



Nortel Workforce Management

Schedulers' Guide

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New in this release

The following sections detail what's new in *Nortel Workforce Management Schedulers' Guide* (NN44480-114) for Release 7.0.

- ["Features" \(page 13\)](#)

Features

This document is the first release of the *Schedulers' Guide*.

Introduction

This guide is intended for use by Workforce Management schedulers. It guides you through the steps to use Forecasting and Scheduling, an intuitive desktop solution for managing and planning your contact center activities.

Screen shots used in this guide are for illustrative purposes only. There may be some differences between what you see in the product and these screen shots, but those differences should not be significant or affect the accuracy of the information contained in this guide.

This document contains the following chapters:

- ["Welcome to Forecasting and Scheduling" \(page 21\)](#)
Introduces you to Forecasting and Scheduling and its features.
- ["Workforce Management Basics" \(page 27\)](#)
Describes opening and logging in to Forecasting and Scheduling, its structure and workflow, how to navigate in the application, and changing its default settings.
- ["Forecasting and Scheduling Work Modes" \(page 24\)](#)
Introduces Forecasting and Scheduling's work modes and provides you with information about using those modes to organize your contact center in Forecasting and Scheduling.
- ["Scheduling with Forecasting and Scheduling" \(page 67\)](#)
Provides step-by-step instructions for creating a schedule.
- ["Organization Mode Modules and Tasks" \(page 77\)](#)
Describes each Forecasting and Scheduling Organization mode module and task in detail.
- ["Campaign Mode Modules and Tasks" \(page 153\)](#)
Describes each Forecasting and Scheduling Campaign mode module and task in detail.
- ["Multi-Contact and Skill-Based Scheduling" \(page 213\)](#)
Offers a brief overview of skill-based scheduling.

- ["Multi-Site Scheduling" \(page 219\)](#)
Describes the separately licensed Multi-Site feature, which allows you to create centralized forecasts and distributed schedules.
- ["Intra-Day Optimization" \(page 223\)](#)
Describes the separately licensed IntraDay feature, which allows you to run your operations more effectively and more efficiently by responding to and adjusting for variations on a real time and intra-day basis.
- ["Queue Hopping" \(page 239\)](#)
Describes the separately licensed Queue Hopping feature, which allows you to schedule agents to work different queues, requiring different skills, at various times throughout their shift.
- ["Workforce Planning" \(page 243\)](#)
Describes Forecasting and Scheduling's workforce planning features.
- ["OutBound Scheduling" \(page 251\)](#)
Describes the separately licensed OutBound-Media feature, which allows you to schedule, forecast, and track outbound calling activities.
- ["Workforce Management Basics" \(page 267\)](#)
Provides a short introduction to the Workforce Management portion of the Workforce Optimization Solution, including on how to log in, navigate, and log off.
- ["Request Management" \(page 293\)](#)
Briefly describes the request management features of the web application and refers you to the appropriate manual for additional information.
- ["Using the Tracking Module" \(page 327\)](#)
Describes the web applications Tracking module, including Adherence (allows you to analyze employee adherence to schedules at any point during the day or to assess trends and potential problems), Pulse (helps you track your contact center performance and provides a place for you to enter and edit historical data), and Alert Rules (allows you to view alert rules for campaigns and the system as a whole).
- ["Reports" \(page 379\)](#)
Describes the Reports module of the web application. In addition, it contains the following appendixes:
- [Appendix "Frequently Asked Questions" \(page 407\)](#)
Gives answers to some of the most frequently asked questions about Forecasting and Scheduling.

- [Appendix "Technical Reference" \(page 421\)](#)
A discussion of some of the more technical aspects involved in using Forecasting and Scheduling, including a list of common error messages, a description of the way Forecasting and Scheduling uses different text colors, a section on deleting information, a look at the way Forecasting and Scheduling uses priorities and preferences, and a description of how to do quick comparison of the predicted and required staffing and service level statistics.
- [Appendix "Preferences Scheduling in Forecasting and Scheduling" \(page 447\)](#)
Gives you information about the Forecasting and Scheduling 7.8.0 preferences scheduling methodology to help you better understand the way they impact your schedules.

In addition to the above, this guide also contains a Glossary, which describes various industry terms used in this manual and the products which it describes

Intended Audience for this Guide

This guide is designed to be used by schedulers in the Workforce Management portion of Impact 360. Users are expected to be experienced in working with contact center equipment and software applications, as well as PC workstation hardware and software.

Conventions Used in this Guide

The following table describes the standard conventions that are used in this document.

Area	Description
Menu items	Menu items are highlighted in bold as in the following example: From the menu, choose File > Preferences > Options .
Document names	Document titles appear in italics. For example: For more information, see the <i>Quality Monitoring 7.7 Installation Guide</i> .

Area	Description
Buttons, functions, and dialog box and window names	Specific button or function names are highlighted in bold. The following example shows how a button and dialog names appear in the documentation: Click OK , and then choose the Restore Database dialog box.
User variables	When the user is expected to type a value, the name of the variable to be replaced is surrounded by < >. For example: The notation < ER Server Name > refers to the name of your Enterprise Reporting server. When you see this notation, replace it with the actual name of the Enterprise Reporting server.

Customer support

This section explains how to get help for Nortel products and services.

Finding the latest updates on the Nortel Web site

The content of this documentation was current at the time the product was released. To check for updates to the latest documentation, go to www.nortel.com/documentation.

Getting help from the Nortel Web site

The best way to get technical support for Nortel products is from the Nortel Technical Support web site:

www.nortel.com

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products.

- download software, documentation, and product bulletins
- search the Technical Support web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting help over the phone from a Nortel Solutions Center

If you do not find the information you require on the Nortel Technical Support web site, and have a Nortel support contract, you can also get help over the phone from a Nortel Solutions Center.

In North America, call 1-800-4Nortel (1-800-466-7835). Outside North America, go to the following web site to obtain the phone number for your region:

www.nortel.com/callus

Getting help from a specialist by using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

www.nortel.com/erc

Getting help through a Nortel distributor or reseller

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.

Welcome to Forecasting and Scheduling

Welcome to Forecasting and Scheduling, a world-class, extensive solution for the workforce management needs of your enterprise contact center. This chapter introduces you to Forecasting and Scheduling and its features.

Forecasting and Scheduling provides you with an intuitive desktop solution for managing and planning your contact center activities, and ensures that your contact center will deliver the ultimate in customer service.

Forecasting and Scheduling offers:

- State-of-the-art forecasting and scheduling tools designed to meet your customer service goals.
- An easy-to-use interface that leverages advanced technology for rapid schedule building.
- Flexible forecasting and scheduling based on your contact center rules and needs.
- Virtual contact center management.
- Seamless integration with your automated call distributor (ACD).
- Queue- and group-level performance analysis and monitoring with easy-to-read graphs.
- Robust employee management tools.

These features are available through an easy-to-use Windows interface designed to make all levels in the contact center more productive.

Workforce Management Packages

To meet the needs of a broad spectrum of enterprises, the Workforce Management portion of the Workforce Optimization Solution is available in pre-packaged solutions that deliver different levels of functionality.

The *Operational Series Workforce Management Package* is comprised of functionality designed to optimize agent performance, reduce risk, and automate manual processes such as forecasting and scheduling. It includes:

- Forecasting and Scheduling—Client software used for daily and weekly forecasting and scheduling.
- Web-Enabled Self-Service—A standard, web-based interface module for agents, supervisors, and administrators.
- Advanced Adherence—Real-time agent adherence tracking, adherence management capabilities for monitoring adherence to schedule for deferred media, including aux codes and non-phone-based activities, as well as enabling management of adherence exceptions.
- Basic Scorecards—Pre-defined role-appropriate scorecards with pre-packaged Workforce Management and Quality Key Performance Indicators (KPIs), which display actual performance information on a daily basis.

Our *Advanced Series Workforce Management Package* builds on the Operational Series' functionality, and focuses on optimizing enterprise performance by raising first call resolution rates, increasing enterprise revenue generation, and ensuring consistent customer experiences.

In addition to those functions included in the Operational Series, the Advanced Series includes:

- Time Off Management (TOM)—A web-based module allowing agents to request and supervisors to manage agents' time-off and vacation requests.

Note: This module is also an option for the Operational Series.

- Advanced Scorecards—A superset of the scorecards found in Basic Scorecards, as well as the ability to display trend information compared to goals.

Note: An even deeper level of functionality for Scorecards is provided with KPI Design, which provides users with the ability to define additional data sources types, source measures, KPIs, and to connect custom adapters from these additional data sources.

- Strategic Planner—Allows you to plan long term for multi-skilled contact center and enterprise back-office environments, assess the operational and financial benefits and impacts of different scenarios before making decisions, increase forecasting accuracy with sophisticated analysis of historical data, plan your resources to reflect projected customer demand and corporate objectives, develop optimal staffing plans that minimize costs while meeting service goals, and provide executives

with the information they need to review and rapidly approve budgets and plans.

The *Strategic Series Workforce Management Package* builds on the Advanced Series' functionality.

In addition to those functions included in the Advanced Series, the Strategic Series includes:

- Learning Lesson Management—Enables agents and supervisors to access on-demand learning, to enhance their skills, and to increase their productivity and performance.
- Content Producer—an application comprised of editing, authoring, and conversion tools to develop interactive clips for internal training and assessment.

Optional functions for the above packages include among other functions:

- Multi-Contact—Enables forecasting and scheduling for additional media other than phone, such as chat, e-mail, etc.
- Shift Bidding—A web-based module facilitating automated shift bidding.
- Multi Week—Enables you to schedule over a multi-week period rather than one week at a time.
- Operations—Allows volume control and workload management, particularly with the financial services arena.
- Projects—Nominally part of the Multi-Contact functions, this separately licensed feature expands the solution's functionality to meet the needs of non-customer-facing activities in the financial services and banking arenas.
- Queue Hopping—Allows you to schedule agents to work on different queues at different times.

The *Performance Management Series Workforce Management Package* is similar to the Advanced Series Workforce Management Package. It includes:

- Strategic Planner
- Volume Capture (part of the Operations functions mentioned above)
- Pulse
- Alerts
- Standard reports
- Ad-hoc reports
- Advanced Adherence

- KPI Design (includes all the functionality of Basic Scorecards and Advanced Scorecards)

This guide assumes at a minimum that you have the Operational Series. Modules and functions that are either optionally available or are only available in the Advanced Series or Strategic Series are appropriately identified in the text.

Note: The Workforce Optimization Solution includes the functions described in this Workforce Management guide. For that reason, you will at times see the product referred to as the Workforce Optimization Solution and at other times as Workforce Management.

Forecasting and Scheduling Work Modes

Forecasting and Scheduling uses two work modes to help you organize your contact center forecasting and scheduling tasks. Each mode contains several modules that are arranged sequentially, allowing you to create and modify your forecasts and schedules in an intuitive step-by-step manner. You simply enter the appropriate data in one module and move to the next.

The Organization Mode

The Organization work mode lets you create and maintain information about your organizations and the employees in them, where they work, when they work, and with whom they work. You can create a hierarchy of organizations that reflect the structure of your company and contact centers. These can be set up according to location, supervisor, or any other criteria, and appropriate information at one level will flow up or down to the others. The Organization mode contains the following modules:

- **Operations**—Set your organization's hours of operation, minimum time between shift assignments, and number of seats.
- **Activities**—Create, edit, and delete your organizations' Activity Types, as well as the Activities that fall under the Activity Types.
- **Work Rules**—Set your shifts and shift activities and create individualized work patterns.
- **Employees**—Enter information about your organization's employees and their preferences, assign them work patterns and skills, and view or edit their personal calendars.
- **Calendar**—Review the schedule for all employees or selected groups of employees in the organization, schedule calendar events, assign shifts to employees, add time off, lock or unlock shifts, and publish schedules.
- **Pulse**—Launches the Tracking module, Pulse section, Pulse tab, which allows you to view and compare actual and forecasted statistics.

The Campaign Mode

The Campaign work mode lets you manage your forecasting and scheduling, creating campaigns for your various types of calls — for example, one for sales and another for customer support. You can then forecast contact volume, set service goals, and schedule employees from throughout your organization to create weekly schedule profiles for each campaign. The Campaign mode contains the following modules:

- **Operations**—Set up the hours of operation for your campaign and assign organizations, queues, and skills to it.
- **Activities**—View your campaign's Activity Types, as well as the Activities that fall under the Activity Types.
- **Work Rules**—Set up special shifts, shift activities, and work patterns exclusively for your campaign.
- **Employees**—Assign employees to a campaign, and view or edit their information and schedules.
- **Forecast**—Use historical data to forecast or modify your contact volume and average handle time.
- **Service Goals**—Set your customer service goals for your campaign.
- **Agent Requirements**—View the number of agents needed by your campaign, determined by your forecast and service goals (only available in non-skills mode).
- **Calendar**—Create a schedule for your campaign, view and print the schedule, make adjustments for individual employees, and schedule other activities.
- **Pulse**—Launches the web application's Tracking module, Pulse section, Pulse tab, which allows you to track your campaign's performance by comparing data from your ACD with your forecasted and required statistics.

What is Next

Once Forecasting and Scheduling is up and running, you should read "[Workforce Management Basics](#)" (page 27) for a detailed overview of the program interface and navigation. "[Forecasting and Scheduling Work Modes](#)" (page 24) provides in-depth information about Forecasting and Scheduling's work modes.

"[Scheduling with Forecasting and Scheduling](#)" (page 67) provides you with a step-by-step checklist that you can refer to when you create your own schedules. "[Organization Mode Modules and Tasks](#)" (page 77) and "[Campaign Mode Modules and Tasks](#)" (page 153) cover each of the modes and modules and discusses all of their functions in detail.

The remaining chapters include:

"Multi-Contact and Skill-Based Scheduling" (page 213) covers skill-based scheduling. "Multi-Site Scheduling" (page 219) covers multi-site scheduling. "Intra-Day Optimization" (page 223) covers intra-day reforecasting. "Queue Hopping" (page 239) describes an optional feature in Forecasting and Scheduling that allows you to schedule agents to work on different queues at different times during the same shift. "OutBound Scheduling" (page 251) covers another optional feature used in outbound or mixed inbound-outbound call centers, where agents can be scheduled to work on outbound calls, their adherence can be tracked, and outbound statistics monitored through Pulse. "Workforce Planning" (page 243) covers Forecasting and Scheduling's workforce planning features, which allow you to determine the number and type of agents needed to meet your service goals and skill requirements. "OutBound Scheduling" (page 251) covers the optional features for outbound calling, that is, making calls using a predictive dialer or manually dialing a list of customers or prospects, for such purposes as collections, pro-active customer service, and telemarketing. "Operations" (page 257) covers optional features for Financial Services Operations, including volume capture, deadline goal modeling, and project scheduling.

In addition to the various features and tools of Forecasting and Scheduling, schedulers also have access to certain functions within the Workforce Management web application. "Workforce Management Basics" (page 267) provides a short introduction to the Workforce Management portion of the Workforce Optimization Solution, including on how to log in, navigate, and log off. "Request Management" (page 293) covers request management, which is performed in the web application, and includes shift swapping, time-off requests, and shift bidding. "Reports" (page 379) covers reports, which are available within the web application. Finally, Appendix "Frequently Asked Questions" (page 407) answers some frequently asked questions, Appendix "Technical Reference" (page 421) provides technical information such as error messages, Appendix "Preferences Scheduling in Forecasting and Scheduling" (page 447) explains Forecasting and Scheduling's Scheduling preferences, and the Glossary defines Forecasting and Scheduling's terminology.

Workforce Management Basics

This chapter provides an introduction to both Forecasting and Scheduling and the Workforce Management portion of the Workforce Optimization Solution. It includes the following sections:

- ["Starting Forecasting and Scheduling" \(page 28\)](#)
Opening and logging in to Forecasting and Scheduling; using the Main Entry window.
- ["Getting Around in Forecasting and Scheduling" \(page 29\)](#)
Introducing Forecasting and Scheduling's structure and workflow; navigating through Forecasting and Scheduling; entering data.
- ["Changing Forecasting and Scheduling Settings" \(page 35\)](#)
Setting the display time zone; adding new users, getting help.
- ["Understanding Roles and Access Rights" \(page 37\)](#)
Controlling users' access to all functions in Workforce Management through the use of assigned roles.
- ["Starting the Workforce Optimization Solution" \(page 39\)](#)
Opening and logging into the Workforce Optimization Solution.
- ["Getting Around in Workforce Management" \(page 41\)](#)
Introducing the Workforce Optimization Solution's setup and workflow, navigating in the Workforce Optimization Solution, using its pages, and entering data.
- ["Setting Preferences" \(page 49\)](#)
Setting your local time zone, opening page, and other personal preferences.
- ["Getting Help" \(page 37\)](#)
Using Impact 360's Help system and other documentation.
- ["Logging Off the System" \(page 51\)](#)
Exiting Workforce Management.

- "What If Mode" (page 51)
Working with hypothetical schedule information without altering the contents of your production database.

Starting Forecasting and Scheduling

To start Forecasting and Scheduling:

Step	Action
1	<p>Double-click the Forecasting and Scheduling icon on your desktop, or click Nortel Systems > Forecasting and Scheduling > Forecasting and Scheduling on the Windows Start menu.</p> <p>The main Forecasting and Scheduling and Login windows appear.</p>
2	<p>Enter your user name and password in the Login window. The Login window is also available from the File menu.</p> <p>Note: If no user accounts have been created, please see your administrator for instructions.</p>
3	<p>Click an operation on the Forecasting and Scheduling Startup window. The following options are available:</p> <ul style="list-style-type: none"> • Work on an Organization: Open an existing organization or create a new one. • Work on a Campaign: Open an existing campaign or create a new one. • Return to Last Activity: Return to the activity you were working on when you last exited Forecasting and Scheduling. • Help: Open Forecasting and Scheduling's online help. • Exit: Quit Forecasting and Scheduling.

—End—

Changing the Forecasting and Scheduling Application Server

When Forecasting and Scheduling is installed, you specify the application server it should connect to. When you log onto Forecasting and Scheduling, the application server's database is the database to which your Forecasting and Scheduling client automatically connects.

