pane, select one or more employees for which you want to assign skills.
- 6 To add a skill for the employees, under **Assigned**, select **Add**.
- 7 Select the skills you want to assign to one or more employees, and select **Add Selected Skills**.
- 8 On the Skills Assignment screen, select **Save**.

### **What to do next**

[Create skill-dedicated activities for queue hopping](#), page 259

### **Related information**

Workflow: Set up skills (*Workforce Management Administration Guide*)

# Create skill-dedicated activities for queue hopping

Create skill-dedicated activities to account for the blocks of time that employees will be spending on the secondary work queue.

For example, if your employee skills including French, English, Sales and Customer Service, you could create the following four skill-combination activities:

- French-Sales
- English-Sales
- French-Customer Service
- English-Customer Service

**!** Make sure that you do not have too many combinations of skills in use for work queue hopping. For example, all employees in a contact center have five skills (A, B, C, D, and E). To cover all possibilities (such as A-B, A-C, A-D, A-E, B-C, B-D, B-E), create the relevant activities. Before implementing a skill, contact *Verint Professional Services*.

## Before you begin

[Create and assign skills for queue hopping](#), page 258

## Procedure

- 1 Go to **Work Administration**. Under **Activities**, select **Activities**.
- 2 From the left pane, select the organization for which you want to create a new activity.
- 3 Select **Create Activity**.
- 4 In the **Media** field, link the activity to one or more media from the **Available Media** list. The different types of media are used as a filter for the types of queues that can be linked to the activity.
- 5 On the **Activity Details** screen, select one of the following:
  - To define a *work-related* activity, select **Use in Shifts (Primary Activity)**. If you select this field, the system automatically selects **Use in Shift Events**.
  - To define a *break-related* activity *only*, select **Use in Shift Events**.
- 6 Select the **Work Queue Hopping** field.
- 7 From the **Work Queues** field that is now available, select the queues to be used for queue hopping from the **Available Work Queues** list.
- 8 Select **Save**.

## What to do next

[Create flexible shift events based on queue hopping activity](#), page 260

## Related information

Create an activity and activity details (*Workforce Management Administration Guide*)

# Create flexible shift events based on queue hopping activity

Create a flexible shift event based on the queue hopping activity. Then, link the shift event to a shift.

Flexible shift events allow the scheduling engine to determine the amount of time an employee spends on specific work queue hopping activities. The scheduling engine calculates the optimum number of blocks of time for each of the activities of the shift event. It then places them in the employee schedules.

## Before you begin

[Create skill-dedicated activities for queue hopping](#), page 259

## Procedure

- 1 Go to **Work Administration**. Under **Work Rules**, select **Shift Events**.
- 2 From the left pane, select the organization for which you want to create a shift event, and select **Create**.
- 3 In the **Activity** field, select the queue hopping activity for the shift event.
- 4 Select **Paid**.  
Once you select this field, the **Flexible** field is available.
- 5 Select **Flexible**.  
The schedule engine can now include a specific number of blocks of the shift event within any shift to which the shift event is linked. This flexibility is useful for queue hopping activities.
- 6 In the **Minimum Count** field, define the *minimum* number of times the shift event can occur during a shift.
- 7 In the **Maximum Count** field, define the *maximum* number of times the shift even can occur during a shift.  
The **Minimum** and **Maximum Count** fields guide the scheduling engine toward generating an optimal schedule. The blocks of the shift event can either be next to each other, or can be scheduled as separate blocks of time.
- 8 To link more activities to the shift event:
  - a. From **Additional Activities**, select **Add**.
  - b. From **Activities**, select the other activities to which you want to associate the shift event, and select **Add Selected Activities**.
- 9 Select **Save**.
- 10 Link the shift event to a shift:
  - a. Go to **Work Administration**. Under **Work Rules**, select **Shifts**.
  - b. Select the shift to which you want to link the shift event, and select **Edit**.
  - c. Expand **Shift Events**.
  - d. Select **Add**.
  - e. From **Available Shift Events**, select the flexible shift event.
  - f. Select **Add Selected Shift Events**.  
The shift event is added to the shift.
  - g. Select **Save**.

**What to do next**

[Link shifts to work patterns and work patterns to employees](#), page 261

**Related information**

Create flexible shift events, create a shift event, and create a shift (*Workforce Management Administration Guide*)

## Link shifts to work patterns and work patterns to employees

Link the shifts that have the flexible shift events to work patterns. Then, assign the work patterns to employees.

**Before you begin**

[Create flexible shift events based on queue hopping activity](#), page 260

**Procedure**

- 1 Go to **Work Administration**. Under **Work Rules**, select **Work Patterns**.
- 2 From the left pane, select the organization for which you want to create a work pattern, and select **Create**.
- 3 Add the shift you created to the work pattern:
  - a. Under **Work Days / Consistency > Shift**, select **Add**.
  - b. From the **Shift Details** screen, select the shift and select **Add Selected Shifts**.  
The selected shifts are added to the work pattern.
  - c. Select **Save**.
- 4 Go to **User Management**. Under **Employees**, select **Work Rules**.
- 5 From the left pane, filter the employee list as required, or search for the employees to whom you want to assign the work pattern.
- 6 To add the work pattern to the work rules assignment:
  - a. Expand **Work Patterns** and select **Add**.
  - b. From the **Work Pattern** screen, select the work patterns you want to add to the work rules assignment and select **Add Selected Work Patterns**.  
The selected work patterns are added to the work rule assignment.
  - c. Select **Save**.

**What to do next**

[Define campaigns and scheduling periods for queue hopping](#), page 262

**Related information**

Create a work pattern and assign work rules to employees (*Workforce Management Administration Guide*)

# Define campaigns and scheduling periods for queue hopping

Define a skill-based scheduling period. Then, link the primary work queue and all secondary work queues to the scheduling period.

## Before you begin

[Link shifts to work patterns and work patterns to employees](#), page 261

## Procedure

- 1 Create a campaign:
  - a. Go to **Forecasting and Scheduling**. From **Campaigns**, select **Settings**.
  - b. Select **Create Campaign**.
  - c. Complete the fields for the campaign.
  - d. To link *all* employees from all linked organizations to the campaign, select **Use All Employees in Linked Organizations**.  
To link *specific* employees (to whom you have linked the skills), you can add those specific employees in [step 3](#).  
e. Select **Save**.
- 2 Create a skill-based scheduling period:
  - a. Select **Create Scheduling Period**.
  - b. Complete the fields and select **Save**.
  - c. Under **General Settings**, select **Skill Based**.
  - d. Select **Save**.
- 3 To link *specific* employees (with the linked skills) from the organizations defined for the scheduling period:
  - a. Go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**.
  - b. From **Campaign**, select the campaign to which you want to link employees.
  - c. From **Period**, select the scheduling period in the campaign to which you want to link employees.
  - d. Select **Add Employee to SP**.  
The employees displayed are associated with the organizations defined in the **Organization** field in the **Settings** workspace under **Campaigns**. You can *only* select employees associated with these organizations.  
e. Select the employees you want and select **Add**. To select all displayed employees, select **Select All**.
- 4 Link the primary work queue and all secondary work queues to the scheduling period:
  - a. Go to **Forecasting and Scheduling**. From **Campaigns**, select **Queues**.
  - b. Under **Campaign Name**, expand the campaign and select the scheduling period to which you want to link work queues.
  - c. To add all primary and secondary queues to the scheduling period, select **Add Queue to Scheduling Period**.
  - d. Select the queues you want and select **Add Selected Queues**.

- 5 Determine the skill required to answer each type of interaction, and associate that skill with the incoming queues:
  - a. On the **Campaign Queues** screen, enter a skill in the **Skill** field for each queue. Associate each work queue with a skill so that the scheduling engine knows which employees can service the workload.

**!** Make sure that you selected the **Skill Based** option for the scheduling period ([step 2 step c](#)). You can only define or edit the skill for the selected queue if this option is enabled.

- b. Select **Save**.

#### What to do next

[Create a forecast and define service goals for queue hopping](#), page 263

#### Related topics

[Workflow: Define a campaign and scheduling period](#), page 22

#### Related information

Workflow: Set up skills (*Workforce Management Administration Guide*)

## Create a forecast and define service goals for queue hopping

Create a forecast and service goals for all work queues defined in the campaign and linked to the scheduling period.

#### Before you begin

[Define campaigns and scheduling periods for queue hopping](#), page 262

#### Procedure

- 1 Create a forecast for all work queues defined in the campaign:
  - a. Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
  - b. Create a forecast.
- 2 Create service goals for all work queues linked to the scheduling period:
  - a. Go to **Forecasting and Scheduling**. Under **Goals**, select **Service Goals**.
  - b. Enter service goals for the campaign.

#### What to do next

[Generate and refine a schedule using queue hopping](#), page 264

#### Related topics

[Workflow: Set service goals](#)  
[Forecasts](#), page 45

# Generate and refine a schedule using queue hopping

Generate a schedule. To further suit your queue hopping requirements, you can manually edit the attributes of shift events, or create new break-related or work-related shift events.

For example, you can assign a work queue hopping shift event of two hours to an employee. Then, create a break within that work queue hopping activity.

## Before you begin

[Create a forecast and define service goals for queue hopping](#), page 263

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left pane filters, select the campaign and scheduling period you created to support queue hopping scheduling components.
- 3 From **Home**, select **Generate Schedule**.
- 4 Set all parameters, and select **Generate**.  
The system generates the schedule with the queue hopping scheduling components.
- 5 To edit the attributes of shift events manually:
  - a. Double-click the shift event you want to edit.
  - b. On the **Shift Event** screen, update the relevant fields and select **Save**.



Alternatively, you can edit the shift details from the details pane. From the calendar, select the shift event. From the details pane, edit the main shift event details and select **Save**. To access the **Shift Event** screen, select the **Additional Details** icon.

- 6 To create a shift event manually:
  - a. Select the shift for which you want to create a shift event.
  - b. From the details pane, select **Add**, and select **Shift event**.
  - c. On the **Shift Event** screen, complete the fields and select **Save**.

## Related topics

[Generate the schedule automatically](#), page 87

[Create a shift event](#), page 154

[Edit a shift event](#), page 156

# Workforce planning

Workforce planning focuses on determining the number and type of employees needed to meet your service goals and skill requirements. These requirements can be applied to *staffing profiles*, which are a type of schedule template or profile defined for a certain type of employee with specific skills and a work pattern.

The scheduling process uses real schedules and forecasts to determine the number of employees required to meet the goals of any given scheduling period. The number of required employees can be the total required to staff a contact center or a campaign from scratch. It can also be the number of new employees an organization *needs to add* to its current staffing.

To fill the gap between actual employees and required employees, create staffing profiles. You can then add the staffing profiles to a scheduling period and include them when you generate the schedule. Upon schedule generation, the system converts the staffing profiles to *phantom* schedules. You can then assign a phantom schedule to actual employees, or convert an employee schedule to a phantom schedule.

## Staffing profiles

You can use staffing profiles to evaluate alternative staffing plans and project future staffing needs.

Use staffing profiles to:

- **Provide a basic headcount plan - incremental to current staff**

You can do a *blue sky* type analysis of how many people are needed for different forecasts and different service goals. The scheduling engine can schedule both actual employees and staffing profiles together.

- **Provide fixed schedules for current staff**

Some companies operate with employees on fixed schedules, because there are specific times that the employees are unavailable to work.

In determining how many extra employees are needed for the future, current employees need to be considered when planning for future staffing needs. To figure this out, add phantom schedules to your *existing* employee schedules. The additional phantoms enable you to determine the new set of schedules for which employees can be hired, leaving existing employee schedules intact.

- **Determine outsourcing needs**

Many companies consider the addition of an outsourcer to help meet peak volumes. By scheduling its current employees along with staffing profiles, managers can determine how many employees outsourcers can hire and at which times.

Using staffing profiles for outsourcers is useful to help offload needs during drastic seasonal changes. In addition, it helps outsourcers determine who they need to staff a future campaign. It also helps them predict staffing costs so that a more accurate bid can be submitted to customers.

- **Create schedules for shift bidding**

Staffing profiles can be used to create schedules that are placed in auctions. As employees bid and receive shifts, real employees replace the profiles.

## Staffing profiles become phantom schedules

When you select to include staffing profiles when you generate the schedule (by the **Employees to schedule** parameter), the system converts the staffing profiles to phantom schedules. You can then determine which phantom schedules to include in the schedule, assign them to employees, or convert employee schedules to phantoms.

## Related topics

[Workflow: Create and use staffing profiles](#), page 266

[Phantom scheduling](#), page 193

# Workflow: Create and use staffing profiles

Create and schedule staffing profiles, and then view the statistics generated as a result.

## Workflow

- 1 [Create a staffing profile](#), page 266

To evaluate alternative staffing plans and project future staffing needs, create a staffing profile.

- 2 [Add a staffing profile to the scheduling period](#), page 267

After creating a staffing profile, assign it to a scheduling period. You can then use it for that scheduling period for all scheduled employees. Define the acceptable percentage your staffing profiles can deviate from the service goals for the scheduling period.

- 3 [Schedule a staffing profile and create phantom schedules](#), page 268

Generate a schedule that includes your staffing profile. You can choose to add staffing profiles only, or employees and staffing profiles. The process is identical to creating a schedule for employees. The profiles are used by the scheduling engine to create and add *phantom* schedules to the calendar.

- 4 [View statistics using staffing profiles](#), page 269

To view the difference between schedules with and without staffing profiles, use the statistics ribbons and graphs on the calendar. Use the results to determine the FTEs, cost, and employee staffing requirements.

## Related topics

[Workforce planning](#), page 265

[Phantom scheduling](#), page 193

# Create a staffing profile

To evaluate alternative staffing plans and project future staffing needs, create a staffing profile.

You can create a staffing profile for each type of employee, which describes the type of employee needed, their work patterns and skills.

Only one profile is needed for each type of employee. The scheduling engine automatically creates the correct number of each type of employee, according to your scheduling requirements. Define the percentage of each type of staffing profile for a specified scheduling period. (For example, you can define a 30% full-time profile and a 70% part-time profile.)

## Procedure

- 1 Go to **User Management**. Under **Staffing Profile**, select **Staffing Profile**.
- 2 From the left pane, select the organization to which you want to associate the staffing profile.
- 3 Select **Create**.
- 4 On the Staffing Profiles screen, complete the fields.

- 5 To add assignment rules to the staffing profile:
  - a. Under **Assignment Rules**, select **Add**.
  - b. From the **Assignment Rules** screen, select the assignment rules you want to add to the staffing profile and select **Add Selected Assignment Rules**.  
The selected assignment rules are added to the staffing profile.
- 6 To add skills to the staffing profile:
  - a. Under **Skills**, select **Add**.
  - b. From the **Skills** screen, select the skills you want to add to the staffing profile and select **Add Selected Skills**.  
The selected skills are added to the staffing profile.

### What to do next

[Add a staffing profile to the scheduling period, page 267](#)

### Related information

Staffing profile details, create an assignment rule, create a skill (*Workforce Management Administration Guide*)

## Add a staffing profile to the scheduling period

After creating a staffing profile, assign it to a scheduling period. You can then use it for that scheduling period for all scheduled employees. Define the acceptable percentage your staffing profiles can deviate from the service goals for the scheduling period.

### Before you begin

[Create a staffing profile, page 266](#)

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Staffing Profiles**, select **Staffing Profiles**.
- 2 From the left pane, expand the campaign and select the scheduling period to which you want to add staffing profiles.
- 3 Select **Add to SP**.
- 4 On the **Staffing Profiles** screen, select the staffing profiles you want to add and select **Save**.  
The profiles are added accordingly for the selected scheduling period. The main details for the staffing profiles were defined when the staffing profiles were created in the **User Management** module, under **Staffing Profile**.
- 5 Optional. If you do *not* see the profile that you are looking for:
  - Verify the organization with the profile you want to use is linked to the campaign:
    - Go to **Forecasting and Scheduling**.
    - Under **Campaigns**, select **Settings**.
    - Under **General Settings**, select the relevant organization in the **Organization** field.
  - Verify that the profile is assigned to the organization linked to the campaign:
    - Go to **User Management**.

- Under **Staffing Profile**, select **Staffing Profile**.
  - Verify that the relevant organization appears under the **Organization** field. If not, select to edit and change the value in the **Organization** field accordingly.
- 6** Determine how to handle the *ratio of employee types* for the staffing profile:
- To let the scheduling engine determine the optimal ratio of employee types, leave the default settings:
    - **Min Ratio** fields = 0%
    - **Max Ratio** fields = 100%
  - To set an exact allocation for employee types, enter a specific value in the **Min Ratio** and **Max Ratio** fields.  
For example, you want an allocation of exactly 60 percent of full-time employees. Enter **60** for both the **Min Ratio** and **Max Ratio** fields for the full-time profile. To enter an allocation of exactly 40 percent of part-time employees, type **40** for the **Min Ratio** and **Max Ratio** fields for the part-time profile.
- 7** If you are using team-based scheduling, set the *Team Size* for the staffing profile. If you are not using team based scheduling, leave *Team Size* as its default value of 1.
- 8** Determine how to handle the *number of employees* for the staffing profile:
- To let the scheduling engine determine the optimal number of employees, leave the default settings:
    - **Min No** fields = **0**
    - **Max No** fields = **30000**
  - To set an exact number of employees for the profile, enter that number in both the **Min No** and **Max No** fields.
  - If you have set a value for *Team Size*, *Min No* and *Max No* must be multiples of *Team Size*, or 0. For example, if you set *Team Size* to 5, valid values for *Min No* and *Max No* would be 5 and 100.
- 9** To save any values you edited, select **Save**.

### What to do next

[Schedule a staffing profile and create phantom schedules](#), page 268

### Related topics

[Staffing profile fields](#), page 41

## Schedule a staffing profile and create phantom schedules

Generate a schedule that includes your staffing profile. You can choose to add staffing profiles only, or employees and staffing profiles. The process is identical to creating a schedule for employees. The profiles are used by the scheduling engine to create and add *phantom* schedules to the calendar.

### Before you begin

[Add a staffing profile to the scheduling period](#), page 267

### Procedure

- 1** Go to **Forecasting and Scheduling**. From **Calendar**, select **Calendar**.

- 2 From the left pane filters, select the campaign and scheduling period to which you linked staffing profiles.
- 3 From **Home**, select **Generate Schedule**.  
By default, the **Scheduling** tab is displayed.
- 4 Select the **Preferences** tab.
- 5 Under **Employees to schedule**, select one of the following options:
  - **Staffing profiles only**: Only staffing profiles are scheduled. The scheduling engine implements goal seeking to add enough phantom employees to meet the required skills and the service levels that are set.
  - **Employees and staffing profiles**: Employees are scheduled. Phantom employees are created and scheduled to meet the required skills and service levels.



If the current employee schedules are *locked*, their portion of the schedule is unchanged and phantom employees are added to the existing schedule. If the current employee schedules are *unlocked*, they are scheduled first, and then phantom employees are added to the schedule.

- 6 Complete the remaining fields on the **Generate Schedule** screen, and select **Generate**.

When the schedule is generated, the staffing profiles become phantom schedules, and are displayed with ghost icons below the employees. They are named after their staffing profile (for example: **Full-Time, 1** and **Full-Time, 2**), with the work rule as the first name and the number as the last name.

- 7 To change the display of which phantom schedules appear on the schedule:
  - a. From the left pane, select **Employees**.
  - b. From the **Phantoms** menu, click the arrow to expand the list.
  - c. Do one of the following:
    - To add *specific* phantoms, select the phantoms you want.
    - To add *all* phantoms, select the check box next to **Phantoms**.
  - d. Select **Apply**.

The phantom schedules you selected now appear on the calendar.

## What to do next

[View statistics using staffing profiles](#), page 269

## Related topics

[Generate the schedule automatically](#), page 87

[Generate Schedule settings](#), page 89

[Phantom scheduling](#), page 193

## View statistics using staffing profiles

Calculate staffing statistics using phantom schedules (created from staffing profiles). This feature allows you to evaluate the impact of staffing profiles (and phantoms) on the current schedule.

### Before you begin

[Schedule a staffing profile and create phantom schedules](#), page 268

**Procedure**

- 1 From the left pane **Employees** filter under **Phantoms**, select the phantom schedules you want to include on the calendar, and select **Apply**.
- 2 From **Tools**, select **Resources Information**.
- 3 Select the **General staffing** tab.
- 4 View the statistics displayed under **Staffing profiles**.

**Related topics**

[Calculate and view resources information](#), page 135

[Phantom scheduling](#), page 193

# Outbound scheduling

A growing number of contact centers are involved in *outbound scheduling*. Outbound scheduling involves making calls using a predictive dialer, or manually dialing a list of customers or prospects.

To optimize outbound calling, you must have employees available to make calls during the best times to contact people.

Use Workforce Management to:

- Optimize both blended inbound-outbound and outbound-only contact center operations
- Generate outbound schedules
- Use Queue Analytics to monitor and manage data associated with outbound scheduling
- Monitor employee adherence in an outbound environment



To include the calling statistics associated with outbound scheduling, you need the optional **Outbound Media** license.

## Related topics

[Workflow: Generate a schedule using outbound scheduling](#), page 271

## Workflow: Generate a schedule using outbound scheduling

To support outbound scheduling, set up specific work queues, skills, and activities. Create a skill-based campaign and link both inbound and outbound work queues to the scheduling period. Forecast and set service goals for each outbound work queue, and generate a schedule for the outbound work queues.

### Outbound scheduling workflow

1 [Set up outbound work queues](#), page 272

Set up work queues with the media type set to **Phone Outbound**.

2 [Set up outbound skills](#), page 272

Set up skills with the media type set to **Phone Outbound**. Then, assign the outbound skills to the employees who are going to be scheduled for outbound calling.

3 [Set up work rules based on outbound activity](#), page 273

Create shifts or shift events based on the default activity, **Outbound**. Create work patterns that include these shifts or shift events. Then, link employees to the work patterns to whom you linked the outbound skills.

4 [Create a campaign and scheduling period for outbound scheduling](#), page 274

Link outbound work queues and inbound work queues to the same scheduling period. Campaigns to which outbound work queues are linked must be skill-based campaigns.

5 [Forecast each outbound work queue](#), page 275

To plan the list of phone numbers the dialer calls, generate an outbound forecast. You can set the specific time and connect rate.

6 [Set service goals for each outbound work queue](#), page 276

Enter the maximum dials per hour and the percentage of the dialer list to which you or a right party connects before the list ends. Alternatively, set a detailed dialing plan for each work queue, with different dial rates during different times of the day.

**7** [View FTE requirements for outbound scheduling](#), page 277

View FTE requirements for outbound scheduling. FTE requirements show the number of dedicated employees that need to be scheduled on individual or combined work queues to meet service goals.

**8** [Generate a schedule with outbound work queues](#), page 278

The scheduling engine aims to meet service goals by scheduling as many employees as possible at peak Right Party Connect times without *exceeding* the service goal. The scheduling engine does *not* try to staff one work queue and media at the expense of other work queues and media.

**9** [View outbound media statistics](#), page 279

View statistics associated with outbound media.

### Related topics

[Outbound scheduling](#), page 271

## Set up outbound work queues

Set up work queues with the media type set to **Phone Outbound**.

### Procedure

- 1** Go to **Work Administration**. Under **Work Queues**, select **Settings**.
- 2** From the left pane, select the organization for which you want to create the queue.
- 3** From the lower right corner, select **Create work queue**.
- 4** On the **Work Queue Details** screen, complete the fields.
- 5** In the **Media** field, select **Phone Outbound**.
- 6** Select **Save**.

### What to do next

[Set up outbound skills](#), page 272

### Related information

Create a normal work queue (*Workforce Management Administration Guide*)

## Set up outbound skills

Set up skills with the media type set to **Phone Outbound**. Then, assign the outbound skills to the employees who are going to be scheduled for outbound calling.

### Before you begin

[Set up outbound work queues](#), page 272

### Procedure

- 1** Go to **Organization Management**. Under **Employee Attributes**, select **Skills**.

- 2 Select **Create Skill**.
- 3 Complete the fields on the **Skill** screen.
- 4 In the **Media Type** field, select **Phone Outbound**.
- 5 Select **Save**.
- 6 Go to **User Management**. Under **Employees**, select **Skills**.
- 7 From the left pane, select one or more employees for which you want to assign outbound skills.  
The Skills Assignment screen lists the current skills assigned to the selected employees.
- 8 To add the outbound skill for the employees, under **Assigned**, select **Add**.
- 9 Select the outbound skills and select **Add Selected Skills**.  
The system populates the skills on the **Skills Assignment** screen, under **Assigned**.
- 10 Select **Save**.

#### What to do next

[Set up work rules based on outbound activity](#), page 273

#### Related information

Create a skill and assign a skill to employees (*Workforce Management Administration Guide*)

## Set up work rules based on outbound activity

Create shifts or shift events based on the default activity, **Outbound**. Create work patterns that include these shifts or shift events. Then, link employees to the work patterns to whom you linked the outbound skills.



