



Cisco Unified Workforce Optimization

Workforce Management Administrator User Guide 10.0

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Workforce Management Administrator User Guide

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Introduction

1

About Workforce Management

Workforce Management (WFM) is a browser application that can be accessed by users (schedulers and administrators) who have Windows Internet Explorer installed on their desktops. Since WFM is a browser application and thus does not require local installation, it is ideally suited to an environment where the workforce is geographically dispersed.

WFM allows the scheduling of multiple CSQs and sites. A single WFM implementation can be used worldwide. It also allows the managing of key performance indicators and historical adherence to schedules.

WFM retrieves historical contact volume information from the ACD and uses this information to define the contact center call distribution for a CSQ. You can alter the call distribution if you think a special event (for example a public holiday or advertising campaign) might artificially affect the historically anticipated call volume.

WFM allows the contact center to define the work conditions for agents and teams. An unlimited number of working conditions can be created through the WFM interface to take into account the different work conditions required by the contact center.

Contact center managers can track forecasts throughout the day to see if there is any risk of understaffing or overstaffing based on contact activity levels.

IT managers do not need to deal with deployment and support issues on each individual user's PC. Administration and maintenance of WFM is isolated to the central servers.

Transition to Cisco Workforce Optimization Widgets

To improve user experience, WFM features are being transitioned to Cisco Workforce Optimization in phases, as listed in [Table 1](#).

Table 1. WFM features transitioned to Workforce Optimization

WFM Version	Features Transitioned
WFM 8.6	All agent functionality
WFM 8.8	All supervisor functionality; one administrator feature (lock down dashboard)

See the *Workforce Management Application User Guide* for more information.

Features in WFM

Contact center managers can use WFM to perform the following tasks:

- Generate forecasts
- Manage schedules for sites in different locations and time zones
- Manage schedules for alternative media sources (for example, chat or email)
- Manage multiple skill scheduling, project scheduling, and assignment scheduling
- Manage historical adherence, intraday activities, and scenario analysis (including what-ifs, distributions, and forecasts)
- Generate reports

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- Manage multiple skill scheduling, project scheduling, and assignment scheduling
- Manage historical adherence, intraday activities, and scenario analysis (including what-ifs, distributions, and forecasts)
- Generate reports

Documentation

The following documents contain additional information about Workforce Management 10.0.

- *Workforce Management Installation Guide*
- *Workforce Management Application User Guide*
- *Workforce Management Troubleshooting Guide*
- *Workforce Management Reports Reference Guide*
- *Release Notes for Workforce Management*

Synchronization with Unified CCX

2

Introduction

This section describes how the Sync Service imports agents, teams, and CSQs from Unified Contact Center Express (CCX) into WFM.

Synchronizing ACD Data

The Sync Service automatically extracts the following information from Unified CCX and loads it into WFM:

- Teams
- Agents and supervisors
- Relationships between agents and teams
- CSQs

Once this information is extracted to WFM, you can then configure WFM to generate forecasts and schedules for CSQs.

NOTE: Any teams, relationships, or CSQs created in WFM cannot be modified in Unified CCX. If you create any of these entities in WFM, they will not be created (or synchronized in) Unified CCX.

Synchronizing Team Data

When team data is changed in Unified CCX, the Sync service detects it and makes changes in WFM. [Table 2](#) summarizes these changes.

Table 2. Synchronization of team information between Unified CCX and WFM

Change in Unified CCX	Resulting Change in WFM
New team is added	<ul style="list-style-type: none"> • New team is added with the same name • Makes any agent who is a member of the team in Unified CCX a member of the team in WFM, and designates the team as the agent's main team. The main team has the following functions in My Page: The agent can see performance statistics for the main team. The agent does not have access to performance statistics for other teams. The agent can request a shift trade or time off with other members of the agent's main team. Only a supervisor for the main team can approve the agent's request if the supervisor and agents are assigned the same view.
Team name is changed	Team name is changed
New agent is added to the team	New agent is added to the team, and the team is designated as that agent's main team

Table 2. Synchronization of team information between Unified CCX and WFM (cont'd)

Change in Unified CCX	Resulting Change in WFM
Team is deleted	No change
Agent is removed from a team	No change

You can create teams in WFM and assign agents to these teams, but these new teams are not synchronized with Unified CCX.

In Unified CCX, an agent can belong to only one team. In WFM, an agent can belong to multiple teams. Assigning an agent to a team in WFM has no effect on the agent's team assignment in Unified CCX.

You might want to assign an agent to multiple teams in WFM for the following reasons:

- Some reports are organized by team. Placing agents on a team allows you to see reporting for all agents as a group.
- Changes are more easily applied by team rather than agent by agent. WFM allows you to filter agent lists by team.

Synchronizing Agent Data

WFM assumes that every user imported from Unified CCX to WFM is an agent. Before you activate an agent in WFM, ensure that the user actually is an agent and not a supervisor, scheduler, or administrator. If the user is not an agent, you must create a new non-agent user manually in WFM and assign the appropriate role and view to that user.

When agent and supervisor data is changed in Unified CCX, the Sync service detects it and makes changes in WFM. [Table 3](#) summarizes these changes.

Table 3. Synchronization of agent information between Unified CCX and WFM

Change in Unified CCX	Resulting Change in WFM
New agent is added	New agent is added. Specifically: <ul style="list-style-type: none"> • Applies the Unified CCX agent first and last name to the WFM agent first and last name. • Applies the Unified CCX login ID to the WFM Employee Number and Log ID. You can change the Employee Number but not the Log ID. Changing the Employee Number has no effect on the Unified CCX login ID. • Sets the WFM start dates for the company and department to the current date. • Assigns the corresponding team to the agent as the agent's main team. • Assigns the agent to the NewAgents team and the default team, if there is one.
	New user is added. Specifically: <ul style="list-style-type: none"> • Applies the Unified CCX agent first and last name to the WFM user first and last name. • Creates a link between the user and the agent. • Sets the status of the user to inactive.
Agent first or last name is changed	Agent and user first or last name is changed
Agent is deleted	Agent and user status is set to Inactive

Synchronizing CSQ Data

When CSQ data is changed in Unified CCX, the Sync service detects it and makes changes in WFM. [Table 4](#) summarizes these changes.

Table 4. Synchronization of CSQ information between Unified CCX and WFM

Change in Unified CCX	Resulting Change in WFM
New CSQ is added	New CSQ is added. Specifically: <ul style="list-style-type: none"> • Applies the Unified CCX CSQ name to the WFM CSQ description. • Applies the Unified CCX CSQ ID to the WFM CSQ number.
	New CSQ mapping is added. Specifically: <ul style="list-style-type: none"> • Applies the Unified CCX CSQ name to the WFM CSQ mapping name. • Applies the Unified CCX CSQ ID to the WFM CSQ mapping number.
	Creates a one-to-one mapping between the Unified CCX CSQ mapping and the WFM CSQ mapping.
CSQ name is changed	<ul style="list-style-type: none"> • Applies the new Unified CCX CSQ name to the WFM CSQ description. • Applies the new Unified CCX CSQ name to the WFM CSQ mapping name.
CSQ name is deleted	No action taken

Getting Started

3

Introduction

This section covers the following topics:

- [Logging In to WFM \(page 26\)](#)
- [Using the Administrator Interface \(page 27\)](#)
- [Setting Display Preferences \(page 33\)](#)
- [Entering Dates \(page 36\)](#)
- [Filtering Your View \(page 37\)](#)

Logging In to WFM

The following procedure describes how to log in to the WFM administration application.

NOTE: The degree of access you have to WFM is determined by the roles and views assigned to your username. For more information on roles and views, see ["Administration" on page 265](#).

To log in to WFM:

1. Enter the following URL in your web browser, where <wfm> is either the name or IP address of the server on which WFM is installed.

`http://<wfm>:8087/c3/`

NOTE: The website address is case sensitive.

The Workforce Management login window appears.

2. Enter your WFM username and password. The username is not case sensitive and the password is case sensitive.

NOTE: If your company uses Active Directory with WFM, your WFM username and password is the same as your network login username and password. If your company does not use Active Directory with WFM, ask your system administrator for your WFM username and password.

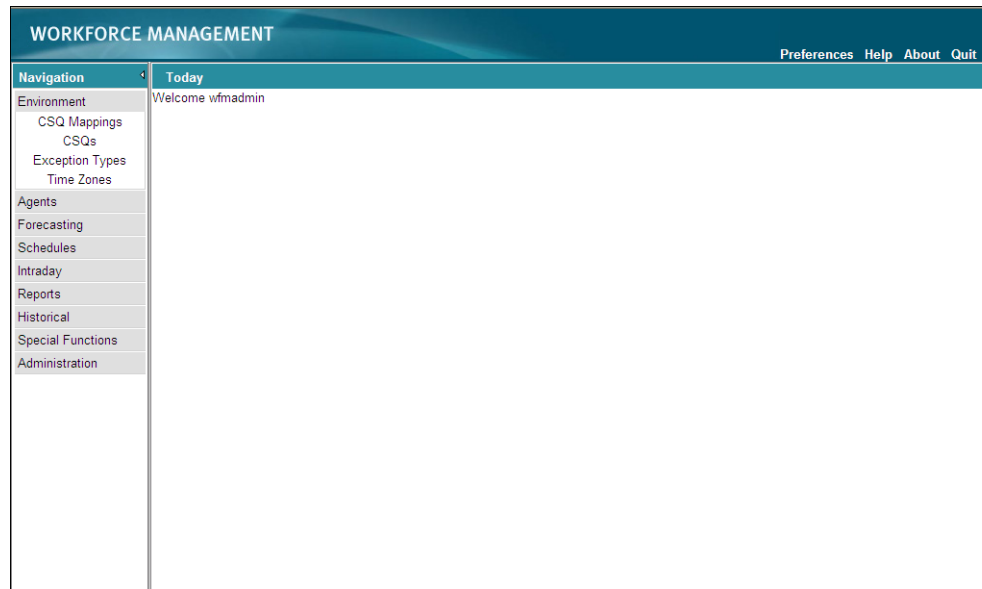
3. Click GO or press Enter to log in to WFM. The Workforce Management window appears.

NOTE: The topics that appear in the Navigation menu depend on the roles that are assigned to the username you used to log in to WFM (see ["Roles" on page 266](#)).

Using the Administrator Interface

The WFM administrator interface (Figure 1) has two panes. The left pane contains the Navigation menu. The right pane displays the fields associated with the menu item you select in the left pane.

Figure 1. Workforce Management Administrator interface



Using the Navigation Menu

Use these mouse actions to use the Navigation menu.

- To expand or collapse the menu, click any topic.
- To hide the Navigation pane, click ◀ (left arrow).
- To display the Navigation pane, click ▶ (right arrow).
- Click a task to display the associated data in the right pane.

Sorting a Table

Data that is presented in tabular form can be sorted based on the contents of a single column in the table. The sort can be ascending or descending.

The small arrow at the right of the primary sort column heading displays the direction of the sort, ascending or descending.


NOTE: Numbers are sorted from left to right, without accounting for the actual value of the number. For example, the numbers 1, 210, 0999, 3, 34, and 3104 are sorted in ascending order as follows:

0999
1
210
3
3104
34

To sort a table:

- Click the column heading. Click again to reverse the sort order.

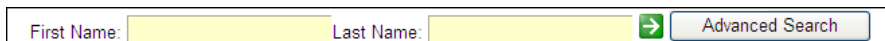
Searching for an Item in a Table


If a table contains many items, use  (Search) to locate an item more quickly. WFM provides simple and advanced searches:

To perform a search:

1. Click  (Search). The simple search fields appear (Figure 2).

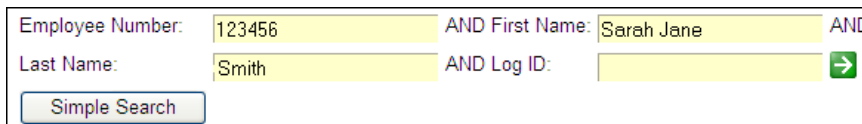
Figure 2. Simple search fields




First Name: Last Name:  Advanced Search


2. You have two options for performing a search:
 - To perform a simple search, enter the user’s first name or last name, or both first and last names in the fields.
 - To perform an advanced search, click Advanced Search (Figure 3), and enter the appropriate text in the fields. To return to the simple search fields, click Simple Search.



Figure 3. Advanced search fields



Employee Number: AND First Name: AND
Last Name: AND Log ID: 
Simple Search

3. Click  (Go). The results appear in the list.

NOTE: If you press the Enter key instead of clicking  (Go), WFM places the focus on the first icon in the toolbar. For example, if the first image is

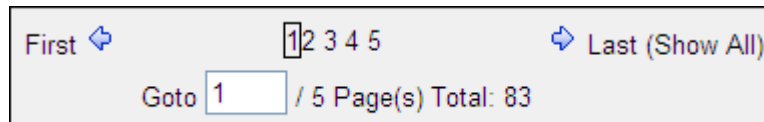
 (New), WFM displays a pane in which you can add a component (for example, the General tab on the Team Details pane). You must click  (Go) to execute the search.

Viewing Long Tables

WFM often displays information in tables. Some tables have more rows than can be viewed on one pane. When a table is large, options appear at the bottom of the pane that allow you to move quickly through the table.

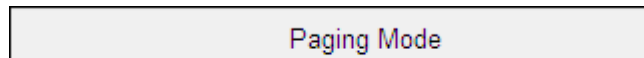
You view tables either in paging mode (the default) or scrolling mode. [Figure 4](#) displays the text that appears at the bottom of the pane when you are in paging mode.

Figure 4. Paging mode





[Figure 5](#) displays the text that appears at the bottom of the pane when you are in scrolling mode.

Figure 5. Scrolling mode



Use these mouse actions to view a large table.

- Click Show All to switch to scrolling mode and display the table on a single page. Use the scroll bar on the right to move up and down on the page.
- Click Paging Mode to display items on multiple pages. When in paging mode, use the following mouse actions:
 - Click  (Next Group) or  (Previous Group) to move forward or backward 5 pages at a time.
 - Click Last to go to the last page.
 - Click First to go to the first page.
 - Enter a page number in the Goto field and click Goto to jump directly to that page. You can also click the desired page number between the arrows.

Moving Items Between Lists


Use these mouse actions to select items in an available list and move them to an assigned list.

- To select an item in an available list, click the name of the item.
- To select multiple noncontiguous items in the available list, press the Ctrl key while selecting each item in the list.
- To select multiple contiguous items in an available list, click the first item in the list, and shift-click on the last item in the list.
- To move the available items to the assigned list, select the names of the items in the available list, then click >. The names of the selected items move to the assigned list.

Use these mouse actions to select items in an assigned list and move them to an available list.






- To select an item in an assigned list, select the check box next to the item.
- To select multiple noncontiguous items in the assigned list, select the check box next to each item.
- To select all items in an assigned list, select check box in the column heading of the assigned list. A check mark appears in all check boxes in the assigned list.
- To move the assigned items to the available list, select the names of the items in the assigned list, then click <. The names of the selected items move to the available list.


















Refreshing Data Displayed on a Pane

If the pane does not include a  (Refresh) button, click another task in the Navigation menu, and then return to the original pane to refresh the data on the pane.

Icon Descriptions

The following table describes the most frequently used actions and their icons.

Icon	Action	Description
	Hide	Hide the Navigation pane.
	Restore	Display the Navigation pane.
	New	Create a new file (user, agent, CSQ mapping, etc.).
	Copy	Copy an item.
	Paste	Paste an item.

Icon	Action	Description
	Save	Save the newly created or modified items.
	Delete	Delete the selected files.
	Search	Search for items in a list.
	Print	Generate a report in a separate browser using the information on the current screen. The report can then be saved to a file or sent to a printer.
	Export data	Export report data to a text file.
	Export report	Export report data to a PDF or XLS file.
	Adjusted Time/ Not Adjusted Time	Toggle between the time zone associated with the virtual CSQ (Adjusted Time) and the time zone associated with a single CSQ within the virtual CSQ (Not Adjusted Time).
	Refresh	Refresh the displayed data (if applicable).
	Launch a request	Submit a processing request to the server.
	Define the context	Define the work context (for example, CSQ or date).
	Next Group	Move forward 5 pages at a time.
	Previous Group	Move backward 5 pages at a time.
	Back	Return to previous pane. NOTE: The back button in Internet Explorer is disabled.
	Graph	Display a data graph. NOTE: This icon appears only when there are 100 or fewer rows in a table.
	New exception request	Create a new exception request.
	New schedule swap request	Create a new request to trade schedules.
	Edit	Edit a request.

Navigation Button Descriptions

The following table describes the most frequently used navigation buttons.

Button	Description
Preferences	Displays the My Preferences pane. See "Setting Display Preferences" on page 33 for more information.
Help	Displays help. WFM provides detailed, browser-based help with comprehensive descriptions and step-by-step procedures. NOTE: Turn off your pop-up blocker to view this information.
About	Displays information about the WFM version in a separate dialog box. NOTE: Turn off your pop-up blocker to view this information.
Logout	Ends your session. When you click Logout, a confirmation dialog box appears. Click OK to confirm logging out and display the WFM Login window.

Setting Display Preferences

Use the procedures below to change your display preferences.

- [Displaying the Date Format \(page 33\)](#)
- [Customizing Dashboards \(page 33\)](#)
- [Selecting Schedule Display Parameters \(page 34\)](#)
- [Changing Your Password \(page 35\)](#)

Displaying the Date Format

Use this procedure to view the default date format that appears in WFM panes and reports. The format displayed depends on your locale. For example, in the US, the default date format is mm-dd-yyyy.

Use the displayed format when entering dates. You cannot change the date format.

NOTE: The format refers to the order in which the month, day, and year are displayed in the date. The separator between these elements can vary. For instance, dates might use a hyphen (12-15-2010) or a slash (12/15/2010). If you input the incorrect separator, you will receive an error message.

To display the default date format:

- Click Preferences and select the General tab. The General tab displays the Date Format.

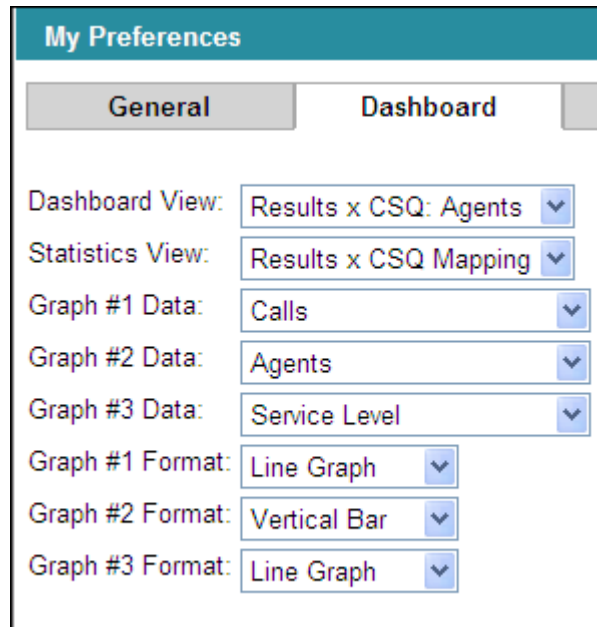
Customizing Dashboards


Use this procedure to select the views and formats you want to appear on your own dashboard.

To customize a dashboard:

1. Click Preferences and select the Dashboard tab. The Dashboard tab appears (Figure 6).

Figure 6. My Preferences: Dashboard tab




2. Select the view you want to display on the Statistics Dashboard pane from the Dashboard View drop-down list.
3. Select the view you want to display on the Statistics pane from the Statistics View drop-down list.
4. Select the data you want to display for each graph in the Statistics Dashboard pane from the Graph #1 Data, Graph #2 Data and Graph #3 Data drop-down lists.
5. Select the format you want for each graph in the Statistics Dashboard pane from the Graph #1 Format, Graph #2 Format and Graph #3 Format drop-down lists.
6. Click  (Save) to save your changes.

Selecting Schedule Display Parameters

Use this procedure to select the information that you want to appear on your schedule.

To select schedule display parameters:


1. Click Preferences and select the Schedule tab. The Schedule tab displays the schedule options.
2. Choose one of the following options from the Show Unavailable Agents on the Schedule drop-down list.
 - Yes: Displays agents who are not available to work on the schedule.
 - No: Hides unavailable agents on the schedule.
3. In the Start Time field, select the time you want the schedule display to start.
4. In the End Time field, select the time when you want the schedule display to end.
5. Click  (Save) to save your changes.

Changing Your Password

Use this procedure to change the password you use when logging in to WFM.

NOTE: If you are using Active Directory, the Password tab only appears if you are logged in as an administrator.

To change your password:

1. Click Preferences, and select the Password tab. The Password tab enables you to change your password.
2. Enter your current password in the Old Password field.
3. Enter your new password in the New Password field.
4. Reenter your new password in the Confirm New Password field to ensure the accuracy of what you entered in the New Password field.
5. Click  (Save) to save your changes.

Entering Dates

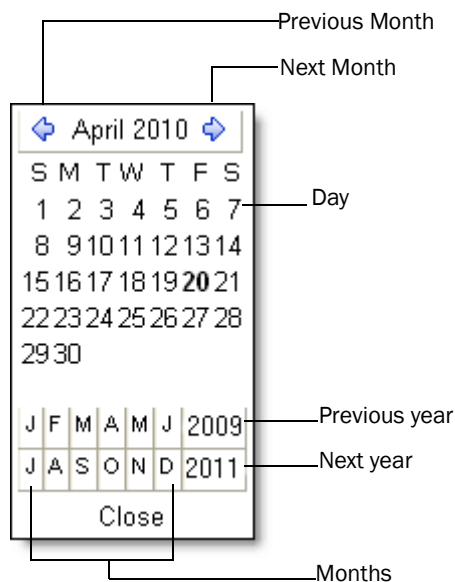
When entering dates in WFM, you can either:

- Enter the date manually using the format specified on the General tab in My Preferences (by default, mm-dd-yyyy)
- Select the date from the popup calendar that appears when you click the date field

To enter a date in a field using the popup calendar:

1. Click a date field in the pane. The calendar appears at the top of the Navigation pane (Figure 7).

Figure 7. Popup calendar



2. Fill the date field by selecting the desired date from the popup calendar. By default, the calendar displays the current month and year.
 - To select a previous or future year, click the desired year at the bottom right of the calendar.
 - To select a month, click the letter associated with the month at the bottom left of the calendar. The letters are displayed in month order. You can also display the next or previous month by clicking ➡ (next month) or ⬅ (previous month).
 - To select a day, click the date in the calendar.
3. Click Close to dismiss the calendar.

Filtering Your View

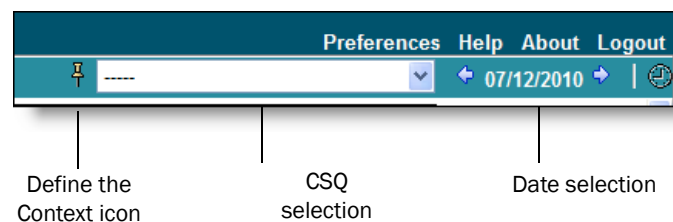
There are several ways to select CSQs, CSQ mappings, teams, and dates to filter the data you view in WFM.

- [Selecting from the Toolbar \(page 37\)](#)
- [Selecting from the Context Pane \(page 37\)](#)

Selecting from the Toolbar

Selection tools are available on the toolbar ([Figure 8](#)) on a number of WFM pages.


Figure 8. Toolbar



- You can choose a CSQ from the drop-down list.
- By default, today's date is displayed on the toolbar. You can navigate to other dates before or after today's date, one day at a time, by clicking the left or right arrows on either side of the date.
- You can click the Define the Context icon to select dates, teams, CSQs, CSQ mappings, and teams from the Context pane.

You might see some or all of these selection tools on a page.

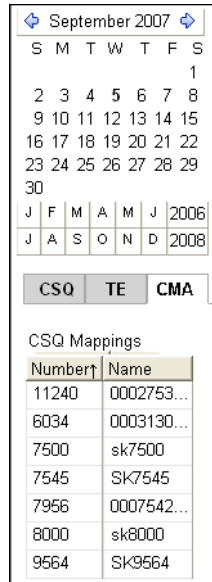
Selecting from the Context Pane

When you click the  (Define the Context) icon, the Context pane appropriate for that page is displayed. This pane can contain any or all of the following:


- A calendar from which you can select a date
- A list of CSQs (the CSQ tab)
- A list of CSQ mappings (the CMA tab)
- A list of teams (the TE tab)

An example of a context pane is shown in [Figure 9](#).

Figure 9. Context pane



When you click a number or description from one of the tabs, the information appears to the right of the Context pane.

To dismiss the Context pane, click the  (Define the Context) icon again.

Environment

4

Introduction

This section covers the following topics:

- [CSQ Mappings \(page 42\)](#)
- [CSQs \(page 45\)](#)
- [Exceptions \(page 61\)](#)
- [Time Zones \(page 66\)](#)

CSQ Mappings

Use the CSQ mappings function to complete the following tasks.

- [Creating a CSQ Mapping \(page 42\)](#)
- [Editing a CSQ Mapping \(page 44\)](#)
- [Assigning Agents to a CSQ Mapping \(page 43\)](#)
- [Assigning CSQs to a CSQ Mapping \(page 43\)](#)
- [Deleting a CSQ Mapping \(page 44\)](#)

Understanding CSQ Mappings

A CSQ mapping provides links between CSQs and agents.



A CSQ mapping is a mechanism used by Unified CCX to link agents to a CSQ. It usually reflects an agent's actual skill area within the contact center. A CSQ mapping has no other purpose or effect. The Sync service extracts a CSQ identity from Unified CCX, loads it into WFM, and creates a CSQ mapping for it. WFM uses the CSQ mapping when creating schedules.

To schedule an agent to support a CSQ, you must assign the agent to the CSQ mapping associated with the CSQ. You can assign an agent to more than one CSQ mapping.

NOTE: The Sync service does not create a CSQ mapping for any CSQ or virtual CSQ that you create in WFM. If you create a CSQ or virtual CSQ in WFM, you must also create a CSQ mapping for it.

Creating a CSQ Mapping


To create a new CSQ mapping:

1. Choose Environment > CSQ Mappings. The CSQ Mapping List appears.
2. Click  (New). The CSQ Mapping Details pane displays the General tab.
3. Enter the name of the CSQ mapping. This name can contain up to 50 alphanumeric characters.
4. Click  (Save) to save your changes. The Agents and CSQs tabs appear.
5. Complete configuring the new CSQ mapping by assigning agents and CSQs to it.

Assigning Agents to a CSQ Mapping

NOTE: WFM cannot create a schedule for an agent unless that agent is assigned to a CSQ mapping.


To assign agents to a CSQ mapping:

1. Choose Environment > CSQ Mappings and select the Agents tab. The tab displays available and assigned agents
You can filter the list of agents by team or CSQ.
2. Move the desired agents from the Available list to the Assigned list by selecting them and clicking >. You can move agents from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.
3. Click  (Save) to save your changes.

Assigning CSQs to a CSQ Mapping

The Sync Service automatically creates a one-to-one CSQ mapping for each CSQ it loads into WFM from Unified CCX. You cannot change a CSQ mapping that was created by the Sync Service.

To assign CSQs to a CSQ mapping:


1. Choose Environment > CSQ Mappings and select the CSQs tab. The tab displays available and assigned CSQs
2. Move the desired CSQs from the Available list to the Assigned list by selecting them and clicking >. You can move CSQs from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.
3. Assign a priority to each CSQ, from 0 to 999, with 0 being the highest priority.
Assigning a priority to each CSQ allows WFM to resolve scheduling conflicts when agents are assigned to multiple CSQs.
Example: You designate some of your agents to support two CSQs, and assign a priority to each CSQ in WFM. If WFM generates the schedules for the two CSQs, and discovers there are not enough agents to support all forecast requirements across both CSQs, it compares the priority value for the two CSQs. WFM then schedules agents for the CSQ with the highest priority first.
4. Click  (Save) to save your changes.

Editing a CSQ Mapping

The CSQ mappings automatically created when the ACD syncs with WFM might not meet your scheduling needs. You might want to refine the makeup of your CSQ mappings to make scheduling and reporting easier and more meaningful.

Any changes you make here are not synchronized back to the ACD, and the ACD will not overwrite your changes in the next synchronization.

To edit a CSQ mapping:


1. Choose Environment > CSQ Mappings. The CSQ Mapping List appears.
2. Click a name in the CSQ mapping list. The CSQ Mapping Details pane appears.
3. Modify the details of the CSQ mapping as desired.
4. Click  (Save) to save your changes.

Deleting a CSQ Mapping

BEST PRACTICES: It is recommended that you do not delete CSQ mappings. If they are deleted, the historical data associated with them will be lost.

NOTE: For Unified CCX, do not use this procedure to delete CSQ mappings created by the Sync service when it imports CSQs. The Sync service will not recreate the CSQ mapping the next time synchronization occurs.

To delete a CSQ mapping:

1. Choose Environment > CSQ Mappings. The CSQ Mapping List appears.
2. Select the check box next to the CSQ mapping you want to delete. You can also select the check box in the column heading to delete all CSQ mappings listed.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

CSQs

A CSQ is a group of agents to which contacts are routed. It is generally associated with a specific skill.

In WFM, you schedule agents to support the CSQ call or email requirements. For this reason, WFM makes CSQs the focal point for schedules and forecasts.

CSQs in a Unified CCX Environment

CSQs can be created in either Unified CCX or WFM.

CSQs created in Unified CCX are imported into WFM by the Sync service. They cannot be modified in WFM, but must be modified at the source, in Unified CCX.

CSQs created in WFM exist only in WFM and are not added to Unified CCX by the Sync service. Every CSQ is uniquely identified by a number. If you create a CSQ in WFM, you cannot assign it the same number that is already assigned to a CSQ created in Unified CCX. In addition, once you create a CSQ in WFM, you cannot change its number.

CSQs created in WFM exist only in WFM and are not added to Unified CCX by the Sync service. The number that identifies a CSQ must be unique; any CSQ you create in WFM must not be assigned a number that is already assigned to a CSQ created in Unified CCX.

CSQs and Schedules

Use WFM to generate a schedule for a CSQ. There are some instances when you might not want to create a schedule for a CSQ. These instances are:

- There are only a couple of agents
If a CSQ always requires the support of the same agents, and there are only one or two agents who provide this support, you might decide that a schedule is unnecessary for these agents. Consider your options carefully before you make this decision. If you do not include these agents in a schedule, you will lose reporting information on adherence to the schedule. The agents also lose their own adherence dashboard.
- The CSQ exists only to identify backup agents for work overflow situations
If you schedule both the primary and backup CSQ to manage call requirements, you double the schedule. Use WFM to keep your staffing level on target for the primary CSQ.
- You are scheduling multiple CSQs as a virtual CSQ
You can group multiple CSQs with the same CSQ type into a virtual CSQ for scheduling purposes. Consider creating a virtual CSQ if you have several groups of agents who all support the same type of contacts (calls or email).

Virtual CSQs

WFM allows the creation of a virtual CSQ. A virtual CSQ is a collection of CSQs merged into a single CSQ. It can be associated with multiple skills. Combining individual CSQs into a single virtual CSQ allows you to create a single schedule for multiple CSQs. If you do not create a virtual CSQ, you must create a separate schedule for each CSQ.

Consider creating a virtual CSQ if you have a group of agents who all support similar types of contacts (calls or email). The following examples describe situations in which you might want to create a virtual CSQ.

- Premium and regular customer service CSQs

In this example, a contact center has one CSQ for premium customers and another CSQ for regular customers. Premium customers are routed through the premium CSQ. Premium customers reach an agent faster and receive higher value services from the agent. However, the same group of agents handles both the premium and regular customer service calls. Creating a virtual CSQ that includes both the premium and regular CSQ simplifies scheduling.

- CSQs for multiple locations that all provide the same service

In this example, an organization has IT help desks in multiple locations. The contact center configuration includes a CSQ for each location, to account for multiple time zones, and allow reporting by location. The contact center routing consolidates the agents from each location into a single pool. It distributes the call to an available agent regardless of location. By grouping the CSQs into a single virtual CSQ, WFM can schedule the agents as a single group in a pattern that is consistent with the routing and time zones.

CSQ Attributes

WFM requires that you assign additional attributes to a CSQ that are unique to WFM. They do not exist in the ACD.

You can specify the order in which WFM uses these attributes to determine which agents to schedule first. For example, you can specify WFM to consider company seniority (Company Start Date) first, rank second, and availability for the week third. You can also determine whether the scheduling feature uses an attribute in ascending or descending order. For example, you can specify that WFM should schedule agents with the most seniority first. See "[Entering Scheduling Order](#)" on page 58 for more information.

These attributes appear on the General and Scheduling Order tabs in the CSQ pane. The WFM attributes are described below.

CSQ Type

WFM needs to know the type of contacts (calls or email) a CSQ handles. This information is used when WFM generates forecasts.

NOTE: Historical email volume is not available for a CSQ of type Email. It must be entered manually.

A CSQ of type Email differs from a CSQ of type Calls in the following ways:

- Time to meet the Service Level Objective: A CSQ of type Email specifies time to meet the service level objective in hours and a CSQ of type Calls specifies time to meet the service level objective in seconds.
- Contact received during closed hours: When generating a forecast, WFM considers email received during closed hours. Closed hours are not considered in the Service Level Objective. WFM does not consider calls received after business hours.

CSQ Priority

Assigning priorities to each CSQ allows WFM to resolve scheduling conflicts when an agent is assigned to multiple CSQs. See ["Work Shifts" on page 83](#) for more information.

To generate a schedule for a CSQ, WFM locates the agents with a CSQ to the desired CSQ. WFM then determines which agents have a work shift with available hours on the specified day. See ["Work Shifts" on page 83](#) for more information. If the agent supports multiple CSQs, WFM uses CSQ priority to determine which CSQ will be assigned to the agent for this schedule. See ["Entering Scheduling Order" on page 58](#) for more information.

For example, you designate some of your agents to support two CSQs, and assign a priority to each CSQ in WFM. If WFM generates the schedules for the two CSQs and discovers there are not enough agents to support all forecast requirements across both CSQs, it compares the priority value for the two CSQs. WFM then schedules agents for the CSQ with the highest priority first. See ["Assigning CSQs to a CSQ Mapping" on page 43](#) for more information on CSQ priority.

CSQ Priority

Assigning priorities to each CSQ allows WFM to resolve scheduling conflicts when agents with multiple skills belong to multiple CSQs. See ["Work Shifts" on page 83](#) for more information.

Standard Talk Time and Standard Work Time/After Call Work

WFM needs to know the typical call duration for a CSQ to determine the number of agents needed. You can enter standard talk time and standard work time/after call work for each CSQ in WFM. Alternatively, you can let WFM generate these values automatically based on historical data. See ["Forecasts" on page 121](#) for more information.

Service Level/Quality Objective

WFM needs to know the service level/quality objective. A service level/quality objective is often expressed as the speed of answer to be attained as some percentage of calls to be answered within some number of seconds or emails answered within a number of hours (for example, 80 percent of call answered within 20 seconds or 80 percent of email answered within 24 hours). A more demanding service level/quality objective requires a higher staffing level. The forecast feature uses the specified service level/quality objective to project the need for agents.

Opening and Closing Hours

The hours during which a contact center accepts calls for the CSQ.

Agents might be scheduled for additional hours to perform work that is not related to a contact center (for example, training, meetings or set up work).

CSQ Parameters

If WFM finds multiple agents available for the CSQ, WFM uses the order of the following CSQ parameters to decide which agents to schedule first.

See ["Work Shifts" on page 83](#) and ["Agents" on page 75](#) for more information on these values.

- **Maximum Hours Available:** The maximum number of hours that the agent is available during the work shift. It is the sum of maximum availability for each day across all the days of the week.
- **Minimum Hours Available:** The minimum number of hours that the agent is available during the work shift. It is the sum of minimum availability for each day across all the days of the week. This parameter is configured in the Work Shift Detail pane.
- **Maximum Hours per Week:** The maximum number of hours that the agent can work each week. This parameter is configured in the Work Shift Detail pane.
- **Minimum Hours per Week:** The minimum number of hours that the agent can work each week. This parameter is configured in the Work Shift Detail pane. Your work shift is variable if there a difference between minimum and maximum hours per week.
- **Company Start Date:** The agent's seniority within the company based on the date when the agent started working for the company. This parameter is configured in the Agent Details pane.
- **Department Start Date:** The agent's seniority within the contact center based on the date when the agent started working in the contact center. This parameter is configured in the Agent Details pane.
- **Rank:** The agent's ranking in the CSQ based on his or her knowledge and expertise. WFM uses this value to define scheduling priorities. This parameter is configured in the Agent Details pane.

Creating a CSQ

You can create a CSQ for each type of email, call, or chat service you want your agents to handle (for example, sales calls or IT help desk chat or email services).

To create a new CSQ:

1. Choose Environment > CSQs. The Contact Service Queue List appears.

Click  (New) to create a new CSQ. The CSQ Details pane appears (Figure 10).

Figure 10. CSQ Details: General tab

2. Complete the fields.

Field	Description
Number	The number associated with this CSQ. This name can contain up to 25 alphanumeric characters. This is a required field.

Field	Description
No Forecasts or Schedules	Select the No Forecasts or Schedules check box if you do not want WFM to run any forecasts or schedules for this CSQ. If this option is selected, the CSQ only appears in the historical data and intraday sections. The CSQ is no longer in service and does not appear in the distribution, forecast or schedules.
Virtual CSQ	WFM automatically selects the Virtual CSQ check box if you assign one or more CSQs on the Virtual CSQs tab.
MSAQ	Select the MSAQ check box if you plan to run a MSAQ schedule request for 2 or more CSQs.
Description	The description for this CSQ. The description cannot exceed 50 alphanumeric characters.
Color	<p>Click the Color field to display the color palette, and select a color. WFM displays the color and the Java number associated with the color. The default color is green. This color appears in the In service time column on the schedule maintenance pane.</p> <p>You can select a color for each CSQ (for example, Customer Service, Email Service, and French). To avoid confusion, select a unique color for each CSQ.</p>
CSQ Type	<p>You can designate a CSQ to exclusively handle a specific type of service (for example, calls, email or chat).</p> <p>Choose the CSQ type. Your options are:</p> <ul style="list-style-type: none"> • Calls: Choose this option if the agents are handling customer calls or chat services. When you choose Calls, you must specify the Service Level Objective in seconds. • Email: Choose this option if the agents are handling customer email. When you choose Email, you must specify the Service Level Objective in hours. <p>WFM uses this information when generating forecasts.</p>


Field	Description
CSQ Priority	<p>The priority assigned to this CSQ, from 0 to 999, with 0 being the highest priority. Assigning a priority number to a CSQ allows WFM to resolve scheduling conflicts when agents are assigned to multiple CSQs.</p> <p>To generate a schedule for a CSQ, WFM locates the agents with a CSQ mapping to the desired CSQ. WFM then determines which agents have a work shift with available hours on the specified day. If the agent supports multiple CSQs, WFM uses CSQ priority to determine which CSQ will be assigned to the agent for this schedule.</p> <p>For example, you designate some of your agents to support two CSQs, and assign a priority to each CSQ in WFM. (If WFM generates the schedules for the two CSQs, and discovers there are not enough agents to support all forecast requirements across both CSQs, it compares the priority value for the two CSQs. WFM then schedules agents for the CSQ with the highest priority first.</p>
Standard Talk Time	<p>The standard talk time in seconds for this CSQ. The standard talk time is the elapsed time from when an agent answers a call until the agent disconnects. It can be an average or an objective.</p> <p>You can specify that WFM update the value of standard talk time when calculating a distribution by selecting the Update CSQ Times check box on the Distribution Request pane under Forecasting > Distribution.</p> <p>WFM uses this information to determine the number of agents required. You can enter the standard talk time for each CSQ in WFM. Alternatively, you can let WFM generate these values automatically based on historical data when running a contact distribution.</p>

Field	Description
Standard Work Time	<p>The standard after call work time in seconds for this CSQ. The standard after call work time can be an average or an objective.</p> <p>You can specify that WFM update the value of standard work time when calculating a distribution by selecting the Update CSQ Times check box on the Distribution Request pane under Forecasting > Distribution.</p> <p>WFM uses this information to determine the number of agents required. You can enter the standard work time for each CSQ in WFM. Alternatively, you can let WFM generate these values automatically based on historical data when running a contact distribution.</p>
Standard Productivity	<p>The percentage of time an agent in a CSQ spends answering customer contacts. Agents in a contact center are generally productive between 80 and 85 percent of the time. However, if your contact center is generally productive 60 percent of the time, you need to enter that productivity value here.</p>
Service Level Objective	<p>A service level objective is a speed of answer goal that is often expressed as a percentage goal for answering calls within a specified number of seconds or email within a specified number of hours. For example, 80 percent of all calls answered within 20 seconds or 100 percent of email answered within 24 hours. A more demanding quality objective requires a higher staffing level.</p> <p>If your CSQ Type is calls, enter the percentage in the % field and the number of seconds in the sec field for Service Level Objective.</p> <p>If your CSQ Type is email, enter the percentage in the % field and the number of hours in the hrs field for Service Level Objective.</p> <p>NOTE: WFM uses this information to determine the number of agents required. The values entered in these fields determine the number of agents projected (Agents Projected column) in Intraday > Statistics. If the percentages are zero (0), zero appears in the Agents Projected column.</p>

Field	Description
Quality Objective	<p>The percentage of contacts handled for this service. Then enter time allowed for this quality objective. For example, if you select Calls as your Service Type, you can specify that all agents must respond to 80 percent of all calls within 20 seconds or less. If you select Email as your Service Type, you can specify that all agents must respond to 80 percent of all email within 24 hours or less.</p>
FTE	<p>(full time equivalent) The number of hours for a single FTE.</p> <p>A FTE person is equal to the number of total scheduled person hours divided by the number of hours per week which constitute a full-time person (for example, 40 hours, or 35 hours). FTE might consist of several part-time individuals whose combined work hours in a week equal the full-time person, but might not incur benefits expenses.</p> <p>For forecasting and planning purposes, you need to establish the number of hours an agent is paid per week (for example, 20, 35, or 40 hours). WFM uses this value to determine the number of FTE agents required for a forecast. If the number of paid hours is 40, and the forecast calls for 80 hours, you need two full time agents.</p>
Hours in Break Per Week	<p>The number of hours per week the CSQ spends in break.</p>

Field	Description
Time Zone	<p>Select the time zone in which the CSQ or virtual CSQ is located from the drop-down list.</p> <p>If the CSQs assigned to a virtual CSQ are located across multiple time zones, you must designate a base location and time zone for the virtual CSQ. If this is a virtual CSQ, use the Hour Gap field on the Virtual CSQs tab to manage the different time zones for each CSQ in the virtual CSQ.</p> <p>The CSQ and agent can be assigned to different time zones or the same time zone. For example, if the agent is located in the Montreal contact center and the CSQ is located in Minneapolis, select the (GMT -5:00) Eastern (U.S.A. and Canada) for the agent's time zone and (GMT -6:00) Central for the CSQ based in Minneapolis. If the agent's start time is 09:00 in Montreal, when a scheduler looks at the schedules for the CSQ, the agent's start time appears as 08:00.</p> <p>Select the Disabled option from the drop-down list only if you are producing schedules for CSQs that are located in different time zones.</p>
Opening	<p>The hours between opening and closing are when the contact center accepts calls for a CSQ.</p> <p>NOTE: Agents can be scheduled for additional hours to perform work that is not related to the contact center (for example, training, meetings, or set up work).</p> <p>Select the opening hours for each day of the week. Select the blank option located at the beginning of the drop-down list when the office is closed for the entire day.</p> <p>Open hours specified in these fields apply to the CSQ. It does not apply to the contact center. WFM captures historical data for CSQ activity within the specified opening and closing times, and days.</p> <p>NOTE: WFM does not keep historical data for times and days not specified.</p>

Field	Description
Closing	Select the closing hours for each day of the week from the drop-down list. Select the blank option from the drop-down list when the office is closed for the entire day.
Active	Select this check box for each day in which the contact center is open. A cleared check box indicates the contact center is closed.
Forecast Precision Level	<p>The precision level of the forecast for the entered date range. When you launch the compilation request, WFM displays in this field how close to reality the generated and updated forecasts were.</p> <p>Forecast accuracy is the ratio of the forecasted call volume over the actual call volume. For example, if the forecast precision level is 105 percent, the forecast contact volume was greater than the actual contact volume by 5 percent.</p> <p>NOTE: The forecast accuracy calculation is based on historical information only. It is not a forward looking calculation. It assesses how a forecast measured up against the actual contacts received during the forecast period.</p>


3. Click  (Save) to save your changes. The following tabs appear:
 - CSQ Mappings
 - Virtual CSQ Mappings
 - Scheduling Order
4. Complete configuring the new CSQ by completing the configuration on these tabs.

Assigning CSQ Mappings to a CSQ

You must assign a CSQ mapping to a CSQ before you can generate a schedule. If a CSQ mapping is not assigned to a CSQ, no agents will be assigned to the schedule.

The Sync Service automatically creates a CSQ mapping for each CSQ it loads into WFM from Unified CCX. You cannot change a CSQ mapping that was created by the Sync service.

To assign CSQ mappings to a CSQ:

1. Click the CSQ Mappings tab. The CSQ Details pane displays available and assigned CSQ mappings.
2. Move the desired CSQ mappings from the Available list to the Assigned list by selecting them and clicking >. You can move CSQ mappings from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.
3. Assign a priority to each CSQ from 0 to 999, with 0 being the highest priority. Assigning priorities allows WFM to resolve scheduling conflicts when agents are assigned to multiple CSQ mappings.
4. Click  (Save) to save your changes.

Creating a Virtual CSQ

A virtual CSQ is a collection of CSQs unified (or merged) into a single CSQ. It can be associated with multiple CSQs. WFM uses the virtual CSQ when generating statistics, schedules, and forecasts.

Create a virtual CSQ when you want to create a single forecast, scenario or schedule for a group of CSQs. Consider creating a virtual CSQ if you have a group of agents who all support the same type of calls.

Once you create a virtual CSQ, WFM will start collecting historical data for the virtual CSQ. If historical data already exists for each CSQ in the virtual CSQ, you need to merge the historical data from the source CSQs into the virtual CSQ (Special Functions > Historical Merge).

NOTE: Historical email volume is not available for a virtual CSQ of type Email. It must be entered manually.

All historical data is merged into the virtual CSQ, including:

- Contact volume (sum)
- Talk time (average)
- ASA (weighted average)
- Service level (weighted average)
- ACW (weighted average)


A distribution, forecast, scenario, and schedule can be calculated for a virtual CSQ after you merge the required historical data (see ["Special Functions" on page 255](#) and ["Forecasts" on page 121](#)).

You can add or remove CSQs from a virtual CSQ at any time by editing the CSQ. The historical data for each source CSQ within a virtual CSQ is available.

To create a virtual CSQ:

1. Click the Virtual CSQs tab. The CSQ Details pane displays available and assigned virtual CSQs
2. Move the desired CSQs from the Available list to the Assigned list by selecting them and clicking >. You can move CSQs from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.
3. Enter a number in the Hour Gap field for each assigned CSQ. The hour gap is the time zone difference between the location of the CSQs and the location of the base time zone of the virtual CSQ. If all of your CSQs are in the same time zone, enter 0. This ensures that all reports display the correct information.

For example, if the base CSQ is located in Minneapolis (GMT -6:00) and there are two other CSQs in the virtual CSQ, one in Ottawa (GMT -5:00) and one in Seattle (GMT -8:00), then the hour gap for the Ottawa CSQ is 1.0 and the hour gap for the Seattle CSQ is 2.0.

4. Click  (Save) to save your changes.

Entering Scheduling Order

To enter a scheduling order:

1. Click the Scheduling Order tab. The CSQ pane displays options for prioritizing the order in which agents are scheduled in a CSQ.

Click Reset Priorities. The default priorities appear under Scheduling Order Parameters (Figure 11).

Figure 11. CSQ Details: Scheduling Order tab

Scheduling Order Parameters		
CSQ Priority†	Criteria	Order
1	Maximum Hours Available	<input type="radio"/> Ascending <input checked="" type="radio"/> Descending
2	Minimum Hours Available	<input type="radio"/> Ascending <input checked="" type="radio"/> Descending
3	Maximum Hours per Week	<input type="radio"/> Ascending <input checked="" type="radio"/> Descending
4	Minimum Hours per Week	<input type="radio"/> Ascending <input checked="" type="radio"/> Descending
5	Company Start Date	<input checked="" type="radio"/> Ascending <input type="radio"/> Descending
6	Department Start Date	<input checked="" type="radio"/> Ascending <input type="radio"/> Descending
7	Rank	<input checked="" type="radio"/> Ascending <input type="radio"/> Descending


2. Change the number in the CSQ field next to each parameter to change the preset priority order. Values range from 0 to 999, with 0 being the highest priority.

NOTE: If you do not want to save your changes, click Reset Priorities to restore the priorities to their system default values.

The parameters are described in the following table.

Field	Description
Maximum Hours Available	The maximum number of hours when the agent is available during the work shift. This number is the sum of maximum availability for each day across all days of the week.

Field	Description
Minimum Hours Available	The minimum number of hours when the agent is available during the work shift. This number is the sum of minimum availability for each day across all days of the week. This parameter is configured in the Work Shift Detail pane.
Maximum Hours per Week	The maximum number of hours when the agent can work each week. This parameter is configured in the Work Shift Detail pane.
Minimum Hours per Week	The minimum number of hours when the agent can work each week. This parameter is configured in the Work Shift Detail pane. Your work shift is variable if there is a difference between the minimum and maximum hours per week.
Company Start Date	The agent's seniority within the company based on the date when the agent started working for the company. This parameter is configured in the Agent Details pane.
Department Start Date	The agent's seniority within the contact center based on the date when the agent started working for the company. This parameter is configured in the Agent Details pane.
Rank	The agent's position relative to a metric associated with the CSQ. This parameter is configured in the Agent Details pane and is not mandatory.


3. Click  (Save) to save your changes.

Editing a CSQ

To edit a CSQ:

1. Choose Environment > CSQs. The Contact Service Queue List appears.
2. Click the number of the CSQ you want to edit in the Number column. The CSQ Details pane appears
3. Edit the fields as desired. The fields are described in ["Creating a CSQ" on page 49](#). The Number field cannot be edited.

NOTE: If you change the Opening and Closing hours for this CSQ, you must run a new distribution and forecast to reflect the change before you generate a new schedule.

4. Click  (Save) to save your changes.


Deleting a CSQ

This procedure permanently deletes the CSQ.

BEST PRACTICES: It is recommended that you do not delete CSQs. If they are deleted, the links and historical data associated with them will be lost.

NOTE: Do not use this procedure to delete CSQs imported by the Sync Service.

To delete a CSQ:

1. Choose Environment > CSQ. The Contact Service Queue list appears.
2. Select the CSQ to delete by completing one of the following steps.
 - To delete one or more CSQs, select the check box next to the CSQ name.
 - To delete all CSQs, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Exceptions

You can use the Exceptions feature to create different types of exceptions (for example, sick leave or vacation) that can be applied to agents.

You can edit the list at any time.

Understanding Exceptions

Exceptions are nonroutine planned or unplanned activities that take agents away from responding to calls or email. Generic exceptions are requested by agents and include general activities such as absence, sick leave, and vacation. Exceptions are assigned to agents by schedulers and are more specific. Examples of exceptions are meeting, training, paid time off (PTO), lateness, holiday, and unscheduled breaks. Agents cannot specify exception type when requesting time off.

Kinds of Exceptions

Exception types are created in the Environment module (Environment > Exceptions). Exceptions are typically created when WFM is initially configured. After the initial configuration, you can create additional exceptions as needed to accurately track non-phone activities for agents. You can assign an exception type to an agent for part of a day or all day. You can also specify whether an agent is paid for an exception type. For more information about exceptions, see ["Exceptions" on page 109](#).

NOTE: When you create an exception type you must compile historical data for the new exception type. See ["Compiling Historical Data" on page 256](#) for more information.

Generic exceptions are created in the Administration module (Administration > Generic Exceptions). A generic exception is a general or high-level kind of exception that agents select when requesting time off. For example, if an agent has a doctor's appointment, the agent would select the Sick leave generic exception (or its equivalent), and then would type a comment indicating that the request was for a doctor's appointment. The generic exception serves as a placeholder until the request is approved. When the time off is approved, the generic exception is overwritten by a more specific exception.