Note: You can check the current server and database by selecting **About Forecasting and Scheduling** from the **Help** menu.

To change the Forecasting and Scheduling application server:

Step	Action
1	Open the Forecasting and Scheduling login window by starting the program or, from the File menu, selecting Close Work and then selecting Login .
2	If you need to connect to a different application server, hold down the Ctrl and Shift keys and click on the Login window. The Change App Server window appears
3	Type the new application server's name and port information and click OK . You are returned to the Login window to log onto the new database.

—End—

Getting Around in Forecasting and Scheduling

Forecasting and Scheduling provides two work modes:

- Organization mode lets you set up general information about your organization, its working hours, its employees, their availability, and their skills. It also provides an overview of the organization's schedule and activities and the ability to produce reports about the organization's activities. Further, you can create a hierarchy of organizations to reflect the structure of your contact centers.
- Campaign mode contains tools that let you forecast your workforce requirements for the scheduling period, set your service goals, and schedule employees from your organization to meet those requirements and goals.

Forecasting and Scheduling uses work modes to allow you enter data for your organization once and, at the same time, set up campaigns and schedule employees with appropriate skills and availability from throughout the organization. Only one work mode is active at any time. Each mode contains several modules for different functions. These modules are arranged so that you can use them sequentially.

Using the Forecasting and Scheduling Window

This section explains how to navigate through Forecasting and Scheduling and how to enter data in its modules.

Note: Press **F5** to refresh Forecasting and Scheduling's display at any time.

The Forecasting and Scheduling Application window contains the following parts:

1. Toolbar
2. Module Bar
3. Module Window
4. Status Bar

The Toolbar

The Forecasting and Scheduling toolbar is similar to that used in standard Microsoft applications. It can be moved to any position on your monitor by clicking on it and dragging it to the desired location. Holding your cursor over a toolbar button for a short time displays a description of the button. Some buttons are only displayed in those modules where their functions are active.

To display or hide the Forecasting and Scheduling Toolbar:

- On the **View** menu, click **Toolbar**.

The Toolbar is toggled on or off.

Toolbar Buttons You can use the Forecasting and Scheduling Toolbar to perform the following functions:

Icon	Description
	Work on an Organization
	Work on a Campaign
	Move to the previous module
	Move to the next module
	Print
	Print Preview
	Open a new Forecasting and Scheduling object—new employee, new shift, etc., or add items to a campaign. See "Using Grids" (page 34).
	Delete the object
	Copy
	Paste
	Zoom in to show a single day

Icon	Description
	Zoom out to show several days
	Select the day of the week selector. Use the arrows to move forward or backward one day or choose a date from the drop-down window. See "Date Selectors" (page 35).
	Open the Forecasting and Scheduling Help system
The following buttons appear only when their functions are active:	
	Sort in ascending order
	Sort in descending order
	Filter employees
	List schedule conflicts
	Set up and start the scheduling process
	Create a new calendar event
	Analyze your schedule for conflicts
	Recalculate the service level and average speed to answer (ASA) statistics in a calendar
	Refresh the calendar data for all employees in the campaign or organization, depending on which mode you are in
	Display a legend for the calendar
	Display tool tip descriptions when the cursor hovers over a shift or event
	Display required and forecast levels for staffing and service level
	The Comparison tool provides a quick comparison of the predicted and required staffing and service level statistics
	Load a saved profile
	Save a profile
	Clear the current profile

Icon	Description
	Restore the profile
	Scale contact information
	Scale Average Handle Time (AHT)
	Enter shrinkage
	Display a table view of the graph.
	Display the Full-Time Equivalent (FTE) calculator
	Publish the schedule
	Unpublish the schedule
	Revert to the last published schedule

The Module Bar

The Module Bar contains icons for the modules in each Forecasting and Scheduling work mode. Forecasting and Scheduling's modes are designed to use a step-by-step approach. You should go through each module in sequence to set up your organization or campaign. Please refer to the *Workforce Optimization Suite Schedulers Guide* for detailed information on the modules.

To navigate to a module, do one of the following:

- Click the module's icon on the Module Bar.

Or

- Click the **Previous Module** or **Next Module** button on the Toolbar.

Or

- Select the module from the **Go** menu.

To display or hide the Forecasting and Scheduling Module bar:

- On the **View** menu, click **Module Bar**.

The Module Bar is toggled on or off.

Module Icons The following icons are used to select modules in both Organization and Campaign modes. Icons appear to be indented when they are selected.

Note: These modules have similar but distinct functionality in each work mode.

Icon	Description
	Operations module
	Activity module
	Work Rules module
	Employees module
	Calendar module
	Pulse module

The following icons and modules are specific to the forecasting and scheduling process and are available only in Campaign mode:

Icon	Description
	Forecast module
	Service Goals module
	Agent Requirements module. (Not available when skills-based scheduling is used.)

The Module Window

The Module window changes as each module is selected. See the *Workforce Optimization Suite Schedulers Guide* for detailed descriptions of each Module window.

The Status Bar

The Status Bar displays a brief help message and the time zone for the selected organization or campaign. It also indicates when you are in the What If or Examples mode.

To display or hide the Forecasting and Scheduling Status bar:

- On the **View** menu, click **Status Bar**.

The Status Bar is toggled on or off.

Entering Data in Forecasting and Scheduling

Forecasting and Scheduling uses standard Windows data entry methods. This section describes two methods you may not have used before—grids and calendars.

Note: These methods are generally used for day-to-day data entry. Use Forecasting and Scheduling's import tools for entering large amounts of data, such as when you are first setting up Forecasting and Scheduling.

Using Grids

Forecasting and Scheduling uses grids similar to those found in many Windows database applications to enter and display data.

To add a new row of data to a grid, do one of the following:

- Click the **New** button on the Toolbar. This takes you to the bottom row of the grid where you can enter your data.

Or

- Click the first field in the empty row at the bottom of the grid. This row is marked with an asterisk (*) in the row header.

To move between fields, press **Tab** or click a field with your mouse.

The **Pencil** icon indicates that a row is being edited. To save the data in the row, Tab to or click in a different row.

Note: Data in Forecasting and Scheduling is saved immediately. If you want to manipulate your data without making permanent changes to it, use the What If mode.

Some grid fields are used to select and link existing data such as shift activities. These are designated by a special ellipsis icon that appears when you move your cursor into the field. Click the icon to display a list of options for that field, and select the one you wish to use.

Using Calendars

Forecasting and Scheduling uses two types of calendars:

Date Selectors Date selectors are used in several modules to select the active day or week (depending on the module). They are displayed when the drop-down date selector on the Toolbar is clicked or when creating a new scheduling period.

- To select a date in the current month, click on the date.
- To change months, click the arrow to the left or right of the name of the month, or click on the month and select from the list.
- To change years, click the year, then use the spinner to change the year.
- To return to the current date, click Today at the bottom of the calendar.

Calendar Grids Calendar grids are used to display shift assignments, employee vacations, breaks, meetings, and so forth. They are located in three modules:

- **Employee module**—one for each employee; displays scheduled activities for an entire week. In the Organization mode, you may move forward or backward in time as far as you wish. In the Campaign mode, only the current week can be displayed.
- **Organization Calendar**—schedules for all employees in the selected organization regardless of the campaign to which they are assigned. You may move forward or backward in time as far as you wish.
- **Campaign Calendar**—schedules for all employees in the selected campaign regardless of the organization to which they are assigned. You can only view dates for the current scheduling period, which can be up to six weeks long.

Note: The data in all Forecasting and Scheduling calendars are linked. A change in any calendar is instantly reflected in all of the others.

Use the date selector (see "[Date Selectors](#)" (page 35)) to select the portion of the calendar grid you wish to display.

Activities are color coded. Hold the cursor over a time block for a short time to see an explanation of the code. Click **Legend** on the **View** menu or click **Settings** on the **File** menu to display a complete list.

Changing Forecasting and Scheduling Settings

Forecasting and Scheduling allows you to make and change a number of settings that apply to the entire program. These are available regardless of the mode or module that is active.

Time Zones

Forecasting and Scheduling lets you set up organizations and campaigns within different time zones—a time zone is entered when the organization or campaign is originally created. When the organization or campaign is opened, the time and date information for the time zone you entered is displayed regardless of your system's time zone. You can change the display time zone at any time and information about times and dates in other zones is automatically adjusted and correctly displayed. This feature is especially useful if you have contact centers in more than one time zone—you can quickly see the hours for each contact center displayed in its local time zone or in your own time zone.

For example, if your East Coast contact center is open from 6 A.M. to 7 P.M. EST, the display time zone is automatically set to Eastern time (regardless of the time zone your system time is set to) when the organization is opened.

If you are on the West Coast and want to see the hours your East Coast contact center is open in your time, set the display time zone to Pacific time.

Note: You can only enter or modify time information when your display time zone is the same as the organization or campaign time zone. It is dimmed when your display time zone is different.

Changing Your Display Time Zone

To change your display time zone:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Double-click the time zone on the Status Bar. |
| 2 | Click the time zone you want to display, and then click OK .
All times and dates in the display reflect the new time zone. |

—End—

You can leave the two time zones you use the most in this dialog box and switch quickly between them. You can also select other time zones as required.

Note: Changing your display time zone does not affect your system time. It only affects the Forecasting and Scheduling display.

Getting Help

Forecasting and Scheduling's online help system is available from each module and dialog box by pressing **F1**, clicking the **Help** icon, or from the **Help** menu.

Understanding Roles and Access Rights

Access to all functions is controlled through the use of roles. See *Roles Setup* in the *Nortel Workforce Management Administration Guide* (NN44480-600). A role defines a user's access rights; each user must be assigned a role in order to log into Nortel Workforce Management and Workforce Management will display or enable only those functions to which a user's role provides access. In Scorecards, your participation in KPIs is based on roles.

Each user's role is also assigned a scope. The scope can be either the organization level to which the role applies, campaign to which the role applies, or group to which the role applies. For example, a manager may have access to the records of people in his own organization but not those in other organizations, or a scheduler can have rights to schedule Campaign A, but not Campaign B. Roles limited to generic (non-organizational and non-campaign) functions do not have scopes.

ATTENTION

The roles and associated access to the various functions, modules, sections, and tabs within Impact 360 are described in the documentation set as they would be for a new installation. If your systems has been upgraded from a previous release, your previous settings are maintained, making it possible that users might not have access to certain features. If you want to grant access to these features, you will need to manually modify the role's access rights, as described in *Roles Setup* in the *Nortel Workforce Management Administration Guide* (NN44480-600). Refer to the *Nortel Workforce Management Roles and Privileges Guide* (NN44480-601) to determine what the various privileges control, as well as their default role assignments.

Workforce Management comes preconfigured with nine different roles:

Role	Description
Adhoc Query Analyst	Adhoc Query Analysts by default have access only to the Ad Hoc Reports section of the Reports module. This section lets them create, edit, and delete ad hoc reports, which are created using the Cognos Query Studio.

Role	Description
Administrator	Administrators can generally set up and administer the Workforce Optimization Suite's functions and organizations, such as Organization Setup, Security Setup, System Setup, Scorecards Setup, and Request Management Setup. Administrators are responsible for operational and business configuration, not for the functions typically performed by Information Technology (IT) organizations.
Agent	Agents can generally view schedules, request time off, request shift swaps, participate in shift bidding, run Learning lessons, enter their time and activities, and view their scorecards.
Branch Administrator	Branch administrators can generally set up and administer the Workforce Optimization Solution's functions and organizations, in the context of retail financial services, which use a subset of the Workforce Management features.
Branch Employee	Branch employees can generally view schedules, and enter their time and activities, and view their scorecards. They are similar to agents, but in the context of retail financial services, which use a subset of the Workforce Management features.
Branch Manager	Branch managers combine some of the functions of managers and schedulers (see below), again in the context of retail financial services, which use a subset of the Workforce Management features.
Manager	Managers can generally manage people, view group schedules, approve agents' requests, view adherence status, authorize adherence exceptions, create and view reports, and view and configure employees scorecards.

Role	Description
Scheduler	In addition to their use of Forecasting and Scheduling, schedulers can use Workforce Management's web application for a variety of tasks, including publishing schedules, viewing adherence data, managing requests, and viewing their own scorecards and organization scorecards.
Supervisor	Supervisors have a more limited set of permissions than managers. They can view scorecards for themselves and their employees, and view highlights. They also can use the Reports module.

Starting the Workforce Optimization Solution

There are two ways to start the web application in Workforce Management, depending on how your system is configured:

- Single sign-on

When your system has been configured for single sign-on, you do not log into Workforce Management, or indeed, any of the Impact 360 applications, such as eLearning, or Quality Monitoring version 7.8 SP1. All authentication is done when you log into Windows on your computer.

- Application-dependent sign-on

You must log into each Impact 360 application independently.

To start Workforce Management:

Step	Action
1	<p>Open your web browser and type the URL of the server location where Workforce Management is installed.</p> <p>If your system is configured for single sign-on, Workforce Management displays the default page for your role, or the page that you have selected in Preferences. You can start working with Workforce Management.</p> <p>If your system is not configured for single sign-on, the Login page opens.</p>
2	<p>Type your Username and Password (both are case-sensitive), then click Login. Workforce Management opens to the default page for your role or the one you have selected in Preferences.</p>

Note: The following are special characters, and cannot be used within Impact 360:

- ([) left square bracket
- (]) right square bracket
- (<) less-than sign
- (>) greater-than sign
- (\) reverse solidus (backslash)
- (") quotation mark
- (&) ampersand
- (!) exclamation point
- (?) question mark

Individual pages within Impact 360 might restrict the use of some other characters.

—End—

If users have forgotten their password, and provided your company's networking and security environment permits, they can click **Reset Password**. The system will prompt them for certain data to identify them (the same data specified in the section Self-Identification of the *Nortel Workforce Management Administration Guide* (NN44480-600)), and if an e-mail address has been registered for them, it will send a temporary password to their e-mail address. They can use this temporary password to log in; the system will then require them to change the temporary password and log in using the new password they have selected.

Note: If an e-mail address is not registered for them, they will be instructed to contact their system administrator either to reset their password or register an e-mail address for them, so they can reset it themselves.

Seat-Based Licensing

Licensing is based either on the total number of employees, or the number of concurrently scheduled employees, also referred to as seats.

If your license is based on seats, and your current schedules, published or unpublished, exceed the number of seats for which you are licensed, all users will see one or both of the following error messages displayed on the login page:

- **<x> seats are scheduled from <y> to <z>. Your license does not allow more than <n> seats. Please contact your system administrator for assistance.**
- **<x> seats are published from <y> to <z>. Your license does not allow more than <n> seats. Please contact your system administrator for assistance.**

These error messages will continue to appear until the number of seats problem has been rectified. If this situation occurs for you and your users, please contact your Nortel sales representative as quickly as possible to resolve this situation.

Getting Around in Workforce Management

Workforce Management uses a web-browser-based interface with a navigation bar and multiple levels of tabs.



The topmost level of navigation consists of modules, such as the following:



The next level of navigation is referred to as a section, such as the following:



The next level of navigation is referred to as a tab, such as the following:



Note: In some modules, there is no need for a section level. Instead, the next navigation level consists of tabs.

In addition, if a role has access to only one module (as is the case for the default agent role), that module is hidden, and the sections below it are displayed as modules. For example, an agent would not see the **My Home** module, but its sections, such as **My Schedule**, would be displayed as modules. This behavior allows agents to see more information on the screen without having to scroll.

Finally, a different type of lower-level navigation, consisting of sidebar elements, is only used for administrators in the **System** module's **Administration** section.

General controls are located above the navigation bar:

Control	Description
Refresh	Update the data on your page

Control	Description
Print	Print a copy of the current page
Send Message	Send a pop-up alert to selected target users
Enter What If	Enter What If mode
Preferences	Open the Preferences window
Help	Open the Workforce Optimization Solution Help system and display help for the current page
Logout	Log out of the Workforce Optimization Solution

Navigate by clicking the appropriate button for the module, section, tab, or sidebar element you want to use.

Note that the button configuration changes depending on the user's role.

Note 1: If you resize your browser window, the rightmost buttons on the button bar may be hidden. Resize your browser window, scroll horizontally, or change your screen resolution to see them.

Note 2: If you find yourself frequently changing among two or three tabs, you can open multiple sessions in separate browser windows to make your access to these tabs quicker and easier.

Expanding Pages

Some pages in Workforce Management use two panes with a selection list on the left and an action page on the right.

Either side of these pages can be expanded by clicking one of the arrow buttons between the panes.

- Click the button facing right to expand the left pane into a summary list.
- Click the button facing left to expand the right pane into a full page display.
- To return to the original display, click the single-arrow button to the side of the display. To switch the pages displayed, click the double-arrow.

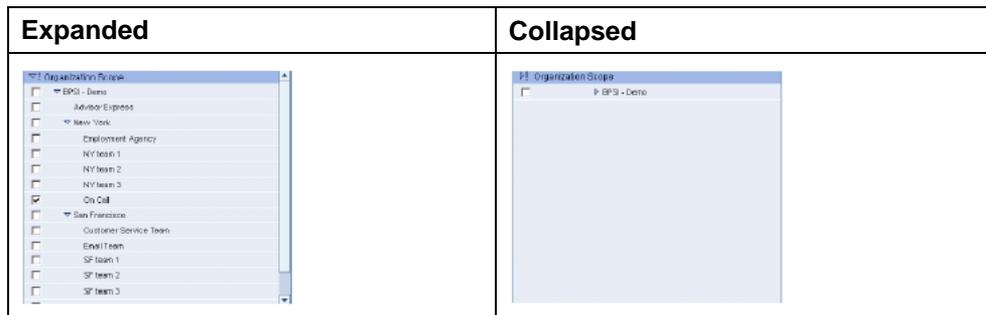
The pane on the right may consist of one or more groupings, referred to as containers.

Each container has its own title and can be collapsed or expanded. Containers may contain multiple collapsed levels.

Expanding and Collapsing Lists

Some lists have controls that allow you to expand the list completely, or to collapse it.