A shift *cannot* be based on the same activity as its linked shift event. Therefore, you *cannot* create shifts based on the **Outbound** activity, and then link those same shifts with a shift event based on the **Outbound** activity. You can create both shifts and shift events based on the **Outbound** activity, as long as they are linked to shifts or shift events based on a *different* activity.

#### Before you begin

[Set up outbound skills](#), page 272

#### Procedure

- 1 Create shifts or shift events based on the **Outbound** activity:
  - a. Go to **Work Administration**. Under **Work Rules**, select **Shifts** or **Shift Events**.
  - b. From the left pane, select an organization and select **Create**.
  - c. Link the **Outbound** activity to the work rule, and select **Save**.
- 2 Create a work pattern that includes either a shift based on the **Outbound** activity, or a shift linked to a shift event based on the **Outbound** activity:
  - a. Under **Work Rules**, select **Work Patterns**.
  - b. From the left pane, select the organization for which you want to create a work pattern, and select **Create**.
  - c. On the **Work Patterns** screen, complete the fields.

- d. Under **Work Days / Consistency > Shift**, select **Add**.
  - e. From the **Shift Details** screen, select the shift you want, and select **Add Selected Shifts**.
  - f. Select **Save**.
- 3** Link employees to the work pattern:
- a. Go to **User Management**. Under **Employees**, select **Work Rules**.
  - b. From the left pane, select the employees to whom you linked the outbound skills.
  - c. Expand **Work Patterns** and select **Add**.
  - d. From the **Work Pattern** screen, select the work pattern you created, and select **Add Selected Work Patterns**.
  - e. Select **Save**.

#### What to do next

[Create a campaign and scheduling period for outbound scheduling](#), page 274

#### Related information

Set up work rules (*Workforce Management Administration Guide*)

## Create a campaign and scheduling period for outbound scheduling

Link outbound work queues and inbound work queues to the same scheduling period. Campaigns to which outbound work queues are linked must be skill-based campaigns.

#### Before you begin

[Set up work rules based on outbound activity](#), page 273

#### Procedure

- 1** Create a campaign:
  - a. Go to **Forecasting and Scheduling**. From **Campaigns**, select **Settings**.
  - b. Select **Create Campaign**.
  - c. Complete the fields for the campaign, and select **Save**.
- 2** Create a skill-based scheduling period:
  - a. Select **Create Scheduling Period**.
  - b. Complete the fields on the first screen, and select **Save**.
  - c. Under **General Settings**, select **Skill Based**.
  - d. Do one of the following:
    - To link *all* employees from all linked organizations to the campaign, select **Use All Employees in Linked Organizations**, select **Save**, and go to [Step 4](#).
    - To link *specific* employees (to whom you have linked the skills), select **Save**, and go to [Step 3](#).
- 3** To link *specific* employees to the scheduling period:
  - a. Go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**.

- b. From **Campaign**, select the campaign to which you want to link employees.
  - c. From **Period**, select the scheduling period to which you want to link employees.
  - d. Select **Add Employee to SP**.  
The employees displayed are associated with the organizations defined in the **Organization** field in the **Settings** workspace under **Campaigns**. You can *only* select employees associated with these organizations.
  - e. Select the employees you want and select **Add**. To select all displayed employees, select **Select All**.
  - f. Select **Save**.
- 4** Assign both inbound and outbound queues to the same scheduling period:
- a. Go to **Forecasting and Scheduling**. From **Campaigns**, select **Queues**.
  - b. Under **Campaign Name**, expand the campaign and select the scheduling period to which you want to link the work queues.
  - c. To add a queue to the scheduling period, select **Add Queue to Scheduling Period**.
  - d. Select the queues you want and select **Add Selected Queues**.
  - e. Select **Save**.

### What to do next

[Forecast each outbound work queue](#), page 275

### Related topics

[Workflow: Define a campaign and scheduling period](#), page 22

## Forecast each outbound work queue

To plan the list of phone numbers the dialer calls, generate an outbound forecast. You can set the specific time and connect rate.

Forecasts are created for incoming lists based on the actual lists from the historical weeks that you add. Dialer lists are defined for each queue every scheduling period.

When you add a week of history to the forecast, you also add all historical lists that intersected that week by which the volume is multiplied. (The calculation is: weight of the historical week divided by the sum of the weights of *all* weeks.) You can manually edit the list forecast, and you can import and export lists.

### Before you begin

- [Create a campaign and scheduling period for outbound scheduling](#), page 274
- If the statistics **Right Party Connect Rate** and **Right Party Connect AHT** are available for your organization, make sure to make them part of the forecast. These statistics have significant effects on the schedule.

### Procedure

- 1** Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2** From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- 3** On the **View** tab, select **All** in the **Outbound Queue** field.
- 4** Expand the details pane on the right and enter values.

**5 Select Save.****Example:**

You can model:

- **Number of calls at a specified time:** A list of 500 numbers being dialed between 9am and 5pm.
- **Connect rate:** Number of calls that connect to a person.
- **Right party connect:** Number of calls that connect to the right person.

**What to do next**

[Set service goals for each outbound work queue](#), page 276

**Related topics**

[Generate a forecast for an outbound queue](#), page 52

[Outbound scheduling statistics](#), page 279

## Set service goals for each outbound work queue

Enter the maximum dials per hour and the percentage of the dialer list to which you or a right party connects before the list ends. Alternatively, set a detailed dialing plan for each work queue, with different dial rates during different times of the day.



Only use Right Party goals if you have Right Party forecasts.

**Before you begin**

[Forecast each outbound work queue](#), page 275

**Procedure**

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Goals & Requirements**.
- 2 Do the following:
  - a. From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queue**.
  - b. Select the **day/week/period** zoom level at the upper-right of the summary table.
- 3 Expand the details pane on the right, from the **Settings** tab select the **Service Goal Type** you want to set.
- 4 Enter values in the fields and select **Save** on the ribbon.

**What to do next**

[Generate a schedule with outbound work queues](#), page 278

**Related topics**

[Service goal tips for outbound queues](#), page 277

[Set service goals](#), page 64

## Service goal tips for outbound queues

When setting service goals for outbound queues, set the parameters according to the requirements of your organization and environment.

The following are tips related to setting service goals for outbound queues:

- Set service goals for each queue.
- For multiple work queues, the sum of the maximum dials for each work queue must *not* exceed the maximum number of dials the dialer can make.
- Set the **Maximum dials per hour** field to the maximum number of dials your dialer can make every hour.

You can set this field to represent a dialing plan for the queue. At peak connect intervals during the day, set this field to the maximum number of dials your dialer can make per hour. This setting gives the scheduling engine the most flexibility.

Alternately, you can set this value to **0** (zero), which halts calls on that list. For example, a certain time of the day is an undesirable time for making outbound calls. For that time interval, set the **Maximum dials per hour** field to **0**. The scheduling engine aims *not* to schedule any employees to work on the work queue during zero-dial intervals.

- If you want to abandon detailed dialing data that you have entered into the **Dials** table, select **Make Dials Constant**. The dialer makes the number of dials specified in **Maximum Dials per hour** for *all* time intervals (within the hours of operation for the campaign).

### Related topics

[Set service goals for each outbound work queue](#), page 276

## View FTE requirements for outbound scheduling

View FTE requirements, which show the number of dedicated employees that would need to be scheduled on individual or combined work queues to meet service goals.

FTE requirement calculations incorporate the following data:

- Forecasted **Connect Rate**
- **AHT**
- **Right Party Connect Rate** (if available)
- **Right Party Connect AHT** (if available)
- Forecasted lists
- Service goals
- Shrinkage



FTE requirements *cannot* be edited for outbound scheduling.

### Before you begin

[Set service goals for each outbound work queue](#), page 276

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Goals**, select **FTE Requirements**.

- 2 From the left pane, select the outbound campaign, scheduling period, and work queue.
- 3 Select **View**.
- 4 View the **FTE Hours** for the outbound queue.
- 5 Note the following:
  - For campaigns that involve outbound work queues, FTE hours are shown as non-zero *only for the start date of the list*. (These hours are sometimes referred to as the list arrival time.)
  - The hours shown at the list arrival time are the total workload for that list. For example, to meet the specified service goals, the scheduling engine calculates that you need 30 FTE hours. Therefore, 30 FTE hours are displayed at hour 0 of the scheduling period.

#### What to do next

[Generate a schedule with outbound work queues](#), page 278

#### Related topics

[FTE requirements](#)

## Generate a schedule with outbound work queues

The scheduling engine aims to meet service goals by scheduling as many employees as possible at peak Right Party Connect times without *exceeding* the service goal.

The scheduling engine does *not* try to staff one work queue and media at the expense of other work queues and media.

#### Before you begin

- [View FTE requirements for outbound scheduling](#), page 277
- If you want specific work queues to have higher staffing priorities than others, go to **User Management, Employees**, and **Skills** and update the **Priority** column accordingly.  
For example, you want to *emphasize* an *inbound* work queue and *de-emphasize* an *outbound* work queue. Set the **Priority** column to **1** for the inbound work queue. Set the **Priority** column to **2** for the outbound work queue. (Lower numbers indicate higher priority.)  
You can also set less aggressive service goals for lower priority work queues.

#### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left pane, select the outbound campaign, scheduling period, employees, and work queue.
- 3 From **Home**, select **Generate Schedule**.
- 4 Set all parameters, and select **Generate**.

The scheduling engine generates reasonable schedules for multiple outbound queues. The outbound service levels trade off with inbound service levels (instead of the outbound queues being strictly higher or lower priority than inbound queues).

#### What to do next

[View outbound media statistics](#), page 279

**Related topics**

[Generate the schedule automatically](#), page 87

**Related information**

Skills assignment details (*Workforce Management Administration Guide*)

## View outbound media statistics

View statistics associated with outbound media.

**Before you begin**

[Generate a schedule with outbound work queues](#), page 278

**Procedure**

- 1 From **Statistics**, select the following:
  - **Dials**
  - **Right party connects**
  - **Right party connects AHT**
- 2 From the **Statistics** area at the bottom of the screen, select the arrow for the name of a statistic to expand it and view the data.



You can also view these statistics in Queue Analytics. For monitoring the performance of outbound queues, you can generate Outbound Performance Reports from the **Reports** module (under **Requests & Results, Instances**).

**Related topics**

[Outbound scheduling statistics](#), page 279

**Related information**

Track queue performance (*Workforce Management Tracking Guide*)

Outbound Performance Reports (*Workforce Optimization Reports Guide*)

## Outbound scheduling statistics

In addition to the more traditional, in-bound calls, a growing number of call centers are involved in outbound calling. Outbound calling is when the organization makes calls using a predictive dialer, or manually dials a list of customers or prospects. Outbound calling is used for collections, pro-active customer service, and telemarketing.

### Outbound statistics: Right Party Connect Rate and Right Party Connect AHT

The **Right Party Connect Rate** and **Right Party Connect AHT** statistics can have significant effects on the schedule. These statistics are *not* available for all organizations. However, when they are, make them part of the forecast.

These statistics can represent different things in different organizations:

- In a *Collections Center*, they would represent the person from whom the center is trying to collect.
- In a *Sales Center*, they would represent a potential customer or a successful sale.

Daily and combined totals for Right Party Connect Rate are averaged. Daily and combined totals for Right Party Connect AHT are weighted and averaged for the rates.

This value is calculated differently in Queue Analytics, where rates are weighted on dials and AHT is weighted on connects. The reason is that these statistics are not yet available at this stage of the outbound scheduling process.

Statistic	Example	Range	Data Source (Module)	Description
Abandons	34 units	0–100,000	Calendar	Total count of Connects that occurred, but had to be dropped because no employee accepted the connect.
Backlog	52 units	0–100,000	Calendar	Total count of numbers entered in the dialer and still need to be dialed or redialed because the right party has not yet been connected.
Connect AHT	120 time units	0–999 minutes	Forecast	The average talk time of all connects in this interval.
Connect Rate	65% of dials	0–100%	Forecast	The percentage of dials that is equivalent to Connects or Dials when connected to someone.
Connects	74 dials	0–100,000	Forecast	Total count of outbound dials that were made in a specified interval that is connected to a person.
Dials	234 dials	0–100,000	Forecast	Total count of outbound dials that were made in a specified interval. This count includes Connects, Right Party Connects, and dials that did not connect to a person.

Statistic	Example	Range	Data Source (Module)	Description
FTEs	48 FTEs	0–100,000	Forecast	Full-Time Equivalents. When an employee works on multiple queues during an interval, it represents the time employees contributed to this particular queue.
Occupancy	84% of the time interval	0–100%	Forecast	Percentage of time that employees who were logged into this queue spent on the phone with connects in this interval.
Right Party Connect AHT	12 time units	0–100,000	Forecast	Average talk time of all Right Party Connects in this interval.
Right Party Connect Rate	62% of dials	0–100%	Forecast	Percentage of dials that connected to the intended party. Equivalent to Right Party Connects/Dials.
Right Party Connects	82 outbound dials	0–100,000	Forecast	Total count of outbound dials that were made in a specified interval that connected to the person that was intended to be reached. These numbers are not redialed because the right party has been reached.
Staffing	26 employees	0–100,000	Calendar	Total count of employees logged into this queue in this interval.

## Related topics

[View outbound media statistics](#), page 279

[Forecast each outbound work queue](#), page 275

[Inbound scheduling statistics](#), page 130

# Time banking scheduling

The concept of time banking is that employees work *more* hours during *busy* periods and *fewer* hours during *slow* periods. Time banking is useful for companies with large seasonal variations in workload.

During peak periods, employees work extra hours and *bank* the additional time worked. During non-peak periods, employees work fewer hours and draw on the *banked* time. The total number of hours employees work remains the same as if they had worked a fixed number of hours each week.

## Generating a time banking schedule

When employees work *more* than the target number of hours in previous scheduling periods, the scheduling engine tries to schedule *fewer* hours in the current scheduling period. If employees work *less* than the target number of hours in previous scheduling periods, the scheduling engine tries to schedule *more* hours in the current scheduling period.

In subsequent scheduling periods, the scheduling engine works toward a zero-hour balance for all employees by the end of the time span of the time bank.

## Time banking workflow

### 1 Create a time bank.

The best practice for creating a time bank is to import the data from Strategic Planner. If your company has purchased Strategic Planner, use it to create long-term plans regarding the number of hours your employees need to work. When you create a time bank in the **Work Administration** module, from **Target Hours**, select **Use Strategic Planner Plan**. Select the plan from the drop-down list.

You can also import the data from a text file. A third option is when you create a time bank in the **Work Administration** module, from **Target Hours**, enter the total hours manually.

### 2 Edit time bank hours, if desired.

When you create a time bank, the system displays the target hours by *Base Period*. Base Period is typically a seven-day period within the time frame of the time bank. You can modify the time bank hours for one or multiple base periods.

### 3 Assign the time bank to employees.

When you assign work rules to employees (in the **User Management** module), you can add a time bank to the work rules assignment. You can only assign *one time bank at a time* to employees.

### 4 Generate a time banking schedule.

Note the following:

- Employees in the campaign *must* have a time bank assigned to them
- The time frame of the scheduling periods *must* be *within* the time span of the assigned time bank.
- The number of hours that can be scheduled for an employee is always limited by the minimum and maximum hour settings for each employee. If the number of hours an employee is scheduled does *not* match the specified target hours for the time bank, the system generates a warning message.

## Example: Adjusting employee hours

Adjustments are useful if you have a new employee starting in the middle of a time bank period.

For example:

- A time bank spans 100 days with 600 total target hours.
- A new employee starts 25 days into the time bank. (One quarter of the total length of the time bank has already passed.)
- Subtract 150 hours (one quarter of the total target hours) from the time bank hours for the employee. If you do *not* make this adjustment, the scheduling engine tries to make up the lost hours.

## Time banking reports

The **Weekly Time Bank Balances by Employee** report shows employee time bank balances grouped by organization, time bank, base period, and employee.

To generate the report:

- 1 Go to **Reports**, and select **Requests & Results and Instances**.
- 2 Under **Time Banking Reports**, select **Weekly Time Bank Balances by Employee**.

## Related topics

[Generate the schedule automatically](#), page 87

## Related information

Create time banks, edit bank hours, assign the time bank to employees (*Workforce Management Administration Guide*)

Weekly Time Bank Balances by Employee report (*Workforce Optimization Reports Guide*)

# Monthly scheduling

To generate a schedule that covers a time period from the first to the last day of a month, use *monthly scheduling*. Monthly forecasting and scheduling features allow you to plan for a calendar *month*, rather than one or more weeks.

Monthly scheduling is important if:

- Local customs, contracts, or labor laws require adherence to *monthly* rules, such as scheduling employees a certain number of hours every *month*.
- Patterns for forecasts and schedules are driven more by *monthly* than *weekly* cycles. For example, the 1st and 15th of the month is busy, regardless of which day of the week they occur.

## Monthly Forecast and Rules license

Monthly scheduling is enabled by activating the **Monthly Forecast and Rules** license. The license is found in the **System Management** module, under **WFM - Workforce Management**, under **Licensing Management** and **System Licensing**.



Monthly scheduling does *not* support Linked Queue Forecasting (LQF), distributed campaigns, and Overtime (OT) and Voluntary Time Off (VTO) scheduling.

## Monthly scheduling reports

The by **Monthly Planned Time Assessment by Employee** report provides a monthly aggregation of the existing **Weekly Planned Time Assessment by Employee** report.

To generate the report:

- 1 From **Reports**, select **Requests & Results and Instances**.
- 2 Under **Staffing Reports**, select **Monthly Planned Time Assessment by Employee**.

## Related topics

[Workflow: Generate monthly schedules](#), page 284

## Related information

Monthly Planned Time Assessment by Employee report (*Workforce Optimization Reports Guide*)

# Workflow: Generate monthly schedules

Generating monthly schedules is similar to generating weekly schedules, with some processes that are unique to monthly scheduling.

## Before you begin

Enable the monthly scheduling feature:

- 1 Go to **System Management**. Under **Licensing Management**, select **System Licensing**.
- 2 Under **WFM - Workforce Management**, select the **Monthly Forecast and Rules** license and select **Save**.

## Workflow

- 1 [Create monthly work patterns and assign to employees](#), page 285  
To support monthly scheduling, create monthly work patterns and assign to the relevant employees.
- 2 [Create monthly assignment rules and assign to employees](#), page 286  
Use monthly assignment rules to support complex scheduling needs. You can create 28, 29, 30, or 31-day month assignment rules.
- 3 [Set minimum and maximum monthly hours for employees](#), page 287  
Set minimum and maximum paid hours for employees on a monthly basis. To support the different number of work days each month, vary the number of hours by month.
- 4 [Create monthly campaign and scheduling period](#), page 288  
Set up scheduling periods in monthly intervals. A monthly scheduling period can strongly support the enforcement of work rules set up on a monthly basis. The monthly scheduling period can also be linked to monthly forecasts.
- 5 [Create forecast for monthly schedules](#), page 289  
To connect to the monthly scheduling period, create a monthly forecast. Create the forecast based on monthly historical data.
- 6 [Generate monthly schedule](#), page 290  
Generate a schedule for the monthly scheduling period. The scheduling engine only uses those monthly work patterns that match the number of days in the scheduling period. The correct alignment of the scheduling period and monthly work rules (work pattern and assignment rules) produces more accurate schedule results.

## Related topics

[Monthly scheduling](#), page 284

# Create monthly work patterns and assign to employees

To support monthly scheduling, create monthly work patterns and assign them to the relevant employees.

Employees can be assigned multiple work patterns for the same *month length*. Monthly work patterns align to the first day of the *calendar* month - they do *not* follow the start day of the month for the *campaign*. Only monthly work patterns and monthly assignments are enforced on monthly scheduling periods.

## Procedure

- 1 Go to **Work Administration**. Under **Work Rules**, select **Work Patterns**.
- 2 From the left pane, select the organization for which you want to create a work pattern, and select **Create**.
- 3 From the **Work Pattern Type** field, select one of the following:
  - **28 Day Month**
  - **29 Day Month**
  - **30 Day Month**
  - **31 Day Month**

- 4 Under **Work Days / Consistency** for **Possible Days Off**, select the days of the month that you do *not* want the selected shift to be assigned to any employee.
- 5 To add shifts to the work pattern:
  - a. Under **Work Days / Consistency > Shift**, select **Add**.
  - b. From the **Shift Details** screen, select the shifts you want to add to the work pattern and select **Add Selected Shifts**.
- 6 To define the consistency of shift start times for all or specific days in the work pattern:
  - a. Expand the shift.
  - b. Determine which days you want the shifts to start at the same times.
  - c. For those specific days, select the same value from the drop-down list of integers of 1-7.  
For example, you want the 1st, 10th and the 15th of the month to have the same shift start time. Select 3 for **Day 1**, **Day 10**, and **Day 15**. (The three value just defines a specific start time group. You can select any value here, as long as it is the same value for all days in the group.)
- 7 To ensure that the *shift events* start at the same times for the shift start time groups, select **Consistent Shift Events** for the relevant shifts. This setting ensures that the *same shift events* start at the same time *only for the same shift start time groups* you defined in [step 6, step c](#).
- 8 Complete the remaining fields for the work pattern and select **Save**.
- 9 Optional. To create more monthly work patterns for each type of month (28, 29, 30 or 31 days) to cover all possible months, repeat [step 2-step 8](#). Just select the relevant option for the **Work Pattern Type** in [step 3](#).
- 10 To assign the work patterns to employees:
  - a. Go to **User Management**. Under **Employees**, select **Work Rules**.
  - b. Select the employees to which you want to assign the monthly work patterns.
  - c. Expand **Work Patterns** and select **Add**.
  - d. From the **Work Pattern** screen, select the monthly work patterns you want and select **Add Selected Work Patterns**.
  - e. Select **Save**.

### What to do next

[Create monthly assignment rules and assign to employees](#), page 286

### Related information

Create a work pattern, Work pattern details, assign work rules to employees (*Workforce Management Administration Guide*)

## Create monthly assignment rules and assign to employees

If required, you can use monthly assignment rules to support complex scheduling needs. You can create 28, 29, 30, or 31-day month assignment rules to assign to employees.

For example, you can set an assignment rule that an employee must have at least one Training shift for each 28-day month.

### Before you begin

[Create monthly work patterns and assign to employees](#), page 285

**Procedure**

- 1 Go to **Work Administration**. Under **Work Rules**, select **Assignment Rules**.
- 2 From the left pane, select the organization for which you want to create an assignment rule, and select **Create**.
- 3 Enter a name and select a priority for the assignment rule.
- 4 Under **Rule Type**, select the relevant options.
- 5 Under **Period**, select one of the following:
  - Each 28 day month
  - Each 29 day month
  - Each 30 day month
  - Each 31 day month
- 6 Select **Save**.
- 7 Create as many assignment rules as needed, for each type of month (28, 29, 30 or 31 days) to cover all possible months. Just select the relevant option for **Period** in step 5.
- 8 To assign the monthly assignment rules to employees:
  - a. Go to **User Management**. Under **Employees**, select **Work Rules**.
  - b. Select the employees to which you want to assign the monthly assignment rules.
  - c. Expand **Assignment Rules** and select **Add**.
  - d. From the **Assignment Rule Details** screen, select the monthly assignment rules you want and select **Add Selected Assignment Rules**.
  - e. Select **Save**.

**What to do next**

[Set minimum and maximum monthly hours for employees](#), page 287

**Related information**

Create an assignment rule (*Workforce Management Administration Guide*)

## Set minimum and maximum monthly hours for employees

Set minimum and maximum paid hours for employees on a monthly basis. To support the different number of work days each month, vary the number of hours by month.

**Before you begin**

[Create monthly assignment rules and assign to employees](#), page 286

**Procedure**

- 1 Go to **User Management**. Under **Employees**, select **Monthly Hours**.
- 2 From the left pane, select the employees for which you want to set monthly hours, and select **View**.
- 3 From the **Year** drop-down field on the right side, select the year for which you want to set the monthly minimum and maximum hours for employees.
- 4 For each month, enter the **Minimum Monthly Hours** and **Maximum Monthly Hours**.

**5** Select **Save**.

**What to do next**

[Create monthly campaign and scheduling period](#), page 288

## Create monthly campaign and scheduling period

Set up scheduling periods for monthly intervals. A monthly scheduling period can strongly support the enforcement of work rules set up on a monthly basis. The monthly scheduling period can also be linked to monthly forecasts.



You *cannot* mix weeks and months in the same campaign.

**Before you begin**

[Set minimum and maximum monthly hours for employees](#), page 287

**Procedure**

- 1** Go to **Forecasting and Scheduling**. Under **Campaigns**, select **Settings**.
- 2** Select **Create Campaign**.
- 3** In the **Name** field, enter a name for the campaign.
- 4** For **Periodicity**, select **Monthly**.
- 5** For **Month Start Day**, select the number of the day in the month on which the campaign starts (1 - 28).