For more information on generic exceptions, see ["Generic Exceptions" on page 282](#).

If you believe that your agents will select the correct exception type, create a group of generic exceptions that are an appropriate subset of your exceptions. If you do not believe that agents will select the correct exception type, configure a small number of broadly defined generic exceptions and ask your agents to enter a descriptive comment when they request time off.

Assigning Exceptions and Schedule Production

When an exception is known well in advance, a scheduler can assign an exception to an agent on a particular date (Agents > Assign Exceptions) before a schedule is produced for that date. Then, when the scheduler generates a schedule for the agent's CSQ, WFM automatically applies the exception to the agent's work shift, moving breaks and lunches to accommodate it. As part of the schedule production process, WFM will also attempt to schedule another agent to work on that date to ensure that the requirements for the CSQ are covered. For more information about assigning exceptions before a schedule has been produced, see ["Exceptions" on page 109](#).

NOTE: If you need to assign an exception to an agent on a date after you have produced the schedule for that date, you should use the Post-Production Planning function. If you do not, you will have to update the schedule manually.

Schedulers can also add unplanned exceptions to a schedule after it has been produced. Doing so ensures that the schedule accurately reflects current conditions. It also ensures that a history of exceptions is saved to the database. For more information about adding unplanned exceptions to a schedule, see ["Post-Production Planning" on page 200](#).

Exceptions and Scheduling

WFM uses the CSQ forecast, work shift assignments, and exception assignments to generate a schedule for the CSQ. If the agents assigned to the CSQ have planned vacations, holidays, or any other non-phone activities for a week that you want to include in a schedule, assign the exceptions to the agents before generating the schedule. Assigning exceptions to agents before you create a schedule saves time and creates more accurate schedules. Also, WFM fills any gaps in the schedule due to an absent agent with another available agent when possible.

NOTE: If the CSQ is closed on a specific day (for example, a holiday) that is usually open, WFM schedules the agents to work that day because the schedules are not affected by closed days. To schedule a day off for the agents on a day that is usually scheduled as a work day, create a Holiday exception type and assign this exception to the CSQ whenever the contact center is closed. See ["Closed Days" on page 160](#) for more information.


When applying an exception to a schedule, WFM modifies the exception to conform to the following rules:

- An exception must appear within the agent's work shift.
- The maximum length of the exception is automatically adjusted to the maximum availability of the agent if the duration of the exception is greater than the agent's availability.

- WFM ignores an exception that overflows outside of the availability period. The exception is restricted to boundaries specified by the availability period.
- An exception is applied exactly on the dates and times specified unless it occurs on an unscheduled day. The length of a partial exception (an exception that occurs less than the maximum number of work hours) is deducted from the maximum number of work hours for the work shift. For example, if the work shift is a maximum of 8 hours and the exception for that day is 4 hours, the agent is scheduled for a maximum of 4 hours.


Creating an Exception Type

To create an exception type:

1. Choose Environment > Exceptions. The Exception List appears.
2. Click  (New) to create an exception type. The Exception Details pane appears.
3. Complete the fields.

Field	Description
Exception	<p>The name of the exception type. An exception is an activity not planned in an employee's work schedule, including meetings, training sessions, unscheduled breaks, and absences.</p> <p>NOTE: If the CSQ is closed on a specific day (for example, a holiday) that is usually open, WFM schedules the agents to work that day because the schedules are not affected by closed days. To schedule a day off for the agents on a day that is usually scheduled as a work day, create a Holiday exception type and assign this exception to the CSQ whenever the contact center is closed. See "Closed Days" on page 160 for more information.</p>
Active	<p>When the Active check box is selected, the exception type can be assigned to agents' schedules for past, current, or future events. The Active check box is selected by default.</p> <p>The exception type appears as a selectable item in the Exception List on the Exception Assignments pane. WFM can schedule non-phone activities for the agent. See "Exceptions" on page 109 for more information.</p> <p>Clear the check box to remove the exception type from the Exception List on the Exception Assignments pane or the Exceptions drop-down list when you edit an agent's schedule (Schedules > Edit Schedule).</p>

Field	Description
Paid	<p>Select the Paid check box if the agent is paid when this exception is assigned to the agent (for example, sick leave). The Paid check box is selected by default. Clear the check box if the agent is not paid when this exception is assigned to the agent.</p> <p>You can change this check box when you assign the exception to an agent from the Exceptions Assignments pane (Agents > Assign Exceptions).</p>
Color	<p>Click the Color field to display the color palette, and select a color. WFM displays the color and the Java number associated with the color. The default color is red. This color appears in the Exceptions column on the schedule maintenance pane.</p> <p>You can select a color for each exception (for example, breaks, lunches, and sick leave). To avoid confusion, select a unique color for each exception.</p>

- Click  (Save) to save your changes. A list of agents that have this exception tab appears.

NOTE: When you add new exceptions you must compile the historical data for the new exceptions. See ["Compiling Historical Data" on page 256](#) for more information.

Editing an Exception Type


Use the following procedure to change an exception type. You might modify an exception type because it is not used any more, or a paid exception type is now an unpaid exception type.

When you modify an exception type, you can select or clear the Active and Paid by default check boxes. You can also change the color assigned to the exception type.

NOTE: An exception name cannot be modified. If the name has changed internally or there is a terminology issue, delete the existing exception type and create a new exception type with the correct name.

To edit an exception type:

- Choose Environment > Exceptions. The Exception Type List appears.
- Click the name of an exception type in the Exception column. The Exception Details pane displays general options.
- Edit the exception type as desired.

4. To view the agents assigned to this exception type, click the Agents having this exception tab. The Exception Details pane displays agents assigned to this exception.
5. Click  (Save) to save your changes.

NOTE: These changes affect new exceptions assigned to agents from this time onward. Any exceptions previously assigned to agents are not affected by this change. The agents listed under Agents having this exception do not change.


Deleting an Exception Type

This procedure permanently deletes the exception type. Delete an exception type when:

- There is a terminology issue. Terminology issues generally occur when you are initially configuring WFM.
- The exception type is no longer assigned to agents. You can only delete exceptions that are not assigned to agents. Once an exception type is assigned, you need to modify the existing schedules using Schedules > Edit Schedules to remove the exception type from the database.

BEST PRACTICES: It is recommended that you do not delete exception types that are no longer used if they were previously assigned to agents. If they are deleted, the historical data associated with them will be lost.

To delete an exception:

1. Choose Environment > Exceptions. The Exception List appears.
2. Select the exception type to delete by completing one of the following steps.
 - To delete one or more exceptions, select the check box next to the exception type name.
 - To delete all exceptions, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Time Zones

Your servers might be in a different time zone than your contact centers. In most cases, users prefer to see reports and schedules in their local time rather than in server time.

You can use the Time Zones function to associate a time zone with CSQs and agents. The time zone assigned to a CSQ or agent should correspond with the location of the CSQ or agent.

Using Multiple Time Zones

Sometimes agents and CSQs are located in different time zones. WFM allows you to generate schedules for agents and CSQs residing in different time zones.

If all of your agents are located in the same time zone, do not enable time zones for your site. Choose the Disabled option from the Time Zone drop-down list for all CSQs and agents. The Disabled option is selected by default.

If you are managing multiple sites over different time zones, you need to specify the correct time zone for each agent and CSQ. The specified time zone must be the time zone in which the agent or CSQ is located.

NOTE: Once you apply a time zone for a single agent or CSQ, you must apply a time zone for each of the remaining agents and CSQs.

If you change the time zone associated with an agent, you must also change the Arrival at the Earliest and Arrival at the Latest times in the Work Shift Detail pane to match the time zone where the CSQ or virtual CSQ is located. See ["Creating a Work Shift" on page 87](#) for more information.

The CSQ and agent can be assigned to different time zones or the same time zone. For example, if the agent is located in the Montreal contact center and the CSQ is located in Minneapolis, select the (GMT -5:00) Eastern (U.S.A. and Canada) for the agent's time zone and (GMT -6:00) Central for the CSQ based in Minneapolis. If the agent's start time is 09:00 in Montreal, when a scheduler looks at the schedules for the CSQ, the agent's start time appears as 08:00.

A virtual CSQ can contain multiple CSQs located in different time zones. When you assign multiple CSQs to a virtual CSQ, you must enter a number in the Hour Gap field for each CSQ in the virtual CSQ. The hour gap is the time zone difference between the CSQ and the base time zone for the virtual CSQ (for example, 3 or -3). If all of your CSQs are in the same time zone, enter 0. This ensures that all reports display the correct information.

Multiple Time Zones and Daylight Saving Time

Daylight Saving Time does not start on the same day in every time zone (and some locations do not use Daylight Saving Time at all). As a result, it is possible that the hour gap you set up for a CSQ that is located in a time zone different than the WFM servers' time zone is wrong for a short time.

For example, let us assume there is a contact center whose WFM servers are located in Minneapolis, Minnesota, and that has a number of agents located in Phoenix, Arizona. During Standard Time, there is a one-hour difference between Minnesota and Arizona. The administrator, located in Minneapolis, assigns these agents a work shift that starts at 09:00. The agents see a start time of 08:00 on their schedules.

Minnesota observes Daylight Saving Time, but Arizona does not. When Minnesota switches to Daylight Saving Time, instead of a one-hour difference between the servers' and the agents' time zones, there is now a two-hour difference, and the agents' schedules show a starting time of 07:00, one hour before their expected starting time of 08:00.

To compensate for this, the administrator creates a work shift that has a start time of 10:00. When assigned to the Phoenix agents during the time when Minnesota observes Daylight Saving Time, their schedules show the correct starting time of 08:00.

Display Time Zones

You can configure the time zone in which users' schedules are displayed. This is separate from the time zone you configure for creating schedules.

Configuring the display time zone can be done for individual users on the User Details page (Administration > User List, then select a user), or for all new users or all new and existing users (Administration > Default Configuration, then select the Schedules tab). Which option you use depends on how your contact center is set up. For example:

- If all your users are in the same time zone, then you can use the Default Configuration page to assign the display time zone globally to all new and existing users.
- If most of your users are in the same time zone, but some are in a different time zone, you can use the Default Configuration page to assign the same display time zone to all users and then use the User Details page to change the display time zone for the few users who are in the different time zone.
- If your users are widely distributed across different time zones, then you can assign their display time zones on an individual basis.

The time zone used in a user's schedule follows this hierarchy:

- Server time zone (no display time zones are configured)

- Users Default Display Time Zone (applied either to all new and existing users' schedules, or to all new users' schedules only)
- Display Time Zone (overrides the server time zone and User Default Display Time Zone for a specific user's schedule)

Scheduling Agents in Multiple Time Zones

Use the following procedure to create a single schedule for agents and CSQ in multiple time zones. Once the schedule is created, the scheduler will be able to see all schedules and reports based on the time zone associated with the virtual CSQ.

NOTE: Once you apply a time zone for a single agent or CSQ, you must apply a time zone for each of the remaining agents and CSQs.

To schedule agents in multiple time zones:

1. Assign the time zone in which the agent is located to the agent. Repeat this step for each agent in WFM (see ["Configuring an Agent" on page 76](#)).
2. Assign the appropriate time zone to each CSQ (see ["Editing a CSQ Mapping" on page 44](#)).
3. Create a virtual CSQ (for example, Corporate IT help desk), assign the CSQs (for example, Minneapolis IT help desk and Montreal IT help desk) to the virtual CSQ, and enter a number in the Hour Gap field for each CSQ in the virtual CSQ. For instructions, see ["Creating a Virtual CSQ" on page 56](#).

The hour gap is the time zone difference between the CSQ and the base time zone for the virtual CSQ. For example, if the Corporate IT help desk is located in Montreal, enter 0 in the Hour Gap field for the Montreal IT help desk and enter -1 in the Hour Gap field for the Minneapolis IT help desk).

4. Create a CSQ mapping. For instructions, see ["Creating a CSQ Mapping" on page 42](#).
5. Assign the virtual CSQ to a CSQ mapping (see ["Assigning CSQs to a CSQ Mapping" on page 43](#)).
6. Verify you have historical contact (call or email) volume for each CSQ in the virtual CSQ (see ["Historical Data" on page 251](#)) and merge the historical data for each CSQ (see ["Merging Historical Data" on page 258](#)).
7. Create a distribution by specifying a start and end date from your historical reference period (see ["Distributions" on page 131](#)).
8. Generate a forecast for the CSQ using reference dates for which you have historical data. See one of the following topics for instructions.
 - [Generating a Forecast Request With Trends \(page 139\)](#)
 - [Generating a Forecast Without Trends \(page 143\)](#)

9. Create work shifts for the agents to handle contacts and change the Arrival at the Earliest and Arrival at the Latest times in the Work Shift Detail pane to match the time zone where the virtual CSQ is located (see ["Creating a Work Shift" on page 87](#)).

For example, if the agents' earliest arrival time in Minneapolis is 07:00 and latest arrival time is 09:00, and the virtual CSQ is located in Montreal, enter 08:00 in the Arrival at the Earliest fields and 10:00 in the Arrival at Latest fields.


10. Assign the work shift to the agents (see ["Assigning a Work Shift Rotation to an Agent" on page 104](#)).
11. Create a schedule for the agents to handle email (see ["Creating Schedules" on page 187](#)).

Adding CSQs to a Time Zone

To add CSQs to a time zone:

1. Choose Environment > Time Zones. The Time Zone List appears.
2. Click a time zone. The Time Zone Detail pane displays available and assigned CSQs.
3. Move the desired CSQs from the Available list to the Assigned list by selecting them and clicking >. You can move CSQs from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.

NOTE: To change the time zone for a CSQ, assign the CSQ to another time zone.


4. Click  (Save) to save your changes.

Adding Agents to a Time Zone

To add agents to a time zone:

1. Choose Environment > Time Zones and select the Agents tab. The Time Zone Detail pane displays available and assigned agents.
2. Move the desired agents from the Available list to the Assigned list by selecting them and clicking >. You can move agents from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.

NOTE: To change an agent's time zone, assign the agent to another time zone.

3. Click  (Save) to save your changes.

Introduction

This section covers the following topics:

- [Teams \(page 72\)](#)
- [Agents \(page 75\)](#)
- [Work Shifts \(page 83\)](#)
- [Work Shifts \(page 83\)](#)
- [Work Conditions \(page 93\)](#)
- [Work Shifts \(page 101\)](#)
- [Exceptions \(page 109\)](#)
- [Projects \(page 116\)](#)

NOTE: If you are using Unified CCX, see "[Synchronizing ACD Data](#)" on [page 20](#) for information on how the Sync Service imports agents, teams, and CSQs from Unified CCX into WFM.


Teams

You can use the Teams function to manage teams in WFM.


When the Sync service extracts a team from Unified CCX, it loads the team into WFM and the team appears on the Team List (see ["Synchronizing Team Data" on page 20](#)).

Creating a Team

To create a team:


1. Choose Agents > Teams. The Team List appears.
2. Click  (New) to create a team. The Team Details pane displays general options.
3. Complete the fields as follows.

Field	Description
Team Name	Name of the team. If a team exists in Unified CCX, the Sync service extracts the team from Unified CCX and displays the Unified CCX team name in this field. NOTE: Do not modify this field if the team is extracted from Unified CCX.
Default Team	Select the Default Team check box if you want this team to be the agent's main team in WFM.
Productivity Compilation	Select the Productivity compilation check box if you want data to be compiled at the team level when WFM produces productivity reports. Selecting the Productivity compilation check box enables the data capture module to compile all daily, weekly, monthly, and yearly productivity indicators for the selected team. This compilation is performed when the data capture module detects productivity data and all cumulative totals are recalculated. These new totals are available for graphs and tabular reports the next day.
System Team	Indicates whether or not the team was created by the Sync Service. You cannot select or clear this check box.

4. Click  (Save) to save your changes. The Agents tab appears. Complete configuring the team by assigning agents to it.

Assigning Agents to a Team

To assign agents to a team:


1. Choose Agents > Teams. The Team List appears.
2. Click a team name to display the Team Details pane and then select the Agents tab.
3. The Agents tab displays available and assigned agents.
4. Move the desired agents from the Available list to the Assigned list by selecting them and clicking >. You can move agents from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.
5. To make this team an agent's main team, select the check box next to the agent under the Main Team column. In WFM, an agent can be part of many teams, but the My Page feature requires a primary team to be identified for the statistic displays and messaging.
6. Click  (Save) to save your changes.

Editing a Team

To edit a team:

1. Choose Agents > Teams. The Team List appears.
2. Click a team name. The Team Details pane displays general team options.
3. Modify the fields as desired.


NOTE: Do not modify the Team Name field if the team is extracted from Unified CCX.

4. Click  (Save) to save your changes.

Deleting a Team

BEST PRACTICES: It is recommended that you do not delete teams. If they are deleted, the historical data associated with them will be lost.

To delete a team:

1. Choose Agents > Teams. The Teams List pane appears.
2. Select the team to delete by completing one of the following steps.
 - To delete one or more teams, select the check box next to the team name.
 - To delete all teams, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Agents

In a Unified CCX environment, agents are added, modified, and deleted in Unified CCX. The Sync service extracts the agent identity information from Unified CCX into WFM (see ["Synchronizing Agent Data" on page 21](#)). [Table 5](#) shows the name of each attribute extracted from Unified CCX and its equivalent attribute in WFM.

NOTE:

Table 5. Agent Attributes in WFM and Unified CCX

Attribute in Unified CCX	Equivalent Attribute in WFM	Comments
User ID	Employee number	The Unified CCX User ID is the initial value for this field. This value must be unique for each agent. You can modify the value. Changes made to this field in WFM have no effect on the User ID value in Unified CCX.
First Name	First Name	The Unified CCX first name is the initial value for this field. Any changes made to this field in Unified CCX are copied to WFM through the Sync Service.
Last Name	Last Name	The Unified CCX last name is the initial value for this field. Any changes made to this field in Unified CCX are copied to WFM through the Sync Service.
Agent User ID	Log ID	The Unified CCX user ID is the initial value for this field.
Team membership in Unified CCX	Team membership	WFM initially loads the team assigned to an agent in Unified CCX and assigns that team as the agent's main team in WFM. You can override this initial configuration.

Use the Agents function to complete the following tasks.

- [Configuring an Agent \(page 76\)](#)
- [Assigning Teams to an Agent \(page 79\)](#)
- [Assigning CSQ Mappings to an Agent \(page 80\)](#)
- [Displaying an Agent's Work Shift Rotation \(page 80\)](#)
- [Displaying and Editing an Agent's Exceptions \(page 80\)](#)

- [Deleting an Agent's Exceptions \(page 81\)](#)

Configuring an Agent

When configuring an agent, you complete information on all the tabs on the Agent Details page. These tabs include:

- General
- Teams
- CSQ Mappings
- Work Shifts
- Exceptions

To configure or edit an agent:

1. Choose Agents > Agents. The Agent List appears.
2. Click an employee number in the Employee Number column. The Agent Details pane appears.

NOTE: This list of agents might contain users who are inactive in Unified CCX. Log into Unified CCX and check the List of Inactive Agents if you want to verify whether an agent is active or inactive in Unified CCX. You can also delete an inactive agent in Unified CCX. Inactive agents in Unified CCX are considered active users in WFM.

3. Complete or edit the fields as follows.

Field	Description
Employee Number	The employee number. This number is required and must be unique. If an agent exists in Unified CCX, the Sync Service extracts the agent from Unified CCX and displays the Unified CCX value (PersonID) in this field.
First Name	The agent's first name. This field is required.
Last Name	The agent's last name. This field is required.

Field	Description
Login Name	<p>The agent's WFM login name. This field is required and must be manually configured in WFM as part of user configuration. If you are using Active Directory, the Login Name must match the Active Directory login name, and the agent must use the Active Directory password to log into WFM.</p> <p>If you are not using Active Directory, you must enter the agent's password on the General tab of the User Details pane. See "Creating a New User" on page 271 or "Assigning a Role to a User" on page 273.</p>
Log ID	The agent's telephone ID (login ID). Since WFM uses Log ID to identify an agent, Log ID must be unique. This field is required.
Phone Numbers	The agent's personal telephone number(s) and extension numbers. This field is optional. If only one telephone number is required, enter the telephone number in the first field. The agent's telephone number appears on reports and lists.
Company Start Date	<p>The date when the agent started working for the company.</p> <p>This is the date when the agent started working for the company and not necessarily in the contact center. This field is required. WFM uses this information for scheduling based on an agent's seniority within the company.</p>
Department Start Date	The date when the agent started working in the contact center. This field is required. WFM uses information for scheduling based on an agent's seniority within the contact center.
End Date	The termination date in this field when the agent no longer works for the company. When a termination date is entered in this field, WFM will no longer schedule the agent after this entered date. This field operates independently of the agent's active status. WFM schedules the agent up to and including the entered date.

Field	Description
Rank	<p>The agent's rank using alphanumeric characters.</p> <p>This is an optional attribute used primarily to rank agents based on their seniority and expertise. WFM uses this value to define scheduling priorities. The exact meaning of rank depends on the service that your contact center provides. You decide what the rank means in your contact center and enter the value for your agents. For example, if your contact center sells products, you can rank your agents on the value of the sales closed or the percentage of calls in which the agents close sales. If your contact center provides a service, you can rank agents based on quality evaluations or subject matter knowledge.</p>
Time Zone	<p>Select the time zone in which the agent is located.</p> <p>The CSQ and agent can be assigned to different time zones or the same time zone.</p> <p>Select the Disabled option from the list only if you are producing schedules for agents who are located in different time zones.</p> <p>Do not select Disabled to disable the time zone associated with an agent if the time zone is already assigned to the agent's CSQ.</p> <p>NOTE: If you change the time zone associated with an agent, you must also change the arrival and departure times in the work shift registry to match the time zone where the virtual CSQ is located. See "Creating a Work Shift" on page 87 for more information.</p> <p>NOTE: The agent's time zone setting affects only the Edit Schedule and Adherence views, The agent's view in Workforce Optimization is controlled by the user's display time zone setting (Administrators > Users > User Details).</p>

4. Select the Active check box. WFM only schedules an agent if the Active check box is selected. The check box is selected by default.


NOTE: If you do not select this check box, the agent cannot log into My Page.

To deactivate the agent, clear the Active check box.

NOTE: Delete all work shifts assigned to this agent before you deactivate the agent (see ["Assigning a Work Shift Rotation to an Agent" on page 104](#)). This action removes the link between the work shifts and the agent.


5. Click the Notes separator bar. The page expands to display the Notes section.
6. Complete the fields as follows.

Field	Description
Supervisor Note	This message displays information regarding this agent. Only a supervisor can read this note.
Agent Note	This message appears on individual schedules up to and including the date specified in the Agent Note's Expiration Date field. The message can contain a maximum of 120 characters.
Agent Note's Expiration Date	This date indicates when you want the message specified in the Agent Note message field to stop appearing in the individual schedules. If you do not enter a date, the message remains in the individual schedule.

7. Click  (Save) to save your changes.

Assigning Teams to an Agent

To assign teams to an agent:


1. Choose Agents > Agents. From the Agent List, click an employee number in the Employee Number column. The Agent Details pane appears.
2. Click the Teams tab. The Agent Details pane displays available and assigned teams.
3. Move the desired teams from the Available list to the Assigned list by selecting them and clicking >. You can move teams from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.
4. Select the check box next to the team in the Main column that you want to designate as the agent's main team. In WFM, an agent can be part of many teams, but the My page feature requires a main team to be identified for the statistic displays and messaging.
5. Click  (Save) to save your changes. Continue configuring the agent on the remaining tabs.

Assigning CSQ Mappings to an Agent

To add CSQ mappings to an agent:

1. Choose Agents > Agents. From the Agent List, click an employee number in the Employee Number column. The Agent Details pane appears.
2. Click the CSQ Mappings tab. The Agent Details pane displays available and assigned CSQ mappings.
3. Move the desired CSQ mappings from the Available list to the Assigned list by selecting them and clicking >. You can move CSQ mappings from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.

NOTE: If you are using the Multi Skill Agent Queuing (MSAQ) feature, you can assign more than one CSQ to the agent (see ["Work Shifts" on page 83](#)).

4. Click  (Save) to save your changes.

Displaying an Agent's Work Shift Rotation

To display an agent's work shift rotation:

1. Choose Agents > Agents. From the Agent List, click an employee number in the Employee Number column. The Agent Details pane appears.
2. Click the Work Shifts tab. A list of the available rotations appears.

NOTE: To edit the agent's work shift rotation, click Edit Agent Rotation (see ["Assigning a Work Shift Rotation to an Agent" on page 104](#)).

Displaying and Editing an Agent's Exceptions

The Exceptions tab on the Agent Details pane displays past and future exceptions assigned to an agent. It displays the name of the exception, the date on which the exception occurs, duration, and the start and end times for the exception for a partial day exception or a check in the Entire day column if the exception lasts an entire day. The Start, End, Duration, and Entire Day columns are not populated if a schedule does not exist for the dates specified in the date column.


To display an agent's exceptions:

1. Choose Agents > Agents. From the Agent List, click an employee number in the Employee Number column. The Agent Details pane appears.
2. Click the Exceptions tab. A list of the exceptions that are assigned to the agent appears.

To edit an agent's exception:


1. Click the name of the exception you want to edit in the Name column. The Editing <agent name - date> pane appears (Figure 12).
2. Edit the exception as desired.




Figure 12. Editing Agent Name - Date

3. Click  (Save) to save your changes.

Deleting an Agent's Exceptions**To delete an agent's exception:**

1. Click the Exceptions tab. The Agent Details pane displays assigned exceptions.
2. Complete one of the following steps.

IMPORTANT: Do not click  (Delete) in the toolbar. Doing so deletes the agent.


- To delete one or more exceptions, select the check box next to the exception name and click  (Delete the selected exception) next to the Assigned Exceptions table. An Internet Explorer dialog box appears.
 - To delete all exceptions, select the check box in the heading in the first column and click  (Delete the selected exception) next to the Assigned Exceptions table. An Internet Explorer dialog box appears.
3. Click OK to confirm the deletion and dismiss the dialog box.
 4. Click  (Save) to save your changes.

Deleting an Agent

You cannot delete an active agent. If the agent is active and you attempt to delete the agent, you will receive an error message. You must first deactivate the agent. See ["Configuring an Agent" on page 76](#) for more information.

BEST PRACTICES: It is recommended that you do not delete agents. If they are deleted, the historical data associated with them will be lost. See ["Creating Organizational Groups for Former Agents" on page 311](#) for a strategy to deal with agents who have left the contact center.

To delete an agent:

1. Choose Agents > Agents. The Agents List pane appears.
2. Select the agent to delete by completing one of the following steps.
 - To delete one or more agents, select the check box next to the agent name.
 - To delete all agents, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.

NOTE: This Windows Internet Explorer dialog also appears if you press the enter key on the Agent List pane. Nothing happens if no agents are selected in the Agent List.

4. Click OK to confirm the deletion and dismiss the dialog box.

Work Shifts

Use the Work Shifts function to complete the following tasks.

- [Creating a Work Shift \(page 87\)](#)
- [Editing a Work Shift \(page 91\)](#)
- [Displaying Agents Associated with a Selected Work Shift \(page 91\)](#)
- [Associating Work Conditions with a Work Shift \(page 92\)](#)
- [Deleting a Work Shift \(page 92\)](#)

Understanding Work Shifts

WFM allows you to create work shifts that match agents' availability, preferred days off, start time, and length of work day. A work shift identifies the hours and days when an agent can work. You can create a work shift for an individual agent or an entire CSQ. WFM will then schedule agents to best match their work shift preferences and business requirements. There is no limit to the number of work shifts you can create, and WFM retains the previous schedule history for each agent in the WFM database.

When configuring a work shift you need to determine whether the work shift is variable or fixed. You can assign agents and work conditions to a work shift for specific weeks. WFM allows you to manage the following work shift types.

- [Fixed Work Shift \(page 83\)](#)
- [Assignment Work Shift \(page 84\)](#)
- [Variable Work Shift \(page 84\)](#)

You can create multiple work shifts and then assign them to an agent's work shift rotation. If you use work shift rotations in which an agent works different shifts over a several weeks, you must define the shift and rotation sequence.

WFM also allows agents to swap (trade) work shifts. Users can approve or deny each schedule trade request (see "[Approving or Denying Requests](#)" on page 231). Users can also perform ad hoc schedule trades based on business requirements and the needs of the contact center (see "[Schedule Trades](#)" on page 220).

Additional information on submitting a schedule trade request can be found in the *Workforce Management Application User Guide*.

Fixed Work Shift

A fixed work shift is a work shift that covers requirements for fixed hours and days. Use this work shift type to schedule agents for phone and email-related activities for entire days or weeks. A fixed work shift has the following characteristics:

- Work days during the week are fixed

- Hours worked each day are fixed, but do not have to be the same for each day
- The shift start time each day is fixed, but does not have to be the same for each day
- The number of hours per week specified for the work shift (Hours per Week) must equal the number total number of hours scheduled for the days of the week in the work shift (Total Hours).

If you assign a fixed work shift to an agent, the agent's schedule never changes. If you assign fixed work shifts to all agents, you cannot optimize schedules to ensure adequate coverage at all times. A fixed schedule never varies.

Assignment Work Shift

An assignment work shift is a type of fixed work shift that does not cover requirements. Use this work shift type to schedule agents or supervisors for non-phone and non-email related activities for entire days or weeks.

Variable Work Shift

A variable work shift is a work shift that covers requirements for variable hours and days. Use this work shift type to schedule agents for call- or email-related activities for variable days and weeks. In contrast to a fixed work shift, a variable work shift offers flexibility in at least one of the following ways:

- Assign at least one day a week as an optional work day. You can choose whether or not to schedule an agent for an optional work day based on the contact center's requirements.
- Assign the total work hours for one or more days per week as variable.
- Assign the arrival time for at least one day a week as variable.

One or more of the following characteristics are different in a variable work shift.

Minimum and Maximum Days per Week and Hours per Day. With a variable work shift, you might want to limit the maximum number of days and hours per week to limit overtime and guarantee a reasonably rested employee. You might also need to commit a minimum number of hours per day and days per week for the agent. You specify the minimum and maximum number of days per week and hours per week for the work shift. Then you specify the minimum and maximum number of hours for each day of the week that the agent can work for the day. You might also specify the days of the week that are potential days off for the agent.

Earliest and Latest Start Times. Determine the earliest time you might want the agent to start work and when the agent can start work. Once you know the earliest and latest possible start times, you configure the earliest and latest start times for an agent in WFM for each day in a work shift.

Optimization. The Optimization feature determines how WFM schedules agents with variable work shifts. This feature has no effect on agents with fixed work shifts, because those agents are scheduled to work at fixed times. You must select one of the following optimization options:

- **Multilinear:** WFM schedules all agents with fixed work shifts first. Then it examines requirements starting at the beginning of the day to identify any requirements not already covered by agents with fixed work shifts. If an agent with a variable work shift is available and a requirement exists for an agent, WFM schedules the agent without considering if there might be a greater need for an agent later in the day. Multilinear scheduling results in more consistent arrival times for agents and is generally preferred by agents.
- **Optimum:** WFM schedules all agents with fixed work shifts first. Then it schedules the remaining available agents to best meet the forecast requirements throughout the remainder of the day. Choose Optimum if you want to schedule agents according to the contact center's requirements. Agents assigned to this work shift will be scheduled according to coverage requirements, and not necessarily their preferences. Optimum scheduling generates the best service levels and is generally preferred by contact center management.

Optimum scheduling generates the best service levels. Multilinear scheduling generally results in more consistent arrival times for agents and, therefore, is generally preferred by agents.

Figure 13 displays a multilinear schedule for a contact center with:

- Three agents who have a fixed eight-hour schedule and arrive at 07:00.
- Five agents with a five-hour shift and variable arrival times between 07:00 and 13:00.

The multilinear schedule in this example provides earlier arrival for three of the agents and schedules complete coverage for the morning requirements, but lacks adequate coverage in the afternoon. The curve represents the volume of calls that occurs during the day.

Figure 13. Multilinear: Agents are schedule when they are first required

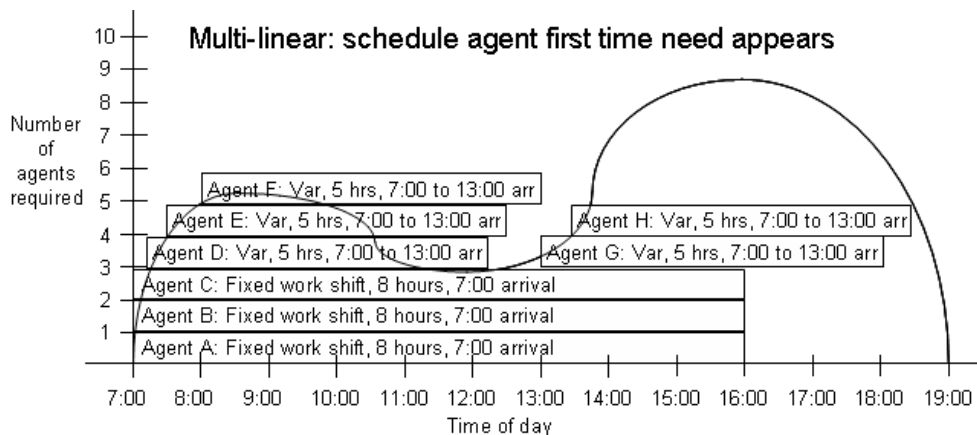
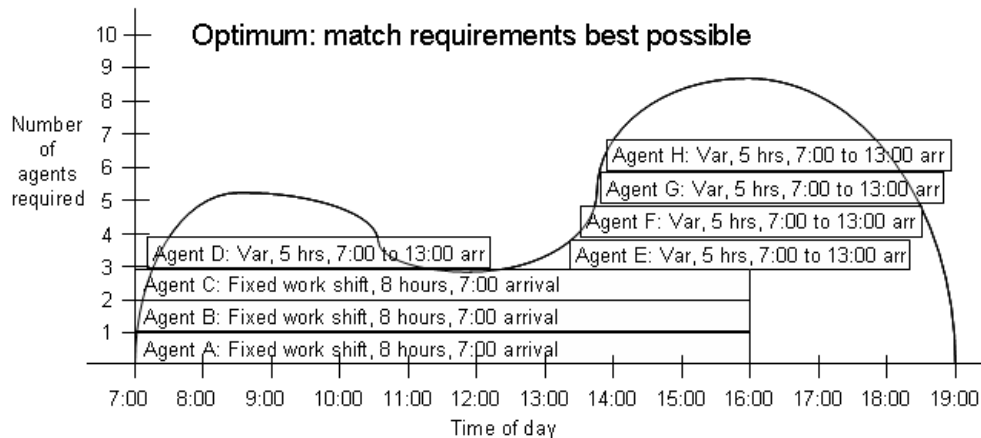


Figure 14 displays an optimum schedule. The optimum schedule makes a better match of agent time to customer call requirements, but pushes arrival times for most agents into the afternoon. The optimum schedule can cause significant variability in day-to-day arrival times for agents with variable work shifts that allow arrival time flexibility.

Figure 14. Optimum: Agents are scheduled to best meet requirements



If your agents have variable work shifts, the choice between multilinear and optimum does make a difference. The best way to understand the difference is to run a schedule once with each option and compare the results.

Creating a Work Shift

To create a work shift:


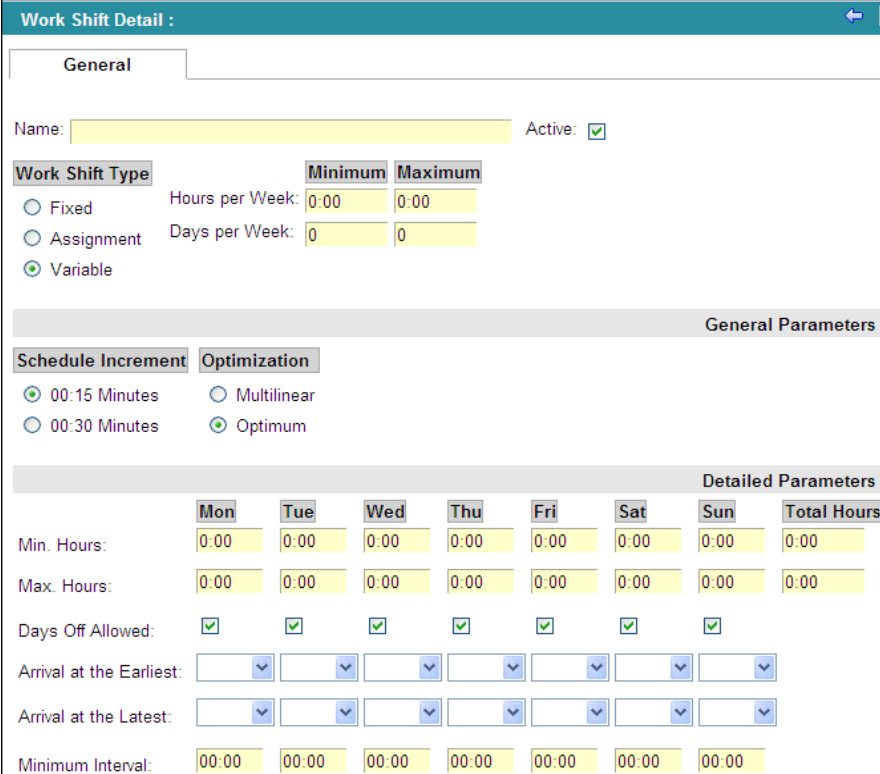
1. Choose Agents > Work Shifts. The Work Shift List appears.
2. Click  (New) to create a work shift. The Work Shift Detail pane displays work shift options (Figure 15).

Figure 15. Work Shift Detail: General tab



Work Shift Detail :

General

Name: Active:

Work Shift Type

Fixed Hours per Week: 0:00 0:00
 Assignment Days per Week: 0 0
 Variable

General Parameters

Schedule Increment **Optimization**

00:15 Minutes Multilinear
 00:30 Minutes Optimum

Detailed Parameters

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total Hours
Min. Hours:	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00
Max. Hours:	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00	<input type="text"/> 0:00
Days Off Allowed:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Arrival at the Earliest:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Arrival at the Latest:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Minimum Interval:	<input type="text"/> 00:00	<input type="text"/> 00:00	<input type="text"/> 00:00	<input type="text"/> 00:00	<input type="text"/> 00:00	<input type="text"/> 00:00	<input type="text"/> 00:00	

3. Complete the fields as described in the table below.

NOTE: To create a variable work shift, for at least one day, at least one of the parameters listed below must be different. If all parameters are equal, the work shift is fixed.

- Hours per week (minimum/maximum)
- Days per week (minimum/maximum)
- Arrival at the earliest or arrival at the latest
- Minimum hours/maximum hours on the same day


- Number of available days versus number of maximum days

Field	Description
Name	The name of the work shift. The name can contain a maximum of 50 characters. Specify a descriptive name that is easy to understand. A descriptive name makes it easier to assign work shifts to agents. For example, you could enter the following work shift name: "Variable shift 0-40", indicating that the work shift is variable and has a minimum of 0 hours and a maximum of 40 hours.
Active	The Active check box is automatically selected when you create a new work shift. Clear the Active check box if you want to deactivate this work shift. NOTE: When you deactivate this work shift, this work shift no longer appears on the agents' schedule. You need to determine if another work shift can be assigned to the agents.
Work Shift Type	Select the work shift type. Your options are: <ul style="list-style-type: none"> • Fixed: A fixed work shift is a work shift that covers requirements for fixed hours and days. Use this work shift type to schedule agents for phone and email-related activities for entire days or weeks. Assign fixed work shifts to senior and full-time agents. • Assignment: An assignment is a type of fixed work shift that does not cover requirements. Use this work shift type to schedule agents for non-phone and non-email related activities for entire days or weeks. • Variable: A variable work shift is a work shift that covers requirements for variable hours and days. Use this work shift type to schedule agents for phone and email-related activities for variable days and weeks. Assign variable work shifts to part-time agents.
Hours per Week	If you selected work shift type of Fixed or Assignment, the number of paid work hours per week for this work shift are automatically filled when entering the number of hours per day. If you selected the work shift type of Variable, enter the minimum and maximum number of paid work hours per week for this work shift.

Field	Description
Days per Week	If you selected work shift type of Fixed or Assignment, the number of work days per week for this work shift are automatically filled when entering the number of hours per day. If you selected the work shift type of Variable, enter the minimum and maximum number of work days per week for this work shift.
Schedule Increment	Select a 15- or 30-minute increment for this work shift. (For example, choosing a 15-minute schedule increment, results in 15-minute time increments for the work shift.) These options only appear if you select a work shift type of Variable.
Optimization	Select the optimization method you want to apply to this work shift. The available optimization methods are: <ul style="list-style-type: none"> • Multilinear: When chosen, WFM schedules all agents with fixed work shifts first. Then it examines requirements starting at the beginning of the day to identify any requirements not already covered by agents with fixed work shifts. If an agent with a variable work shift is available and a requirement exists for an agent, WFM schedules the agent without considering if there might be a greater need for an agent later in the day. • Optimum: When chosen, WFM schedules all agents with fixed work shifts first. Then it schedules the remaining available agents to best meet the forecast requirements throughout the remainder of the day. When you are creating a new work shift, the default value is optimum (see "Optimization" on page 85). These options only appear if you select a work shift type of Variable.
Hours	The number of hours to be worked for each day in the format hh:mm. The total hours for the week appear in the Total Hours column. The number of hours usually excludes time for a lunch. This field only appears when you select a work shift type of Fixed or Assignment.
Arrival	Select the arrival time from the drop-down list for each day in these fields. These fields only appear if you select a work shift type of Fixed or Assignment.

Field	Description
Minimum Hours	<p>The minimum number of hours to be worked for each day in the format hh:mm. The total hours for the week appear in the Total Hours column. The minimum number of hours usually excludes time for a lunch.</p> <p>These fields only appear if you select a work shift type of Variable.</p>
Maximum Hours	<p>The maximum number of hours to be worked for each day in the format hh:mm. The total hours for the week appear in the Total Hours column.</p> <p>The maximum number of hours usually excludes time for a lunch.</p> <p>For example, if the maximum number of paid hours is 8 hours, enter 8:00. Do not include any non-paid time in this field (for example, a half hour lunch break).</p> <p>These fields only appear if you select a work shift type of Variable.</p>
Days Off Allowed	<p>Select the check box associated with each day an agent is allowed off. When the check box is clear, the agent is required to work that day if the work shift indicates there are hours available to work that day.</p> <p>An agent with a variable work shift might not be scheduled to work on a day they are scheduled to be available.</p> <p>These check boxes only appear if you select a work shift type of Variable.</p>
Arrival at the Earliest	<p>Select the earliest arrival time allowed from the drop-down list for each day in these fields. Your work shift is variable if there is a difference between the earliest arrival time and latest arrival time.</p> <p>These fields only appear if you select a work shift type of Variable.</p>
Arrival at the Latest	<p>Select the latest arrival time allowed from the drop-down list for each day in these fields.</p> <p>These fields only appear if you select a work shift type of Variable.</p>


Field	Description
Minimum Interval	<p>Enter the minimum interval, in hours in hh:mm format, for each day in these fields. The minimum interval is the time between the end of a work shift and the start of the next work shift.</p> <p>NOTE: Make sure enough time is allowed between the end of one work shift and beginning of the next work shift. The time specified in the Minimum Interval could change the Arrival at the Earliest time.</p> <p>These fields only appear if you select a work shift type of Variable.</p>

- Click  (Save) to save your changes. The Agents and Work Conditions tabs appear.

Editing a Work Shift

If the work shift you want to edit is already assigned to an agent, the changes you make appear the next time you generate the schedule (see ["Creating Schedules" on page 187](#)).

To edit a work shift:

- Choose Agents > Work Shifts. The Work Shift List appears.
- Click a work shift name in the Name column. The Work Shift Detail pane displays general work shift options.
- Edit the fields as desired.
- Click  (Save) to save your changes.


Displaying Agents Associated with a Selected Work Shift

To display agents associated with a selected work shift:

- Choose Agents > Work Shifts
- Click a work shift name and then select the Agents tab. The Work Shift Detail pane displays all agents assigned to the work shift.
- To modify an agent who is assigned to this work shift, click the agent number in the Number column (see ["Configuring an Agent" on page 76](#)).

Associating Work Conditions with a Work Shift


To associate work conditions with a work shift:

1. Click the Work Conditions tab. The Work Shift Detail pane displays available and assigned work conditions.
2. Move the desired work conditions from the Available list to the Assigned list by selecting them and clicking >. You can move work conditions from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.
3. Click  (Save) to save your changes.

Deleting a Work Shift

Before you delete a work shift, you must remove any agents assigned to it. WFM will not delete a work shift if agents are assigned to it. To remove an agent from a work shift, see "[Assigning a Work Shift Rotation to an Agent](#)" on page 104.

To delete a work shift:

1. Choose Agents > Work Shifts. The Work Shifts List appears.
2. Select the work shift to delete by completing one of the following steps.
 - To delete one or more work shifts, select the check box next to the work shift name.
 - To delete all work shifts, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Work Conditions

This section covers the following topics.

- [Understanding Work Conditions \(page 93\)](#)
- [Creating a Work Condition \(page 95\)](#)
- [Editing a Work Condition \(page 99\)](#)
- [Assigning Work Shifts to a Work Condition \(page 100\)](#)
- [Deleting a Work Condition \(page 100\)](#)

Understanding Work Conditions

WFM differentiates between routine and non-routine activities. It categorizes activities, such as breaks and lunches, that occur during every work shift as *routine*. These routine activities are called work conditions. A work condition is a set of rules used to identify a routine activity that prevents the agent from answering contacts.

A work condition might be linked to fixed or variable work shifts. If the agent can work 4.5 to 6 hours during that work shift and scheduling is in half hour increments, you must configure work conditions for 4.5, 5, 5.5, and 6 hours and assign them to the agent's work shift. You can set up to 28 different work conditions for the same block of hours. A block of hours is the duration of a work shift (for example, six hours).

NOTE: If you do not assign any work conditions, WFM creates agent schedules with no breaks.

For each work condition, you must specify the following information:

- Name of the work condition
- Duration of the work condition, in minutes
- The minimum delay between the start of the work shift and the start of this work condition. For example, if the work shift starts at 08:00 and this work condition cannot start any earlier than 09:00, the minimum delay must be 1:00.
- The maximum delay between the start of the work shift and the start of this work condition. For example, if the work shift starts at 08:00 and this work condition cannot start any later than 09:20, the maximum delay must be 1:20.
- The minimum interval between the end of the previous work condition and the start of this work condition. For example, if the previous work condition is a 15-minute break, and this work condition is a one-hour lunch, and there must be at least an hour and a half between the break and the lunch, the minimum interval must be 90 minutes.

- The increment in minutes that WFM uses to schedule the work condition. Possible values are 00:05, 00:10, 00:15, 00:20, and 00:30.
- The portion that is paid. For example, you can indicate that 15-minute breaks are paid and that one-hour lunches are unpaid.

Note that when creating schedules, WFM allocates time for the longest work condition first. For example, if your work conditions are 15-minute breaks and one-hour lunches, WFM schedules the one-hour lunches first.

When you create work conditions for lunch and breaks, configure the minimum delay, maximum delay, and minimum interval so that conflicts are avoided. If you do not configure these three parameters correctly, WFM might create a schedule that does not satisfy all of the constraints.

One way to avoid scheduling conflicts is to use the following parameter assignments:

- Morning break minimum delay = lunch minimum delay – lunch minimum interval – morning break duration
- Lunch minimum delay = morning break maximum delay + morning break duration + morning break minimum interval

To illustrate these guidelines, consider the following scenario. A contact center has created three work conditions: Morning Break, Lunch, and Afternoon Break. Work shifts are eight hours long. The start and end times of work shifts are variable: start times can be as early as 07:30 and end times as late as 17:30.

The work conditions are configured as follows.

	Min. Delay	Max. Delay	Duration	Min. Interval
Morning Break	1:30	3:00	15	0
Lunch	3:00	5:00	30	90
Afternoon Break	5:30	6:45	15	90

If an agent's work shift begins at 08:00, then that agent's morning break can start any time between 09:30 and 11:00. The agent's lunch can start any time between 11:00 and 13:00. The agent's afternoon break can start any time between 13:30 and 14:45.

For example, assume that to handle predicted call volume, WFM must schedule an agent to begin work at 08:00 and to take a lunch break from 11:00 to 11:30. WFM then schedules the agent's morning break from 09:30 to 09:45 to satisfy the minimum delay of 1:30 for that work condition.

However, that would leave only 11:00 minus 9:45, or 1:15, between the end of the morning break and the start of the lunch break. WFM cannot create a schedule that

satisfies all of the parameters as configured. This situation can be corrected by decreasing the minimum delay of the morning break from 1:30 to 1:15.

As another example, assume that to handle predicted call volume, WFM must schedule an agent to begin work at 08:00, take a lunch break from 13:00 to 13:30, and a morning break from 09:30 to 09:45. WFM then schedules the agent's afternoon break. Since the agent's lunch break ends at 13:30, the afternoon break cannot begin until 15:00 (90 minutes later). However, the maximum delay for the afternoon break is 6:45, which means the afternoon break must begin by 08:00 plus 6:45, which is 14:45. WFM cannot create a schedule that satisfies all of the parameters as configured. This situation can be corrected by increasing the maximum delay of the afternoon break from 6:45 to 7:00.

The revised work conditions are as follows.

	Min. Delay	Max. Delay	Duration	Min. Interval
Morning Break	1:15	3:00	15	0
Lunch	3:00	5:00	30	90
Afternoon Break	5:30	7:00	15	90

Legal Requirements

WFM's work conditions and scheduling order parameters can be used to apply a country's or industry's work time regulations to work shifts.

Creating a Work Condition

To create a work condition:

1. Choose Agents > Work Conditions. The Work Condition List appears.


2. Click  (New) to create a work condition. The Work Condition Detail pane displays general work condition options (Figure 16).

Figure 16. Work Condition Detail: General tab

3. Complete the fields as follows.


Field	Description
Name	Required. The name of the work condition. Specify a descriptive name that is easy to understand. It should also specify the number of work hours to which the work condition applies (for example, Customer Service - 4.5 hours). A descriptive name makes it easier to assign work shifts to agents.

Field	Description
Hours of Work per Day (hh:mm)	<p>The number of paid hours covered by this work condition in hh:mm format. For example, enter 07:30 for 7.5 hours.</p> <p>If the agent can work 4.5 to 6 hours during a work shift and scheduling is in half hour increments, you must configure work conditions for 4.5, 5, 5.5 and 6 hours and assign them to the agent's work shift. You can set up to 28 different work conditions for the same block of hours. A block of hours is the duration of a work shift (for example, six hours).</p> <p>If you do not configure a work conditions work shift length, WFM will not schedule break and lunch times.</p>
General Condition	<p>Select the General Condition check box if both of the following statements are true:</p> <ul style="list-style-type: none"> • This work condition applies to every work shift that has the same block of hours (Hours of Work per Day). • No other work condition is associated with the work shift. <p>NOTE: If you do not select the General Condition check box for this work condition and no other work condition is linked to a work shift, WFM will not schedule break or lunch times to agents assigned to this work shift.</p>
As of (hh:mm)	<p>Enter the earliest shift arrival time for this work condition in hh:mm format. For example:</p> <ul style="list-style-type: none"> • If you want the work condition to apply only to work shifts that begin after 06:30, then enter 06:30 in this field. • If you want the work condition to apply for all arrival times, enter 00:00 in this field.
Monday—Sunday	<p>Select the check box associated with each day when this work condition applies.</p>


4. To add a break, click Add and select the activity type for this work condition. Your options are:


- Lunch
- Break

5. Complete the fields as follows.

Field	Description
Name	<p>The activity name associated with a break or lunch. For example, you could have a morning break, lunch, and an afternoon break. If you leave this field empty, WFM enters the name of the chosen activity (Lunch or Break) in this field when you click  (Save).</p> <p>NOTE: Some terms are reserved in WFM. These terms are In service, Available, Not available, Closed CSQ, Overtime, and Exception.</p>
Minimum Delay	The minimum delay in hh:mm format. The minimum delay is the amount of time that must elapse between the shift arrival time and the start of the work condition activity.
Maximum Delay	The maximum delay in hours and minutes in hh:mm format. The maximum delay is the amount of time that must elapse between the shift arrival time and the start of the work condition activity.
Duration	The duration of the activity in minutes. If your database increment is 5 minutes, you can specify the duration in 5-minute increments. If your database increment is 15 minutes, you can specify the duration in 15-minute increments.
Increment	The increment determines the times when the work condition can begin in hh:mm format. Valid increments are 00:05, 00:10, 00:15, 00:20, and 00:30. For example, if you enter 00:10 and work begins at 8:00, the work condition activity for an agent might begin at 08:00, 08:10, 08:20, 08:30, 08:40, or 08:50.
Paid Portion	The portion of the work condition (in minutes) that is paid.
Minimum Interval	<p>The minimum interval (in minutes) between breaks. This is the minimum interval between the end of the previous work condition activity and the start of this work condition activity.</p> <p>NOTE: The minimum interval of the first break should be "0" since there is no previous break.</p>


Field	Description
Color	<p>Click the Color field to display the color palette and select a color. WFM displays the color and the Java number associated with the color. The default colors are:</p> <ul style="list-style-type: none"> • Yellow for break time • Magenta for lunch time <p>These colors appear in the Schedule Maintenance pane.</p> <p>You can select a color for each break or lunch time. To avoid confusion, select a unique color for each work condition.</p>

6. To delete one or more breaks, select the check box next to the Activity type for each break and click  (Delete).

To delete all breaks, select the check box in the heading of the first column and click  (Delete). An Internet Explorer dialog box appears.