For example, the following graphic shows the Organization Scope list in both its expanded and collapsed form:



Selecting Items in a Drop-Down Menu

You set the value of some items in the web interface using drop-down menus. There are two types of drop-down menus:

- single-selection
You can only select one item from the drop-down menu.
- multi-selection
You can select one or more items, using the **Ctrl** key to select non-adjacent items or the **Shift** key to select a contiguous range of items.

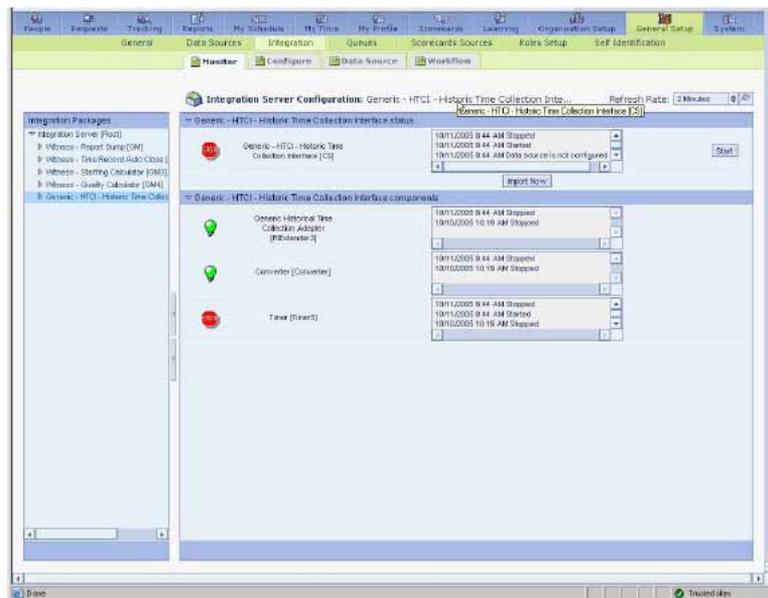
The type of drop-down menu is indicated with the following buttons:

Icon	Description
	Single-selection
	Multi-selection

Expanding Truncated Text

Some windows automatically truncate text in the Content Title area of the window. To indicate that the text has been truncated, the system adds an ellipsis (...) to the end of the displayed text.

To expand the text so you can see it in its entirety, position your cursor over the text for a few seconds (referred to as hovering). The full text then appears in a pop-up box, as shown in the following figure:



Sorting Data

Many pages contain columns of information that can be sorted.

To sort information:

- Click the name of the column to be sorted. The column head turns darker and a small arrow indicates the sort order of the column.
- To reverse the sort order, click the name of the column again.

Printing a Page

To print a page:

Step	Action
------	--------

- | | |
|---|---|
| 1 | Click Print on the navigation bar. The Print dialog box opens. |
| 2 | On the Options tab, select Print frames as laid out on screen . |
| 3 | Click Print . |

—End—

Sending Pop-Up Messages

You can use the **Send Message** button to send pop-up alerts to other employees.

When you click the **Send Message** button, the **Send Pop-up Message** pop-up window opens.

To create a new alert message, you need to provide the pop-up alert target information (to whom) and the message itself.

Providing Target Information

You can send pop-up alerts to employees in a number of ways:

1. You can select employees by name, by checking the **Employees** check box. To select specific employees, click the employee icon. The employee selector screen appears. Select the employees as desired and click **Save**.
2. You can send pop-up alerts to all employees selected by an existing filter or one that you create or edit at the time of sending the alert by checking the **Employee Filter** check box.
3. You can send pop-up alerts to employees using their Workforce Management login names, separated one from the other by semi-colons, by checking the **Additional users by login names (semicolon separated)** check box.
4. You can send pop-up alerts to employees by role, checking the **Additional users by role** check box, and selecting the desired role from the drop-down list.
5. You can send pop-up alerts to employees using their Windows login names, separated one from the other by semi-colons, by checking the **Additional delivery targets (semicolon separated)** check box, provided you have specified these in the **Pop-up Address** field on the **Profiles** tab of the **People** module.

You can select targets using one or more of the above methods, if desired.

Providing Message Information

To provide the message information:

Step	Action
1	Insert the subject line and the message text in the available text boxes.
2	Select the delivery template from the drop-down list.

—End—

Message Templates

Three different templates are used for pop-up messages:

- **Normal**

Normal pop-up messages display a banner at the bottom right of the screen. This banner resembles a sheet of ruled note paper, and shows the subject of the message against a yellow background, and the sender and the date and time the message was sent against a white background. Clicking the banner opens a separate window showing the entire message.

- **High**

Messages sent using the High template are meant to be read immediately. For that reason, no banner is displayed, but the message is displayed in a separate window.

- **Confidential**

Confidential pop-up messages display a banner at the bottom right of the screen. This banner resembles a sheet of ruled note paper, and shows the text **Confidential message received...** against a yellow background. To maintain the confidentiality of the message, the sender and the date and time the message was sent are not displayed. Instead, the text *****CONFIDENTIAL***** is displayed. Clicking the banner opens a separate window with a button that enables the reader to show the entire message (an additional level of security).

Sending the Message

To send the pop-up alert message:

Step	Action
1	Click Send Message to send the alert message.
2	Click Done if you want to close the form without sending the message. The form closes and you return to the web application.
—End—	

Receiving Pop-Up Alert Messages

The pop-up messages you receive can be sent to you in two different ways:

- As a result of alerts that your administrator has configured. Alerts can be sent for such conditions as one of your KPIs being out of range, or your being out of adherence.

- When an administrator, manager, supervisor, or scheduler uses the **Send Message** button at the top of the web application window.

Message Templates

As described previously, three different templates are used for pop-up messages:

- Normal

Normal pop-up messages display a banner at the bottom right of the screen. This banner resembles a sheet of ruled note paper, and shows the subject of the message against a yellow background, and the sender and the date and time the message was sent against a white background. Clicking the banner opens a separate window showing the entire message. Click the **Check Mark** (✓) icon to close the message or click the **Delete** icon to delete the message. If you take no action, the banner fades away, but the message is not lost; pop-up messages are kept for the duration of your session within Workforce Management.

- High

Messages sent using the High template are meant to be read immediately. For that reason, no banner is displayed, but the message is displayed in a separate window.

- Confidential

Confidential pop-up messages display a banner at the bottom right of the screen. This banner resembles a sheet of ruled note paper, and shows the text **Confidential message received...** against a yellow background. To maintain the confidentiality of the message, the sender and the date and time the message was sent are not displayed. Instead, the text *****CONFIDENTIAL***** is displayed. Clicking the banner opens a separate window with a button that enables the reader to show the entire message (an additional level of security). Click the **Check Mark** (✓) icon to close the message or click the **Delete** icon to delete the message. If you take no action, the banner fades away, but the message is not lost; pop-up messages are kept for the duration of your session within Workforce Management.

Reading Messages

As mentioned previously, you can click the message banner (for Normal and Confidential messages) to open the message in a separate window.

If the banner is no longer visible, you can click the message icon on the Windows taskbar.

The window that opens displays an **Alerts** tab, consisting of the following message elements:

- Navigation icons

- Header
- Controls
- Body

Navigation Icons

Icons are displayed for each message. Icons for the first and last message are always displayed. When more than ten messages exist for the current session, an icon resembling multiple pages is shown, allowing you to move from one group of ten to the next.



Clicking on the icon labeled 11-21 above would change the navigation display to the following:



When you select a particular message icon, the color changes to red for High template messages, and yellow for Normal and Confidential template messages.

Header

The message header is displayed just below the navigation icons. It resembles the pop-up banner described previously, and varies according to the message template:

- Normal
- High
- Confidential

Controls

Message controls are displayed to the right of the message header. All messages, regardless of the template used, have a **Delete** button. Click the **Delete** button to delete a message.

In addition, Confidential messages have the **Show** button. Click the **Show** button to display the sender and message body of a confidential message. (Until you click this button, the sender is displayed as the string *********, and the message body as the string *****Confidential*****.)

Body

The message body is found below the message header area. Messages are shown in plain text for both Normal and High template messages.

Note: HTML tags can be used in the message text.

Confidential messages are not shown in plain text until you click the Show button described previously. Instead, the string ***** is shown in place of the sender (in the window header), ***CONFIDENTIAL*** in place of the text, and the string Confidential message received... is shown in place of the subject.

Setting Preferences

You can set your viewing preferences by clicking Preferences on the navigation bar. These settings remain in effect until you change them.

Note: These settings affect only your display. Some of the preference settings shown might not be applicable to you, depending on your license.

Preferences allow you to choose the following display options:

General:

- **Default Language**—available languages are determined by your license and made available by your administrator through the Licensed Languages container of the System module's Administration section's General sidebar element. If only one language is available, this option is not displayed.
- **Default Regional Format**—sets the default format for:
 - Date (short and long formats, order, separator)
 - Time (12 or 24 hour and relevant symbols, separator, leading zero)
 - Currency (symbol, number settings)
 - Number settings (000 separator, decimal point character)
 - First day of week (in calendars)

The localized setting will be used anywhere dates, times, currency figures and numbers are displayed.

- **Default Time Zone**—activity times and schedules are displayed to you in this time zone.
- **Default Screen at Login**—the screen that first appears each time you log in.

User Interface:

- **Show Navigation Images**—toggles the display of the images shown above the module names in the navigation bar. Suppressing the display of the images allows more information to be displayed on your monitor, somewhat reducing the need to scroll.
- **Show Organization Dropdown in Hierarchical Order**—determines how organizations are displayed in drop-down menus. If this parameter is checked, organizations are displayed in hierarchical order, that is, indentation is used to show peer, parent, and child relationships. All organizations are shown, even those not in a user's scope.

If this parameter is not checked, organizations are listed alphabetically. Only organizations in a user's scope are shown.
- **Repeat Header Every N Rows**—the frequency a table or report header will be displayed as you scroll through a list. Type a number in the text box. A blank box sets the number to the default, 30. Enter a zero (0) if you don't want the header to repeat.
- **Default Rows in a page**—for pages that support pagination, the number of rows to display by default for tabular data.
- **Adherence Auto-Refresh (Today Only)**—How often to auto-refresh adherence data. (Adherence is a separately licensed feature, and may not be relevant for your organization.)
- **Adherence Timeline Collapsed View**—Which of the three time lines shown in expanded adherence data should be displayed when the data is shown in collapsed format. The choices are Scheduled, Actual, and Exception. (Adherence is a separately licensed feature, and may not be relevant for your organization.)
- **Pulse Auto-Refresh (Today in Date Range Only)**—How often to auto-refresh Pulse data.
- Getting Help

Help for each Workforce Optimization Solution web page is available by clicking the Help link on the navigation bar.

On the **Help** page, click the **User Guides** button to access the major Workforce Management user guides.

Click the **About** button to view statements about intellectual property, open source attribution, and the user license.

Click the **Close** button to return to the main page.

Logging Off the System

You can log out of the Workforce Optimization Solution at any time.

To log out of the Workforce Optimization Solution:

- Click **Logout** on the navigation bar.

What If Mode

A special mode exists in both the web application and Forecasting and Scheduling that allows you to work with hypothetical schedule information without inadvertently altering the contents of your production database. For more information, see "[Forecasting and Scheduling Work Modes](#)" (page 24).

Forecasting and Scheduling Work Modes

This chapter introduces Forecasting and Scheduling's work modes and provides you with information about using those modes to organize your contact center in Forecasting and Scheduling. You can find detailed information about these modes in "[Organization Mode Modules and Tasks](#)" (page 77) and "[Campaign Mode Modules and Tasks](#)" (page 153).

Forecasting and Scheduling lets you structure information about your contact center in two different ways:

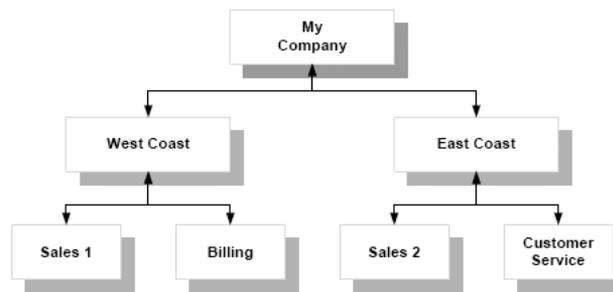
- The **Organization** mode lets you manage information about your employees—where they work, when they work, who they work for and with, and how they work.
- The **Campaign** mode lets you manage information about your business—forecasting contact volume and scheduling employees from throughout your organization's hierarchy to meet the forecast requirements.

The Organization Mode

Use the Organization mode to create a business structure that reflects the way your company is organized. For example, you can structure your business by location, manager, supervisor, function, or skill set; you can also structure it according to virtually any other organizational hierarchy. Since information flows up and down the organization (employee data flows up; work rules flow down), you can work at any level within the structure, and your work will be reflected throughout the other levels.

Note: You are not required to create a hierarchic structure. You can place all your employees in a single organization, but doing so is not recommended.

This figure shows an example of a company organized along both geographic and functional lines:



My Company is first organized by location—East Coast and West Coast. Then the employees in each geographic organization are organized by function. You could further subdivide the functions (billing, sales, and so forth)—by supervisor, for example. Note that the information in this organization flows both up and down the hierarchy.

Note: Forecasting and Scheduling’s hierarchic organization lets you view groups of suborganizations by viewing their parent (the organization above them in the hierarchy). For example, the West Coast organization contains a roll-up of Sales 1 and Billing. You can see all employees in both organizations and their schedules.

Tasks You Can Perform in the Organization Mode

You can perform the following general tasks in the Organization mode:

- Create organizations.
- Create, edit, and delete your organizations’ Activity Types, as well as the Activities that fall under the Activity Types.
- Set each organization’s hours of operation.
- Create shifts and work patterns for each organization.
- Create calendar events, time off, and unavailabilities.
- Add employees to the organizations.
- View the organization calendar.
- View statistics about all your queues.
- Publish, unpublish, and revert schedules.

Opening or Adding an Organization

To open an existing organization:

Step	Action
1	In the Forecasting and Scheduling Startup window, click Work on an Organization . Or On the Toolbar , click the Organization button The Work on an Organization window appears.
2	Click + to expand the tree to locate the organization.
3	Double-click the organization. Or Click the organization, and then click Open . Note: If Open is unavailable (appears dimmed), you might not have access to the organization. See your system administrator for access privileges.

—End—

To add a new organization:

Step	Action
1	In the Forecasting and Scheduling Startup window, click Work on an Organization . Or On the Toolbar , click the Organization button The Work on an Organization window appears.
2	Click the parent organization of the one you are adding.
3	Click New . The New Organization dialog box appears.
4	Type a name for the organization.
5	Select a time zone for this organization.
6	Select the day of the week on which the organization starts its work week.

- 7 Set the day boundary for the organization. This boundary is used to determine when the organization's work day begins and ends for scheduling purposes. If you have a 24-hour organization, this time determines the start and end times for your shifts. Employee shifts and schedules cannot cross this boundary unless the **Allow shift assignments to cross day boundary** check box in the **Advanced Options** group of the Organization mode Operations module is selected.

ATTENTION

You cannot change the time zone, start day, and day boundary once you have created a shift or an employee for this organization.

- 8 Click **OK** to add the new organization.

—End—

To delete an existing organization:

Step	Action
------	--------

- | | |
|---|---|
| 1 | Close the organization if it is open. |
| 2 | Select the organization in the Work on an Organization window. |
| 3 | Click Delete , then click Yes to confirm.
The organization and its contents are removed from the system. |

—End—

To rename an organization:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Open the organization. |
| 2 | In the Operations module of the new organization, type the new name in the Name field.
The new name appears in the Work on an Organization window. |

—End—

Organization Mode Modules

The Organization mode contains the following modules:

Icon	Description
	Operations —Use the Operations module to set information about the organization, including the maximum number of seats available, the organization's hours of operation, and the minimum time between shift assignments. Use the Operations module to establish a 24-hour contact center. See " The Operations Module " (page 82).
	Activities —Use the Activities module to create, edit, and delete your organizations' Activity Types, as well as the Activities that fall under the Activity Types. See " The Activities Module " (page 84).
	Work Rules —Use the Work Rules module to set up shifts, shift activities, and work rules for the current organization and its divisions. See " The Work Rules Module " (page 86).
	Employees —Use the Employees module to add, delete, and change information about the organization's employees. Also, use it to review and change individual employees' schedules, work patterns, and skills. See " The Employees Module " (page 115).
	Calendar —Use the Calendar module to review the schedule for all or selected groups of employees in the organization. See " The Calendar Module " (page 136).
	Pulse —Use the web application's Tracking module, Pulse section, Pulse tab to review the data gathered by your ACD. See " The Pulse Module " (page 152).

The Campaign Mode

Use Campaign mode to forecast your contact center's needs and create schedules to meet those needs. Campaigns let you schedule employees of different organizations in different time zones to create "virtual" contact centers dedicated to a unique objective. You can create as many campaigns as needed.

Note: Each campaign uses scheduling periods to forecast contact behavior and schedule individual employees to meet those needs. Each campaign links to a different set of queues or data sources for which it is responsible.

Tasks You Can Perform in the Campaign Mode

You can perform the following general tasks in the Campaign mode:

- Create new campaigns and scheduling periods with queues and resources from one or more organizations. Assign skills to queues.
- View your campaigns' Activity Types, as well as the Activities that fall under the Activity Types.

- Assign work patterns to campaigns and create new ones.
- Assign employees to campaigns.
- Use history and other data to forecast contact volume and agent requirements.
- Set campaign service goals.
- Generate and modify agent schedules to match campaign goals and requirements.

Adding a Campaign

To add a new campaign:

Step	Action
1	In the Forecasting and Scheduling Startup window, click Work on a Campaign Or On the Toolbar, click the Campaign icon. The Work on a Campaign window appears.
2	Click Campaigns , and then click New . The New Campaign dialog box appears.
3	Type a name and select a time zone, start day, and day boundary for the campaign. The start day and day boundary determine the scheduling period that will be scheduled. If this is to be a distributed campaign, click the Distributed Campaign: check box.
<p>ATTENTION</p> <p>You cannot change the time zone, start day, day boundary, or distributed campaign setting once the campaign is established.</p>	
4	Click OK . The new campaign appears in the Work on a Campaign window.