The campaign ends on the day before the day it started on the previous month. For example, if it starts on the 15th of the month, it ends on the 14th day of the *next* month.



You *cannot* start the campaign on the 29th, 30th or 31st because not all months have these dates. All days, however, have at least 28 days.

- 6** Complete the remaining fields, and select **Save**.
- 7** Select **Create Scheduling Period**.  
**Campaign**, **Time Zone**, and **Day Boundary** are read-only fields defined when the campaign was created.
- 8** From **Month** and **Year**, specify the month and year for the monthly scheduling period.  
By default, the current month is automatically displayed.
- 9** Under **Initialization Options**, specify how to create the data for the monthly scheduling period.  
(These options are the same ones as for weekly scheduling periods.)
- 10** Select **Save**.
- 11** Configure **General Settings** for the entire monthly scheduling period.
- 12** Do one of the following:
  - To link *all* employees from *all* organizations defined for the scheduling period, select **Use All Employees in Linked Organizations**.

- To link *specific* employees from the organizations defined for the scheduling period, go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**. Select the specific employees you want to add.

**13** Under **Hours of Operation**, do one of the following:

- To set the same hours of operation for all weeks in the *entire scheduling period*, verify that the entire period is selected by the zoom level drop-down menu on the top right side of the screen. Then, set the hours of operation accordingly.
- To set different hours of operation *for each week* in the scheduling period, select the previous or next weeks in the scheduling period by selecting the right and left arrows until the week you want is selected. Alternatively, select the week from the drop-down list (partial weeks are indicated). Then, set the hours of operation accordingly. Any days *not* associated with the monthly scheduling period during a partial week are unavailable.

**14** Select **Save**.

The scheduling period appears under the selected campaign.



Asterisks indicate different days of operation for different weeks. Blank start time or end times indicate different hours of operation for that day.

### What to do next

[Create forecast for monthly schedules](#), page 289

### Related topics

[Scheduling period settings](#), page 27

[Configure general settings and hours of operation](#), page 26

[Link employees to the scheduling period](#), page 38

## Create forecast for monthly schedules

To connect to the monthly scheduling period, create a monthly forecast. Create the forecast based on monthly historical data.

### Before you begin

[Create monthly campaign and scheduling period](#), page 288

### Procedure

- Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- From the filter pane on the left, select a **Campaign**, **Scheduling period**, and **Queues**.
- Expand the details pane on the right and select the **History data** tab.
- From the ribbon, select **Add**.
- From **Month**, select the month and year to retrieve history for the new forecast.  
The historical month is then added that match the month of the existing scheduling period.  
When forecasting using a monthly date, the day of the month from historical data is aligned with the day of the month of the scheduling period.
- Select **Create forecast**.

**What to do next**

[Generate monthly schedule](#), page 290

**Related topics**

[Add historical weeks](#), page 47

## Generate monthly schedule

Generate a schedule for the monthly scheduling period. The scheduling engine only uses those monthly work patterns that match the number of days in the scheduling period. The correct alignment of the scheduling period and monthly work rules (work pattern and assignment rules) produces more accurate schedule results.

When the scheduling engine generates this schedule, *monthly* work patterns take precedence over *weekly* work patterns.

If there is a monthly work pattern that covers *most* of the scheduling period, the scheduling engine uses *weekly* work patterns for any period that:

- Is not covered by the monthly work pattern
- Contains a full week based on the week start day

**Before you begin**

[Create forecast for monthly schedules](#), page 289

**Procedure**

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left filter pane, make sure to select the following:
  - **Campaign**: Monthly campaign
  - **Dates**: Monthly scheduling period
  - **Employees**: Employees assigned the monthly work pattern
- 3 From **Home**, select **Generate Schedule**.
- 4 Set all parameters, and select **Generate**.

The WFM application schedules employees to meet the monthly forecast and service goals *for each queue*. Schedules are optimized to ensure that you have the right mix of employees available at any time.

**Related topics**

[Generate the schedule automatically](#), page 87

# Campaign pooling

If the demand arises, campaign pooling allows you to schedule employees to work at locations other than their primary location.

Employees can be assigned to work on more than one campaign at one time on an intra-day or inter-day basis.

In a campaign, there are two types of employees who can be scheduled:

- *Non-pooled employees*: Employees who are scheduled to work at their primary location *only*.
- *Pooled employees*: Employees who are scheduled to work at their primary location with some scheduling holes. The scheduler can then fill the demand of other locations with these employees, who pool to other locations for scheduling needs.

## Intra-Day and Inter-Day campaign pooling

Employees can be scheduled to pool into secondary campaigns on an *intra-day* basis (part of one day). This scheduling works when employees do *not* have to move physically from one branch to another to perform the activity.

Alternatively, employees can be scheduled to pool into secondary campaigns on an *inter-day* basis (from one day to the next). For example, an employee is assigned to the secondary campaign for the whole day.

For pooling intervals (whole day shifts or partial day shift events), employees are dedicated to the secondary campaign. They are *not* scheduled to work on the primary campaign. For other intervals on that day and for other days in the scheduling period, poolers can be assigned to work on the primary campaign.

## Campaign pooling rules

Verify that the following rules are applied when setting up campaign pooling:

- Pooled employees must have appropriate skills tied to their profiles.
- Pooled employees must have appropriate media types tied to their available work patterns.
- The scheduling periods that a profile can pool between must have the exact same lengths.

## Employees in one campaign and pooled for another

If one campaign contains employees that can be pooled in another campaign, ensure that there are working schedules for both campaigns:

- 1 Generate the schedule for the first campaign.
- 2 Set the service level for the first campaign.
- 3 Generate the schedule for the second campaign.  
This schedule establishes the service level requirements for the second campaign.
- 4 Recalculate the statistics for the first campaign.
- 5 Regenerate the schedule for the second campaign.  
This schedule pulls in any released poolers from the first campaign into the second campaign.
- 6 Then, recalculate the statistics for the service level of the second campaign.
- 7 Recalculate the statistics for the first campaign.  
This recalculation synchronizes all changes related to poolers on the two campaigns.

**Related topics**

[Workflow: Generate schedules for campaign pooling](#), page 292

## Workflow: Generate schedules for campaign pooling

To maximize scheduling efficiency, you can schedule employees to work at their primary location and *pool* them to be scheduled at other locations. *Campaign pooling* allows you to achieve service goals by taking advantage of a larger pool of eligible employees when scheduling needs arise.

**Workflow**

**1** [Set up activities and work rules for pooling](#), page 292

Set up activities and work rules at a high level in the organization hierarchy, to be available in each campaign for which the poolers are scheduled. In addition, make sure the activities for which employees are pooling can be scheduled within a shift from another campaign.

**2** [Specify employees as poolers and assign work rules](#), page 293

Specify which employees are poolers, who can be scheduled to work for their *primary* organization and also across multiple *secondary* organizations, if needed. In addition, assign the work patterns that you created to the poolers.

**3** [Link poolers to a secondary campaign](#), page 294

You can link *all* employees in the associated organizations to a scheduling period (including poolers). Alternatively, link *specific* employees and poolers to a scheduling period for the *secondary* campaign.

**4** [Generate a schedule for the primary campaign](#), page 295

Generate a schedule for the *primary* campaign you set up for poolers. For this campaign, the employees are defined as *employees*, not poolers.

**5** [Generate a schedule for the secondary campaign](#), page 296

Generate a schedule for the *secondary* campaign you set up for poolers. For this campaign, the employees are defined as *poolers*, not employees.

**6** [View poolers on the schedule](#), page 297

After generating a schedule for the secondary campaign that includes poolers, you can now view them as poolers on the schedule.

**Related topics**

[Campaign pooling](#), page 291

## Set up activities and work rules for pooling

Set up activities and work rules at a high enough level in the organization hierarchy to be available in each campaign for which poolers are scheduled. In addition, make sure the activities for which employees are pooling can be scheduled within a shift from another campaign.

**Procedure**

- 1** Take note of the organizations that are associated with the campaigns for which you schedule poolers.
- 2** Go to **Work Administration**. Under **Activities**, select **Activities**.
- 3** Create all activities to be used by poolers:

- a. From the left pane, select an organization that is *at the same level or above* the organizations you associate with the campaigns that include poolers.
  - b. Select **Create Activity**.
  - c. Under **Scheduling Usage**, select **Can be Scheduled Within a Shift from Another Campaign**.
  - d. Complete the remaining fields and select **Save**.  
If you want to create shifts or shift events based on the activity, select **Use in Shift (Primary Activity)** or **Use in Shift Event** accordingly.
- 4** Create all work rules for work patterns used by poolers:
- a. Under **Work Rules**, select the work rule to create for the poolers (such as **Shifts**, **Shift Events**, **VTO Events**, or **OT Extensions**).
  - b. From the left pane, select an organization that is *at the same level or above* the organizations you associate with the campaigns that include poolers.
  - c. Select **Create**.
  - d. From the **Activity** field, select an activity to be used by poolers (set up in [step 3](#)).
  - e. Complete the remaining fields for the work rule and select **Save**.
- 5** Create a work pattern that includes the work rules you created:
- a. Under **Work Rules**, select **Work Patterns**.
  - b. From the left pane, select an organization that is *at the same level or above* the organizations you associate with the campaigns that include poolers.
  - c. Select **Create**.
  - d. Add the shifts, VTO events, and OT extensions you created for poolers.
  - e. Complete the remaining fields for the work pattern and select **Save**.

### What to do next

[Specify employees as poolers and assign work rules](#), page 293

### Related information

Activity details and work rules (*Workforce Management Administration Guide*)

## Specify employees as poolers and assign work rules

Specify which employees are poolers, who can be scheduled to work for their *primary* organization and also across multiple *secondary* organizations, if needed. In addition, assign the work patterns that you created to the poolers.

### Before you begin

- Set up the profiles of employees who you want to be pooled in campaigns (*WFO User Management Guide*)
- [Set up activities and work rules for pooling](#), page 292

### Procedure

- 1** Go to **User Management**. Under **Employees**, select **Work Rules**.
- 2** Select the employees for whom you want to set up pooling rules and assign work rules.

- 3 Under **Hours**, complete the **Minimum Paid Hours** and **Maximum Paid Hours** for the employees, in addition to the other hour values.
- 4 Under **Pooling Rules**, select **Employee Can Pool**.
- 5 In **Minimum Paid Hours in Primary Organization**, set the minimum hours in the primary campaign for the employee.

This setting ensures that the pooler works a set number of hours for the primary organization, *before* they are scheduled at any of the secondary organizations. For example, you want to make sure that the employee works a *minimum* of 24 hours at their primary organization *before* being available to pool. In this case, set this value to 24 (hours).

- 6 From **Secondary Organizations**, select the **Organization Selector** icon and select one or more organizations in which the employee can pool. Select **Set**.
- 7 In **Start Date** and **End Date**, specify the dates when pooling for the employee takes effect.
- 8 Assign the work patterns to the employees:
  - a. Under **Work Patterns**, select **Add**.
  - b. Select the work patterns you created for poolers and select **Add Selected Work Patterns**.
- 9 Select **Save**.

#### What to do next

[Link poolers to a secondary campaign](#), page 294

#### Related information

Work rules assignment details (*Workforce Management Administration Guide*)

## Link poolers to a secondary campaign

You can link *all* employees in the associated organizations to a scheduling period (including poolers). Alternatively, link *specific* employees and poolers to a scheduling period for the *secondary* campaign.

#### Before you begin

- [Specify employees as poolers and assign work rules](#), page 293
- Create a *primary* campaign and scheduling period for the poolers - see [Workflow: Define a campaign and scheduling period](#), page 22
- For skill-based campaigns, make sure the employees required to work in the primary campaign and secondary campaigns have the required *skills*. They *must* have these skills to be scheduled for pooling (see [Create skills and link them to employees](#), page 230).



The scheduling periods for the primary and secondary campaigns do *not* need to have the *exact same* time frames. However, there can be a significant overlap between the two campaigns.

#### Procedure

- 1 Create a secondary campaign for poolers.  
(Go to **Forecasting and Scheduling**. From **Campaigns**, select **Settings**).
- 2 Select **Create Scheduling Period**.
- 3 Complete the initial settings and select **Save**.

- 4 Determine the next step:
    - If all poolers are associated with the linked organizations, select **Use All Employees in Linked Organizations**. Complete the remaining fields and select **Save**.
    - To link *specific* employees (who you have defined as poolers), you can add those specific employees in [step 5](#).
  - 5 To link *specific* employees (poolers) from the organizations defined for the scheduling period:
    - a. Go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**.
    - b. Select the campaign and scheduling period to which you want to link poolers.
    - c. Select **Add Employee to SP**.
    - d. On the **Add Employee to SP** screen, select **Show Poolers**.  
In addition to *non-pooled* employees, the system displays employees who *pool* to one of the organizations linked to the campaign.
-  If the employees are not showing up in the list after selecting **Show Poolers**, verify that the current employee filter includes the pooled employees.
- e. Determine which employees to add to the scheduling period:
    - To add specific employees and poolers, select the employees you want and select **Add**.
    - To add all employees and poolers, select **Select All**.

#### What to do next

[Generate a schedule for the primary campaign](#), page 295

#### Related topics

[Scheduling period settings](#), page 27

[Link employees to the scheduling period](#), page 38

## Generate a schedule for the primary campaign

Generate a schedule for the *primary* campaign you set up for poolers. For this campaign, the employees are defined as *employees*, not poolers.

#### Before you begin

- [Link poolers to a secondary campaign](#), page 294
- Create a forecast (see [Forecasts](#), page 45)
- Define service goals (see [Service goals and requirements](#), page 63)

#### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left pane, select **Campaign**, and the *primary* campaign you created for poolers.
- 3 From **Dates**, select the scheduling period you want for the primary campaign.
- 4 From **Employees**, select the employees you want, which include the employees who pool to secondary organizations.

- 5 Select **Apply**.
- 6 From **Home**, select **Generate Schedule**.
- 7 Complete the scheduling parameters and select **Generate**.
- 8 View the schedule for the primary campaign.

The scheduling engine only needs to schedule poolers for the *minimum* hours defined for the *primary* campaign. This setting is called **Minimum Paid Hours in Primary Organization**, defined under **User Management, Employees**, and **Work Rules**.

#### What to do next

[Generate a schedule for the secondary campaign](#), page 296

#### Related topics

[Generate the schedule automatically](#), page 87

[Generate Schedule settings](#), page 89

## Generate a schedule for the secondary campaign

Generate a schedule for the *secondary* campaign you set up for poolers. For this campaign, the employees are defined as *poolers*, not employees.

#### Before you begin

[Generate a schedule for the primary campaign](#), page 295

#### Procedure

- 1 From the left pane, select **Campaign**, and the *secondary* campaign you created for poolers.
- 2 From **Dates**, select the scheduling period you want for the secondary campaign.
- 3 From **Employees**, select the employees you want (which include non-poolers).
- 4 Under **Employees**, select the **Poolers** tab.
- 5 Under **Poolers**, select the poolers you want to include in the *secondary* campaign.
- 6 Select **Apply**.
- 7 From **Home**, select **Generate Schedule**.
- 8 On the **Preferences** tab under **Employees**, verify that for **Employees to schedule**, the value is set to **Filtered employees only**. This setting ensures that both employees *and* poolers are included in the schedule.
- 9 Complete the scheduling parameters and select **Generate**.
- 10 View the schedule for the secondary campaign.
- 11 Note the following:
  - The scheduling engine does *not* schedule over the shift assignments for the primary campaign.
  - If they have available hours, poolers from the primary campaign are scheduled *as needed* in the secondary campaign.
  - The scheduling engine tries to balance the service level across both campaigns. If both campaigns are understaffed, the scheduling engine tries to share the poolers to balance out the service level between campaigns.

**What to do next**

[View poolers on the schedule](#), page 297

**Related topics**

[Generate the schedule automatically](#), page 87

[Generate Schedule settings](#), page 89

## View poolers on the schedule

After generating a schedule for the secondary campaign that includes poolers, you can now view them as poolers on the schedule.

**Before you begin**

- [Generate a schedule for the secondary campaign](#), page 296
- To ensure that managers can view poolers on the schedule, broaden the organization scope for the manager to include all relevant organizations.

**Procedure**

**1** Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.

**2** From the left pane, verify the following:

- **Campaign**: Set to the secondary campaign.
- **Dates**: Set to the scheduling period you want to view for the secondary campaign.
- Under **Employees** and **Poolers**: Relevant poolers are selected.

**3** View the draft schedule.

The poolers appear in the list with a special icon to indicate their pooling status. Their name is colored in the workpane to indicate that they are poolers.

**4** To view the schedule *without* poolers:

- a. Return to the **Employees** filter and under **Poolers**, unselect the pooled employees.
- b. Select **Apply**.

**Related topics**

[View the schedule](#), page 115

# Operations scheduling

In an Operations environment, activities are based on the **Operations** media. This media is suitable for back-office environments, which include financial institutions (such as insurance companies and banks). Project scheduling is a feature that can be used in an Operations environment, which meets the needs of non-customer-facing activities.

There are features and workflows that are specific to an Operations environment. The WFM application supports this functionality through a separate license called **Operations**.

## Topics

Operations workflow overview .....	299
Workflow: Generate a schedule for Operations queues .....	301
Workflow: Generate a schedule for Project queues .....	312
Project queue staffing status .....	317
Operations terminology .....	323

# Operations workflow overview

There are specific differentiating features of the Operations workflow.

## Generating a schedule for Operations queues

The following are the main differentiating features in the workflow for generating a schedule for Operations queues:

- Set up a root queue, from which work items are distributed to extra queues according to defined requirements.
- Activities are based on the **Operations** media, and **Work Queue Hopping** is enabled.
- Shifts are based on the **None** activity, and are linked to shift events based on Operations-based activities.
- All *Linked Queue Forecasting (LQF)* scheduling periods must be *skill-based*. All source and target queues in a chain are linked to a single campaign. You can also link work queues not involved in the Linked Queue Forecasting (LQF) chain to the scheduling period.
- The forecast is created based on the root queue, and deadline goals are defined (as an alternative to service level).
- After the schedule is generated, you can track and update the status of work items, and view work history.

## Work queue hopping

*Work queue hopping* is when employees are scheduled to work on different work queues at different times, rather than working on several work queues concurrently. Queue hopping is especially useful in an Operations environment. Typically, *one* entire shift consists of *several* shift events. Each shift event can involve performing an activity linked to a different queue.

## Example: Queue hopping in an Operations environment

Within one 8-hour shift, employee John Green has four shift events:

- For the first shift event, from 9:00-10:00, John is scheduled to perform the activity, Check processing, which is linked to the queue, **OpsA**.
- From 10:00-12:00, John is scheduled to perform the activity, Mortgage statements, which are linked to the queue, **OpsB**.
- From 1:00-3:00, John is scheduled to perform the activity, Filing, which is linked to the queue, **OpsC**.
- From 3:00-5:00, John is scheduled to perform the queue, Financials, which is linked to the queue, **OpsD**.

## Shifts and Shift events for Operations

In an Operations environment, the activity of the shift itself does *not* define the work done during the shift. The work is done in smaller blocks of time defined by the *shift events*. Therefore, the *activity of the shift* is set to **None**. The *activities of the shift events* are set to specific Operations activities that need to be performed during the shift. Queue hopping is enabled for all Operations activities.

### Example: Creating shifts and shift events for Operations

For example, a shift called **Ops\_shift1** is eight hours in duration and associated with the activity, **None**.

The following shift events are linked to **Ops\_shift1**:

- **Ops\_filing** based on the Filing activity
- **Ops\_mortgage** based on the Mortgage statements activity
- **Ops\_checks\_proc** based on the Check processing activity

Employees assigned to this shift are scheduled for these shift events during the shift.

### Deadline goals for Operations

Deadline goals and *not* service levels define Operations queues. Financial documents, for example, need to be processed within a specified time (a specific number of hours, days or weeks). For this reason, the *percentage of work* that needs to be completed is always set to 100%. The *time period* by which the work needs to be completed is defined based on the requirements of the organization.

### Example: Deadline goals

- There is a work item arriving between 6:00 AM - 3:30 PM today that an employee *must* complete by 5:15 PM today.
- There is a work item arriving between 3:30 PM today - 6:00 AM tomorrow that an employee *must* complete by 10:00 AM tomorrow.

### Deadline goals similar to ASA

Deadline goals function similarly to Average Speed to Answer (ASA), in terms of implications on FTE Requirements and the scheduling engine:

- Deadline goals do *not* impact employee requirements.
- The scheduling engine predicts employee requirements based on deadline goals.
- The scheduling engine schedules employees to meet deadline goals.

### Tracking work items for Operations

For tracking work items, you can:

- Add new items that recently *arrived* and are ready to be worked on
- Indicate which items are *checked out* and currently being worked on
- Indicate which items are *checked in* and done

### Operations adapters

Specific adapters import Operations data and volume from an external source into the WFM application. You can view and use the imported data through the user interface in the same way as events entered through the user interface.

### Related topics

[Workflow: Generate a schedule for Operations queues](#), page 301

# Workflow: Generate a schedule for Operations queues

Specific setup and features are used when generating a schedule for Operations queues.

## Workflow

### 1 [Create queues for Operations](#), page 302

For Operations, create a root work queue. Then, create more queues to which work items are distributed from the root queue.

### 2 [Define and manage volume for Operations queues](#), page 302

Using the Volume Capture Tool (VCT), define the distribution of work between the root queue and the additional queues used for Operations. The queues are linked together (called *Linked Queue Forecasting* or *LQF*), and work is distributed according to your defined requirements.

### 3 [Create activities for Operations](#), page 303

Create activities that are based on the **Operations** media, enabled for **Work Queue Hopping**, and are linked to the Operations queues you created.

### 4 [Create shift events for Operations](#), page 304

Set up shift events based on an Operations-based activity.

### 5 [Create shifts and work patterns for Operations](#), page 305

Create a shift based on the **None** activity, and link the shift events to the shift. Then, create a work pattern and add the shifts. Finally, link the employees to the work pattern.

### 6 [Create a campaign and scheduling period for Operations](#), page 306

Create a campaign and scheduling period, and link queues and employees to the scheduling period.

### 7 [Create forecast for Operations root queue](#), page 307

Create a forecast for an Operations root queue.

### 8 [Set deadline goals for Operations](#), page 308

As an alternative to service level, set *deadline goals* for your Operations queues. A deadline goal aims to complete a work item that arrives during a certain interval by a set time of day. Deadline goals can be set up to one year in advance.

### 9 [Generate a schedule for Operations](#), page 308

Generate a schedule for the Operations queues you created. Make sure to enable **Linked Queue Forecasting** before generating the schedule.

### 10 [Track volume, status, and history of work items](#), page 309

You can track and update the status of work items for Operations. You can also view the history of work items.

## Related topics

### [Workflow: Generate a schedule for Operations queues](#), page 301

## Related information

Operations adapters (*Workforce Management Operations Adapter Guide*)

## Create queues for Operations

Create a root work queue. Then, create extra queues to which work items are distributed from the root queue.

### Procedure

- 1 Go to **Work Administration**. Under **Work Queues**, select **Settings**.
- 2 Select **Create work queue**.
- 3 To create the root work queue, complete the fields with **Media** set to **Operations**.
- 4 Select **Save**.
- 5 Repeat step 1 - step 4 to create the other queues to handle the Operations work items.

### What to do next

[Define and manage volume for Operations queues](#), page 302

### Related information

Work queues overview (*Workforce Management Administration Guide*)

## Define and manage volume for Operations queues

Using the Volume Capture Tool (VCT), define the distribution of work between the root queue and the additional queues used for Operations. The queues are linked together (called *Linked Queue Forecasting* or *LQF*), and work is distributed according to your defined requirements.

### Before you begin

[Create queues for Operations](#), page 302

### Procedure

- 1 Go to **Work Administration**. Under **Work Queues**, select **VCT Configuration**.
- 2 From the left pane, select the organization for which you created the root queue and the other queues for Operations.
- 3 From the right pane, select the root queue for which you want to define the distribution of work.
- 4 Select **Edit work queue**.
- 5 From the **As of** field, specify the date from which this distribution is relevant.
- 6 Select **Use Volume Capture**.
- 7 Under **Work Queue Configuration**, complete the remaining fields.
- 8 To add more queues to which the workload is distributed from the root queue, select **Add** and complete the fields for the target queues.
- 9 Define the events that trigger when the additional queues receive the work items:
  - From the **Source Event** field, select the event from the *source* queue that triggers the work item to be distributed to the *target* queue. Typically, this field is set to **Check-in**.

For example, this field is set to **Check-in** for **OpsA**, which is the first queue in this list. The employee who works on the root queue *checks in* their work item. It is then ready to be worked on by the employee who is working on **OpsA**.