7. Click OK to confirm the deletion and dismiss the dialog box.

WFM removes the break from the Breaks table.

8. Click  (Save) to save your changes. The Work Condition Details displays available and assigned work shifts (see ["Assigning Work Shifts to a Work Condition" on page 100](#)).


Editing a Work Condition

To edit a work condition:

1. Choose Agents > Work Conditions. The Work Condition List appears.
2. Click a work condition name. The Work Condition Detail pane displays general work condition options
3. Modify the work condition as desired.
4. To add, modify, or remove break activities, click Breaks to open the panel and choose one of the following options.
 - To add an activity line, click Add and complete the fields.
 - To delete one or more breaks, select the check box next to the Activity type for each break and click Delete.

To delete all breaks, select the check box in the heading of the first column and click Delete.

WFM removes the break from the Breaks table.

5. Click  (Save) to save your changes.


Assigning Work Shifts to a Work Condition

You must assign the appropriate work condition to a work shift to ensure proper coverage of requirements for every work shift type and duration. Once a work shift is assigned to a work condition, it will be included the next time you generate a schedule.

NOTE: If you generate a schedule and discover agents without work conditions, go to the Work Shifts tab on the Work Conditions Detail pane and assign the work shift to a work condition, then run the schedule again or edit the agents' schedules.

NOTE: If all work conditions are general work conditions, then you do not need to associate work shifts with them.


To assign work shifts to a work condition:

1. Click the Work Shift tab. The Work Condition Detail pane displays available and assigned work shifts.
2. Move the desired work shifts from the Available list to the Assigned list by selecting them and clicking >. You can move work shifts from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.
3. Click  (Save) to save your changes.

Deleting a Work Condition

IMPORTANT: This procedure permanently deletes the work condition.

To delete a work condition:

1. Choose Agents > Work Conditions. The Work Condition List pane appears.
2. Select the work condition to delete by completing one of the following steps.
 - To delete one or more work conditions, select the check box next to the work condition name.
 - To delete all work conditions, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Work Shifts

Use the Work Shift Assignments pane to complete the following tasks.

- [Creating a Work Shift Rotation \(page 101\)](#)
- [Creating a Split Work Shift \(page 102\)](#)
- [Assigning a Work Shift Rotation to an Agent \(page 104\)](#)

See "[Understanding Work Shifts](#)" on page 83 for more information.

Creating a Work Shift Rotation

If you use work shift rotations in which an agent works different work shifts over several weeks, you must first define the work shifts and then the rotation sequence.

NOTE: The first day of the week must be configured before you create a work shift rotation. If you change the first day of the week, new work shift rotations must be created in order to incorporate the change.

When you create a work shift rotation, you can assign one or more work shifts to the agent. The work shifts rotate automatically when you generate schedules for the agent's CSQ.

The first week of the rotation is always the current week when you create a new rotation and generate a schedule.

For example, create a work shift rotation with three different work shifts and assign the work shifts to the following weeks:

- Week 1: night shift
- Week 2: day shift
- Week 3: weekends

If you generate a four-week schedule for the agent's CSQ, WFM automatically assigns the night shift to the fourth week of the schedule.

To create a work shift rotation:

1. Create the work shifts (see "[Creating a Work Shift](#)" on page 87). For example:
 - For an agent with a three-week day shift followed by a one-week night shift, create a one-week day shift and a one-week night shift.
 - For an agent who only works three out of four weeks, create a one-week work shift.

- For a full-time agent whose schedule never varies, create a one-week work shift.
2. Create work shift rotation (see ["Assigning a Work Shift Rotation to an Agent" on page 104](#) and ["Creating a New Work Shift Rotation" on page 105](#)). For example:
 - For an agent with a three-week day shift followed by a one-week night shift, assign the one-week day shift to the work shift rotation for three weeks and then assign the one-week night shift to the fourth week of the work shift rotation.
 - For an agent who only works three out of four weeks, create a 14-week work shift rotation, delete 10 of the weeks, assign the one-week work shift to the work shift rotation for three-weeks and leave the fourth week of the rotation blank.
 - For a full-time agent whose schedule never varies, assign the one-week work shift to the work shift rotation.
 3. Generate the weekly schedule production (see ["Automated Work Shift Rotation" on page 188](#)).

When you create work shift rotation and generate the weekly schedule production, you will see the automatic work shift rotation selected by default (see ["Automated Work Shift Rotation" on page 188](#)). An automatic work shift rotation follows this schedule until you decide to change it. For example, if you schedule an agent to work three out of four weeks, the agent will be assigned to work the first three weeks and off on the fourth week. As the weeks progress, the schedule will rotate and the pattern will repeat, as follows.

Week 1: work	Week 5: work
Week 2: work	Week 6: work
Week 3: work	Week 7: work
Week 4: off	Week 8: off

Creating a Split Work Shift

A split work shift is a situation where an agent works two different shifts during the same day. Before you split a work shift, you must create two work shifts that start and end at different times or days.

To create a split work shift:

1. Create two work shifts (see ["Creating a Work Shift" on page 87](#)).

For example, if an agent works four hours in the morning and four hours in the evening, you must create one work shift that covers the morning hours and another work shift that covers the evening hours.

NOTE: Before you split a work shift, you must create two work shifts that start and end at different times. The start and end time for each work shift must not overlap and the work shifts should not conflict with each another.

2. Create a split work shift (see ["Assigning a Work Shift Rotation to an Agent" on page 104](#), ["Creating a New Work Shift Rotation" on page 105](#), and ["Splitting a Work Shift" on page 106](#)).
3. Generate the weekly schedule production (see ["Automated Work Shift Rotation" on page 188](#)).

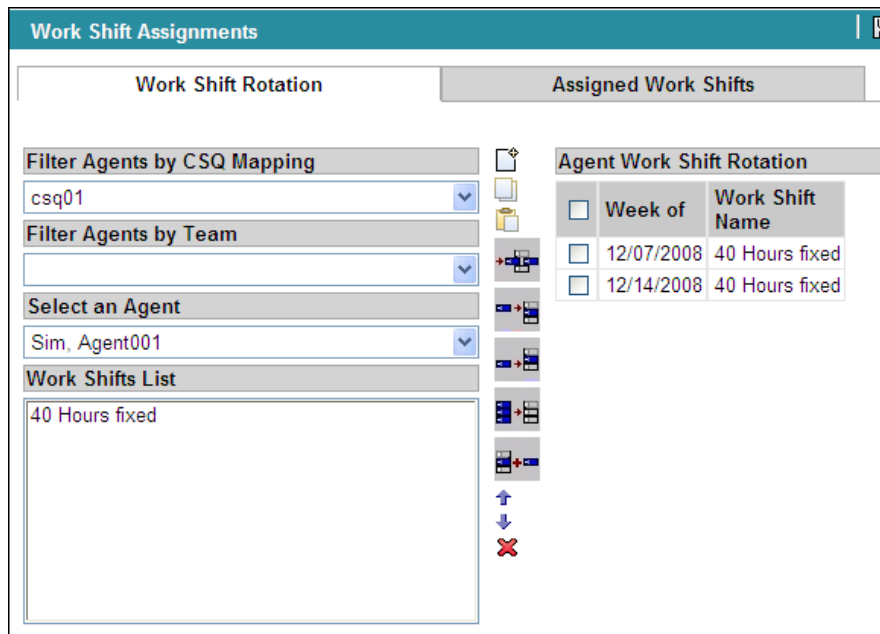
NOTE: When you create work shift rotation and generate the weekly schedule, you will see the automatic work shift rotation selected by default (see ["Automated Work Shift Rotation" on page 188](#)). An automatic work shift rotation follows this schedule until you decide to change it.

Assigning a Work Shift Rotation to an Agent

To assign a work shift rotation to an agent:

1. Choose Agents > Assign Work Shifts. The Work Shift Assignments pane displays available and assigned work shift rotation (Figure 17).

Figure 17. Work Shift Assignments: Work Shift Rotation tab



2. If desired, filter the list of agents by CSQ mapping or team.
3. Choose the agent to whom you want to assign a work shift from the Select an Agent list. A list of work shifts assigned to the selected agent appears under Agent Work Shift Rotation. If the list is empty, then the agent has not been assigned any work shifts.






NOTE: If you are editing an agent from the Agent Details pane, only the agent you selected from the Agent List appears in this field.

4. Under Work Shifts List, select a work shift to assign to the agent.
5. Assign the selected work shift to the selected agent by completing one of the following options:
 - [Creating a New Work Shift Rotation \(page 105\)](#)
 - [Replacing an Existing Work Shift with a New Work Shift \(page 105\)](#)
 - [Inserting a New Work Shift Before or After an Existing Work Shift \(page 105\)](#)

- [Deleting Assigned Work Shifts \(page 106\)](#)
- [Splitting a Work Shift \(page 106\)](#)
- [Advancing or Postponing Assigned Work Shifts \(page 107\)](#)
- [Copying a Work Shift Rotation to Other Agents \(page 107\)](#)



Creating a New Work Shift Rotation

To create a new work shift rotation:

1. Delete all of the existing assignments by selecting the check box in the column heading of the Agent Work Shift Rotation table and click  (Delete).
2. Click  (New Rotation). Fourteen weeks (without work shift assignments) appear under Agent Work Shift Rotation.
3. Select a work shift from the Work Shifts List.
4. Assign the work shift to all of the weeks by selecting the top check box in the list and clicking  (Insert On).
5. Delete any undesired assignments by selecting the check box for those assignments and clicking  (Delete).
6. Click  (Save) to save your changes.

Replacing an Existing Work Shift with a New Work Shift

To replace an existing work shift assigned to an agent with a new work shift:




1. Select the check boxes for the assignments you want to change.
2. Select a work shift from the Work Shifts List.
3. Click  (Insert On). WFM replaces the selected work shifts with the new work shift.
4. Click  (Save) to save your changes.

Inserting a New Work Shift Before or After an Existing Work Shift

Use this procedure to insert a new work shift after an existing work shift in the Agent Work Shift Rotation list.

To insert a new work shift before or after an existing work shift:



1. Select the check box next to a work shift assignment in the Agent Work Shift Rotation list.
2. Select a work shift from the Work Shifts List.

3. Do one of the following:
 - a. Click  (Insert Before). The dates for assignments that occur before the new assignment do not change. The dates for the assignments that occur after the new assignment advance by one week.
 - b. Click  (Insert After). The dates for assignments that occur before the new assignment do not change. The dates for the assignments that occur after the new assignment advance by one week.
4. Click  (Save) to save your changes.

Deleting Assigned Work Shifts




Use this procedure to delete assigned work shifts. There are two ways to delete assigned work shifts: by deleting an entire work shift rotation, or by deleting work shifts.

To delete an entire work shift rotation:

1. Click  (Delete Rotation (All Work Shifts)). The existing weeks remain, but the work shift assignments for those weeks are deleted.
2. Click  (Save) to save your changes.

NOTE: Delete any weeks that do not have work shifts assigned to them, because WFM will take them into account when generating a schedule.

To delete assigned work shifts:

1. To delete all work shift assignments, select the check box in the heading of the first column of the Agent Work Shift Rotation table and click  (Delete).
To remove one or more work shift assignments, select the check box next to each work shift assignment name and click  (Delete).
2. Click  (Save) to save your changes.




Splitting a Work Shift

Use this procedure to split a work shift. Split a work shift when an agent works two different shifts during a day.





NOTE: Before you split a work shift, you must create two work shifts that start and end at different times. The start and end time for each work shift must not overlap and the work shifts should not conflict with each another.

This procedure assumes that you already added one of the two work shifts to the Work Shift Rotation List as described in ["Creating a New Work Shift Rotation" on page 105](#).

To split a work shift:

1. Select the check box next to the existing work shift you want to split in the Agent Work Shift Rotation list.
2. Click  (Add Work Shift to Selected Weeks (Split Shift)). The selected work shift does not change. A new work shift assignment appears next to the selected work shift assignment and displays the same date and work shift name.
3. Select the check box next to the newly created work shift in the Agent Work Shift Rotation list.
4. Select a work shift in the Work Shift Lists that you want to use for the additional shift in the split work shift.
5. Click  (Insert On). The selected work shift in the Agent Work Shift Rotation now displays the name of the work shift selected in the Work Shifts List.
6. Click  (Save).




Advancing or Postponing Assigned Work Shifts**To advance or postpone assigned work shifts from the Work Shifts Assignment pane:**

- To advance all the work shift assignments by one week, click  (Advance) and  (Save) to save your changes.
- To postpone all of the work shift assignments by one week, click  (Postpone) and  (Save) to save your changes.

Copying a Work Shift Rotation to Other Agents

This procedure describes how to copy a work shift rotation to other agents.

To copy a work shift rotation to other agents:

1. Choose Agents > Assign Work Shifts. The Work Shift Assignments pane displays available and assigned work shifts.
2. To copy the work shift rotation from the Agent Work Shift Rotation list, click  (Copy). The Select Agents pane appears.
3. Select the agents to whom you want to copy the displayed work shift rotation.
4. Click  (Paste) to paste the work shift rotation to the selected agents.
5. Click  (Save) to save your changes.
6. To verify the work shift rotation was copied to the selected agents, complete one of the following steps.

- Select the name of the agent to whom you copied the work shift rotation from the Select an Agent drop-down list. The agent's work shift rotation should appear in the Agent Work Shift Rotation list.
- Display the agent's work shift rotation.
 - a. Choose Agents > Agents. The Agent List appears.
 - b. Click the employee number associated with the agent you want to verify. The Agent Details pane appears.
 - c. Click the Work Shifts tab. The work shift rotation copied to this agent should appear on this pane.

NOTE: You can edit the agent's work shift rotation by clicking Edit Agent Rotation.

Displaying Assigned Work Shifts

To display assigned work shifts:

1. Click the Assigned Work Shifts tab. The Work Shift Assignments pane displays assigned work shifts.
2. Enter a date for the first day of a week (by default, Sunday) in the Select a date field and click Display Assignments. The assigned work shifts for the selected date appear in the Assignments pane.
3. Click a work shift under the Work Shift Name column to display agents assigned to this work shift. WFM displays the work shifts details in the Assignment Details pane.

Exceptions

See ["Understanding Exceptions" on page 61](#) for more information.

NOTE: If you need to assign an exception to an agent on a date after you have produced the schedule for that date, you should use the Post-Production Planning function. If you do not, you will have to update the schedule manually. For more information about adding unplanned exceptions to a schedule, see ["Post-Production Planning" on page 200](#).

Understanding the Exception Assignment Fields

The fields in the Exception Assignments pane ([Figure 18](#)) are described in the following table.

Field	Description
Exception List	Name of exception.
Starts On	Date on which the exception starts. The default is the current date.
Ends On	Date on which the exception ends.
After <i>number</i> Occurrences	Choose this option if you want the exception to be repeated a specified number of times and enter the number of times the exception is repeated.
Entire Day	Whether the exception covers the whole service day.
Start Time	Exception start time (in hours and minutes) using hh:mm format.
End Time	Exception end time (in hours and minutes) using hh:mm format.
Hours	Total number of hours required for the exception.
Paid	<p>Whether the agent will be paid for these hours. By default, WFM displays the Paid status you entered when you created the exception type. See "Editing an Exception Type" on page 64. However, you can change it here.</p> <p>NOTE: If the exception is paid, the total number of hours between the start and the end time must be equal to the number of paid hours. The number of paid hours does not include lunch time.</p>

Field	Description
Frequency	Choose the frequency of the occurrences. The options are Daily, Weekly, Monthly, and Yearly (for example, once a week for 10 weeks) (see "Examples of Exceptions" on page 111 for more information).
Occurrence	Choose the type of occurrence. The options that appear in this field depend on the option you chose under Frequency (see "Examples of Exceptions" on page 111 for more information).

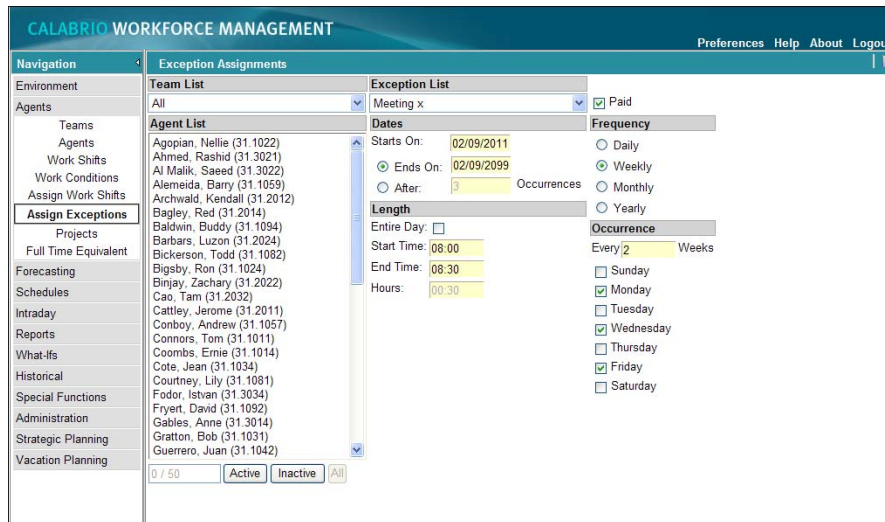
Assigning a Pre-Production Exception

This topic explains how to use the Exception Assignments pane to assign an exception before a schedule has been produced. For information about assigning exceptions after a schedule has been produced, see ["Assigning a Post-Production Exception" on page 203](#).

To assign a pre-production exception:

1. Choose Agents > Assign Exceptions. The Exception Assignments pane appears ([Figure 18](#)).


Figure 18. Exception Assignments



2. Select the team of the agent to whom you want to assign the exception.
3. If desired, filter the list of agents by status by clicking Active, Inactive, or All at the bottom of the agent list.

4. Select one or more agents from the list. The field to the left of the Active/Inactive/All buttons shows how many agents you selected from this list.
5. Select an exception from the Exception List.
6. Enter the date when the exception will start in the Starts On field.
7. Specify the length of the exception, frequency, and occurrence of the exception.

EXAMPLE: [Figure 18](#) shows an exception for a regular meeting. This meeting is held Monday, Wednesday, and Friday every other week from 08:00 to 08:30, starting on February 9, 2011 and running indefinitely (the end date is set for February 9, 2099, which is so far in the future that the meetings essentially have no end date).

8. If the agent will be paid for these hours, select the Paid check box. By default, WFM displays the Paid status that you entered when you created the exception type (see "[Editing an Exception Type](#)" on page 64). However, you can change it here.
9. Click  (Save) to save your changes.

Examples of Exceptions

The following list provides typical examples used when defining frequency and occurrence of exceptions.

- An agent is assigned to special administration work for two months. The assignment starts on July 2 and ends on September 21. The agent is required to perform this administration work on every Wednesday and Thursday from

10:00 to 12:00. [Figure 19](#) shows how to enter this exception.

Figure 19. Example 1

Exception List	
Special Administration	<input checked="" type="checkbox"/> Paid
Dates	Frequency
Starts On: 07-02-2008	<input type="radio"/> Daily
<input checked="" type="radio"/> Ends On: 09-21-2008	<input checked="" type="radio"/> Weekly
<input type="radio"/> After: 1 Occurences	<input type="radio"/> Monthly
	<input type="radio"/> Yearly
Length	Occurence
Entire Day: <input type="checkbox"/>	Every 1 Weeks
Start Time: 10:00	<input type="checkbox"/> Sunday
End Time: 12:00	<input type="checkbox"/> Monday
Hours: 02:00	<input type="checkbox"/> Tuesday
	<input checked="" type="checkbox"/> Wednesday
	<input checked="" type="checkbox"/> Thursday
	<input type="checkbox"/> Friday
	<input type="checkbox"/> Saturday

- A group of agents must attend ten meetings on Mondays every other week for one hour. The meeting runs from 14:00 to 15:00. The meetings start on February 12. (Note that the Ends On option is disabled.) [Figure 20](#) shows how to enter this exception.

Figure 20. Example 2

Exception List	
Team Meeting	<input checked="" type="checkbox"/> Paid
Dates	Frequency
Starts On: 02-12-2008	<input type="radio"/> Daily
<input type="radio"/> Ends On: 02-12-2008	<input checked="" type="radio"/> Weekly
<input checked="" type="radio"/> After: 10 Occurences	<input type="radio"/> Monthly
	<input type="radio"/> Yearly
Length	Occurence
Entire Day: <input type="checkbox"/>	Every 2 Weeks
Start Time: 14:00	<input type="checkbox"/> Sunday
End Time: 15:00	<input checked="" type="checkbox"/> Monday
Hours: 01:00	<input type="checkbox"/> Tuesday
	<input type="checkbox"/> Wednesday
	<input type="checkbox"/> Thursday
	<input type="checkbox"/> Friday
	<input type="checkbox"/> Saturday

- Starting on February 12, the contact center assigns two agents to prepare statistics reports for one full day on the 5th day of every third month for the year 2008. [Figure 21](#) shows how to enter this exception.

Figure 21. Example 3

Exception List	
Statistics Reporting	<input checked="" type="checkbox"/> Paid
Dates	
Starts On: 02-12-2008	
<input type="radio"/> Ends On: 02-12-2008	
<input checked="" type="radio"/> After: 4 Occurrences	
Length	
Entire Day: <input checked="" type="checkbox"/>	
Start Time:	
End Time:	
Hours:	
Frequency	
<input type="radio"/> Daily	
<input type="radio"/> Weekly	
<input checked="" type="radio"/> Monthly	
<input type="radio"/> Yearly	
Occurrence	
<input checked="" type="radio"/> The 5 Of every 4 Month	
<input type="radio"/> The First Sunday Of every 1 Month	

- Four agents are required to mail the monthly statements from 08:00 to 12:00, the first Monday of every month, from the beginning of the year. [Figure 22](#) shows how to enter this exception.

Figure 22. Example 4

Exception List	
Monthly Statements	<input checked="" type="checkbox"/> Paid
Dates	
Starts On: 01-1-2008	
<input checked="" type="radio"/> Ends On: 02-12-2008	
<input type="radio"/> After: 1 Occurrences	
Length	
Entire Day: <input type="checkbox"/>	
Start Time: 8:00	
End Time: 12:00	
Hours: 04:00	
Frequency	
<input type="radio"/> Daily	
<input type="radio"/> Weekly	
<input checked="" type="radio"/> Monthly	
<input type="radio"/> Yearly	
Occurrence	
<input type="radio"/> The 1 Of every 1 Month	
<input checked="" type="radio"/> The First Monday Of every 1 Month	

Alternatively, you could specify 12 occurrences without specifying an end date. [Figure 23](#) shows how to enter this exception.

Figure 23. Example 5

Exception List	
Monthly Statements	<input checked="" type="checkbox"/> Paid
Dates	Frequency
Starts On: 01-1-2008	<input type="radio"/> Daily
<input type="radio"/> Ends On: 02-12-2008	<input type="radio"/> Weekly
<input checked="" type="radio"/> After: 12 Occurrences	<input checked="" type="radio"/> Monthly
	<input type="radio"/> Yearly
Length	Occurrence
Entire Day: <input type="checkbox"/>	<input type="radio"/> The 1 Of every 1 Month
Start Time: 8:00	<input checked="" type="radio"/> The First Monday Of every 1 Month
End Time: 12:00	
Hours: 04:00	

Projects

Use the Projects function to complete the following tasks.

- [Creating a Project \(page 116\)](#)
- [Editing a Project \(page 119\)](#)
- [Assigning Agents to a Project \(page 120\)](#)
- [Deleting a Project \(page 120\)](#)

Understanding Projects

A project is an activity that prevents agents from responding to contacts. Projects are generally assigned to optimize use of agent idle time when contact volume is low. These activities occur each work shift and can be assigned for periods of a day or a week. They can be activities that are internal to the customer contact center efforts, such as answering internal email and sending faxes. You can create projects and assign agents to these projects.

WFM examines the coverage for every interval and schedules a project for a time where it would have least impact on coverage. If an agent is assigned multiple projects, WFM also looks at the priority assigned to each project and assigns the project with the highest priority first.

Creating a Project

To create a project:

1. Choose Agents > Projects. The Project List appears.


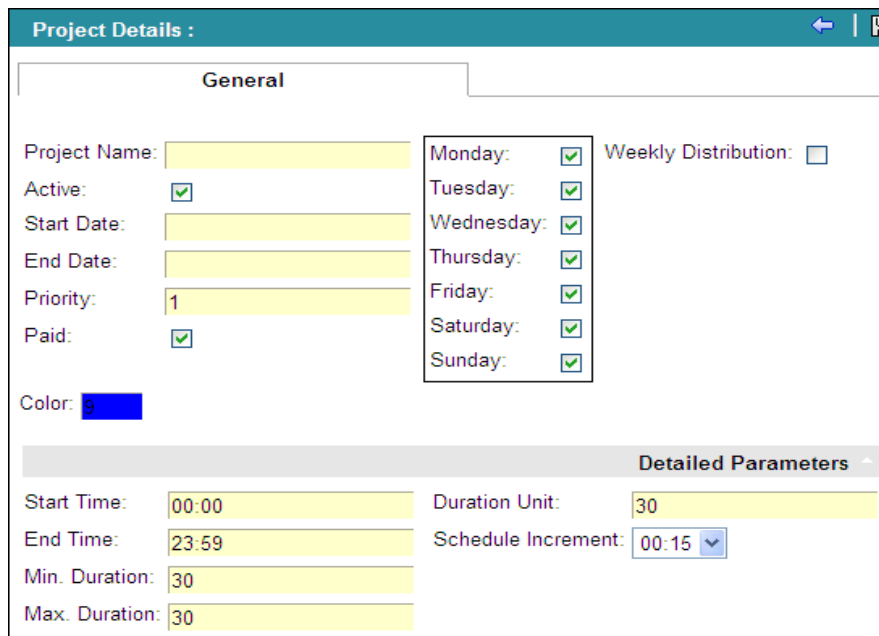
- Click  (New) to create a project. The Project Details pane displays general project options (Figure 24).

Figure 24. Project Details: General tab




- Complete the fields.

Field	Description
Project Name	The name of the project.
Active	WFM only schedules the project if the Active check box is selected. The check box is selected by default. Clear the Active check box if you want to deactivate the project.
Start Date	The start date for the project.
End Date	The end date for the project.

Field	Description
Priority	<p>The priority number for this project (0–9, with 0 being the highest priority). Assigning priorities to projects allows WFM to resolve scheduling conflicts when agents are assigned to multiple projects.</p> <p>For example, you designate some of your agents to support two projects and assign a priority to each project in WFM. If WFM generates the schedules for the two projects and discovers there are not enough agents to support all forecast requirements across both projects, it compares the priority value for the two projects. WFM then schedules agents for the project with the highest priority first.</p>
Paid	Whether agents are paid to do this project.
Color	<p>The color that appears in the Project column on the Schedule Maintenance pane. The default color is blue.</p> <p>To avoid confusion, select a unique color for each project. Click the Color field to display the color palette and select a color. WFM displays the color and the Java number associated with the color.</p>
Monday— Sunday	The days on which agents can work on this project.
Weekly Distribution	<p>Select this check box if you want this project to occur when it would have the least impact on coverage. Weekly distribution projects are scheduled after the schedule is completed for all agents. WFM examines the coverage for every interval and schedules a project for a time where it would have least impact on coverage during the week. If an agent is assigned multiple projects, WFM also looks at the priority assigned to each project and assigns the project with the highest priority first.</p> <p>When selected, the following fields appear:</p> <ul style="list-style-type: none"> • Maximum Hours per Week • Apply to All Selected Days • Applies to One of the Selected Days


Field	Description
Maximum Hours per Week	The maximum number of hours per week agents can work on this project and select one of the following options. <ul style="list-style-type: none"> Apply to All Selected Days: Applies Maximum Hours per Week to all selected days (Monday–Sunday). Apply to One of the Selected Days: Applies Maximum Hours per Week only to one of the selected days (Monday-Sunday).
Start Time	The project start time in hh:mm format.
End Time	The project end time in hh:mm format.
Minimum Duration	The minimum amount of time, in minutes, an agent is expected to work on this project. If you enter zero (0) in this field, WFM will not apply this project at a time where the service level will go below the service level objective.
Maximum Duration	The maximum amount of time, in minutes, an agent is expected to work on this project.
Duration Unit	The minimum increment, in minutes, for the length of time. If the Minimum Duration is 30 minutes and the Maximum Duration is 60 minutes and you specify 15 minutes in the Duration Unit field, the time worked could be 30, 45, or 60 minutes.
Schedule Increment	Select a 15- or 30-minute increment for this project. If you choose a 15-minute schedule increment, the start time is 08:00, 08:15, or 08:30 and the number of hours worked is 3, 3.25, 3.5, or 3.75.

- Click the Agents tab. The Project Details pane displays available and assigned agents.
- Move the desired agents from the Available list to the Assigned list by selecting them and clicking >. You can move agents from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.
- Click  (Save) to save your changes.

Editing a Project


To edit a project:

- Choose Agents > Projects. The Project List appears.

2. Click a project name. The Project Details pane displays general project options.
3. Edit the fields as desired. The fields are described in "[Creating a Project](#)" on [page 116](#).
4. Click  (Save) to save your changes.

Assigning Agents to a Project


To assign agents to a project:

1. Choose Agents > Projects. The Project List appears.
2. Click a project name. The Project Details pane displays general project options.
3. Click the Agents tab. The Project Details pane displays available and assigned agents.
4. Move the desired agents from the Available list to the Assigned list by selecting them and clicking >. You can move agents from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.
5. Click  (Save) to save your changes.

Deleting a Project

BEST PRACTICES: It is recommended that you do not delete projects. If they are deleted, the historical data associated with them will be lost.

To delete a project:

1. Choose Agents > Projects. The Projects List pane appears.
2. Select the project to delete by completing one of the following steps.
 - To delete one or more projects, select the check box next to the project name.
 - To delete all projects, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Introduction

This section covers the following topics:

- [Distributions \(page 131\)](#)
- [Forecast Requests \(page 139\)](#)
- [Editing Forecasts \(page 148\)](#)
- [Special Events \(page 153\)](#)
- [Firm Date Associations \(page 158\)](#)
- [Closed Days \(page 160\)](#)

Understanding the Forecasting Process

In WFM, a forecast is a prediction of the number of contacts that a contact center will receive over a specific period of time. WFM uses historical contact data first to generate a distribution, then uses the historical data and the distribution to generate a forecast, and finally uses the forecast to create a schedule.

You can create a forecast for any length period. The distribution of a forecast contains contact data by day and by schedule interval (typically 30 minutes).

The Forecasting Module

The Forecasting module is an essential part of WFM. It provides the basis for creating schedules. Use the Forecasting module to do the following:

- Generate and edit scenarios (see ["Forecast Scenarios" on page 243](#)).
- Generate distributions and edit the results (see ["Distributions" on page 131](#) and ["Distribution Scenarios" on page 240](#)).
- Generate forecasts and edit the results (see ["Forecast Requests" on page 139](#)).
- Define and assign special events. Special Events cause historical contact volume to be above or below normal patterns and identify specific dates when the events occurred (see ["Special Events" on page 153](#)).
- Create firm date associations (see ["Firm Date Associations" on page 158](#)). A firm date association is a link that you can create between two dates that fall on different days of the week from year to year. For example, New Year's Day falls on a Friday in 2010 and on a Saturday in 2011. Firm date associations are useful because when WFM generates distributions and forecasts, it uses the day of the week and not the date.
- Identify closed days on which the contact center does not handle calls for a specific CSQ (see ["Closed Days" on page 160](#)).

Forecast Requirements

When you generate a forecast, you need to specify the following:

- A CSQ or virtual CSQ
- The dates for which you want to generate a forecast (forecast period)

You need to know the day or days for which you want to generate a forecast. For a normal forecast, you can specify a week or two at a time. If there is a special event (for example, a holiday), you might want to generate forecasts for the days before and after the holiday one day at a time.

- The method used to forecast the contact volume for each day in the forecast period (for example, Previous Year Equivalent Day or Average of Equivalent Days)
- With trends or without trends. If you choose to forecast with trends, you must also specify the method used to determine trends (for example, Specific Trends per Day or Overall Trend).

A trend is the year-to-year change in contact volume. A trend tells you the percentage of change (either greater, equal or less than) in contact volume for the current year over the same period last year. The method for determining the trend is dependent on the extent of historical data stored in WFM.

- The historical reference period. Specify the same start and end dates for the reference period you used when you created the distribution.
- The average call or email handling time. To project the number of agents required, the forecasting process needs to project not only the number of calls or email likely to arrive in a scheduling period, but also the time the agents take to handle calls or email.
- The adjustment factor. If you lack sufficient historical data to forecast with trends, but you think the volume in the forecast period will be above or below the volume in the historical reference period, you should enter the ratio of the forecast period to the historical volume as the adjustment factor. For example, if you think the forecast period volume will be five percent higher than the historical volume, enter 1.05 in the Adjustment Factor field.
- Service level targets. For each schedule period, you can set the target for customer service expressed in terms of the percentage of calls answered in a specified number of seconds or email answered within a number of hours. Meeting a more demanding target requires more agents than meeting a less demanding one. The forecast process adjusts projected agent requirements to levels required to meet the service goal.

The Forecasting Process

To create a forecast, you must complete the following tasks.

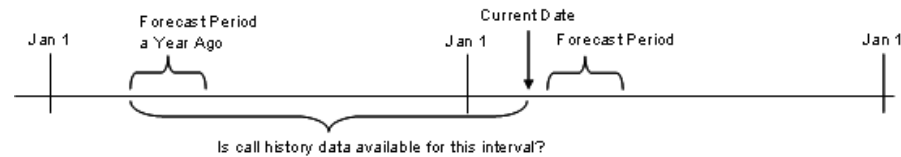
1. Select a reference period.

WFM uses historical data to project future requirements. You need to identify the reference period with the historical data that most closely resembles the period for which you want to generate a forecast. For example, a reference period should reflect any weekly or seasonal patterns that are likely to occur during the forecast period. Choosing a reference period from a year prior to the forecast period often provides the best reflection of weekly and seasonal patterns.

See the *Workforce Management Installation Guide* for instructions on capturing historical data.

To determine the historical data available to you, see ["Displaying Historical Data for a CSQ" on page 252](#). For the best results, you need data for the past 12 to 15 months.

Figure 25. Historical call volume data



If you have extensive historical data, see for ["Forecasting with Extensive Historical Data" on page 125](#). If you have limited historical data, see ["Forecasting with Limited or Unusable Historical Data" on page 125](#).

2. Generate a distribution using the reference period you chose.
3. Edit the distribution as needed.

For example, if a special event caused contact volume to be lower than usual on a certain day in the reference period, you can increase the contact volume in the distribution to match the average more closely. Or, if you expect the contact volume to be lower on a certain day of the week in your forecast period, you can decrease the contact volume on that day in the distribution.

4. Generate the forecast. The forecast reference period is typically shorter (one to four weeks long) than a distribution reference period (several months long). You might generate a forecast for the four weeks leading up to a holiday, for example, or a week-long seasonal sale, but the distribution reference period would not necessarily be that short.
5. Review the forecast. If you do not believe the forecast values are on target, edit the forecast (see ["Editing Forecasts" on page 148](#)).

Understanding How WFM Generates a Forecast

After you launch your forecast request, WFM performs the following steps to generate the forecast.

1. Applies any special event adjustments that you assigned for the CSQ in the historical reference period (see ["Special Events" on page 153](#)).
2. Generates the volume projection for each day in the forecast period.
3. When forecasting with trends, determines the trend percentage by day and adjusts the volume projections by the trend amount.

For example, if the forecast for the day was 40 calls and the trend indicated that this year's contact volume was five percent above last year's contact volume, the forecast process increases the projection for the day to 42 calls (1.05×40).

4. Adjusts the volume projection for each day by the adjustment factor.
For example, if you enter 1.05 in the Adjustment Factor field, WFM increases the total volume projection for each forecasted day by 5 percent. If you enter 0.95 in this field, WFM decreases the total volume projection for each forecasted day by 5 percent.
5. Applies the schedule interval ratios from the distribution for the day to divide the projection for the day into projections for each schedule period within the day.
6. Multiplies the projection for each schedule interval by the average handling time for the interval to estimate the amount of agent handling time required.
7. Performs statistical analysis with respect to the agent call or email handling time estimates and the service level goals for the schedule intervals to determine the number of agents required.

Forecasting with Limited or Unusable Historical Data

Sometimes extensive historical data is not available or cannot be used. If you do not have contact volume data for 12 to 15 months prior to the forecast period, you must use more recent data. If you do have 12 to 15 months of historical data, but your current contact volume has changed to such an extent that information from a year ago might no longer be indicative of future activity, you must use more recent data.

For forecasts based on limited history, WFM:

- Includes any past special event adjustments configured for the days in the reference period.
- Retrieves the contact volume for each day of the week for all instances of that day in the reference period. For example, when creating a forecast for a Monday using a six-week reference period, WFM retrieves the contact volume for the six Mondays in the reference period.
- Generates the estimates for each day by calculating the average from the values for that day in the reference period. For example, WFM divides the sum of the contact volume on the six Mondays mentioned previously by six to determine the contact volume estimate for the Monday in the forecast period.

Forecasting with Extensive Historical Data

If your contact center has extensive historical data, you can generate forecasts either with or without trends. If you generate forecasts without trends, then you do not have any other options to choose.

Use the following guidelines to determine if you should generate a forecast with trends:

- If you do not have 12 to 15 months of historical data in WFM, you must generate a forecast without trends. WFM generates a forecast using a default trend value of one.
- If you have 12 to 15 months of historical data and your contact center circumstances are fairly consistent with what they were a year ago, you can create a forecast with trends.

If you want to generate forecasts with trends, then you need to select settings for two additional parameters. These parameters are independent of each other.

Daily Volume Based On. This parameter defines how each day's contact data is calculated. Choose one of the following:

- **Average of Equivalent Days:** the average of the number of contacts received on several days of the previous year
- **Previous Year Equivalent Day:** the number of contacts received on the corresponding day of the previous year

Type of Trend Calculation: This parameter defines how the trend is calculated. Choose one of the following:

- **Overall Trend:** one number, which is the ratio of this year's contact volume during the reference period to last year's contact volume during the corresponding reference period
- **Specific Trends per Day:** seven numbers, consisting of the ratios of this year's contact volume for each day of the week during the reference period to last year's contact volume for each day of the week during the corresponding reference period

These methods are described in more detail below.

Choosing a Trend Calculation Method

If you want to create a forecast with trends, WFM provides the following trend options:

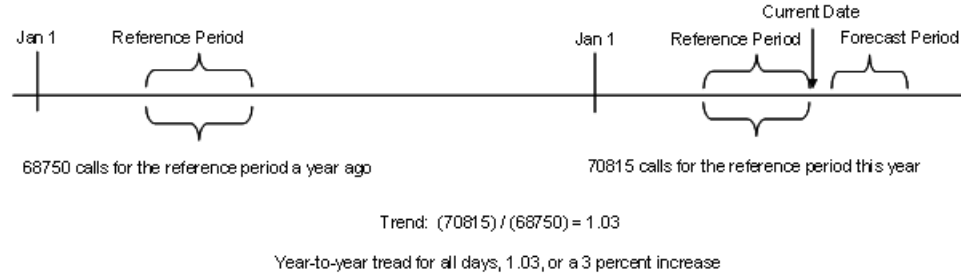
- [Overall Trend \(page 127\)](#)
- [Specific Trends per Day \(page 127\)](#)

Overall Trend

When you choose to generate a forecast with trends and select the Overall Trend method, WFM calculates the total contact volume for the CSQ for this year's period and the equivalent period from last year and divides this year's total by last year's total to determine the trend. [Figure 26](#) shows an example of an overall trend

calculation.

Figure 26. Overall trend example

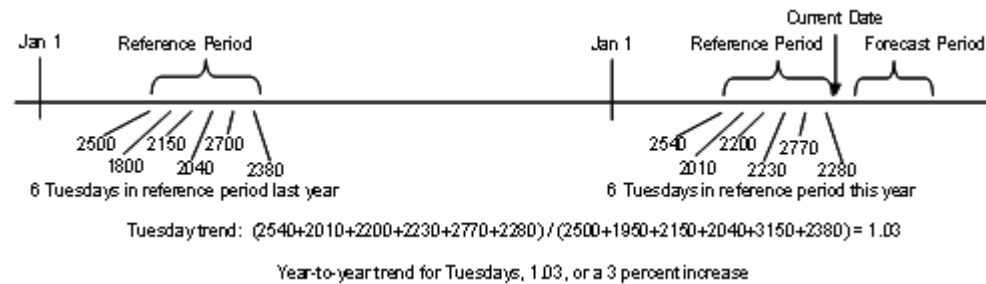


Specific Trends per Day

When you choose to generate a forecast with trends and select the Specific Trends per Day method, WFM calculates seven trends, one for each day of the week. WFM calculates the total contact volume for the CSQ for each day of the week in this year’s period and also for each day of the week in the equivalent period last year. It then divides this year’s total for each day by last year’s total to determine the trend for all seven days of the week. This method best captures year-to-year variations in the weekly call or email arrival pattern.

Figure 27 shows an example of a specific trends per day calculation.

Figure 27. Specific trends per day example



Choosing a Volume Calculation Method

If your seasonal patterns are strong, use either Previous Year Equivalent Day or Average of Equivalent Days with a short reference period. Average of Equivalent Day with a longer reference period tends to hide seasonal patterns. If your day-to-day call volume is highly volatile, use Average of Equivalent Days with a longer reference period (for example, 3 to 6 weeks).

Previous Year Equivalent Day

If you choose Previous Year Equivalent Day, WFM must have at least 12 months of historical data. When you generate a forecast using Previous Year Equivalent Day, WFM bases its calculation on the contact volume of the same day of the week for the same week of the month for the previous year.

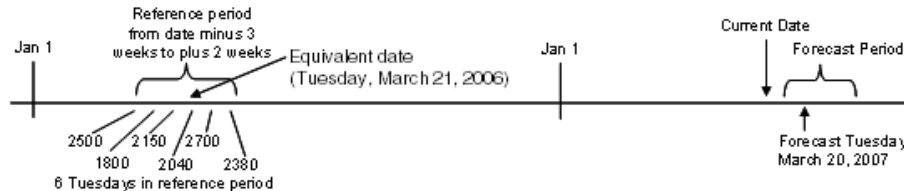
For example, to generate a forecast for May 15, 2007, which is the third Tuesday in May, WFM uses the contact volume for the third Tuesday in May of 2006 (May 16, 2006) for the projection.

Average of Equivalent Days

If you choose Average of Equivalent Days, WFM must have more than 12 months of historical data. When you generate a forecast with trends using Average of Equivalent Days, you must enter a range of weeks for WFM to use in calculating the averages: one or more weeks before the forecast date and one or more weeks after the forecast date. WFM then calculates the average contact volume for each day of the week over the range of weeks you selected.

For example, if you want to generate a forecast for Tuesday, March 20, 2007, you might decide to include three weeks before and three weeks after the equivalent date as the average volume calculation reference period. WFM generates the forecast by calculating the average contact volume for each Tuesday in the six week period from February 28, 2006 to April 3, 2006 (Figure 28).

Figure 28. Average of equivalent days example



Firm Date Associations

When WFM generates a forecast, it uses historical data from the same day of the week. For example, to generate a forecast for Friday, January 1, 2010, WFM uses data from Friday, January 2, 2009. However, the 2010 date is New Year's Day, and the 2009 date is the day after New Year's Day. The contact data for the two dates is probably going to be significantly different because of the holiday. To ensure that WFM uses a date with similar data for its forecast, you can create firm date associations (see "Creating, Copying, and Deleting Firm Date Associations" on page 158).

Choosing a Contact Handling Time

You have two options for contact (call and email) handling times:

- **Historical Handling Times:** This option uses the contact handling times calculated from historical data when you generated the distribution for this forecast. If you think the handling times in the forecast periods are likely to follow historical patterns, you should choose this option.

- **Standard Handling Times:** This option uses the standard contact handling times for the CSQ configured in Environment > CSQs. If you think that the handling times will be significantly different from historical patterns for the forecast period, then and choose this option.

NOTE: Before you choose this option, you must either enter the standard time information manually or generate a distribution with the Update CSQ Times option selected.

Email Forecasting Redistribution Options

There are several differences between email and call CSQs that affect how WFM generates forecasts.

- Email is processed asynchronously and does not have to be answered immediately
- Email can arrive outside of business hours, when a CSQ is closed (inactive)

Because of these differences, when you generate forecasts for email CSQs, you need to consider how quickly you want agents to respond. WFM provides several processing options that you can choose from depending on your service level objectives and scheduling requirements. These options affect how the forecasted emails for a CSQ are redistributed across the intervals that the CSQ is open.

Redistributing Emails Forecasted to Arrive During Business Hours

WFM provides the following options for redistributing emails that a CSQ is forecasted to receive during business hours.

- **No Deferring:** If you choose this option, the forecast is not modified. WFM uses the distribution in production for a CSQ as is to distribute the emails across all of the intervals that the CSQ is open. Using this option tends to favor meeting service level objectives (fast email processing) as opposed to creating efficient schedules (high occupancy ratios).
- **Non-Linearly:** If you choose this option, WFM redistributes 50 percent of emails forecasted to arrive during a particular interval to that interval, 50 percent of the emails remaining from that interval to the next interval, and so on. WFM redistributes any emails left over to the last interval that the CSQ is open. This process is repeated for every half hour interval that the CSQ is open. Using this option is a compromise between service level objectives and efficient schedules.
- **Linearly:** If you choose this option, WFM evenly redistributes all of the emails forecasted to arrive during a particular interval across that interval and the remaining intervals that the CSQ is open. This process is repeated for every half hour interval that the CSQ is open. Using this option defers email towards the end of the day and tends to favor service level objectives the least.

WFM provides forecast options for processing email contacts received during and after business hours. These options are available when you select Email as the CSQ Type when creating a forecast (see "[Generating a Forecast Without Trends](#)" on [page 143](#)).

Redistributing Emails Forecasted to Arrive Outside of Business Hours

WFM provides the following options for redistributing emails that a CSQ is forecasted to receive outside of business hours.

- **No Deferring:** If you choose this option, WFM redistributes all of the emails that are forecasted to arrive while a CSQ is closed to the first interval of the next day that the CSQ is open.
- **Non-Linearly:** If you choose this option, WFM redistributes 50 percent of the emails forecasted to arrive outside of business hours to the first interval of the next day that the CSQ is open, 50 percent of the remaining emails to the second interval, and so on, until the last interval that the CSQ is open that day. Any emails left over are distributed to that last interval.
- *** Linearly:** If you choose this option, WFM evenly distributes all of the emails that are forecasted to arrive outside of business hours to each of the intervals of the next day that the CSQ is open.

Distributions

Use the Distribution function to create a distribution.

Understanding Distributions

A distribution consists of one week's worth of data about contacts (call or email) for every 30-minute interval. The data includes the following:

- Percentage of the day's total contacts
- Contacts received
- Average talk or processing time
- Average work time

You can use a distribution to determine when the CSQ receives the most contacts (for example, every day between 10:00 and 11:00, or Mondays and Tuesdays between 18:00 and 20:00) during the week.

Guidelines for Generating a Distribution

Choosing an appropriate reference period is important for generating a distribution suitable for your forecast period. You must generate a distribution before you generate a forecast.

You can generate a distribution once and reuse it for every forecast or generate a new distribution every time you generate a forecast. A distribution and forecast are linked automatically—a CSQ can only have one distribution and one forecast in production at any given time.

The type of distribution you generate (call or email) depends on the type of the CSQ for which you are generating the distribution.

Use the following guidelines when generating a distribution.

- If your daily or weekly data fluctuate wildly, choose a longer reference period (for example, the last three weeks). If your contact data is fairly stable, choose a shorter reference period (for example, two or three weeks).
- If your contact data is fairly stable or seasonal, choose a longer reference period from the same period last year (for example, last year's entire season).
- If you have 12 to 15 months of historical contact data and your business and routing patterns have not changed dramatically, use a reference period from a year earlier that is similar to the forecast period. Using a reference period from a year earlier includes seasonal patterns.

- If you do not have 12 to 15 months of historical contact data or your contact center conditions have changed dramatically, identify a more recent period that is likely to have contact data that is similar to the forecast period.
- If the contact data is reasonably stable throughout the year, you might go several months without having to regenerate your distribution. If the call or email data has strong seasonal variation, then you might need to regenerate your distribution at least once a month.
- If the contact data varies frequently, you might need to regenerate your distribution at least once a month or every time you create a forecast.

Requirements for Generating a Distribution

To generate a distribution, you must specify the following information:

- A CSQ or virtual CSQ associated with this distribution.
- The reference period with contact data that most closely resembles the dates for which you want to generate a forecast. To determine the historical data available to you, see ["Displaying Historical Data for a CSQ" on page 252](#).
- The days of the week for which the distribution will be relevant.

How WFM Processes a Distribution

When generating a distribution, WFM performs the following tasks:

1. WFM calculates the average number of contacts received in the reference period for each schedule interval for every day of the week that the CSQ is open. For example, to calculate the average contact volume for the 08:30 to 09:00 interval on Monday, WFM takes the sum of the volume for the 08:30 to 09:00 interval for each Monday in the reference period and divides the total by the number of Mondays in the reference period.
2. WFM then divides the result for each half hour by the average number of contacts received for the entire day to determine the percentage of the day's contacts that arrive during this interval.
3. WFM calculates the average talking time (calls) or processing time (emails) and work time values per contact for each half hour. For example, to calculate the average talking time/processing time for the 08:30 to 09:00 interval on Monday, WFM takes the sum of talking time/processing time for each contact between 09:00 and 09:30 for each Monday in the reference period and divides the total by the number of contacts to determine the average talking time/processing time. WFM uses the same method to calculate average work time.

Creating a Distribution

To create a distribution:

1. Choose Forecasting > Distribution Request. The Distribution Request pane appears (Figure 29).

Figure 29. Distribution Request

Reference Period	Calculate Distribution:
Start Date: 07-01-2007	Sunday <input checked="" type="checkbox"/>
End Date: 09-30-2007	Monday <input checked="" type="checkbox"/>
	Tuesday <input checked="" type="checkbox"/>
	Wednesday <input checked="" type="checkbox"/>
	Thursday <input checked="" type="checkbox"/>
	Friday <input checked="" type="checkbox"/>
	Saturday <input checked="" type="checkbox"/>

Update Skill Group Times:

Execute Request Date: 10-20-2007 00:00

2. From the Select CSQ list, select one or more CSQs.
3. *Optional:* To assign this distribution to a scenario, complete the following steps.
 - a. Select the Assign Distribution to a Scenario check box. A drop-down list and the Create New Scenario check box appear.

NOTE: The drop-down list only displays scenarios if you have selected CSQs that are associated with scenarios.

- b. Complete one of the following steps:
 - To use an existing scenario, select it from the drop-down list.
 - To create a new scenario, complete the following steps.
 1. Select the Create New Scenario check box. The Scenario Name field appears.

2. Type a name for the distribution scenario.
4. Under Reference Period, enter the start and end dates for the reference period.