—End—

To delete a campaign:

Step	Action
1	Close the campaign if it is open.

Note: If you delete a campaign, all scheduling periods and other data associated with the campaign will be deleted as well.

- 2 Click the campaign in the **Work on a Campaign** window.
- 3 Click **Delete**, and then click **Yes** to confirm the deletion. The campaign is deleted.

—End—

Adding a Scheduling Period to a Campaign

Each campaign uses a scheduling period to forecast contact center requirements and schedule agents to meet those requirements. Each campaign has its own set of scheduling periods.

To add a scheduling period:

Step	Action
1	Click the campaign you want to schedule.
2	Click New . The New Scheduling Period dialog box appears.
3	Click in the scheduling period you want to schedule. The scheduling period is highlighted.
4	Choose the initialization options: <ul style="list-style-type: none"> • Create as empty—The profile includes no data. • Copy data from the previous week(s)—The profile includes data from the previous week(s). This data includes queues, organizations, employees, work rules, forecasts, service goals, and locked shift assignments. • Copy data from the selected period—The profile includes data from a previous period selected in the drop-down list. • Customize week selection—Use weekly data from various period(s) you select. See "Customizing the Week Selection" (page 60). • Copy Employee Min/Max Hour, Skill, and Work Pattern Assignments—When you copy the data from existing scheduling period(s), you can also copy to the new scheduling period the min/max hours, skills, and work pattern assignments that were in effect for the week being copied.
5	Click OK . The scheduling period is added to the list of scheduling periods in this campaign.

Note: The dates for the scheduling period that are displayed in the Work on a Campaign window are shown in your system time, regardless of the time of the campaign. For example, if a scheduling period starts at 12:00 a.m. Eastern time on Monday, March 8, 1999, and your system is set to Pacific time, the starting date of the scheduling period will be displayed as 3/7/99. This applies only to the Work on a Campaign window.

—End—

To delete a scheduling period:

Step	Action
1	If the scheduling period is currently open, close it.
2	Click the scheduling period in the Work on a Campaign window.
3	Click Delete , and then click Yes to confirm the deletion. The scheduling period is deleted.

—End—

Customizing the Week Selection

This is the most flexible initialization option. It provides a dialog box that allows you to match up each week of the new scheduling period with any previous week, regardless of in which scheduling period the previous week belongs.

This feature allows you, while scheduling multi-week periods, to copy from individual weeks that might have special promotions, or shutdowns, or other special weeks, and assign them to single weeks within the new campaign period.

Destination weeks are shown on the left; source weeks are selected one by one on the right. Only weeks that are within an existing scheduling period are shown in the source week selectors.

Note 1: All the weeks selected must have the same setting for Skill Based, Queues, and Organizations. If one of the weeks does not have the same setting, an error message is displayed.

Note 2: You can select the same source week multiple times. For example, when creating a scheduling period from 1/14 – 1/28, you could use 1/1 – 1/7 as the source for the first week and use 1/1 to 1/7 as the source for the second week.

Opening a Scheduling Period

To open an existing scheduling period:

Step	Action
1	Click the scheduling period in the Work on a Campaign window.
2	Click OK .

Note: If **Open** is unavailable (appears dimmed), you might not have access rights to the scheduling period. See your system administrator for access privileges.

—End—

Campaign Mode/Scheduling Period Modules

The following modules are available in Campaign mode:

Note: Additions and changes to these modules apply only to the scheduling period for which they are entered. You can only modify data at the organization or campaign where it is entered.

Icon	Description
	Operations —Use the Operations module to set information about the campaign, including the campaign's queues and their associated skills, the campaign's hours of operation, and the organizations participating in the campaign. See " The Operations Module " (page 157).
	Activities —Use the Activities module to view your campaigns' Activity Types, as well as the Activities that fall under the Activity Types. See " The Activities Module " (page 160).
	Work Rules —Use the Work Rules module to add or change shifts, shift activities, and work rules for the campaign or scheduling period. See " The Work Rules Module " (page 160).
	Employees —Use the Employees module to add, delete, and change information about the campaign's employees. Also, use it to review and change individual employees' schedules, work patterns, and skills. See " The Employees Module " (page 160).
	Forecast —Use the Forecast module to project Contact Volume and Average Handle Time (AHT) for the open scheduling period using historical data. See " The Forecast Module " (page 164).

Icon	Description
	Service Goals —Use the Service Goals module to set goals using the Service Level or Average Speed to Answer (ASA) and contact abandonment level. See " The Service Goals Module " (page 177).
	Agent Requirements —Use the Agent Requirements module to view the number of agents required to meet the forecasted contact volume and service goals throughout the work week. See " The Agent Requirements Module " (page 182).
	Calendar —Use the Calendar module to generate the schedule for the scheduling period based on the best fit between the agent requirements and work patterns. See " The Calendar Module " (page 188).
	Pulse —Use the web application's Tracking module, Pulse section, Pulse tab to review the data gathered by your automatic call distributor (ACD), and compare it to the forecasted and required numbers. See " The Pulse Module " (page 212).

What If Mode

Forecasting and Scheduling automatically saves changes to its database at the time they are made. If you want to make changes that are not saved, you can use the What If mode. This is a special mode of Forecasting and Scheduling that copies your current information into a separate database. You can then make any changes you want to the data without affecting your original data.

The data in the What If database, including your changes to it, will remain as you leave it until the data is resynchronized with the active database.

Note: What If mode uses a single Forecasting and Scheduling database, which is named BPWHATIFDB. Any Forecasting and Scheduling client can access this database.

When a Forecasting and Scheduling client is using the What If database, it is locked until that user leaves What If mode.

To enter What If mode:

Step	Action
1	From the File menu, select Enter What If Mode .
2	You are asked if you want to synchronize the What If data with your current data. <ul style="list-style-type: none"> Choose Yes to load your current data into the What If database. This operation makes an exact copy of your existing database. It overwrites any data that is currently in the What If database.

Or

- Choose **No** to leave the What If database untouched—that is, it will be the same as it was the last time a user exited from What If mode.
- 3 You are notified that you are in What If mode. Click **OK**. The **What If Mode** is displayed on the status bar until you return to normal operation.

—End—

To leave What If mode:

Step	Action
1	From the File menu, select Exit What If Mode .
2	You are switched back to your normal database. Your normal database is not updated. Click OK to acknowledge the change, or click Cancel to remain in What If mode.

—End—

What If Mode in the Web Application

You can also enter What If mode when you are logged into the web application.

To enter What If mode, click the **Enter What If** text at the top of the web application window.

The colors used in the display change to signify that you are in **What If** mode, and the modules, sections, and tabs available are limited to those that can be used in **What If** mode (the **Pulse** tab under the Tracking module's Pulse section, and the Reports module).

What If mode in the web application allows you to use the following reports:

- Management Reports
 - Employee Information
- Performance Reports
 - Daily Comprehensive Performance
 - Daily Forecast Assessment
 - Daily Service Goals and Backlog

- Monthly Forecast Assessment Summary
- Monthly Service Goals Assessment Summary
- Service Goals Assessment
- Staffing Number Assessment by Interval
- Staffing Reports
 - Daily Planned Time Assessment by Employee
 - Employee Calendar Events
 - Employee Schedule by AgentID
 - Employee Schedule by Date
 - Employee Schedule by Employee
 - Employee Shift Assignments
 - Planned Activity Cost (Unburdened)
 - Planned Media Cost (Unburdened)
 - Planned Staffing Numbers by Interval
 - Planned Time Assessment
 - Weekly Planned Time Assessment by Employee
- Time Off Reports
 - Absence Hours and Absence Shrinkage for Employee by Time
 - Absence Hours and Absence Shrinkage for Employee Filter by Employee
 - Absence Hours and Absence Shrinkage for Employee Filter by Organization
 - Absence Hours and Absence Shrinkage for Employee Filter by Time
 - Absence Numbers for Employee by Time
 - Absence Numbers for Employee Filter by Employee
 - Absence Numbers for Employee Filter by Organization
 - Absence Numbers for Employee Filter by Time
 - Time Off Allocations by Time
 - Time Off Requests for Employee by Time
 - Time Off Requests for Employee Filter by Organization
 - Time Off Requests for Employee Filter by Time
 - Time Off Summary for Employee

- Time Off Summary for Employee Filter
- Work Force Planning Reports
 - Daily Profile Requirements
 - Profile Requirements

For additional information on these reports, see ["Reports"](#) (page 379).

Scheduling with Forecasting and Scheduling

This chapter provides step-by-step instructions for creating a schedule. Use it as a checklist as you schedule your contact center, and to troubleshoot if you do not achieve the results you want. See ["Organization Mode Modules and Tasks" \(page 77\)](#) and ["Campaign Mode Modules and Tasks" \(page 153\)](#) for detailed information about each module and task.

Note: You can use the What If mode to practice scheduling and test new scenarios without affecting your normal database. See ["What If Mode" \(page 62\)](#).

This chapter contains the following sections:

- ["Setting Up Data Sources and Queues" \(page 68\)](#)
Ensure that queues have been set up and data imported from your ACD or data source.
- ["Adding To or Modifying Forecasting and Scheduling Settings" \(page 68\)](#)
Add new employee types, shift activities, skills, and other parameters to Forecasting and Scheduling's defaults.
- ["Setting Up Your Organization" \(page 69\)](#)
Create organizations and set their hours of operation and other parameters.
- ["Creating Your Activity Types and Activities" \(page 70\)](#)
Create, edit, and delete your organizations' Activity Types as well as the Activities that fall under the Activity Types.
- ["Creating Your Work Rules" \(page 71\)](#)
Establish and link shifts, shift activities, and work patterns for each organization.
- ["Adding Employees" \(page 72\)](#)
Add employees and assign them work patterns, preferences, skills, and availability.

- ["Setting Up Your Campaign and Scheduling Period" \(page 73\)](#)
Create campaigns and scheduling Periods.
- ["Setting Up Campaign-Specific Work Rules" \(page 73\)](#)
Create work rules for your campaign (optional).
- ["Adding Employees to Your Campaign" \(page 74\)](#)
Assign employees from your organizations to the campaign.
- ["Forecasting Your Contact Volume" \(page 74\)](#)
Use histories and profiles to forecast contact volume.
- ["Setting Your Service Goals" \(page 74\)](#)
Establish service criteria for your campaign.
- ["Generating Your Schedule" \(page 75\)](#)
Schedule employees to meet your goals.

Setting Up Data Sources and Queues

Forecasting and Scheduling uses contact history data from your automatic call distributor (ACD) or other data sources to track and forecast your contact volume and predict your agent requirements. Make sure your administrator has configured data sources and queues within the Data Sources section of the System module of the web application before you start the scheduling process. Make sure you have your queues set up and are successfully importing data from them.

Note: If you want to get started before your data source integration is complete, you can import a text file containing the contact history. You will still need to use the Queue tab of the App Admin module of the web application to create queues.

Adding To or Modifying Forecasting and Scheduling Settings

You can optionally add and change the available employee types, media type time units, and skills in the Settings module. (You must have Administrator privileges to open the Settings module.)

Step	Action
------	--------

- | | |
|---|---|
| 1 | Close all your current work. |
| 2 | From the File menu, choose Settings . |
| 3 | Use the tabs and grids to add or change settings. |

You can add as many new items as you want to the **Employee Types** and **Skills** tabs:

- **Employee Types** - Lists types of employees. Forecasting and Scheduling contains four predefined employee types. You can change these types or add additional types as needed. Employee type is a required field in the **Employees** module. It also appears in the **Work Patterns** tab of the **Work Rules** module, in the **Employee Type** field, where it is used to determine the type of employee that is eligible to be assigned to a work pattern.
- **Media Types** - Lists six types of media and their associated time units. These units are used throughout Forecasting and Scheduling, and the default time units can be changed. A loss of precision may result if they are changed. Media types are associated with skills in the **Skills** tab.
- **Skills** - Lists types of agent skills and their associated media types. Skill types are added to an employee in the **Skills** tab of the **Employees** module. Skills and their associated media determine the queue(s) for which an agent will be scheduled.

—End—

Setting Up Your Organization

Step	Action
1	Create an organization or an organizational hierarchy. Make sure you enter the correct time and start day for each organization. See "Opening or Adding an Organization" (page 55) .
2	<p>For each organization you add, designate the number of seats available for the organization. This is the maximum number of agents from the organization that will be scheduled at any one time. Select the hours and days of operation and the day boundary for each organization. See "The Hours of Operation Group" (page 83).</p> <p>For non-24-hour contact centers:</p> <ol style="list-style-type: none"> 1. Click the days of the week your contact center is open. 2. Set the start and end times for each day. <p>For 24-hour contact centers:</p> <ol style="list-style-type: none"> 1. Click 24-hour contact center.

- 3 (Optional) Enter the minimum time between employee shift assignments and the maximum number of consecutive working days that an employee can be assigned. If appropriate, click **Allow shift assignments to cross day boundary**. See "[The Hours of Operation Group](#)" (page 83).

—End—

Creating Your Activity Types and Activities

Activity types are folders that contain similar activities; they make selecting an activity easier for My Time users in the web application. Forecasting and Scheduling comes preconfigured with the following Activity Types:

- Absence Activities (such as vacation or jury duty)
- Assigned Work Activities (such as phone or research)
- Desktop Monitoring (if included in your license)
- Learning Activities
- Planned Events (such as training or a staff meeting)
- Shift Events (such as lunch or a coffee break)

You can add activity types or modify existing ones.

The **Activities** tab allows you to create or edit existing activities within Forecasting and Scheduling. The Activity Detail window that appears when you double-click on an existing activity or double-click the * next to the row at the bottom of the grid allows you to set the following:

- Activity name
- Description
- Activity type (from a drop-down menu of the activity types you have defined)
- Whether the activity is paid
- The color displayed on the calendar for that activity
- The activity code displayed as part of the legend when you print in black and white.
- Whether the activity should be considered time off.
- The media associated with the activity. (Only used in multi-contact scheduling, an optional feature of Forecasting and Scheduling; see "[Multi-Contact and Skill-Based Scheduling](#)" (page 213).)
- Whether you can use the activity in queue hopping. (See "[Queue Hopping](#)" (page 239).)

In addition, you can also specify the following:

- **Schedule Usage**—Whether you can use the activity as a primary activity in a shift, a shift activity, a calendar event, or an unavailability. If the activity is used as an unavailability, you can set the activity to be used in requests. (See Request Management Usage next.)

Note: A shift's primary activity is the activity that will be worked for the majority of the shift. For example, an eight-hour shift might have a primary activity of Phone and a one-hour shift event with activity Lunch. An agent who was assigned this shift would be scheduled for seven hours of the Phone activity and one hour of the Lunch activity.
- **Request Management Usage**—For unavailability events, if you can use the activity in time off requests, and is part of an allotted time off period.
- **Activity Manager Usage**—The adherence tolerance, maximum time in activity, and whether people in the activity should be considered as In or Out.

Creating Your Work Rules

Note: Each organization must have work rules. You can enter them in the parent organization at the top of the hierarchy where they will be available for all the organizations below it (recommended), or you can enter them individually for each organization.

Step	Action
1	Create your shift activities. See " The Shift Activities Tab " (page 97).
2	Create your shifts. See " The Shifts Tab " (page 100). Verify that your shift lengths and start times are valid for the organization's start and end times. Entries will appear in red if they are not valid.
3	Link shift activities to each shift. See " Linking Shifts and Shift Activities " (page 102). Verify that the Start Window falls within the shift period. Entries will appear in red if they are not valid.
4	Create your work patterns. See " The Work Patterns Tab " (page 103).
5	Link your shifts to work patterns and set their occurrence. See " Setting Possible Work Days " (page 105). <ol style="list-style-type: none"> 1. On the Possible Days Off shift, the box for each day should be checked if employees are allowed to be off that day in the work

pattern. For days that employees cannot be off in this work pattern, clear the check box.

2. Add the shifts you want associated with this work pattern.
 3. For each shift, the box for each day should be checked if a shift can be assigned for that day in the work pattern. Clear the check boxes for days on which you do not want a shift to be assigned.
-
- 6 (Optional) Set the minimum and maximum consecutive days. See ["Setting Consecutive Days for a Shift" \(page 106\)](#).
 - 7 (Optional) Set consistent start times. See ["Setting Consistent Start Times for Shifts and Shift Activities" \(page 107\)](#).
Verify that the shifts set for consistent start times have compatible start times available.
 - 8 (Optional) Create fairness or shift assignment rules. See ["The Assignment Rules Tab" \(page 108\)](#).

—End—

Adding Employees



WARNING

For effective scheduling, it is very important that you enter agents only in organizations at the lowest level of your hierarchy.

1. Enter employee information. See ["Adding Employees" \(page 116\)](#).
 - a. Make sure each employee has a minimum and maximum number of hours.
 - b. Make sure each employee is assigned a type that is consistent with the work patterns you want to assign them.
 - c. Make sure that each employee has the correct start date.
 - d. Verify that each employee does not have an end date earlier than today (unless they are no longer working).
 - e. If you use ranking to determine shift preferences, enter a number for each employee's rank. 1 is a higher ranking than 5. An employee with a higher ranking will be given a priority when assigning preferred shifts.
 - f. If you are using agent adherence, enter a Data Source ID number.

2. Assign each employee appropriate work patterns. Set their preferences (optional). See ["Assigning Work Patterns to Employees"](#) (page 132). If you are using rotations instead of work patterns, assign the employee a rotation (see ["Assigning Rotations to Employees"](#) (page 133)).
3. Optionally, assign each employee appropriate assignment rules (see ["Assigning Assignment Rules to Employees"](#) (page 133)).
4. If you are using skill-based scheduling, assign each employee the appropriate skills. See ["Assigning Skills to Employees"](#) (page 134).
5. Using the **Calendar** module, set any periods of employee unavailability. See ["Creating and Modifying Unavailabilities"](#) (page 146).

Setting Up Your Campaign and Scheduling Period

After you have set up your organizations, you can forecast and schedule.