- From the **Target Event** field, select the event when the *target* queue receives the work coming from the source queue.

For example, if the **Source Event** is set to **Check-in**, the **Target Event** is set to **Arrivals**. The work is *arriving* to the target queue and ready to be worked on by the employee handling that queue.

- 10** To define how the work to be distributed among the additional queues is calculated, set the **Proportion Type** and the **Proportion (Pct)** fields.

For example, the **Proportion Type** is set to **Fixed Allocation**, which is a fixed percentage of work. In this case, the value in the **Proportion (Pct)** field defines the *exact percentage* of work that is *always* distributed to the specified queue. The field for the **OpsA** queue is set to 75.0, which means that 75% of the work from the root queue is always distributed to **OpsA**.

- 11** To define when the additional queues receive the work items, you can do the following:

- To wait until a specific number of work items are ready to be worked on by target queue, set the **Bundle Size**. For example, set this field to **10** for the first queue after the root queue. The work is only distributed to the first queue when 10 work items are ready for this queue.
- To specify a lag time only after which the work is ready for the target queue, set the **Lag (Hrs)** and **Lag (Mins)** fields.

### What to do next

[Create activities for Operations](#), page 303

### Related information

VCT work queue configuration (*Workforce Management Administration Guide*)

## Create activities for Operations

Create activities that are based on the **Operations** media, enabled for **Work Queue Hopping**, and are linked to the Operations queues you created. These activities will be used for shift events to perform tasks for Operations.

### Before you begin

[Define and manage volume for Operations queues](#), page 302

### Procedure

- Go to **Work Administration**. Under **Activities**, select **Activities**.
- Select **Create Activity**.
- Complete the fields for the activity.
- From **Activity Type**, select **Shift Events**.
- In the **Media** field:
  - Select the **Edit** icon.
  - From **Available Media**, select **Operations** and select the **Assign right** arrow.
  - Select **Set**.

- 6 Select **Work Queue Hopping**.
- 7 In the **Work Queues** field:
  - a. Select the **Edit** icon.
  - b. From **Available Work Queues**, select the Operations queues to which you want to be able to link the activity and select the **Assign right** arrow.
  - c. Select **Set**.
- 8 To create shift events based on the activity, select **Use in Shift Event**.
- 9 Select **Save**.

The system creates the Operations activity. It can now be associated with shift events, which are then scheduled within shifts for Operations queues.

#### What to do next

[Create shift events for Operations](#), page 304

#### Related information

Create an activity and activity details (*Workforce Management Administration Guide*)

## Create shift events for Operations

Set up shift events based on an Operations-based activity.

#### Before you begin

[Create activities for Operations](#), page 303

#### Procedure

- 1 Go to **Work Administration**. Under **Work Rules**, select **Shift Events**.
- 2 Select **Create**.
- 3 From the **Activity** field, select an Operations activity you created.
- 4 In the **Length** field, specify the duration of the shift event.

Most shift events to perform Operations activities are a few hours each.
- 5 Select **Paid**.
- 6 Select **Flexible**, and then select **Add** under **Additional Activities**.
- 7 Add more Operations activities to the shift event and select **Add Selected Activities**.

Depending on the defined volume, Activity Handling Time (AHT) and deadline goals, the scheduling engine determines which activity to schedule for this shift event. It is either the main shift event activity or more activities.
- 8 Complete the remaining fields and select **Save**.

The system creates the shift event based on the Operations activity.
- 9 Repeat step 1 - step 8 for all the shift events you need for Operations shifts.

#### What to do next

[Create shifts and work patterns for Operations](#), page 305

## Related information

Create a shift event, shift event details (*Workforce Management Administration Guide*)

# Create shifts and work patterns for Operations

Create a shift based on the **None** activity, and link the shift events to the shift. Then, create a work pattern and add the shifts. Finally, link the employees to the work pattern.

## Before you begin

[Create shift events for Operations](#), page 304

## Procedure

- 1 Create a shift based on the **None** activity:
  - a. Under **Work Rules**, select **Shifts**.
  - b. Select **Create**.
  - c. From the **Activity** field, select **None**.
  - d. Complete the fields related to the shift.
- 2 Link the shift events based on Operations activities to the shift:
  - a. Under **Shift Events**, select **Add**.
  - b. Select the shift events you want to link to the shift.
  - c. Select **Add Selected Shift Events**.
- 3 To save the shift, select **Save**.
- 4 Create a work pattern and link the shifts to the work pattern:
  - a. Go to **Work Administration**. Under **Work Rules**, select **Work Patterns**.
  - b. From the left pane, select the organization for which you want to create a work pattern, and select **Create**.
  - c. On the **Work Patterns** screen, complete the fields.
  - d. Under **Work Days / Consistency > Shift**, select **Add**.
  - e. From the **Shift Details** screen, select the shifts you want to add to the work pattern and select **Add Selected Shifts**.  
The selected shifts are added to the work pattern.
  - f. Select **Save**.
- 5 Link the employees to the work pattern:
  - a. Go to **User Management**. Under **Employees**, select **Work Rules**.
  - b. From the left pane, filter the employee list as required, or search for the employees you want.
  - c. Expand **Work Patterns** and select **Add**.
  - d. From the **Work Pattern** screen, select the work patterns you want to add to the work rules assignment and select **Add Selected Work Patterns**.
  - e. Select **Save**.  
The selected work patterns are added to the work rule assignment for the selected employees.

## What to do next

[Create a campaign and scheduling period for Operations](#), page 306

## Related information

Create a shift, create a work pattern, assign work rules to employees (*Workforce Management Administration Guide*)

# Create a campaign and scheduling period for Operations

Create a campaign and scheduling period, and link queues and employees to the scheduling period for Operations.

## Before you begin

[Create shifts and work patterns for Operations](#), page 305

## Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Campaigns**, select **Settings**.
- 2 Select **Create Campaign**, complete the fields, and select **Save**.
- 3 Select **Create Scheduling Period**, and complete the fields.
- 4 Select **Skill Based** for the scheduling period.

**!** Linked queue forecasting scheduling periods (Operations scheduling periods) *must* be skill-based scheduling periods.

- 5 Select **Save**.
- 6 Under **Campaigns**, select **Queues**.
- 7 Under **Campaign Name**, expand the campaign and select the scheduling period to which you want to link an Operations work queue.
- 8 To add an Operations queue to the scheduling period, select **Add Queue to Scheduling Period**.
- 9 Select the queues you want and select **Add Selected Queues**.

*The source (root) queue and all target queues in a chain are linked to a single campaign.* You can also link work queues that are not involved in the linked queue forecasting chain to the scheduling period.

- 10 Under **Employees**, select **Profiles**.
- 11 Select the campaign and scheduling period to which you want to link employees, and select **Add Employee to SP**.

The employees displayed are associated with the organizations defined in the **Organization** field in the **Settings** workspace under **Campaigns**. You can *only* select employees associated with these organizations.

- 12 Select the employees you want and select **Add**.

The employees are now linked to the scheduling period you selected, and the Operations queues are linked to the scheduling period. Therefore, when you generate the schedule, these employees are scheduled to work on these queues.

**What to do next**

[Create forecast for Operations root queue](#), page 307

**Related topics**

[Workflow: Define a campaign and scheduling period](#), page 22

## Create forecast for Operations root queue

Create a forecast for an Operations root queue.

The entire volume for the queue is consolidated into the root work queue. The work is then distributed to the target queues. This distribution is done according to the defined parameters in the **VCT** (Volume Capture Tool) **Configuration** screen (in the **Work Administration** module).

**Before you begin**

[Create a campaign and scheduling period for Operations](#), page 306

**Procedure**

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecasts**.
- 2 From the left filter pane, select the campaign and scheduling period you created for the Operations schedule.
- 3 From **Work Queue Name**, select the root Operations queue you created that is linked to the scheduling period.
- 4 From the ribbon, select **Scale**.
- 5 On the **Scale** popup, select **Volume / Activity Handling Time** in the drop-down box.
- 6 Enter new whole numbers in the **Scaled** or **%Change** columns for the root queue.  
For each day during the scheduling period, the volume arrives at the beginning of the shift. Change the Volume and AHT for the root queue that suits your requirements. The Activity Handling Time (AHT) is defined in *minutes* for Operations queues (and not in *seconds* as it is defined for non-Operations queues).
- 7 To apply changes, select **Scale**.

**What to do next**

[Set deadline goals for Operations](#), page 308

**Related topics**

[Scale forecast data](#), page 50

## Set deadline goals for Operations

As an alternative to service level, set *deadline goals* for your Operations queues. A deadline goal aims to complete a work item that arrives during a certain interval by a set time of day. Deadline goals can be set up to one year in advance.

### Before you begin

[Create forecast for Operations root queue](#), page 307

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Goals**, select **Service Goals**.
- 2 From the left filter pane, select the campaign and scheduling period you created for the Operations schedule.
- 3 From **Work Queue Name**, select the root Operations queue you created that is linked to the scheduling period.
- 4 Under **Service Goal Type**, select **Deadline Goals**.  
**Deadline Goals** is displayed *only* when you select an Operations queue.
- 5 In **% of Volume**, enter **100**.  
This value specifies the percentage of arriving work that needs to be completed. As all Operations work items need to be completed *in their entirety*, this value is *always* set to 100%. (Only values 1–100 are valid.)
- 6 In **Completed within Time in Minutes**, set the defined time within which the deadline goal must be completed.
- 7 Select **Save**.

### What to do next

[Generate a schedule for Operations](#), page 308

## Generate a schedule for Operations

Generate a schedule for the Operations queues you created. Make sure to enable **Linked Queue Forecasting** before generating the schedule.

### Before you begin

[Set deadline goals for Operations](#), page 308

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left pane filters, select the campaign and scheduling period you created for Operations queues.
- 3 From **Tools**, select the X on the **Linked Queue Forecasting** button to change it to a blue check mark.

This button ensures that linked queues (or queues used for Operations) are included in the next generated schedule.

- 4 From **Home**, select **Generate Schedule**.
- 5 Set all parameters, and select **Generate**.

The WFM application schedules employees to meet the forecasted volume and deadline goals for the Operations root queue. Schedules are optimized to ensure that you have the employee requirements based on the set deadline goals.

**!** If you update the schedule (such as adding time off, meetings, and training), it affects the volume of work generated for the target work queues. To recalculate the volumes for the target work queues, enable **Linked Queue Forecasting** and select **Recalculate statistics** from **Statistics**.

### What to do next

[Track volume, status, and history of work items](#), page 309

### Related topics

[Generate the schedule automatically](#), page 87

## Track volume, status, and history of work items

You can track and update the status of work items for Operations. You can also view the history of work items.

### Before you begin

[Generate a schedule for Operations](#), page 308

### Procedure

- 1 Go to **Tracking**. Under **Tasks**, select **Volumes**.
- 2 From the left pane, select the employees linked to the queues you want to track, and select **View**.
- 3 For each queue under the **Work Queue** column, view the value in the **Inventory** field.  
This value indicates the net total outstanding work (backlog) for the selected work queue.
- 4 To add new arriving work items, enter this value in the **Arrival** field for the relevant queue, and select **Refresh**.  
When you enter a value in this field, it is *added* to the current value in the **Inventory** field. The arrivals get transformed into volumes through an Integration Server adapter.
- 5 To indicate the number of items *currently being worked on* by employees, enter this value in the **Check-out** field for the relevant queue, and select **Refresh**.  
When you enter a value in this field, it is *subtracted* from the current value in the **Inventory** field. It is then *added* to the current value in the **WIP** (Work in Progress) field.
- 6 To indicate the number of items *that are done* by employees, enter this value in the **Check-in** field for the relevant queue, and select **Refresh**.  
When you enter a value in this field, it is *subtracted* from the current value in the **WIP** (Work in Progress) field.
- 7 Under **Tasks**, select **History**.
- 8 From the left pane, select the employees for which you want to view work history and select **View**.

- 9 View the history of the volume of work items for each event type for each queue: **Arrival**, **Check-out**, and **Check-in**.

For example, you can view the number of items that were checked in for a specific queue on a specific date.

### Related topics

[Workflow: Generate a schedule for Operations queues](#), page 301

## Example: Generating a Linked Queue Forecasting (LQF) schedule

For Linked Queue Forecasting (LQF), the scheduling engine generates schedules for the LQF queues, depending on the way the work is defined to be distributed.

### Create the queues

For example, create four work queues:

- Work Queue 1 is the root queue.
- Work Queue 2 is an extra queue.
- Work Queue 3 is an extra queue.
- Work Queue 4 is an extra queue.

### Define the distribution of work of the queues

Note the following:

- 100% of the items checked into Work Queue 1 flow to Work Queue 2
- Work Queue 2 has two target queues:
  - Work Queue 3
  - Work Queue 4
- 50% of the items checked into Work Queue 2 flow to Work Queue 3
- 50% of the items checked into Work Queue 2 flow to Work Queue 4

### Three levels equal three iterations

There are three levels, or tiers, in this chain, so the scheduling engine goes through a minimum of three iterations to generate the schedule.

### First iteration

- A schedule is generated for Work Queue 1, based on the initial forecast.
- A volume forecast is generated for Work Queue 2, based on the number of items forecasted to be checked in for Work Queue 1.

For example, employees working on Work Queue 1 process 20 items for a 15-minute time bucket. Therefore, the volume forecast for Work Queue 2 is 20 items for each 15-minute time bucket. (100% of Work Queue 1's checked-in items become arrivals for Work Queue 2.)

### Second iteration

- A schedule is generated for Work Queue 1 and Work Queue 2.
- Volume forecasts are generated for Work Queue 3 and Work Queue 4. The forecasts are based on the number of items forecasted to be checked in for Work Queue 2.

For example, employees working on Work Queue 2 process 20 items for a 15-minute time bucket. The volume forecast for Work Queue 3 is 10 items for each 15-minute time bucket. (50% of Work Queue 2's checked-in items become arrivals for Work Queue 3.)

The volume forecast for Work Queue 4 is 10 items for each 15-minute time bucket. (50% of Work Queue 2's checked-in items become arrivals for Work Queue 4.)

### Third iteration

A schedule is generated for Work Queue 1, Work Queue 2, Work Queue 3, and Work Queue 4. In subsequent iterations, schedules are optimized and variances settle.

### Related topics

[Workflow: Generate a schedule for Operations queues](#), page 301

# Workflow: Generate a schedule for Project queues

Project scheduling is a feature that can be used in an Operations environment. In the Operations industry, employees process volume-driven and non-volume driven work, such as filing and inventories. Project scheduling meets the needs of these non-customer-facing activities.

## Before you begin

Set up Project queues, activities, work rules, and skills (*Workforce Management Administration Guide*)

## Workflow

### 1 [Create a campaign and scheduling period for Projects](#), page 312

Create a campaign and scheduling period, and link queues and employees to the scheduling period for Projects.

### 2 [Create a forecast for a Project queue](#), page 313

Create forecasts for all non-project queues and project queues linked to the scheduling period. Forecasts can be based on imported or manually entered historical data.

### 3 [Generate a schedule for Projects](#), page 315

Generate a schedule for project queues, which is the same as creating a schedule that does *not* include Projects. When the schedule is generated automatically, Projects appear on the calendar as shift events.

## Related topics

[Project queue staffing status](#), page 317

# Create a campaign and scheduling period for Projects

Create a campaign and scheduling period, and link queues and employees to the scheduling period for Projects.

## Before you begin

Set up Project queues, activities, work rules, and skills (*Workforce Management Administration Guide*)

## Procedure

### 1 Go to **Forecasting and Scheduling**. Under **Campaigns**, select **Settings**.

### 2 Select **Create Campaign**, complete the fields, and select **Save**.

### 3 Select **Create Scheduling Period**, and complete the fields.

### 4 Select **Skill Based** for the scheduling period.



Project scheduling periods *must* be skill-based scheduling periods.

### 5 Select **Save**.

### 6 Under **Campaigns**, select **Queues**.

### 7 Under **Campaign Name**, expand the campaign and select the scheduling period to which you want to link queues.

- 8 To add queues to the scheduling period, select **Add Queue to Scheduling Period**.
- 9 Select the work queues you want and select **Add Selected Queues**.  
The Project work queues you select *must* be linked to the Project activities you want to schedule during this scheduling period.
- 10 Under **Employees**, select **Profiles**.
- 11 Select the campaign and scheduling period to which you want to link employees, and select **Add Employee to SP**.  
The employees displayed are associated with the organizations defined in the **Organization** field in the **Settings** workspace under **Campaigns**. You can *only* select employees associated with these organizations.
- 12 Select the employees you want and select **Add**.  
The employees are now linked to the scheduling period you selected, and the queues are linked to the scheduling period. When you generate the schedule, these employees are scheduled to work on these queues.

#### What to do next

[Create a forecast for a Project queue, page 313](#)

#### Related topics

[Workflow: Define a campaign and scheduling period, page 22](#)

## Create a forecast for a Project queue

Create forecasts for all non-Project queues and Project queues linked to the scheduling period. Forecasts can be based on imported or manually entered historical data.



Project work queues do *not* support options for entering backlog data, using strategic forecasting weights or reforecasting.

#### Before you begin

[Create a campaign and scheduling period for Projects, page 312](#)

#### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Tactical Forecasts**, select **Forecast**.
- 2 From the left filter pane, select the campaign and scheduling period you created for the Project queues.
- 3 From **Queues**, select a Project queue you created that is linked to the scheduling period.  
Project queues (based on the **Project** media type) represent non-volume driven work. If they have actual volumes and activity handle time populated through VCT chaining, projects can still be based on historical week data.
- 4 Determine the next step:
  - To import historical volume and AHT data into the forecast, from the **Historical weeks to use when forecasting** pane, select **Add Historical Week**. Then, select the week you want.

- To enter volume and AHT data into the forecast manually or to modify imported data, enter these values in the **Project** pane.

You *cannot* enter forecast data for multi-week scheduling periods when in *Period* Zoom view. To zoom into *Week* Zoom or *Day* Zoom view, select the **Zoom In** button and then enter the data.

Once you have modified existing data or added new project data, the **Historical weeks to use when forecasting pane** is unavailable. You can *no longer* select more weeks of historical data for all queues in the scheduling period unless you delete all forecast data by selecting **Clear**.

Alternatively, undo your changes by selecting **Restore**.

**5** Note the following about adding historical weeks:

When there are no Project forecasts added manually, you can still select the actual data from history for both volume and AHT. You can *only* add Historical weeks at a single queue level. You *cannot* add them in a combined queue or at a multi-select queue level. The **Add Historical Week** button is unavailable in these cases.

You can *only* add historical weeks when *no* manually created Projects exist. Therefore, if you have a project on day 1–2 of a scheduling period, you *cannot* add historical weeks.

If you have no Projects defined and you add a historical week, you get one of the following:

- One project for the week, where the duration is equal to the total volume multiplied by the standard time for the historical week.
- One project for every day, where the duration is equal to the total volume multiplied by the standard time for the historical days.

**6** To display the data for the week, select **Weekly Project**.

When the daily totals are displayed, the weighting for the week is *not* included.

**7** From the bottom pane, select **Add**.

The **Total Length (hours)** required for the Project forecast are calculated using the volume and AHT information you selected for the historical week. The other data is automatically calculated based on the historical week you added. You can add more than one historical week for the selected scheduling period.

**8** To save the forecast, select **Save**.

### What to do next

[Generate a schedule for Projects](#), page 315

### Related topics

[Project forecast columns](#), page 315

## Project forecast columns

When you create forecasts for Project queues, there is specific data that defines the forecast for each queue.

Column	Description
Work Queue	Name of the Project work queue associated with the forecast. This value is always the currently selected <i>single</i> queue because you <i>cannot</i> add Projects in a multi-queue or combined queue scenario.
Date	Indicates the start and end dates for the project, which is the forecasted number of required hours for the project. Dates are limited to the scheduling period <i>only</i> . The default dates for a new Project definition are the start and end date of the current view based on the zoom level. One work queue <i>cannot</i> have multiple Projects with overlapping start and end dates.
Total Length (hours)	Forecasted number of hours it takes employees working on this project work queue to process the required amount of work within the specified time period. This value is calculated by multiplying the number of hours required for each historical week by the weight for that week, divided by the sum of the weights. This value is displayed in two decimal places. For example, 20.25 represents 20 hours and 15 minutes.

### Related topics

[Create a forecast for a Project queue, page 313](#)

## Generate a schedule for Projects

Generate a schedule for Project queues, which is essentially the same as creating a schedule that does *not* include Projects.

### Projects added to calendar as shift events or calendar events

When automatically added to the schedule, projects are added as shift events. You can also manually add projects to the schedule as shift events or calendar events. (Calendar events can *only* be manually added to the calendar.) When projects are manually added as calendar events, the activity for the project queue needs to be defined with the parameter **Use in Calendar Event**.

### Before you begin

[Create a forecast for a Project queue, page 313](#)

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 From the left pane filters, select the campaign and scheduling period you created for Project queues.
- 3 From **Home**, select **Generate Schedule**.
- 4 Set all parameters, and select **Generate**.

WFM generates a schedule that includes the forecasted volume requirements and the service level for the Project work queues that are linked to the scheduling period.

Then, WFM schedules Projects as specified in the **Work Rules** module (under **Project Rules**), and takes forecasted requirements for the Project work queues into account:

- Projects *must* occur during the specified time frame, for the specified duration.
- The number of blocks of time devoted to Project work must *not* exceed daily and weekly maximum hours set for employees.
- The number of employees simultaneously working on a specified Project must *not* exceed the specified number.

### What to do next

[View Project queue status](#), page 319

### Related topics

[Generate the schedule automatically](#), page 87

### Related information

Create project activities (*Workforce Management Administration Guide*)

# Project queue staffing status

After a Project queue is included in the schedule and employees begin to work on the queue, you can view the staffing status of the queue. Based on the status, you can make certain decisions related to the staffing of your Project queues.

## Two places to view Project staffing status

There are two areas where you can view Project queue staffing status:

- From the **Statistics** menu, select **Projects**. Projects are displayed under the **Projects** tab at the bottom of the screen.

When viewing a specific project, a threshold status is displayed. This status indicates whether the Project staffing requirements for the current scheduling period are *within*, *above*, *below*, or *far below* the defined threshold.

The color-coded icon represents the threshold status of the Project on the calendar. It provides a quick, easy-to-understand overview of how well the Project is understaffed or overstaffed. This visualization allows you to monitor and adjust staffing levels, as required.

- From the **Resources Information** screen, under the **Calculation details** tab.

View the staffing status of Project queues for a specific campaign, which indicates whether the Project is sufficiently staffed for the current scheduling period.

## Actions to take after viewing Project staffing status

Depending on the status, you can take the appropriate actions:

- If the Project is *overstaffed*, you can *remove* shift events linked to the Project activity and work rule.
- If the Project is *understaffed*, you can *add* shift events linked to the Project activity and work rule.

## Related topics

[Configure Project queue threshold status](#), page 317

[View Project queue status](#), page 319

[View Project resources information](#), page 322

# Configure Project queue threshold status

Configure parameters that define the tolerance percentages for the required staffing of Project queues. Then, set the parameters that define the colors you want to represent the thresholds you defined. These colors appear when you select to view the status of the **Projects** under **Statistics** on the calendar.

## Procedure

- Enter values for the parameters that define the tolerance percentages for the required staffing of Project queues:
  - Go to **Organization Management**. Under **Hierarchies**, select **Organization Settings**.
  - From the **Calendar Queue Ribbon Color Configuration** section, enter values for the following parameters:
    - Project queue above requirements tolerance (%)**

- **Project queue below requirements tolerance (%)**
- 2 Define the colors you want to represent the thresholds you defined for Project queues:
- a. From the logged in user name, select **Preferences**.
  - b. From **My Preferences**, select **Workforce Management**.
  - c. From **Forecasting and Scheduling Calendar**, select the *color* to be displayed for each of the following parameters:
    - **Queue Within Tolerance Color**
    - **Queue Above Tolerance Color**
    - **Queue Below Tolerance Color**
    - **Queue Far Below Tolerance Color**

#### Related topics

[Calendar Queue Ribbon Color Configuration parameters](#), page 318

[Forecasting and Scheduling Calendar Preferences Parameters](#), page 318

## Calendar Queue Ribbon Color Configuration parameters

When configuring the threshold for the Project queues, set the parameters that define the tolerance percentages for the required staffing of Project queues.

These parameters are set in:

**Organization Management, Hierarchies, Organization Settings, Calendar Queue Ribbon Color Configuration**

Parameter	Description
Project queue above requirements tolerance (%)	Defines the percentage <i>above which</i> the staffing for the Project is considered to be <i>above</i> the required value.
Project queue below requirements tolerance (%)	Defines the percentage <i>below which</i> the staffing for the Project is considered to be <i>below</i> the required value.