To determine the historical data available to you, see ["Displaying Historical Data for a CSQ" on page 252](#).
5. Under Calculate Distribution, clear the check boxes for any days for which you do not want a distribution. For example, if the CSQ is closed on Sunday and Monday, clear the Sunday and Monday check boxes.
6. If you want WFM to update the Standard Talk Time and After Call Work Time for the CSQ, select the Update CSQ Times check box.
7. In the Execute Request Date field, enter the date and time at which you want to run this request, in mm-dd-yyyy hh:mm format. By default, today's date and a time of 00:00 is displayed in the field.

NOTE: Requests containing a large amount of data require significant time to run. It is recommended that you run requests during off-peak hours (for example, at night) because the process server only runs one request at a time, and running requests during peak hours will prevent other users from running their requests.

8. Click  (Launch Request). WFM launches your distribution request.

NOTE: You can monitor the status of your request on the Server Request List (see ["Server Requests" on page 278](#)).

Editing Distributions

The future does not always repeat the past. Future events can cause a contact distribution to change. If you know about upcoming events that might affect a distribution, you can use the Edit Distribution function to modify the distribution to account for those events. For any half-hour interval, you can change the number of contacts likely to arrive, the average talk or processing time, and the average work time.

You can use the Edit Distribution function to complete the following tasks.

- Display and modify a distribution on one or more days (see ["To edit a distribution:" on page 135](#))
- Display a distribution graph (see ["Displaying a Distribution Graph" on page 138](#))
- Copy a distribution from one day to another (see ["Copying a Distribution" on page 138](#))

To edit a distribution:

1. Choose Forecasting > Edit Distribution. The Distribution Maintenance pane appears.
2. Select the name of the CSQ from the drop-down list in the toolbar. WFM populates the fields in the Distribution Maintenance pane (Figure 30).

NOTE: By default, WFM displays the distribution for Sunday. To display the distribution for a different day, select the day from the Select Day drop-down list.

Figure 30. Distribution Maintenance

Interval	Ratio	email	ATT	AWT
07:30	0	0	260	60
08:00	0.0143	19	227	27
08:30	0.0196	26	235	27
09:00	0.0437	58	219	30
09:30	0.046	61	232	30
10:00	0.0535	71	227	27
10:30	0.0512	68	214	28
11:00	0.046	61	224	28
11:30	0.0437	58	222	31
12:00	0.0414	55	215	32
12:30	0.0437	58	219	29
13:00	0.0437	58	233	28
13:30	0.049	65	220	34
14:00	0.0512	68	226	29
14:30	0.0512	68	234	30
15:00	0.0512	68	233	32
15:30	0.0535	71	221	29
16:00	0.046	61	221	30
16:30	0.0392	52	228	31


Summary				
Total	100%	1327	225	30

3. *Optional:* Select a distribution scenario from the Select a Distribution Scenario drop-down list.

4. Update any field except the Interval field. The fields are described in the following table.


Field	Description
Interval	<p>The start time for the half hour interval.</p> <p>For a CSQ of type Calls, the distribution covers intervals when the CSQ is open (see the opening and closing hours in the CSQ Detail pane).</p> <p>For a CSQ of type Email, WFM displays all intervals in the 24 hours, since the contact center can receive email even when the CSQ is closed.</p>
Ratio	<p>The percentage of the day's contacts that arrive during the interval. The value is expressed in decimal format. WFM will distribute the forecasted contact volume according to this distribution ratio when you generate a forecast.</p>
Calls/ Email/ Contacts	<p>The number of calls/contacts/emails received. WFM uses this value when making ratio adjustments. If you modify the number, WFM recalculates the ratio.</p> <ul style="list-style-type: none"> • The Calls column appears when the ACD is Unified CCX and the CSQ type is Calls. • The Email column appears when the ACD is Unified CCX and the CSQ type is Email. •
ATT	<p>Average Talk Time. For a CSQ of type Calls, the amount of time, in seconds, it takes an agent to handle calls for each interval. Talk time is elapsed time from when an agent answers a call until the agent disconnects or transfers the call. This includes the time when the agent is actively talking to the caller and the time when the agent places the caller on hold. The average time that agent was in the Talk In, Talking Out, and Talking other states during an interval.</p> <p>For a CSQ of type Email, the average processing time for answered email during the scheduled period. Processing time includes all time from the moment the agent opens the email to the moment the agent sends the email. This includes the time when the agent is actively writing a response to the email.</p>

Field	Description
AHT	Average Handle Time. The average amount of time, in seconds, it takes an agent to handle a call to completion, including talk time plus after-contact work time. To calculate, divide the total seconds of work time by the number of calls. Handle time includes the time agents spend in the Talking In, Hold, Work Ready, and Work Not Ready states.
AWT	Average Wrapup Time. The average time required by an agent after a conversation is ended or a response to email is sent, to complete work that is directly associated with the call or email just completed. Does not include time for any activities such as meetings, breaks, or correspondence. If the CSQ is of type Email and you are not using an email switch, the value in this column is zero (0).
ACW	After Call Work. The average time required by an agent after a conversation is ended or a response to email is sent, to complete work that is directly associated with the call or email just completed. Does not include time for any activities such as meetings, breaks, or correspondence. If the CSQ is of type Email and you are not using an email switch, the value in this column is zero (0).

5. Click  (Save) to save your changes.

Displaying a Distribution Graph

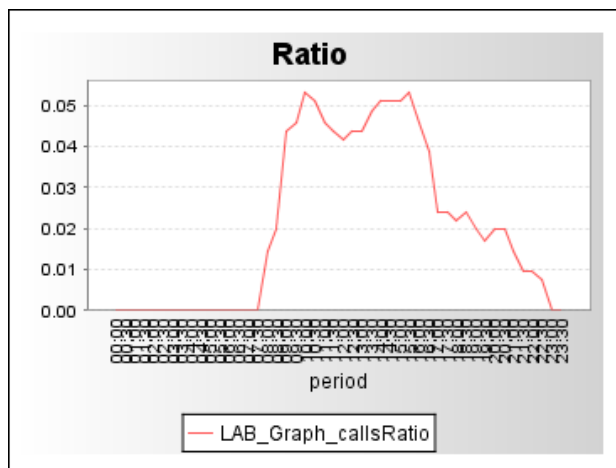
To display a distribution graph:

- Click  (Graph) next to a column heading to display the data graph. The x-axis displays the schedule intervals ([Figure 31](#)).

NOTE: The graph icon only appears when the table has 100 rows or less.




NOTE: The x-axis has a maximum of 30 points. If you specify more than 30 intervals, WFM displays the average for each displayed interval.

Figure 31. Graph sample dialog box



Copying a Distribution

To copy a distribution:

1. From the Select Day drop-down list, select the day from which to copy the distribution.
2. Click  (Copy). WFM copies the selected distribution to the clipboard and displays this message.
Copy done. Ready to paste.
3. From the Select Day drop-down list, select the day to which to copy the distribution.
4. Click  (Paste). WFM pastes the distribution and displays this message.
Paste done successfully.
5. Click  (Save) to save your changes.

Forecast Requests

Use the Forecast Request function to complete the following tasks.

- [Generating a Forecast Request With Trends \(page 139\)](#)
- [Generating a Forecast Without Trends \(page 143\)](#)

Generating a Forecast Request With Trends

If you have at least 12 months' worth of historical data in WFM, use this procedure to generate a forecast with trends.

NOTE: If an entire year of historical data is not available and you generate a forecast with trends, the forecast value will be zero.

IMPORTANT: You must generate a distribution before you generate a forecast (see ["Creating a Distribution" on page 133](#)).

To generate a forecast request with trends:

1. Choose Forecasting > Forecast Request. The Forecast Request pane appears ([Figure 32](#)).

Figure 32. Forecast Request

2. Choose Calls or Email from the CSQ Type drop-down list. The Select CSQs list displays all of the CSQs of the type you choose.

NOTE: If you have a CSQ designated to handle chat, you must choose Calls.

3. Select the CSQs from the Select CSQs list.
4. *Optional:* To use scenarios, click Get Scenarios and then complete one or both of the following steps.
 - To apply a distribution scenario to a forecast, choose the scenario from the Select Distribution Scenario drop-down list.
 - To generate a forecast scenario, choose the scenario from the Select Forecast Scenario drop-down list.
5. Under Forecast Dates, enter the start and end dates for the forecast period. The dates can be for any time, including the past.

Make sure that the dates you enter include the period you want to generate a schedule for.

NOTE: You can generate a forecast for a period as short as one day. However, if you want to use the forecast to generate a schedule, you must generate a forecast that is at least one week long, since the minimum length of a schedule is one week.

6. Under Year-To-Year Trend Calculation, select the With Trends option.
7. Under Type of Trend Calculation, select one of the following options.
 - Overall Trend
 - Specific Trends per Day

Both options will provide reasonable results. The Specific Trends per Day option is recommended, unless the CSQ experiences a wide fluctuation in the pattern of contacts from week to week.

8. Under Reference Period for Trend Calculation, enter the start and end dates. WFM calculates the average contact volume for each day of the week in your reference period to use as the forecasted contact volumes for each day of the week in your forecast period. WFM considers the following factors when generating a forecast.
 - If you use more than one week for your reference period, the dates with the highest and lowest contact volumes are automatically omitted from the average calculation.
 - If you have special events assigned to one or more dates in your reference period, the impact ratio is automatically applied to the volume on these dates before the average is calculated.
 - If there are firm dates associated to one or more forecast dates, the volumes from the associated dates are used instead of the same dates in the average calculation.

-
9. Under Daily Volume Based On, select one of the following options (see ["Choosing a Volume Calculation Method" on page 127](#)).
- Average of Equivalent Days: If you select this option, complete the following steps.
 - a. Enter the number of weeks prior to the selected day in the Weeks Prior to Equivalent Day field.
 - b. Enter the number of weeks after the selected day in the Weeks After Equivalent Day field.
 - Previous Year Equivalent Day: If you select Previous Year Equivalent Day, no additional information is needed.
10. To adjust average contact handling time, click Additional Parameters. The Additional Parameters panel expands.
- a. Select one of the following options for Average Call Handling Time (see ["Choosing a Contact Handling Time" on page 128](#)).
 - Distribution Call Handling Times: Choose this option if you think the average call handling time that was calculated as part of generating the distribution for the CSQ is more accurate.
 - Standard Handle Times: Choose this option if you think the average call handling time calculated as part of generating the distribution is not accurate. For example, agents might be handling calls more slowly because they have begun using a new system that they are not familiar with. Before you launch a forecast with this option, ensure that you first configure the standard call handling settings for the CSQ (Environment > CSQs).
 - b. In the Adjustment Factor field, enter the ratio by which you want the forecast adjusted. For example, enter 1.5 to adjust the forecast upwards by 50 percent or 0.50 to adjust it downwards by 50 percent. If you do not want any special adjustment, leave the adjustment factor at 1.0.
- NOTE:** WFM applies this adjustment independent of the trend calculation.
- NOTE:** Unless your contact center is growing by a known factor, it is recommended that you leave this field set to the default value of 1.0 and instead modify the adjustment factor on the Forecast Maintenance pane, where you can analyze the data in more detail (see ["Editing Forecasts" on page 148](#)).
11. In the Execute Request Date field, enter the date and time at which you want this request to run, in mm-dd-yyyy hh:mm format.

NOTE: Requests containing a large amount of data require significant time to run. It is recommended that you run requests during off-peak hours (for example, at night) because the process server only runs one request at a time, and running requests during peak hours will prevent other users from running their requests.


12. To adjust service level objectives, click Service Levels Calculation. The Service Levels Calculation panel expands and displays a table that has one row for every half-hour interval. By default, the table is filled with default values for Service % and Seconds (calls/chat) or Hours (email).
13. For each half-hour interval, complete the following steps.
 - a. In the Service % field, enter the percentage of calls or emails that must be answered within the specified time period to meet your service level objective. A dialog box appears, asking if you want the new value to be applied to the next period. If you click Cancel, only the value for the selected interval changes. If you click OK, the values for the selected interval and all subsequent intervals change.
 - b. In the Seconds or Hours column, enter the number of seconds or hours in which all contacts must be answered to meet your service level objective.
14. To change the methods used to redistribute emails, click Defer Handling of Email. The Defer Handling of Email panel expands.

NOTE: Defer Handling of Email only appears if you select an email CSQ.

15. Select one of the following options to redistribute emails forecasted to arrive during and outside of the CSQ business hours.

Option	Email Received During Business Hours	Email Received Outside of Business Hours
No Deferring	WFM evenly redistributes all email forecasted to arrive during a particular interval across that interval and the remaining intervals that the CSQ is open. This process is repeated for every half hour interval that the CSQ is open.	WFM evenly distributes all email forecasted to arrive outside of business hours to each of the intervals of the next day that the CSQ is open.

Option	Email Received During Business Hours	Email Received Outside of Business Hours
Linearly	All email received during business hours is divided by the number of intervals in a work shift to determine the number of emails handled during each half hour.	All email received after business hours is divided by the number of half hours in a work shift to determine the number of emails handled during each half hour.
Non-Linearly	WFM redistributes 50% of emails forecasted to arrive during a particular interval to that interval, 50% of the emails remaining from that interval to the next interval, and so on. WFM redistributes any emails left over to the last interval that the CSQ is open. This process is repeated for every half hour interval that the CSQ is open.	WFM redistributes 50% of the emails forecasted to arrive outside of business hours to the first interval of the next day that the CSQ is open, 50% of the remaining emails to the second interval, and so on, until the last interval that the CSQ is open that day. Any emails left over are distributed to that last interval.

16. Click  (Launch Request). A Windows Internet Explorer dialog box appears requesting confirmation.
17. Click OK to dismiss the dialog box. WFM launches the forecast request.

NOTE: You can monitor the status of your request on the Server Request List pane. See ["Server Requests" on page 278](#) for more information.

Generating a Forecast Without Trends

Use this procedure if you have fewer than 12 months' worth of historical data in WFM to generate a forecast without trends. WFM will generate the forecast using a default trend value of one.

NOTE: You must generate a distribution before you generate a forecast (see ["Creating a Distribution" on page 133](#)).

When forecasting without trends, WFM does the following for a given date to forecast:

1. If there is a firm date association for the date, WFM uses the historical call volume from the associated date as the forecasted volume.

2. WFM finds each date in the reference period that is the same day of the week as the date to forecast. This is the list of reference dates.
3. In the list of reference dates, WFM applies any special event factors to the call volume.
4. WFM removes outliers from the list of reference dates. Note that it is possible that special event factors could cause some dates to become outliers and thus be removed from the list.
5. WFM uses the average call volume of the list of reference dates as the forecasted volume.

To generate a forecast request without trends:

1. Choose Forecasting > Forecast Request. The Forecast Request pane appears.
2. Choose Calls or Email from the CSQ Type drop-down list. The Select CSQs list displays all of the CSQs of the type you choose.

NOTE: If the CSQ is designated to handle chat, you must select Calls.

3. Select the CSQs from the Select CSQs list.
4. *Optional:* To use scenarios, click Get Scenarios and then complete one or both of the following steps.
 - To apply a distribution scenario to a forecast, choose the scenario from the Select Distribution Scenario drop-down list.
 - To generate a forecast scenario, choose the scenario from the Select Forecast Scenario drop-down list.
5. Under Forecast Dates, enter the start and end dates for the forecast period. The dates can be for any time period, including the past.

Make sure that the dates you enter include the period you want to generate a schedule for.

NOTE: You can generate a forecast for a period as short as one day. However, if you want to use the forecast to generate a schedule, you must generate a forecast that is at least one week long, since the minimum length of a schedule is one week.

6. Under Year-To-Year Trend Calculation, select the Without Trends option.
7. Under Volume Projection Reference Period, complete one of the following steps.
 - If you choose Date Range, enter the start and end dates.
 - If you choose Date List, enter a date, and then click >. Repeat this step for each date you want to add to the list. If you want to remove a date from the list, click the date in the list, and then click <.

NOTE: The Date List option does not appear for email CSQs.

8. To adjust average call handling time, click Additional Parameters. The Additional Parameters panel expands.
 - a. Select one of the following options (see ["Choosing a Contact Handling Time" on page 128](#) for additional information).
 - Distribution Call Handling Times: Choose this option if you think the average call handling time that was calculated as part of generating the distribution for this CSQ is more accurate.
 - Standard Handle Times: Choose this option if you think the average call handling time calculated as part of generating the distribution is not accurate. For example, agents might be handling calls more slowly because they have begun using a new system that they are not familiar with. Before you launch a forecast with this option, ensure that you first configure the standard call handling settings for the CSQ (Environment > CSQs).
 - b. In the Adjustment Factor field, enter the ratio by which you want the forecast adjusted. For example, enter 1.5 to adjust the forecast upwards by 50 percent or 0.50 to adjust it downwards by 50 percent. If you do not want any special adjustment, leave the adjustment factor at 1.0.

NOTE: WFM applies this adjustment independent of the trend calculation.

NOTE: Unless your contact center is growing by a known factor, it is recommended that you leave this field set to the default value of 1.0 and instead modify the adjustment factor on the Forecast Maintenance pane, where you can analyze the data in more detail (see ["Editing Forecasts" on page 148](#)).

9. To adjust service level objectives, click Service Levels Calculation. The Service Levels Calculation panel expands and displays a table that has one row for every half-hour interval. By default, the table is filled with default values for Service % and Seconds (calls/chat) or Hours (email).
10. For each half-hour interval, complete the following steps.
 - In the Service % field, enter the percentage of calls that must be answered within the specified number of seconds to meet your service level objective. A dialog box appears, asking if you want the new value to be applied to the next period. If you click Cancel, only the value for the selected interval changes. If you click OK, the values for the selected interval and all subsequent intervals change.


- In the Seconds or Hours column, enter the number of seconds or hours in which all contacts must be answered to meet your service level objective.

11. To change the methods used to redistribute emails, click Defer Handling of Email. The Defer Handling of Email panel expands.

NOTE: Defer Handling of Email only appears if you select an email CSQ.

12. Select one of the following options to redistribute emails forecasted to arrive during and outside of the CSQ business hours.

Option	Email Received During Business Hours	Email Received Outside Business Hours
No Deferring	WFM evenly redistributes all email forecasted to arrive during a particular interval across that interval and the remaining intervals that the CSQ is open. This process is repeated for every half hour interval that the CSQ is open.	WFM evenly distributes all email forecasted to arrive outside of business hours to each of the intervals of the next day that the CSQ is open.
Linearly	All email received during business hours is divided by the number of intervals in a work shift to determine the number of emails handled during each half hour.	All email received after business hours is divided by the number of half hours in a work shift to determine the number of emails handled during each half hour.
Non-Linearly	WFM redistributes 50% of emails forecasted to arrive during a particular interval to that interval, 50% of the emails remaining from that interval to the next interval, and so on. WFM redistributes any emails left over to the last interval that the CSQ is open. This process is repeated for every half hour interval that the CSQ is open.	WFM redistributes 50% of the emails forecasted to arrive outside of business hours to the first interval of the next day that the CSQ is open, 50% of the remaining emails to the second interval, and so on, until the last interval that the CSQ is open that day. Any emails left over are distributed to that last interval.

13. Click  (Launch Request). A Windows Internet Explorer dialog box appears requesting confirmation.
14. Click OK to dismiss the dialog box. WFM launches the forecast request.

NOTE: You can monitor the status of your request on the Server Request List pane. See "[Server Requests](#)" on [page 278](#) for more information.

Editing Forecasts

Use the Edit Forecast page to complete the following tasks.

- [Editing a Forecast \(page 148\)](#)
- [Displaying a Forecast Graph \(page 152\)](#)

Editing a Forecast

To edit a forecast:

1. Choose Forecasting > Edit Forecast. The Forecast Maintenance pane appears ([Figure 33](#)).

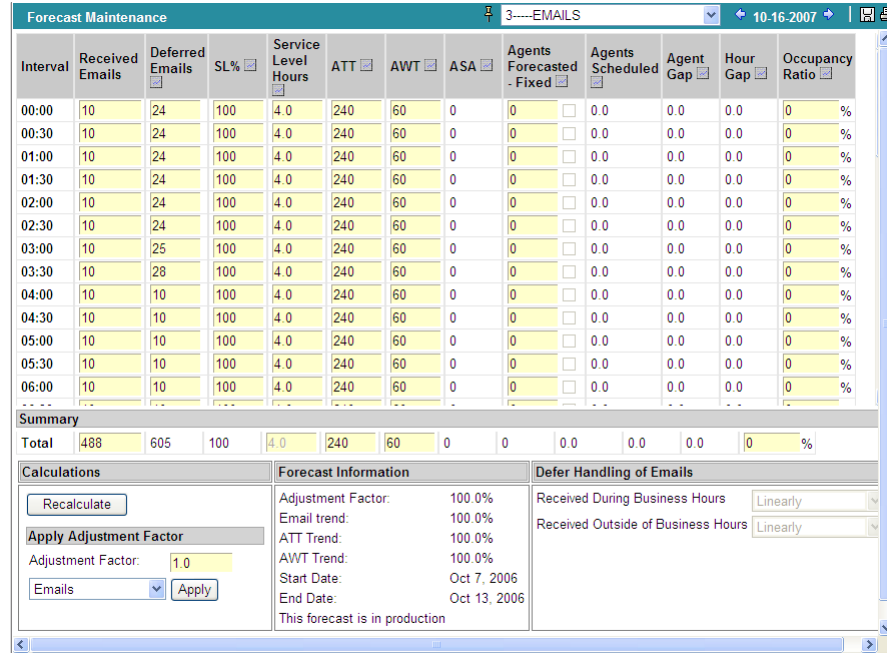
Figure 33. Forecast Maintenance: Initial view

The screenshot displays the 'Forecast Maintenance' window. At the top, there is a toolbar with a date selector set to '12/10/2008'. Below the toolbar is a row of input fields for various metrics: Interval, Calls, SL%, SL, ATT, AWT, ASA, Agents Forecasted - Fixed, Agents Scheduled, Agent Gap, Hour Gap, and Occupancy Ratio. A 'Summary' section shows a 'Total' row with values: 0, 0%, 0 sec, 0, 0, 0, 0, 0.0, 0.0, 0.0, 0%. The main area is divided into three panels: 'Calculations' with 'Initialize' and 'Recalculate' buttons, an 'Apply Adjustment Factor' section with an 'Adjustment Factor' field set to '1.0' and a 'Calls' dropdown, and 'Forecast Information' with fields for 'Quality Threshold' (0%), 'Adjustment Factor' (0.0%), 'Reference Start', and 'Reference End'. The 'Apply Scenarios' panel includes dropdowns for 'Select Distribution Scenario' and 'Select a Forecast Scenario', and an 'Apply in production' button. A status message at the bottom reads 'This forecast is not in production.'

2. Select a date.
3. Select a CSQ from the drop-down list in the toolbar.

Click Initialize. WFM displays the selected forecast (Figure 34).

Figure 34. Forecast Maintenance: After selecting date and CSQ



- Edit the forecast by changing the values in the table. The fields are defined below. Values are for each interval unless specified otherwise.

Field	CSQ Type	Description
Interval	Calls, Email	Schedule interval for the selected day in 30-minute increments.
Calls	Calls	Total number of calls forecasted to arrive.
Received Email	Email	Number of emails forecasted to arrive.
Deferred Email	Email	Number of deferred emails forecasted to need processing.
SL%	Calls, Email	Service Level %. Percentage of contacts handled within the time specified in the service level (SL) field.
SL	Calls	Service Level. Number of seconds in which calls must be answered.


Field	CSQ Type	Description
Service Level Hours	Email	Number of hours in which email must be processed.
ATT	Calls	Average Talk Time. Average time, in seconds, necessary for agents to handle calls. Talk time includes elapsed time from when an agent answers a call until the agent disconnects, including hold time.
AWT	Calls, Email	Average Wrapup Time. Average time required by an agent after a contact is ended to complete work directly associated with the contact.
ACW	Calls	After Call Work. The average time required by an agent after a contact is ended to complete work that is directly associated with the contact just completed.
ASA	Calls, Email	Average Speed of Answer. The average time elapsed in seconds between the time the call was received and answered. The ASA is calculated as the sum of the queue time for calls answered and divided by the number of calls answered. If your CSQ type is Email, the value in this column is zero (0).
Agents Forecasted - Fixed	Calls, Email	The number of agents available during this schedule.
Agents Scheduled	Calls, Email	The number of agents currently scheduled. After you generate a forecast, the value in this field is zero (0). The value changes after you create a schedule.
Agent Gap	Calls, Email	The gap between the number of agents scheduled and the number of agents forecasted.

Field	CSQ Type	Description
Hour Gap	Calls, Email	The gap, in hours, in the service requirements. A negative value indicates there are not enough agents to cover the service requirements. A positive value indicates there are more agents than required.
Occupancy Ratio	Calls, Email	The percentage of logged-in time that an agent spends in active contact handling states (for example, on incoming calls, in wrapup activity, on outbound calls).
Total	Calls, Email	<p>You can edit the following fields in the Total row:</p> <ul style="list-style-type: none"> • Calls (for a call CSQ) • Received Email and Deferred Email (for an email CSQ) • SL% • SL (seconds) • ATT • AWT • Agents Forecasted - Fixed • Occupancy Ratio <p>If you modify one of these fields, the corresponding fields are updated for each interval.</p>


5. Apply an adjustment factor to a column. Choose the column you want to adjust from the drop-down list and enter an adjustment factor in the Adjustment Factor field. For example, to increase the data in the column by 5 percent, enter 1.05. To decrease the data in the column by 12 percent, enter 0.88.
6. Click Apply to modify the column data by the specified adjustment factor. You can modify as many columns as you wish, one at a time.
7. You can modify values for either specific intervals or fields in the Total row. If you modify one of the Total fields and click Recalculate, the data in the intervals for that column will be recalculated.
8. *Optional:* To apply a distribution scenario to this forecast, select one from the Select Distribution Scenario drop-down list.

9. *Optional:* To apply a forecast scenario to this forecast, select one from the Select Forecast Scenario drop-down list.
10. When finished with data modifications, click Recalculate to change the data.

NOTE: Do not press Enter to recalculate values. Pressing Enter displays the calendar.

11. If you are editing a forecast scenario, click Apply in Production to put this forecast into production and make it the forecast used when generating a schedule.
12. Click  (Save) to save your changes.

Displaying a Forecast Graph

You can display the data in any column in a forecast in graph format if there are 100 or fewer rows in the table and a graph icon is displayed in the column heading. Click  (Graph) to open a popup window containing the desired graph.

Special Events

Use the Special Events function to create, edit, and delete special events.

A special event is a type of event that causes contact volume to deviate from normal. The special event can cause volume to either increase or decrease. When you assign a special event to a CSQ, WFM makes adjustments for the effect of the special event when generating distributions and forecasts.

Understanding the Impact of a Special Event

You need to determine the impact of a special event. Special events affect distribution requests and forecast requests.

When examining a historical special event, consider the following:

- Which CSQ does the special event affect? A special event is always related to a CSQ.
- What type of event is this special event? You can configure generic types of special events with default values. Once you create a generic special event, you can select it from a list of available special event types whenever you need it.
- When does the special event occur?
- How many days after the special event does the contact volume impact appear? The impact of a power outage is immediate. The impact of a bill format change happens after the postal service delivers the bills and the customers open the mail.
- How long does the contact volume impact last in days? The impact of a power outage might only last a day, if service is restored during that time. The impact of a bill format change is likely to endure for a number of days, because customers handle bills at different times.
- What was the impact ratio? This is determined by dividing the contact volume that occurred with the special event by the contact volume that would most likely occur in the absence of the special event.

Impact on Distribution Requests

If the reference period you specify in a distribution request includes a special event, the special event date is excluded from the reference period. This ensures that the abnormal call patterns (including call handle times) on the special event day do not affect the call distribution patterns.

For example, consider a power outage that causes call volume to be halved. A special event with an impact ratio of 0.5 is created. The date of this special event, if part of a reference period, will be excluded from that reference period.

Impact on Forecast Requests

If the reference period you specify in a forecast request includes a special event, the normalized call volume is calculated by dividing the actual call volume on the special event day by the impact factor.

That is,

$$\text{Normalized call volume} = \frac{\text{Actual call volume on special event date}}{\text{Impact factor}}$$

In the power outage example, let us say that the actual call volume on the day the power outage occurred was 5,000 calls. The power outage special event has an impact factor of 0.5. Using the above equation,

$$\text{Normalized call volume} = \frac{5000}{0.5} = 10000$$

The call volume in the reference period has been normalized to 10,000 calls to compensate for the effect of the special event, which makes the forecast more accurate.

Limitations of Special Events


Special events are used to negate the effects of a sudden and nonrepeating change in the call volume in the past to ensure that forecasts do not include these anomalies.

Special events cannot be used to predict changes in call volume due to future events, such as an upcoming marketing campaign. These types of events can be accommodated either automatically or manually during the forecasting process.

Creating, Editing, and Deleting a Special Event


BEST PRACTICES: It is recommended that you do not delete special events. If they are deleted, the historical data associated with them will be lost, which can affect forecast accuracy.

To create or edit a special event:


1. Choose Forecasting > Special Events. The Special Event List appears.
2. Click  (New) to create a new special event, or click the name of the special event you want to edit. The Special Event Details pane appears.
3. Enter new information or modify the fields as needed.

NOTE: This information can also be modified when the special event is assigned to a CSQ.

Field	Description
Event	Name of the event you want to create.
Impact Delay	Delay, in whole days, between the special event and the impact.
Impact Duration	The number of whole days you expect the impact on your contact center will last.
Impact Ratio	The impact the special event has on normal call volumes. The impact ratio is calculated by dividing the contact volume with the special event by the expected contact volume if the special event had not occurred.

4. Click  (Save) to save your changes.

To delete a special event:

1. Choose Forecasting > Special Events. The Special Event List appears.
2. Select the check box next to the special event you want to delete. You can also select the check box in the column heading to delete all special events listed.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Assigning a Special Event or Editing an Assigned Special Event

To assign a special event or edit an assigned special event:

1. Choose Forecasting > Assign Events. The Assigned Special Events pane appears.



Click  (New) to create a new event or click the date of the event you want to edit. The Assigned Event List appears (Figure 35).

Figure 35. Assigned Event List

2. Complete the fields, or modify as needed.


Field	Description
Event	Event name.
Select CSQ	CSQ to which the special event is to apply.
Date	Date that the event occurred. The effect of a special event can only be applied to a date in the past.
Impact Delay	<p>Delay, in whole days, between the special event and the impact.</p> <p>For example, the default impact delay for a radio promotion is 0, because as soon as the broadcast starts, the customers start calling the contact center. The impact delay for a mailed sales brochure starts the moment the sales brochures are mailed (launch date) and ends when the customers receive the sales brochures and start calling the contact center, perhaps 2 days.</p>
Impact Duration	The number of whole days you expect the impact on your contact center will last.
Impact Ratio	The impact the special event has on normal call volumes. The impact ratio is calculated by dividing the contact volume with the special event by the expected contact volume if the special event had not occurred.

Field	Description
Comments	Description of the nature of the special event, if necessary.

3. Click  (Save) to save your changes.

Deleting an Assigned Special Event

To delete an assigned special event:

1. Choose Forecasting > Assign Events. The Assigned Special Events pane appears.
2. Select the check box next to the special event assignment you want to delete. You can also select the check box in the column heading to delete all special event assignments listed.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Firm Date Associations

A firm date association is a link that you create between two dates that fall on different days of the week from year to year. Firm date associations are useful because when WFM generates a forecast, it uses historical data from the same day of the week rather than a specific date. For example, to generate a forecast for the first Friday of January 2010 (January 1, 2010), by default WFM uses data from the first Friday of January 2009 (January 2, 2009). However, the 2010 date is New Year's Day, and the 2009 date is the day after New Year's Day. The contact data for the two days is likely to be significantly different because of the holiday. To ensure that WFM uses a date with similar data for its forecast, you need to create firm date associations.

If you do not have adequate historical data in the WFM database to use firm date associations, you can alternatively generate a forecast and then edit the data for that specific date to reflect correct information. See ["Editing a Forecast" on page 148](#) for more information.

Creating, Copying, and Deleting Firm Date Associations

Once you have set up firm date associations for one CSQ, you can copy those associations to another CSQ.

You cannot edit an existing firm date association, but you can edit the description. To change dates for an association, you must first delete the existing association and then create a new one with the desired dates.


To create a firm date association:

1. Choose Forecasting > Firm Dates. The Firm Date Association pane appears ([Figure 36](#)).

Figure 36. Firm Date Association

Associate Dates		Associated Dates			
Target Date:	01-1-2009	<input type="checkbox"/>	Target Date	Reference Date	Description
Reference Date:	01-1-2008				

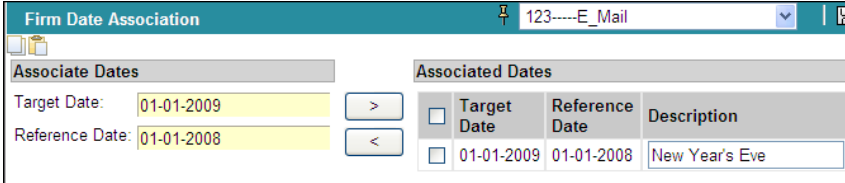
2. Select a CSQ from the drop-down list on the toolbar.
3. Enter a future date in the Target Date field (for example, the next New Year's Eve).
4. Enter a historical date in the Reference Date field (for example, the previous New Year's Eve).

5. Click > to move the target and reference dates to the Associated Dates table.
6. Enter a name for this firm date association in the Description field. This field is required.
7. Click  (Save) to save your changes.




To copy firm date associations:

1. From the Firm Date Association pane ([Figure 37](#)), select a CSQ from the drop-down list on the toolbar.


Figure 37. Firm Date Association



Associate Dates		Associated Dates			
Target Date:	01-01-2009	<input type="checkbox"/>	Target Date	Reference Date	Description
Reference Date:	01-01-2008	<input type="checkbox"/>	01-01-2009	01-01-2008	New Year's Eve

2. From the Associated Dates table, select one or more firm dates.
3. Click  to copy the selected firm date associations to the clipboard. WFM displays the following message:
Copy done. Ready to paste.
4. Select a different CSQ from the drop-down list on the toolbar.
5. Click  to paste the firm date associations. WFM copies the firm date associations to the selected CSQ and displays the following message:
Paste done successfully.
6. Click  (Save) to save your changes.

To delete a firm date association:

1. Select the check box next to each firm date association and click < to delete.
To delete all firm date associations, select the check box in the column heading and click < to delete.
2. Click  (Save) to save your changes.

Closed Days

Use the Closed Days function to designate dates on which a CSQ is closed. Designating a CSQ as closed on specific dates indicates that it does not handle calls or process emails on those dates. Conversely, dates on which a CSQ is open indicates dates on which calls are handled or emails processed. In the US, typical dates on which CSQ might be closed include Christmas and Thanksgiving.

By default, all CSQs are open every day of the year in WFM.

NOTE: You could use the Closed Days functions to designate a CSQ as closed every Saturday. In this situation, however, the best practice is to configure a CSQ as inactive on Saturdays by editing the CSQ parameters in the Environment module (see ["Editing a CSQ" on page 59](#)).

NOTE: Designating a closed day changes the forecast for that day to zero calls. However, it does not affect any schedule already generated for that day. If agents are scheduled for a closed day, they remain scheduled for that day. See ["Deleting a Work Shift" on page 92](#) for more information.

It is a good idea to update open and closed days at least once a year.

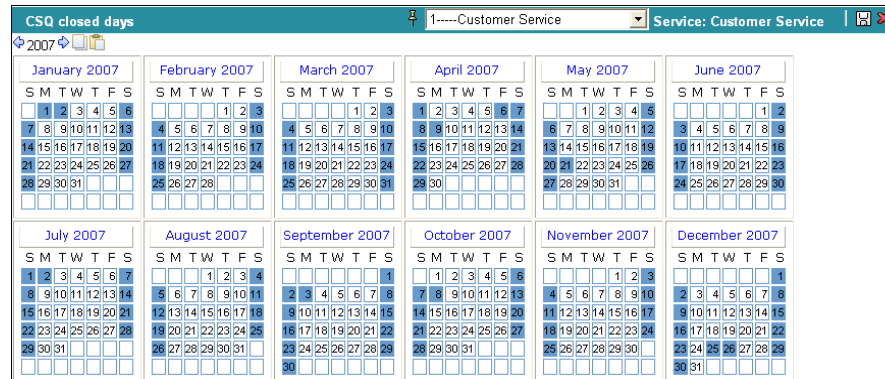
If the open and closed days are the same for several CSQs, you can specify the open and closed days for one CSQ and then copy them to the other CSQs. You must specify open and closed days for each CSQ in your contact center.


Designating Open and Closed Days for a CSQ

To designate open and closed days for a CSQ:

1. Choose Forecasting > Closed Days. The CSQ Closed Days pane appears (Figure 38).

Figure 38. CSQ Closed Days





2. Select a CSQ from the CSQ field on the toolbar.
3. Use the arrow keys to select a year.
4. Click the days to toggle between open and closed as desired. Open days have a white background and closed days have a blue background.
5. Click  (Save) to save your changes.

Copying Open and Closed Days to Another CSQ


Use this procedure to copy open and closed days from one CSQ to another.

NOTE: The Copy button is disabled if you do not save your changes to open and closed days.

To copy open and closed days to another CSQ:

1. From the CSQ Closed Days pane, select the CSQ whose open and closed days calendar you want to copy.
2. Click  (Copy) to copy the calendar to the clipboard. WFM displays the following message:
Copy done. Ready to paste.
3. Select the target CSQ and click  (Paste). WFM copies the open and closed days calendar to the selected CSQ and displays the following message:

Paste done successfully.

4. Click  (Save) to save your changes.

Introduction

This section covers the following topics:

- [Understanding Scheduling \(page 164\)](#)
- [Multi Skill Agent Queuing \(page 167\)](#)
- [Configuration Requirements for Scheduling \(page 186\)](#)
- [Creating Schedules \(page 187\)](#)
- [Viewing and Editing Schedules \(page 190\)](#)
- [Displaying Schedules \(page 194\)](#)

Understanding Scheduling

A schedule lists the times at which agents are either available or assigned to handle calls or process emails for a CSQ. For each agent, a schedule includes the start and end times for work shifts, breaks, lunches, exceptions, overtime, and projects (such as meetings or training).

If you are using the MSAQ feature to generate a schedule for agents who support multiple CSQs, the schedule will also include the times at which the agents are planned to switch between CSQs (see ["Multi Skill Agent Queuing" on page 167](#)).

Schedules are based on the agents' work shifts. When WFM generates a schedule, it takes into account the agents' work shifts and the forecast associated with the agents' CSQ. WFM looks at the requirements, the agents' availabilities, and preferences to create the most optimal schedules for the contact center and its agents.

WFM also uses absenteeism metrics when creating schedules. Absenteeism is based on actual hours absent rather than shrinkage, which is an arbitrary figure applied against a full 24-hour period and which increases the number of actual FTEs scheduled.

When creating a schedule for a CSQ, WFM sorts all agents for the specified CSQ by CSQ mapping and then sorts them by CSQ priority, if used. Then WFM sorts the agents based on scheduling order parameters. Agents assigned to fixed work shifts are scheduled before agents assigned to variable work shifts.

After sorting agents, WFM schedules the first agent based on the agent's work shift preferences and optimizes the agents' breaks, lunches, and projects based on the minimum and maximum delays entered. The work shifts, breaks, lunches, and projects are influenced by coverage requirements. After scheduling the first agent, WFM schedules the next agent, and so on.

Closed Days and Fixed Work Shifts

When WFM schedules an agent with a fixed work shift, it schedules the agent for days, hours, and arrival times exactly as specified in the work shift configuration. It does not take into account a closed day for a CSQ. As a result, an agent with a fixed work shift can be scheduled to work on a day when the contact center is closed (for example, a mid-week holiday).

To prevent this situation, complete the following steps:

1. Choose Environment > Exceptions and create an exception type to identify a closed day for which an agent with a fixed shift might be scheduled.

2. Choose Agents > Assign Exceptions and assign the exception to the agents with fixed work shifts that covers their available hours for that work shift on the closed day.

Maintaining a Schedule Intraday

The Schedule Maintenance pane (Schedules > Edit Schedule) shows the agents' schedules and the coverage of requirements in 15- or 30-minute intervals for a selected CSQ. A contact center user can use the Schedule Maintenance pane to quickly update an agent's schedule on an intraday basis for maximum efficiency (see ["Viewing and Editing Schedules" on page 190](#)).

You can also schedule activities (for example, a meeting) after you generate a schedule. You can use the Post-Production Activity Planning pane to determine when to schedule non-phone or email activities with minimal impact to the daily service level objective for the CSQ (see ["Post-Production Planning" on page 200](#)).

Scheduling Order

WFM allows contact centers to define the scheduling order for a specific CSQ by availability, seniority, or ability (Scheduling Order tab under Environment > CSQs). This allows the contact center to fully manage their customer contact operations while maximizing the available workforce for the most important activities.

Depending on your contact center's policies, you can set the seven different priorities to meet the desired scheduling order. The scheduling order indicates the order in which agents in the CSQ will be scheduled.

The first four parameters in the Criteria column are related to work shifts (see ["Work Shifts" on page 83](#)), and the last three parameters are related to the agents (see ["Agents" on page 75](#)). You can schedule agents based on availability for a work shift by ranking one of the following criteria as the highest priority:

- Maximum Hours Available
- Minimum Hours Available
- Maximum Hours per Week
- Minimum Hours per Week

For example, to schedule agents first by minimum hours per week, enter 1 in the Minimum Hours per Week field.

Or you can schedule agents based on seniority by ranking one of the following criteria as the highest priority.

- Company Start Date
- Department Start Date

- Rank

For example, to schedule agents first by seniority in a CSQ, enter 1 in the Company Start Date field (see "[CSQ Attributes](#)" on page 46).

CSQ

Assigning a priority number to a CSQ allows WFM to resolve scheduling conflicts when agents are assigned to multiple CSQs. 1 is the highest priority.

To generate a schedule for a CSQ, WFM finds the agents who are assigned to a CSQ mapping that is associated with the desired CSQ. WFM then determines which agents have a work shift with available hours on the specified day. If the agent supports multiple CSQs, WFM uses CSQ priority to determine which CSQ will be assigned to the agent for this schedule.

For example, you designate some of your agents to support two CSQs, and assign a priority to each CSQ in WFM. If WFM generates the schedules for the two CSQs, and discovers there are not enough agents to support all forecast requirements across both CSQs, it compares the priority value for the two CSQs. WFM then schedules agents for the CSQ with the highest priority first.

Multi Skill Agent Queuing

The multi skill agent queuing (MSAQ) feature allows contact centers to schedule agents so they can support several CSQs over the course of one work shift. When you configure the MSAQ feature, you indicate the relative priority of providing support for each CSQ. MSAQ offers an effective way to address the challenges of scheduling in contact centers with multiple products and services, multiple languages, and agents shared across different CSQs (cross-skilled agents).

MSAQ is not appropriate for all contact centers. The decision to use MSAQ depends on the kind of contact routing that the contact center uses.

Types of Contact Routing

Most contact centers use one of the following kinds of contact routing.

Basic Skill-based Routing

The contact center supports a limited number of products, services, and languages. Most of the agents are cross-trained, and 80 percent or more of the agents have the same skills. As a result, many of the agents can respond to many of the contacts.

	Skill		
	1	2	3
Agent 1	x	x	x
Agent 2	x	x	x
Agent 3	x	x	x
Agent 4	x	x	x
Agent 5	x	x	x
Agent 6	x	x	x
Agent 7	x	x	x
Agent 8	x	x	x
Agent 9	x		x
Agent 10		x	x

The advantages of basic skill-based routing include the following:

- Easy to configure
- Easy to maintain
- Results are easy to analyze

- Provides optimal coverage for that skill
- Scheduling sequence is determined by scheduling order parameters (HR rules)

The disadvantages of basic skill-based routing include the following:

- Coverage of requirements is available only for aggregated skills, and cannot be viewed for individual skills
- Schedules appear to show that every agent is responding to the same type of contact

Simple Skill-based Routing

The contact center supports more products, services, and languages. Some agents are cross-trained and can respond to almost any contact. Most of the agents can respond to some of the contacts.

	Skills			
	1	2	3	4
Agent 1	x	x		
Agent 2	x	x		
Agent 3	x	x		
Agent 4	x	x		
Agent 5	x	x		
Agent 6	x	x		x
Agent 7	x	x	x	x
Agent 8	x	x	x	
Agent 9				x
Agent 10	x		x	x

The advantages of simple skill-based routing include the following:

- Easy to configure
- Easy to maintain
- Results are easy to analyze
- Optimum coverage of requirements for CSQs with higher priorities
- Coverage of requirements displayed for either individual or aggregated CSQs
- Scheduling order is determined first by CSQ priority, then by scheduling order parameters

The disadvantages of simple skill-based routing include the following:

- Agent schedules display on their first priority CSQ; you might have to select several CSQs to display some agent schedules.
- If the contact center is short-staffed, the lowest priority CSQ will be short-staffed. Others will be staffed adequately, if there are enough resources with those skills.

Complex Skill-based Contact Routing

This type of contact center supports many products, services, and languages. Only a few of the agents are cross-trained. Some of the agents can respond to greater than half of the contacts. Some of the agents are specialists, and can only respond to fewer than half of the contacts.

	Skills				
	1	2	3	4	5
Agent 1	x	x			
Agent 2	x	x			
Agent 3	x	x	x		
Agent 4	x	x	x	x	x
Agent 5		x	x	x	x
Agent 6				x	x
Agent 7			x	x	x
Agent 8		x	x	x	x
Agent 9	x			x	x
Agent 10		x	x		x

The advantages of complex skill-based routing include the following:

- Coverage of requirements displayed for either individual or aggregated CSQs
- Scheduling order is determined first by CSQ priority, then by scheduling order parameters

The disadvantages of complex skill-based routing include the following:

- Harder to configure, maintain, and analyze
- Agent schedules display on their first priority CSQ; you might have to select several CSQs to display some agent schedules.
- If the contact center is short-staffed, the lowest priority CSQ will be short-staffed. Others will be staffed adequately.

- Agents might be scheduled on their highest priority CSQ, which might not be their main skill.

Very Complex Skill-based Contact Routing

WFM is not well-suited to support very complex skill-based routing.

This type of contact center supports a wide variety of products, services, and languages. None of the agents are cross-trained. Each agent can respond to fewer than half of the contacts. Only a few agents have any given skill.

	Skills							
	1	2	3	4	5	6	7	8
Agent 1	x							
Agent 2		x	x					
Agent 3	x		x		x			
Agent 4		x						x
Agent 5				x		x	x	
Agent 6			x			x		
Agent 7				x			x	
Agent 8								x
Agent 9					x			
Agent 10		x		x			x	

Example: Configuring MSAQ Parameters

This example shows how a contact center that uses simple skill-based routing could apply MSAQ.

The contact center has 10 agents and four CSQs. Most of the agents support two CSQs, and a few agents support three or four CSQs. The table below shows the agents and the CSQs they support.

Agent	Sales-Calgary	Sales-Vancouver	Sales-Victoria	Sales-Saskatoon
scalgary1	x	x		
scalgary2	x	x		
scalgary3	x	x		
scalgary4	x	x		
scalgary5	x	x		
svancouver1	x	x		x
svancouver2	x	x	x	x
svancouver3			x	
svancouver4	x	x		x
svancouver5	x	x	x	x

The contact center completes the following tasks to implement multi-skilled agent scheduling.

Task 1: Analyze Agents and CSQs

To analyze the agents and CSQs, consider these questions:

- How many CSQs are to be scheduled? In this example, there are four.
- Are there any patterns that allow CSQs to be merged? In this example, most agents support two CSQs (Sales-Calgary and Sales-Vancouver), so these two CSQs can be merged. Merging them facilitates scheduling and coverage analysis, since agents are scheduled for fewer CSQs.

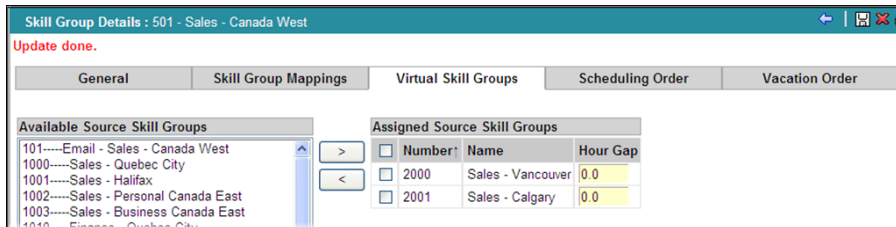
Task 2: Create virtual CSQs

To create the virtual CSQs, follow these steps:

1. Choose Environment > CSQs.
2. Click New.
3. On the General tab, enter a number and a description.

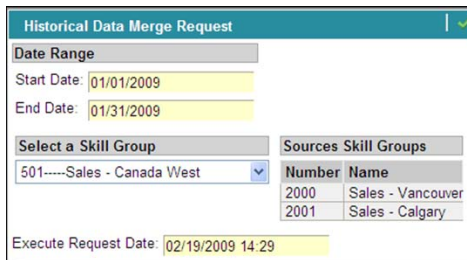
4. Click Save.
5. On the Virtual CSQs tab (Figure 39), assign the Sales–Calgary and Sales–Vancouver CSQs.

Figure 39.



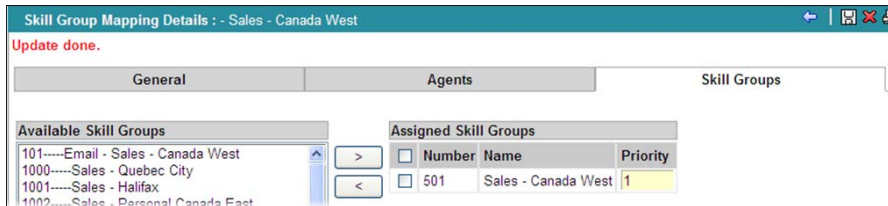
6. Click Save.
7. Choose Special Functions > Historical Merge (Figure 40).

Figure 40.



8. Enter the start and end dates, select the virtual CSQ, and click Launch Request.
9. Choose Environment > CSQ Mappings.
10. Click New.
11. On the General tab, enter a name.
12. Click Save. The Agents and CSQs tabs appear.
13. On the CSQs tab (Figure 41), assign the virtual CSQ.

Figure 41.



14. Click Save.

Task 3: Determine CSQ Priorities

Usually, the best coverage is obtained when the CSQ with the fewest agents has the highest priority. Start with this rule, but consider experimenting with priority settings to find the best coverage. See "[Example: MSAQ Scheduling Based on Priorities](#)" on [page 181](#) for examples of using priorities to improve coverage.

Applying this rule to our example contact center (see the table on [page 171](#)) results in the following priority settings:

- Priority 1: Sales–Victoria
- Priority 2: Sales–Saskatoon
- Priority 3: Sales–Calgary and Sales–Vancouver

Task 4: Configure CSQs

To configure CSQs, follow these steps.

1. Choose Environment > CSQs.
2. On the General tab ([Figure 42](#)) for each CSQ, including virtual CSQs, do the following:
 - a. Select the MSAQ check box.
 - b. Enter the CSQ Priority (established in Task 3).
 - c. Select a unique color.

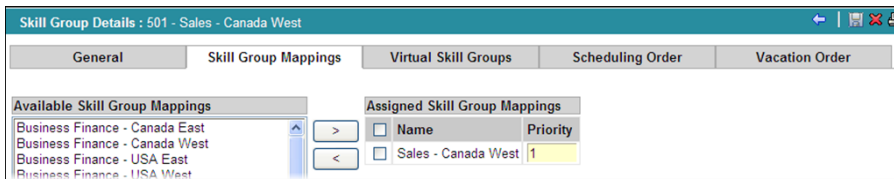
Figure 42.

Skill Group Type	Parameters	Time Zone
<input checked="" type="radio"/> Calls	Skill Group Priority: 3	Disabled
<input type="radio"/> Email	Standard Talk Time: 180 sec.	
	Standard Work Time: 40 sec.	

3. On the CSQ Mappings tab ([Figure 43](#)) for each CSQ, including virtual CSQs, do the following:
 - a. Assign one CSQ mapping to the CSQ.

- b. Assign a priority of 1 to that CSQ mapping.

Figure 43.