Step	Action
1	Create a campaign. See "Adding a Campaign" (page 58).
2	Create a scheduling period under the campaign. You can create an empty profile or base one on the data in a previous profile. See "Adding a Scheduling Period to a Campaign" (page 59).
3	Open the scheduling period. See "Opening a Scheduling Period" (page 61).
4	In the Operations module, link one or more organizations to your campaign. Adjust the hours of operation if necessary. See "The Organizations Group" (page 158).
5	Link one or more queues to your campaign. See "The Queues Group" (page 159).
6	(Optional) Click Skill-based if appropriate. (See "Multi-Contact and Skill-Based Scheduling" (page 213).) Link skills to the highlighted queue.

—End—

Setting Up Campaign-Specific Work Rules

Step	Action
1	(Optional) Create any shifts or work patterns that apply only to this campaign. These will be listed with "Local" as the organization. (Skip this module if you are not adding special work rules. The work

rules created for the organization will automatically be used. See ["The Work Rules Module" \(page 86\).](#)

—End—

Adding Employees to Your Campaign

Step	Action
------	--------

- | | |
|---|---|
| 1 | Add employees to your campaign. Click New on the Toolbar and select employees from the list that is displayed. This list includes employees from all linked organizations. See "The Employees Module" (page 115). |
|---|---|
-

—End—

Forecasting Your Contact Volume

Step	Action
------	--------

- | | |
|---|--|
| 1 | Create a forecast for each queue by doing one or more of the following (any of these can be used in combination with the others; see "The Forecast Module" (page 164)): <ul style="list-style-type: none">• Load an existing profile.• Add existing weeks to the history grid, and edit them if necessary.• Type numbers directly into the table. |
| 2 | (Optional) Adjust the forecast by scaling. |
| 3 | (Optional) Set schedule shrinkage. |
| 4 | Click Save . |
-

—End—

Setting Your Service Goals

Step	Action
------	--------

- | | |
|---|--|
| 1 | Select either Service level or Average speed to answer as your goal type. If you select Service level, enter a percentage of calls |
|---|--|
-

answered and time in seconds to meet the level. If you select **Average speed to answer**, enter the average time in seconds to meet the level. See "[The Service Goals Module](#)" (page 177).

- 2 In **Abandonment**, type one of the following:
 - The percentage of abandoned calls,
 - Or
 - (Skill-based only) Patience in seconds for the selected queue.
- 3 Set your service goal for each queue by doing one or both of the following:
 - Click **Make goal constant** to set the goal to be the same throughout the scheduling period.
 - Type numbers directly in the table. You must enter numbers for each day.

—End—

Generating Your Schedule

Step	Action
1	In the Calendar module, click Schedule .
2	In the Scheduler Setup dialog box, select the days to schedule. See " Setting Up the Scheduler " (page 189).
3	(Optional) Select the preference determinant. If you select Rank , make sure each employee is ranked.
4	Use the sliders to select your scheduling preferences.
5	Click OK to generate a schedule for the period of the campaign.
6	(Optional) Click the Publish icon to publish the schedule for the campaign period.

—End—

Organization Mode Modules and Tasks

This chapter describes each Forecasting and Scheduling Organization mode module and task in detail. It contains the following topics:

- ["Organization Mode" \(page 77\)](#)
Understanding Organization Mode and organizational hierarchies.
- ["The Operations Module" \(page 82\)](#)
Setting up your organization, its size, and its hours of operation.
- ["The Activities Module" \(page 84\)](#)
Creating, editing, and deleting your organizations' Activity Types as well as the Activities that fall under the Activity Types.
- ["The Work Rules Module" \(page 86\)](#)
Establishing shifts, shift activities, work patterns, and assignment rules.
- ["The Employees Module" \(page 115\)](#)
Entering and importing employee data and preferences. Establishing employee work patterns.
- ["The Calendar Module" \(page 136\)](#)
Viewing your employees' schedules.
- ["The Pulse Module" \(page 152\)](#)
Tracking your contact center's performance.

Organization Mode

Organization mode is used to enter and view information about your contact center and its employees. The information you enter in this mode is intended to be long-term and stable. You can make weekly changes at the employees' level.

For an overview of Forecasting and Scheduling's modes, see ["The Organization Mode" \(page 53\)](#). The following sections cover each of the mode's modules in detail.

Tasks You Can Perform in the Organization Mode

You can perform the following general tasks in the Organization mode:

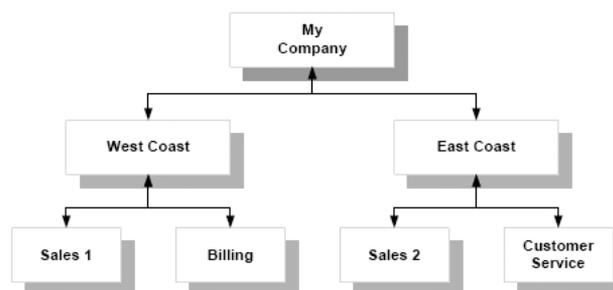
- Create organizations and their subdivisions.
- Set each organization's hours of operation.
- Create, edit, and delete your organizations' Activity Types, as well as the Activities that fall under the Activity Types
- Create shifts, shift activities, work patterns, and assignment rules for each organization.
- Add employees and staffing profiles to the organizations and assign them skills and work patterns.
- View the organization and employee calendars and add calendar events.
- View statistics about all your queues.

Understanding Organizational Hierarchies

When you enter employee information into Forecasting and Scheduling, you can arrange your agents into multiple organizations at multiple levels. The organizations you create in this mode are hierarchic—in other words, since information flows up and down the organization, data you enter at any level will be reflected up or down the organizational chain depending on its type.

Note: You do not have to use a hierarchical structure in Forecasting and Scheduling. You can add all employees to a single organization if you want, but this is not recommended.

In the figure below, My Company has two geographic divisions, West Coast and East Coast. Each division has several subdivisions based on function and supervision. Information in the hierarchy flows both up and down.



Top-Down Information

Operations information (see ["The Operations Module" \(page 82\)](#)) and work rules (see ["The Work Rules Module" \(page 86\)](#)) flow downward.

The following items are inherited by all organizations below the level where they are entered (the organization listed in the shift, shift activity, assignment rule, or work pattern):

- Hours of operation.
- Activity types and activities.
- Work rules, including shifts, shift activities, work patterns, and assignment rules.

Conversely, they are not available to organizations above or at the same level where they are created. Therefore, you should enter them at the highest level possible.

Hours of Operation Hours of operation are inherited from the parent when an organization is first created, but can be easily changed after that. Once established, an organization's hours can only be changed in the organization itself. They are not overridden by any other level.

Activity Types and Activities Activity types and activities are inherited from the parent when an organization is first created. You can also create additional activity types and activities for lower-level organizations.

Work Rules Work rules do not change or override anything at the lower levels. They are simply inherited and available when they are created. Lower-level organizations are not able to modify inherited rules but are able to create their own.

Because the West Coast and East Coast organizations are responsible for the operation and scheduling of My Company's contact centers, and because each uses a different set of work patterns, you should enter the patterns at their level. West Coast work patterns are available to both of its divisions, Sales 1 and Billing. (If you open the Work Rules module, these patterns are displayed.) On the other hand, work patterns entered for Sales 1 are available only to that organization and cannot be seen by any other organization. Work patterns are not shared among organizations at the same level.

Bottom-Up Information

Employee information (see "[The Employees Module](#)" (page 160)) flows upward; it is important that it be entered at the lowest level possible. Generally, this means that you should enter employee information at the level where the employee actually works, so that you can change the employee's information, proficiency level, and so forth, as needed. Higher-level organizations are also able to modify information for all their employees.

Tiffany and her scheduler both work for Customer Service. You should enter her employee information in Customer Service. Her scheduler can then change any of her information, such as her minimum or maximum hours, address, proficiency, and so forth. Because her employee information rolls upward, the East Coast organization or My Company can also change her data when she gets her promotion and pay raise.

Opening, Adding or Deleting an Organization

To open an existing organization:

Step	Action
1	On the Forecasting and Scheduling Startup window, click Work on an Organization . Or On the Toolbar, click the Organization button The Work on an Organization window appears.
2	Click + to expand the tree to locate the organization.
3	Double-click the organization. Or Click the organization, and then click Open . Note: If Open is unavailable (appears dimmed), you may not have access to the organization. See your system administrator for access privileges.

—End—

To add a new organization:

Step	Action
1	On the Forecasting and Scheduling Startup window, click Work on an Organization . Or On the Toolbar, click the Organization button The Work on an Organization window appears.
2	Click the parent organization of the one you are adding.
3	Click New . The New Organization dialog box appears.

- 4 Type a name for the organization.
- 5 Select a time for this organization.
- 6 Select the day of the week on which the organization starts its work week.
- 7 Set the day boundary for the organization. Forecasting and Scheduling uses this boundary to determine when the organization's work day begins and ends for scheduling purposes. If you have a 24-hour organization, this time determines the start and end times for your shifts. Employee shifts and schedules cannot cross this boundary unless the **Allow shift assignments to cross day boundary** check box in the Advanced Options group of the Organization mode **Operations** module is selected. See "[The Operations Module](#)" (page 82).

**WARNING**

You cannot change the time, start day, and day boundary once you have created a shift or an employee for this organization.

- 8 Click **OK** to add the new organization.

—End—

To delete an existing organization:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Close the organization if it is open. |
| 2 | Select the organization in the Work on an Organization window. |
| 3 | Click Delete , and then click Yes to confirm. The organization is removed from the system. |

Note: You cannot delete organizations if they are linked to any scheduling periods. See "[The Organizations Group](#)" (page 158).

—End—

To rename an organization:

Step	Action
1	Open the organization.
2	In the Operations module of the new organization, type the new name in the Name field. The new name appears in the Work on an Organization window.

—End—

The Operations Module

The Operations module is displayed when you open an organization or click the Operations icon. Information entered in this module applies to the open organization and all its divisions (organizations under it in the hierarchy—see "[Understanding Organizational Hierarchies](#)" (page 78)).

You use the Operations module to set information about the organization, including the maximum number of seats available, the organization's hours of operation, and the minimum time between employee shift assignments. Use the Operations module to set up a 24-hour contact center.

The Organization Group

Enter information about the organization under this group.

- **Name and Description**—Here you can change the name you originally assigned to the organization when it was created (see "[Opening, Adding or Deleting an Organization](#)" (page 80)). The description is optional.
- **Maximum number of seats**—Enter the maximum number of agents that can be scheduled at any time for this organization.
- **Time Zone**—Designated when the organization is first created. This time zone cannot be changed once you have created a shift or an employee for this organization. If it is incorrect, you must delete the organization and create a new one with the correct time zone. The time zone is used to store time-related information, such as hours of operation and shifts, and is also used by Forecasting and Scheduling to make sure this organization's employees are only scheduled during its open hours in its time zone.
- **Parent Organization**—Automatically assigned when you create the organization. Organizations at the highest (root) level are labeled "This is a top organization."

The Hours of Operation Group

Enter information about the days and times this organization is open for business. Organizations below this one in the hierarchy inherit these hours. See ["Hours of Operation" \(page 79\)](#).

Note 1: If you change the hours of operation after scheduling periods have been scheduled, you must clear each affected schedule and reschedule the scheduling period before the changes will be reflected.

Note 2: If your display time zone is not the same as the organization's time zone, items in this group will be unavailable. See ["Getting Help" \(page 37\)](#).

- **Day boundary**—Designated when you first create the organization. If it is incorrect, you must delete the organization and create a new one. This time determines the start and end times of each work day. Employee shifts and schedules cannot cross this boundary unless the **Allow shift assignments to cross day boundary** check box in the Advanced Options group is selected.
- **Day, Start Time, End Time**—Select each day and enter a start time and an end time for all shift activities. If your hours cross midnight, the day of the week is displayed next to each time. Your hours of operation cannot cross the Day boundary.

Note: You must always select the days your contact center is open, even if you select 24-hour contact center (see below).

Note: If all days have the same schedule, first clear each day's check box, and then select the first day of the week. Enter the start and end times for that day. Select the other days; the start and end times automatically reflect the first day's times.

The Advanced Options Group

These options provide additional choices for setting up and scheduling this organization.

Enter the minimum time between shift assignments, the maximum consecutive work days to schedule, and select 24 hour operations. (Optional.)

- **Minimum time between shift assignments**—Set the minimum number of hours an employee will be given between shift assignments. This minimum applies to all employees in the organization and its divisions regardless of their work patterns (see ["Using Work Patterns" \(page 91\)](#)).
- **Maximum consecutive working days to schedule**—Set the maximum number of days in a row an employee may be scheduled to work. This maximum applies to all employees in the organization and its divisions regardless of their work patterns (see ["Using Work Patterns" \(page 91\)](#)).

- **24-hour contact center**—Select this check box for contact centers that operate 24 hours a day, 7 days a week. The start and end times in the Hours of Operation group are unavailable. Use Day Boundary to set the start/end times for your 24-hour contact center.

Note: After you select 24-hour contact center, you must select the days of operation for your contact center.

- **Allow shift assignments to cross day boundary**—Select this check box to allow shift schedules to start in one day and end in another. A shift assignment's day of the week is the day the shift starts. A shift that starts at any time between 12:00 a.m. and 11:45 p.m. on Monday is considered a Monday shift.

The Activities Module

Click the **Activities** module icon to display the **Activities** module.

Activity types and the activities they contain are the basic building blocks of Workforce Management. Activities specify the scheduled work and the work actually done.

Activity Types

Activity types are folders that contain similar activities; they make selecting an activity easier for My Time users. Each activity type has a name, a description, and a setting specifying whether My Time users can see this activity type in the web application.

Workforce Management comes preconfigured with the following activity types:

- Absence Activities (such as vacation or jury duty)
- Assigned Work Activities (such as phone or research)
- Desktop Monitoring (TBD)
- Learning Activities (such as training sessions using the Competency-based Learning training application)
- Planned Events (such as training or a staff meeting)
- Shift Events (such as lunch or a coffee break)

For example, Assigned Work Activities could contain the Phone activity and the Email activity.

Absence Activities might contain the Sick activity and Jury Duty activity.

You can add new activity types or modify existing ones.

Activities

Activities represent work that agents can perform. Each activity has a name, a description, a setting specifying if the activity is paid, a color, a code, a tolerance, and an activity type.

- If an activity is marked as paid, any time an agent logs into this Activity, the resulting entry is also marked as paid. A manager can override the paid/unpaid status of any time entry on the Day Details page.
- Workforce Management uses the specified color and code of an activity to display schedules and time records on the Adherence screen in the web application.
- An activity's tolerance specifies how long an Agent can be out of adherence to a scheduled activity before an exception appears. For example, the Phone activity is assigned a tolerance of 5 minutes. An agent is scheduled to log onto the Phone activity at 9:00 a.m. Instead, he logs on at 9:05 a.m. He was not adhering for 5 minutes and the tolerance is 5 minutes, so no adherence exception is displayed. However, if the Agent logged in at 9:10 a.m., the full 10 minutes from 9:00 a.m. to 9:10 a.m. would show up as an exception.
- Finally, every activity must have an activity type.

Creating or Editing Activities

The Activities tab allows you to create or edit existing activities within Forecasting and Scheduling.

The Activity Detail window, shown above, appears when you double-click an existing activity or double-click the * next to the row at the bottom of the grid. It allows you to set the following:

- Name
- Description
- Activity Type (from a drop-down menu of the activity types you have defined)
- Whether the activity is paid
- The color displayed on the calendar for that activity
- The activity code displayed as part of the legend when you print in black and white.
- Whether the activity is used in queue hopping.

If you are licensed for queue hopping, the queue hopping check box can be enabled for activities that are checked as a Shift Activity, and not checked as a Time Off, Unavailability, or Calendar Event activity.

Once you have selected the queue hopping check box, the queue selection button becomes available. When you select the button,

Forecasting and Scheduling brings up a screen to allow you to choose the queues from which the scheduler will select. The media you have selected limits your queue selection. If no queues are shown, you do not have any queues configured for the selected media.

- The media associated with the activity. (You can select more than one.)

Note: You can only enable media when **Time Off**, **Use in Calendar Event**, and **Unavailability** are unchecked in the **Schedule Usage** container described below.

In addition, you can also specify the following:

- Schedule Usage—Whether the activity can be used as:

- a primary activity in a shift
- a shift activity
- a calendar event
- an unavailability

If the activity is used as an unavailability, you can set the activity to be used in requests. (See the next bulleted item).

- a time off

Note: If the activity can be used as a primary activity in a shift, the Paid field also needs to be checked, and you cannot set the activity to be used as a shift activity. If the activity is used as an unavailability, you must set the activity to be used in requests (see the next item).

- Request Management Usage—For activities usable as time off or unavailability, if the activity can be specified in time off requests and is part of an allotted time off period.
- Activity Manager Usage—The adherence tolerance, maximum time in activity, and whether people in the activity should be considered as In or Out.
- Scorecards Usage—From the drop-down menu, the mapping of new activities to a Scorecards source mapping. The choices are None (the default), Time in Admin, Time in Break, Time in Other, and Time in Training.

The Scorecards source mappings are only needed for Scorecards, and can be ignored if your license does not include Scorecards.

The Work Rules Module

The Work Rules module is displayed when you click the **Work Rules** icon. Use the Work Rules module to set up shifts, shift activities, work patterns, and assignment rules for your organization and link them together.

All work rules apply to the open organization and all its divisions. You can change work rules only in the organization where they are created, which is listed in the Organization field.

Creating a Work Pattern—A Checklist

This section provides a quick overview of all the steps needed to create a complete work pattern that can be assigned to an employee and scheduled. You can find detailed information about each step later in this chapter. You will first create the shift activities, which will then be assigned to shifts. The combined shifts and shift activities will then be linked into work patterns. Finally, you will create complex fairness and shift assignment rules that will be linked to agents and groups of agents in the Employees module.