#### Related topics

[Configure Project queue threshold status](#), page 317

[Forecasting and Scheduling Calendar Preferences Parameters](#), page 318

## Forecasting and Scheduling Calendar Preferences Parameters

Set the parameters that define the *colors* you want to represent the thresholds you defined.

These parameters are set in:

**Preferences, My Preferences, Workforce Management, Forecasting and Scheduling Calendar**

Parameter	Description
Queue Within Tolerance Color	Color displayed if the value is <i>less</i> than the percentage defined for <b>Project queue above requirements tolerance (%)</b> and <i>more</i> than the percentage defined for <b>Project queue below requirements tolerance (%)</b> .
Queue Above Tolerance Color	Color displayed if the value is equal to <i>or higher</i> than the percentage defined for <b>Project queue above requirements tolerance (%)</b> .
Queue Below Tolerance Color	Color displayed if the value is equal to <i>or lower</i> than the percentage defined for <b>Project queue below requirements tolerance (%)</b> .
Queue Far Below Tolerance Color	Color displayed if the value is <i>twice the value</i> of the percentage defined for <b>Project queue below requirements tolerance (%)</b> .

### Related topics

[Configure Project queue threshold status](#), page 317

[Calendar Queue Ribbon Color Configuration parameters](#), page 318

## View Project queue status

You can view the staffing status of Project queues for a specific campaign under **Statistics for Projects**. The staffing status of the Project queue indicates whether the Project is sufficiently staffed for the current scheduling period.

### Before you begin

[Configure Project queue threshold status](#), page 317

### Procedure

- 1 Go to **Forecasting and Scheduling**. Under **Calendar**, select **Calendar**.
- 2 Select a campaign, scheduling period, and Project queue for which you want to view staffing requirements for Projects for the current scheduling period.

**!** You *must* select a Projects queue to view the status of Projects scheduled for that queue. In addition, you can only view Project queue statuses for a specific campaign. You *cannot* view them in *no campaign* mode.

- 3 From **Statistics**, select **Projects**.

Under the **Projects** tab at the bottom of the screen, each Project and details about its staffing status are listed for the selected queue.

- 4 Under the **Projects** tab, find the name of the Project you want.

- 5 Next to the Project name, view the number of hours that are currently scheduled for the Project in the current scheduling period, out of the total number of required hours for the Project.
- 6 Next to this ratio, view the icon, representing the tolerance threshold of the current state of staffing for the Project.
- 7 Determine the next step:
  - To view staffing information about Projects that have been scheduled on an hourly basis for a specific day, select the day and then **Hours or Day**.  
The system displays the time frame in a framed, color-coded box during which Projects *can be scheduled* during the current scheduling period. The shaded part of this box is the time during which Projects *have already been scheduled* for at least one employee during the current scheduling period.
  - To view staffing information about Projects that have been scheduled for a specific day during a week or the whole scheduling period, select the day and then **Week or Period**.  
The system displays the number of hours each day that is currently scheduled for the Project in the current scheduling period.
- 8 Based on this information, determine the next step:
  - If the staffing for the Project is *above* the tolerance threshold, you can *remove* specific shift events linked to the Project activity and work rule from the schedule for the current scheduling period.
  - If the staffing for the Project is *below* the tolerance threshold, you can *add* specific shift events linked to the Project activity and work rule to the schedule for the current scheduling period.

### Related topics

[Project queue status fields](#), page 320

[Example: Viewing Project queue threshold status](#), page 321

## Project queue status fields

When viewing the Project status for a specific queue, the fields under the **Project** tab indicate whether Projects have sufficient staffing for the current scheduling period.

Field	Description
Projects	Indicates the number of Projects in the current scheduling period, out of the total number of Projects defined for the selected queue (in other scheduling periods).
Staffed	Indicates the number of hours in the current scheduling period that the Project is scheduled (staffed).
Sort by	Allows you to sort the list by Project name or staffed hours.
Project name	Specifies the name of the Project.

Field	Description
Staffed hours / Total required hours	Indicates the number of hours that are scheduled for the Project in the current scheduling period, out of the total number of required hours.
Tolerance icon	<p>Indicates whether the currently scheduled hours for the Project are <i>within, above, below</i> or <i>far below</i> the defined tolerance level threshold for staffing the Project.</p> <p>Note the following about the icons:</p> <ul style="list-style-type: none"> <li>The tolerance level thresholds for Project queues are defined in <b>Organization Settings</b> (under <b>Calendar Queue Ribbon Color Configuration</b>).</li> <li>The colors that represent the thresholds are defined in <b>Preferences</b> (under <b>Workforce Management, Forecasting and Scheduling Calendar</b>).</li> <li>The symbols within the icons indicate whether the threshold level is <i>within, above, below</i> or <i>far below</i> the defined tolerance level threshold.</li> </ul>
Scheduled hours in Hours or Day views	<p>Indicates the time frame in a framed, color-coded box during which Projects <i>can be scheduled</i> during the current scheduling period. The time frame is defined by the forecast for the Project queue in the <b>Forecasts</b> module.</p> <p>The shaded part of this box is the time during which Projects <i>have already been scheduled</i> for at least one employee during the current scheduling period.</p> <p>The color of the box around the time frame is the same color as the threshold icon (defined in <b>Preferences</b>, under <b>Workforce Management</b>).</p>
Scheduled hours in Week or Period views	<p>Indicates the number of hours per day that are currently scheduled for the Project in the current scheduling period.</p> <p>In <b>Week</b> view, if you expand a day to open it in <b>Hours</b> view, you can view the scheduled hours as it is displayed in <b>Hours</b> or <b>Day</b> views.</p>

## Related topics

[View Project queue status](#), page 319

[Example: Viewing Project queue threshold status](#), page 321

## Example: Viewing Project queue threshold status

The icon next to the project on the calendar reflects the defined configuration, and the current percentage staffed for projects.

For example:

- 1 The **Project queue above requirements tolerance (%)** parameter is set to **90%**.
- 2 The **Project queue below requirements tolerance (%)** parameter is set to **-90%**.

- 3 Select the **Hours** time resolution.
- 4 For the Filing Project for this scheduling period, the current number of staffed hours is 8, and the total required number of hours is 10. Therefore, the percentage staffed for this Project is 80%, which is considered to be *within* the Project tolerance threshold.
- 5 The color displayed on the line is the color selected by the **Queue Within Tolerance Color** parameter under **Preferences**, which is green.

#### Related topics

[View Project queue status](#), page 319

## View Project resources information

You can view the staffing status of Project queues for a specific campaign on the **Resources Information** screen on the **Calculation details** tab. The staffing status of the Project queue indicates whether the Project is sufficiently staffed for the current scheduling period.

#### Before you begin

[Select campaign data for schedules](#), page 85

#### Procedure

- 1 From the left pane filters, select the campaign and scheduling period you created for Project queues.
- 1 From **Tools**, select **Resources Information**.  
By default, the **Calculation details** tab is selected.
- 2 Under **Projects**, view the staffing status for any Project queues included on the schedule.
- 3 Based on this information, determine the next step:
  - If the staffing for the Project is *overstaffed*, *remove* shift events linked to the Project activity and work rule.
  - If the staffing for the Project is *understaffed*, *add* specific shift events linked to the Project activity and work rule.

#### Related topics

[Calculation details](#), page 136

# Operations terminology

In an Operations environment, certain terminology is used that is different from the terminology used in contact centers.

Contact Center Term	Operations-Equivalent Term
Queue	Work Queue
Contact Volume (CV)	Volume (or V)
Average Handle Time	Activity Handle Time

## Related topics

[Operations scheduling](#), page 298

# Troubleshooting schedule messages

While generating the schedule, the system displays messages that notify you of any warnings or violations found while scheduling. The information in these messages helps you fix any problems with the schedule. Once you resolve the issues, you can then generate the schedule again.

## Topics

Schedule generation messages .....	325
General Issues .....	326
Assignment Rule Issues .....	330
Employee Issues .....	332
Queue Issues .....	335
Goal/Forecast Issues .....	337
Min/Max Hour Issues .....	338
Shift Issues .....	340
Shift Event Issues .....	342
Number of named employees Issues .....	343
Hours of Operations Issues .....	345
Event Issues .....	346
Attendee Issues .....	347
Preference Issues .....	348
Time Bank Issues .....	350
Additional Messages .....	351

# Schedule generation messages

While generating the schedule, the system displays messages that notify you of any warnings or violations found while scheduling. The information in these messages helps you fix any problems with the schedule. Once you resolve the issues, you can then generate the schedule again.

During the scheduling process, the scheduling engine analyzes many factors to provide an optimum schedule. An optimal schedule satisfies your forecast requirements and desired service levels, and incorporates employee availability and preferences. If the scheduling engine *cannot* generate an optimum schedule, it displays messages that let you know where the difficulty lies.

## Related topics

[Generate the schedule automatically](#), page 87

# General Issues

**<Number> profiles without shift assignments were scheduled. It was necessary to satisfy 'Target Agent Ratio' or 'Limit # of Agents to' constraints.**

The scheduling engine created some staffing profiles without any shift assignments to satisfy the **Target Agent Ratio** or **Limit # of Agents To** constraints.

To address this issue, do one of the following:

- 1 Prevent more staffing profiles from being created for the current scheduling period. From **Forecasting and Scheduling** under **Staffing Profiles**, reduce the **Target Agent Ratio** percent or the **Limit # of Agents To** value.
- 2 Verify that the extra staffing profiles that are created have shift assignments. From **User Management** under **Staffing Profile**, create an assignment rule such as *Employees must work between 30 and 40 hours per week* to the staffing profiles.

**It is difficult to create profiles from Template <profile\_name> due to Assignment Rule <assignment\_rule\_name>.**

The scheduling engine was unable to add the staffing profile because it could not create a schedule that complied with the assignment rule defined for the staffing profile. To see how many units were overstaffed or understaffed due to the assignment rule, examine the other messages. Verify that the work pattern of the staffing profile is consistent with the assignment rule and could be followed *without* violating the rule. Also, verify that all other assignment rules assigned to the staffing profile are consistent with the named assignment rule.

**It is difficult to create profiles from Template <profile\_name> due to overstaffing.**

The scheduling engine was unable to add the staffing profile because it caused excessive overstaffing. It is unlikely that the scheduling engine added more staffing profiles to the starting schedule. However, it can still change the mix of staffing profiles by removing others and replacing them.

If you want the scheduler to add more staffing profiles of the specified type, there are several possibilities:

- You can set the **Scheduling algorithm behavior** slider bar toward **Prefer Overstaffing** in the scheduler options.
- You can increase the forecast from the **Forecast** module.
- You can increase the service goals from the **Goals & Requirements** module.
- You can remove existing employees from the calendar.

**It is difficult to create profiles from Template <profile\_name> due to the number of named employees in Organization <organization\_name>.**

The scheduling engine was unable to add the staffing profile because the number of named employees would have been exceeded in the named organization. If you want to add more staffing profiles from the specified organization, increase the number of named employees under **Organization Settings** in the **Organization Management** module.

**It is difficult to create profiles from Template <profile\_name> due to work pattern issues.**

The scheduling engine was unable to add the staffing profile. It could not create a schedule that complied

with the assigned work pattern of the staffing profile. To see if the work pattern was valid, examine the other messages. Check if there were ignored shifts, or if there was a shift possible on every day. Also, verify that the occurrence grid of the work pattern is consistent with the min/max consecutive shifts of the work pattern and the max consecutive working days specified in the organization of the staffing profile.

**No agents are scheduled to work between <date> <time> and <date> <time>.**

Even though there were interactions arriving between the specified dates and times, there are no employees scheduled. The employees' work patterns or work rules, such as Max Hours, might not have allowed them to be scheduled.

To address this issue, there are several possibilities:

- Add more employees to the scheduling period from the **Forecasting and Scheduling Employees** module.
- Add more shifts to the employees' work patterns in **Work Administration, Work Rules**, and **Work Patterns**, or add more start times to shifts on the **Shifts** screen of the **Work Rules** module.
- Increase the employees' **Maximum Paid Hours** in **User Management, Employees**, and **Work Rules**.

**Only <number> agents at: <date> <time> are scheduled, but Min Agents constraint requires <number> agents.**

The scheduler was not able to satisfy the Min Agents constraint during the specified times. The employees' work patterns or work rules such as Max Hours may not have allowed them to be scheduled.

To address this issue, there are several possibilities:

- Add more employees to the scheduling period in the **Forecasting and Scheduling Employees** module.
- Add more shifts to the employees' work patterns on the **Work Patterns** screen in the **Work Administration Work Rules** module, or add more start times to the shifts on the **Shifts** screen of the **Work Rules** module.
- Increase the employees' **Maximum Paid Hours** in **User Management, Employees**, and **Work Rules**.
- Reduce the number specified for the parameter, **Schedule at least this number of employees** on the **Preferences** tab on the **Generate Schedule** screen.

**Only <number> agents at <queue\_name>:<date> <time> are scheduled, but Min Agents constraint requires <number> agents.**

In a skill-based environment, the scheduling engine tries to meet the value defined for the parameter, **Schedule at least this number of employees**, for every queue. In this case, it was not able to satisfy this value during the specified times. The employees' work patterns or work rules, such as **Maximum Paid Hours**, may not have allowed them to be scheduled.

To address this issue, there are several possibilities:

- Add more employees to the scheduling period in the **Forecasting and Scheduling Employees** module.

- Add more shifts to the employees' work patterns on the **Work Patterns** screen in the **Work Administration Work Rules** module, or add more start times to the shifts on the **Shifts** screen of the **Work Rules** module.
- Increase the employees' **Maximum Paid Hours** in **User Management, Employees**, and **Work Rules**.
- Reduce the number specified for the parameter, **Schedule at least this number of employees** on the **Preferences** tab on the **Generate Schedule** screen.

**Organization <organization\_name> is misaligned from the current scheduling period by more than 24 hours.**

This message is given if the week start day of the organization to which the employees belong is more than a day different from the campaign's week start day. The scheduling engine always schedules the weeks defined for the organization for the employees who are linked to the scheduling period.

For example, a campaign has a week start of Sunday. Some employees in the scheduling period belong to an organization with a week start of Monday. When this scheduling period is scheduled, those employees are scheduled from Monday to Monday; the scheduling engine does *not* modify their schedule on the first Sunday of the scheduling period. In this case, it might be difficult to verify that all shift assignments created by the scheduling engine are acceptable.

**The sum of the maximum target agent ratios for staffing profiles is <number>. This must be at least 100.**

It is *not* possible to schedule less than a 100% ratio for staffing profiles. For example, you *cannot* enter a 60% **Maximum Ratio** for the full-time staffing profile, and a 30% **Maximum Ratio** for the part-time staffing profile. To resolve this issue, go to **Forecasting and Scheduling, Staffing Profiles, Staffing Profiles**. In the **Maximum Ratio** field for every staffing profile, adjust the value so that the total is 100%.

**The sum of the minimum target agent ratios for staffing profiles is <number>. This must be at most 100.**

It is *not* possible to schedule more than a 100% ratio of staffing profiles. For example, you cannot enter a 40% **Min. Ratio** for the full-time staffing profile, and an 80% **Min. Ratio** for the part-time staffing profile. To resolve this issue, go to **Forecasting and Scheduling, Staffing Profiles, Staffing Profiles**. In the **Min. Ratio** field for every staffing profile, adjust the value so that the total is 100.

**There are no employees in this scheduling period.**

Before generating the schedule, you need to link employees to a scheduling period. To link *all* employees from *all* organizations defined for the scheduling period, go to **Forecasting and Scheduling**. Under **Campaigns**, select **Settings**. From the left pane, expand a campaign and select a scheduling period. Under **General Settings**, select **Use All Employees in Linked Organizations**. To link *specific* employees from the organizations defined for the scheduling period, go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**. Select a campaign and scheduling period, and select **Add Employee to SP**. Select the employees you want and select **Add**.

**There is an active employee filter and no employees are selected for this scheduling period.**

Before generating a schedule, verify that employees are selected from the left pane **Employees** filter.

**Warning: No staffing profiles have been linked to this scheduling period.**

For the **Employees to schedule** parameter on the **Preferences** tab on the **Generate Schedule** screen, you have selected either **Staffing profiles only** or **Employees and staffing profiles**. Before scheduling staffing profiles, you need to add them to the scheduling period. Go to **Forecasting and Scheduling**, select **Staffing Profiles**, and **Staffing Profiles**. Select the campaign and scheduling period. Then, select the staffing profile and select **Add to SP**.

**Warning: The number of employees from Organization <organization\_name> selected to be scheduled in this scheduling period is more than twice the number of named employees in that organization.**

It is likely your number of named employees is too low. The number of named employees is set in the **Organization Settings** in the **Organization Management** module.

**Warning: The Workforce Planner will not add any new agents when scheduling with a filter active.**

Before the scheduling engine adds any staffing profiles to the scheduling period, clear your employee filter.

**You are scheduling into the past: This scheduling period begins at <day\_of\_week>, <date>, which is before the current time of <day\_of\_week>, <date>.**

You are scheduling a period that starts earlier than the current time. This message is not a fatal one—the scheduling engine continues to schedule, if you want.

**Related topics**

[Generate the schedule automatically](#), page 87

# Assignment Rule Issues

## **Rotation rule <rotation\_name> has work patterns of a different employee type.**

Typically, employees can only be assigned work patterns of their own employee type, but this rotation contains multiple employee types. The scheduling engine still assigns the work patterns, but you might want to verify that the employee types are set correctly on the **Work Patterns** screen of the **Work Rules** module, and that the rotation contains the correct work patterns in the **Assignment Rules** screen of the **Work Rules** module.

## **Violation: you have overscheduled <employee\_name> by <number><units> or <number>% in period <day\_of\_week>, <date> to <day\_of\_week>, <date> for rule <assignment\_rule\_name>.**

The scheduling engine was unable to create a schedule that satisfied the named assignment rule. Verify that the employee's work pattern and **Minimum Paid Hours** are consistent with the assignment rule, and can be followed *without* violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule.

## **Violation: you have under-scheduled <employee\_name> by <number><units> or <number>% in period <day\_of\_week>, <date> to <day\_of\_week>, <date> for rule <assignment\_rule\_name>.**

The scheduling engine was unable to create a schedule that satisfied the named assignment rule. Verify that the employee's work pattern and **Maximum Paid Hours** are consistent with the assignment rule, and can be followed *without* violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule.

## **Warning: it is projected that you may have overscheduled <employee\_name> by <number><units> or <number>% in period <day\_of\_week>, <date> to <day\_of\_week>, <date> for rule <assignment\_rule\_name>.**

The scheduling engine was unable to create a schedule that satisfied the percentage of the multi-week assignment rule that should have been scheduled in the current period. Verify that the employee's work pattern and **Minimum Paid Hours** are consistent with the assignment rule, and can be followed *without* violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule. The scheduling engine will try to "catch up" by scheduling fewer units in future periods.

## **Warning: it is projected that you may have under-scheduled <employee\_name> by <number><units> or <number>% in period <day\_of\_week>, <date> to <day\_of\_week>, <date> for rule <assignment\_rule\_name>.**

The scheduling engine was unable to create a schedule that satisfied the percentage of the multi-week assignment rule that should have been scheduled in the current period. Verify that the employee's work pattern and **Maximum Paid Hours** are consistent with the assignment rule, and can be followed *without* violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule. The scheduling engine will try to "catch up" by scheduling more units in future periods.

## **Employees: <employee\_name> and <employee\_name> are on the same team, but they do not have the same min/max hours.**

If the team assignment rule specifies that employees must start at the same time, end at the same time,

and work the same days, then the employees must also have the same **Minimum Paid Hours** and **Maximum Paid Hours**. You can adjust the hours in **User Management**, **Employees**, and **Work Rules**. Alternatively, modify the team assignment rule on the **Assignment Rules** screen of the **Work Administration Work Rules** module.

**Employees:** <employee\_name> **and** <employee\_name> **are on the same team, but they do not have the same Work Patterns.**

If the team assignment rule specifies that employees must start at the same time, end at the same time, and work the same days, then the employees must also have the same work patterns. You can change their work pattern assignment in **User Management**, **Employees** and **Work Rules**. Alternatively, modify the team assignment rule on the **Assignment Rules** screen of the **Work Administration Work Rules** module.

#### Related topics

[Generate the schedule automatically](#), page 87

# Employee Issues

## **Rotation rule <rotation\_name> has work patterns of a different employee type.**

Typically, employees can only be assigned work patterns of their own employee type, but this rotation contains multiple employee types. The scheduling engine still assigns the work patterns, but you might want to verify that the employee types are set correctly on the **Work Patterns** screen of the **Work Rules** module, and that the rotation contains the correct work patterns in the **Assignment Rules** screen of the **Work Rules** module.

## **Violation: you have overscheduled <employee\_name> by <number><units> or <number>% in period <day\_of\_week>, <date> to <day\_of\_week>, <date> for rule <assignment\_rule\_name>.**

The scheduling engine was unable to create a schedule that satisfied the named assignment rule. Verify that the employee's work pattern and **Minimum Paid Hours** are consistent with the assignment rule, and can be followed *without* violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule.

## **Violation: you have under-scheduled <employee\_name> by <number><units> or <number>% in period <day\_of\_week>, <date> to <day\_of\_week>, <date> for rule <assignment\_rule\_name>.**

The scheduling engine was unable to create a schedule that satisfied the named assignment rule. Verify that the employee's work pattern and **Maximum Paid Hours** are consistent with the assignment rule, and can be followed *without* violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule.

## **Warning: it is projected that you may have overscheduled <employee\_name> by <number><units> or <number>% in period <day\_of\_week>, <date> to <day\_of\_week>, <date> for rule <assignment\_rule\_name>.**

The scheduling engine was unable to create a schedule that satisfied the percentage of the multi-week assignment rule that should have been scheduled in the current period. Verify that the employee's work pattern and **Minimum Paid Hours** are consistent with the assignment rule, and can be followed *without* violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule. The scheduling engine will try to "catch up" by scheduling fewer units in future periods.

## **Warning: it is projected that you may have under-scheduled <employee\_name> by <number><units> or <number>% in period <day\_of\_week>, <date> to <day\_of\_week>, <date> for rule <assignment\_rule\_name>.**

The scheduling engine was unable to create a schedule that satisfied the percentage of the multi-week assignment rule that should have been scheduled in the current period. Verify that the employee's work pattern and **Maximum Paid Hours** are consistent with the assignment rule, and can be followed *without* violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule. The scheduling engine will try to "catch up" by scheduling more units in future periods.

## **Employees: <employee\_name> and <employee\_name> are on the same team, but they do not have the same min/max hours.**

If the team assignment rule specifies that employees must start at the same time, end at the same time,

and work the same days, then the employees must also have the same **Minimum Paid Hours** and **Maximum Paid Hours**. You can adjust the hours in **User Management**, **Employees**, and **Work Rules**. Alternatively, modify the team assignment rule on the **Assignment Rules** screen of the **Work Administration** **Work Rules** module.

**Employees:** <employee\_name> **and** <employee\_name> **are on the same team, but they do not have the same Work Patterns.**

If the team assignment rule specifies that employees must start at the same time, end at the same time, and work the same days, then the employees must also have the same work patterns. You can change their work pattern assignment in **User Management**, **Employees** and **Work Rules**. Alternatively, modify the team assignment rule on the **Assignment Rules** screen of the **Work Administration** **Work Rules** module.

**Employee** <employee\_name> **does not have any work patterns available.**

You must assign at least one work pattern to the employee before the employee can be scheduled. Work patterns are assigned to employees in the **User Management** module, under **Employees** and **Work Rules**.

**Employee** <employee\_name> **has 0.0 maximum paid hours per week.**

The employee will not be scheduled unless the employee's **Maximum Paid Hours** are greater than 0. You can adjust the hours in **User Management**, **Employees**, and **Work Rules**.

**Employee** <employee\_name> **has a shift assignment on** <date> **with an abnormally long duration of** <number> **hours -- the maximum length of a shift is 23.27 hours.**

You *cannot* schedule a shift that is longer than 23.75 hours. Adjust the length of the shift and reschedule.

**Employee** <employee\_name> **has the skills to work** <media\_type> **queues, but is not linked to any shifts that allow the employee to work** <media\_type> **queues.**

In multi-contact scheduling, the employee has skills for some media, but is not linked to any work patterns that contain shifts with an activity that includes the media. For example, even if an employee has skills to work email queues, it is not possible for the employee to work on email unless one of his work patterns contains a shift with an activity that includes the Email media.

**Employee** <employee\_name> **is not qualified to work on any of the queues in this scheduling period.**

In skill-based scheduling, the named employee does *not* have any of the skills required by the campaign's queues. To assign the employee the required skills, go to **User Management**, **Employees**, and **Skills**. You can create skills for the organization in **Organization Management**, **Employee Attributes**, and **Skills**.