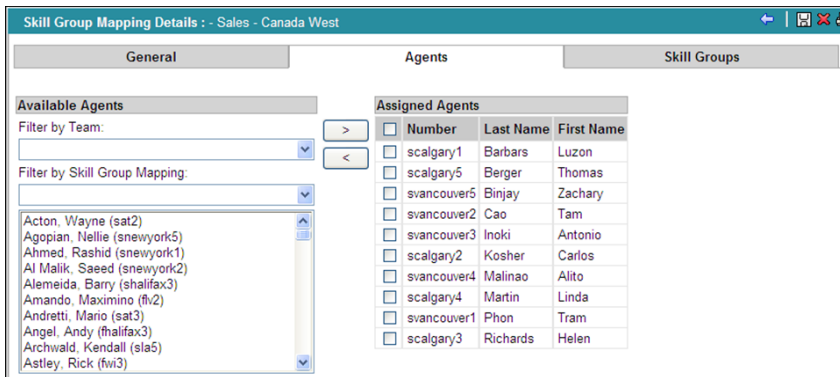
4. Click Save.

Task 5: Assign Agents to CSQ Mappings

To assign agents to CSQ mappings, follow these steps.

1. Choose Environment > CSQ Mappings.
2. On the Agents tab (Figure 44) for each CSQ mapping, assign agents to the CSQ mapping created in Task 1.

Figure 44.



3. Click Save.

Task 6: Produce an MSAQ Schedule

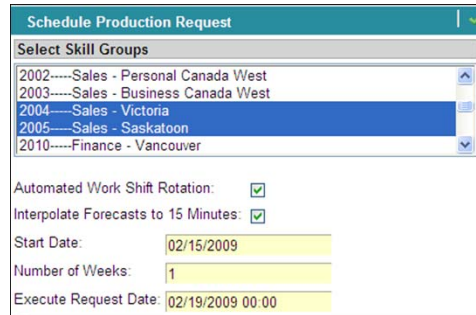
To produce an MSAQ schedule, follow these steps.

1. Choose Schedules > Schedule Request.
2. Select all of the CSQs, including the virtual CSQ, for which you want to produce an MSAQ schedule (Figure 45).

NOTE: Each CSQ, including the virtual CSQ, must have a distribution and forecast before you can generate a schedule.

3. Enter other parameters.

Figure 45.



The screenshot shows a 'Schedule Production Request' window. At the top, there is a title bar with the text 'Schedule Production Request' and a green checkmark icon. Below the title bar is a section titled 'Select Skill Groups' which contains a list of skill groups. The list items are: '2002-----Sales - Personal Canada West', '2003-----Sales - Business Canada West', '2004-----Sales - Victoria', '2005-----Sales - Saskatoon', and '20010-----Finance - Vancouver'. The '2004-----Sales - Victoria' item is highlighted in blue. Below the list, there are four checked checkboxes: 'Automated Work Shift Rotation', 'Interpolate Forecasts to 15 Minutes', 'Start Date' (with a value of '02/15/2009'), and 'Number of Weeks' (with a value of '1'). At the bottom, there is a field for 'Execute Request Date' with a value of '02/19/2009 00:00'.

4. Click Launch Request.

Task 7: Refine the Schedule

To refine the MSAQ schedule, you can modify the following parameters:

- CSQ scheduling order (priority)
- Agent work shift assignment, rank, and seniority

In order to modify the CSQ scheduling order, it helps to understand how WFM schedules agents. By default, WFM follows this order:

1. CSQs by priority, with the highest priority first
2. For each CSQ in order of priority:
 - a. Finds all agents who can support the CSQ
 - b. Schedules agents with fixed work shifts in order of their rank
 - c. Schedules agents with variable work shifts in order of their rank
3. If CSQ requirements are covered for the CSQ, WFM goes on to the next CSQ.

If you want to get better coverage of all CSQs, you might need to change the CSQ priorities, or change the scheduling order parameters so that agent rank is used first. In that case, you might also need to change the rank of individual agents.

If multi-skilled agents are being scheduled first because they can support the highest priority CSQ, and they should be scheduled later so they can fill in around single-skilled agents, you can change the scheduling order parameter to use the agent rank first, and then assign lower ranks to multi-skilled agents.

The last agents to be scheduled are more likely to be assigned to the lower priority CSQs because the higher priority CSQs are probably already covered by other agents.

To implement scheduling by rank, follow these steps:

1. Choose Environment > CSQs.
2. Select a CSQ and click the Scheduling Order tab.
3. Reassign priorities to the scheduling order criteria so that Rank is first.
4. Choose Agents > Agents.
5. For each agent being scheduled, select the agent and enter a number in the Rank field.

Displaying and Interpreting MSAQ Schedules

You can display an MSAQ schedule for a CSQ two ways:

- To display a color-coded schedule, choose Schedules > Edit Schedule.
- To display a hyperlinked schedule, choose Schedules > Schedule Viewer.

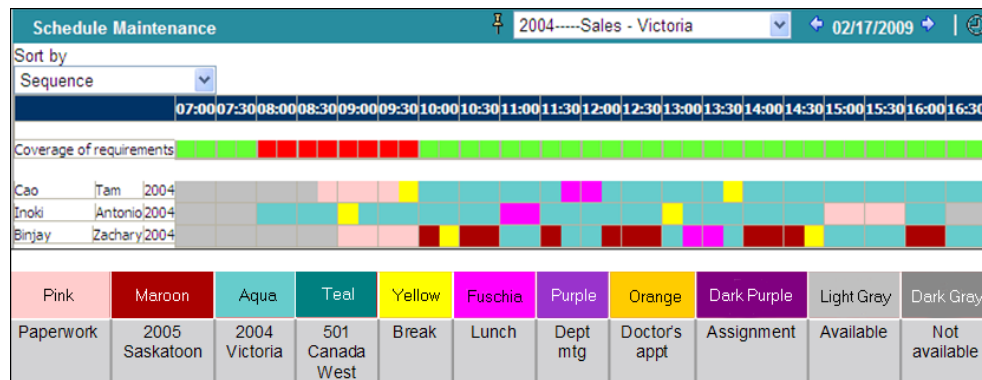
Agents are listed on the schedule of every CSQ that they *could* support. However, agents might not actually be scheduled to support a CSQ on the date being displayed.

Displaying Schedules for Agents by CSQ

Figure 46 illustrates the MSAQ schedule for the CSQ 2004 – Sales–Victoria.

NOTE: The color key below the schedule shown in Figure 46 does not appear when you view a schedule in WFM. It is provided here, and with other figures showing sample schedules, to help you interpret the schedule.

Figure 46.

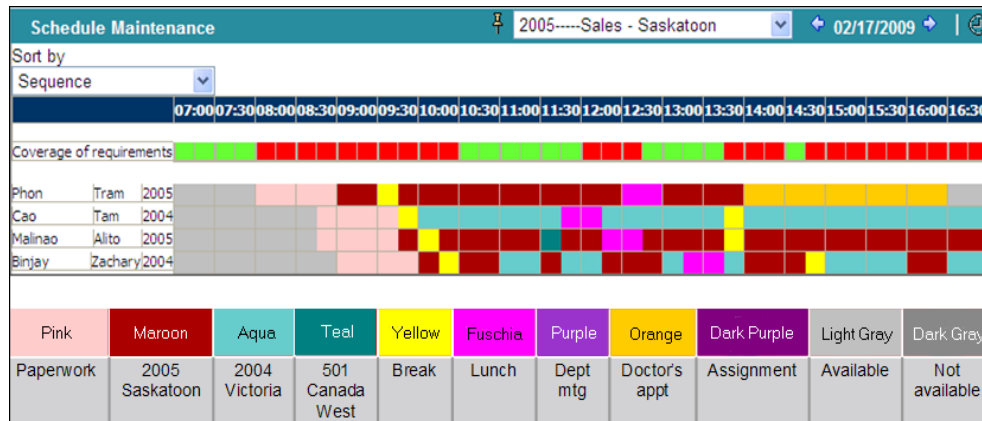


This CSQ has a priority of 1 and can be supported by three agents: Tam Cao, Antonio Inoki, and Zachary Binjay. In Figure 46, notice the following:

- All three agents are scheduled to complete an hour of paperwork.
- Tam Cao and Antonio Inoki are supporting only Sales–Victoria on the date displayed.
- Zachary Binjay is supporting Sales–Saskatoon and Sales–Victoria.

Figure 47 illustrates the MSAQ schedule for the CSQ 2005 – Sales–Saskatoon.

Figure 47.

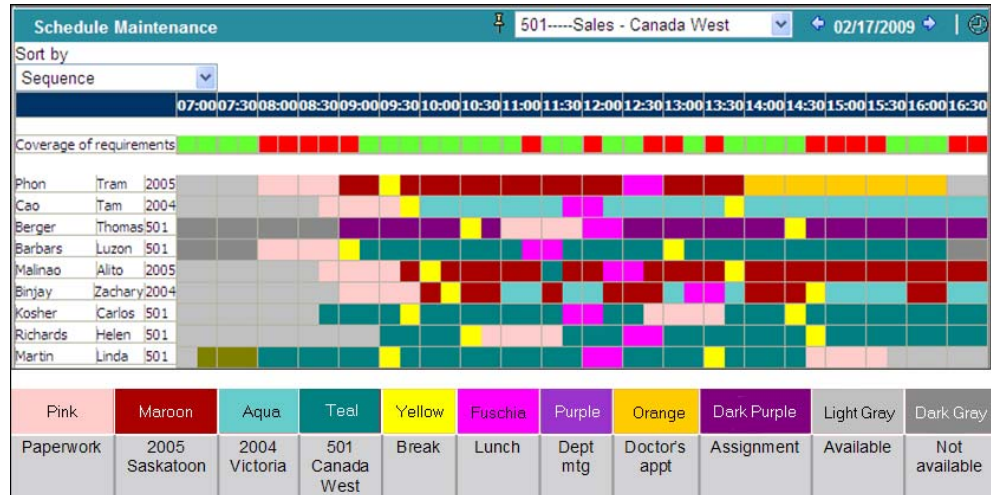


This CSQ has a priority of 2 and can be supported by four agents: Tram Phon, Tam Cao, Alito Malinao, and Zachary Binjay. In Figure 47, notice the following:

- All four agents are scheduled to complete an hour of paperwork.
- Although Tam Cao is supporting only Sales–Victoria on the date displayed, she appears on this schedule because she could potentially also support Sales–Saskatoon.
- Tram Phon has a doctor’s appointment in the afternoon and the rest of the day is supporting only the Sales–Saskatoon CSQ.
- Alito Malinao is supporting Sales–Canada West (the virtual CSQ) for a short time in addition to supporting Sales–Saskatoon.
- Zachary Binjay is supporting Sales–Victoria in addition to Sales–Saskatoon.

Figure 48 illustrates the MSAQ schedule for the Sales–Canada West virtual CSQ.

Figure 48.



Sales–Canada West has a priority of 3 and can be supported by nine agents. In Figure 48, notice the following:

- All of the agents are scheduled to complete an hour of paperwork.
- Four agents are supporting only Sales–Canada West on the date displayed.
- Alito Malinao is supporting Sales–Canada West for a short time in addition to supporting Sales–Saskatoon.
- Thomas Berger is on assignment all day.

Displaying Schedules for Agents by Team

You can view all agents on one schedule if you assign all agents to one team.

To display the schedule for a team, click the Define the Context icon, choose the TE (Team) tab, and select the team.

Displaying Coverage of Requirements for All CSQs

To display the coverage of requirements for one or all CSQs, complete these steps:

1. Choose Intraday > Coverage (Figure 49).
2. Select the MSAQ CSQs.

3. Enter a date.

Figure 49.

Coverage of requirements

Skill Group Type: Calls

Date: 02/17/2009

Select Skill Groups:

- 101-----Email - Sales - Canada West
- 501-----Sales - Canada West
- 1000-----Sales - Quebec City
- 1001-----Sales - Halifax
- 1002-----Sales - Personal Canada East
- 1003-----Sales - Business Canada East

Calculate Coverage

Anticipated Service Level: 64%

Service Level Objective: 80%

4. Click Calculate Coverage.

Figure 50.

Interval from 00:00 to 08:00					Interval from 08:00 to 16:00					Interval from 16:00 to 24:00				
Interval	Forecasted Agents	Scheduled Agents	Agents Gap	Service Level	Interval	Forecasted Agents	Scheduled Agents	Agents Gap	Service Level	Interval	Forecasted Agents	Scheduled Agents	Agents Gap	Service Level
00:00	0	0.0	0.0	%	08:00	6	2.0	-4.0	43	16:00	8	7.0	-1.0	83
00:15	0	0.0	0.0	%	08:15	6	2.0	-4.0	43	16:15	8	7.0	-1.0	83
00:30	0	0.0	0.0	%	08:30	6	2.0	-4.0	42	16:30	7	5.0	-2.0	59
00:45	0	0.0	0.0	%	08:45	7	3.0	-4.0	47	16:45	7	5.0	-2.0	76
01:00	0	0.0	0.0	%	09:00	8	3.0	-5.0	35	17:00	7	5.0	-2.0	70
01:15	0	0.0	0.0	%	09:15	8	5.0	-3.0	62	17:15	7	2.0	-5.0	21
01:30	0	0.0	0.0	%	09:30	7	4.0	-3.0	57	17:30	6	1.0	-5.0	12
01:45	0	0.0	0.0	%	09:45	8	6.0	-2.0	77	17:45	6	1.0	-5.0	12
02:00	0	0.0	0.0	%	10:00	9	8.0	-1.0	81	18:00	2	0.0	-2.0	0
02:15	0	0.0	0.0	%	10:15	9	8.0	-1.0	81	18:15	2	0.0	-2.0	0
02:30	0	0.0	0.0	%	10:30	8	8.0	0.0	86	18:30	2	0.0	-2.0	0
02:45	0	0.0	0.0	%	10:45	8	8.0	0.0	91	18:45	2	0.0	-2.0	0
03:00	0	0.0	0.0	%	11:00	7	7.0	0.0	85	19:00	2	0.0	-2.0	0
03:15	0	0.0	0.0	%	11:15	7	6.0	-1.0	67	19:15	2	0.0	-2.0	0
03:30	0	0.0	0.0	%	11:30	7	7.0	0.0	85	19:30	2	0.0	-2.0	0
03:45	0	0.0	0.0	%	11:45	7	7.0	0.0	85	19:45	2	0.0	-2.0	0
04:00	0	0.0	0.0	%	12:00	8	6.0	-2.0	65	20:00	2	0.0	-2.0	0
04:15	0	0.0	0.0	%	12:15	8	7.0	-1.0	84	20:15	2	0.0	-2.0	0
04:30	0	0.0	0.0	%	12:30	7	6.0	-1.0	68	20:30	2	0.0	-2.0	0
04:45	0	0.0	0.0	%	12:45	7	6.0	-1.0	69	20:45	2	0.0	-2.0	0
05:00	0	0.0	0.0	%	13:00	7	6.0	-1.0	67	21:00	2	0.0	-2.0	0
05:15	0	0.0	0.0	%	13:15	7	7.0	0.0	85	21:15	2	0.0	-2.0	0
05:30	0	0.0	0.0	%	13:30	7	6.0	-1.0	68	21:30	2	0.0	-2.0	0
05:45	0	0.0	0.0	%	13:45	8	7.0	-1.0	75	21:45	2	0.0	-2.0	0
06:00	0	0.0	0.0	%	14:00	9	8.0	-1.0	89	22:00	2	0.0	-2.0	0
06:15	0	0.0	0.0	%	14:15	9	8.0	-1.0	89	22:15	2	0.0	-2.0	0
06:30	0	0.0	0.0	%	14:30	7	7.0	0.0	83	22:30	0	0.0	0.0	%
06:45	0	0.0	0.0	%	14:45	7	5.0	-2.0	45	22:45	0	0.0	0.0	%
07:00	0	0.0	0.0	%	15:00	9	6.0	-3.0	60	23:00	0	0.0	0.0	%
07:15	0	0.0	0.0	%	15:15	9	6.0	-3.0	52	23:15	0	0.0	0.0	%
07:30	0	0.0	0.0	%	15:30	9	6.0	-3.0	55	23:30	0	0.0	0.0	%
07:45	0	0.0	0.0	%	15:45	8	6.0	-2.0	57	23:45	0	0.0	0.0	%

As Figure 50 shows, the selected CSQs fall short of the service level objective during the following intervals:

- 08:00–10:00
- 11:15–11:30
- 12:00–12:15
- 12:30–13:15
- 14:30–14:00
- 14:45–16:00
- 16:30–22:30

Example: MSAQ Scheduling Based on Priorities

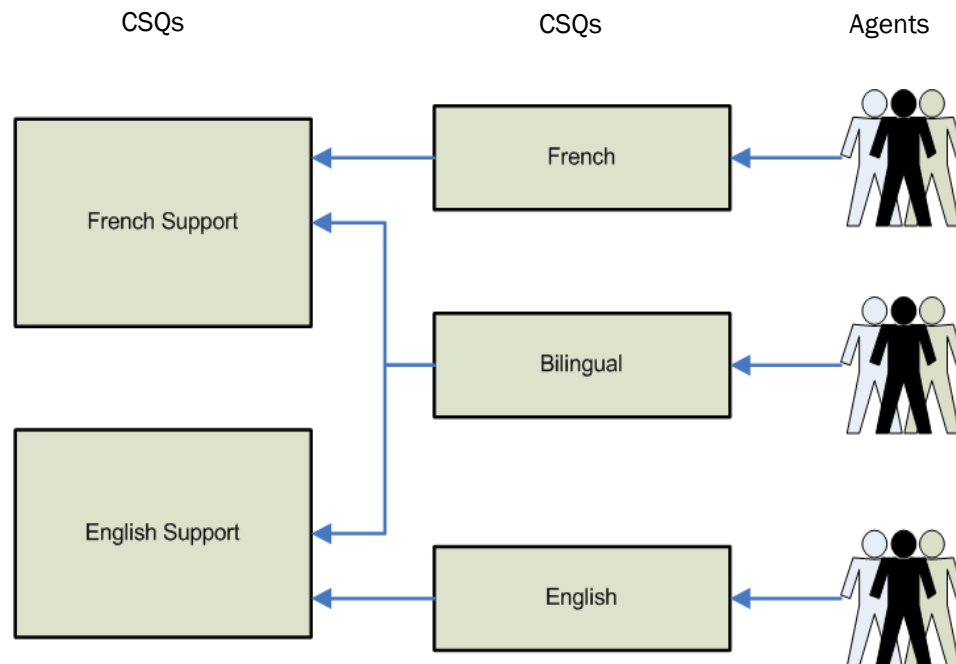
The following examples show how WFM uses MSAQ to assign agents from various CSQs to support English- and French-speaking customers based on priorities.

In this example, a contact center has to support English- and French-speaking customers. In this situation, the agents belong to three different CSQ mappings: French, Bilingual, and English. Agents assigned the French CSQ mapping are assigned to the French Support CSQ. Agents assigned to the English CSQ mapping are assigned to the English Support CSQ. Agents assigned to the Bilingual CSQ mapping are assigned to the English Support CSQ and the French Support CSQ.

NOTE: You do not have to create three different CSQ mappings to handle this kind of situation. You could assign the bilingual agents to the French and English CSQ mappings with the appropriate priority setting for the bilingual agents' CSQs.

Figure 51 illustrates the contact center configuration.

Figure 51. Multi Skill Agent Queuing situation



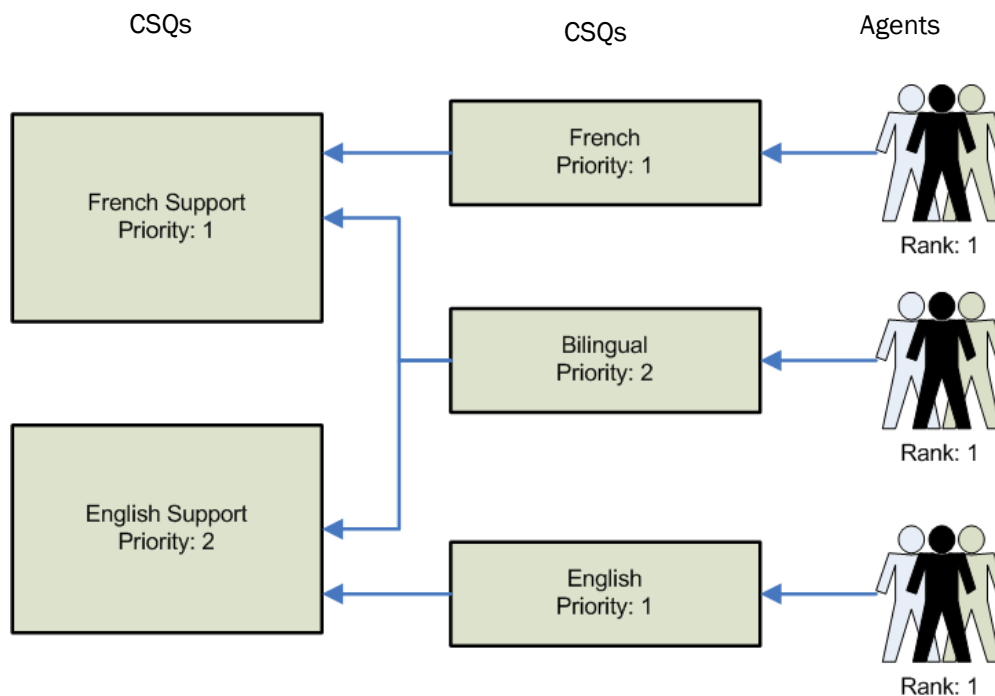
Both CSQs have the MSAQ check box selected and are forecasted to require four agents from 08:00 to 16:00. All agents are ranked equally and are available to work from 08:00 to 16:00.

Example 1

Priorities are assigned as follows (see [Figure 52](#)):

- French Support CSQ: priority 1
- English Support CSQ: priority 2
- French CSQ mappings: priority 1
- English CSQ mappings: priority 1
- Bilingual CSQ mapping: priority 2

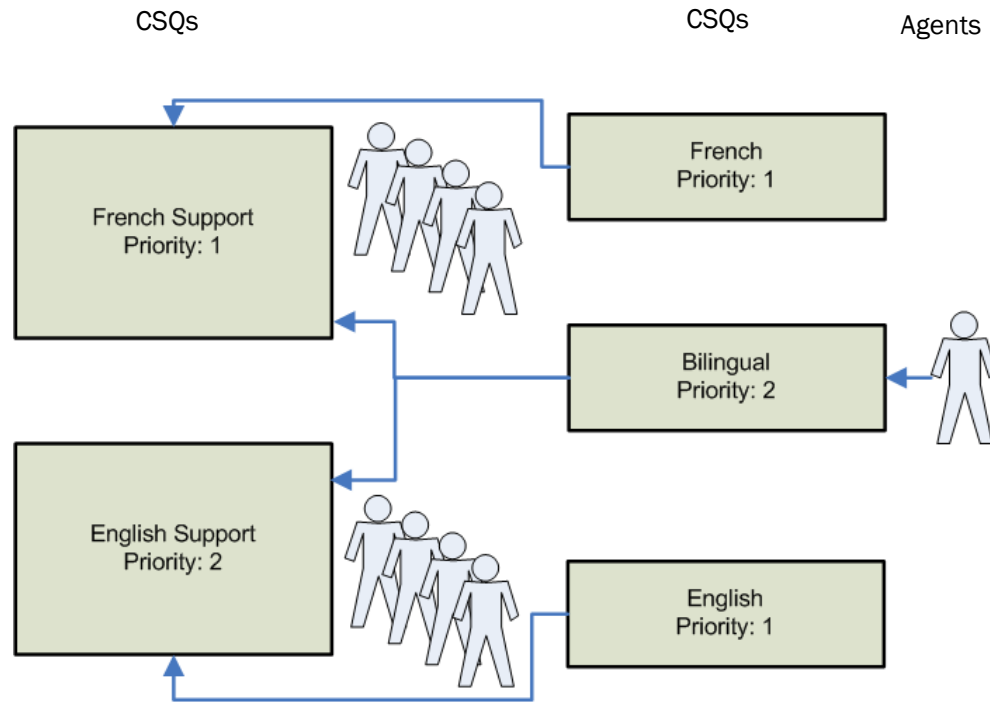
Figure 52. Multi Skill Agent Queuing example 1



When you produce a schedule, WFM first assigns four agents to the French Support CSQ, then assigns four agents to the English Support CSQ. In this situation, agents assigned to the Bilingual CSQ mapping are always assigned last because the priority assigned to the Bilingual CSQ mapping is lower than the priority for French or English.

As a result, your coverage is perfect for both CSQs, and you are overstaffed by one agent (Figure 53).

Figure 53. Multi Skill Agent Queuing bilingual scheduled

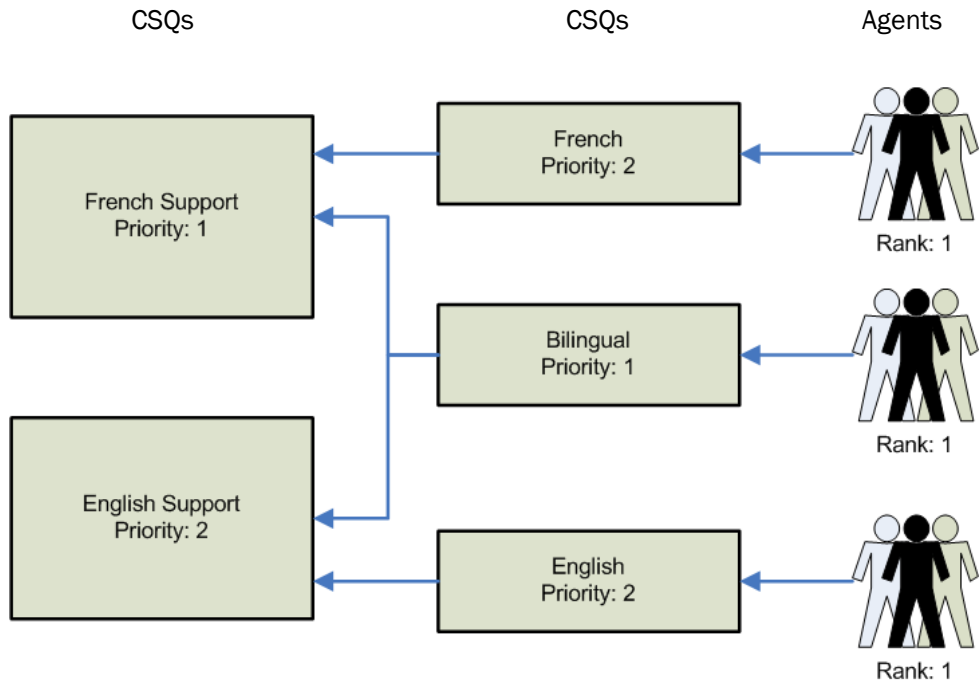


Example 2

Priorities are assigned as follows (see Figure 54):

- French Support CSQ: priority 1
- English Support CSQ: priority 2
- French CSQ mappings: priority 2
- English CSQ mappings: priority 2
- Bilingual CSQ mapping: priority 1

Figure 54. Multi Skill Agent Queuing example 2



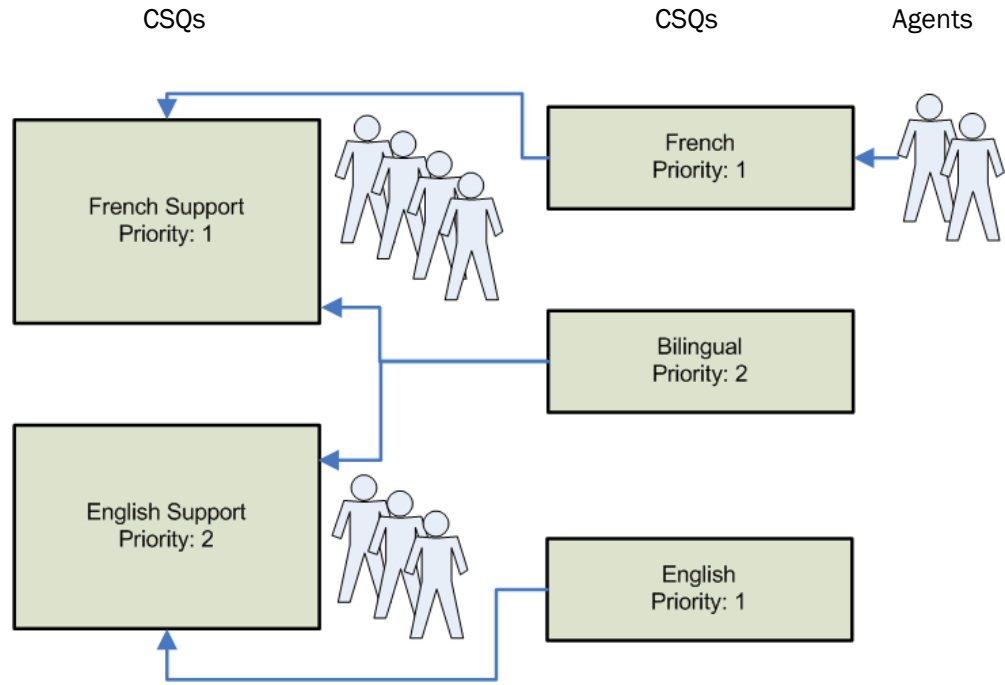
When you run the schedule, WFM assigns four agents to the French Support CSQ first and then assigns three agents to the English Support CSQ. In this situation, the contact center is short one English-speaking agent (Figure 55).

NOTE: MSAQ scheduling only works if the most skilled and valuable agents are scheduled at the lowest priority. If you do not assign the lowest priority to the most skilled and valuable agents, WFM:

- Might not have enough agents for coverage

- Minimizes call handling flexibility with fewer multi skilled agents

Figure 55. Multi Skill Agent Queuing when Bilingual is scheduled last



Configuration Requirements for Scheduling

This section describes the minimum configuration requirements for scheduling an agent in WFM to meet forecast requirements.

Before you launch a request for a schedule for a CSQ for a specific period, you must complete the following tasks.

1. Create and activate a view, and then assign the following elements to it.
 - One or more CSQs
 - The CSQ mappings associated with the CSQs
 - Users corresponding to the agents who will support the CSQs
 - Teams to which the above agents will belong
 - Work conditions
 - Work shifts
2. Activate agents to support the CSQs and then assign the following elements to the agents.
 - Teams
 - Work shifts
 - The CSQ mappings that are associated with the CSQs
 - Projects
 - Exceptions

NOTE: If the agents have planned vacations, holidays, or any other non-phone activities for a week that you want to include in a schedule, assign the exceptions to the agents before generating the schedule. Assigning exceptions to agents before you create a schedule saves time and creates more accurate schedules. Also, when possible, WFM fills any gaps in the schedule due to an absent agent with another available agent.

3. Generate a distribution for the CSQs.
4. Generate a forecast for the CSQs for the specific period for which you want a schedule.

NOTE: WFM only creates a schedule if a forecast exists for all of the days that the CSQs are open during the schedule period. If one or more open days do not have a forecast when you launch your schedule request, your request will fail.

5. If you are using the MSAQ feature to generate a schedule for several CSQs, configure them for this feature as described in ["Creating a CSQ" on page 49](#).

Creating Schedules

You can use the Schedule Request function to create a schedule for agents in a CSQ.

IMPORTANT: Before you can create a schedule, you must complete several prerequisites. See "[Configuration Requirements for Scheduling](#)" on page 186 for more information.

To create a schedule:

1. Choose Schedules > Schedule Request. The Schedule Production Request pane appears ([Figure 56](#)).

Figure 56. Schedule Production Request

The screenshot shows the 'Schedule Production Request' window. It includes a 'Select CSQs' list with the following items: 100----VSG, 999----K-Name, 5105----SK_Group1, 5106----SK_Group2, and 5107----SK_Group3. Below the list are several checkboxes: 'Automated Work Shift Rotation' (checked), 'Interpolate Forecasts to 15 Minutes' (checked), 'Apply Shrinkage' (checked), and 'Execute Request Date' (05/29/2012 09:38). The 'Start Date' is 06/03/2012 and 'Number of Weeks' is 1. There are expandable sections for 'Additional Parameters' and 'Shrinkage Percent Calculation'. The 'Shrinkage Percentage' table is shown below.

Week	Absenteeism	Time Off	Meeting	Training	Coaching	Total
Week 0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Week 1	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Week 2	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Week 3	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Week 4	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Week 5	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Week 6	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Week 7	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Week 8+	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %


2. Select the name of the CSQ from the Select CSQs list.

NOTE: If you are using the MSAQ feature, select all of the CSQs that you want to generate a schedule for.

3. Complete the fields.

Field	Description
Automated Work Shift Rotation	<p>Whether WFM automatically rotates the assigned work shifts for all agents from week to week. The first rotation starts on the day specified in the Start Date field.</p> <p>This check box is selected by default. For best results, this check box should remain selected.</p> <p>NOTE: If you clear this box, you must manually rotate the work shifts for each agent (see "Assigning a Work Shift Rotation to an Agent" on page 104).</p>
Interpolate Forecasts to 15 Minutes	<p>Whether WFM calculates the number of agents required based on previous schedules and following 15-minute intervals to create a requirements curve. This check box is selected by default.</p> <p>When this check box is selected, WFM assigns the agents where needed in a 30-minute interval. For example, WFM might assign 2 agents to the first 15-minute interval and 3 agents to the second 15-minute interval based on the contact center's requirements. The agents are assigned to the schedule when they are most needed. This is a curve calculation.</p> <p>If you clear the check box, WFM assigns the same number of agents to both 15-minute intervals. For example, 3 agents to the first 15-minute interval and 3 agents to the second 15-minute interval. This is a stairway calculation.</p>
Start Date	<p>Schedule start date. By default WFM displays the date for the next Monday or Sunday by default.</p>
Number of Weeks	<p>Number of weeks for this schedule. WFM displays one week by default. You can enter up to 12 weeks of schedule production.</p> <p>NOTE: Running a schedule consumes significant server resources. Specify the minimum number of weeks necessary to satisfy scheduling needs.</p>

Field	Description
Apply Shrinkage	<p>Whether shrinkage is taken into account by the schedule process. By default the check box is clear.</p> <p>When the check box is selected the shrinkage percentages shown in the table in the Shrinkage Percent Calculation area are applied to the schedule process.</p>
Execute Request Date	<p>Date and time on which you want WFM to run this schedule in mm-dd-yyyy hh:mm format. When you select a date from the calendar, WFM automatically inserts the current time.</p> <p>NOTE: Requests containing a large amount of data require significant time to run. It is recommended that you run requests during off-peak hours (for example, at night) because the process server only runs one request at a time, and running requests during peak hours will prevent other users from running their requests.</p>
Shrinkage Percentage table	<p>The table displayed here is a read-only copy of what is configured in Workforce Optimization in the WFM Default Configuration application. For more information about setting up shrinkage percentages, see the <i>WFM Application User Guide</i>.</p>

- Click  (Launch Request). WFM launches the schedule production request.

NOTE: You can monitor the status of your request on the Server Request List pane (see "[Server Requests](#)" on page 278).

Viewing and Editing Schedules



The Schedule Maintenance pane shows the schedule for a selected CSQ or team on a specified day. From this pane, you can complete any of the following tasks:

- View the schedule for a CSQ or team.
- Sort the schedule by agent last name, sequence, arrival time, and CSQ.
- View the coverage of requirements for each interval at the bottom of the pane.
- View and edit an individual agent's schedule.

NOTE: If you are displaying an MSAQ schedule, the Schedule Maintenance and Schedule Viewer panes both display all agents who are assigned to the selected CSQ or team, even if the agents are not scheduled to support the selected CSQ or team on the displayed date. For more information about the MSAQ feature, see ["Work Shifts" on page 83](#).

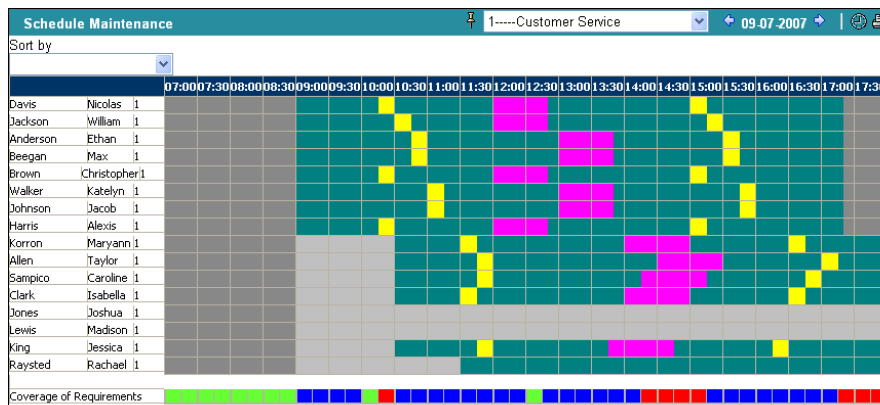
NOTE: WFM automatically deletes schedules that are older than one year.






To view a schedule:

1. Choose Schedules > Edit Schedule.
2. Click  (Define the Context). The calendar pane appears.
3. Select a date that is included in your schedule.
4. Select a CSQ or team.
5. Click  (Define the Context) again to remove the date and CSQ or team list from the pane.

WFM displays the schedule information for the CSQ or team ([Figure 57](#)).

Figure 57. Schedule Maintenance pane

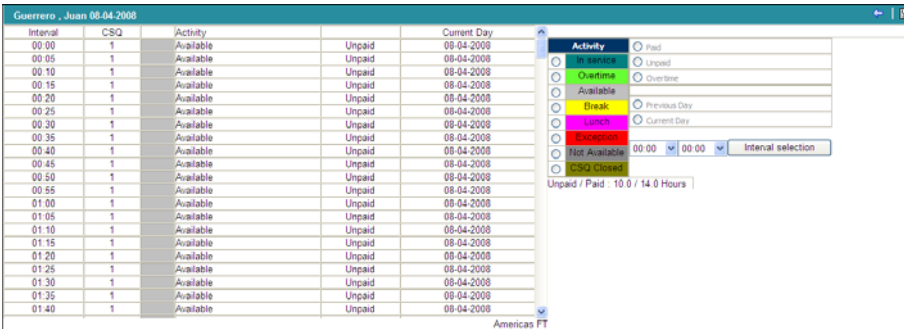


6. You can modify how the information in the Schedule Maintenance pane is displayed.
 - To hide the Navigation pane and expand the information displayed pane, click  (Hide) next to Navigation.
 - To change how agents are displayed, select an option from the Sort by drop-down list. Your sort options are Last Name, Sequence, Arrival Time, and CSQ.
 - If the schedule is produced for a virtual CSQ that contains source CSQs located in different time zones, click  in the toolbar to convert schedule times to time zones associated with the CSQ. Click  again to display the time zone associated with the virtual CSQ. By default, the agents' scheduled times are the same as the CSQ on which they are working.
 - To display the schedule for another day, click  (Previous) or  (Next) next to the date on the toolbar.
 - To view a tooltip that displays the type and length of the activity for an agent, move your cursor over the item.

To edit an agent's schedule:

1. In the Schedule Maintenance pane, display the schedule for a CSQ or team on a specified day.
2. Click an agent's first or last name. WFM displays the agent's schedule in detail for that day ([Figure 58](#)).

Figure 58. Agent Activities




Interval	CSQ	Activity	Unpaid	Current Day
00:00	1	Available	Unpaid	08-04-2008
00:05	1	Available	Unpaid	08-04-2008
00:10	1	Available	Unpaid	08-04-2008
00:15	1	Available	Unpaid	08-04-2008
00:20	1	Available	Unpaid	08-04-2008
00:25	1	Available	Unpaid	08-04-2008
00:30	1	Available	Unpaid	08-04-2008
00:35	1	Available	Unpaid	08-04-2008
00:40	1	Available	Unpaid	08-04-2008
00:45	1	Available	Unpaid	08-04-2008
00:50	1	Available	Unpaid	08-04-2008
00:55	1	Available	Unpaid	08-04-2008
01:00	1	Available	Unpaid	08-04-2008
01:05	1	Available	Unpaid	08-04-2008
01:10	1	Available	Unpaid	08-04-2008
01:15	1	Available	Unpaid	08-04-2008
01:20	1	Available	Unpaid	08-04-2008
01:25	1	Available	Unpaid	08-04-2008
01:30	1	Available	Unpaid	08-04-2008
01:35	1	Available	Unpaid	08-04-2008
01:40	1	Available	Unpaid	08-04-2008

3. Edit the agent's schedule as desired.
 - a. Select an interval using one of these methods.
 - To select multiple contiguous intervals, click the first interval and shift-click the last interval to select all intervals in between, or select a start interval and an end interval from the drop-down list in the Activity pane and click Interval Selection.
 - To select multiple noncontiguous intervals, Ctrl-click each interval.

- b. In the Activity list, choose the activity that you want to apply to the selected intervals. Some activities (In Service, Exception, Project, and Assignment) require that you select an appropriate option from a drop-down list that appears to the right of the Activity list after you select the activity.

NOTE: You can add only one exception each time you perform this procedure. If you want to add more than one exception, perform the procedure again, once for each additional exception.

- c. Select Paid, Unpaid, or Overtime pay status for the chosen activity.
 - d. Select whether the activity applies to the current day or the previous day (for night shifts only).
4. Click  (Save) to save your changes.

Colors Used in Schedules

The default activity colors displayed in schedules are defined in the following table. Colors can be customized if desired. The table also shows where you can make changes to the default color for the various activities.

Activity	Default Color	Where Changed
In Service	Teal green	CSQs Details (Environment > CSQs)
Overtime	Bright green	
Available	Light gray	
Break	Yellow	Work Condition Detail (Agents > Work Conditions)
Lunch	Pink	Work Condition Detail (Agents > Work Conditions)
Exception	Red	Exception Details (Environment > Exceptions)
Project	Blue	Project Details (Agents > Projects)
Not Available	Dark gray	
Assignment	Purple	

Coverage of Requirements Colors

The Schedule Maintenance pane displays a Coverage of Requirements bar (Figure 59) at the bottom of the pane. The Coverage of Requirements bar shows the coverage of requirements for each 15-minute interval for the selected CSQ. You can use this information to see exactly how the schedule affects the service level. It shows what your coverage is and updates automatically whenever the schedule is changed (see "Coverage of Requirements" on page 216).

Figure 59. Coverage of Requirements bar



The colors used on the Coverage of Requirements bar are defined in the following table.

Color	Description
Red	The number of agents scheduled is less than the number of agents required to cover the forecasted contacts.
Blue	The number of agents scheduled is greater than the number of agents required to cover the forecasted contacts.
Green	The number of agents scheduled and the number of agents required to cover the forecasted contacts are equal.

To view a tooltip that displays the coverage information, move your cursor over the interval in the Coverage of Requirements bar. The tooltip displays information in the format hh:mm = xx/yy, where hh:mm is the time in hours and minutes (for example, 09:15), xx is number of agents scheduled, and yy is the number of agents forecasted for each 15-minute interval.

Displaying Schedules

You can use the Schedule Viewer function to display schedules in summary and detail for agents from the same CSQ.

The Schedule Viewer pane displays the following information.

- A schedule summary for an entire week
- The start and end time for each agent for each day of the week
- The total time in service for the week

Using the Schedule Viewer

If you are displaying an MSAQ schedule, the Schedule Maintenance and Schedule Viewer panes both display all agents who are assigned to the selected CSQ or team, even if the agents are not scheduled to support the selected CSQ or team on the displayed date. For more information about the MSAQ feature, see ["Work Shifts" on page 83](#).

To view a schedule:



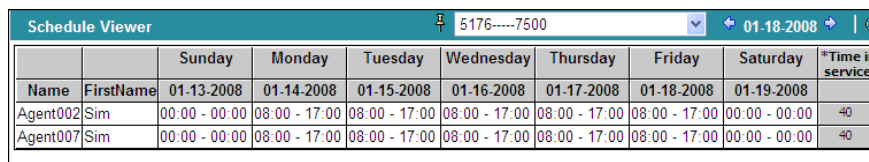
1. Choose Schedules > Schedule Viewer.
2. Click  (Define the Context). The Date Calendar appears.
3. Select a date. The date must be in your forecast production request.
4. Select a CSQ or team.
5. Click  (Define the Context) again to hide the date and CSQ list. The Schedule Viewer pane appears ([Figure 60](#)).

Figure 60. Schedule Viewer









		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	*Time in service
Name	FirstName	01-13-2008	01-14-2008	01-15-2008	01-16-2008	01-17-2008	01-18-2008	01-19-2008	
Agent002	Sim	00:00 - 00:00	08:00 - 17:00	08:00 - 17:00	08:00 - 17:00	08:00 - 17:00	08:00 - 17:00	00:00 - 00:00	40
Agent007	Sim	00:00 - 00:00	08:00 - 17:00	08:00 - 17:00	08:00 - 17:00	08:00 - 17:00	08:00 - 17:00	00:00 - 00:00	40

NOTE: The Schedule Viewer pane only displays start and end intervals for paid hours. It does not display unpaid hours, even if the agent is in service and the in service time is unpaid. If an agent is assigned to an unpaid activity all day, the Schedule View pane displays 00:00–00:00.

NOTE: The Time in Service column might not display the correct Time in Service value for overnight work shifts. For example, your work shift starts at 22:00 each day and ends at 06:45, and includes one 30-minute lunch

and one 15-minute break, for a total of 8 hours in service and 75 minutes or 1.25 hours not in service. If you work 7 days a week, the total time in service column should be 56 hours. However, WFM might add time not in service to the calculation, for a total of 64.25 hours.



NOTE: WFM displays schedule details in 15-minute increments, even though you can define the duration of activities in 5-minute intervals. As a result, if you schedule an activity that lasts 40 minutes, WFM will display the activity as two 15-minute intervals.

6. Use these mouse actions to modify the Schedule Viewer pane.
 - To hide the Navigation pane and expand the information display pane, click  (Hide) next to Navigation.
 - If the schedule is produced for a virtual CSQ that contains source CSQs located in different time zones, click  in the toolbar to convert schedule times to time zones associated with the CSQs. Click  again to display the time zone associated with the virtual CSQ. By default, the agents' scheduled times are the same as the CSQ on which they are working.
 - To display the schedule for another day, click  (Previous) next to the date in the toolbar to go to the previous day or click  (Next) to go to the next day.
 - To sort the table by the agent's last name or first name, click Name or FirstName in the column heading. Click again to reverse the sort order.
 - To sort the table by work shift time, click the date in the column heading. Click again to reverse the sort order.
 - To view the schedule for a specific day of the week, click the day in the column heading. The Schedule viewer displays the schedule for the selected day. To return to the weekly schedule, click  (Previous) in the

toolbar (Figure 61).

Figure 61. Schedule Viewer

Schedule Viewer		09-04-2007										
Name	FirstName	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
Davis	Nicolas											
Jackson	William											
Jones	Joshua											
Korron	Maryann											
Sampico	Caroline											
Allen	Taylor											
Lewis	Madison											
Anderson	Ethan											
Beegan	Max											
Walker	Katelyn											
Johnson	Jacob											
Brown	Christopher											
King	Jessica											
Harris	Alexis											
Clark	Isabella											
Raysted	Rachael											

- To view an agent’s details, click the agent’s first name or last name. To return to the weekly schedule, click  (Previous) in the toolbar.
- To view an agent’s detailed schedule (including paid and unpaid time), click the start–end time (for example, 09:00–17:20) in one of the day columns to display the agent’s activities in detail. The Schedule Details pane appears (Figure 62). To return to the weekly schedule, click .

(Previous) in the toolbar.

Figure 62. Schedule Viewer

Schedule Details											
09-05-2007											
day	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
Wednesday 5											
Detail							Date	Service			
00:00 - 09:00 = Not Available							2007-09-05	1			
09:00 - 10:15 = In service							2007-09-05	1			
10:15 - 10:30 = Break							2007-09-05	1			
10:30 - 12:00 = In service							2007-09-05	1			
12:00 - 12:50 = Lunch							2007-09-05	1			
12:50 - 15:00 = In service							2007-09-05	1			
15:00 - 15:15 = Break							2007-09-05	1			
15:15 - 17:20 = In service							2007-09-05	1			
17:20 - 23:59 = Not Available							2007-09-05	1			
In service:	7hrs										
Overtime:	0hrs										
Available:	0hrs										
Break:	0,5hrs										
Lunch:	0,83hrs										
Exception:	0hrs										
Assignment:	0hrs										
Project:	0hrs										
Not Available:	15,67hrs										
Paid/Unpaid:	7,5 / 16,5hrs										

Intraday Functions

8

Introduction

This section covers the following topics:

- [Post-Production Planning \(page 200\)](#).
- [Contact Statistics and Productivity Data \(page 205\)](#).
- [Displaying Statistics Data Views \(page 215\)](#).
- [Coverage of Requirements \(page 216\)](#).
- [Schedule Trades \(page 220\)](#).
- [Adherence \(page 224\)](#).
- [Your Inbox \(page 230\)](#).

Post-Production Planning

Post-production planning refers to the process of scheduling agents for non-service activities, such as meetings or training, after a schedule has been generated. You can use the Post-Production Activity Planning pane to find times when you can schedule agents for activities so that the service level is least affected.

Use the Post-Production function to complete the following tasks.

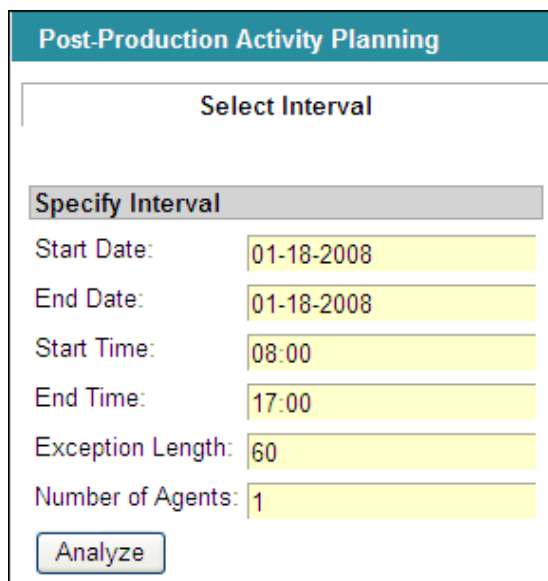
- Look for all of the possible intervals during which agents are available for a non-service activity.
- Determine the best time to schedule a non-service activity so that it has the least impact on the CSQ's service level objective.
- Schedule the non-service activity by assigning an exception to the agents involved.

Planning Non-Service Activities

To plan non-service activities:

1. Choose Intraday > Post-Production. The Select Interval tab of the Post-Production Activity Planning pane appears (Figure 63).

Figure 63. Post-Production Activity Planning: Select Interval tab



The screenshot shows a software interface titled "Post-Production Activity Planning" with a sub-tab "Select Interval". Below the title is a section labeled "Specify Interval" containing several input fields:

Start Date:	01-18-2008
End Date:	01-18-2008
Start Time:	08:00
End Time:	17:00
Exception Length:	60
Number of Agents:	1

At the bottom of the form is an "Analyze" button.

2. Select a CSQ from the drop-down list in the toolbar.

3. Complete the fields as described in the following table.

Field	Description
Start Date, End Date	The first and last day the planned activity can occur. NOTE: A schedule must already exist for this period.
Start Time, End Time	The earliest time the planned activity can start and the latest time the planned activity can end.
Exception Length	The duration of the exception in minutes. The duration of the exception can cover several consecutive intervals. For example, you can search for a 30-minute time slot with 4 agents available between Monday and Friday, from 08:00 to 14:00. When you specify a value in the Exception Length field, WFM interpolates the value in the Forecasted field for the exception duration specified in this field. The value in the Forecasted field on the Post-Production Activity Planning pane only matches the value in the Forecasted field in the Coverage of Requirements pane (Intraday > Coverage) when the value in the Exception Length field matches the interval for the schedule.
Number of Agents	The number of agents to whom you want to assign the activity. NOTE: If you enter zero (0) in this field, WFM displays the maximum number of agents available for this planned activity without affecting the coverage requirements.

4. Click Analyze to display the best period to apply the activity. The Analysis Results table appears ([Figure 64](#)). The table is described below.

- To sort the table by a column, click the column heading.









- To display a graph of the data, click  (Graph) next to a column heading. The graph icon appears only when the table has 100 or fewer rows.