To create work patterns and rules:

Step	Action
1	Click the Shift Activities tab. Create any new shift activities needed for your shift. See "The Shift Activities Tab" (page 97) .
2	Click the Shifts tab. Create any new shifts needed for this work pattern. See "The Shifts Tab" (page 100) . Verify that your shift lengths and start times are valid for the organization's start and end times. Entries will appear in red if they are not valid. Be sure to include the appropriate activity. Note: The Length column allows a shift length ranging from 15 minutes to 22 hours, 45 minutes. You can set the shift length in 5-minute intervals, using the up and down arrows, or manually in 1-minute intervals.
3	Link your shifts with shift activities. See "Linking Work Patterns and Shifts" (page 104) . Verify that the Start Window falls within the shift period.
4	Click the Work Patterns tab. Create your work patterns. See "The Work Patterns Tab" (page 103)
5	Link your shifts to work patterns and set their occurrence. See "Linking Work Patterns and Shifts" (page 104) <ol style="list-style-type: none"> 1. On the Possible Days Off shift, check the box for each day if employees are allowed to be off that day in the work pattern. For days that employees cannot be off in this work pattern, clear the check box. 2. Add the shifts you want associated with this work pattern.

3. For each shift, you should check the box for each day if a shift can be assigned for that day in the work pattern. Clear the check boxes for days on which you do not want a shift to be assigned.

- 6 (Optional) Set the minimum and maximum consecutive days. See ["Setting Consecutive Days for a Shift" \(page 106\)](#).

- 7 (Optional) Set consistent start times. See ["Setting Consistent Start Times for Shifts and Shift Activities" \(page 107\)](#).
Verify that the shifts set for consistent start times have compatible start times available.

- 8 Click the **Assignment Rules** tab. Create your Assignment Rules. See ["The Assignment Rules Tab" \(page 108\)](#). These will be assigned to individual employees in the **Employees** module. See ["Assigning Assignment Rules to Employees" \(page 133\)](#).

—End—

This completes your work pattern.

Note: The **VTO Event** and **OT Extension** tabs are used in Intra-Day Optimization. See ["Intra-Day Optimization" \(page 223\)](#) for more information on this separately licensed feature.

An Introduction to Work Rules

The heart of Forecasting and Scheduling's scheduling feature is its ability to establish work rules and patterns that reflect the needs of both your contact centers and your individual agents. Agents are assigned work patterns that can combine a variety of shift lengths, start and stop times, shift activities, and specific rules (no weekend work, for example).

The work patterns that you create are reusable. You can assign a work pattern to many different agents, or you can assign many work patterns to one agent, specifying a number of allowable shift lengths and starting times. (An employee will only be scheduled for one work pattern per scheduling period if many are assigned.)

You can also create assignment rules that ensure your agents are treated fairly. For example, a Fairness rule might state that "All agents in the Sales group must work the same number of night shifts in a scheduling period with a tolerance of 1." See ["The Assignment Rules Tab" \(page 108\)](#).

This section explains the basic concepts of work rules—creating shifts and shift activities and linking them to produce a set of work patterns that you can then assign to agents. For examples of useful work patterns, see ["Creating Effective Work Patterns" \(page 91\)](#).

Overview of the Work Rules Module

The Work Rules module is available in both Organization and Campaign modes. Information entered in the Organization mode applies to the current organization and all units below it in the organization's hierarchy. Normally, work rules are entered within the Organization mode and will be inherited by any campaign that is linked to that organization.

When specific rules are needed for a campaign, you enter rules in Campaign mode. These rules apply to all organizations in the open scheduling period but only for the duration of the profile.

You can only enter and edit assignment rules in Organization mode.

The Work Rules module contains four tabs: Shifts, Shift Activities, Work Patterns, and Assignment Rules.

Note: The VTO Event and OT Extension tabs are used in Intra-Day Optimization. See Chapter 9 Intra-Day Optimization for more information on this separately licensed feature.

- Shifts are work periods of a definite length. Each shift type has a length and a start time or range of start times and can have linked shift activities, such as breaks and meals.
- Shift Activities are periods when agents are scheduled for activities such as breaks, meals, training, and so forth, and are not available to answer calls. You can link shift activities to one or more shift types.
- Work Patterns combine shift types and their linked shift activities with days of the week, consistent start times, and the minimum and maximum consecutive days the shift types can be scheduled. These patterns are then assigned to employees in the Employees module.
- Assignment Rules allow you to create and edit assignment rules that ensure fairness or help manage shift assignments. Assignment rules also allow you to establish work pattern rotations.

Note: You can only modify shifts, shift activities, work patterns, and assignment rules at the location where they were created. That location is displayed in the Organization column and is the organization name. Shifts, shift activities, and work patterns created for campaigns are Local. You can only create and edit assignment rules in Organization mode. If you try to edit a work rule component in a different location, you are notified that it is read-only.

Shifts

Use the Shifts tab to specify the start time and length of work periods, the minimum and maximum time between shift activities, and to associate shifts with shift activities. You can create as many shift types as you need, and each shift can have as many shift activities as necessary.

Shift Activities

Use the Shift Activities tab to specify activities such as breaks, lunch, and training when the agent is not available. You can specify the activity, length, and start times of the activities. You can use one shift activity for many different shifts.

Work Patterns

Use the Work Patterns tab to combine one or more shifts and their associated shift activities, and designate the days of the week, minimum and maximum consecutive days they can be scheduled, and whether they have consistent start times. See "[Setting Work Rules for a Work Pattern](#)" (page 105).

You then assign work patterns to individual employees in the Employees module. Each work pattern is automatically assigned a Possible Days Off shift. This shift determines the days of the week the employee can be off.

Assignment Rules

Use the Assignment Rules tab to create and edit assignment rules. Forecasting and Scheduling provides two groups of assignment rules. The first group, fairness rules, ensure that shift assignments are balanced so all members of a group are treated fairly. The second group, shift rules, ensure that individual agents or groups of agents are assigned (or are not assigned) certain types of events over a period of time.

You can also use the Assignment Rules Wizard to create work pattern rotations, assigning a sequence of work patterns over a period of time.

Forecasting and Scheduling's Assignment Rules Wizard leads you through the process of creating the assignment rules. The rules themselves are assigned to agents in the Employees module (see "[Assigning Skills to Employees](#)" (page 215)).

For detailed information about assignment rules, see "[Using Assignment Rules](#)" (page 94).

Using Work Patterns

Forecasting and Scheduling generates schedules by assigning shifts to employees based on their work patterns. When properly prepared, work patterns are powerful tools that allow you to match a wide range of work and employee requirements quickly and efficiently.

To use work patterns effectively, you must first understand how Forecasting and Scheduling schedules employees. This section explains the relationship between the different elements and provides some examples to demonstrate Forecasting and Scheduling's scheduling features and flexibility.

How Forecasting and Scheduling Uses Work Patterns to Schedule

Each employee is assigned one or more work patterns. Each work pattern consists of one or more shifts and their associated shift activities.

When creating a new schedule, Forecasting and Scheduling evaluates the work patterns assigned to each employee. It then selects shifts for that employee out of one—and only one—work pattern:

- If Sarah is assigned a single work pattern that includes only Shift A, she will be scheduled only for Shift A.
- If Sarah is assigned a single work pattern that includes both Shift A and Shift B, she can be scheduled for a combination of days from both Shift A and Shift B.
- If Sarah is assigned two work patterns, one including only Shift A and the other including only Shift B, Forecasting and Scheduling will schedule her either all from Shift A or all from Shift B. Forecasting and Scheduling will use only one work pattern for her schedule.
- If Sarah is assigned two work patterns, one including Shift A and Shift B and the other including Shift C and Shift D, Forecasting and Scheduling will schedule her either a combination of days from Shift A and Shift B or a combination of days from Shift C and Shift D.

Creating Effective Work Patterns

You can create work patterns that will help Forecasting and Scheduling provide the best schedule to meet your service goals, labor rules, and agents' needs. These examples demonstrate how you can build general rules or very specific ones.

Example 1: Single Work Pattern In this example, Mike can work both morning and evening shifts. Forecasting and Scheduling will choose from the shifts in this pattern and will schedule Mike to work a mixture of morning and evening shifts. Mike's contact center is open seven days a week. Because all of Mike's days are checked for each shift, including the Possible

Days Off shift, Mike can be scheduled to work on any day or can be given any day off. Forecasting and Scheduling will determine Mike's shifts based on service goals and his minimum and maximum paid hours.

Work Pattern 1:

Mike's Available Shift Types	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Shift A (8-hour morning)	x	x	x	x	x	x	x
Shift B (8-hour evening)	x	x	x	x	x	x	x
Possible Days Off	x	x	x	x	x	x	x

Example 2: Multiple Work Patterns If Mike wishes to work either all morning shifts or all evening shifts, Mike's scheduler can assign him two work patterns. Forecasting and Scheduling will then schedule him for all Shift A or all Shift B.

Work Pattern 1:

Mike's Available Shift Types	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Shift A (8-hour morning)	x	x	x	x	x	x	x
Possible Days Off	x	x	x	x	x	x	x

Work Pattern 2:

Mike's Available Shift Types	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Shift B (8-hour evening)	x	x	x	x	x	x	x
Possible Days Off	x	x	x	x	x	x	x

Example 3: Multiple Shifts Within a Single Work Pattern Jennifer can work three shift types. By creating and assigning a work pattern, her scheduler is able to specify when Jennifer is able to work. In this example, Jennifer can work different shift types on Mondays and Wednesdays, but

has limited availability on the other days and cannot work weekends. Using this pattern, Forecasting and Scheduling will schedule her only for the shifts she can work.

Work Pattern 1:

Jennifer's Available Shift Types	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Shift A (8-hour morning)	x		x		x		
Shift B (8-hour evening)	x		x				
Shift C (4-hour morning)		x		x			
Possible Days Off						x	x

Example 4: Multiple Shifts Within Multiple Work Patterns Mary can work a variety of shift types. Her scheduler wants to ensure that agents are never scheduled to work a morning shift after a late night shift the night before. She also wants to be sure that Mary is given two days off in a row. The contact center's agents are given either Saturday and Sunday or Wednesday and Thursday off. These two work patterns will match those requirements. The system will choose one of the two patterns to work with.

Work Pattern 1:

Mary's Available Shift Types	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Shift A (8-hour morning)	x	x		x			
Shift B (8-hour evening)	x	x	x	x	x		
Shift C (8-late night)		x		x	x		
Possible Days Off						x	x

Work Pattern 2:

Mary's Available Shift Types	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Shift A (8-hour morning)	x				x		
Shift B (8-hour evening)	x	x			x	x	x
Shift C (8-hour late night)	x	x			x	x	
Possible Days Off			x	x			

Using Assignment Rules

Forecasting and Scheduling provides assignment rules to ensure equitable scheduling over a period of time. There are two groups of rules that are used in different situations:

- Fairness rules ensure that all agents assigned the rule are scheduled for the same number (a fair number) of shifts, days off, weekends off, working holidays, and so forth, within a given period within a certain tolerance. For example, a Fairness rule might state that "All agents in the Sales group must work the same number of night shifts in a scheduling period with a tolerance of 1."
- Shift rules ensure that individual agents or groups of agents are given a certain number of shifts, days off, weekends off, working holidays, and so forth, within a given period. For example, a shift rule might state that "Agents in the Sales group should be scheduled to work no more than 4 days in 1 week."

Note in the examples that the Fairness rule ensures that all agents in the Sales group are scheduled for the same number of night shifts without designating how many night shifts each will work. Each agent could be scheduled for 3 or 4 night shifts as long as the other agents were assigned the same number.

The Shift rule, on the other hand, ensures that no agent in the Sales group will be scheduled for more than 4 days in 1 week. An individual agent can be scheduled for 0, 1, 2, 3, or 4 days without regard to the other agents' schedules.

Forecasting and Scheduling also lets you set up rotations, a sequence of work patterns that repeat over a period of time.

This section provides information about the way assignment rules are used to schedule employees equitably. For specific information about using the assignment rules wizard to create rules, see "[Creating Shift and Fairness Assignment Rules](#)" (page 108).

Fairness Rules

You use Fairness rules to ensure that members of a group are scheduled fairly in relation to other members of the group over a period of time. In other words, the rules cause Forecasting and Scheduling to assign the same number of week days, weekends, night shifts, and so forth to all members of the group over a fixed period of time. Fairness rules apply only to the group to which they are assigned.

Fairness is determined using the following factors:

- An item that must be equitably assigned—specific shifts, days of the week, weekend days, weekend nights, holidays, and so forth.
- A time period—a number of days, weeks, months, or years,
- A starting date—starting on a specific date.
- A tolerance—an acceptable deviation from the Fairness rule.

Each rule uses a similar structure: The group assigned this rule will be scheduled to work the same number of items in a time period starting on a date with a tolerance of a number.

Here are some examples of Fairness rules:

- All employees should be scheduled for no more than five days every week starting on January 10.
- All employees should be scheduled for no more than one weekend day every week starting on March 2.
- This group must have off the same number of weekend nights every eight weeks starting on March 1 with a tolerance of one weekend night.

Shift Rules

You use shift rules to ensure that agents are (or are not) assigned specific shifts over a week. In other words, a rule can ensure that an agent will be assigned a certain number of weekend days off during a week period or will not be assigned more than a certain number of night shifts per week.

Shift rules establish a relationship between the agent assigned the rule and the schedule, while Fairness rules establish a relationship between the agent and other agents in a group.

The following factors determine shift rules:

- People—specific agents, groups of agents, everyone in an organization, the entire company

- A constraint—at least, no more than, between, exactly
- The item that is occurring—specific shifts, days of the week, weekends, weekend nights, minimum or maximum number of days or hours
- A number of occurrences—an explicit number of times an event will occur during the designated time period.

Note: The number of occurrences factor distinguishes shift rules from fairness rules. In a fairness rule, an event is scheduled the same number of times within a given period for each member of a group—the exact number of times is determined by Forecasting and Scheduling. In a shift rule, the event is assigned the designated number of times within a given period to each agent assigned the rule.

- A time period—the number of days or weeks
- A starting date—the date the rule starts

Each rule uses a similar structure.

Here are some examples of shift rules:

- All employees should be scheduled for no more than five days every week starting on January 10.
- All employees should be scheduled for no more than one weekend day every week starting on March 2.
- All agents in Organization A should be scheduled for exactly four mornings every six weeks starting on October 15.
- All agents in Organization B should be scheduled for no more than three nights every week starting on December 1.
- Tiffany and Simon should be scheduled for at least three nine-hour training shifts every week starting on November 1.

Rotations

You use rotations to assign a specific repeating sequence of work patterns. If, for example, you want a group of agents to work an early morning pattern for a week, then work an evening pattern for a week, next work a late morning pattern for a week, and then start the sequence over, you can accomplish this with a rotation rule.

Rotations require the following information:

- The number of weeks in the rotation (2 to 26 weeks).
- The work pattern assigned to each week.
- The starting date of the rotation.

Team Work Rules

You can create work rules to have multiple employees scheduled to work at the same time as each other or as their supervisor or lead. Such a rule is referred to as a team work rule. For detailed information, see ["Creating Team Work Rules" \(page 111\)](#).

The Shift Activities Tab

Use the Shift Activities tab to create and modify periods of non-phone activities, such as breaks, training, and lunch. These periods are scheduled as part of the shifts to which they are linked. (See ["Linking Shifts and Shift Activities" \(page 102\)](#).)

Forecasting and Scheduling schedules these periods within the start window that you provide (see ["Shift Activities Grid Fields" \(page 98\)](#)) to make the smallest impact on your service levels.

A single shift activity can be associated with as many shifts as you want. If you have an early break that is used by shifts A, B, and C, you only have to create it once, and then link it to each shift. However, each shift activity is assigned an activity, and cannot be linked to a shift that has the same activity.

To create a new shift activity, do one of the following:

- Click the * next to the row at the bottom of the grid or click the **New** button on the Toolbar, and then enter data (see ["Shift Activities Grid Fields" \(page 98\)](#)) in each field. For information about using grids, see ["Using Grids" \(page 34\)](#).

Or

- Double-click anywhere in the empty row, and then fill in the **Shift Activity Detail** dialog box.

To modify an existing shift activity:

Step	Action
1	Click the field you want to modify, and then type the new information. Or
2	Double-click anywhere in the row you want to modify, and then fill in the Shift Activity Detail dialog box.

—End—

To delete a shift activity:

Step	Action
1	Make sure you are in the organization that originated the shift activity.
2	Select the shift activity, and then click the Delete button on the toolbar.
3	Click OK to confirm the deletion.

—End—

Shift Activities Grid Fields

The Shift Activities grid and Shift Activity Detail dialog box contain the following fields:

- **Name**—Type a descriptive name for the shift activity.
- **Activity**—Select an activity for the period from the drop-down menu. Activities are created in the Activities module's Activities tab.
- **Description**—Type a description of the shift activity (optional).
- **Organization**—Filled in automatically when the shift activity is saved.
- **Paid**—Click or clear the Paid check box to make the shift activity paid or unpaid.

Paid shift activities are included in calculating the minimum and maximum hours for which an employee is scheduled. (See "[Employee Grid Fields](#)" (page 120).) Unpaid shift activities are not included in the minimum or maximum hours calculation.

- **Length**—Type the length of the period in hours and minutes. Lengths can be set in 5-minute increments.
- **Flexible**—If the duration of this shift activity can vary (particularly useful in queue hopping, see "[Queue Hopping](#)" (page 239)), click the box labeled Flexible. You then specify the minimum and maximum counts of periods of the previously specified length for that activity. For example, the scheduling engine can create a flexible shift activity of length 15 minutes for which the minimum count is one and the maximum count is four as an activity of 15, 30, 45, or 60 minutes.

Note: Only paid shift activities can be flexible, and only those for which the Shift box on the Activities tab in the Activities module (see "[Activities](#)" (page 85)) has been checked.

When you create a flexible shift activity, Forecasting and Scheduling checks to make sure its minimum duration can fit within the shift, taking into account the shift duration and other linked shift activities.

- Start Times—You can specify shift activities to start as follows:
 - Start Anytime—Click the Start anytime check box to allow a shift activity to start at any time during the shift.
 - Relative to Shift Start—Using the Start Begin and Start End fields, you can specify that an activity should start within the specified range of hours after the start of the shift itself.
 - Absolute—Using the Start Begin and Start End fields, you can specify that an activity should start between two specific times of the day, for example, between 11:30 a.m. and 12:30 a.m. (One possible use for the Absolute setting is to accommodate the hours of operation of a cafeteria, for example, that is only open between certain hours of the day.)
 - Start Begin—For the setting Relative to Shift Start, enter the length of time after the shift begins for the shift activity to begin. For the Absolute setting, specify the earliest time of the day at which the shift activity can begin. If the shift activity can start at any time during the shift, click the Start Anytime radio button.