**Employee** <employee\_name> **was deleted during the span of the current scheduling period.**

An employee has been removed from one of the organizations linked to your campaign and will *not* be scheduled after the deletion date. The employee's names will remain on the schedule, however, and you can give the employee a shift assignment manually.

**Note: Employee <employee\_name> has an end date of <day\_of\_week>, <date>, and the scheduling period ends on <day\_of\_week>, <date>.**

An employee has been terminated from one of the organizations linked to your campaign and will not be scheduled after the termination date. The employee's names will remain on the schedule, however, and you can give the employee a shift assignment manually.

**Note: Employee <employee\_name> has a start date of <day\_of\_week>, <date>, and the scheduling period starts on <day\_of\_week>, <date>.**

An employee has been hired during the scheduling period and will not be scheduled before the hire date. The employee's names will remain on the schedule, however, and you can give the employee a shift assignment manually.

### Related topics

[Generate the schedule automatically](#), page 87

# Queue Issues

## Average proficiency on queue <queue\_name> ( <number> ) is greater than 1.

If the average proficiency is greater than 1, then the AHT used by the scheduling engine will be greater than the AHT forecast in the **Forecast** module. Proficiency can be set in the **Employees** module.

## Average proficiency on queue <queue\_name> ( <number> ) is less than 1.

If the average proficiency is less than 1, then the AHT used by the scheduling engine will be less than the AHT forecast in the **Forecast** module. Proficiency can be set in the **Employees** module.

## In the forecast, the call volume at <date><time> is <number>, but the average handling time is 0.000.

If the contact volume is greater than 0, the average handling time (AHT) must also be greater than 0. Adjust these numbers in the **Forecast** module. If you are unsure why that value is zero, check the historical contact volume you are using for your forecast. If this value is 0, you should check your ACD reports to determine why the AHT was zero. Sometimes, this is due to your ACD reporting calls in one interval (when the contact arrived) and AHT in the next interval (when the contact completed).

## Patience for Queue <queue\_name> is <number> seconds, which is shorter than the Service Time of <number> seconds.

In a skills-based environment, the patience should be greater than the service goal time. If the patience is less than the service goal time, the service level forecasts will be inaccurate. Adjust the service goal time and patience in the campaign's **Service Goals** module.

## Queue <queue\_name>: In the forecast, the call volume at <date><time> is <number>, but the average handling time is 0.000.

In a skills-based environment, if the contact volume is greater than 0 on the named queue, the average handling time (AHT) must also be greater than 0. Adjust these numbers in the **Forecast** module. If you are unsure why that value is zero, check the historical contact volume you are using for your forecast. If this value is 0, you should check your ACD reports to determine why the AHT was zero. Sometimes, this is due to your ACD reporting calls in one interval (when the contact arrived) and AHT in the next interval (when the contact completed).

## The number of employees qualified to work queue Combined Queue (<number>) is less than the minimum staffing (<number> ).

It is likely that the minimum staffing is too high. You should reduce the minimum staffing required in the scheduler options, or add more employees to the scheduling period in the campaign's **Employees** module.

## The number of employees qualified to work queue <queue\_name> ( <number> ) is less than the minimum staffing ( <number> ).

In a skill-based environment, the scheduler will try to meet the minimum staffing for every queue. It is likely that the minimum staffing is too high. You should reduce the minimum staffing required in the scheduler options, add more employees to the scheduling period in the campaign's **Employees** module, or give more employees the skill to work on the named queue in the organization's **Employees** module.

**There are no agents qualified to answer calls on queue <queue\_name>.**

You are using skill-based scheduling and none of the agents have the skills linked to the queue. Either change the skills linked to the queue in the **Operations** module or assign the skill to some employees in the **Employees** module.

**For queue <queue\_name>, the reserve threshold is 0. This value should probably be greater than 0.**

The reserve threshold time should be greater than 0; otherwise, there is little difference between a primary skill and a reserve skill.

**For queue <queue\_name>, the reserve threshold 1 (<number> seconds) is greater than the reserve threshold 2 (<number> seconds).**

The second reserve threshold time should be greater than the first reserve threshold time since it is assumed that the Agents with reserve 1 skills should be used before agents with reserve 2 skills.

### Related topics

[Generate the schedule automatically](#), page 87

# Goal/Forecast Issues

**In Queue <queue\_name>, the Service Level goal should have some non-zero values. Please ensure that a service level goal has been set for this queue.**

You must set service levels for each queue and for each day. Adjust your service levels in the **Service Goals** module. If you are in a skill-based scenario, be sure to set service goals for all of your queues. If you did set your Service level goals and they are still at 0, check to be sure your hours of operation are set in the **Operations** module, and check to be sure you have created a forecast in the **Forecast** module.

## Related topics

[Generate the schedule automatically](#), page 87

## Min/Max Hour Issues

**Employee <employee\_name> is working <number> paid hours, which is greater than the specified maximum <number> paid hours.**

Because this message does not include any information about work hours, some other factor is causing this problem.

Here are some things to evaluate:

- **Work Pattern issues**—Perhaps the occurrence grid or the min consecutive days set in the work pattern does not allow the max hours to be reached.
- **Scheduler options**—If you are rescheduling, check to see if you have **Don't remove people** checked. If this is checked, no shift assignments can be removed.

**Employee <employee\_name> is working <number> paid hours, which is less than the specified minimum <number> paid hours.**

Because this message does not include any information about work hours, some other factor is causing this problem.

Here are some things to evaluate:

- **Unavailability and Hours of Operation**—Do you have any events that are marked **Makes employee unavailable**? These unavailability events will prevent the scheduler from adding shifts. The scheduler is also unable to place shifts when the campaign or organization is closed.
- **Number of named employees**—Perhaps the scheduler cannot add more hours due to the number of named employees for the organization being reached.
- **Work Pattern Issues**—Perhaps the occurrence grid or the max consecutive days set in the work pattern do not allow the min hours to be reached.
- **Scheduler Options**—If you are rescheduling, check to see if you have **Don't add people** checked. If this is checked, no additional shift assignments be made. The scheduler can only adjust shifts around.

**The maximum paid hours for employee <employee\_name> is <number>, but according to his/her work patterns, his/her minimum possible paid hours is <number>.**

This message means you have a mismatch between the **Maximum Paid Hours** field in the **Employees** module and the minimum hours that can be worked set by the work patterns you have linked to this employee. You should correct this message before you continue to schedule; otherwise, you must reschedule or manually add shift assignments to ensure the correct number of hours.

Here are some steps to correct it:

- 1 First, determine what the minimum and maximum hours for this employee should be. Then, re-evaluate the error message.
- 2 If the maximum paid hours in parentheses are correct, then evaluate the work patterns that are linked to the employee. Check the shifts inside each of the work patterns to ensure they have the right amount of paid time. Make sure your breaks are set correctly to paid/unpaid. Remember, if you get this message, you have too many hours in your work pattern.
- 3 If the maximum paid hours number is not correct and the number the work patterns provide is correct, return to the **Employees** module in Organization mode and adjust the **Max Pd Hrs** field with

the correct value. Although you can continue and the employee will be scheduled for the correct number of hours, be sure to fix the mistake.

**The minimum paid hours for employee <employee\_name> is <number>, but according to his/her work patterns, his/her maximum possible paid hours is <number>.**

This message means you have a mismatch between the **Min Hours** field in the **Employees** module and the maximum hours that can be worked set by the work patterns you have linked to this employee.

This message tells you that you do not have enough paid hours in the work pattern to meet the minimum hours you have set in the **Employees** module. You should correct this message before you continue to schedule; otherwise, you must reschedule or manually add shift assignments to ensure the correct number of hours.

Here are some steps to correct it:

- 1 First, determine what the minimum and maximum hours for this employee should be. Then, re-evaluate the error message.
- 2 If the minimum paid hours are correct, you should evaluate the work patterns that are linked to the employee. Check the shifts inside each of the work patterns to ensure they have the right amount of paid time. Remember, if you get this message you are not scheduling enough hours.
- 3 Check your shift lengths.
- 4 Be sure your breaks are set correctly to paid/unpaid.
- 5 If the minimum hours are not correct and the amount that the work rules supply is correct, simply return to the **Employees** module in the organization and adjust the **MIN PD HRS** field with the correct value. Although you can continue and the employee will be scheduled for the correct number of hours, be sure to fix the mistake.

**Related topics**

[Generate the schedule automatically](#), page 87

# Shift Issues

**<Employee\_name> has not been assigned a shift on <date>, but he/she is not allowed an OFF shift that day in any work pattern.**

The scheduling engine was unable to assign a shift assignment to the named employee on the given date, but that employee was also not allowed to have a day off on that date.

There are several possible reasons and resolutions for this issue:

- 1 Verify that the employee has some shifts “checked” in the employee’s work patterns’ occurrence grids on the given date in the **Work Rules** module.
- 2 Check the other warning messages to see if the shifts that are allowed in the employee’s occurrence grid are being ignored.
- 3 If the number of named employees for the employee’s organization has been reached, the scheduler will not schedule the employee for any shift assignment. The number of named employees can be increased in the organization’s **Operations** module.
- 4 Verify that a shift can be added on the given date without violating the max consecutive days specified in the organization’s **Operations** module or the min/max consecutive shifts specified in the **Work Pattern** page of the **Work Rules** module.

**<Work\_pattern\_name> has an invalid shift linked to it which will be ignored.**

The work pattern will be ignored because one of the linked shifts was invalid. Examine the other messages to determine why the shift was invalid. It might be due to the shift event windows or the hours of operation.

**No shifts can occur on <day\_of\_week> in work pattern <work\_pattern\_name>.**

This tells you that the indicated day is not checked in the **Work Pattern Occurrences** page for any shifts or for a possible days off in that work pattern. If you want to have shifts assigned on Mondays for that page, then the shifts should be checked. If you do not want to have shifts scheduled on that day, you should check **Possible Day Off**.

**On <date>, Employee <employee\_name> has a custom shift assignment which is in a consistent start group, but has an invalid start time.**

The named employee is working a work pattern that has consistent start times set, but the employee also has a custom shift assignment on the given date that was manually modified, such that its start time is not allowed by the shift definition. The scheduler will not be able to schedule other shift assignments of that type start consistently unless the shift assignment is removed or moved to an allowed start time.

**Shift <shift\_name> cannot be scheduled as shift events: <shift\_event\_names> cannot all fit in the overlapping start/end window.**

This shift will be ignored because it is not possible to fit all of the named shift events within their overlapping start/end window. The start/end windows for the shift events must be adjusted in the **Shift Events** page of the organization’s **Work Rules** module, such that they have less overlap.

**Shift <shift\_name> does not fit within the hours of operation for any day in the week.**

This shift will be ignored because it does not fit inside the hours of operation for its organization on any

day in the week. For example, the shift might start at 8 a.m., but the organization is closed on the weekends and only opens at 9 a.m. on the weekdays.

**Shift <shift\_name> will be ignored for Employee <employee\_name> because he/she cannot work shift <shift\_name> on any queue this week.**

If the shift's primary activity has associated media, but the employee cannot work any queue of the media, then the shift will be ignored. For example, an employee is linked to a work pattern that contains a shift named "Email + Fax 8 hour Shift." This shift has a primary activity named "Email + Fax" that is associated with two media: Email and Fax. Now, if the employee has no skills to work any Email or Fax queues, then this shift will be ignored. Similarly, if no Email or Fax queues are linked to the scheduling period, then this shift will be ignored.

**Shift <shift\_name> will be ignored for Profile <profile\_name> because he/she cannot work shift <shift\_name> on any queue this week.**

If the shift's primary activity has associated media, but the staffing profile cannot work any queue of the medias, then the shift will be ignored. For example, a profile is linked to a work pattern that contains a shift named "Email + Fax 8 hour Shift." This shift has a primary activity named "Email + Fax" that is associated with two media: Email and Fax. Now, if the profile has no skills to work any Email or Fax queues, then this shift will be ignored. Similarly, if no Email or Fax queues are linked to the scheduling period, then this shift will be ignored.

### Related topics

[Generate the schedule automatically](#), page 87

# Shift Event Issues

## **Shift <shift\_name> has an invalid shift event.**

The shift will be ignored because one of the linked shift events was invalid. Examine the other messages to determine why the shift event was invalid. It might be due to an illegal window.

## **Shift <shift\_name> will be ignored for Employee <employee\_name> as he/she cannot work shift event <shift\_event\_name> on any queue this week.**

If the shift events' activity has associated media, but the employee cannot work any queue of the media, then the shift will be ignored. For example, an employee is linked to a work pattern that contains a shift named "8 hour Shift with 1 hour Email + Fax." This shift has a shift event named "1 hour Email + Fax." This shift event has an activity named "Email + Fax" that is associated with two media: Email and Fax. Now, if the employee has no skills to work any Email or Fax queues, then this shift will be ignored. Similarly, if no Email or Fax queues are linked to the scheduling period, then this shift will be ignored.

## **Shift <shift\_name> will be ignored for Profile Template <employee\_name> because he/she cannot work shift event <shift\_event\_name> on any queue this week.**

If the shift events' activity has associated media, but the staffing profile cannot work any queue of the media, then the shift will be ignored. For example, a profile is linked to a work pattern that contains a shift named "8 hour Shift with 1 hour Email + Fax." This shift has a shift event named "1 hour Email + Fax." This shift event has an activity named "Email + Fax" that is associated with two Media: Email and Fax. Now, if the profile has no skills to work any Email or Fax queues, then this shift will be ignored. Similarly, if no Email or Fax queues are linked to the scheduling period, then this shift will be ignored.

## **Shift event <shift\_event\_name> has an illegal window for Shift <shift\_name>.**

The named shift event does not fit within the shift or the shift event's start/end window does not fit in the shift. The shift event must be modified to have a shorter duration or an earlier start/end window in the Shift Event tabs of the organization's **Work Rules** module.

### **Related topics**

[Generate the schedule automatically](#), page 87

# Number of named employees Issues

## **Shift <shift\_name> has an invalid shift event.**

The shift will be ignored because one of the linked shift events was invalid. Examine the other messages to determine why the shift event was invalid. It might be due to an illegal window.

## **Shift <shift\_name> will be ignored for Employee <employee\_name> as he/she cannot work shift event <shift\_event\_name> on any queue this week.**

If the shift events' activity has associated media, but the employee cannot work any queue of the media, then the shift will be ignored. For example, an employee is linked to a work pattern that contains a shift named "8 hour Shift with 1 hour Email + Fax." This shift has a shift event named "1 hour Email + Fax." This shift event has an activity named "Email + Fax" that is associated with two media: Email and Fax. Now, if the employee has no skills to work any Email or Fax queues, then this shift will be ignored. Similarly, if no Email or Fax queues are linked to the scheduling period, then this shift will be ignored.

## **Shift <shift\_name> will be ignored for Profile Template <employee\_name> because he/she cannot work shift event <shift\_event\_name> on any queue this week.**

If the shift events' activity has associated media, but the staffing profile cannot work any queue of the media, then the shift will be ignored. For example, a profile is linked to a work pattern that contains a shift named "8 hour Shift with 1 hour Email + Fax." This shift has a shift event named "1 hour Email + Fax." This shift event has an activity named "Email + Fax" that is associated with two Media: Email and Fax. Now, if the profile has no skills to work any Email or Fax queues, then this shift will be ignored. Similarly, if no Email or Fax queues are linked to the scheduling period, then this shift will be ignored.

## **Shift event <shift\_event\_name> has an illegal window for Shift <shift\_name>.**

The named shift event does not fit within the shift or the shift event's start/end window does not fit in the shift. The shift event must be modified to have a shorter duration or an earlier start/end window in the Shift Event tabs of the organization's **Work Rules** module.

## **All named employees for Organization <organization\_name> are in use; more hours may not be scheduled unless the Number of named employees is increased.**

At some time in the scheduling period, every named employee is being used so no more employees or staffing profiles can be scheduled from that organization. If you want more employees to be scheduled, you must increase the number of named employees in the organization's **Operations** module.

## **From <date><time> to <date><time>, the number of employees scheduled in Organization <organization\_name> exceeds the number of named employees in the call center (<number>).**

During the time period specified, employees and staffing profiles from the named organization are using more named employees than the specified number of named employees. The scheduler will remove shift assignments from the scheduling period until the number of named employees is not exceeded. However, the scheduler will not remove shift assignments that are locked. If you want more employees to be scheduled, you must increase the number of named employees in the organization's **Operations** module.

**The Number of named employees for organization <organization\_name> is 0. Defaulting to unlimited number of named employees for the organization.**

The number of named employees represents the number of phones available at any one time and determines the maximum number of agents that will be scheduled during any single 15-minute interval. If it is set to 0 in the organization's **Operations** module, the scheduler can schedule more agents than there are named employees. Enter the maximum number of named employees to avoid this.

**Related topics**

[Generate the schedule automatically, page 87](#)

# Hours of Operations Issues

**Employee <employee\_name> has Work Pattern <work\_pattern\_name> which contains Shift <shift\_name>, but Shift <shift\_name> does not fit in the hours of operation for Organization <organization\_name> on <date>.**

The named employee has a shift specified in their work patterns' occurrence grid that cannot be scheduled due to their organization's hours of operation.

This shift should be removed from the occurrence grid on that day in the **Work Pattern** page of the organization's **Work Rules** module.

## Example: Shifts conflicting with hours of operation

- A shift is checked for Sunday in the work pattern's occurrence grid, but this employee's organization is not open on Sunday.
- A shift that must start at 8:00 AM might be checked for Monday in the work pattern's occurrence grid, but this employee's organization does not open until 9 a.m. on Monday.

## Related topics

[Generate the schedule automatically](#), page 87

# Event Issues

**Employee <employee\_name> has a shift event overlapping the Event with comment '<event\_comment>' at <date><time>.**

The scheduling engine attempts to always schedule shift events outside of calendar events, but it was unable to schedule the named shift event outside of the listed event. You might need to manually modify the calendar event or the shift event. Additionally, you can check the start/end windows for the shift event to see if they can be expanded. If the calendar event is a floating event or a class, you can also check the start/end window of the floating event or class to see if they can be expanded as well.

**Class <event\_comment> at <date><time> requires at least <number> attendees but there are only <number>.**

The scheduler was unable to satisfy the class attribute **Minimum number of Attendees**.

Here are some possibilities to correct it:

- 1 Make sure that min/max attendees can accommodate the required attendees (required attendees may not divide into min/max attendees).
- 2 There may be a group of employees scheduled at some time due to their work patterns, where the size of the group is less than minimum number of attendees.
- 3 The scheduler option attribute **Schedule at least X agents per queue** might be preventing agents from attending a class.

**Class <event\_comment> at <date><time> requires no more than <number> attendees but there are <number>.**

The scheduler was unable to satisfy the class attribute **Maximum number of Attendees**. Make sure that min/max attendees can accommodate the required attendees (required attendees might not divide into min/max attendees).

## Related topics

[Generate the schedule automatically](#), page 87

# Attendee Issues

**Employee <employee\_name> could not be scheduled to attend the Event with comment '<event\_comment>' at <date>.**

The named employee does not have a shift assignment "underneath" a calendar event or a floating event that he is required to attend. The employee's availability might not coincide with the event time. This generally implies that there are other calendar events overlapping available times or the employee's work patterns do not coincide with the times the event starts.

**Employee <employee\_name> is not attending class <event\_comment> as required.**

The named employee does not have a shift assignment "underneath" a class session that the employee is required to attend.

Here are some possibilities to correct it:

- Employee availability may not coincide with class times. This generally implies that there are other calendar events overlapping available class times or the employee's work patterns do not coincide with the times the class may start.
- The scheduler option attribute **Schedule at least X agents per queue** might be preventing agents from attending a class.

## Related topics

[Generate the schedule automatically](#), page 87

# Preference Issues

## **Employee <employee\_name> is using both start time/day off preferences and work pattern preferences.**

You should not use both work pattern preferences and start time/day off preferences. You can remove work pattern preferences by setting all work pattern preference values to 1 in the **Work Pattern** page of the **Employees** module. If both are used, the start time/day off preferences take priority.

## **Employee <employee\_name> was assigned to work pattern <work\_pattern\_name>. The employee has <number> work patterns which (s)he prefers more than the assigned pattern.**

The named employee did not receive his or her most preferred work pattern.

There are several possible causes for this:

- It was not possible for this employee to work the more preferred work patterns due to other work rules, such as min/max hours, assignment rules, and unavailability.
- The scheduler did not schedule any more preferred work patterns since they were not useful for meeting the service goal.
- The scheduler did schedule some more preferred work patterns, but they were all assigned to other employees who had higher rank or higher seniority than this employee.
- The scheduler did schedule some more preferred work patterns, but they were all assigned to other employees who could not "swap" work patterns with this employee due to their work pattern assignments or work rules.

## **Employee <employee\_name> was not scheduled for any of his/her favored preferences on <date>.**

The named employee did not receive any of the preferred start times or days off that were favored given the Favor Preferences slider bar position in the scheduler options. You can review the employee's favored preferences by selecting the **View Favored Preference** button. It is possible that the employee could not work the favored preference due to other work rules, such as min/max hours, assignment rules, and unavailability.

## **The top 25 percent of <employee\_name>'s preferred days off are not possible in any of his/her work patterns.**

It is not possible for this employee to get his or her most preferred days off in any of his work patterns.

If you want to address this, you can:

- 1 Ask the employee to modify his preferences in **My Profile > My Preferences**, or day off possibilities.
- 2 You can assign him additional work patterns in the **Work Pattern** page of the **Employees** module.
- 3 You can modify his work patterns to contain additional days off in the **Work Pattern Occurrence** page of the **Work Rules** module.

## **The top 25 percent of <employee\_name>'s preferred start times are not possible in any of his/her work patterns.**

It is not possible for this employee to get his or her most preferred start times in any of his work patterns.

If you wish to address this, you can:

- 1 Ask the employee to modify the preferences in **My Profile, My Preferences** web page, or day off possibilities.
- 2 You can assign the employee additional work patterns in the **Work Pattern** page of the **Employees** module.
- 3 You can modify the employee's work patterns to contain additional shifts in the **Work Pattern Occurrence** page of the **Work Rules** module.

#### Related topics

[Generate the schedule automatically](#), page 87

# Time Bank Issues

The scheduling engine attempts to meet the time bank target for the current period, just as if it were an hours assignment rule with the same duration as the period.

If the employee is running over or under his hours for the previous period, the scheduler tries to schedule fewer or extra hours in this period to get back to the plan. If, after scheduling, the employee is over or under his hours for the current period for the bank to date, the following message is displayed in both the scheduler warning messages and conflicts:

**Employee X is over/under scheduled for Y hours for his Time Bank Z hours of A from mm/dd/yyyy to mm/dd/yyyy.**

Note the following:

- If the time bank period for an employee does *not fully intersect* the scheduling period that is being scheduled, a pre-scheduler warning is displayed. This message is identical to the warning when an assignment rule period does not correspond to the scheduling period.
- If the base time bank period *does not match* the scheduling period, there is a warning message during scheduling.
- The scheduling algorithm in a multi-week scenario applies the target hours either weekly, or for the entire period. This is determined per employee based on what was requested for the time bank to which they've been assigned for this period. If two different time banks are active for this period, the preference of the first time bank is used for the calculations.

## Related information

Time banking (*Workforce Management Administration Guide*)

# Additional Messages

In addition to the standard checker messages, a few situations produce special warnings in a dialog box whenever a scheduling run is attempted. These situations require immediate remedy—the scheduling engine cannot be run until they are resolved.

**Employee<employee\_name> has two shift assignments that start on <date> in the Calendar. One of them must be removed!!**

You must delete one of the Shift Assignments before you can generate a schedule.

**Illegal scheduling window: The start of the scheduling window (<date><time>) must be before the end of the scheduling window (<date>).**

You must set the start time to before the end time in the scheduler options before you can generate a schedule.

**No queues are linked to this scheduling period -- cannot schedule.**

You must go to the Campaign **Operations** module and add queues before you can generate a schedule.

**Scheduling cannot continue as Employee <employee\_name> has a Shift Assignment overlapping an Unavailability at <date><time>.**

You must delete the Shift Assignment or the Unavailability before you can generate a schedule.

**There are no employees selected to be scheduled in scheduling period.**

You must go to the campaign's **Employees** module and add employees before you can generate a schedule.

## Related topics

[Generate the schedule automatically](#), page 87

# WFM Frequently Asked Questions (FAQs)

If you are having issues using the WFM application, read through the WFM FAQs *before* contacting Technical Support.

## Topics

Organization settings FAQs .....	353
Work rules FAQs .....	355
Employee FAQs .....	357
Campaign FAQs .....	360
Forecasting FAQs .....	362
Service level FAQs .....	364
Calendar FAQs .....	365
Importing data into Queue Analytics FAQs .....	369

# Organization settings FAQs

Before using WFM, set up your organizations and organization settings.

## Organizational hierarchy general FAQs

### Do I have to create an organizational hierarchy?

No. You can have one organization with all of your employees in it.