Figure 64. Post-Production Planning: Analysis Results table

Analysis Results							
Date	Start	End	Forecasted 	Scheduled 	Gap 	Ratio 	Service Level 
11-25-2008	11:00	12:00	9	10.0	1.0	100.0	97 %
11-24-2008	11:15	12:15	9	9.5	0.5	100.0	96 %
11-24-2008	12:15	13:15	8	9.0	1.0	100.0	96 %
11-27-2008	12:15	13:15	9	10.0	1.0	100.0	96 %
11-28-2008	12:00	13:00	9	9.5	0.5	100.0	96 %
11-24-2008	11:00	12:00	9	10.0	1.0	100.0	95 %
11-24-2008	11:30	12:30	9	9.5	0.5	100.0	95 %
11-27-2008	12:00	13:00	9	10.0	1.0	100.0	95 %
11-28-2008	12:15	13:15	9	9.5	0.5	100.0	95 %
11-24-2008	12:00	13:00	8	9.0	1.0	100.0	94 %
11-24-2008	13:15	14:15	9	9.0	0.0	100.0	94 %
11-25-2008	10:30	11:30	9	10.0	1.0	100.0	94 %
11-25-2008	10:45	11:45	9	10.0	1.0	100.0	94 %
11-25-2008	12:45	13:45	9	9.0	0.0	100.0	94 %
11-27-2008	12:30	13:30	9	10.0	1.0	100.0	94 %
11-28-2008	12:30	13:30	9	9.5	0.5	100.0	94 %
11-28-2008	12:45	13:45	9	9.5	0.5	100.0	94 %
11-28-2008	13:00	14:00	9	9.5	0.5	100.0	94 %
11-28-2008	13:15	14:15	10	9.5	-0.5	100.0	94 %
11-25-2008	10:00	11:00	10	10.0	0.0	100.0	93 %

First  1 2 3 4 5  Last Show All
Go to / 13 Page(s) Total: 259

Data	Description
Date	Date at the beginning of the schedule interval.
Start	Time at the beginning of the schedule interval.
End	Time at the end of the schedule interval.
Forecast	Number of agents required for the schedule interval.
Scheduled	Number of agents scheduled for this schedule interval.
Gap	The difference between the number of agents scheduled and the number of agents forecasted.

Data	Description
Ratio	<p>Percentage of the coverage during the interval. The value is expressed in decimal format.</p> <p>For example, if you plan a one-hour meeting that contains four 15-minute intervals and you are overstaffed for three intervals and short-staffed for one interval, you are covered for 75 percent (0.75) of the meeting.</p>
Service Level	<p>Percentage of contacts forecasted to be answered for each interval within the service level objective based on the scheduled staffing level.</p>

Interpreting the Analysis Results Table

This topic explains how to interpret the results displayed in the Analysis Results table on the Post-Production Activity Planning pane.

After you click Analyze, the Analysis Results table is populated. To determine the least disruptive time for a planned activity, look at the Gap column. The Gap column displays the difference, in number of agents, between the forecasted requirements and scheduled agents. You can use the gap to determine the number of agents who are available for the planned activity without affecting the coverage requirements.

A positive gap means that the number of agents scheduled exceeds the forecasted requirements. If the Analysis Results table includes intervals with positive gaps, you can use these intervals for exceptions, assignments, or projects. For example, if the interval from 10:30 to 11:00 has a gap of 4.0, you can schedule a 30-minute meeting with 4 agents during that time.

A negative gap means that the number of agents scheduled is less than the forecasted requirements. If the Analysis Results table includes intervals with negative gaps, you should find agents to fill those gaps.

Assigning a Post-Production Exception

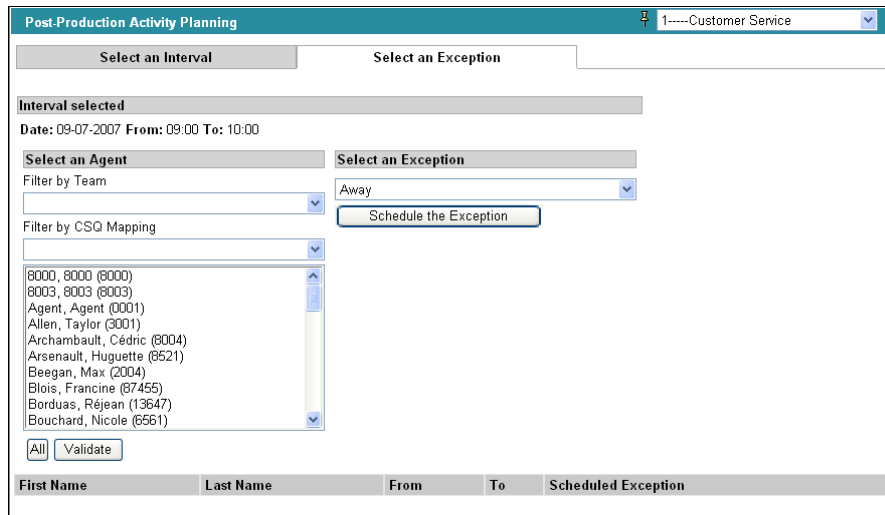
This topic explains how to use the Post-Production Activity Planning pane to assign an exception after a schedule has been produced. For information about assigning exceptions before a schedule has been produced, see ["Assigning a Pre-Production Exception" on page 110](#).

To assign a post-production exception:

1. From the Post-Production Activity Planning pane, click a start time in the Analysis Results table ([Figure 64](#)). A new tab called Select an Exception appears.

Click the Select an Exception tab (Figure 65).

Figure 65. Post-Production Activity Planning: Select an Exception tab



2. *Optional:* Filter the list of agents by choosing a team or CSQ mapping. To display all agents, click All (below the agent list).
3. Select one or more agents to whom you want to assign the exception. To select multiple agents, use the Ctrl key.
4. Click Validate to ensure the selected agents are scheduled for the selected CSQ mapping for that day and interval. A list of available agents appears.

NOTE: If you select agents who are not scheduled for that day, time, or CSQ, they will not appear in the table at the bottom of the pane.

5. Select the exception that you want to assign to the agents from the Select an Exception drop-down list.
6. Click Schedule the Exception to assign the exception to the selected agents. WFM adds the exception to the schedule.

Contact Statistics and Productivity Data

Every 30 minutes, the Capture service collects contact data for the day so far from the ACD. This contact data is displayed on your dashboard in graphical and tabular form.

You can use the Dashboard function to display and interpret contact statistics and productivity data for a CSQ.



Real-Time Comparisons

WFM captures forecasted information and displays the forecasted, projected, and actual service level scores in a dashboard. You can compare the actual service level scores to the forecasted and projected service level scores to see exactly what is happening in the contact center. The graphical illustration of these elements show how closely the contact center achieved its desired service level.

Displaying Contact Statistics and Productivity Data

NOTE: You can customize the data that appears in your dashboard pane (see ["Customizing Dashboards" on page 33](#)).

To display contact statistics and productivity data:

1. Choose Intraday > Dashboard. The Supervisor Dashboard pane appears. By default, the Supervisor Dashboard pane displays data for the current date.
2. Select a CSQ from the toolbar. The Supervisor Dashboard pane displays the selected information.
3. Complete any of the following steps if needed.
 - To sort the table by a column, click the column heading.
 - To refresh the data, choose Intraday > Dashboard.
 - To display data for another CSQ, select the CSQ from the drop-down list on the toolbar.
 - To display data for another date, click  (Define the Context) in the toolbar, then click a date in the calendar in the context pane.
 - To display a graph associated with a column heading, click  (Graph) next to the column heading. A new browser window appears and displays the selected data in graph form.

NOTE: The graph icon only appears if the table has 100 or less rows.

Interpreting Numerical Data in the Left Pane

Table 6 describes the numerical data that is displayed in the left pane of the Supervisor Dashboard. All data is for the selected CSQ for the selected day, unless stated otherwise.

Table 6. Numerical display options

Data	Description
Total Calls Forecasted	Total calls forecasted for the day.
Total Calls Projected	Total calls projected for the day based on the current trend. Calculated using the following formula: $F_d \times (O_p \div F_p)$ where: <ul style="list-style-type: none"> • F_d = Forecast calls for the day • O_p = Offered calls for all intervals completed so far • F_p = Forecast calls for all intervals completed so far
Current Calls Forecasted	Calls forecasted for the day so far (for all of the intervals from midnight to the last complete interval).
Current Calls Answered	Percentage of calls that agents answered for the day so far. Calculated using the following formula: $(H \div A) \times 100$ where: <ul style="list-style-type: none"> • H = Handled calls so far (calls answered by agents) • A = Actual calls so far (includes abandoned calls)
Current Calls Actual	Calls answered by agents for all intervals so far (for all of the intervals from midnight to the last complete interval).
Service Level Forecasted	Percentage of calls forecasted to be answered for each interval within the service threshold time.
Service Level Actual	Percentage of actual calls answered for each interval within the service threshold time.

Table 6. Numerical display options (cont'd)

Data	Description
Occupancy Ratio Forecasted	<p>Forecasted percentage of time that agents spend in active call handling states versus total time in service. Active call handling states include talking on incoming calls, engaged in wrap-up activity, and making outbound calls. Calculated using the following formula:</p> $(T_f + W_f) \div L_f$ <p>where:</p> <ul style="list-style-type: none"> • T_f = Talk time forecasted • W_f = Work time forecasted • L_f = Login time forecasted
Occupancy Ratio Actual	<p>Actual percentage of logged in time that agents spend in active call handling states versus their total time in service. Active call handling states include talking on incoming calls, engaged in wrap-up activity, and making outbound calls. Calculated using the following formula:</p> $(L_a + R_a) \div L_a$ <p>where:</p> <ul style="list-style-type: none"> • L_a = Login time actual • R_a = Ready time actual
ASA Forecasted	<p>Average Speed of Answer Forecasted. Forecasted average time elapsed in seconds, between the time the call was dropped out of the IVR (after menu selections) and the time an agent answers.</p>
ASA Actual	<p>Average Speed of Answer Real. Calculated using the following formula:</p> $Q \div A$ <p>where:</p> <ul style="list-style-type: none"> • Q = Queue time for calls answered by agents • A = Calls answered by agents

Interpreting Graphical Data in the Middle Pane

Table 7 describes the data that you can display graphically in the middle pane of the Supervisor Dashboard. For instructions about how to choose data to display, see ["Customizing Dashboards" on page 33](#). Each graph displays data by specified intervals from the following perspectives:

- Forecasted: The forecasted value for the CSQ
- Projected: The projected value for the CSQ based on the current trend
- Actual: The actual results

Table 7. Graphical display options

Data	Description
Calls	The forecasted, projected, or actual number of calls for each schedule interval.
Agents	The forecasted, projected, or actual number of agents for each schedule interval. NOTE: Agents are counted as actual agents only when they are scheduled and are not in the Not Ready state.
Service Level	The forecasted, projected, or actual percentage of contacts answered for each interval within the service threshold time.
Occupancy Ratio	The forecasted, projected, or actual percentage of logged in time that agents spend in active contact handling states versus their total time in session. Active call handling states include talking on incoming calls, engaged in wrap-up activity, and making outbound calls. Calculated using the following formula: $(L - R) \div L$ where: <ul style="list-style-type: none"> • L = Logged in time • R = Ready time
Average Speed of Answer	The forecasted, projected, or actual average speed of answer. The same as the average queue time.
Average Talk Time	The forecasted, projected, or actual time, in seconds, necessary for agents to process calls. Talk time is elapsed time from when an agent answers a call until the agent disconnects. This includes the time when the agent is actively talking to the caller and the time when the agent places the caller on hold.

Interpreting Statistical Data in the Right Pane

[Table 8](#) describes the statistical data you can display in the right pane of the Supervisor Dashboard. For instructions about how to customize the statistics view, see ["Customizing Dashboards" on page 33](#). All fields apply to the CSQ for the specified interval. The third column provides the name of the statistics view that contains the listed data.

Table 8. Statistical display options

Data	Description	Where Used
Interval	Start time for a specific interval.	All options
Coeff	Coefficient applied to Calls, in decimal format.	View: All Data
Target %	Service level percentage of calls to be answered within the time specified in Target Sec.	Results x CSQ: Agents Results x CSQ: Calls View: Agents View: All Data
Target Sec	Service level time in seconds within which Target % of calls should be answered.	View: Agents View: All Data
Calls Forec	Forecasted calls.	Results x CSQ: Calls View: All Data View: Calls
Calls Real	Total actual calls. Calculated using the following formula: $A + B$ where: <ul style="list-style-type: none"> • A = Answered calls • B = Abandoned calls 	View: All Data View: Calls
Calls Projected	Total calls expected. This is a trend calculation based on the current trend of real and forecasted calls.	Results x CSQ: Agents View: Agents View: All Data
Agents Forecasted	Forecasted agents required.	Results x CSQ: Agents View: Agents View: All Data

Table 8. Statistical display options (cont'd)

Data	Description	Where Used
Agents Real	Actual full-time equivalent agents. Calculated using the following formula: $L \div 1800$ where: <ul style="list-style-type: none"> • L = Agent's login time 	Results x CSQ: Agents View: All Data View: Agents
Agents Projected	Total agents required. This is a trend calculation based on the current trend of real and forecasted agents.	Results x CSQ: Agents View: Agents View: All Data
Agents Scheduled	Agents scheduled.	Results x CSQ: Agents View: Agents View: All Data
ASA Forecasted	Average Speed of Answer Forecasted. Forecasted average time elapsed in seconds between the time the call was dropped out of the IVR (after menu selections) and the time an agent answers.	View: All Data View: ASA
ASA Actual	Average Speed of Answer Actual. Calculated using the following formula: $Q \div A$ where: <ul style="list-style-type: none"> • Q = Queue time for answered calls • A = Answered calls 	Results x CSQ: Agents View: All Data View: ASA

Table 8. Statistical display options (cont'd)

Data	Description	Where Used
ATT Forecasted	Average Talk Time Forecasted. Forecasted time in seconds necessary for agents to process calls, which is all time from the moment the agent answers a call to the moment the agent ends the call. Includes time during which the caller is either actively talking to the agent or on hold. Appears only for a CSQ of type Calls.	View: All Data View: ATT
ATT Actual	Average Talk Time Actual. Average time in seconds necessary for agents to process calls for each interval, which is all time from the moment the agent answers a call to the moment the agent ends the call. Includes time during which the caller is either actively talking to the agent or on hold. Appears only for a CSQ of type Calls.	View: All Data View: ATT
Occupancy Forecasted	Forecasted percentage of logged in time that an agent spends in active contact handling states (for example, on incoming calls, in wrap-up activity, on outbound calls).	Results x CSQ: Agents View: All Data View: Occupancy
ACW Forecasted	After Call Work Forecasted. Forecasted average seconds per call necessary for agents to complete after call work.	Results x CSQ: Agents View: All Data View: Calls

Table 8. Statistical display options (cont'd)

Data	Description	Where Used
ACW Actual	<p>After Call Work Actual. Real average time in seconds per call necessary for agents to complete after call work. Calculated using the following formula:</p> $W \div A$ <p>where:</p> <ul style="list-style-type: none"> • W = Work time • A = Answered calls 	<p>Results x CSQ: Agents View: All Data View: Calls</p>
Abandon Real	<p>Actual contacts for which the caller terminates the contact while in queue. Ringing time is included in queue time.</p>	<p>Results x CSQ: Calls View: All Data</p>
Calls Handled	<p>Calls answered by agents.</p>	<p>Results x CSQ: Calls View: All Data</p>
Time in Service	<p>Total time, in hours, that agents are in session (logged in).</p>	<p>View: All Data</p>
SL Real	<p>Service Level Real. Actual speed of answer attained. Calculated using the following formula:</p> $(B_{sl} + A_{sl}) \div (B_t + A_t)$ <p>where:</p> <ul style="list-style-type: none"> • B_{sl} = Calls abandoned before service level threshold • A_{sl} = Calls answered within service level threshold • B_t = Total abandoned calls • A_t = Total answered calls 	<p>Results x CSQ: Calls View: All Data View: Calls</p>
Waiting Time	<p>Total time in the ready state.</p>	<p>View: All Data</p>

Table 8. Statistical display options (cont'd)

Data	Description	Where Used
Calls Answered %	<p>Percentage of calls answered. Calculated using the following formula:</p> $A \div (A + B)$ <p>where:</p> <ul style="list-style-type: none"> • A = Answered calls • B = Abandoned calls 	<p>Results x CSQ: Calls View: All Data View: Calls</p>
Occupancy Actual	<p>Actual percentage of time that agents spend in active contact handling states (for example, on incoming calls, in wrap-up activity, on outbound calls).</p>	<p>Results x CSQ: Calls View: All Data View: Occupancy</p>
Precision %	<p>Gap as a percentage between forecasted and actual calls. Calculated using the following formula:</p> $(F \div R) \times 100$ <p>where</p> <ul style="list-style-type: none"> • F = Forecasted calls • R = Received calls <p>Value results from Forecast Precision Level calculation, which is completed when you compile historical data (see "Compiling Historical Data" on page 256).</p>	<p>View: All Data</p>
Gap in Service x Projected	<p>Gap between agents in service and agents projected. Calculated using the following formula:</p> $A_s - A_p$ <p>where:</p> <ul style="list-style-type: none"> • A_s = Agents in service • A_p = Agents projected 	<p>Results x CSQ: Calls View: All Data View: Agents</p>

Table 8. Statistical display options (cont'd)

Data	Description	Where Used
Gap Forecasted x Projected	Gap between agents projected and agents forecasted. Calculated using the following formula: $A_f - A_p$ where: <ul style="list-style-type: none"> • A_f = Agents forecasted • A_p = Agents projected 	Results x CSQ: Calls View: Agents View: All Data
Gap Scheduled x Projected	Gap between agents scheduled and agents projected. Calculated using the following formula: $A_s - A_p$ where: <ul style="list-style-type: none"> • A_s = Agents scheduled • A_p = Agents projected 	Results x CSQ: Calls View: Agents View: All Data
SL FC	Service Level Forecasted. Forecasted speed of answer within the service level target time.	View: All Data View: Service Level



Displaying Statistics Data Views

Every 30 minutes, the Capture service collects contact data from the ACD. This contact data is displayed in a table on the Statistics pane.

To display a statistics data view:

1. Choose Intraday > Statistics. The Statistics pane appears. By default, it displays the Results x CSQ: Agents data view for the current date.

NOTE: You can change the default data view by customizing the dashboard (see "[Customizing Dashboards](#)" on page 33).

2. Select a CSQ from the toolbar. WFM displays data for the CSQ for the current date.
3. Complete any of the following steps as needed.
 - To display data for another CSQ, select the CSQ from the drop-down list on the toolbar.
 - To display a different set of data, select a data view from the drop-down list.
 - To display data for another date, click  (Define the Context) in the toolbar, then click a date in the calendar in the context pane.
 - To display the data as a report, click Get Report: Full. A new browser window appears and displays the report.
 - To sort the table by a column, click the column heading.
 - To refresh the data, choose Intraday > Statistics.
 - To display a graph associated with a column heading, click  (Graph) next to the column heading. A new browser window appears and displays the selected data in graph form.

NOTE: The graph icon only appears if the table has 100 or fewer rows.

Coverage of Requirements

The Coverage of Requirements pane displays the coverage requirements and service level for the selected CSQ in 15-minute intervals. The Coverage of Requirement pane displays the following information.

- The daily service level objective for the CSQ
- The anticipated daily service level average per CSQ
- The anticipated service level per interval per CSQ

You can use the Coverage of Requirements pane to see how WFM predicts what the CSQ will do for each day and interval. It shows you if your forecast is accurate when compared to the production schedule. For instructions, see ["Displaying Coverage of Requirements" on page 217](#).

You can also use this screen to edit the schedule to improve the overall service level objective. (For example, by rescheduling an agents break to occur 15 or 30 minutes later to resolve a staffing issue.) It is especially useful when you need to correct a situation where there are not enough agents to meet the service level objective. This schedule flexibility can make a big difference when maintaining the daily service level objective.

NOTE: The values in the Coverage of Requirements pane are calculated differently than the values in the Cisco Workforce Optimization Agent Schedules application. As a result, the Cisco Workforce Optimization coverage values differ from the Coverage of Requirements pane on an interval basis in terms of forecast numbers of agents, and on a daily total basis in terms of Scheduled Service Level versus Anticipated Service Level. For various reasons, the values calculated in Cisco Workforce Optimization are considered to be more accurate.

Interval Display Options

The interval table displays the following information:

Data	Description
Interval	The start time for a schedule interval.
Forecasted Agents	The number of agents forecasted per interval.
Scheduled Agents	The number of agents scheduled to be in service per interval.

Data	Description
Agents Gap	The gap between the number of agents scheduled and the number of agents forecasted using the following formula: Number of agents forecasted – Number of agents scheduled
Service Level	The expected percentage of calls answered within the service level objective for the CSQ per the schedule interval, based on the scheduled staffing level and forecasted call volume.

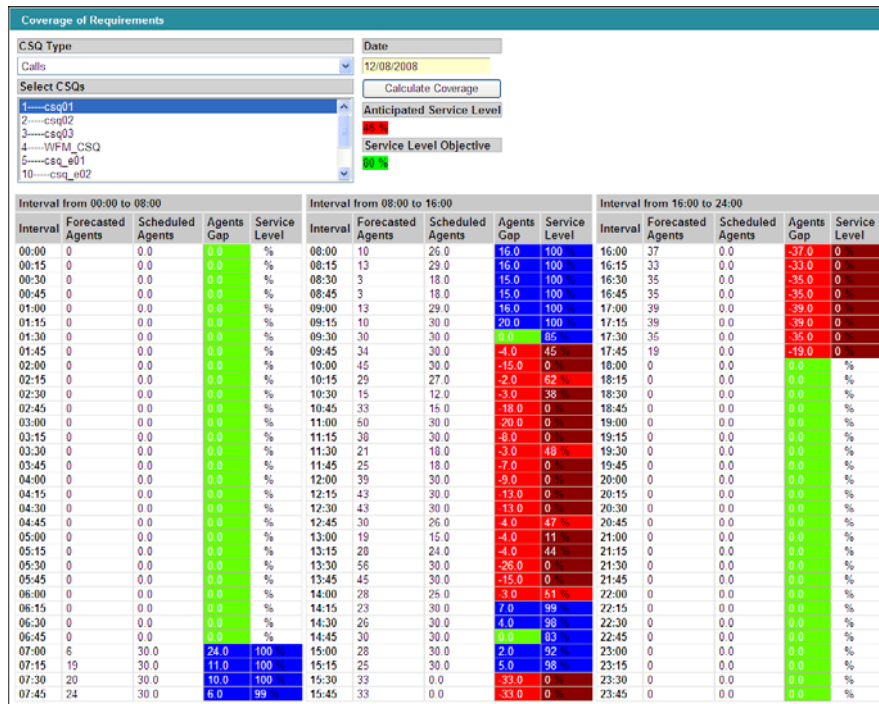
Displaying Coverage of Requirements

To display coverage of requirements:

1. Choose Intraday > Coverage. The Coverage of Requirements pane appears. By default, the pane has no CSQ selected and displays no data.
2. Select the CSQ type (calls or email) from the CSQ Type drop-down list.
3. Select one or more CSQs from the Select CSQs list. If you select multiple CSQs, the coverage results display the totals for the selected CSQs.
4. Enter the date for which you want to display the coverage of requirements.

- Click Calculate Coverage. The pane displays data for the selected date and CSQ (Figure 66).

Figure 66. Coverage of Requirements: After calculating coverage



Interpreting the Coverage of Requirements

The Coverage of Requirements pane displays three color-coded tables. Each table displays 8 hours' worth of interval data. The first table displays the intervals from 00:00 to 08:00, the second from 08:00 to 16:00, and the third from 16:00 to 24:00.

Each table has five columns; the fourth and fifth columns are color-coded to aid in interpretation. The first column in each table lists the interval. The second, third, and fourth columns represent the coverage of requirements, which consists of three numbers: the forecasted agents, the scheduled agents, and the gap between the two numbers. The fifth column lists the service level.

Table 9 describes the colors applied to the fourth column, Agents Gap.

Table 9. Agent Gap color key

Color	Condition
Green	No gap
Red	Shortage of agents

Table 9. Agent Gap color key (cont'd)

Color	Condition
Blue	Surplus agents scheduled

Table 10 lists the meaning of the colors applied to the fifth column, Service Level.

Table 10. Service Level color key

Color	Condition
Blue	Service level for the interval is greater than the service level objective.
Green	Service level for the interval is equal to the service level objective.
Light red	Service level for the interval is less than the service level objective.
Dark red	Service level is less than the objective and less than the anticipated service level for the day.

Schedule Trades

The Schedule Trade function allows you to do the following:

- Trade schedules between agents for the same date
- Trade schedules between agents for two different days
- Copy one or more periods from an agent's schedule to one or more agents' schedules for one or many dates.

Trading Schedules on the Same Day

Use this procedure to swap one or more days between agents. Both agents must be scheduled to work on the days you choose. You can swap one or more consecutive days as long as you specify the same start and end dates for the source agent and the destination agent. For example, you can swap the source agent's Monday morning work shift with the destination agent's Monday afternoon work shift.

To trade schedules on the same day:


1. Choose Intraday > Schedule Trade. The Schedule Trade pane appears (Figure 67).

Figure 67. Schedule Trade: Same Day

The screenshot shows the 'Schedule Trade' dialog box. The 'Trade Type' section has three radio buttons: 'Schedule Trade (Same Day)' (selected), 'Schedule Trade (Different Days)', and 'Copy Selected Intervals'. Below this are two columns for filtering agents: 'Filter by Team' and 'Filter by CSQ Mapping', each with a dropdown menu. The 'Source Agent' and 'Destination Agent' sections each have a list of agents: '5151, 5151 (5151)', 'Agent001, Sim (agent001)', 'Agent002, Sim (agent002)', 'Agent003, Sim (agent003)', 'Agent004, Sim (agent004)', 'Agent005, Sim (agent005)', and 'Agent006, Sim (agent006)'. Below each list is an 'All' button. At the bottom, there are 'Start Date' and 'End Date' fields, both set to '08-10-2007', and a 'Get Schedule' button. A table at the bottom shows columns for 'Date', 'CSQ', 'Interval', 'First Name', 'Last Name', 'CSQ', 'Date', and 'Interval'.

The Schedule Trade (Same Day) option is selected by default.

2. If desired, filter the list of source agents by team, CSQ mapping, or All (below the Source Agent list).
3. Select the source agent from the Source Agent list. Click All to select all the agents in the list.
4. Select a date in the Start Date and End Date fields.

5. Click Get Schedule for the source agent. The schedule for the source agent appears.
6. If desired, filter the list of destination agents by team, CSQ mapping, or All (below the Destination Agent list).
7. Select one agent from the Destination Agent list. Click All to select all the agents in the list.
8. Select a date in the Start Date and End Date fields.
9. Click Get Schedule for the destination agent. The schedule for the destination agent appears.
10. Review the schedule and click  to finish this trade. WFM automatically updates the agents' schedules.


Trading Schedules on Different Days

Use this procedure to swap a day off or holiday between agents. You can swap one or more consecutive working days for days off or holidays as long as you specify different dates. Essentially, you are swapping one set of dates with a different set of dates. For example, you can swap one agent's Monday off with another agent's Friday off.

NOTE: To use this procedure, you must be trading each agent's day off with the other agent's work shift. When you trade working days, WFM trades the days off automatically. For example, consider two agents, Agent A and Agent B. Agent A works Monday and does not work on Wednesday. Agent B works Wednesday and does not work Monday. If you trade their work shifts, Agent A now works Wednesday and does not work on Monday, and Agent B works Monday and does not work on Wednesday.

To trade schedules for different days:

1. Choose Intraday > Schedule Trade. The Schedule Trade pane appears.
2. Choose Schedule Trade (Different Days).
3. If desired, filter the list of source agents by team, CSQ mapping, or All (below the Source Agent list).
4. Select the source agent from the Source Agent list.
5. Select a date in the Start Date and End Date fields.
6. Click Get Schedule for the source agent. The schedule for the source agent appears.
7. If desired, filter the list of destination agents by team, CSQ mapping, or All (below the Destination Agent list).
8. Select one agent from the Destination Agent list.
9. Select start and end dates.

10. Click Get Schedule for the destination agent. The schedule for the destination agent appears.
11. Review the schedule and click  to finish this trade. WFM automatically updates the agents' schedules.

Copy Selected Intervals to Other Agents

Use this procedure to copy intervals in an agent's work shift for a specified day to one or more agent's work shifts for one or more specified days. For example, you can copy a meeting that runs from 08:00 to 10:00 from one agent's schedule to the schedules for several other agents.

One situation in which this procedure is useful is when you need to add an agent who was not active when the schedule was produced. The Copy Selected Intervals function allows you to add agents without regenerating the schedule. When you copy selected intervals to new agents, first find an agent with a schedule that is similar to the one you want to assign the new agents (for example, the same CSQ and work times) and follow the procedure below to copy the schedule to the new agents.


NOTE: You can only enter one date to copy from, but you can select one or more intervals from the schedule on that date to copy to multiple agents.

To copy selected intervals to other agents:

1. Choose Intraday > Schedule Trade. The Schedule Trade pane appears.
2. Choose Copy Selected Intervals.
3. If desired, filter the list of source agents by team, CSQ mapping, or All (below the Source Agent list).
4. Select the source agent from the Source Agent list.
5. Select a date in the Start Date field.
6. Click Get Schedule for the source agent. The schedule for the source agent appears.
7. Select the intervals in the source agent's schedule you want to copy to the destination agent's schedule.
 - To copy one or more intervals, select the check box next to each interval in the source agent's schedule.
 - To copy all intervals, select the check box in the column heading of the source agent's schedule.
8. If desired, filter the list of destination agents by team, CSQ mapping, or All (below the Destination Agent list).
9. Select one or more agents from the Destination Agent list.

10. Select a start and end date in for the destination agent.

NOTE: You do not need to click Get Schedule for the destination agents. The activity for each interval copied from the source agent replaces the activity for each interval in the destination agents' schedules.

11. Click  to finish this copy. WFM automatically updates the agents' schedules.

Adherence

WFM collects data from your contact center ACD to determine all agents' states in real time. WFM then compares these real-time states with the agents' schedules, and calculates the agents' adherence. You can view schedule adherence by team, by CSQ mapping, and by CSQ.

Adherence is the percentage of time that agents follow their schedules. When calculating adherence, WFM considers scheduled arrival and departure times, breaks, lunches, and time spent on scheduled activities, and compares the actual activity to the scheduled activity each minute through the work shift. For example, an agent who is scheduled to be in service at 08:00 and log out at 16:00 and who sticks to the schedule for the entire day is adhering to the schedule 100 percent.

Adherence Data in Workforce Optimization

Adherence data is viewed in Workforce Optimization in the Real Time Adherence widget and the Agent Adherence Detail flyout.

Using the Application Management application, administrators can map WFM agent states to scheduled activities in order to customize how adherence is calculated. See the *Workforce Management Application User Guide* for details on customizing your adherence calculations.

Historical adherence data that was collected before the installation of WFM 8.9 is still displayed in the Adherence pane. Adherence data collected after the installation of WFM 8.9 is displayed only in Workforce Optimization. The Adherence pane in that case is blank.

WFM reports will display adherence data as usual. Note that how the data is calculated can change after WFM 8.9 is installed. For example, an agent's usual schedule adherence percentage could change significantly because it might be calculated differently.

How Adherence is Calculated

Adherence data from the period before WFM 8.9 is installed is calculated according to the following formula:

$$\frac{(\text{minutes scheduled} - \text{minutes not in adherence})}{\text{minutes scheduled}} \times 100$$

Adherence data from the period after WFM 8.9 is calculated according to the following formula:

$$\frac{(\text{configured schedule adherence minutes} - \text{minutes not in adherence})}{\text{configured schedule adherence minutes}} \times 100$$

Where “configured schedule adherence minutes” is the sum of time scheduled for activities for which the Calculate Adherence column in the Workforce Optimization Application Management application is set to Yes.

If the adherence data calculation is not customized, then the default settings are used. When adherence is calculated, only Overtime or In Service time is counted; Not Ready and Logged Out time are not considered in adherence for Overtime and In Service activities.

NOTE: The ACC service will recompute adherence for multiple historical days only as far back as agent adherence detail data is retained. For example, if the calculation period is the past five days, but agent adherence detail data is configured in WFM Configuration Setup to be retained for three days, then the ACC service recomputes adherence only for the past three days.

The Difference Between Adherence and Conformance

While adherence is the percentage of time that agents follow their schedules, conformance is the percentage of time an agent works the right amount of time regardless of the time of day when the agent works. Schedule conformance does not take arrival and departure times into account. For example, an agent who is scheduled to work from 08:00 to 16:00, but instead works from 10:00 to 18:00 would be conforming, but not adhering, to the schedule.

Schedule conformance is calculated based on the following formula:

$$\frac{\text{Total time an agent is in a ready, talk, hold, or work state}}{\text{Agent total scheduled in service time}} \times 100$$

NOTE: In service time does not include lunch, breaks, projects, or exceptions.

Monitoring Real-Time Adherence

All real-time adherence monitoring is done using the Real Time Adherence widget in Workforce Optimization. See the *Workforce Management Application User Guide* for details.

Monitoring Schedule Adherence

To view schedule adherence:


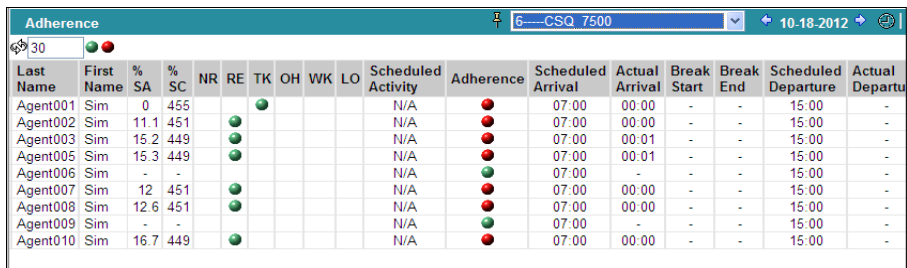
1. Choose Intraday > Adherence. The Adherence pane appears. By default, it displays the current date, and as a result, is blank. Real-time adherence data is viewed in Workforce Optimization.
2. To view historical adherence data from before WFM 8.9 was installed, select a CSQ, team, or CSQ mapping.
3. Click  (Define the Context), and then click a past date in the Context pane. WFM displays historical adherence data (Figure 68).

Figure 68. Adherence displaying values for the selected date



Last Name	First Name	% SA	% SC	NR	RE	TK	OH	WK	LO	Scheduled Activity	Adherence	Scheduled Arrival	Actual Arrival	Break Start	Break End	Scheduled Departure	Actual Departure
Agent001	Sim	0	455							N/A	●	07:00	00:00	-	-	15:00	-
Agent002	Sim	11.1	451		●					N/A	●	07:00	00:00	-	-	15:00	-
Agent003	Sim	15.2	449		●					N/A	●	07:00	00:01	-	-	15:00	-
Agent005	Sim	15.3	449		●					N/A	●	07:00	00:01	-	-	15:00	-
Agent006	Sim	-	-							N/A	●	07:00	-	-	-	15:00	-
Agent007	Sim	12	451		●					N/A	●	07:00	00:00	-	-	15:00	-
Agent008	Sim	12.6	451		●					N/A	●	07:00	00:00	-	-	15:00	-
Agent009	Sim	-	-							N/A	●	07:00	-	-	-	15:00	-
Agent010	Sim	16.7	449		●					N/A	●	07:00	00:00	-	-	15:00	-

Displaying an Adherence Report for a Specific Agent

All real-time adherence monitoring is done using the Real Time Adherence widget in Workforce Optimization. See the *Workforce Management Application User Guide* for details.

To display a historic adherence report for a specific agent:


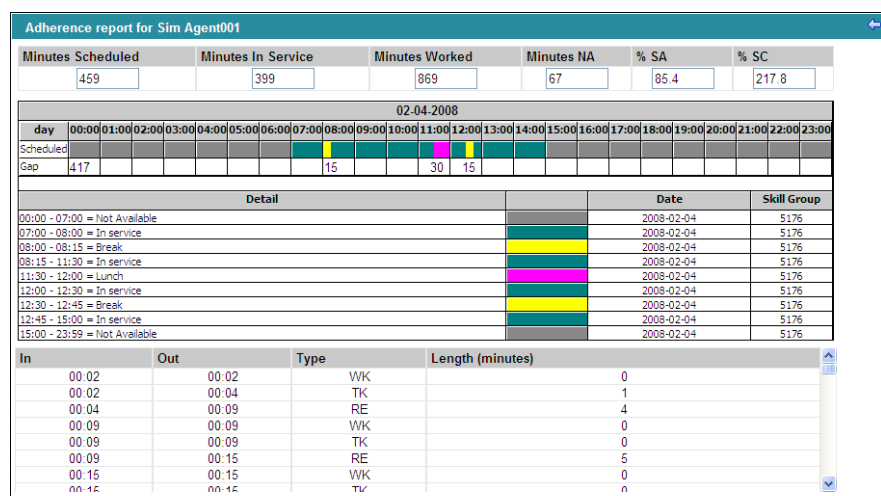
- Click a percentage in the %SA (Schedule Adherence) column. The Adherence Report pane for the selected agent appears (Figure 69). Click  (Back) to return to the Adherence pane.

Figure 69. Adherence Report



Minutes Scheduled	Minutes In Service	Minutes Worked	Minutes NA	% SA	% SC
459	399	869	67	85.4	217.8

02-04-2008						
day	00:00	01:00	02:00	03:00	04:00	05:00
Scheduled						
Gap	417				15	30

Detail	Date	Skill Group
00:00 - 07:00 = Not Available	2008-02-04	5176
07:00 - 08:00 = In service	2008-02-04	5176
08:00 - 08:15 = Break	2008-02-04	5176
08:15 - 11:30 = In service	2008-02-04	5176
11:30 - 12:00 = Lunch	2008-02-04	5176
12:00 - 12:30 = In service	2008-02-04	5176
12:30 - 12:45 = Break	2008-02-04	5176
12:45 - 15:00 = In service	2008-02-04	5176
15:00 - 23:59 = Not Available	2008-02-04	5176

In	Out	Type	Length (minutes)
00:02	00:02	WK	0
00:02	00:04	TK	1
00:04	00:09	RE	4
00:09	00:09	WK	0
00:09	00:09	TK	0
00:09	00:15	RE	5
00:15	00:15	WK	0
00:15	00:15	TK	0

Table 11 describes the data in the Adherence Report.

Table 11. Adherence Report data

Data	Description
Minutes Scheduled	Minutes the agent was scheduled to work. This value includes all scheduled activities for an agent whether paid or unpaid. Only Not Available and Available time are left out in the minutes scheduled total.
Minutes in Service	Minutes the agent was scheduled to be in service and available to handle calls. When agents are in service they are either ready to handle a call or handling a call.
Minutes Worked	Actual minutes the agent was ready or handling calls.
Minutes NA	Minutes the agent was not in adherence.
%SA	Agent's schedule adherence (SA) as a percentage; clickable (accesses detailed agent adherence report).
%SC	Agent's schedule conformance (SC) as a percentage. Minutes in service includes breaks and lunch; minutes worked do not.


Table 11. Adherence Report data (cont'd)

Data	Description
Gap	Minutes during which the agent did not adhere to the schedule. This number is always displayed under the beginning of the activity.
In	Time that the agent started the activity.
Out	Time that the agent finished the activity.
Type	Activity type. The possible types are: <ul style="list-style-type: none"> • LO: Logged out • NR: Not ready • WT: Ready • BU: Busy • IC: In call
Length	Minutes that the agent spent on the activity.

Displaying Agent Details

You can drill down to display details about an individual agent and that agent's schedule.

To display agent details:

- Do one of the following to display agent details:
 - Click either the agent's last name or first name to display the Agent Details pane.
 - Click a time in the Scheduled Arrival column to display the Schedule details pane for that agent.
- Click  (Back) to return to the Adherence pane.

Interpreting Adherence Data

Table 12 lists the data that can be displayed in the Adherence pane. The fields shown can differ depending which ACD you have.

Table 12. Adherence data

Data	Description
% SA	Agent's schedule adherence (SA) as a percentage; clickable (accesses detailed agent adherence report).

Table 12. Adherence data (cont'd)

Data	Description
% SC	Agent's schedule conformance (SC) as a percentage.
Actual Arrival	Actual time at which the agent starts working; clickable (accesses Schedule Details pane).
Actual Departure	Actual time at which the agent stops working.
First Name	Agent's first name; clickable (accesses Agent Details pane).
Last Name	Agent's last name; clickable (accesses Agent Details pane).
Minutes in Service	Total time, in minutes, that the agent was in session (logged in).
Minutes NA	Minutes during which the agent was not in adherence.
Minutes Scheduled	Minutes the agent was scheduled to work. This value includes all scheduled activities for an agent whether paid or unpaid. Only Not Available and Available time are left out in the minutes scheduled total.
Minutes Worked	Minutes that the agent worked.
Scheduled Arrival	Time at which the agent is scheduled to start work; clickable (accesses Schedule Details pane).
Scheduled Departure	Time at which the agent is scheduled to end work.

Your Inbox

Use the Inbox feature to approve schedule trades between agents and exception requests.

Accessing Your Inbox

To access your *Inbox*:

- Choose Intraday > Inbox. The Inbox List pane appears (Figure 70).

Figure 70. Inbox List pane

Inbox List						
!	From	Request Type	Status	Received	Expiration Date	Actions
? 2	Sim Agent002	Vacation Request	Validated/Waiting for Approval	02-11-2008 13:56:49		
! 1	Sim Agent002	Work Shift Grab	Validated/Waiting for Approval	02-11-2008 15:08:42		
! 1	Sim Agent014	Work Shift Grab	Validated/Waiting for Approval	02-11-2008 15:19:38		

The columns in this pane are described in the following table.

Data	Description
!	<p>Displays an icon and a number that has a specific meaning related to the status of the message. The icons and numbers are described as follows.</p> <ul style="list-style-type: none"> • ! + 1: A request is in process and requires you to perform an action. • ? + 2: A request is in process. No action is required. • Blank + 3: A request was rejected or closed.
From	The name of the agent who sent the request. Click the name to display the agent's details.

Data	Description
Request Type	<p>The type of request. The following request types are available:</p> <ul style="list-style-type: none"> • Exception request: Indicates an agent is requesting an exception (for example, agent needs to take the morning off to go see a doctor). This request is usually submitted before a schedule is created, so an agent is not scheduled for this period. • Work Shift Grab: Indicates an agent is requesting a schedule trade with another agent. <p>Click a request in the Request Type column to see the details for the request.</p>
Status	<p>The status of the request. The possible values are:</p> <ul style="list-style-type: none"> • Closed: A request is resolved. • Validated/Waiting for Approval: The request is open and waiting for a response.
Received	The date and time when the message was received or created.
Expiration Date	The expiration date, if applicable.
Actions	Action icons only appear in this field for agents in My Page > Inbox. This field is always blank in the Intraday > Inbox.

Approving or Denying Requests

In WFM, users can approve or deny vacations.

When approving a schedule trade, use the Analyze function to compare the schedules of both agents and make sure there are no exceptions already planned for them. If there are exceptions or scheduling conflicts, you might need to reschedule the conflicting issues.

Check the compatibility information to make sure there are no conflicts. The compatibility information includes availability, CSQ mapping, teams, CSQs, and time zones. Once approved, the schedule adjustments are automatic and a reply is sent to the agents.

To approve or deny requests:

1. Choose Intraday > Inbox. The Inbox List appears.

2. In the list, locate the request you want to approve or deny.
3. Click the request type in the Request Type column to open the Request Details pane (Figure 71 or Figure 72).

Figure 71. Exception Request Details pane

Request Details	
Type:	Exception Request
Submitted on:	2007-09-07
Submitted by:	Alessandra Sanchez
Exception Request:	Day Off
Date:	2007-08-30
Duration:	-
Status:	Submitted/Waiting for Validation
History:	Submitted on 2007-09-07 14:22 by Alessandra Sanchez Comment : Going fishing.
Please Select an Exception:	
<input type="text"/>	
Comment:	
<input type="text"/>	
<input type="button" value="Approve"/> <input type="button" value="Deny"/>	

Figure 72. Work Shift Grab Request Details pane

Request Details	
Request type:	Work shift grab
Date:	04-18-2007
Trade from:	Christopher Brown
Schedule:	04-20-2007
With:	Nicolas Davis
Schedule:	04-20-2007
Status:	Validated/Waiting for approval
Description:	Submitted on 2007-04-18 17:18 by Christopher Brown Validated on 2007-04-18 17:19 by Nicholas Davis
Comment:	
<input type="text"/>	
<input type="button" value="Analyse"/> <input type="button" value="Approve"/> <input type="button" value="Deny"/>	

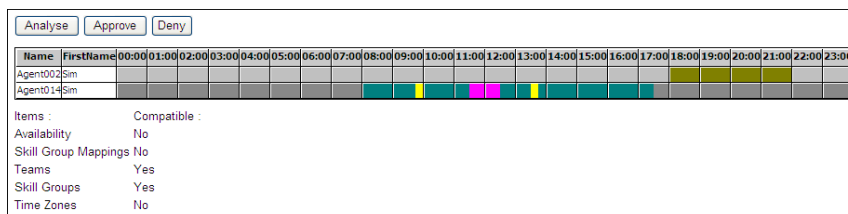
4. Approve or deny the request as follows:

- If it is an exception request, link the agent’s exception request to an actual exception by clicking the exception from the Please Select an Exception drop-down list.

IMPORTANT: If schedules are already created for this date, scheduler must edit the schedule to reflect this change. If schedules are not created for this date, the exception date and time is added to exceptions assigned to this agent (see ["Exceptions" on page 109](#)), and when the schedule is created the exception will be applied automatically.

- If it is a schedule trade (work shift grab), click Analyze to view the two schedules. The schedule details appear in the Request Details pane ([Figure 73](#)).

Figure 73. Analysis view of the two schedules involved in a schedule trade



5. Add a comment if desired with your approval or refusal.
6. Click Approve or Deny. In both cases, the agent will receive the approved or denied message in the his or her Inbox. If the request is a schedule trade, and the schedule trade is approved, WFM automatically trades the schedule for both agents.

Introduction

There are two types of reports in WFM:

- Historical reports generated using the Reports module
- Reports of data shown in various WFM pages that can be printed, saved, and exported using the BIRT (Business Intelligence and Reporting Tools) Report Viewer

This section covers the following topics:

- [Generating Reports Using the Reports Module \(page 236\)](#)
- [Generating Reports Using the BIRT Report Viewer \(page 237\)](#)

Generating Reports Using the Reports Module

Use the Reports module to generate a variety of historical reports in the following categories:

- Productivity
- Interval results
- Schedule view
- Performance analysis
- Advanced planning

Detailed information about the reports available in WFM can be found in the *Workforce Management Reports Reference Guide*. The information for each report includes the following:

- A description of the purpose of the report
- The selection criteria used to generate the report
- The fields that appear in the report
- Field definitions to help you interpret the report data

To generate a report:

1. From the main Navigation pane, click Reports. The Historical Report Navigation pane appears.
2. Click the category of report you want to generate. A list of the available reports under that category appears.
3. Click the name of the desired report. A pane containing report specification fields appears.
4. Select the criteria you want to use to generate the report.


NOTE: Some reports allow you to select which fields will appear in the generated report. Fields that are disabled in the list of selected fields are required fields and must appear in the report, and cannot be deselected.

5. Select a report format (HTML, CSV, or PDF) from the Format drop-down list.



NOTE: Not all report formats are available for all reports.

6. Click Submit. A new browser window opens and displays the report. From this window you can print the report or save it to a file.

Generating Reports Using the BIRT Report Viewer



WFM provides a  (Print) icon in the toolbar or a Get Report button in a pane when the data displayed in the pane is available to be printed, saved, or exported.

To export a report:

1. Click  (Print) in the toolbar or click Get Report. The BIRT Report Viewer appears in a new browser window and displays the report.
2. Click  (Export report). The Export Report dialog box appears.
3. Select the file format, the pages you want to export, and, for a PDF only, the page size, and then click OK. The File Download dialog box appears.
4. Complete one of the following steps.
 - To save the report, click Save. The Save As dialog box appears. Click Save.
 - To open the report, click Open. The browser window displays the report in the format you selected. From here you can print or save the report.

NOTE: The report's default file name might contain the long string of text from the browser Address field. It is recommended that you give the report a descriptive name when saving it.

To export report data:

1. Click  (Print) in the toolbar or Get Report. The BIRT Report Viewer appears in a new browser window and displays the report.
2. Click  (Export data). The Export Data dialog box appears.
3. Select the columns you want to export, the output encoding, and the separator, then click OK. The File Download dialog box appears. Complete one of the following steps.
 - Click Save to save the file.
 - Click Open. Microsoft Excel opens and displays the exported data. From here you can print the report or save it in CSV format.

NOTE: The report's default file name might contain the long string of text from the browser Address field. It is recommended that you give the report a descriptive name when saving it.

Introduction

You can use the What-ifs module to see how changes in distribution and volume at your contact center affect staffing requirements.

To do what-if analysis, create several distribution and forecast scenarios, then estimate resource requirements based on these scenarios. The results enable you to better understand and manage your contact center during periods with more variable contact volume and distribution.

This section covers the following topics:

- [Distribution Scenarios \(page 240\)](#)
- [Forecast Scenarios \(page 243\)](#)
- [Resource Requirements Calculations \(page 246\)](#)

Distribution Scenarios

A distribution scenario consists of the same kind of contact data that a distribution does. Both consist of seven days' worth of contact data, with each day containing data for each of that day's 48 intervals (each interval is 30 minutes long). Each interval has four values: the number of contacts that arrived during that interval, the fraction of calls received during that interval compared with the calls received during the entire day, the average talk time, and the average wait time.

There are three differences between a distribution and a distribution scenario.

- At any given time, WFM has only one distribution but any number of distribution scenarios.
- By definition, a distribution is in production, and a distribution scenario is not. In other words, if you generate a forecast, WFM will automatically use the distribution and not the distribution scenario, unless you specifically indicate that WFM should use the distribution scenario.
- You can only create a distribution with data (Forecasting > Distribution). You can create a distribution scenario either with data (Forecasting > Distribution) or without data (What-ifs > Distribution Scenario). If you create a distribution scenario without data, you must either enter data in it manually (Forecasting > Edit Distribution) or generate data for it automatically (Forecasting > Distribution).

If you want to generate several distributions and forecasts so that you can analyze how different conditions affect call volumes and agent schedules, you need to use distribution and forecast scenarios. If you are confident that the contact volume and distribution at your contact center is stable, then you only need to generate one distribution and one forecast, and you do not need to use scenarios.



You can generate a distribution scenario either in two steps, by creating an empty distribution scenario and then populating it, or in one step, by generating a populated distribution scenario.

From the Distribution Scenario pane, you can do the following:

- Create an empty distribution scenario (without data)
- Rename an existing distribution scenario
- View and edit contact data for an existing distribution scenario
- Delete an existing distribution scenario

Managing Distribution Scenarios


To create an empty distribution scenario and then populate it:

1. Choose What-ifs > Distribution Scenario. The Distribution Scenario List pane appears.
2. Click  (New). The Distribution Scenario Details pane appears.
3. Enter a name for the distribution scenario.
4. Select the CSQ you want to assign to this scenario.
5. Click  (Save) to save your changes. WFM creates the empty scenario.
6. Choose Forecasting > Distribution. The Distribution Request pane appears.
7. Select the CSQ you assigned to this scenario. The Assign Distribution to a Scenario check box appears.
8. Select the Assign Distribution to a Scenario check box. A drop-down list and the Create New Scenario check box appear.
9. Select the name of the empty distribution scenario you just created from the drop-down list.
10. Complete the remaining fields as you would for a distribution and launch the request.


To generate a populated distribution scenario:

1. Choose Forecasting > Distribution. The Distribution Request pane appears.
2. Select the CSQ you want to assign to this scenario. The Assign Distribution to a Scenario check box appears.
3. Select the Assign Distribution to a Scenario check box. A drop-down list and the Create New Scenario check box appear.
4. Select the Create New Scenario check box. The drop-down list disappears and the Scenario Name field appears.
5. Enter a name for the distribution scenario.
6. Complete the remaining fields as you would for a distribution and launch the request.

To rename a distribution scenario:


1. Choose What-ifs > Distribution Scenario. The Distribution Scenario List appears.
2. Click the name of a scenario. The Distribution Scenario Details pane appears.
3. Enter a new name and click  (Save).