Note: Both Start Begin and Start End (described next) move in 15-minute increments, although you can specify shift activity lengths in 5-minute increments.

- Start End—For the setting Relative to Shift Start, enter the maximum length of time after the shift begins for the shift activity to begin. For the Absolute setting, specify the latest time of the day at which the shift activity can begin.

For a relative-to-shift-start activity, if you enter a Start Begin of 2:00 and a Start End of 3:00 for a break for a shift that starts at 8:00 a.m., the break will be scheduled to start between two and three hours after the beginning of the shift—sometime between 10:00 a.m. and 11:00 a.m.

Note: The more time you allow between the start and end times, the more optimization choices Forecasting and Scheduling has.

For an absolute shift start activity, if you enter a Start Begin of 2:00 and a Start End of 3:00 for a break for a shift that starts at 8:00 a.m., the break will be scheduled to start between 2:00 and 3:00 a.m.

ATTENTION

You must link shift activities to shifts in order for them to be scheduled. See ["Linking Shifts and Shift Activities"](#) (page 102).

The Shifts Tab

Shifts are part of a template that Forecasting and Scheduling uses to optimize your schedules. For example, you do not have to enter separate shifts to have an eight-hour shift start at 7:00, 7:15, 7:30, 7:45, and so forth.

Use the Shifts tab to create and modify employee shift types and link them to shift activities. These shifts are placed on the schedule itself when employees are scheduled.

The upper pane of the tab contains a grid listing the organization's shifts. When a shift is highlighted, the lower pane lists the shift activities linked to that shift. For example, in the figure above, the Training shift is highlighted in the upper pane and the shift activities linked to that shift are displayed in the lower pane.

To create a new shift:

Step	Action
------	--------

- | | |
|---|---|
| 1 | Click the * next to the row at the bottom of the grid, or click the New button on the toolbar, and then enter data (see "Shift Grid Fields" (page 101)) in each field. For information about using grids, see "Using Grids" (page 34) . |
|---|---|

Note: The Length field allows a shift length ranging from 15 minutes to 22 hours, 45 minutes, to be set in 5-minute intervals, or manually in 1-minute intervals.

- | | |
|---|--|
| 2 | Click OK . The information is automatically entered into the grid. The Organization is entered automatically. |
|---|--|

—End—

To modify an existing shift:

Step	Action
------	--------

- | | |
|---|---|
| 1 | Click the field you want to modify, and then type the new information.
Or |
| 2 | Double-click anywhere in the row you want to modify, and then fill in the Shift Detail dialog box. |

—End—

To delete a shift:**Step Action**

- 1 Make sure you are in the organization that originated the shift.
- 2 Select the shift, and click the **Delete** button on the toolbar.
- 3 Click **OK** to confirm the deletion.

Note: Any work patterns linked to the deleted shift are dimmed on the Work Patterns tab to show that the shift has been deleted. You then need to delete the shift from the work patterns. When you delete a shift, it can no longer be scheduled as part of a work pattern. It is not, however, removed from existing schedules. See "[The Work Patterns Tab](#)" (page 103).

—End—

Shift Grid Fields

The Shifts grid and the Shift Details dialog box contain the following fields:

- Name—Type a descriptive name for the shift.
- Length—Type the length of the shift in hours and minutes.
- Activity—Select the activity that the employee will be performing during the majority of the shift.
- Min Spacing—Specify the minimum amount of time allowed between two consecutive shift activities or between a shift activity and the beginning or end of a shift.
- Max Spacing—Specify the maximum amount of time allowed between two consecutive shift activities or between a shift activity and the beginning or end of a shift.
- Description—Type a description of the shift in this field (optional).
- Organization—You can only modify or delete a shift in the organization where it was created. This field contains the name of that organization. It is filled in automatically when a new shift is saved and cannot be changed.
- Start Times—The Start Times area has rows for each hour and columns for 15-minute increments. Drag your mouse across the range of times the shift can start, or click individual time blocks. A red "X" appears in any time block that falls outside the shift's acceptable range, which is determined by the organization's hours and the length of the shift. Drag across or click selected times to clear them.

Note: Don't forget to include all the start times. For example, if you want your shifts to start every 15 minutes from 6:00 to 7:00, you must click 6:00, 6:15, 6:30, 6:45, and 7:00.

You can select any times or range of times within the shift's acceptable range by dragging down one or more columns or across one or more rows, or by clicking individual time blocks. Start times do not have to be consecutive.

Note: The greater the range of start times you provide, the more flexibility Forecasting and Scheduling has in creating an optimum schedule that matches your service level and employee availability.

Linking Shifts and Shift Activities

You can link each shift to one or more shift activities, and you can link a shift activity to as many shifts as you want (see "[The Shift Activities Tab](#)" (page 97)). When a shift is selected, its linked shift activities are displayed in the lower pane of the Shifts tab.

Note: You cannot link a shift activity with an activity to a shift with the same activity. For example, you cannot link an immediate shift activity with an immediate shift.

To link one or more shift activities to a shift:

Step	Action
1	Select the shift. The Shift Activity grid for that shift is displayed in the lower pane.
2	Click the * next to the row at the bottom of the grid, and then click the ellipses box that appears in the Name field. The Shift Activities dialog box appears.
3	Select one or more shift activities to link to the shift, and then click OK . The new shift activities are displayed on the grid in the lower pane.

—End—

To unlink a shift activity from a shift:

Step	Action
1	Select the shift. The Shift Activity grid for that shift is displayed in the lower pane.
2	Select the shift activity, and then click the Delete button on the toolbar.

- 3 Click **OK** to confirm the deletion.

—End—

The Work Patterns Tab

Use the Work Patterns tab to provide the rules that Forecasting and Scheduling uses when scheduling shifts for employees.

Work patterns consist of the shifts that can be assigned to an employee and can include rules determining the days of the week the shifts can be scheduled, the number of consecutive days the shifts will be scheduled, and whether the shifts must start at the same time.

The upper pane of the tab contains a grid listing the organization's work pattern types. When a shift is highlighted, the lower pane lists the shifts and rules linked to that pattern.

To create a new work pattern:

Step	Action
1	In the upper pane, click the asterisk (*) next to the row at the bottom of the grid, or click the New button on the toolbar, and then enter data (see " Linking Work Patterns and Shifts " (page 104)) in each field. For information about using grids, see " Using Grids " (page 34). Or
2	Double-click anywhere in the empty row, and then fill in the Work Pattern Detail dialog box. The information is automatically entered into the grid.

—End—

To modify an existing work pattern:

Step	Action
1	Click the field you want to modify, and type the new information. Or
2	Double-click anywhere in the row you want to modify, and then fill in the Work Pattern dialog box.

—End—

To delete a work pattern:

Step Action

- 1 Make sure you are in the organization that originated the shift.
- 2 Select the shift, and then click **Delete** on the toolbar.
- 3 Click **OK** to confirm the deletion.

Note: Any deleted work pattern that has been assigned to an employee appears dimmed in the Work Patterns tab of the Employees module. See "[Assigning Work Patterns to Employees](#)" (page 132).

—End—

Work Patterns Grid Fields

The Work Patterns grid and Work Pattern Detail dialog box contain the following fields:

- Name—Type a descriptive name for the work pattern. Consider the names of your shifts when assigning work pattern names.
- Consistency Tolerance—Select in 15-minute intervals how much tolerance you want the scheduling engine to use in setting start times for shifts. For example, you can specify that all employees' shifts or shift activities must start within X minutes of each other.
- Type—Select an employee type from the menu. Employee types are created in the Settings dialog box. (See "[Adding To or Modifying Forecasting and Scheduling Settings](#)" (page 68)

The type determines the type of employee to whom you can assign a work pattern. For example, if you designate a work pattern as Full Time, you can only assign the pattern to employees designated as Full Time. You assign work patterns to employees in the Employees module. See "[Assigning Work Patterns to Employees](#)" (page 132).

- Description—Type a description of the shift activity (optional).
- Organization—Filled in automatically when the work pattern is saved.

Linking Work Patterns and Shifts

Each work pattern is linked to one or more shifts. When a work pattern is highlighted, its linked shifts are displayed in the lower pane. A work pattern can have many shifts, and you can use a shift in many different work patterns.

To link one or more shifts to a work pattern:

Step	Action
1	Select the work pattern. The Work Rules grid for that work pattern is displayed in the lower pane. When you create a new work pattern, a shift is automatically added. The Possible Days Off shift indicates the days an employee assigned the work pattern can be scheduled for a day off. See " Setting Work Rules for a Work Pattern " (page 105).
2	In the lower pane, click the asterisk (*) next to the row at the bottom of the grid, and then click the ellipses box that appears in the Shifts field. The Shifts dialog box appears, containing all the shifts you have created. When you select a shift, its linked shift activities are listed in the lower pane of the dialog box.
3	Select one or more shifts to link to the work pattern, and then click OK . The new shifts are displayed on the Work Rules grid in the lower pane of the work pattern grid.

—End—

To unlink a shift from a work pattern:

Step	Action
1	Select the work pattern. The Work Rules grid for that shift is displayed in the lower pane.
2	Select the shift, and then click the Delete button on the toolbar.
3	Click OK to confirm the deletion.

—End—

Setting Work Rules for a Work Pattern

When you have linked one or more shifts to your work pattern, you next set additional work rules for each shift.

Setting Possible Work Days You can use the Work Days tab (in the lower left corner of the Work Pattern window) to set the days of the week that you want a shift scheduled and determine the days that employees with the work pattern can be off.

To set the work days for a shift:

- Select the days of the week you want the shift to be scheduled for employees assigned the work pattern.

When a shift is linked to a work pattern, it initially has all days selected (checked). This means that Forecasting and Scheduling can schedule an employee with this pattern to work any day the organization is open. Clear the days you do not want the selected shift assigned to any employee with the work pattern.

The Possible Days Off shift indicates the days an employee can be off. If you do not want employees with the work pattern to have a certain day off (Monday, for example), clear that day. If you clear all the days except, say, Saturday and Sunday, those are the only days an employee will be given off.

Note: If an organization is not open on a particular day or time (see "The Hours of Operation Group" (page 83)), all employees will be scheduled for that time off regardless of their work patterns.

Setting Consecutive Days for a Shift You can set the minimum and maximum number of days you want a shift assigned to an employee with the work pattern. These numbers determine how many days in a row an employee will work a shift or how many days in a row an employee will have off. You can do this for each shift.

To set the minimum and maximum number of consecutive days for a shift:

Step	Action
1	In the # Consecutive Days column of the selected shift, click Min .
2	Select the minimum number of days in a row that this shift should be assigned. Employees with this work pattern are assigned this shift at least that many times in a row. If the shift is Possible Days Off, employees are given at least that number of days off in a row.
3	In the # Consecutive Days column of the selected shift, click Max .
4	Select the maximum number of days in a row that this shift should be assigned. Employees with this work pattern are assigned this shift no more than that many times in a row. If the shift is Possible Days Off , employees are given no more than that number of days off in a row.

—End—

For example, if your organization is open seven days a week and you want your employees to have two days off in a row, in the Possible Days Off shift, set both the minimum and maximum days to 2.

Note: You do not need to set both the minimum and maximum days. You can set either one without the other or leave both at zero.

Setting Consistent Start Times for Shifts and Shift Activities Forecasting and Scheduling uses the range of start times you set for each shift to schedule employees (see ["Shift Grid Fields" \(page 101\)](#)). You can create a work rule so that a work pattern sets consistent start times for each employee. Forecasting and Scheduling still schedules different employees for different start times, but each individual employee with that work pattern starts a shift at the same time each day.

You can also set a consistency tolerance, as described previously in ["Work Patterns Grid Fields" \(page 104\)](#).

To set consistent shift start times:

Step	Action
1	Click the Consistency tab at the bottom of the Work Patterns tab. The Consistency grid appears.
2	Select numbers to set the shifts and days of the week with the same start times. All shifts with the same numbers will have the same start times. In the illustration above, the shifts scheduled for Monday, Wednesday, and Friday will have the same start time. The shifts scheduled on Tuesday and Thursday will have the same start time, but it will be a different time than Monday, Wednesday, and Friday. Saturday and Sunday have a common start time different than the weekdays.
3	Check Consistent Shift Activities to have the Shift Activities start at the same time.

Note: If you use consistent start times, Forecasting and Scheduling still chooses the actual shift start time from within the range of start times you provided. If you want shifts to start at the same hour, say 8:00 a.m., create a shift with 8:00 a.m. as the only available start time. The disadvantage of doing this is that it restricts Forecasting and Scheduling's ability to generate an optimum schedule.

—End—

The Assignment Rules Tab

Use the **Assignment Rules** tab to create Fairness and Shift rules for agents, and to create and assign shift rotations.

Fairness rules ensure that each member of a group of agents is assigned the same number of specific events (shifts, nights, weekends, weekend nights, days off, and so forth) during a specified period. See "[The Assignment Rules Tab](#)" (page 108) for a list of the exact conditions. A Fairness rule compares each employee's schedule with those of all the other employees to ensure that each receives fair treatment. Because Forecasting and Scheduling cannot always guarantee that a workable schedule can completely comply with a given rule, you can include a tolerance level in the rule.

Shift rules ensure that agents or groups of agents are assigned a specified number of events (shifts, nights, weekends, weekend nights, days off, and so forth) during a specified period. A shift rule adjusts the schedule of an agent or group of agents to meet the specified conditions. You can assign assignment rules to individual agents or to groups of agents.

To summarize, Fairness rules compare the schedules of all agents assigned the rule to ensure an equitable relationship between them. Shift rules compare the schedules of agents assigned the rule with the conditions of the rule itself.

Rotations let you assign agents a set of specific work patterns that are scheduled in the same order over a period of time. For example, you can assign an agent or group of agents three work patterns, A, B and C, in a three-week rotation. Agents are assigned work pattern A the first week, work pattern B the second week, work pattern C the third week, then work pattern A the fourth week, work pattern B the fifth week, and so forth.

Note: If a work pattern contains more than one shift type, an agent may not work the same shifts each week of the rotation. See "[Using Work Patterns](#)" (page 91).

Creating Shift and Fairness Assignment Rules

Forecasting and Scheduling provides a wizard to help you create new assignment rules. The wizard leads you through each step of the process.

See "[Creating Work Pattern Rotations](#)" (page 110) for information about creating rotations.

Note: Review "[Using Assignment Rules](#)" (page 94) to familiarize yourself with the structure and terminology of assignment rules before using the wizard.

To create an assignment rule:

Step	Action
1	In the upper pane, double-click the asterisk (*) next to the row at the bottom of the grid, or click New on the toolbar. The Rules wizard appears.
2	Select Employee must work or Employee must have off . (See "Creating Work Pattern Rotations" (page 110) for Employee must work rotation , and "Creating Team Work Rules" (page 111) for Employees on this team must .)
3	Click Next to continue. Note: Employee must work indicates that the agent assigned the rule must start work sometime during the selected period. Employee must not work indicates that the agent assigned the rule must not start work any time during the selected period.
4	To create a fairness rule, select a fair # of (see "Using Assignment Rules" (page 94)) in the upper pane. The number of occurrences is computed by Forecasting and Scheduling. Or To create a shift rule, select a constraint (see "Using Assignment Rules" (page 94)) in the upper pane, and then click the number of occurrences in the lower pane. Type a number in the dialog box, and then click OK . Click Next to continue.
5	Select the object (shift, day of the week, weekend, and so forth) to be assigned in the upper pane. If needed, click the underlined shift name or day of the week to open the selection dialog. Choose the shift or day, and then click OK . Click Next to continue.
6	Select the time period for the rule in the top pane, and then click the underline to open the selection dialog. Type a number, and then click OK . Click Next to continue.
7	Select starting on in the top pane, and then click the underline to open the date selection dialog. Type the date the rule will take effect, or click the down arrow and select the date from the date selector. Click Next to continue.

- 8 Type a name for the rule in **Rule name**, and assign the rule a **Priority**. In the event of a conflict between rules, the priority determines which rule Forecasting and Scheduling will use.
- 9 Click **Finish** to complete the rule and close the wizard, or click **Back** to edit any part.

—End—

Creating Work Pattern Rotations

Forecasting and Scheduling creates and assigns work pattern rotations through assignment rules.

To create a work pattern rotation:

Step	Action
1	In the upper pane, double-click the asterisk (*) next to the row at the bottom of the grid or click New on the toolbar. The Rules wizard appears.
2	Select Employee must work rotation . Click Next to continue.
3	Select the length (in weeks) of the rotation. Click Next to continue.
4	Select a work pattern for the first week of the rotation by clicking the work pattern name and selecting a pattern from the list. Click Next and repeat to enter the work pattern for each week.
5	Select a starting date for the first week in the rotation. Click Next to continue.
6	Give your rule a name and set its priority. In case of a conflict between assignment rules, the priority determines which rule is used.
7	Click Finish to complete the rotation rule. Use the Rotations tab in the Employees module to assign rotations. (See " Assigning Rotations to Employees " (page 133).)

—End—

Creating Team Work Rules

You can create work rules to have multiple employees scheduled to work at the same time as each other or as their supervisor or lead. Such rule is referred to as a team work rule.

Step	Action
1	In the upper pane, double-click the * next to the row at the bottom of the grid or click New on the toolbar. The Rules wizard appears.
2	Select Employees on this team must . Click Next to continue.
3	Select the type of overlap for the team members. The choices for overlap consist of: <ul style="list-style-type: none"> • start at the same time • start at the same time on the same days • start and end at the same time • start and end at the same time on the same days • start, end, and take breaks at the same time on the same days • work shifts which overlap ___ minutes each day • work shifts which overlap ___ minutes each working day • work shifts which overlap ___ minutes each week
4	If you select one of the last three overlaps listed above, click the underlined number, fill in the desired number, and then click OK . Click Next to continue.
5	Select the group of employees to whom the rule is to apply. Choices include: <ul style="list-style-type: none"> • as all other team members • as their supervisor • as their lead Click Next to continue.
6	Type a name for the rule in Rule name , and assign the rule a Priority. In the event of a conflict between rules, the priority determines which rule Forecasting and Scheduling will use.