### Does my organizational hierarchy have to be by location?

No. You can have all of your employees on the same floor and break them out into different divisions or units. It depends on how you want to manage your employees.

## Organization Management, Hierarchies, Organization Settings FAQs

### Is the parameter, Maximum consecutive working days to schedule just within a week?

No. The **Maximum consecutive working days to schedule** parameter specifies the number of days in a row that employees can ever be scheduled, even across week boundaries.

### How is the Maximum consecutive working days to schedule parameter different from consecutive shift assignments in work rules?

This parameter is different than consecutive shift assignments. This parameter defines the *total number of back-to-back days* scheduled for employees, regardless of the shifts they are assigned. The consecutive shift assignment rules are defined for each shift, and specify how many days in a row a particular shift may be assigned to an employee.

### Can my start day be any day?

Yes. When you create the organization, you specify the start day by the parameter, **Week Start Day**. Anything related to days of the week will automatically adjust to show that start day as the first day. For example, if you set your start day to be Wednesday, then the hours of operation and all of the calendars will put Wednesday at the head of the list.

### How do I change the time zone display to see the hours of operation in my own time zone?

In campaign mode, you can toggle between viewing schedule data in *user* or *campaign* time zone on the calendar. By default, when viewing the schedule in *campaign mode*, you view the schedule in the *campaign time zone*.

To see all schedule data in the time zone of the logged in user, from **View**, select **User time zone**. User time zone is defined by the **Time Zone** setting under **My Preferences, General**, and the **Regional Settings** section. When *user* time zone is selected, the schedule data is displayed in the user time zone, but the campaign *nominal* dates and times still appear as the headers and groupings on the calendar.

If no campaign is selected, the schedule is *only* displayed in user time zone. There is no option to select user time zone and to view both user and campaign time zones on the calendar.

### Can schedules cross the week boundary?

Yes.

**Can I schedule different organizations together that are in different time zones?**

Yes. Simply add the organization in the **Organization** field under **Campaigns, Settings**, and verify that the **Hours of Operation** are correct for the full range of times you are open. The system takes care of the rest.

**How do I give an organization its time zone?**

You set the time zone for an organization when it is created. Go to **Organization Management**. Under **Hierarchies**, select **Organization Settings**. Under **Create Organization**, set the time zone in the **Time Zone** setting. Once this is set, it *cannot* be changed, which is why it appears only as a fixed text string under the **General Settings** section in **Forecasting and Scheduling, Campaigns**, and **Settings**.

**How do I specify hours for my 7-day, 24-hour operation?**

Go to **Organization Management**. Under **Hierarchies**, select **Organization Settings**. Under the **Days and Hours of Operations** section, select the **Is 24 Hour** parameter. Your start and stop times are set based on the **Day Boundary** parameter you defined when you created the organization.

**Related information**

Managing Organizations and Groups (*Workforce Optimization User Management Guide*)

# Work rules FAQs

Define work rules and patterns that reflect both the needs of your organizations and your individual employees. Employees are assigned work patterns that combine various shift lengths, start and stop times, shift events and specific rules. The scheduling engine uses these work patterns to generate schedules.

## Shift events and shifts

### Do I need to create separate shift events for each shift?

No. You create a pool of shift events that any shift can use. First, create all the shift events you need for any shift under **Work Administration**, **Work Rules**, and **Shift Events**. Then, to add specific shift events to a specific shift, create the shift under **Work Rules**, **Shifts**. Add all the shift events you want to the shift by selecting **Add** under the **Shift Events** section for the shift.

### How do I create a new shift event?

Go to **Work Administration**. Under **Work Rules**, select **Shift Events**. Select **Create**. To create a new shift event, complete the fields on the **Shift Events** screen and select **Save**.

### How many shift event types can I have?

As many as you want.

### How many shifts, shift events, or work patterns can I have?

As many as you want.

### Can I create shift events, such as breaks, that are less than 15 minutes in duration?

Yes. You can create a shift event ranging from one minute to 23 hours, 59 minutes long.

### Can I automatically rotate shifts?

Yes. Create *rotations*, which are a specific repeating sequence of work patterns. Work patterns are linked to shifts. Therefore, a rotation includes work patterns, which are associated with specific shifts. The shifts are then rotated by the repeating cycle of assigned work patterns to the rotation. After you create a rotation, assign it to employees.

For example, assign a group of employees three work patterns - A, B, and C - in a three-week rotation. Employees are assigned work pattern A for the first week, work pattern B for the second week, and work pattern C for the third week. For the fourth week, employees are assigned work pattern A again, and the cycle continues.

You can either assign *multiple work patterns* to an employee, or a *single rotation* to an employee.

### How can I define a split shift?

You can define split shifts as one long shift with a big break between the first and second parts of the shift. Define a shift whose duration equals the total length of the first shift, plus the second shift, plus the split time. Then, define an *unpaid* break that is fixed (only one possible start time for the break) occurring between the first and second parts of the shift. (Of course, you can still define other breaks inside the shifts.)

**Can you assign shifts directly to employees?**

No, you assign *work patterns* to employees. Work patterns are associated with one or multiple shifts.

**Work patterns****What is the length of time that a work pattern covers?**

One week only.

**Which work rule actually gets associated with an employee?**

Work Patterns. Every employee is assigned one or more work patterns. Every work pattern can be assigned to as many employees as you want. Rotations and Assignment Rules are also associated to employees.

**Work rules for organizations****If I have many organizations in my hierarchy, but they all have the same work rules, do I have to create separate ones for each?**

No. You can set the work rules at the parent company and all of the other sub-organizations inherit them. This speeds your setup process and helps you control the patterns at a high level.

**Work rules used in campaigns****How are work rules used in a campaign?**

When you create work rules for a specific campaign (from **Forecasting and Scheduling, Work Rules**), it enables you to set rules that *only* apply to the selected campaign. It enables you to customize shifts and work patterns to meet the needs of special weeks in the campaign.

Most users set up their work rules from the **Work Administration** module (**Work Rules**) and use those on a regular basis. Work rules set up in the **Work Administration** module apply to *all* campaigns.

*Campaign* work rules, on the other hand, provide you with flexibility without changing your global work rules.

**Do I have to set up campaign-specific work rules?**

No. Work rules set up in the **Work Administration** module are linked to a specific organization. When you create a campaign, you also link the campaign to an organization. Therefore, the campaign inherits the work rules set up for the selected organization. If you do *not* create campaign-specific work rules, the campaign uses the work rules set up for the organization. However, if you do create campaign-specific work rules, these work rules *override* the work rules set up for the organization.

When you link employees to a campaign, they are linked to the work patterns they were assigned in the **User Management** module, under **Employees, Work Rules**.

**Related topics**

[Overriding organizational work rules for a specific scheduling period](#), page 31

**Related information**

Set up work rules (*Workforce Management Administration Guide*)

# Employee FAQs

Workforce Management (WFM) allows you to schedule the right *people* with the right *skills* in the right *place* at the right *time*. Using WFM, you can manage employee profiles, schedule preferences, time off, skills, and assigned work rules.

## **Employee licenses, deleting employees, and user-defined fields**

### **Is there a limit to the number of employees in the system?**

The only limit is the number that you are licensed for.

### **What if I have a lot of employees that no longer work for me? Will that count toward the number of employees I have?**

No. The licensing mechanism only takes into account active employees in the database. When an employee leaves the organization, deactivate them by giving them an end date. After that date, they are not counted towards licensing (and they *cannot* be scheduled).

### **Can I delete employees?**

Yes. User termination and deletion are two ways of discarding user data in the system. Terminated or deleted users are no longer visible on user lists.

Determine whether an employee should be *terminated* or *deleted*:

- *Delete* an employee who is leaving the company permanently. You can also delete employees that have no meaningful data, such as duplicate records and test records. Delete new employees who never worked at the company or who left the company before doing any substantial work. Deleting a user permanently removes the user's definitions, though their statistics can be retrieved in a limited fashion.
- *Terminate* employees who have data that you want to retain. This could include employees who are leaving temporarily (such as for a prolonged leave of absence), but are expected to return. You can reactivate terminated employees at a later time. Reactivating a user will spare you the process of redefining the user from scratch. Reactivation also keeps all user statistics intact. Since all definitions and statistics of terminated users remain available, these users can be searched for and viewed in reports and forms.

### **Are there any user-definable fields?**

Yes. There are 10 User Defined Fields (UDFs). To define these fields, go to **System Management**. Under **General Settings**, select **General**. These fields are under the **User Defined Fields** section.

## **Scheduling employees for campaigns**

### **What do I define in the Employees module under Forecasting and Scheduling?**

This is where you link specific employees to a scheduling period.

You can link *all* or *specific* employees associated with the organizations defined for the scheduling period:

- To link *all* employees from *all* organizations defined for the scheduling period, when you create a scheduling period, select the option, **Use All Employees in Linked Organizations**.

- To link *specific* employees from the organizations defined for the scheduling period, go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**. Select the campaign and scheduling period to which you want to link employees. Select **Add Employee to SP**. The employees displayed are associated with the organizations defined in the **Organization** field in the **Settings** workspace under **Campaigns**. You can *only* select employees associated with these organizations. Select the employees you want and select **Add**.

### Can I change employee information in the Forecasting and Scheduling Employees module?

Yes, but only a limited amount of information can be changed. You can change the following: min/max hours, ranking, proficiency, work pattern links, and skills.

### Can employees be scheduled in multiple campaigns?

Yes. The WFM application will *not* override any shifts that were created by another campaign.

### Can an employee be scheduled in multiple campaigns on the same day?

No. Employees can *only* be assigned *one* shift assignment each day.

### Setting unavailability for employees

#### How do I make an employee unavailable for a period of time on the calendar?

You can create an *unavailability* event for employees, which is a special type of event that indicates an employee is unavailable for scheduling. From the calendar, select the employees for whom you want to create the unavailability event. From the details pane, select **Add** and then **Unavailability**, and complete the fields for the unavailability event.

To create a series of unavailability events (instead of a single instance), select **Recurring** and specify the days and times the event should recur in the series. For example, you know that an employee is unavailable due to medical reasons from 8:00-10:00 AM during the scheduling period. Therefore, you can schedule an unavailability event manually for that employee during that time period.

To add multiple employees to the unavailability event, select the relevant employees on the **Attendees** tab. When you are done, select **Save**.

#### When I create vacations for my employees, can I determine the number of vacation hours that will actually be counted for reporting?

Yes. By default, vacation hours are set to 8 hours, but you can edit this value. The WFM application also counts the hours set for vacation towards meeting the minimum and maximum paid hours for the week. To allocate all or some hours of a work event to vacation hours, double-click the event. From the details pane, select **Make employee absent**, and then **Vacation**. After creating the **Vacation** unavailability event, enter the time range and duration for the vacation hours and select **Save**.

### Employee proficiency

#### What does the Proficiency setting mean in the Forecasting and Scheduling module, under Employees, and Skills?

The **Proficiency** setting defines a value for the general work proficiency level of employees, using the following scale:

- **0.5:** Employee is *above average* at work. It takes them *half as long* as the defined Average Handle Time (AHT) to complete their work. The system considers this value as the work of two employees.
- **1.0:** Employee is *average* at work. They complete their work *within* the Average Handle Time (AHT). The system considers this value as the work of one employee.
- **2.0:** Employee is *below average* at work. It takes them *twice as long* as the defined Average Handle Time (AHT) to complete their work. The system considers this value as the work of one half of an employee.

The proficiency level is used in creating skill-based schedules.

### **Is there something to automatically help me determine the proficiency of an employee?**

No. It is up to you to define and enter that information.

### **Employee preferences**

#### **When I set a preference, what am I actually setting the preference for?**

You are setting a preference for certain start times, days off, or a certain work pattern.

#### **Can I set a preference for a shift?**

Yes. You can set a preference for a shift by creating a work pattern that contains only that shift.

#### **Can I tell the system that an employee prefers to work at a certain time in the day?**

Yes, from the **User Management** module, under **Employees** and **Schedule Preferences**, you can set employee start time preferences on specific days, day off preferences, and Overtime (OT) and Voluntary Time Off (VTO) preferences.

### **Related topics**

[Link employees to the scheduling period](#), page 38

[Create an unavailability event](#), page 168

[Make an employee absent for a shift](#), page 166

### **Related information**

Terminating or deleting employees (*Workforce Optimization User Management Guide*)

User Defined Fields (*Workforce Optimization System Administration Guide*)

Skills, proficiencies and preferences (*Workforce Management Administration Guide*)

# Campaign FAQs

A *scheduling period* is a specified period where defined employees target a specific workload. A *campaign* is a collection of scheduling periods. Schedules are generated for groups of employees who belong to a scheduling period.

## General FAQs about campaigns and scheduling periods

### So what exactly is a *campaign*?

The best way to think about a campaign is that it is a group that you need to schedule. Some users will *only* have *one* campaign, whereas others will have *multiple* campaigns. A campaign is a line of business that has one or more queues associated with it, and employees to take on the workload for those queues.

### What is a *scheduling period*?

A scheduling period is a container for a length of time and a start time for which to generate a schedule for a campaign. A scheduling period can be one week, multiple weeks, or one month.

### Can I copy data from one scheduling period to another?

Yes. The data that is copied includes the queues, skills, organizations, employees, forecasts, service goals, and any locked shift assignments from the copied scheduling period.

### When I'm adding an organization to a campaign and I select a parent organization, will all of its child organizations automatically be selected as well?

Yes.

### Campaign time zone, hour of operation, and holidays

#### I see that there is a Time Zone field for the campaign. Do I have to have organizations from that same time zone?

No. This is just a way to determine the time zone used for the data you enter for the campaign. Any user can select to view the schedule in their local time zone (by selecting the **User time zone** setting under **View**).

#### Can I have hours of operation for a scheduling period that are different than the hours of operation for the organizations which are linked to it?

Yes. The system is flexible enough to let you set hours that are different at the campaign level. This also helps you to set special hours for holidays, for example.

### Can I specify holidays and their hours for a campaign?

There is no specific holiday calendar for campaigns. However, because of the flexibility of the hours of operation at the campaign level, you can change hours to be different for any day in any scheduling period. You can set your hours to match any special day scenario.

### Related topics

[Campaigns and scheduling periods overview](#), page 21

[Campaign settings](#), page 23

# Forecasting FAQs

A forecast in WFM is used to accurately predict how many interactions each queue will handle, and how long we expect the work to take.

## Forecast profiles

### Do I need to use profiles to forecast?

No. You can link historical weeks, import data, create a profile, or just type in numbers.

### Can I edit profiles?

Yes. Once profiles are created, they can be edited at any time. Load the profile, make your changes, and then save the profile again.

### Can profiles be any other length of time than a week?

No. Profiles are limited to a week, but they can contain as many weeks of data as you want.

## Reforecasting

### Can the WFM application automatically reforecast?

You can use the Queue Analytics graphs to easily compare forecasted to actual values, and run a report on the deviation from predicted and/or required values. This comparison identifies the necessary adjustment. You can then return to the **Forecast** module and change the forecast by using the **Scale** feature or by adjusting the numbers in the table.

## Forecast weighting

### How does the weighting feature work?

By averaging the data from several weeks, a profile can smooth out the random quirks that can distort your forecast. At the same time, averaging can blur distinctions that let you anticipate patterns in your contact volume.

To avoid this issue, Forecasting and Scheduling lets you use *weighted averages*, allowing you to assign *less* weight to *de-emphasize* weeks with irregular behavior, or to assign *more* weight to *emphasize* weeks with important patterns.

## Absenteeism in forecasts

### Can I use absenteeism from this time last year?

Only if you copied the week from a week from last year. Otherwise, you must determine it yourself.

## Importing data into forecasts

### Should I import data directly into the forecast?

You can import data directly into the forecast. In case you want to use the data contained in the forecast in future, you should save the forecast.

## Scaling AHT from the Forecast thick client

### After scaling AHT from the Forecast thick client, why is the AHT at the combined level different after loading the forecast?

When scaling AHT from the Web and thick client, the percentage change is applied to each queue for AHT. This is not CV weighted. These combined values are saved to the database.

When loading the forecast from the Web, the forecast is loaded from the database (**FORECASTTIMESERIES** table).

When loading the forecast from the thick client, the combined values are calculated from CV and AHT from each individual queue, and this is CV weighted.

Therefore, there are some inconsistencies at the combined level for AHT in the thick client. This does not occur in later versions, as the forecast from the Web loads forecast data from the database.

### Related topics

[Forecasts](#), page 45

# Service level FAQs

*Service goals* define how quickly you want work to be handled. *Service level* is a type of service goal that defines a set percentage of interactions to be handled in a set unit of time.

## Why is my predicted Average Speed to Answer (ASA) so high?

This usually indicates that there are not enough employees assigned to meet the predicted workload.

When the workload (the total number of seconds of work that needs to be done by the scheduled employees) *exceeds* the total time available to the employees, the ASA jumps to a very large number because there is no one to respond to customer interactions. The large prediction is accurate.

## How accurate is the Resources Information calculator? Can I use it for budgeting?

The cost calculation done using the **Resources Information** screen should be seen as an estimate to which some overhead needs to be added. The calculated costs are based on the staffing hours required, multiplied by a single hourly wage.

The result is accurate *only if the contact center is perfectly staffed with absolutely no overstaffing or understaffing*. In the real world, of course, some overstaffing or understaffing is inevitable due to contact volume spikes and other uncontrollable variables.

## Related topics

[Service goals and requirements](#), page 63

# Calendar FAQs

The main goal of the calendar is to generate a schedule automatically for a specific campaign and scheduling period. The scheduling engine uses defined work rules, forecast data, and scheduling parameters to generate an optimal schedule that fits your service level requirements.

Before or after generating a schedule, you can manually add defined or custom shift assignments and shift events to employee schedules. You can also add calendar events, time-off events, and unavailability events.

## Sorting and filtering data

### What sorting options does the calendar provide?

From the **Tools** menu, you can sort by:

- **Employee last name**
- **Draft shift start**
- **Draft shift end**
- **Draft shift length**
- **Draft shift type**
- **Published shift start**
- **Published shift end**
- **Primary shift start**
- **Primary shift end**
- **Adherence status**

You can sort all of these attributes in ascending or descending order.

### Is there an easy way to find shift assignment or events on the calendar?

Yes. From the **Tools** menu, select **Find**. You can find all types of events, activities and shift assignments on the calendar, either within the current scheduling period or within a specified time period. The system maintains the color shading of the components you selected to find, and greys out the scheduling components you did *not* select on the **Find** screen.

## Scheduling meetings

### How do I create a meeting?

You can create a meeting as a *calendar event*. On the calendar, select the employees for whom you want to create the calendar event. From the details pane, select **Add** and **Calendar event**. On the **Calendar Event** screen, complete the fields and select **Save**.

### I have a staff meeting every Monday morning. Do I need to create one each week?

No. To create a series of calendar events (instead of a single instance), select **Recurring** on the **Calendar Event** screen. From **Recurs every \_\_ weeks**, specify the number of weeks after which the event should recur. From **Occurs on**, specify the days on which the event should occur (Monday, for example).

## **Can the system find the best time to hold the meeting?**

Yes. You can schedule a *floating* calendar event, where you specify the *possible* days and range of start times of the event. When you generate the schedule, the scheduling engine finds the optimal day and start time within the time frame you specified when service levels would be impacted the least. To set a floating calendar event, select **Floating** on the **Calendar Event** screen. From **Start Time Range**, specify the days and range of possible start times for the calendar events.

## **What is the difference between scheduling meetings and scheduling non-phone time?**

Meetings are scheduled as *calendar events*. Non-phone time can be scheduled as a working or non-working *shift event*.

*Working shift* events are associated with activities that are considered work activities, but are *not* the main activities of the shift. For example, a *shift* is associated with the activity, **Phone**. A *working shift event* can be associated with the activities **Project** or **Research**.

*Non-working shift* events are associated with activities that occur during a shift, but are *not* considered work activities. Common examples are shift events based on the activities **Lunch** or **Break**.

Both types of shift events are scheduled in the same way (by creating a shift event). The difference is the activity on which the shift events are based. Also, *non-working shift events* are on a higher layer in the schedule layer hierarchy than *working shift events*. So, for example, if a lunch is scheduled on top of a project, the employee is considered to be in adherence if they take the lunch, and not if they work on the project, during the overlapped period of time.

## **Scheduling issues**

### **When I create a schedule, John Smith is not scheduled to work at all.**

First, go to **User Management**. Under **Employees**, select **Work Rules**. From the left pane, select John Smith. Verify that the **Minimum Paid Hours** setting is greater than zero. If it is zero, the scheduling engine does *not* need to include him in the schedule.

If the **Minimum Paid Hours** setting for John is greater than zero and he is *still* not being assigned to work, the scheduling engine could not find a way to use this employee in the schedule in order to meet service level requirements.

Under **Work Patterns** on the **Work Rules Assignment** screen, make sure there is a work pattern added for John.

One more thing to check is whether there are any unavailability events scheduled for John in the schedule. You need to make sure that John is available for work during the shift times.

### **Jane West should work 5 shifts a week and is only scheduled for 4 days.**

If the scheduling engine added another shift to the schedule for Jane, it would probably cause her to exceed her **Maximum Paid Hours** every week. Go to **User Management**. Under **Employees**, select **Work Rules**. From the left pane, select Jane West. Verify that her **Minimum Paid Hours** and **Maximum Paid Hours** values are correct. Also, remember that these hours include *paid time only*. If you define a break in a shift as *paid*, then that break time counts against the **Minimum Paid Hours** and **Maximum Paid Hours** values.

### **The scheduling engine is not scheduling employees, even though they are available and there is a high demand.**

You may be out of employees. Go to **Organization Management**. From **Hierarchies**, select

**Organization Settings.** For the **Number of Seats** parameter, verify this value. Then, go to **Forecasting and Scheduling**. Under **Employees**, select **Profiles**. From the left pane, select the campaign and scheduling period. The current list of employees linked to the selected scheduling period is displayed in the list. Verify this value, and then look at the number of employees included in the schedule. You might need to increase the **Number of Seats** to meet your scheduling requirements.

### My part-time employees are not being given as many hours as I want. What can I do?

Look at the Staffing graph in the **Queue Analytics** module to see if there is a high amount of understaffing and determine the next step:

- If there is *little or no understaffing*, the scheduling engine is *not* giving your part-timers many hours because it does *not* need them to make a good schedule! If needed, you can force the scheduling engine to give hours to part-timers by specifying the **Minimum Paid Hours** every week for part-timers in the **User Management**, module, under **Employees** and **Work Rules**.
- If there is *some understaffing*, but part-timers are *still not* working, go to the **Generate Schedule** screen and select the **Preferences** tab. Look at the **Staffing preference** parameter in the **Employees** section. Move the slider towards **Overstaffing**. To generate the schedule again, select **Generate**. By doing this, you are telling the scheduling engine that you are willing to accept more overstaffing at times in order to eliminate understaffing.

### Printing the schedule

#### When the schedule is printed, it looks funny.

In the **Calendar** module, select **Page Setup** from the **File** menu, and then select the **Settings** button to open the **Print Settings** window. In this window, you can configure the patterns used for printing schedules. Use the test page to see if your pattern choices print to your liking. One or the other of the two custom settings provided usually works for most printers.

#### When the schedule is printed, I can't distinguish between shifts and breaks.

The print patterns currently selected for shifts and breaks look the same on your particular printer. In the **Calendar** module, select **Page Setup** from the **File** menu, and then select the **Settings** button to open the **Print Settings** window. In this window, you can configure the patterns used for printing schedules. Use the test page to see if your pattern choices print to your liking. One of the two custom settings provided will work for most printers.

#### When I print the schedule, it prints out on more than one page. Is there any way I can reduce the size of the printout to fit the schedule onto one page?

You can print the schedule in text formats, which typically take less space than graph formats, or you can resize the graphic schedule printout. To resize the graphic schedule printout, select **Page Setup** from the **File** menu, and then select **Settings** to open the Print Settings window. In the **Scale** section of this window, you can scale the printout by a percentage or you set the number of pages you want the schedule printed on, and have the scheduling engine automatically resize the schedule to fit.

### Setting a regular schedule for employees

#### How can I establish a set schedule for an employee?

You can create a set schedule (one that always starts at the same time, for example) by editing the employee's availability or by creating a customized shift pattern.

**Related topics**

- [Find calendar data](#), page 126
- [Sort schedule attributes](#), page 127
- [Calendar, time off and unavailability events](#), page 158
- [Create a calendar event](#), page 160
- [Generate the schedule automatically](#), page 87

**Related information**

Work rules assignment details (*Workforce Management Administration Guide*)

# Importing data into Queue Analytics FAQs

You can import data into Queue Analytics on which to base a forecast.