To view and edit contact data for a distribution scenario:

1. Choose What-ifs > Distribution Scenario. The Distribution Scenario List appears.
2. Click the View scenario hyperlink in the last column. The Distribution Maintenance pane appears.
3. Edit the fields as you would for a distribution in production and click  (Save).

NOTE: For more information, see ["To edit a distribution:" on page 135](#).

To delete a distribution scenario:

1. Choose What-ifs > Distribution Scenario. The Distribution Scenario List pane appears.
2. Select the distribution scenario to delete by completing one of these steps.
 - To delete one or more scenarios, select the check box next to the distribution scenario name.
 - To delete all scenarios, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Forecast Scenarios

A forecast scenario is a forecast that is not immediately applied to a schedule. After analyzing several scenarios, if you think the forecast scenario will be more accurate than a regular forecast, you can put the forecast scenario into production and use it to generate a schedule.

Like distributions and distribution scenarios, there are three differences between a forecast and a forecast scenario.



- At any given time, WFM has only one forecast but any number of forecast scenarios.
- By definition, a forecast is in production, and a forecast scenario is not. In other words, if you generate a schedule, WFM will automatically use the forecast and not the forecast scenario. If you want to generate a schedule from a forecast scenario, you must first put the forecast scenario into production.
- You can only create a forecast with data (Forecasting > Forecast). You can only create a forecast scenario without data (What-ifs > Forecast Scenario). After you create a forecast scenario, you must either enter data in it manually (Forecasting > Edit Forecast) or generate data for it automatically (Forecasting > Forecast Request).

From the Forecast Scenario pane, you can do the following:

- Create a new forecast scenario (without data)
- Rename a forecast scenario
- View and edit data for an existing forecast scenario
- Delete a forecast scenario


Managing Forecast Scenarios

To create and populate a forecast scenario:


1. Choose What-ifs > Forecast Scenario. The Forecast Scenario List pane appears.
2. Click  (New). The Forecast Scenario Details pane appears.
3. Enter a name for the forecast scenario in the Scenario Name field.
4. Select the CSQ you want to assign to this scenario.
5. Click  (Save) to save your changes. WFM creates the scenario.
6. Choose Forecasting > Forecast Request. The Forecast Request pane appears.

7. Select the CSQ you assigned to this forecast scenario. The Get Scenarios button is enabled.
8. Click Get Scenarios.
9. If you want to use a distribution scenario, select it from the Select Distribution Scenario drop-down list. If you want to use the distribution that is in production, do not select anything from this drop-down list.
10. Select the forecast scenario you just created from the Select Forecast Scenario drop-down list.
11. Complete the remaining fields as you would for a forecast and then launch your request.

To rename a forecast scenario:

1. Choose What-ifs > Forecast Scenario. The Forecast Scenario List appears.
2. Click the name of a scenario. The Forecast Scenario Details pane appears.
3. Enter a new name for the forecast scenario.
4. Click  (Save). WFM changes the scenario name.

To view and edit data for a forecast scenario:


1. Choose What-ifs > Forecast Scenario. The Forecast Scenario List appears.
2. Click the View scenario hyperlink in the last column. The Forecast Scenario Details pane appears. This pane displays the forecast summary for each day of the period.
3. To view the details for a specific day in the forecast, click View scenario for that date. The Forecast Maintenance pane for that day is displayed.
4. Edit the fields as you would for a forecast in production and then click  (Save) to save your changes.

NOTE: For more information, see ["Editing a Forecast" on page 148](#).

Deleting a Forecast Scenario

To delete a forecast scenario:

1. Choose What-ifs > Forecast Scenario. The Forecast Scenario List pane appears.
2. Select the forecast scenario to delete by completing one of these steps.
 - To delete one or more scenarios, select the check box next to its name.
 - To delete all scenarios, select the check box in the column heading.

3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Resource Requirements Calculations

A resource requirements calculation is an estimate of the number of resources (agents) that are required to cover the forecasted contact volume for one or more CSQs on certain dates, given a specific configuration of work shifts, work conditions, and number of agents available for each shift. The resource requirements calculation is based on the production forecast.

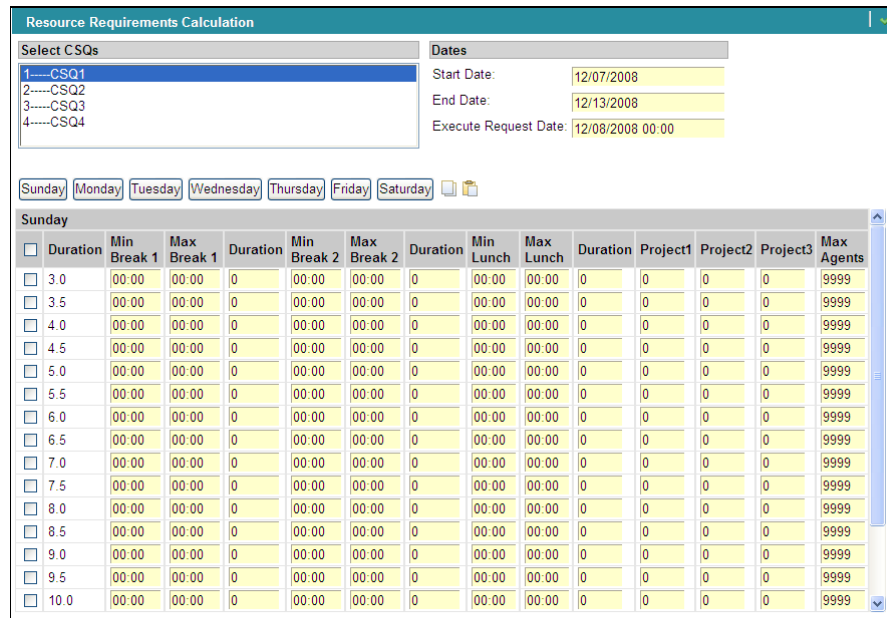
Resource requirements estimations consider the existing work shift types, CSQs, forecast dates, and work shift types (including hours and work conditions), and then create a resource forecast based on the resources required to cover the specified forecast dates.

Generating a Resource Requirement Calculation

To generate a resource requirement calculation:

1. Choose What-ifs > Resource. The Resource Requirements Calculation pane appears. By default, the table displays all possible work shifts for the current day (Figure 74).

Figure 74. Resource Requirements Calculation



2. Select one or more CSQs from the Select CSQs list.
3. Under Dates, enter the start and end dates in the Start Date and End Date fields.

NOTE: You can use any date range for which you have already generated a forecast; a duration of one week is most commonly used. If you enter a longer date range, the calculation uses the average contact volume.

4. In the Execute Request Date field, enter the date and time at which you want to run this request in mm-dd-yyyy hh:mm format.




NOTE: Requests containing a large amount of data require significant time to run. It is recommended that you run requests during off-peak hours (for example, at night).

5. Click the button for the day you want to configure. The table displays all possible work shifts for the selected day.
6. For each work shift that you want to include in the resource requirement calculation, complete the following steps.
 - a. Select one or more work shifts by selecting the check box next to each work shift duration. To select all work shifts, select the check box in the column heading.
 - b. Complete the fields for the work shift as described in the following table.

Field	Description
Min Break 1	Earliest time agents can take their first break, in hh:mm format. Default value is 00:00.
Max Break 1	Latest time agents can take their first break, in hh:mm format. Default value is 00:00.
Duration	Duration of the activity in minutes. Default value is 0. The duration can be specified in the same increment your database is in. For example, if your database increment is 15 minutes, the duration can be in 15-minute increments.
Min Break 2	Earliest time agents can take their second break, in hh:mm format. Default value is 00:00.
Max Break 2	Latest time agents can take their second break, in hh:mm format. Default value is 00:00.
Duration	Duration of the activity in minutes. Default value is 0. The duration can be specified in the same increment your database is in. For example, if your database increment is 15 minutes, the duration can be in 15-minute increments.
Min Lunch	Earliest time agents can go to lunch, in hh:mm format. Default value is 00:00.

Field	Description
Max Lunch	Latest time agents can go to lunch, in hh:mm format. Default value is 00:00.
Duration	Duration of the activity in minutes. Default value is 0. The duration can be specified in the same increment your database is in. For example, if your database increment is 15 minutes, the duration can be in 15-minute increments.
Project1, Project2, Project3	If projects are assigned to the selected work shift, the duration of each project in minutes. Default value is 0. The duration can be specified in the same increment your database is in. For example, if your database increment is 15 minutes, the duration can be in 15-minute increments.
Max Agents	Maximum number of agents available for the work shift. Default value is 9999. NOTE: If you want WFM to determine the maximum number of agents available, use the default value.

c. *Optional:* To copy the selected day's work shift configuration to another day, complete the following steps.

1. Click  (Copy). WFM copies the work shift configuration to the clipboard.
 2. Click the button for the day you want to configure next. The table displays all possible work shifts for the selected day.
 3. Click  (Paste). WFM pastes the work shift configuration to the selected day.
7. Click  (Launch Request). WFM launches your request.

NOTE: You must have data entered for every active (non-closed) day of the work week or the request will fail.

NOTE: You can monitor the status of your request on the Server Request List (see "[Server Requests](#)" on page 278).

Displaying Existing Resource Requirement Calculations

To display existing resource requirements calculations:

1. Choose What-ifs > Resource List. The Existing Resource Requirements Calculations pane appears (Figure 75).

Figure 75. Existing Resource Requirements Calculations

Existing Resource Requirements Calculations 111-----VIRTUAL

Search Existing Resource Requirements

Start Date: 01-21-2008 End Date: 01-21-2008 Search

Weekday	Date
---------	------

Display Resource Requirements

Start Date: 01-21-2008 End Date: 01-21-2008

Hourly Rate: 10.0 Display Results

2. Select the name of the CSQ from the drop-down list in the toolbar.
3. Under Search Existing Resource Requirements, enter the start and end dates for the existing resource requirements in the Start Date and End Date fields.
4. Click Search. A list of week days and dates appears.
5. Under Display Resource Requirements, enter the start and end dates for the forecasted resource requirements in the Start Date and End Date fields.
6. Enter the agents' hourly rate in the Hourly Rate field.

- Click Display Results. The Resource Requirements Calculation pane appears (Figure 76).

Figure 76. Resource Requirements Calculation: Display Results

Resource Requirements Calculation																					
Resource Requirements Results																					
	Monday Min.	Monday Avg.	Monday Max.	Tuesday Min.	Tuesday Avg.	Tuesday Max.	Wednesday Min.	Wednesday Avg.	Wednesday Max.	Thursday Min.	Thursday Avg.	Thursday Max.	Friday Min.	Friday Avg.	Friday Max.	Saturday Min.	Saturday Avg.	Saturday Max.	Sunday Min.	Sunday Avg.	Sunday Max.
4.0	0	0	0	18	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8.0	138	138	138	125	125	137	137	137	137	0	0	0	0	0	0	0	0	0	142	142	142
Total	138	138	138	143	143	143	137	137	137	0	0	0	0	0	0	0	0	0	142	142	142
	Monday			Tuesday			Wednesday			Thursday			Friday			Saturday			Sunday		
Hours in Service	1104.0			1072.0			1096.0			0.0			0.0			0.0			0.0		
Projects	0			0			0			0			0			0			0		
Hours in Overtime	0			0			0			0			0			0			0		
Standard Deviation	0			0			0			0			0			0			0		
Productivity	0			0			0			0			0			0			0		
Calls	28965.0			57050.0			28904.0			0.0			0.0			0.0			0.0		
Calls per Hour	26.254528			53.218285			26.281021			0			0			0			0		
Cost per Call	0.38088657			0.18790534			0.3805027			0			0			0			0		
Hourly Rate	10.0			10.0			10.0			10.0			10.0			10.0			10.0		
Daily Budget	11040.0			10720.0			10960.0			0			0			0			0		
Weekly Budget	44080.0			44080.0			44080.0			44080.0			44080.0			44080.0			44080.0		
Internal Budget	44080.0			44080.0			44080.0			44080.0			44080.0			44080.0			44080.0		

- The data on this pane is described in the following table.

Label	Description
Monday— Sunday Min	Minimum number of agents required for the work shift to cover the requirements for the day.
Monday— Sunday Ave	Average number of agents required for the work shift to cover the requirements for the day.
Monday— Sunday Max	Maximum number of agents required for the work shift to cover the requirements for the day.
Hours in Service	Total number of hours in service for each day.
Projects	Total number of hours working on projects for each day, if there are any projects.
Standard Deviation	Gap between the minimum number hours for that day and the maximum number of hours for that day.
Productivity	Occupancy percentage per selected work shift.
Calls	Number of calls received each day.
Calls per Hour	Average number of calls per hour.
Cost per Call	Average cost per call.
Hourly Rate	Hourly rate per agent.
Daily Budget	Budget for each day.
Weekly Budget	Budget for the week.
Internal Budget	Budget for the interval.

Historical Data

11

Introduction


This section covers the following topics:

- [Displaying Historical Data for a CSQ \(page 252\)](#)

Displaying Historical Data for a CSQ

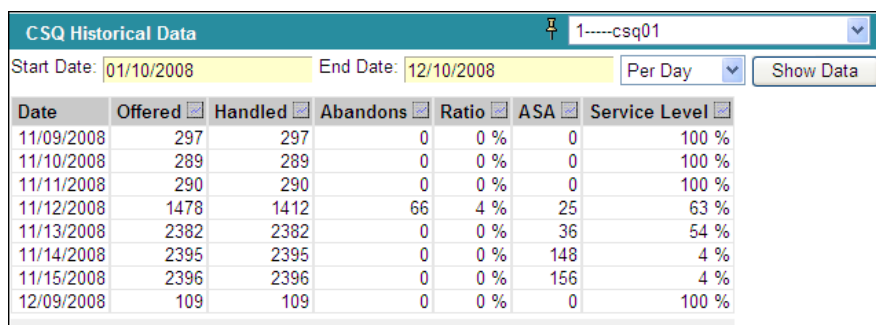
You can display historical data for a CSQ as either a table or a graph.

To display historical data for a CSQ:

1. Choose Historical > CSQ. The CSQ Historical Data pane appears
2. Select the CSQ from the drop-down list in the toolbar or click  (Define the Context) and select the it from the CSQ list.
3. Enter the start and end dates.
4. Select the interval type from the drop-down list. Possible values are Per Interval, Per Day, Per Week, Per Month, or Per Year.


Click Show Data. WFM displays the historical data report for the CSQ (Figure 77).

Figure 77. CSQ Historical Data



Date	Offered	Handled	Abandons	Ratio	ASA	Service Level
11/09/2008	297	297	0	0 %	0	100 %
11/10/2008	289	289	0	0 %	0	100 %
11/11/2008	290	290	0	0 %	0	100 %
11/12/2008	1478	1412	66	4 %	25	63 %
11/13/2008	2382	2382	0	0 %	36	54 %
11/14/2008	2395	2395	0	0 %	148	4 %
11/15/2008	2396	2396	0	0 %	156	4 %
12/09/2008	109	109	0	0 %	0	100 %

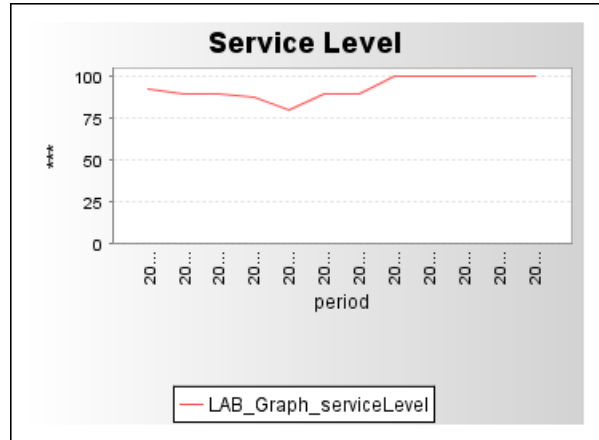
NOTE: WFM does not automatically capture calls that last over 1:44:59. If you want long calls included in the WFM database, you must manually capture the historical call data for that day. See “Capturing Historical Call Data” in the *Workforce Management Installation Guide*.

5. Click  (Graph) next to a column heading to display the graph associated with the column. WFM displays the data in graph format (Figure 78).

NOTE: The graph icon only appears when the table has 100 or fewer rows.

NOTE: The x-axis displays up to 30 intervals. If you specify more than 30 intervals, WFM will calculate the average for each displayed interval.

Figure 78. Historical Data graph sample



The historical data report displays the following data:

Label	Description
Offered	Number of calls that are received by the ACD for each interval. Offered calls are then either answered by a resource (handled) or abandoned.
Handled Calls	Number of calls answered for each interval.
Calls Abandoned	Number of calls per interval for which the caller terminated the call while in queue.
Ratio	Percentage of the day's calls that arrive during the interval.
ASA	Average Speed of Answer. The average time it takes to answer a call. The ASA is calculated as the sum of the queue time for calls answered during the interval and divided by the number of calls answered during the interval. If the CSQ Type is Email, the value is zero (0).
Service Level	Percentage of contacts answered for each interval within the service threshold time.

Introduction

This section covers the following topics:

- [Compiling Historical Data \(page 256\)](#)
- [Merging Historical Data \(page 258\)](#)
- [Entering Historical Data Manually \(page 260\)](#)
- [Requesting ACD Data \(page 263\)](#)

Compiling Historical Data

Use the Compilation function to calculate the accuracy of a forecast for a CSQ based on historical data. You can also use the compilation function to forecast the number of hours that agents will spend in offline activities.

You can use the result of the forecast accuracy calculation to improve the accuracy of your forecasts. To do so, enter an adjustment factor on the Forecast Maintenance pane (see "Editing Forecasts" on page 148).

Forecast accuracy is the ratio of the forecasted call volume over the actual call volume. For example, if your forecast precision level is 105 percent, the forecast contact volume was greater than the actual contact volume by 5 percent.

NOTE: The forecast accuracy calculation is based on historical information only. It is not a forward-looking calculation. It assesses how a forecast measured up against the actual contacts received during the forecast period.

To compile historical data:


1. Choose Special Functions > Compilation. The Data Compilation Requests pane appears (Figure 79).

Figure 79. Data Compilation Request

2. Choose one of the following options.

- Forecast Accuracy: This option calculates the precision level of the forecasts for the entered date range. It is selected by default.
- Worked Hours by Offline Activity: This option forecasts the number of hours that agents will spend in offline activities.

NOTE: To see the results of this option, you must create a strategic plan before you submit this request.

3. Enter the start and end dates for this forecast accuracy calculation.
4. If you chose Forecast Accuracy, select one or more CSQs from the Select CSQs list.
5. Enter the date and time in mm-dd-yyyy hh:mm format when you want to run this request in the Execute Request Date field. When you select a date from the calendar, WFM automatically inserts the current time. The best practice is to compile the historical data during off-peak hours.
6. Click  (Launch Request). WFM launches the compilation request.

NOTE: You can monitor the status of your request on the Compilation Request List pane (see "[Compilation Requests](#)" on page 280).

7. To view the results of your compilation request, choose one of the following options.
 - To display the forecast accuracy of a CSQ, choose Environment > CSQ and select the CSQ. The forecast accuracy is displayed at the bottom of the Opening/Closing Hours panel.
 - To display the forecasted hours for offline activities, choose Strategic Planning > Strategic Plan List and select your strategic plan. The forecasted hours appear in six columns: Meetings, Training, Coaching, Projects, Absenteeism, and Total.

Merging Historical Data

Use this feature to merge historical data from source CSQs into a virtual CSQ.

NOTE: You must create a virtual CSQ before you can perform this task.

All historical data from the CSQs is merged, including

- Contact volume (sum)
- Talk Time (average)
- ASA—Average Speed of Answer (weighted average)
- Quality of service (weighted average)
- ACW—After Call Work (weighted average)

A distribution, forecast, scenario, and schedule can be calculated for a virtual CSQ when you have the required historical data. The historical data for each source CSQ within the virtual CSQ will remain available.


To merge historical data:

1. Choose Special Functions > Historical Merge. The Historical Data Merge Request pane appears.
2. Enter the start and the end dates for this historical data merge.

NOTE: You need historical data within this date range for this historical data merge to work. You can specify any date up to and including the current date.

3. Select a virtual CSQ from the Select a CSQ drop-down list. WFM displays the source CSQs associated with the selected virtual CSQ.
4. Enter the date and time in mm/dd/yyyy hh:mm format when this merge will run in the Execute the Request On field. The process server will run the request at the specified date and time. The best practice is to merge the data during an off-peak hour.

NOTE: Requests containing a large amount of data require significant time to run. It is recommended that you run requests during off-peak hours (for example, at night) because the process server only runs one request at a time, and running requests during peak hours will prevent other users from running their requests.

5. Click  (Launch Request). WFM launches the merged historical data request. After creating historical data for a virtual CSQ, the data compilation per day, week, month, and year for the virtual CSQ automatically appears in displays and reports.

NOTE: You can monitor the status of your request on the Compilation Request List pane (see "[Compilation Requests](#)" on page 280).

Entering Historical Data Manually

WFM requires historical data to generate forecasts and schedules and to calculate statistical metrics. The more accurate the historical data is, the more accurate the forecasts and schedules will be. However, sometimes historical data for a CSQ is incomplete, inaccurate, or missing. When this happens, you can enter missing data manually or edit existing inaccurate data using the Manual Entry feature.

The following list includes some of the situations in which you might need to enter or edit historical data.

- To correct inaccurate data due to system or network issues
- To adjust unusual data due to an infrequent event, such as a marketing campaign
- To input missing data when call volume is normal but no data was captured because the system or the network was down
- To create a database when historical data is either unavailable or missing, as when you first install WFM
- To support forecasting and scheduling with CSQs for email (and other media)

NOTE: Unified CCX can store historical data about email volume, but WFM does not support capturing this type of data.

This procedure explains how to enter historical data for a CSQ that has no data on a specific date. You can enter values in any field, whether the field corresponds to a specific interval or to a total or average for the day.

One fast method for creating historical data is to enter a number in one of the total fields and press Enter. WFM will automatically enter that value in all of the corresponding interval fields and then display the default value of 0 in the total field.

NOTE: If you want to enter a value in the total Handled or Abandoned field that is automatically distributed across all of the corresponding interval fields, the CSQ must have a distribution (see "[Creating a Distribution](#)" on page 133).

To enter or edit historical data manually:

1. Choose Special Functions > Manual Entry.
2. Select a CSQ from the drop-down list in the toolbar.
3. Select a date.
4. Do either of the following:
 - Edit the displayed data as desired.

- Click Initialize Historical Data. WFM displays zeroes (0) in all of the interval and total fields (Figure 80).


Figure 80. Manual Data Entry per Interval

Manual Data Entry per Interval								
Date	Interval	Handled	Aband.	Answered	TAT	ATT	AWT	SL
12/10/2012	00:00	0	0	0	0	0	0	0 %
12/10/2012	00:30	0	0	0	0	0	0	0 %
12/10/2012	01:00	0	0	0	0	0	0	0 %
12/10/2012	01:30	0	0	0	0	0	0	0 %
12/10/2012	02:00	0	0	0	0	0	0	0 %
12/10/2012	02:30	0	0	0	0	0	0	0 %
12/10/2012	03:00	0	0	0	0	0	0	0 %
12/10/2012	03:30	0	0	0	0	0	0	0 %
12/10/2012	04:00	0	0	0	0	0	0	0 %
12/10/2012	04:30	0	0	0	0	0	0	0 %
12/10/2012	05:00	0	0	0	0	0	0	0 %
12/10/2012	05:30	0	0	0	0	0	0	0 %
12/10/2012	06:00	0	0	0	0	0	0	0 %
12/10/2012	06:30	0	0	0	0	0	0	0 %
12/10/2012	07:00	0	0	0	0	0	0	0 %
12/10/2012	07:30	0	0	0	0	0	0	0 %
12/10/2012	08:00	0	0	0	0	0	0	0 %
12/10/2012	08:30	0	0	0	0	0	0	0 %
12/10/2012	09:00	0	0	0	0	0	0	0 %
12/10/2012	09:30	0	0	0	0	0	0	0 %
Summary								
Total		0	0	0	0	0	0	0 %
<input type="button" value="Get total"/>								

5. Enter values for the fields as described in the following table.

Field	Description
Offered	Number of emails that are received during each interval. This field only appears when you choose a CSQ of type Email.
Handled	Number of calls handled for each interval.
Abandoned	Number of contacts per interval where the person originating the contact terminates the contact while in queue.
Answered	Number of calls answered for each interval.
TAT	Total Answer Time. The total amount of time callers waited for their calls to be answered for each interval.

Field	Description
ASA	Average Speed of Answer. Average speed of answer in seconds for each interval.
ATT	<p>Average Talk Time. For a CSQ of type Calls, the average time, in seconds, necessary for agents to process calls for each interval. Talk time is elapsed time from when an agent answers a call until the agent disconnects. This includes the time when the agent is actively talking to the caller and the time when the agent places the caller on hold.</p> <p>For a CSQ of type Email, the average time, in seconds, necessary for agents to process email for each interval. Process time is elapsed time from when an agent opens the email until the agent sends the email. This includes the time when the agent is actively writing a response to the email.</p>
AWT	<p>Average Wrapup Time. Also known as After Call Work (ACW). Average wrapup time for calls or email during the scheduled period. The time required by an agent after a conversation is ended or a response to an email is sent, to complete work that is directly associated with the call just completed. Does not include time for any activities such as meetings, breaks, or correspondence. If your CSQ is of type Email and you are not using an email switch, the value in this column is zero (0).</p> <p>NOTE: WFM does not currently support email switches. You can enter email data manually and WFM will generate the correct calculations.</p>
SL	Service Level. Percentage of contacts to be answered for each interval.

6. Click Get Total to display the total for each column.
7. Click  (Save) to save your changes.

Requesting ACD Data

Use the Request ACD Data feature to pull call activity data from your ACD for a specified period.

NOTE: The Request ACD Data function (pulling in data on demand) is not available for Avaya ACDs or ACDs for which the Generic ACD type is selected.


You can use this feature when you want to do the following:

- Import historical data from your ACD for the period before you installed WFM
- Fill in gaps in your historical data that occur because of interruptions in the connection to your ACD after you installed WFM

To import ACD data into WFM:

1. Choose Special Functions > Request ACD Data. The Request ACD Data pane appears.
2. Complete the fields as follows.

Field	Description
Request ACD Data	(Read only) The name of your ACD.
Start Date	The start date and time of the data you want to retrieve, in mm/dd/yyyy hh:mm format. By default, the current date and time is entered.
End Date	The end date and time of the data you want to retrieve, in mm/dd/yyyy hh:mm format. By default, the current date and time is entered.
Available Requests	The type of data to import. The only option is AgentAndServiceStats (call activity data).

3. Click  (Launch Request). WFM launches the ACD data retrieval request.

NOTE: An ACD data retrieval request can put a large load on the system. It is advisable to request this data when the contact center is closed or during a quiet period.

NOTE: You can monitor the status of your request on the Server Request List pane (see "[Server Requests](#)" on page 278).

Introduction

This section covers the following topics:

- [Roles \(page 266\)](#)
- [Views \(page 269\)](#)
- [Users \(page 271\)](#)
- [Default Configuration \(page 276\)](#)
- [Server Requests \(page 278\)](#)
- [Compilation Requests \(page 280\)](#)
- [Generic Exceptions \(page 282\)](#)

Roles

A role is a collection of privileges. Users can have one or many roles, and have the collective privileges of all the roles assigned to them. If multiple roles are assigned to a user, the user will see a combination of topics on the Navigation menu that reflect the roles assigned to the user.

There are four roles in WFM: agent, supervisor, administrator, and scheduler. The access per role to the navigation nodes in WFM are described in [Table 13](#).

NOTE: Agents do not access this WFM interface, so they are not listed in [Table 13](#). They use the Workforce Management application through Workforce Optimization.

Table 13. Navigation nodes available per role

Navigation Node	Role		
	Admin	Supervisor	Scheduler
Environment	x		x
Agents	x		x
Forecasting	x		x
Schedules	x		x
Intraday	x		x
Reports	x	x	x
What-ifs	x		x
Historical	x		
Special Functions	x		
Administration	x		
Strategic Planning	x		x
Vacation Planning	x		x

Privileges and Scope

A privilege is the permission to perform a transaction, for example, the ability to accept schedule trades or delete CSQs.

A scope is a set of boundaries in which privileges apply. WFM sets scope by role, privilege, and view. For example, a scheduler can only create schedules for agents who are assigned to the teams associated with the view assigned to the scheduler.

Some transactions have no scope restrictions (for example, setting preferences).

[Table 14](#) lists the privileges for each WFM roles.

Table 14. WFM roles and privileges

Role	Privilege
Administrator	All functions on all data. Administrators also use the Workforce Optimization interface to configure and lock down agent dashboards.
Agent	Widgets available in the Workforce Management application accessed through Workforce Optimization to manage the agent's own information
Scheduler	<p>Manage CSQs, CSQ mappings, and exceptions within the scheduler's view</p> <p>Manage teams (and agents assigned to those teams), work shifts, breaks, exceptions, and projects within the scheduler's view</p> <p>For CSQs, CSQ mappings, teams, projects, work conditions, work shifts, and exceptions within the scheduler's view:</p> <ul style="list-style-type: none"> • Create distributions and forecasts • Create, display, and edit schedules • Perform post-production planning, display intraday information, and trade agent schedules • Generate reports • Perform what-if analysis • Display historical data • Manage server requests

Table 14. WFM roles and privileges (cont'd)

Role	Privilege
Supervisor	<p>Supervisors use Workforce Optimization widgets to manage agents and teams assigned to them, projects, work conditions, work shifts, and exceptions within the supervisor's view. Supervisors can also do the following:</p> <ul style="list-style-type: none"> • Display and edit schedules • Perform post-production planning, display intraday information, and trade agent schedules • Generate some reports in Workforce Optimization and other reports in WFM Administrator

Viewing Role Details

To view a role's details:

1. From the Navigation menu, choose Administration > Roles. The Role List pane appears.
2. Click a role. The Roles Details pane appears. This pane has three tabs:
 - General—displays the role's name.
 - Privileges—lists the privileges assigned to this role. This list cannot be modified.
 - Assign Users—enables you to assign users to this role.

Assigning Users to a Role

Use this procedure to assign users to a role in WFM. You can assign multiple roles to a user.

To assign users to a role:

1. From the Role Details pane, click the Assign Users tab. The Roles Details pane displays the available and assigned users.
2. Move the desired users from the Available list to the Assigned list by selecting them and clicking >. You can move users from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.

Views

A view controls the scope of accessibility a user has in WFM. A user assigned to a view only has access to the entities assigned to that view (for example, the CSQs, CSQ mappings, teams, projects, work conditions, work shifts, and exceptions assigned to the view) and the privileges assigned to their role.

A WFM entity can be included in one or multiple views. A user can be assigned to one or multiple views.


The Enterprise View is the default view in WFM. You can use this as your primary view or create new views to suit your needs.

This section covers the following topics.



- [Creating a View \(page 269\)](#)
- [Editing an Existing View \(page 270\)](#)
- [Deleting a View \(page 270\)](#)

Creating a View

To create a new view:


1. Choose Administration > Views. The View List appears.
2. Click  (New) to create a new view. The View Details pane displays the general view option.
3. Enter the name of the view in the Name field.
4. Select the Active check box to make this view accessible to assigned users.

NOTE: Only the default Enterprise View can be configured to be a system view. For all other views, the System View check box is disabled.

5. Click  (Save) to save your changes. The tabs needed to configure the new view appear.
6. On each of the tabs is an available list and an assigned list. Configure the new view by moving the desired elements from the available list to the assigned list.
 - a. Select the desired element in the Available list, then click >. The selected elements move to the Assigned list.
 - b. To remove elements from the view, select them from the Assigned list, then click <. The elements return to the Available list.
7. Click  (Save) to save your changes when you are finished configuring each tab.


Editing an Existing View

To edit an existing view:

1. Choose Administration > Views.
2. Click the name of the view you want to edit.
3. Make the desired changes.
4. Click  (Save) to save your changes.

Deleting a View

To delete a view:

1. Choose Administration > Views. The View List pane appears.
2. Select the view to delete by completing one of the following steps.
 - To delete one or more views, select the check box next to the view name.
 - To delete all views, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Users

You can add, update, and delete users in WFM. WFM allows you to create users for the following roles: administrator, scheduler, supervisor, and agent.

In a Unified CCX environment, the best practice is to manage agent identities through Unified CCX and allow the Sync service to automatically create a WFM user identity for each agent.

Users who are assigned the roles of supervisor, scheduler, and administrator might have an agent identity in Unified CCX. The best practice is to deactivate those users' agent role in WFM and then create duplicate users with the same name but different login credentials, and then apply the appropriate role and view. Keeping the deactivated agent identities rather than deleting them makes it possible for supervisors, schedulers, and administrators to act as agents if the need arises.

This section covers the following topics.

- [Creating a New User \(page 271\)](#)
- [Assigning a Role to a User \(page 273\)](#)
- [Assigning Views to a User \(page 274\)](#)
- [Deleting a User \(page 275\)](#)

Creating a New User

This procedure describes how to create a new user in WFM.

NOTE: A user created in WFM is not associated with any users in Unified CCX. If you create a user in WFM, the user will not appear in Unified CCX.

To create a new user in WFM:

1. Choose Administration > Users. The User List appears.

NOTE: This list might contain users who are inactive in Unified CCX. If you want to verify whether a user is active or inactive, log into Unified CCX and check the List of Inactive Agents.


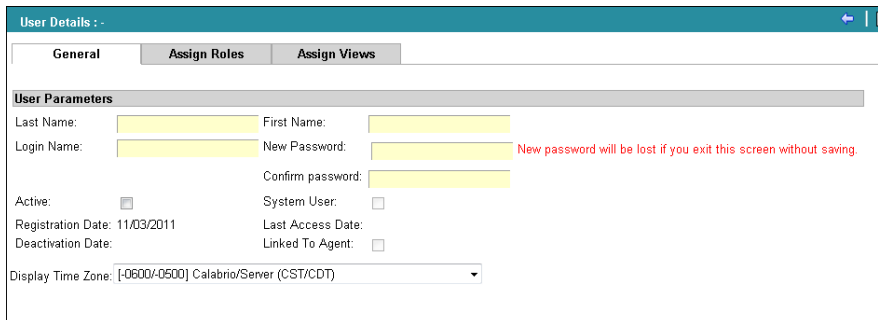
- Click  (New) to create a new user. The General tab of the User Details pane appears (Figure 81).

Figure 81. User Details: General tab



- Complete the fields.


Field	Description
Last Name	User's last name.
First Name	User's first name.
Login Name	The name the user will use to log into WFM. The login name is not case sensitive. If you are using Active Directory, the login name must match the user's Active Directory login name.
New Password	User's password. NOTE: This field does not appear if you are using Active Directory. WFM automatically uses the password associated with the user's Active Directory login name.
Confirm Password	User's password, to ensure the accuracy of what you entered in the Password field. NOTE: This field does not appear if you are using Active Directory. WFM automatically uses the password associated with the user's Active Directory username.
Active	Whether a user is active. Only active users can log into WFM. Clear the Active check box if you want to deactivate the user. NOTE: If you do not select this check box, the user cannot log into WFM.

Field	Description
Display Time Zone	The time zone in which the user's schedule is displayed. By default this is set to the Users Default Display Time Zone configured in Administration > Default Configuration > Schedule tab. If that is not configured, then the default is the server time zone.

The data displayed on the General tab is described in the following table.

Label	Description
System User	Whether the user has access to the Enterprise View. When checked, the user has access to the Enterprise View.
Registration Date	Date when the user was created.
Last Access Date	Last time this user logged into WFM.
Deactivation Date	Date when the user was deactivated. This date appears when you clear the Active check box.
Linked to Agent	Indicates whether an agent is associated with this user. NOTE: An agent must be associated with a user so the agent can log into the system and access My Page.

4. Complete one of the following steps:


- If this is not an active user, click  (Save) to save your changes.
- If this is an active user, you must assign at least one role to the user before you can save your changes. If you assign an administrator, scheduler, or supervisor role, you must also assign at least one view.

Assigning a Role to a User

To assign a role to a user:

1. From the User Details pane, click the Assign Roles tab. The User Details pane displays available and assigned roles.
2. Move the desired roles from the Available list to the Assigned list by selecting them and clicking >. You can move roles from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.

You can assign any combination of the administrator, scheduler, supervisor, and agent roles to a user.

3. Click  (Save) to save your changes.

Assigning Views to a User

Use this procedure to assign a view to a user created in WFM. The user can only perform tasks against entities in the views you assign to the user.


Main Views

The Main View designation affects the access the user has to applications in Workforce Optimization. If a view is designated as a user's Main View, then that user has read-write access to schedules in the agent Schedules application. Also, if an agent's Main Team is part of a supervisor's Main View, then the supervisor has access to that agent's requests in the Messaging application.

To assign views to a user:

1. From the User Details pane, click the Assign Views tab. The User Details pane displays available and assigned views.
2. Move the desired views from the Available list to the Assigned list by selecting them and clicking >. You can move views from the Assigned list back to the Available list by selecting the check box next to their listings and clicking <.
3. Select the Main View check box if you want the user to have read-write access to the schedules of the agents belonging to the teams assigned to the view.

NOTE: You must assign at least one view to the user.

4. Click  (Save) to save your changes.

Enabling Supervisors to Edit Agents in Workforce Optimization


In order to enable supervisors to edit agent schedules, insert agent activities, and trade agent schedules in Workforce Optimization, those agents must be assigned to teams that are in turn assigned to the supervisor's Main View.

To enable supervisors to edit agents in Workforce Optimization:

1. Create a team.
2. Assign the agents that the supervisor will manage to the new team.
3. Assign the new team to a view.
4. Assign that view to the supervisor, and make it the supervisor's Main View.

Editing an Existing User Account

To edit an existing user account:


1. Choose Administration > Users. The User List pane appears
2. Click the last name of the user account that you want to edit.
3. Modify the account as needed.
4. Click  (Save) to save your changes.

Deleting a User

Do not delete a user who originated in Unified CCX from WFM until that user is first deleted from Unified CCX. The Sync Service does not delete users from WFM when they are deleted in Unified CCX, so this task must be done manually.

BEST PRACTICES: It is recommended that you do not delete users. If they are deleted, then you lose the link between the agent and the user record.

To delete a user:

1. Choose Administration > Users. The User List pane appears.
2. Select the user to delete by completing one of the following steps.
 - To delete one or more users, select the check box next to the user name.
 - To delete all users, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Default Configuration


Use the Default Configuration function to configure the following elements of WFM.

- [Setting System-Level Parameters \(page 276\)](#)
- [Setting Dashboard Parameters \(page 276\)](#)
- [Configuring the Default Schedule Format \(page 277\)](#)

Setting System-Level Parameters

Use the General tab to configure basic settings for WFM.

To configure general system-level settings:

1. Choose Administration > Default Configuration. The General tab of the Default System Configuration pane appears.
2. Enter the name of your company or enterprise in the Enterprise Name field. The name can contain a maximum of 50 characters.
3. Click  (Save) to save your changes.

Setting Dashboard Parameters


Use the Dashboard tab to configure the default WFM dashboard. Users can configure their own dashboard view through their My Preferences page.

To configure the dashboard:

1. Choose Administration > Default Configuration and select the Dashboard tab.
2. Complete the fields as described in this table.

Field	Description
Data Interval	Length of the data interval displayed, in minutes.
Dashboard View	Default dashboard view for all users. ¹
Statistics View	Default statistics to be displayed for all users ¹ (see "Contact Statistics and Productivity Data" on page 205 for more information).
Graph 1, 2, and 3 Data	Type of data to appear in graph format on the dashboard. ¹
Graph 1, 2, and 3 Format	Type of graph format in which to display the selected data on the dashboard. ¹

1 Users can change their default views by changing their preferences as described in ["Setting Display Preferences" on page 33](#).

3. Click  (Save) to save your changes.

Configuring the Default Schedule Format


Use the Schedule tab to configure the details of your schedules.

To configure the default schedule format:

1. Choose Administration > Default Configuration and select the Schedule tab.
2. Complete the fields as described in this table.

Field	Description
Schedule Production Interval	(Read only) Schedule interval in minutes. This value is configured when the database is created.
Schedule Interval	Interval at which schedule data is displayed.
Start Time	Default schedule display start time. ¹
End Time	Default schedule display end time. ¹
First Day of the Week	First day of the week. Default = Sunday. If you change this value to another day of the week, do so before you set up and assign work shift rotations.
Number of Weeks Visible to Agents (Past)	Number of previous weeks that will be available for the agent to view.
Number of Weeks Visible to Agents (Future)	Number of future weeks that will be available for the agent to view.
Users Default Time Zone	The time zone that agents see by default in their schedules. You can choose to apply the default display time zone to new agents only, or to all new and existing agents.

1 Users can change the schedule start and end times as described in ["Setting Display Preferences" on page 33](#).

3. Click  (Save) to save your changes.

Server Requests

Schedulers and administrators can send requests to the server to produce distributions, forecasts, and schedules. These requests are put into a queue and processed one at a time.

You can view the server request queue in order to monitor the status of your request and to delete unneeded requests if necessary.

Displaying a Server Request

To display a server request:

1. Choose Administration > Server Request. The Server Request List appears (Figure 82).

Figure 82. Server Request List

ID	Status	Process Start	Process End	Requester	Description
149637	1	11/01/2010 00:00		wfadmin	Forecast
149638	1	11/01/2010 00:00		wfadmin	Forecast
149640	1	11/01/2010 00:00		wfadmin	Forecast
149781	1	11/02/2010 00:00		wfadmin	Forecast
149783	1	11/02/2010 00:00		wfadmin	Forecast
149788	1	11/02/2010 00:00		wfadmin	Forecast
149806	1	11/02/2010 00:00		wfadmin	Forecast
150657	2	11/08/2010 00:00	11/08/2010 00:40	wfadmin	Strategic Forecast
150658	2	11/08/2010 00:00	11/08/2010 00:53	wfadmin	Strategic Forecast
150659	2	11/08/2010 00:00	11/08/2010 00:59	wfadmin	Strategic Forecast
150762	9	11/08/2010 00:00		wfadmin	Distribution
150763	9	11/08/2010 00:00		wfadmin	Distribution
150764	9	11/08/2010 00:00		wfadmin	Distribution
150766	9	11/08/2010 00:00		wfadmin	Distribution
150768	9	11/08/2010 00:00		wfadmin	Forecast
150769	2	11/08/2010 00:00	11/08/2010 03:38	wfadmin	Distribution
150770	9	11/08/2010 00:00		wfadmin	Forecast
150773	1	11/08/2010 00:00		wfadmin	Forecast
150778	2	11/08/2010 00:00	11/08/2010 06:58	wfadmin	Strategic Forecast
150780	9	11/08/2010 00:00		wfadmin	Distribution

The columns are described in the following table.

Label	Description
ID	Order in which the server request arrived.

Label	Description
Status	Status of the request. Possible values are: <ul style="list-style-type: none"> • 0 - In queue. The request is waiting in the queue. • 1 - Processing. This request is currently being processed. • 2 - Completed Successfully. The request ended successfully. • 9 - Unsuccessful. The request failed. This error occurs when a prerequisite is missing (for example, there is no forecast for the schedule launched). For more details, click the ID number.
Process Start	Date and time in which the request was initiated.
Process End	Date and time in which the request was completed.
Requester	Name of the user who initiated the request.
Description	Type of request.


NOTE: To refresh the data, choose Administration > Server Requests.

2. Click the request ID. The Server Request Details pane appears and displays information associated with the request
3. Click the Assigned CSQs tab to display the CSQs that are the source of data.

Deleting Server Requests

You can delete server requests whose status is 0, 2, or 9. A status of 1 indicates the request is currently being processed and cannot be deleted.

To delete server requests:

1. Choose Administration > Server Request. The Server Request List pane appears.
2. Select the request to delete by completing one of the following steps.
 - To delete one or more requests, select the check box next to the request ID.
 - To delete all requests, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Compilation Requests

The Compilation Request List displays a summary of each compilation request sent to the server. From the Compilation Request List, you can monitor the status of requests to compile data that is extracted from historical data tables. You can also delete incomplete requests.

Only active compilation requests appear in the Compilation Request List. Once a compilation is completed, it disappears from the list.

Displaying Compilation Requests

To display compilation requests to the server:

- Choose Administration > Compilation Requests. The Compilation Request List appears. The columns in the list are described in the following table.


Label	Description
Number	Number indicating the order in which the compilation request arrived. Click the number to display the Compilation Request Details pane.
Status	Current status of the request. Possible status values are: <ul style="list-style-type: none"> • 0 - To be Processed. The request is waiting to be processed. • 1 - Processing. The request is currently being processed. • 2 - Ended Successfully. The request ended successfully. • 9 - Ended Abnormally. The request failed. The reason for the failure appears on the Compilation Request Details pane.
Start Date	Date when the request was initiated.
End Date	Date when the request was processed.
Requester	Name of the user who initiated the request.
Description	Summary of the request.
Priority	Priority assigned by the system to the request. The highest priority is 1.

Deleting Compilation Requests

You can only delete compilation requests with the status 0 (To Be Processed), 2 (Ended Successfully), or 9 (Ended Abnormally). A status of 1 (Processing) indicates the request is currently processing and cannot be deleted.

NOTE: Once a compilation is completed, it normally disappears from the list. This procedure can be used when compilation fails for some reason.

To delete compilation requests:



1. Choose Administration > Compilation Requests. The Compilation Request List pane appears.
2. Select the request to delete by completing one of the following steps.
 - To delete one or more requests, select the check box next to the request ID.
 - To delete all requests, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

Generic Exceptions

Use the Generic Exceptions pane to create and manage exceptions that appear as options that agents can select from their My Page when they request time off.


Creating and Editing Generic Exceptions

To create and edit generic exceptions:

1. Choose Administration > Generic exceptions. The Generic Exception List appears.
2. Do one of the following:
 - To create a new generic exception, click  (New) and enter the name of the new exception in the Name field.
 - To edit the name of an existing generic exception, click the name of the exception you want to edit, and then change the name in the Generic Exception Details pane.
3. Click  (Save) to save your changes.

Deleting a Generic Exception

To delete a generic exception:

1. Choose Administration > Generic Exceptions. The Generic Exception List pane appears.
2. Select the exception to delete by completing one of the following steps.
 - To delete one or more exceptions, select the check box next to the exception name.
 - To delete all exceptions, select the check box in the column heading.
3. Click  (Delete). An Internet Explorer dialog box appears.
4. Click OK to confirm the deletion and dismiss the dialog box.

A**abandoned contact**

A call or other type of contact that has been offered into a communications network or telephone system, but is terminated by the person originating the contact before any conversation takes place. In an outbound calling scenario, abandoned calls refer to contacts that are disconnected by the automated dialer once live contact is detected and no agent is available to match up with the call.

ACD (Automatic Call Distributor)

A specialized phone system used for handling many incoming calls. The ACD recognizes and answers incoming calls and looks in its database for call routing instructions. It sends the call to a recording, to a voice response unit (VRU), or to an available agent according to the instructions for that call. An ACD normally produces information that tracks both calls and agent performance.

ACW (After Call Work)

Work immediately following an inbound call or transaction. If work must be completed before the agent can handle the next contact, then ACW is factored into the average handle time (AHT). After call work might involve entering activity codes, updating databases, filling out forms, or placing an outbound contact. The agent is unavailable to receive any inbound calls while in this state. Also called wrapup and post contact processing (PCP).

adherence

The percentage of time that agents follow their schedules. When calculating adherence, WFM considers scheduled arrival and departure times, breaks, lunches, and time spent on scheduled activities. For example, an agent who is scheduled to arrive at 08:00 and leave at 16:00 and sticks to the schedule for the entire day is adhering to the schedule 100%.

adjustment factor

Increases or decreases the selected value by the specified percentage in a forecast or scenario. For example, if you apply an adjustment factor of 1.05 when calculating a forecast, WFM increases the forecast by 5%. If you apply an adjustment factor of 0.95, WFM decreases the forecast by 5%.

administrator

A user role with the highest level of access to WFM, able to configure and administer the application. An administrator can also have the roles of scheduler and supervisor.

agent

1. The person who handles calls and email in a contact center. Also called a customer service representative or telephone sales representative.
2. A user role in WFM with the most restricted access to the application. The agent role cannot be assigned to users who have other roles.

AHT (Average Handle Time)

The average amount of time it takes to handle a contact to completion, including talk time plus after-contact work time. To calculate, divide the total seconds of work time by the number of contacts.

AOD (Average Open Days)

The average number of days that a contact center is open. The average number of open days does not include all closed and open holidays, and closed days that are not weekends.

APT (Average Processing Time)

The average time necessary for agents to process email. Process time is elapsed time from when an agent opens the email until the agent sends the email, and includes the time when the agent is actively writing a response to the email.

ASA (Average Speed of Answer)

The average time it takes to answer a call. The ASA is calculated as the sum of the queue time for calls answered during the interval and divided by the number of calls answered during the interval.

assignment

A type of fixed work shift that does not cover requirements. Use this work shift type to schedule agents for non-phone-related activities for entire days or weeks.

ATT (Average Talk Time)

The average elapsed time from when an agent answers a call until the agent disconnects.

AWT (Average Work Time)

Also known as After Call Work (ACW). The average time required by an agent after a conversation is ended or a response to an email is sent, to complete work that is directly associated with the call or email just completed. Does not include time for any activities such as meetings, breaks, or correspondence.

B**block of hours**

The duration of a work shift (for example, six hours). You can set up to 28 different work conditions for the same block of hours.

break

An activity during which an agent is not handling contacts because of a work condition.

business orientation

The result you intend to obtain during the year and the means you use to reach that result. For example, desired results can include:

- 10% contact volume growth
- 5% sales increase
- 5% reduction in labor turnover rate

C**closed day**

A day when the contact center does not handle contacts. If the contact center is only open Monday through Friday, you would designate Saturdays and Sundays as closed days.

concurrent users

The users who are logged into WFM at any given time. The maximum capacity for concurrent users is the total number of users that can be logged into WFM at any given time.

configured user

Any scheduled or recorded agent plus all other users with active login rights to Workforce Optimization (WFO) applications (for example, supervisors, managers, quality evaluators, or schedulers). The maximum capacity for configured users is the total number of users who can be configured in WFM. See also named user.

conformance

The percentage of time an agent works the right amount of time regardless of the time of day when the agent works. Schedule conformance does not take arrival and departure times into account. For example, if an agent is scheduled to work from 08:00 to 16:00, but instead works from 10:00 to 18:00, his or her conformance is 100 percent but adherence is 0 percent.

contact center

A business center with two or more persons that provides customer services by phone, email, and fax. Examples of contact centers are help desks, customer service centers, catalog sales centers, reservation centers, and telemarketing/collection operations.

contact

A connection via voice or email from a customer to an agent in the customer contact center.

CSQ (Contact Service Queue)

In Unified CCX, a group of agents to which contacts are routed. It is generally associated with a specific skill.

CSQ mapping

A mechanism used by Unified CCX to link agents with a CSQ. It usually reflects an agent's skill within the contact center. A CSQ mapping has no other purpose or effect. The Sync Service extracts a CSQ identity from Unified CCX, and loads it into WFM and also creates a CSQ mapping for it in WFM. WFM uses the CSQ mapping when creating schedules.

customer service representative

A service representative who handles customer contacts, including account inquiries, complaints, and support calls.

D

database

A collection of related data or information organized in such a way that it can be easily retrieved or manipulated.

debugging file

A log file (with the *.dbg file extension) that contains diagnostic information that can help resolve issues. WFM creates debugging logs by default. If you want debugging turned off, you must edit the appropriate configuration file.

distribution

One week's worth of data about contacts (call or email) for every 30-minute interval that includes:

- the percentage of the day's total contacts
- the contacts received
- the average talk or processing time
- the average work time

See *also* distribution scenario.

distribution scenario

Contains the contact (call or email) volume history for each period, day, and week in the specified reference period. It includes the calculation of the percentage of the day's calls or email by day in each schedule period. It also identifies the average talk time or average processing time and work time per call for each half hour increment.

See *also* distribution.

DN (Directory Number)

A phone number customers dial to connect to a specific CSQ. This is the customer's first point of entry into the PBX/ACD.

E

error code

A brief description of a system event.

exception

Any unplanned activity in an employee's work schedule, including meetings, training sessions, unscheduled breaks, and absenteeism.

F

firm date association

A link that you can create between two dates that fall on different days of the week from year to year. For example, New Year's Day 2010 is on Friday and New Year's Day 2011 is on Saturday.

You need to use firm date associations because otherwise WFM uses the day of the week and not the date to generate distributions and forecasts.

fixed work shift

A work shift that covers requirements for fixed hours and days. Use this work shift type to schedule agents for phone and email-related activities for entire days or weeks. A fixed work shift has the following characteristics:

- Work days during the week are fixed
- Hours worked each day are fixed, but do not have to be the same for each day
- The shift start time each day is fixed, but does not have to be the same for each day

forecast

A prediction of future contact volume and distribution. In WFM, a forecast uses historical contact information from a specified period to estimate the future contact volume and scheduling requirements for a contact center.

See *also* forecast scenario, standard forecast, and strategic forecast.

forecast scenario

A named forecast that is not applied to a schedule.

FTE (Full-time Equivalent)

The number of total hours scheduled divided by the maximum number of compensable hours in a work year. For example, if the work year is defined as 2,080 hours, then one worker occupying a paid full time job all year consumes one FTE. Two employees working for 1,040 hours each consume one FTE between the two of them.

G

gap

The difference between the number of agents scheduled and the number of agents forecasted to be needed. See also negative gap and positive gap.

generic exception

A high level type of exception that an agent can select when requesting time off. For example, a generic exception can be absence, sick leave, or vacation. If an agent has a doctor appointment, the agent selects the sick leave generic exception and specifies a doctor appointment in the Comment field.

H

handled call

A call that is answered by an agent (as opposed to being blocked or abandoned).

handle time

The combination of conversation time and after call work time.

historical data

The contact and agent information captured on reports generated by the ACD over a period of time. WFM uses this information to generate distributions, forecasts, schedules, and strategic planning forecasts.

I

idle time

The time when an agent is ready and available to take contacts, but there are no contacts to take.

impact delay

A delay, typically in days, between a special event and its effect.

For example, the impact delay for a radio promotion is 0, because as soon as the broadcast starts, the customers start calling the contact center. The impact delay for a sales brochure mailed to customers could be 2 days, and starts the moment the sales brochures were mailed (launch date) and ends when the customers receive the sales brochures and start calling the contact center.

in service

An activity during which an agent is scheduled to be logged in and ready to handle contacts.

ISO week date

The ISO week date system is a leap week calendar system that is part of the ISO 8601 date and time standard. The system is used in government and business for fiscal years, as well as in timekeeping. The first week of a year is the week that contains the first Thursday of the year.

The system uses the same cycle of 7 weekdays as the Gregorian calendar. Weeks start with Monday. ISO years have a year numbering which is approximately the same as Gregorian years, but not exactly. An ISO year has 52 or 53 full weeks (364 or 371 days). The extra week is called a leap week.

A date is specified by the ISO year in the format YYYY, a week number in the format ww prefixed by the letter W, and the weekday number, a digit data from 1 through 7, beginning with Monday and ending with Sunday. For example, 2006-W52-7 (or in its most compact form, 06W527) is the Sunday of the 52nd week of 2006. In the Gregorian system this day is called 31 December 2006.

K

KPI (Key Performance Indicator)

The most critical measures of performance in any organization, typically productivity measures.

L

log file

A log file (with the *.log file extension) contains event messages and, if problems occur, warning and other error messages. All messages in log files are identified by an error code.

long-term strategic plan

A forecast that determines business orientations and budget for a period of months or a year. See also short-term strategic plan.

linear email deferral

An option for handling email. WFM divides all email received during business hours by the number of intervals in a work shift to determine the number of emails handled during each half hour. WFM follows the same procedure with email received after business hours.

lunch

An activity during which an agent is not handling contacts because of a work condition.

N

N/A (Not Available)

An activity during which an agent is not scheduled for a CSQ and the agent's work shift does not allow the agent to be scheduled.

named user

Any scheduled or recorded agent plus all other users with active login rights to Workforce Optimization (WFO) applications (for example, supervisors, managers, quality evaluators, or schedulers).

See *also* configured user.

negative gap

There are not enough agents to meet the schedule requirements. If there is a negative gap, you need to find agents to fill that gap in the schedule.

no deferring

An option for handling email. During business hours, agents must handle all email received during the half hour when it is received. After business hours, agents must handle all email received after business hours during the first half hour of the next day.

non-linear email deferral

An option for handling email. During business hours, WFM schedules the agents to handle 50% of the email received during the first half hour and divides the number of email handled for each remaining half hour by 50%, until the last half hour in the work shift. During the last half hour in the work shift, agents are expected to complete the remaining email. WFM follows the same procedure with email received after business hours.

non-phone activity

Any activity that prevents an agent from answering phones. Non-phone activities include meetings, training sessions, PTO, email, vacation, lateness, holiday, unscheduled breaks, and absenteeism.

See *also* offline activity.

not scheduled

An activity during which an agent is not scheduled to work.

O

occupancy ratio

The percentage of time an agent spends handling customer contacts for each interval versus the agent's total time in session.

occupancy

The percent of logged-in time that an agent spends in active contact handling states (for example, on incoming calls, in wrapup activity, or outbound calls).

offline activity

Any exception that prevents agents from handling customer contacts. They can be activities that are external to the customer contact center efforts, such as illness and vacation, or internal, such as training and department meetings. For strategic planning and vacation purposes, WFM tracks these activities to determine the offline activity FTE ratio for the contact center. The typical FTE ratio for offline activities corresponds to 20–30% of monthly FTE. See also, non-phone activity.

open day

A day when the contact center handles contacts. WFM displays all calendar days open by default. Monday through Friday are typical examples of open days.

outside hours

An activity during which the CSQ is closed and agents are not handling contacts.

P

paid exception

An exception for which an employee is paid (for example, sick leave).

PBX (Private Branch Exchange)

A private telephone exchange located on the user's premises and connected to the public network via trunks. Also known as a PABX (private automatic branch exchange).

positive gap

The number of agents scheduled exceeds the schedule requirements. When there is a positive gap, the time can be used for exceptions, assignments, or projects. For example, a 30-minute meeting with four agents can be scheduled after the schedule is produced when there is a positive gap of four or more agents.

post-production planning

The process of scheduling agents for non-service activities, such as meetings or training, after a schedule has been generated. The Post-Production Activity Planning pane can be used to find times when agents can be scheduled for activities so that the service level is least affected.

precision %

A percentage indicating how precise the forecast was when compared to the actual contact volume. The formula used to determine precision is:

forecasted contact volume ÷ actual contact volume

privilege

The permission to perform a transaction. For example, the ability to accept schedule trades or delete skills.

processing time

The time necessary for agents to respond to email. Process time is elapsed time from when an agent opens an email until the agent sends a reply. This includes the time when the agent is actively writing a response to the email.

productivity ratio

The percentage of time a CSQ spends handling customer contacts.

project

A non-routine activity that prevents agents from handling contacts. Projects are generally assigned to optimize agent idle time. These non-routine activities occur each work shift and can be assigned for periods of a day or a week. They can be activities that are internal to the customer contact center efforts, such as answering email and sending faxes.

PTO (Paid Time Off)

An exception type assigned to an agent by a scheduler to more fully define a general exception.

Q**quality objective**

A speed of answer goal, often expressed as a percentage, for answering calls within a specified number of seconds or email within a specified number of hours. For example, 80 percent of all calls answered within 20 seconds or 100 percent of email answered within 24 hours.

queue

The “waiting line” for delayed calls. A queue holds the call until an agent is available. It can also refer to a list of items waiting to be processed (for example, email).

R

real-time adherence

Measurement of how closely agents follow their planned work schedule. Real-time statistics are available from the ACD to show the current state of any agent; these states can be compared to an agent's schedule to determine adherence at any point in time. Real-time adherence is displayed in the Real Time Adherence widget in Workforce Optimization.

resource requirements calculation

An estimate that looks at the existing work shift types, CSQs and forecast dates, and work shift types (including hours and work conditions) and creates a set of requirements based on calculated resources needed to cover the specified forecast dates.

role

A collection of privileges. A user can have one or many roles. Users have the collective privileges across all roles assigned to them. If multiple roles are assigned to a user, the user sees a combination of tasks on the Navigation pane that reflect the roles assigned to the him or her. There are four roles with specific limitations: agent, administrator, scheduler, and supervisor. See also privilege, agent, administrator, scheduler and supervisor.

S

schedule adherence

See adherence.

schedule conformance

See conformance.

schedule

A schedule lists the times at which agents are either available or assigned to handle calls or process emails for a CSQ. For each agent, a schedule includes the start and end times for work shifts, breaks, lunches, exceptions, overtime, and projects (such as meetings or training).

scheduler

A user role in WFM. A scheduler can also have the roles of administrator, scheduler, and supervisor.

scope

A set of boundaries in which privileges apply. WFM sets scope by role, privilege, and view. Some transactions have no scope restriction (for example, setting preferences). A supervisor who can create schedules can only create schedules for agents assigned to the teams associated with the view assigned to the supervisor.

service goal

A definable service objective. For example, answering 80% of calls within the first 20 seconds.

service level or service level objective

A speed of answer goal, often expressed as a percentage, for answering calls within a specified number of seconds or email within a specified number of hours. For example, 80% of all calls answered within 20 seconds or 100% of email answered within 24 hours.

shift offer

An agent makes a shift available to others (for example, when the agent plans to be absent for a day).

shift trade

An agent offers to trade shifts with another agent.

short-term strategic plan

A forecast that determines business orientations and budget for a period of weeks or by day. See also long-term strategic plan.

skill

A developed aptitude or ability (for example, speaking a foreign language).

special event

A type of event that causes contact volume to deviate from normal (for example, a power outage that shuts down the contact center or a special offer that increases contact volume). In WFM, you can define special events that might cause a forecasted contact volume to be above or below normal and assign a special event to a specific date for specific CSQs. This allows you to identify times when a special event altered contact volume for the CSQ.

standard forecast

A prediction about contacts over some specific time, including volume, distribution, average talk time, and average speed of answer. The distribution of a standard forecast is by day and interval.

See *also* forecast, forecast scenario, and strategic forecast.

strategic forecast

A prediction of future events for a future period of 6, 12, 18, or 24 months. The distribution of a strategic forecast is by ISO month and week. See also, forecast and standard forecast.

supervisor

A supervisor is the person who has first-line responsibility for the management of a group of agents, and often is able to monitor agents and system performance. It is also a role in WFM. Supervisors can also be assigned roles as administrator and scheduler.

T

talk time

The elapsed time from when an agent answers a call until the agent disconnects.

team

A group of agents. An agent can belong to many teams. WFM generates reports by team.

trend

The year-to-year change in contact volume. A trend tells you the percentage of change in contact volume for the current year over the same period last year. The method for determining the trend is dependent on the extent of historical data stored in WFM.

U

unpaid exception

An exception for which an employee is not paid (for example, a doctor's appointment).

user

A person who can log into WFM. A user can be linked to an agent identity to take calls.

V

variable work shift

A work shift that covers requirements for variable hours and days. In contrast to a fixed work shift, a variable work shift offers flexibility in at least one of the following ways:

- You can designate at least one day a week as an optional work day. You can choose whether or not to schedule an agent for an optional work day based on the customer contact center's requirements.
- You can designate the total work hours for at least one day a week as variable.
- You can designate the arrival time for at least one day a week as variable.

view

The level of accessibility a user has in WFM. For example, you can assign a view that is associated with one or more users, CSQs, CSQ mappings, teams, work conditions, work shifts, and exceptions.

virtual CSQ

A CSQ that merges data from several source CSQs, enabling WFM to generate a single distribution, forecast, and schedule using historical data from multiple CSQs.

virtual service

A collection of services unified (or merged) into a single service. It can be associated with multiple virtual services. WFM uses the virtual service when generating statistics, schedules, and forecasts.

W

work condition

A set of rules used to identify a routine activity that prevents the agent from answering contacts. These routine activities, such as breaks and lunches, occur during every work shift.

work shift rotation

A work shift in which an agent works different shifts over several weeks.

work shift

The hours and days when an agent can work. It includes days, hours, arrival, and departure times.

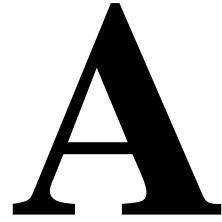
Workforce Management

1. The art and science of having the right number of agents, at the right times, to answer an accurately forecasted volume of incoming calls at the service level standard set by the contact center.
2. A Cisco product.

wrapup time

The time required by an agent after a conversation is ended or a response to an email is sent, to complete work that is directly associated with the call just completed. Does not include time for any activities such as meetings, breaks, or correspondence.

Quick References, Tips, and Tricks



Introduction

This appendix contains quick references on how to perform common WFM tasks, as well as tips and tricks that help you use WFM more easily.

Agent Tasks

- [Adding a New Agent \(page 300\)](#)
- [Assigning Dual Roles to an Agent \(page 301\)](#)
- [Deactivating an Agent Who Leaves the Contact Center \(page 302\)](#)

CSQ Tasks

- [Scheduling a New CSQ \(page 303\)](#)
- [Creating a Virtual CSQ \(page 304\)](#)

Distribution, Forecast, and Schedule Tasks

- [Generating a Schedule \(page 306\)](#)
- [Generating a Forecast \(page 307\)](#)
- [Generating a Distribution \(page 308\)](#)
- [Generating a Forecast Scenario \(page 310\)](#)
- [Creating Organizational Groups for Former Agents \(page 311\)](#)
- [Determining Optimum Fixed Shifts \(page 311\)](#)
- [Manually Editing Call Handle Times \(page 313\)](#)
- [Managing Exceptions \(page 314\)](#)

Agents

Adding a New Agent

Use these steps when a new agent joins the contact center and needs to be included in the schedule.

Table 15. Adding a new agent to the contact center

Step	Description	Comment
Agents > Agents (Activate the agent record and create the work shift rotation)		
1	Locate and select the agent in the agent list.	In a Unified CCX environment, users are imported by the Sync service.
2	Select the Active check box.	
3	Enter the agent's login name. This is the agent's login to WFM.	In an Active Directory (AD) environment, enter the agent's AD login.
4	<p>Optional step: enter agent information.</p> <p>Employee Number: By default, this is the same as the agent's ACD login. You can change this to the agent's actual employee ID if desired.</p> <p>Company/Department Start Date: By default, WFM populates these fields with the date that WFM first synchronized this agent's information from the ACD.</p> <p>Rank: You can enter any alphanumeric string in this field or leave it blank.</p> <p>Time Zone: If the contact center spans multiple time zones, enter the agent's home time zone.</p> <p>Display Time Zone: Specify the time zone in which you want the agent's schedule to be displayed.</p>	You can use the start date and rank to determine scheduling order.
5	Go to the Teams tab and make sure the right teams are selected. Add and remove teams as necessary.	Default team information is captured by WFM.
6	Go to the CSQ Mappings tab and verify that the right CSQ mappings are assigned to the agent.	WFM schedules agents for all CSQ mappings that have been assigned to them.

Table 15. Adding a new agent to the contact center (cont'd)

Step	Description	Comment
7	Go to the Work Shifts tab and click Edit Agent Rotation.	If the agent requires custom work shifts, you should create them now.
8	Create the agent's rotation, then save your changes.	
Administration > Users (Activate the user record)		
9	Locate the agent's name in the User List.	
10	Go to the Assign Roles tab and assign the Agent role to this agent.	
11	Go to the General tab. Enter the New Password and confirm it. This will be the agent's password when logging in to WFM. Select the Active check box.	In an Active Directory environment, the password fields will not appear, because the password is linked to AD.
12	Save your changes.	

Assigning Dual Roles to an Agent

Use these steps to assign an agent another role (for example, if an agent is also a supervisor). Since WFM does not allow agents to have dual roles, you accomplish this by creating a new user account that is almost identical to the agent's user account.

Table 16. Creating a dual role for an agent

Step	Description	Comment
Administration > Users (View existing user; create a new user)		
1	Open the agent's user account and note the following settings: <ul style="list-style-type: none"> • Last Name • First Name • Login Name • View 	
2	Create a new user account with the same Last Name, First Name, and View settings as are in the agent's user account.	

Table 16. Creating a dual role for an agent (cont'd)

Step	Description	Comment
3	Assign a Login Name to the new user account that is different from the agent's user account Login Name.	If Active Directory is used, a separate AD account must be created for the user's second role.
4	Assign the second, non-agent role to the user.	
5	Select the Active check box.	If you do not select this check box, the user cannot log into WFM.
6	Save your changes.	

Deactivating an Agent Who Leaves the Contact Center

Use these steps to deactivate records for agents when they leave the contact center.

You should never delete an agent from WFM. Deleting an agent also deletes all historical schedules and reporting information pertaining to that agent. Deactivating an agent frees up a user license and removes the agent from any lists of active agents.

Table 17. Deactivating an agent

Step	Description	Comment
Agents > Agents (Deactivate the agent record)		
1	Locate and select the agent in the agent list.	
2	Clear the Active check box. Optional: Enter an End Date for the agent.	
3	Save your changes.	
Administration > Users (Deactivate the user record)		
4	Locate the agent's name in the User List.	
5	Clear the Active check box.	
6	Save your changes.	

CSQs

Scheduling a New CSQ

Complete the following steps when you need to generate a schedule for a new CSQ that has been added to your WFM system.

Table 18. Scheduling a new CSQ

Step	Description	Comment
Environment > CSQs (Create the CSQ)		
1	Locate and select the CSQ in the CSQ list.	
2	MSAQ: If this CSQ is to be part of a Multi-Skilled Agent Queue, select the MSAQ check box. Select the appropriate CSQ Priority. This value determines how WFM prioritizes calls to this CSQ.	Tip: Assign a unique color to the CSQ to make it easier to identify in the Schedule Viewer.
3	Enter a Standard Talk Time and Standard Work Time for the CSQ.	You can also request that WFM calculates these numbers when you run a distribution.
4	Enter a Service Level/Quality Objective in the form of a percentage of calls answered in a number of seconds.	An example is, "80% of calls should be answered within 20 seconds."
5	If the contact center spans multiple time zones, select the appropriate time zone for the CSQ.	
6	Enter the opening and closing hours for each day of the week. Clear the Active check box for every day of the week the CSQ is closed.	WFM will only generate forecast data for days and times the CSQ is open.
7	Go to the CSQ Mappings tab and confirm that the appropriate CSQ mappings are assigned to this CSQ. Change as appropriate.	
8	Optional: If you want WFM to schedule agents using a custom method, go to the Scheduling Order tab and update the Scheduling Order Parameters.	By default, WFM schedules variable shift agents by highest number of available hours.
9	Save your changes.	
10	Optional: If you want your new CSQ to be part of a virtual CSQ, locate and select the virtual CSQ, then go to the Virtual CSQs tab, add your new CSQ, and save your changes.	

Creating a Virtual CSQ

Complete the following steps to add a new virtual CSQ to WFM. A virtual CSQ is a combination of several source CSQs and can be used for scheduling in some instances.

Table 19. Creating a new virtual CSQ

Step	Description	Comment
Environment > CSQs (Create the virtual CSQ)		
1	Click New to create a new CSQ.	You should always create a virtual CSQ from scratch; you should never add a CSQ to a source CSQ.
2	Enter a Number to represent the CSQ.	Use a number range that is separate from the ACD CSQs.
3	Enter a unique Description for the virtual CSQ.	
4	MSAQ: If the virtual CSQ is to be part of a Multi-Skill Agent Queue, check the MSAQ check box. Select the appropriate CSQ Priority. This value determines how WFM prioritizes calls to this CSQ.	Assign a unique color to the CSQ to make it easier to identify in the Schedule Viewer.
5	Enter a Standard Talk Time and Standard Work time for the CSQ.	You can also request that WFM calculate these numbers when you run a distribution.
6	If the contact center spans multiple time zones, select the appropriate time zone for the CSQ.	
7	Enter the opening and closing hours for each day of the week. Clear the Active check box for every day of the week the CSQ is closed.	WFM will only generate forecast data for days and times the CSQ is open.
8	Click the Virtual CSQs tab. Select from the list of available source CSQs all CSQs that you want to make part of the new virtual CSQ.	
9	Optional: If you want WFM to schedule agents using a custom method, go to the Scheduling Order tab and update the Scheduling Order Parameters.	By default, WFM schedules variable shift agents by highest number of available hours.
10	Save your changes.	
Environment > CSQ Mapping (Create the new virtual CSQ mapping)		

Table 19. Creating a new virtual CSQ (cont'd)

Step	Description	Comment
11	Click New.	
12	Enter a Name for the new CSQ mapping.	
13	Click the Agents tab. Add all appropriate agents to the CSQ mapping.	Use the Filter by Team and CSQ Mapping drop-down lists to locate agents more quickly.
14	Click the CSQs tab. Select the virtual CSQ you created.	
15	Save your changes.	
Special Functions > Historical Merge (Merge historical data)		
16	Select a Date Range for the historical merge. The range should include all historical data for the source CSQ.	
17	Select the new virtual CSQ from the Select a CSQ list.	The source CSQs will populate to the right.
18	Click Launch Request.	
Administration > Server Requests (Verify completion)		
19	Verify that the schedule request completed successfully. If the request failed, click the Request ID to display more information. Correct the error, and then launch another schedule request.	Status 2 indicates success, while status 9 indicates failure.

Distributions, Forecasts, and Schedules

Generating a Schedule

Complete the following steps when you need to generate a new schedule.

Requirements

The agents to be scheduled must satisfy these criteria:

- Be activated
- Have a start date that is on or before the first day of the schedule period
- Be assigned to a work shift rotation for the schedule period
- Be assigned to a CSQ that is associated with the CSQ you are scheduling

The CSQ to be scheduled must have forecast data for every day in the schedule period, with the exception of any days the CSQ is defined as closed (Environment > CSQs).

If the CSQ is missing forecast data for the schedule period, or if you recently generated a new distribution for the CSQ and you want to use the new distribution for your schedule, you must generate a new forecast before you generate the schedule.

Best Practices

You should assign exceptions (Agents > Assign Exceptions) and weekly projects (Agents > Projects) before you generate a schedule. Examples of exceptions include company holidays and pre-approved exceptions.

NOTE: Any exception requests that you approve (Intraday > Inbox) before you generate a schedule will also be incorporated in the schedule.

Table 20. Generating a schedule

Step	Description	Comment
Schedules > Schedule Request (Generate the schedule)		
1	Select one or more CSQs. MSAQ: If you are using the Multi-Skill Agent Queue feature, you must submit one schedule request for all of the MSAQ CSQs together.	
2	Enter the schedule start date. This must fall on the first day of the week (Administration > Default Configuration, Schedule tab).	If the date you enter is not the first day of the week, WFM will change the date so it is.

Table 20. Generating a schedule (cont'd)

Step	Description	Comment
3	Leave the other fields as is.	You can generate a schedule for several weeks, but it will take more time to process.
4	Click Launch Request. WFM will ask you to confirm your request. Click OK or Cancel as appropriate.	Generating a schedule can take several minutes or more, depending on the number of agents and CSQs involved.
Administration > Server Requests (Verify completion)		
5	Verify that the schedule request completed successfully. If the request fails, click the Request ID to display the error message. Correct the error, then launch your request again.	Status 2 indicates success, while status 9 indicates failure.

Generating a Forecast

The forecasting process uses the distribution of call volume per interval and day and historical data to predict the number of calls per interval and the number of agents required to meet the service level objective.

Keep in mind that you need forecast data for a period before you can generate a schedule for that period. For example, if you want to generate a schedule for one week starting on November 1, 2009, you can use Sunday, November 1, 2009 as the forecast start date and Saturday, November 7, 2009 as the forecast end date. In fact, you can also use any date before Sunday, November 1, 2009 as the forecast start date, and/or any date after Saturday, November 7, 2009 as the forecast end date.

Requirements

A CSQ must have a distribution before you can generate a forecast for it. The distribution reference period can be any period that contains representative historical data. The distribution does not need to have data for days that your CSQ is defined to be closed, such as Saturday or Sunday.

Table 21. Generating a forecast

Step	Description	Comment
Forecasting > Forecast Request (Generate the forecast)		
1	Select one or more CSQs.	The CSQ Type defaults to Call. You only need to change it if you are working with an email CSQ.

Table 21. Generating a forecast (cont'd)

Step	Description	Comment
2	Enter the dates for which you want to generate the forecast.	Keep in mind that when you generate a forecast, the forecast will always start on the first day of the week (Administration > Default Configuration, Schedule tab).
3	Leave the Year-to-Year Trend Calculation as Without Trends, unless you have more than 12 months of historical data.	If WFM has more than one year of historical data, generate a forecast With Trends as this will generally give the best results.
4	Enter dates for the Volume Projection Reference Period. This period does not have to be the same as the distribution reference period.	When choosing a reference period, if call volume is fairly steady, you can use a longer reference period. If the call volume varies greatly, use a more recent reference period.
5	Click Launch Request.	
Administration > Server Requests (Verify completion)		
6	Verify that the forecast request completed successfully. If the request fails, click the Request ID to display the error message. Correct the error, then launch your request again.	Status 2 indicates success, while status 9 indicates failure.

Generating a Distribution

A distribution consists of the pattern of incoming call volume for each half hour interval on each day of the week, Monday through Saturday.

Requirements

The CSQ you want to generate a distribution for must have historical data.

NOTE: To find out whether you have historical data, go to Historical > CSQ. Select the CSQ from the drop-down list and enter the dates you want to check. One approach is to leave the end date as is and change the start date to the same day of the previous year. Then select Per Month and click Show Data.

Table 22. Generating a distribution

Step	Description	Comment
Forecasting > Forecast Request (Generate the forecast)		
1	Select one or more CSQs.	
2	Modify the reference period only if necessary.	The reference period must contain historical data. If no data exists for this period, an error message will appear.
3	Leave all of the days selected unless the CSQ is always closed on certain days.	It can cause problems later if you don't have a distribution for a particular day of the week.
4	Click Launch Request.	
Administration > Server Requests (Verify completion)		
6	Verify that the distribution request completed successfully. If the request fails, click the Request ID to display the error message. Correct the error, then launch your request again.	Status 2 indicates success, while status 9 indicates failure.

What-If Scenarios

What-If forecasts are useful in determining the effects of various contact center situations. Use these steps to generate forecast scenarios.

Generating a Forecast Scenario

Table 23. Generating a what-if distribution

Step	Description	Comment
Forecasting > Distribution (Generate a populated distribution scenario)		
1	Select one CSQ and then select the Assign Distribution to a Scenario check box.	Unlike production distributions, you can only generate a distribution scenario for one CSQ.
2	Select the Create New Scenario check box and enter a name in the Scenario Name field.	
3	Modify the remaining fields if necessary and then click Launch Request.	
What-ifs > Forecast Scenario (Create an empty forecast scenario)		
4	Click New to create a new forecast scenario.	
5	Enter a name and then select one CSQ from the drop-down list.	Unlike production forecasts, you can only create a forecast scenario for one CSQ.
Forecasting > Forecast Request (Populate the forecast scenario)		
6	Select the CSQ, and then click Get Scenarios.	
7	Select the distribution and forecast scenarios that you just created from the two drop-down lists.	
8	Modify the remaining fields if necessary and then click Launch Request.	
What-ifs > Forecast Scenario (Review the forecast scenario)		
9	Click View Scenario and choose the date you want to display.	
10	Review and edit as necessary.	

Tips and Tricks

Creating Organizational Groups for Former Agents

When agents leave the contact center, you might wish to deactivate them, but not delete them. By deactivating them and leaving them in the system, you are able to retain all of the historical schedule and reporting information stored about the agents.

This can, however, make managing lists of agents difficult, because many WFM pages show lists of all agents, regardless of whether or not they are active (and as a result, you are able to report on inactive agents).

To make organizing ex-agents easier, you can create an ex-agent team and ex-agent CSQ mapping. When an agent leaves the contact center, you can remove that agent from any production teams and CSQ mappings and move the agent into these ex-agent groups for organizational purposes.

NOTE: When assigning an ex-agent to the ex-agent team, remember that every agent must have a main team. Make sure that the Main check box is selected.

When running reports, if you filter the agent list by team or CSQ mapping, you will not see ex-agents since they no longer belong to any active teams or CSQs. Similarly, if you want to run a report on ex-agents, filter the agent list by the ex-agent team or CSQ mapping.

Determining Optimum Fixed Shifts

One of the biggest challenges facing the contact center's workforce management staff is balancing the required call coverages with the agent desire for stable work shifts. The best way to provide call coverage is to implement variable work shifts to cover the daily variations in call patterns. The primary issue with variable work shifts is that agent start times will vary every day.

One solution to this is to allow WFM to create a variable schedule and then recreate that schedule with fixed shifts. To do this, perform the following steps.

1. Create a variable shift for full-time agents that covers all possible start times in the contact center ([Figure 83](#)).

For example, let us say that a contact center is open from 08:00 to 23:00, Monday through Friday, so eight-hour shifts (plus one hour of unpaid lunch) can begin any time between 08:00 and 14:00.

Figure 83. Variable shift that covers all start times

Name: Active:

Work Shift Type

Fixed Hours per Week:
 Assignment Days per Week:
 Variable

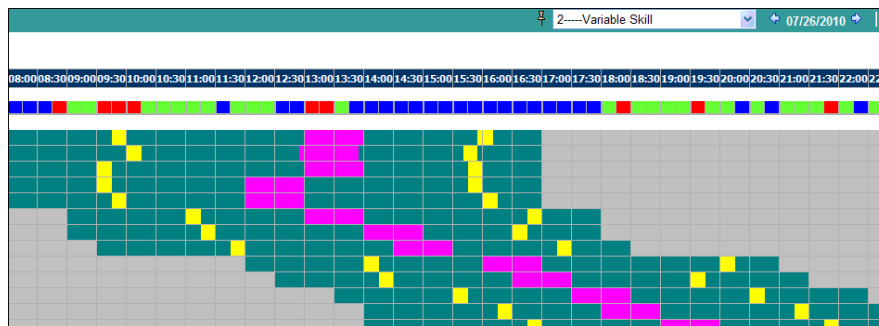
Schedule Increment **Optimization**

00:15 Minutes Multilinear
 00:30 Minutes Optimum

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total Hours
Min. Hours:	0:00	8:00	8:00	8:00	8:00	8:00	0:00	40:00
Max. Hours:	0:00	8:00	8:00	8:00	8:00	8:00	0:00	40:00
Days Off Allowed:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Arrival at the Earliest:	<input type="text"/>	08:00	08:00	08:00	08:00	08:00	<input type="text"/>	
Arrival at the Latest:	<input type="text"/>	14:00	14:00	14:00	14:00	14:00	<input type="text"/>	
Minimum Interval:	00:00	00:00	00:00	00:00	00:00	00:00	00:00	

2. Assign this work shift to all full-time agents.
3. Launch a schedule and wait for it to complete.

Figure 84. Completed schedule



4. Recreate the resulting schedule with fixed shifts and assign them to the appropriate agents. In the example above, the system identifies the need for five agents at 08:00, two agents at 09:00, one at 09:30, and so on.

5. Now create the applicable fixed work shifts and assign them to the appropriate number of agents.

In this example, the busiest day of the week, Monday, was used to recreate the schedule with fixed shifts. The system will give a different shift configuration for every day of the week, but by choosing the busiest day of the week, you can get a good approximation of the rest of the week, in most cases.

Manually Editing Call Handle Times

When calculating call handle times, the distribution adds average talk time (ATT) and average work time (AWT) together. In many contact centers, however, agents use the Not Ready state for after call work (ACW), which WFM does not count. You can include this time in the handle time several different ways: by editing the Standard Work Time parameter, manually editing distributions, and manually editing forecasts.

Editing the Standard Work Time

Under each CSQ (Environment > CSQs), there are configurable Standard Talk Time and Standard Work Time parameters. If agents on average spend two minutes in a Not Ready state at the end of a call, you can edit the Standard Work Time to reflect this.

When launching a new forecast request (Forecasting > Forecast Request), be sure to expand the Additional Parameters pane and select the Standard Handling Times.

The tradeoff with this method is that it uses the same Talk Time and Work Time for every 30-minute interval in the day. This method works best in contact centers where the Handle Time is fairly steady throughout the day.

Editing Distributions Manually

For contact centers where the Handle Time fluctuates on a daily basis, the best method is to edit the distribution directly. Using this method, the system can calculate the talk time variations throughout the day and the week.

To do this, run a distribution and then edit the AWT field to reflect the amount of time your agents spend in a Not Ready state after a call.

Editing Forecasts Manually

The last method for editing the handle time is best if the amount of work time varies greatly. You can edit a forecast after it has been run (Forecasting > Edit Forecast) and apply an adjustment factor to the AWT field. The forecast can then be recalculated to take into account the adjustment factor.

Managing Exceptions

Using Post-Production to Add an Exception to a Group of Agents

Use this procedure to add an exception to a group of agents after a schedule has been put into production.

In the following example, a 30-minute training session is added to a group of agents.

1. Choose Intraday > Post-Production (Figure 85).

Figure 85. Post-production activity planning

Specify Interval		Analysis Results						
Date	Start	End	Forecasted	Scheduled	Gap	Ratio	Service Level	
08/03/2010	10:00	10:30	4	12.0	8.0	100.0	100 %	

2. Enter start and end dates and times for the exception you want to add.
3. Click Analyze.

- After the exception is analyzed, under the Analysis Results section, click the link under the Start column, and select the Select an Exception tab that appears (Figure 86).

Figure 86.

The screenshot shows the 'Post-Production Activity Planning' window with the 'Select an Exception' tab active. The 'Interval selected' section shows 'Date: 08/03/2010 From: 10:00 To: 10:30'. Below this, there are two main sections: 'Select an Agent' and 'Select an Exception'. The 'Select an Agent' section has a 'Filter by Team' dropdown and a 'Filter by Skill Group Mapping' dropdown set to 'Variable Schedule'. A list of agents is displayed, including Bagley, Red; Barker, Tony; Binjay, Zachary; Brian, Hugh; Fox, Jim; France, Esther; House, Mandy; James, Ron; Jemmy, Tiger; and Josef, Valter. The 'Select an Exception' section has a dropdown menu with 'training' selected and a 'Schedule the Exception' button. At the bottom left, there are 'All' and 'Validate' buttons.

- Filter the list of agents by team or CSQ mapping, select the agents to be scheduled, and then choose an exception from the drop-down list.
- Click Schedule the Exception to add the exception to the selected agents' schedules.

Removing Exceptions from a Schedule

Removing an exception that has been applied to a group of agents from an existing schedule can be a labor-intensive process if all edits are done manually using the Edit Schedule page. The following procedure can be used to ease this process.

The example describes how to remove the exception (a half-hour training session that runs from 10:00 to 10:30) that was added to the schedule in post-production in the previous tip ("[Using Post-Production to Add an Exception to a Group of Agents](#)" on [page 314](#)).

To remove this exception, manually edit one agent's schedule and then copy the interval to the remaining agents.

- Choose Schedules > Edit Schedule, and on the production schedule, select one of the agents who has the exception.

2. Locate the interval where the exception is applied, and add a five-minute exception before and after the currently scheduled exception. It doesn't matter what exception you apply, because this is only a temporary placeholder.

Figure 87. Add two five-minute exceptions before and after the exception to be removed

Save done.

09:20	2	In service
09:25	2	In service
09:30	2	In service
09:35	2	In service
09:40	2	In service
09:45	2	In service
09:50	2	In service
09:55	2	Vacation
10:00	2	training
10:05	2	training
10:10	2	training
10:15	2	training
10:20	2	training
10:25	2	training
10:30	2	Vacation
10:35	2	In service

3. Save the edited schedule.
4. Now select the interval between your two new exceptions (the exception you want to remove) and change the activity to In Service, or any other activity you want to schedule your agents for (Figure 88).

Figure 88. Change the exception's activity to In Service.

09:55	2	Vacation	Paid	08/03/2010
10:00	2	In service	Paid	08/03/2010
10:05	2	In service	Paid	08/03/2010
10:10	2	In service	Paid	08/03/2010
10:15	2	In service	Paid	08/03/2010
10:20	2	In service	Paid	08/03/2010
10:25	2	In service	Paid	08/03/2010
10:30	2	Vacation	Paid	08/03/2010
10:35	2	In service	Paid	08/03/2010

5. Save the edited schedule.
6. Choose Intraday > Schedule Trade and select the Copy Selected Intervals option.
7. In the Source Agent list, select the agent whose schedule you edited in Step 2. In the Start Date field, select the date of the exception.
8. Filter the list of Destination Agents by team or CSQ mapping and select the agents who need to have the exception removed.
9. Click Get Schedule.

- Under the source agents, select the check box in front of the interval you want to copy. It should be bordered by the two five-minute exceptions you added earlier (Figure 89).

Figure 89. Copying the selected interval

The screenshot shows the 'Trade Type' configuration window. At the top, there are three radio buttons: 'Schedule Trade (Same Day)', 'Schedule Trade (Different Days)', and 'Copy Selected Intervals' (which is selected). Below this are two columns of filters: 'Filter by Team' and 'Filter by Skill Group Mapping', both set to 'Variable Schedule'. The 'Source Agent' list on the left includes: House, Mandy; James, Ron; Jemmy, Tiger; Josef, Valter (highlighted); Lortie, Susana; Rochette, Denise; and Smith, Sandy. The 'Destination Agent' list on the right includes: Bagley, Red; Barker, Tony; Binjay, Zachary; Brian, Hugh; Fox, Jim; France, Esther; and House, Mandy. At the bottom, there are two 'Get Schedule' buttons with 'Start Date' and 'End Date' fields set to 08/03/2010. Below the filters is a table with two parts: a list of intervals on the left and a detailed schedule on the right.

Date	Skill Group	Interval	First Name	Last Name	Skill Group	Date	Interval
<input type="checkbox"/>	08/03/2010	2			2	08/03/2010	00:00 - 08:00 = Not Available
<input type="checkbox"/>	08/03/2010	2			2	08/03/2010	08:00 - 09:00 = Available
<input type="checkbox"/>	08/03/2010	2			2	08/03/2010	09:00 - 10:30 = In service
<input type="checkbox"/>	08/03/2010	2			2	08/03/2010	09:55 - 10:00 = Vacation
<input type="checkbox"/>	08/03/2010	2			2	08/03/2010	10:00 - 10:30 = training
<input type="checkbox"/>	08/03/2010	2			2	08/03/2010	10:30 - 10:35 = Vacation
<input type="checkbox"/>	08/03/2010	2			2	08/03/2010	10:35 - 11:15 = In service
<input type="checkbox"/>	08/03/2010	2			2	08/03/2010	11:15 - 11:30 = Break
<input type="checkbox"/>	08/03/2010	2			2	08/03/2010	11:30 - 13:00 = In service
			Red	Bagley	2	08/03/2010	00:00 - 08:00 = Not available
			Red	Bagley	2	08/03/2010	08:00 - 09:00 = Available
			Red	Bagley	2	08/03/2010	09:00 - 10:30 = In service
			Red	Bagley	2	08/03/2010	10:00 - 10:30 = training
			Red	Bagley	2	08/03/2010	10:30 - 11:45 = In service
			Red	Bagley	2	08/03/2010	11:45 - 12:00 = Break
			Red	Bagley	2	08/03/2010	12:00 - 14:00 = In service
			Red	Bagley	2	08/03/2010	14:00 - 15:00 = Lunch
			Red	Bagley	2	08/03/2010	15:00 - 17:00 = In service
			Red	Bagley	2	08/03/2010	17:00 - 17:15 = Breqak
			Red	Bagley	2	08/03/2010	17:15 - 18:00 = In service

- Click Launch Request to copy this exception to everyone.
- Remove the two placeholder exceptions you added to the agent in Step 2. Go to Schedules > Edit Schedule and change those five-minute intervals back to In Service.

Periodic Checklists and Tasks

B

This appendix contains checklists and tasks that should be performed periodically in order to optimize your use of WFM.

- [Checklists \(page 320\)](#)
- [Tasks \(page 321\)](#)

Checklists

Daily Checklist

- Check your intraday inbox messages for employee absences, work shift trades, and offers. Approve requests and update schedules as needed (see ["Your Inbox" on page 230](#)).
- Monitor coverage and adherence to determine if additional staffing changes are required (see ["Coverage of Requirements" on page 216](#) and ["Adherence" on page 224](#)).

Weekly Checklist

- Update the official schedule for the next several weeks to reflect any absences, work shift trades, or offers (see ["Schedule Trades" on page 220](#) and ["Your Inbox" on page 230](#)).
- Review intraday performance reports to determine if additional staffing changes are required (see ["Reports" on page 235](#)).

Monthly Checklist

- Check distribution scenarios to make sure forecasting and staffing assumptions reflect your current situation and objectives (see ["Distribution Scenarios" on page 240](#)).
- Update forecasts (["Editing Forecasts" on page 148](#)).
- Delete any distribution or forecast scenarios you no longer need (see ["Distribution Scenarios" on page 240](#) and ["Forecast Scenarios" on page 243](#)).
- Review unusual events and create a special event assignment (see ["Special Events" on page 153](#)).

Yearly Checklist

- Assign the appropriate allocation of vacation hours to each agent (see ["Vacation Hours" on page 329](#)).
- Enter closed days (including weekends and holidays) for each CSQ (see ["Closed Days" on page 160](#)).
- Create firm date associations between historical dates and target dates for each CSQ in your forecast period (see ["Firm Date Associations" on page 158](#)).

Tasks

Weekly/Monthly Tasks

The following tasks should be completed on a daily or weekly basis. Each contact center will have different requirements regarding the amount of time spent on any one of these areas, but in general, the more up-to-date the information given to the Workforce Management system, the better the resulting schedules will be.

NOTE: If call patterns vary widely, you should generate distributions often (weekly or biweekly) using recent short reference periods. If call patterns don't fluctuate widely, you can generate distributions less often (monthly or quarterly) using long reference periods.

Schedules

Updating the schedule daily will ensure more accurate data reflected for forecasting and reporting.

Adherence

Agent adherence assumes that agents perform the activity they are scheduled for at the time they are scheduled to do it. If agents cannot adhere to their schedules for any reason (for example, receiving a call right before a scheduled break and delaying the break by five minutes) will negatively affect their adherence. Have supervisors and schedulers ensure that the daily schedule reflects the realities of the contact center to ensure the accuracy of adherence reports.

TIP: Historical adherence is based on agents logging in when they are scheduled to be in service and logging out when they are not in service. Not Ready state changes are not captured historically. Therefore, agents should log out every time they are scheduled for breaks, lunches, projects, and exceptions to ensure accuracy.

Coverage of Requirements

Use the Coverage of Requirements bar at the bottom of the schedule to see how changes to the schedule will reflect service level. You can then edit the schedule or bring in additional agents to handle staff shortages.

Dashboard

The dashboard is the best tool for daily information about the health of the Workforce Management system.

- **Total Calls.** Total calls are a daily indication of forecast accuracy. If the system is not accurately forecasting calls, reconsider the reference period being used. Shorter and more recent reference periods generally are more accurate when contact center volumes are fluctuating in the short term. Longer reference periods are more accurate when forecasting call volumes that are relatively steady.

TIP: What-if scenarios can be very helpful when determining which forecasting method works best for your contact center. Running several What-If forecasts using different methods of forecasting (different reference periods, forecasting with and without trends, etc.), and comparing these scenarios to the daily dashboard is a good method of determining which method suits your contact center and individual CSQs.

- **Service Level.** Are service level goals being met? There are several ways in WFM to determine root causes. Compare the forecasted Average Talk Time and After Call Work to the actual. If the actual figures are greater than the forecasted figures, you might have a shortage of agents.
- **Customize the Dashboard.** Remember, the graphs and statistical data on the dashboard can be configured in your preferences. There are many different format options that can be configured to suit your needs.

Post-Production

Use the post-production function to schedule non-contact center activities at a time when the service level will be impacted the least. For example, use it to find the best time to schedule training or a meeting.

Adherence

Agent adherence to the schedule is the number one factor that determines the effectiveness of the WFM system. If agents do not adhere to the schedules assigned to them, WFM cannot accurately predict the service level. Use the adherence tool to confirm agents are sticking to their schedules.

Special Events

When unexpected fluctuations in call volume occur (for example, a power outage in the middle of the day that cuts call volume in half), special events should be entered to normalize them. For forecasting and distribution purposes, when using that date as part of a reference period, WFM needs to be told it was a one-time event.

TIP: To determine the appropriate impact ratio for a special event, use the Forecast Accuracy in the Performance Daily report as a guide (Reports > Performance Reports). For example, if the forecast predicted 500 calls, but the power outage dropped calls to 250, the forecast accuracy for that day would be 50 percent. Therefore, the impact ratio for the special event entered

on that day is 0.50 (this assumes that the forecast would have been accurate for that day had the special event not occurred).

Yearly Tasks

This section contains a list of tasks that should be performed on an annual basis. These are items that are based on pre-planned, annual events such as company holidays.

Closed Days

Before the beginning of each calendar year, enter Closed Days for each CSQ that is forecasted and scheduled.

NOTE: Entering a Closed Day causes the system to forecast the number of calls for that CSQ for that day to be zero. Agents with fixed shifts will still be scheduled. Exceptions must be assigned to agents in order to ensure they are not scheduled on closed days.

TIP: Exceptions for company holidays should be added just before the schedule for the holiday week is generated.

Firm Dates

Use the Firm Dates tool to associate past historical dates to future dates for forecasting purposes. For example, the day after a holiday might have a higher call volume every year. Use Firm Dates to associate the day from the previous year to the corresponding day in the upcoming year.

TIP: Use the copy/paste feature to copy firm dates from one CSQ to another.

Forecasting with Trends

Once the WFM system has one year's worth of historical data, you can use the With Trends option when forecasting. Trend calculations generally produce the best forecasting results.

Introduction

This appendix lists statistics used in WFM and describes their definitions and how they are calculated in specific ACDs.

Table 24. Cisco Unified CCX statistics

Statistic	Description/Calculation
% Busy	
% In Session	
% Processing	<p>Total calls handled by an agent out of the total calls offered.</p> $\text{(Total ACD Calls Handled} \div \text{Total Offered Calls)} \times 100$ <p>ACD Calls Handled = The number of calls the agent answered during the logged-in interval by going into the ACD Talking state.</p> <p>Total Offered Calls = Total number of ACD calls offered to the Agent during the logged-in interval.</p>
Average Absence Time	<p>The average amount of time that an agent was logged in but was not accepting ACD calls.</p> $\text{sum (Not Ready)} \div \text{sum (Answered Calls)}$ <p>Not Ready = ACD State: Not ready. The agent is unavailable for any call work.</p> <p>Answered Calls = The number of calls the agent answered during the logged-in interval by going into the ACD Talking state.</p>
Average After Call Work	<p>The average amount of time that an agent spent on the work that is required immediately following an ACD call. The agent is considered unavailable to receive another ACD call.</p>

Table 24. Cisco Unified CCX statistics

Statistic	Description/Calculation
Average Calls Per Hour	<p>The average number of ACD calls answered. Calls are counted in the interval in which an agent answered.</p> <p>Calls per hour = $(\text{Answered Calls} \times 3600) \div \text{In Service time}$.</p> <p>Answered Calls = Number of calls handled by the agent when he is logged in.</p> <p>In Service time = Total time in which the agent is In Service.</p>
Average Not Ready Time	<p>The average amount of time that an agent was logged in but was not accepting ACD calls.</p> <p>$\text{sum (Not Ready)} \div \text{sum (Answered Calls)}$</p> <p>Not Ready = ACD State: Not ready. The agent is unavailable for any call work.</p> <p>Answered Calls = The number of calls the agent answered during the logged-in interval by going into the ACD Talking state.</p>
Average On Hold Time	<p>The average amount of time per Answered ACD call that an agent places an ACD call on hold.</p>
Average Processing Time	<p>The average amount of time that an agent was in calls, on hold, work ready, and work not ready.</p> <p>$\text{sum (Total Talk Time + Work Time)} \div \text{sum (Answered Calls)}$</p> <p>Total Talk Time = ACD State: Talking. The time agent spends talking on a call (inbound, outbound, or inside).</p> <p>Work Time = ACD State: Work. The agent is performing after call work and will be ready to receive a call when completed.</p> <p>Answered Calls = The number of calls the agent answered during the logged-in interval by going into the ACD Talking state.</p>
Average Ready Time	<p>The average amount of time that an agent was logged in and was available to accept ACD calls.</p> <p>$\text{sum (Ready Time)} \div \text{sum (Answered Calls)}$</p> <p>Ready = ACD State: Ready. The agent is ready to accept a call.</p> <p>Answered Calls = The number of calls the agent answered during the logged-in interval by going into the ACD Talking state.</p>
Average Talking Time	<p>The average amount of time that an agent was on ACD calls, beginning when an agent answers an ACD call until the agent disconnects the call, including hold time. Only considers inbound calls.</p>

Table 24. Cisco Unified CCX statistics

Statistic	Description/Calculation
Average Waiting Time	<p>The average amount of time that an agent was available to receive an ACD call. It is the total amount of waiting time divided by the number of incoming ACD calls answered.</p> <p>$\text{sum (Available Time)} \div \text{sum (Calls Handled)}$</p> <p>Available Time = ACD State: Ready. The agent is ready to accept a call.</p> <p>Calls Handled = The number calls the agent answered during the logged-in interval by going into the ACD Talking state.</p>
Handled Calls	<p>The total number of ACD calls that an agent completed.</p> <p>$\text{sum (Answered Calls)}$</p> <p>Answered Calls = The number calls the agent answered during the logged-in interval.</p>
Incoming Calls	<p>The total number of incoming calls that an agent completed.</p> <p>sum (In Calls)</p> <p>In Calls = The number of calls to an agent.</p>
Outgoing calls	<p>The total number of outgoing calls that an agent completed.</p> <p>sum (Out Calls)</p> <p>Out Calls = The number of calls originated by the agent.</p>
Total After Call Work	<p>The total amount of time that an agent spent on the work that is required immediately following an ACD call.</p> <p>$\text{sum (Total Handled Calls Time - Total Handled Calls Talk Time)}$</p> <p>Total Handled Calls Time = ACD State: Talking + Work</p> <p>Total Handled Calls Talk Time = ACD State: Talking.</p>
Total Processing Time	<p>The total amount of time that an agent was in call, on hold, work ready, and work not ready.</p>
Total Talk Time	<p>The total amount of time that an agent was on ACD calls, beginning when an agent answers an ACD call until the agent disconnects the call, including hold time. Only considers inbound calls.</p> <p>$\text{sum (Talking Time)}$</p> <p>Talking Time = ACD State: Talking. The time agent spends talking on a call, including hold time</p>
Total Time Busy	<p>The total amount of time that an agent was logged in but was not able to take an ACD call during the interval.</p>

Table 24. Cisco Unified CCX statistics

Statistic	Description/Calculation
Total Time In Service	<p>The total amount of time that the agent was either in a Ready state or was handling a call (total talk time plus total after-call time).</p> <p>sum (Total Talk Time + Work Time + Total Waiting)</p> <p>Total Talk Time = ACD State: Talking. The time agent spends talking on a call including any on hold time (inbound, outbound, or inside).</p> <p>Work Time = ACD State: Work. The agent is performing after call work and will be ready to receive a call when completed.</p> <p>Total Waiting = ACD State: Ready. The agent is ready to accept a call.</p>
Total Time In Session	<p>Total time in seconds during the period that the agent was logged into the ACD.</p> <p>sum (Logged On Time)</p> <p>Logged On Time = The amount of time the agent is logged in, including all states when an agent is logged in (Ready, Not Ready, Talking, Work).</p>
Total Time Not Ready	<p>The total amount of time that an agent was in the Not Ready state.</p> <p>sum (Not Ready Time)</p> <p>Not Ready Time = ACD State: Not ready. The agent is unavailable for any call work.</p>
Total Time On Hold	<p>The total amount of time that an agent placed calls on hold, including hold time for transfers and conferences.</p>
Total Time Ready	<p>The total amount of time that an agent was logged in and available to accept ACD calls.</p> <p>sum (Ready Time)</p> <p>Ready Time = ACD State: Available. The agent is ready to accept a call.</p>
Transferred Calls	<p>The total number of ACD calls that an agent transferred.</p> <p>sum (Transferred Calls + Conferenced Calls)</p> <p>Transferred Calls = The number of all the calls that agent Transferred while on an active ACD call.</p> <p>Conferenced Calls = The number of all the calls that agent Conferenced while on an active ACD call.</p>

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