**I recently installed the WFM application, but I have *not* configured the Integration Server to automatically import ACD data. I would like to set up a forecast to create a schedule. How do I import a few weeks of ACD data/contact history into WFM?**

## Should I import this data into the Forecast module or into the Queue Analytics module?

Import your data into the **Tracking** module, **Queue Analytics** and **History**. Contact history data imported into Queue Analytics is saved and can be used for any forecast in the future. Data imported into the Forecast module is *not* saved as contact history and is more difficult to reuse in a future forecast.

If the data imported into the Forecast module is *not* saved in Queue Analytics, any changes made to forecast values *cannot* be undone. For example, if you enter data in a forecast manually and then change some of the contact volumes, the original values are *not* saved and you *cannot* undo your changes by selecting **Restore**. When you load a week of data saved in Queue Analytics into your forecast, you can change the numbers in the Forecast module and then clear all your changes by selecting **Restore**.

## What is the best way to import data manually?

First, create a report on your ACD that will be saved as a text (\*.txt) file. Add your data to the report, and then import the data into Queue Analytics.

To create your ACD report file:

- 1 Use one of the following delimiters: page, comma, or semicolon.
- 2 Make sure each text file contains information for only one queue and for a single week. Do not print more than one queue to a file.
- 3 Make sure each text file has an interval of 15, 30, or 60 minutes. 15-minute intervals are best.
- 4 Import the following types of data into the **Queue Analytics History** page (as you require): **Date**, **Time**, **Contact Volume**, **Service Level**, **Abandon**, **ASA**, **AHT**, **Staffing**, and **Occupancy**. No other categories are necessary for this report.

## Example: Import ACD data into WFM

**ACD page-delimited text report with a 30-minute time interval (48 total 30-minute intervals per day)**

Date	Group	Time	Contact Volume	ASA	SL	Abdn
22/11/2019	5913	00:00	0	0	100	0
22/11/2019	5913	00:30	0	0	100	0
22/11/2019	5913	01:00	0	0	100	0
22/11/2019	5913	01:30	0	0	100	0

22/11/2019	5913	02:00	0	0	100	0
22/11/2019	5913	02:30	0	0	100	0

### To import this report into WFM

- Create a text file with the formatting shown above and save it as **C:\Group5913.txt**.
- The contact center has a Monday 12:00 am start date and time, and the hours of operation are M-F.
- This file contains 5 days worth of data (Monday, 11/22/19 through Friday, 11/26/19).
- The only ACD Queue / Group / Skill in this report is Group 5913.
- A queue has already been created in WFM for Group 5913 (a new queue is created with ACD Utilities), and this queue is already linked to an existing scheduling period.

### To import data using this file

- 1 Go to **Tracking**. From **Queue Analytics**, select **History**.
- 2 Select the queue for which you are importing data.
- 3 Select the **Show Data Table** button. This allows you to see the data you import.
- 4 From the **Date** selector, select the week to import. In this example, select Monday, 11/22/19.
- 5 Select **Import**.

The dialog box contains the following parameters:

- **Source File** – The file path where the data to be imported is located. To the right of the **Source File** field, select **Browse**, locate **C:\Group5913.txt**, and then select **Open**.
- **Time Zone** – You set **Time zone** to either campaign or GMT, depending on the way the report is generated by the ACD. In this example, it should be set to campaign time zone.
- **Time Interval** – You choose in which time interval data will be imported. For this example, set the **Importing interval** to 30 minutes.
- **Delimiter** – You choose which delimiter was put between columns in the imported data file. In this example, select **page** from the **Delimiter** pull-down.

The dialog box also contains a mapping table with a list of available statistics (trace types) that you can import from the file.

- 6 Map each statistic to its corresponding column number in the file.

The statistics include:

- Contact Volume
- Average Handling Time
- Service Level
- Average Speed to Answer
- Abandons
- Backlog
- Staffing
- Occupancy
- Full Time Equivalent

Other columns that also need to be mapped are:

- Queue Name
  - Date
  - Time
- 7** For the example text, place check marks in the following fields and set the column numbers as indicated:
- **Contact volume** = 4
  - **Average Speed to Answer** = 5
  - **Service Level** = 6
  - **Abandons** = 7
- 8** Select **Import** to import the data from the current view. When the import is complete, you should get a dialog box that states something like this:
- **Completed successfully.**
  - **244 records out of 244 were imported.**

You have now imported one week's worth of data into Queue Analytics contact history for Queue/Group/Skill 5913. You are now ready to import data for other queues into the same week or import data for more weeks into the same queue.

### How do I import more than one week in a single file?

If you need to import several weeks worth of data, you can create a single text file for a queue that has more than one week in it.

Date formats come in several different forms from each ACD, and certain formats cause the import process to fail. Therefore, using the example above, if you want to import 3 weeks of data, you need to add data to the text file to account for the Saturday and Sundays that are closed. There must be at least one hour of data with zero values for Saturday and for Sunday, or the Monday data for the second week will be imported into Saturday of the first week.

To adjust for this, do the following:

- 1** Set up the first week using 5 days worth of data with all 24 hours accounted for (in this example, 48 lines of 30 minutes report text).
- 2** Copy one hour's worth of data and paste it twice between Week 1 and Week 2, and change the date for this data to the Saturday and Sunday dates. If you use the example above, the following four lines would be inserted between Week 1 and Week 2, and dates would be changed. (Only two lines are added because it is a 30-minute report; four lines would be needed for a 15-minute report):

27/11/2019	5913	00:00	0	0	100	0
27/11/2019	5913	00:30	0	0	100	0
28/11/2019	5913	00:00	0	0	100	0
28/11/2019	5913	00:30	0	0	100	0

It is not necessary to change the dates, but it makes it easier to understand the text file by doing so. Insert the Saturday and Sunday data between each week in the text file. You do not need to insert 24 hours of data for each day.

**Related information**

Queue Analytics (*Workforce Management Tracking Guide*)

# Preference-based scheduling

Preference-based scheduling supports high-quality customer service with the most efficient use of employee time, while promoting employee satisfaction, especially among senior or high-ranking employees.

## Topics

Scheduling with preferences .....	374
Fixed constraints .....	376
Prioritized constraints and preferences .....	377
Schedule preferences methodology .....	378
Obstacles to preferences being granted .....	382
Sample preferences report .....	383

# Scheduling with preferences

After assigning work patterns to employees, the scheduling engine can rearrange the schedule to take preferences into account. This is only done if service levels are *not* impacted by preference considerations.

To create an optimal schedule, the scheduling engine schedules for the forecasted call volume while meeting the service goals as closely as possible. This part takes into account employee unavailability, proficiency, skills, and employee min/max hours, but does *not* include preferences.

After service goals are met, the scheduling engine takes into account preferred start times, or days off and preferred work patterns.

## Scheduling engine schedules according to work patterns

Employees are scheduled for *one work pattern only* out of the group of work patterns they have been assigned.

Based on this work pattern, and taking into consideration other factors, such as availability, the employee is assigned days off and start times. *Preferences are not taken into account at this point.*

Based on this initial step, schedules might look like this for patterns with single start times:

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Employee 1	7 am	7 am	7 am	7 am		7 am	
Employee 2	8 am	8 am	8 am		8 am		8 am
Employee 3		6 am	6 am		6 am	6 am	6 am

## How the scheduling engine uses preferences

Next, the scheduling engine rearranges the schedules or "swap" to give the more senior or higher-ranked employees their preferred work pattern, start time, or day off.



Start-time and day-off preferences are always given priority by the scheduler over work-pattern preferences if both are used.

Any swaps must *not* impact the service levels generated by the initial schedule. Swaps can only happen if a work pattern, start time, or day off is already on the schedule. The scheduling engine does *not* schedule work patterns, days off, or start times simply to provide individual employees with their preferences.

For example, all three employees preferred to work the late work pattern. But, since that work pattern was not scheduled, no employee can receive his or her preferences. In another example, all three employees preferred to start at 9 am, but a 9 am start time is *not* available, and therefore, no employee—regardless of seniority or ranking—will be assigned it.

The scheduling engine now starts with the most senior employee and looks at the rest of the employees and sees if there is a work pattern, start time, or day off that has been assigned that is preferred by the more senior employee. If one is found, the engine does a swap.

**Example: How the scheduling engine assigns preferences**

This is a final schedule after taking preferences into account:

Employee	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Employee 1	8am	8am	8am		8am		8am
Employee 2	7am	7am	7am	7am		7am	
Employee 3		6am	6am		6am	6am	6am

The scheduling engine went through the following process in order to assign this schedule:

- Employee 1's top preference is an 8:00 AM start time.
- According to the original schedule:
  - Employee 1 starts at 7:00 AM
  - Employee 2 starts at 8:00 AM
- Employee 1 is more senior than Employee 2. Therefore, the scheduling engine swaps the two shifts and gives Employee 1 the 8:00 AM start time.
- The days off for Employee 1 and Employee 2 were switched as well. Employee 1 is now off on Thursday and Saturday, instead of Friday and Sunday.
- This is only done if Employee 1's day-off preferences match this new schedule or are less important than his start-time preferences.

**Related topics**

[Schedule preferences methodology](#), page 378

# Fixed constraints

Specific parameters set limits the scheduling engine *cannot* violate. All schedules must meet *all* of these constraints.

They are of equal priority:

- **Minimum consecutive days for a shift:** *Minimum* number of days a shift is assigned to an employee with a work pattern. This value determines how many days in a row an employee works a shift.
- **Maximum consecutive days for a shift:** *Maximum* number of days a shift is assigned to an employee with a work pattern. This value determines how many days in a row an employee has off of work.
- **Minimum time between shift assignments:** *Minimum* number of hours an employee is given between shift assignments.
- **Maximum consecutive working days to schedule:** *Maximum* number of days in a row an employee is scheduled to work.
- **Consistency rules:** Consistent start times and shift events are assigned to all employees with a work pattern.
- **Hours of Operation:** All shift start and finish times *must occur* during the organization or campaign's hours of operation.

## Related topics

[Prioritized constraints and preferences](#), page 377

# Prioritized constraints and preferences

There are specific parameters the scheduling engine prioritizes when generating an optimal schedule. The following items are listed in the order they are considered by the scheduling engine:

- 1 **Number of Seats:** Maximum number of employees that can be scheduled at any time for an organization.
- 2 **Minimum Paid Hours and Maximum Paid Hours:** Minimum and maximum number of paid hours an employee can be scheduled every week.
- 3 **Assignment Rules:** Priorities for each Assignment Rule are set when the rules are created.
- 4 **Meetings scheduled within shift assignments:** To the greatest extent possible, meetings are scheduled during periods when all attendees are scheduled to work.
- 5 **Not scheduling employees:** The scheduling engine does *not* need to schedule employees when the **Service Goal** is set to 0% on all of their skills.
- 6 **Schedule at least this number of employees:** Specifies the minimum number of employees that must be scheduled (on the **Generate Schedule** screen under the **Preferences** tab). The scheduling engine *never* schedules fewer than this number of employees.
- 7 **Service goals:** The scheduling engine generates schedules that best reach your service goals.
- 8 **Start Time Preference and Days Off Preference:** These preferences are set in the **User Management** module, under **Employees** and **Schedule Preferences**.
- 9 **Work patterns:** Employees are assigned work patterns in the **User Management** module, under **Employees** and **Work Rules**.
- 10 **Even spacing of shift events:** Shift events are spaced as evenly as possible throughout each shift.

## Related topics

[Fixed constraints](#), page 376

# Schedule preferences methodology

The scheduling engine uses a set of rankings or preferences to determine when employees are scheduled for work.

In a preferences scheduling model, employees with more seniority or higher ranking have their work preferences satisfied before less senior or lower ranking employees.

Assignment of work hours is based on the availability of those hours determined initially by the creation of the best possible schedule.

Scheduling using preferences does *not* impact service level—preferences are used *only if it is possible to do so while maintaining the required service level*. The only exception to this is defined by the **Service level** preferences on the **Generate Schedule** screen under the **Preferences** tab.

Preference-based scheduling is used to ensure that schedules are created that provide the best possible customer service with the most efficient use of employee time, while at the same time promoting employee satisfaction, especially among senior or high-ranking employees.

There are two methods of assigning and scheduling preferences:

- **Work pattern preferences:** Enables employees to set a preference for a particular type of weekly pattern or schedule.
- **Start time and day off preferences:** Enables employees to set specific preferences for start times or days off.

These two methods can be used in conjunction with each other.

## Related topics

[Work pattern scheduling](#), page 378

[Work pattern preferences](#), page 379

[Start time and day off scheduling](#), page 380

[Start time and day off preferences](#), page 381

# Work pattern scheduling

To understand how work-pattern-based scheduling preferences work, it is important to understand how the scheduling engine creates schedules using the work patterns you assign to your employees.

When the scheduling engine creates a schedule for an employee, it uses the set of work patterns that are linked to the employee to determine the types of shifts that it can assign.

Each employee is assigned shifts from *only one work pattern per week*. The scheduling selects shifts (and, therefore, start times) from that *single* work pattern. *It cannot select shifts from multiple work patterns.*

## Example: Scheduling with one work pattern assignment

An employee has work pattern X assigned to her (from the **User Management** module, under **Employees** and **Work Rules**).

Work pattern X has a shift that can start at any of the following times: 6, 7, 8, 9, 10, or 11 am,

**Schedule Result:** Employee can be scheduled for a shift that starts at any of the start times (6-11 a.m.).

## Example: Scheduling with multiple work pattern assignments

An employee has work patterns A and B assigned to her (from the **User Management** module, under **Employees** and **Work Rules**).

- Work pattern A has a shift that can start at 6, 7, or 8 am.
- Work pattern B has a shift that can start at 9, 10, or 11 am.

The scheduling engine selects *either* work pattern A or work pattern B to generate the employee's shift assignments.

#### Schedule Result:

- The employee starts at either 6, 7, or 8 am for the entire week.  
Or
- The employee starts at either 9, 10, or 11 am for the entire week.

Because the scheduling engine uses *only one* work pattern, it is impossible to schedule a combination of 6–11 shifts throughout the week.

#### Related topics

[Work pattern preferences](#), page 379

## Work pattern preferences

Since work patterns are collections of shifts and their associated shift events, work pattern preferences allow employees to set relative preferences for different types of shifts or schedules.

For example, employees can specify a higher preference (by entering a *lower* number) for the 4-day by 10-hour work pattern and a lower preference (by entering a *higher* number) for the 5-day by 8-hour work pattern.

Work pattern preferences can also be used for consistency. For example, you can create two identical work patterns, but have consistency turned on for only one of them. By using work pattern preferences, employees can state whether they prefer to have consistent schedules or not.

#### Example: set up and use work pattern preferences

- 1 From **Work Administration**, **Work Rules** and **Work Patterns**, create two work patterns:
  - a. **Work Pattern 8 hour**: Work pattern that contains a 5-day, 8-hour shift
  - b. **Work Pattern 10 hour**: Work pattern that contains a 4-day, 10-hour shift.
- 2 Add the following shifts to each work pattern:
  - a. **Work Pattern 10 hour**: Has a 10-hour shift that can be scheduled on all days.
  - b. **Work Pattern 8 hour**: Has an 8-hour shift that can be scheduled on all days.
- 3 From **User Management**, **Employees** and **Work Rules**, assign three employees both of these work patterns, indicating that they can work either one.  
An employee's linked work patterns will be:
  - **Work Pattern 10 hour**
  - **Work Pattern 8 hour**
- 4 For each employee, enter the following preferences for the work patterns for all employees:
  - **Work Pattern8 hour: 1**
  - **Work Pattern10 hour: 2**

These values indicate that all three employees prefer **Work Pattern 8 hour** over **Work Pattern 10 hour**. These employees each have *one* preferred work pattern for the entire week. Employees *cannot* state a preference for each day.

Employee Seniority	Preference: WP 10 hour	Preference: WP 8 hour
Most senior	2	1
Second most senior	2	1
Third most senior	2	1

### Related topics

[Work pattern scheduling](#), page 378

## Start time and day off scheduling

To understand how preferences-based scheduling preferences work, it is important to understand how the scheduling engine uses shifts and selects days off.

Without preferences, the scheduling engine can select *any day off* that is valid according to the work pattern and *any start time* that is valid according to the shift.

### Example: start time and day off scheduling

For example, a work pattern can be created using shifts that can start any time between 10 am and 2 pm, and has possible days off on all days except Monday.

The scheduling engine uses these possible start times and days off to select a combination that provides the best service level.

Every employee is assigned shifts and days off from *only one work pattern every week*. The scheduling engine selects shifts (and, therefore, start times) and days off from a single work pattern. *It cannot select shifts and days off from multiple work patterns*.

### Factors that affect shift start times and days off

The following factors can affect the start times and days off that are selected:

- An employee's *availability* can force the scheduling engine to schedule an employee in a certain way. For example, an employee can be marked as unavailable on Monday, which means that the employee always gets a day off on Monday.
- *Consistency* can affect start times by enabling the scheduling engine to select only one start time for the whole week.
- *Assignment rules* can also determine days off and start times, while min/max hours can affect how many days off an employee is assigned.

### Related topics

[Start time and day off preferences](#), page 381

## Start time and day off preferences

Start time and day off preferences enable employees to indicate their preferences for a particular start time or day off. For example, employees can state their preferences to start work at 9 am and to have a day off on Friday.

Start time and day off preferences are set in the **User Management** module, under **Employees** and **Schedule Preferences**.

### Example: Set start time and day off preferences

An employee can state a preference to start on Monday at 6 am, Tuesday at 7 am, and to have days off on Wednesday and Saturday.

Employees can rank any of these choices and can also select multiple preferences and rank them from most to least important. For example, an employee can state that his highest preference is to start work at 9 am, his second preference is to start work at 10 am, and his third preference is to start work at 11 am.

Now the employee also wants to add day-off preferences. It is important to note that day off preferences are part of the same preferences scale as start time preferences.

Note:

- By giving a **Start Time Preference** a **1** and giving a **Day Off Preference** a **2**, you are stating that the start time preference is more important than the day off preference.
- If the scheduling engine needs to select between assigning this person a start time or day off preference, it selects the start time preference because it is more important.
- In this case, the employee has selected Friday as his most important preference for a day off and Tuesday as his second. The employee has also stated that these day off preferences are less important than his start time preferences.

### Early or Late start time preference

Users also have a choice of selecting a start time preference of **Early** or **Late**. This choice is *less* important than the specific start time preferences. It is used if no specific start time preferences can be scheduled.

For example, an employee *cannot* be scheduled for one of his preferred start times of 9 am, 10 am, or 11 am. Therefore, the scheduling engine determines the start times based on the more general **Early** or **Late** start time preference.

This preference is also used when the employee *only* states a preference for **Early** or **Late**, and does *not* select specific start time preferences.

For example, an employee asks for as early a start time as is possible. In this case, there is no need to specify start time preferences. Instead, just select the **Early** setting.

### Related topics

[Start time and day off scheduling](#), page 380

# Obstacles to preferences being granted

There are specific factors that can prevent the scheduling engine from making shift swaps in the schedule in order to grant preferences.

The following factors can be obstacles to preferences being granted in any particular schedule:

- **Unavailability**

Employees with varying unavailability can present an obstacle to complete shift swaps. The scheduling engine cannot make the swaps necessary to give more senior employees their preferences because unavailability is blocking some of the preferred start times.

With start time and day off preferences, the scheduling engine can make single day swaps. Therefore, it switches days where possible.

- **Consistency**

You could also have a problem if consistency is turned on for these employees. Consistency is the constraint that requires *all shifts during the week for a single employee to have the same start time*.

- **Employees with varying skill sets or proficiencies**

When the system swaps shifts or work patterns, service goals *cannot* suffer. This means the system must swap employees that have the same skill sets or the same level of proficiency. When you switch one employee for an employee with a different proficiency or skill set, it might cause an adverse affect on the service level for that time period.

- **Employees with varying min/max hours**

The hours after a shift or schedule swap must fall within the employee min/max hours. Otherwise, a swap cannot be made. A swap will not be made that puts employees above their maximum hours or below their minimum hours.

- **Assignment rules**

The scheduling engine will not make a swap if that swap causes an assignment rule to be violated. For example, an assignment rule that calls for each employee to work one weekend every two weeks will prevent a swap that would give one employee two weekends off, even if this is a senior employee who prefers to not work weekends.

- **Employees from different organizations**

A swap will not be made if it causes an employee to violate organization parameters. For example, a swap must not put more employees on the schedule at one time from a particular organization than that organization has named employees. Also, an employee who prefers to work early will not receive a shift through a swap that would cause that employee to work outside hours of operation.

- **Work patterns might limit shift swapping**

When swapping individual shifts, both employees must be eligible for their new shift within the work pattern that the scheduler has selected for the week. If the employee is only eligible for this shift through an assigned work pattern that has not been selected for this week, the swap *will not be made*.

## Related topics

[Scheduling with preferences](#), page 374

# Sample preferences report

To view how scheduling preferences for employees were accommodated into a schedule, when the scheduling engine pauses during the scheduling process or at the end of the scheduling process, select **View favored preferences**.

## Example: Preferences report

### Favored Preferences

---

**Park, Julie - Start Date 1/2/2000 - top 6% of options favored each day:**

8/9/2004 - 38 start time/day off options - 6 favored: Day Off,09:45,10:00,10:15,10:30,10:45  
8/10/2004 - 38 start time/day off options - 6 favored: Day Off,09:45,10:00,10:15,10:30,10:45  
8/11/2004 - 38 start time/day off options - 6 favored: Day Off,09:45,10:00,10:15,10:30,10:45  
8/12/2004 - 38 start time/day off options - 6 favored: Day Off,09:45,10:00,10:15,10:30,10:45  
8/13/2004 - 38 start time/day off options - 6 favored: Day Off,09:45,10:00,10:15,10:30,10:45  
8/14/2004 - No start time/day off options favored  
8/15/2004 - No start time/day off options favored

**Koza, Frederick - Start Date 1/17/2000 - top 10% of options favored each day:**

8/9/2004 - No start time/day off options favored  
8/10/2004 - No start time/day off options favored  
8/11/2004 - No start time/day off options favored  
8/12/2004 - No start time/day off options favored  
8/13/2004 - No start time/day off options favored  
8/14/2004 - No start time/day off options favored  
8/15/2004 - No start time/day off options favored

**Spielberg, Lisa - Start Date 12/12/2001 - top 63% of options favored each day:**

8/9/2004 - No start time/day off options favored  
8/10/2004 - No start time/day off options favored  
8/11/2004 - No start time/day off options favored  
8/12/2004 - No start time/day off options favored  
8/13/2004 - No start time/day off options favored

**8/14/2004 - No start time/day off options favored**

**8/15/2004 - No start time/day off options favored**

**Whistler, Aaron - Start Date 12/15/2001 - top 65% of options favored each day:**

**8/9/2004 - 18 start time/day off options - 13 favored:**

07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45,10:00

**8/10/2004 - 18 start time/day off options - 12 favored:**

07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

**8/11/2004 - 18 start time/day off options - 12 favored:**

07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

**8/12/2004 - 18 start time/day off options - 12 favored:**

07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

**8/13/2004 - 18 start time/day off options - 13 favored: Day**

Off,07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

**8/14/2004 - No start time/day off options favored**

**8/15/2004 - No start time/day off options favored**

**Vocavick, Brenda - Start Date 3/15/2004 - top 92% of options favored each day:**

**8/9/2004 - No start time/day off options favored**

**8/10/2004 - No start time/day off options favored**

**8/11/2004 - No start time/day off options favored**

**8/12/2004 - No start time/day off options favored**

**8/13/2004 - No start time/day off options favored**

**8/14/2004 - No start time/day off options favored**

**8/15/2004 - No start time/day off options favored**

**Chang, Kevin - Start Date 3/15/2004 - top 94% of options favored each day:**

**8/9/2004 - No start time/day off options favored**

**8/10/2004 - No start time/day off options favored**

**8/11/2004 - No start time/day off options favored**

**8/12/2004 - No start time/day off options favored**

**8/13/2004 - No start time/day off options favored**

**8/14/2004 - No start time/day off options favored**

**8/15/2004 - No start time/day off options favored**

**Brannon, Mick - Start Date 3/15/2004 - top 97% of options favored each day:**

8/9/2004 - No start time/day off options favored  
8/10/2004 - No start time/day off options favored  
8/11/2004 - No start time/day off options favored  
8/12/2004 - No start time/day off options favored  
8/13/2004 - No start time/day off options favored  
8/14/2004 - No start time/day off options favored  
8/15/2004 - No start time/day off options favored

**Corones, Helena - Start Date 3/15/2004 - top 100% of options favored each day:**

8/9/2004 - No start time/day off options favored  
8/10/2004 - No start time/day off options favored  
8/11/2004 - No start time/day off options favored  
8/12/2004 - No start time/day off options favored  
8/13/2004 - No start time/day off options favored  
8/14/2004 - No start time/day off options favored  
8/15/2004 - No start time/day off options favored

#### **Related topics**

[Service level versus preferences](#), page 94



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