- 7 Click **Finish** to complete the rule and close the wizard, or click **Back** to edit any part.

—End—

Editing and Deleting Assignment Rules

Note: You assign assignment rules to agents in the Employees module. See "[Assigning Assignment Rules to Employees](#)" (page 133).

To edit an assignment rule:

Step	Action
1	In the upper pane of the Assignment Rules tab, click the rule you want to edit, then click on an underlined item in the lower pane to change it. Or
2	In the upper pane of the Assignment Rules tab, double-click the rule you want to edit. When the Rule wizard appears, click Back to move to the part of the rule you wish to edit. Make your changes, then click Next , and then click Finish .



WARNING

If you change an assignment rule that applies across multiple weeks and that has already been scheduled, you must clear the schedule for each scheduling period to which the rule applies, and reschedule the period. Failure to clear and reschedule scheduling periods—including those that have passed—can result in inaccurate schedules.

—End—

To delete an assignment rule:

Step	Action
1	In the upper pane of the Assignment Rules tab, click the rule you want to delete.
2	Click Delete on the toolbar, and then click OK to delete the rule.

—End—

Exporting Shift and Work Pattern Information

You can export information about your shifts and work patterns. This information can be particularly helpful when you are upgrading your system, and need to have documentation on any shifts or work patterns you have defined.

To export this information:

Step	Action
1	On the File menu, click the Export menu item. The Work Rules Export window opens:
2	Enter specifications for the export file using one of the following methods: <ol style="list-style-type: none"> 1. To select from a list of file formats, click Browse and type the file name (with no extension.) Then select a type under Save as type. For example, you type forecast, and select HTML. Then click Save. 2. Under File to export, type the file name, extension, and location to which the file will be exported. For example, <code>c:\myfiles\forecast.htm</code>
3	Select which category of information you want to export, Shifts or Work Patterns .

—End—

Shift Information

When you export information on shifts, Forecasting and Scheduling creates a file with the following columns of information:

- Shift Names
- Start Times
- Length
- Activity
- Min Spacing
- Max Spacing
- Organization
- Shift

- Activity Name
- Type
- Start Window
- Length
- Activity
- Paid

This information essentially records what you see on the Shifts tab of the Work Rules module, in the top and bottom grids, for each defined shift and its associated shift activities. For example:

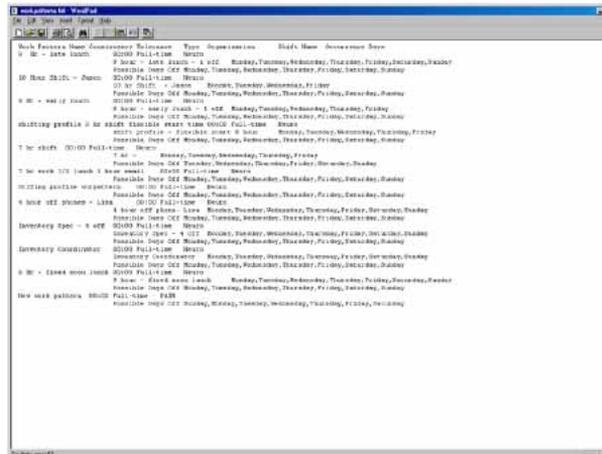
The screenshot displays a complex data table with multiple columns. The columns include Shift Name, Shift Length, Activity Name, Activity Type, and various scheduling parameters. The data is organized into several sections, likely representing different shifts or activity periods. The interface includes standard software window controls at the top and a status bar at the bottom.

Work Patterns Information

When you export information on work patterns, Forecasting and Scheduling creates a file with the following columns of information:

- Work Pattern Name
- Consistency Tolerance
- Type
- Organization
- Shift Name
- Occurrence Days

This information essentially records what you see on the **Work Patterns** tab of the **Work Rules** module, in the top and bottom grids, for each defined work pattern and its associated shift rules. For example:



The Employees Module

The Employees module is displayed when you click the **Employees** icon.

Note: See "Creating Staffing Profiles" (page 244) for information about the Staffing Profiles tab.

Use the Employees module in Organization mode to:

- Add employees to an organization and edit their information. See "Adding Employees" (page 116).
- Move employees from one organization to another. See "Editing and Deleting Employees" (page 117).
- View an employee's personal calendar; add vacations, training, and so forth; set employee unavailability. See "The Employee Personal Calendar" (page 123).
- Add employee preferences for days off and start times. See "Adding Employee Preferences" (page 130).
- Assign work patterns to employees. See "Assigning Work Patterns to Employees" (page 132).
- Assign rotations to employees. See "Assigning Rotations to Employees" (page 133).
- Assign shift and fairness assignment rules to employees. See "Assigning Assignment Rules to Employees" (page 133).
- Assign skills to employees (if skill-based scheduling is enabled). See "Assigning Skills to Employees" (page 134).

The next section discusses adding and editing employee information. For specific information about the Employee grid field, see "Employee Grid Fields" (page 120).

Adding Employees

You can add employees directly to Forecasting and Scheduling or you can import a text file containing the employee data. You can also designate employees to be supervisors and/or team leads.

Note: Employees should always be added at the lowest possible level.

To import employee data from a text file:

Step	Action
1	While in the Organization work mode, click Employees .
2	On the File menu, click Import . The Employee Import dialog box appears.
3	Type the name of the file in File to import, or click Browse to locate it.
4	Select the delimiter used by the import file (tab, comma, or semicolon).
5	If the file contains non-essential data (header information, for example) at its beginning, type the number of lines the data occupies in Number of lines to ignore at start of file .
6	Select the fields you want to import, or click Check All to select all the fields. First Name and Last Name are mandatory fields and are always checked.
7	For each of the fields you have selected, type the column in which it appears in the import file. If more than one item occupies the same column (First Name and Last Name , for example), type the same number for both items.
8	Click OK to begin the import.

—End—

Import Specifications

When data contained in an imported field is inconsistent with its intended usage in Forecasting and Scheduling, Forecasting and Scheduling handles it in the following way:

- **First Name and Last Name**—These are required fields.
- **Employee type**—This is a required field. If the imported data contains an employee type not already present in the database, you are asked if you want to create a new type. If you click No, the record is skipped. If you click Cancel, the import is canceled.

- **Min hours/Max hours**—If the Min hours value is larger than the Max hours value, the values are made equal. For instance, if Min hours is 50 and Max hours is 40, they are both set to 40. If either value is greater than 100, the field is set to 0.
- **Organization**—If the import file specifies an organization different from the current active organization, and the organization exists in the Forecasting and Scheduling database, the employee is imported into the specified organization and not into the current organization. If the organization specified in the import file does not exist in the Forecasting and Scheduling database, the employee is imported into the current working organization.
- **Start date**—If there is an error in the Start date, it is changed to the current date.
- **End date**—If there is no End date, the system inserts the year 2079.

Note 1: A log file titled EmployeeImport.log is created when you import employee data. If you have difficulty importing employees, open this file with any text editor and check for errors.

Note 2: When you import employee data, Forecasting and Scheduling assumes that each data item has effective dates equal to the start and end date for the employee.

To add an employee using the Employees grid:

Step	Action
1	Click the asterisk (*) next to the row at the bottom of the grid or click New on the toolbar, and then enter data in each field. Or
2	Double-click anywhere in the empty row, and then fill in the New Employee dialog box. Note: If you are not authorized to view secure employee fields, they are crosshatched out.

—End—

Editing and Deleting Employees

Note: If you are adding or changing the same information for a group of employees, such as their organization or supervisor, select all the employees, hold the shift key down, and double-click the last employee selected to open the Employee Details dialog box and change the data.

To edit employee data:

Step Action

- 1 Click in the field you want to edit.
 - 2 Type in the new data.
 - 3 Click in a different row to save the data.
-

—End—

To delete employee data:

Step Action

- 1 Select an employee, and then click **Delete** on the toolbar.

When an employee is deleted, Forecasting and Scheduling sets the employee's End date to the current date. The employee appears on all past schedules but is not scheduled after the deletion date.

Note: It is often quicker to delete employees if you select the **Work Patterns** tab at the bottom of the **Employee** module instead of the default **Calendar** tab.

—End—

Effective Dates

The Employee module allows you to maintain historical information for some of its fields. On the employee grid, some of the items have a blue icon on the right side of their cell. This icon, which looks like a calendar, is the Effective Dates button. The button brings up a dialog box that displays all of the historical information for the field and any fields that share the effective date.

The dialog box also provides three options:

- Update value for current period – Allows you to set a new value based on the effective date period of the current value displayed.

Note: The value displayed is always based on the effective value on the first date of the Viewing Display Period, which is displayed on the tool bar at the top of the Forecasting and Scheduling window.
- Insert value for period from – Allows you to set a new value for the exact Viewing Display Period shown on the toolbar at the top of the Forecasting and Scheduling window.

- Insert value from – Allows you to set a new value from the first date of the Viewing Display Period through the end date of the employee.

The effective date dialog boxes are also available from the employee detailed dialog window. When you are editing more than one employee at a time (referred to as multi-editing), the effective date dialog box options display “*****” in place of the dates for option one. When you select this option, it still results in the new value being used for each individual employee’s effective dates for the value valid on the first day of the Viewing Display Period. You cannot edit any of the fields if one or more are secure fields.

Sorting and Filtering the Employee Grid

Forecasting and Scheduling lets you sort the information in the Employee grid by any column. It also lets you filter information to create subsets of employees.

To sort information in the Employee grid:

Step	Action
1	Double-click the heading of the column you want to sort by. Double-click again to reverse the sort order. Or
2	Click in a field in the column you want to sort by.
3	From the Employee menu, select the sort order.
—End—	

To create a subset of employees:

Step	Action
1	From the Employee menu, select Filter . The Employee Filter dialog box appears. Note: In Organization mode, employees are always filtered by their Start Date and End Date (see below). To be displayed, an employee must have a Start Date on or before the last day in the current week (displayed in the date selector at the top of the Employees module), and an End Date on or after the first day of the current week. In other words, the employee must have at least one day of active employment during the week to be displayed. Employees who do not meet these criteria will not be displayed, even if they meet all of the filter’s criteria.

- 2 Enter the information you want to filter by, and then click **OK**.
Remember that all fields in the Employee Filter dialog box containing data are used to create the subset.

—End—

To return to a full set of employees:

Step	Action
------	--------

- | | |
|---|--|
| 1 | From the Employee menu, select Filter . The Employee Filter dialog box appears. |
| 2 | Click Clear All , and then click OK . |

—End—

Employee Grid Fields

The Employee grid contains the following fields:

- **First Name, M.I. (middle initial), Last Name, Suffix**—First Name and Last Name are required fields. M.I. and Suffix are optional. The default names are New and Employee.
- **Birth Date**—Type the employee's date of birth.
- **Employee Type**—Select a type from the menu. Types are created in the Employee Type tab of the Settings dialog box. This is a required field. The default is the same type as the employee immediately above. If there is no employee above, the first type on the menu is used. Employee types determine the work patterns an employee is scheduled for.
- **Is Supervisor**—If the employee supervises other employees, click the check box to designate the employee as a supervisor. That employee is then added to the drop-down menu choices for Supervisor for other employees in the supervisor's organization and suborganizations. Supervisors can receive notifications about their employees and process their employees' requests. In addition, Team Rules created in the Assignment Rule module can refer to employees with the same supervisor or team lead (see next field) as a team. The Supervisor field is described below.
- **Is Team Lead**—If the employee is the team lead of other employees, click the check box to designate the employee as a team lead. That employee is then added to the drop-down menu choices for Team Lead for other employees in the team lead's organization and

suborganizations. In addition, Team Rules created in the Assignment Rule module can refer to employees with the same supervisor or team lead as a team. The Team Lead field is described below.

- **Min paid hours, Max paid hours**—Type the minimum and maximum number of paid hours an employee can be scheduled each week. The default is 00:00. An employee is always scheduled for at least the minimum hours and is never scheduled for more than the maximum. An employee with minimum hours of 0 might not be scheduled, depending on the employee's maximum hours and agent requirements. An employee with maximum hours of 0 is not scheduled.
- **Supervisor**—Choose a supervisor. If none is selected, the default setting is blank. See also Is Supervisor above.
- **Team Lead**—Choose a team lead. If none is selected, the default setting is blank. See also Is Team Lead above.
- **Organization**—Choose an organization. The default is the current organization.
- **Proficiency**—Classify employees' proficiency according to their average handle time. The default entry is 1.0.

Forecasting and Scheduling uses this number when scheduling agents. An agent with 1.0 has an average handle time, an agent with 2.0 takes twice as long, and an agent with 0.5 takes half as long to handle calls.

- **Rank**—Assign a rank to be used by the scheduler in determining employee preferences. The default entry is 1.
The lower the number, the higher the rank.
- **Email, Pop-up Address, Address, Home Phone, Work Phone, Mobile Phone, Job Title, Tax ID (SSN), Wage**—Optional fields.
- **Start Date**—Enter the employee's start date. The default is today's date. The scheduling engine uses this seniority date in determining the effect of employee preferences.

Note: An employee is not scheduled for a period that starts earlier than the start date—the date the employee's data is entered. To schedule an employee for an earlier period, make sure the employee's start date is earlier than the first day of the schedule.

An employee with a start date later than the last day of the current week is not displayed.

- **End Date**—Enter the last date an employee worked for your organization. The default date is placed far into the future.

Employees with end dates earlier than the current date are considered terminated and are not scheduled. Employees with end dates earlier than the first day of the current week are not displayed.

- **Employee ID**—Type the employee's internal ID number here.
- **Data Source IDs**—Click **Open** to open a list of Impact 360 data sources. Type the employee's data source identification used by the Adherence capabilities of Impact 360™ next to each data source. ***** will appear on the main grid when ACD IDs are assigned.
- **User 1, User 2, User 3...User 10**—Type any additional employee information in these fields. (Your administrator assigns names to the user fields in Impact 360™. A maximum of ten user fields are available. They must be assigned names in sequence starting with the first field. Those fields that have not been assigned a name are not visible in the employee grid.)
- **Preferred Start**—Select a block of time the employee prefers to begin work. This selection sets high preferences for the times in that period. Individual time preferences are set in the Preferences tab. These preferences are used when user-defined preferences cannot be met.
- **Max VTO Per Week, Max VTO Per Day, Max OT Per Week, Max OT Per Day**—If you have an Intra-Day Optimization license, you can view and set the weekly and daily maximums for overtime and voluntary time off here.
- **OT Before Shift, OT After Shift, VTO at Shift Start, VTO at Shift End**—If you have an Intra-Day Optimization license, these columns show the employee's current preferences, as set in the web application's My Profile module, in the Schedule Preferences section. You can override the settings here.
- **Chat Sessions**—The number of concurrent chat sessions the employee can participate in.
- **Effective Date buttons**—The employee fields that have effective dates allow for two types of editing. If the date displayed is the correct period for which you want to set the new value, you can save your changes by clicking the Apply button or OK button at the bottom of the dialog box.

To change the effective dates of one or more of the values, click the Effective Dates button (the calendar icon) next to the value(s) to be modified. The Effective Dates dialog box appears, allowing you to set the dates of the change along with the new value. This data is not actually saved until you click the Apply button or OK button at the bottom of the dialog box. (See "[Effective Dates](#)" (page 118) for more information on the **Effective Dates** dialog box.)

Note: The Copy and Paste features apply to rows, not columns. That is, you can copy an employee and paste a copy in a new row, but you cannot copy the Preferred Start column and paste the data elsewhere.

The newly created employee will not transfer historical or future data from the employee being copied. Data values are based on the first date of the view period displayed on the toolbar. These are the same as the data values being displayed in the grid for the employee being copied. Also note that you must stay in the same view period between the time that you copy and paste the employee(s).

The Employee Personal Calendar

The Calendar tab in the lower pane of the Employees module contains the selected scheduling period's schedule for the highlighted employee. For general information, see "[Calendar Grids](#)" (page 35). Use the date selector in the toolbar (Organization mode only) to select a different scheduling period if desired.

You can use the Employee Calendar to:

- Display the employee's schedule.
- Add or change shift assignments and calendar events, such as employee unavailability.

Creating and Modifying Shift Assignments and Calendar Events

You can create and modify shift assignments and calendar events directly in the employee's personal calendar. You can also use most of these techniques on calendars in the Calendar module and in Campaign mode.

Shift Assignments

To change an employee shift time or length:

Step	Action
1	<p>Select the employee, and then double-click the shift for the day you want to change.</p> <p>Or</p> <p>Right-click the shift, and then select Edit Shift Assignment....</p> <p>Or</p> <p>Right-click on an empty space, and then select New > Create Shift Assignment....</p> <p>The Shift Assignment dialog box appears.</p>
2	<p>Use the Shift Assignment dialog box to edit the employee's shift:</p> <ul style="list-style-type: none"> • Start date/time—Type a new shift start date and time. • End date/time—This field reflects changes made in the start time or shift length, but you can make changes manually as well.

- **Activity**—Select one of the activities from the drop-down menu. (The activities displayed are those specified as shift activities on the Activities tab of the Activities module. See ["Creating or Editing Activities"](#) (page 85) under **Schedule Usage**.)
- **Overtime before/after shift**—Either select an existing OT extension using the drop-down menu, or type the length of any scheduled overtime. The overtime is displayed with a grid pattern on the calendar.
- **Shifts**—Click a shift to change the current assignment. All available shifts for the employee's organization are listed. The End date/time field is updated to reflect any changes in shift length.

Note: This overrides all other considerations, such as assigned work patterns and employee type (part or full time).

- **Comments**—Type any comments about the shift assignments.
- 3 Click **OK** to complete the shift assignment. Changes are reflected on all employee calendars. See ["Using Calendars"](#) (page 34).

—End—

To change an employee shift time manually:

Step	Action
1	Select the employee, and then click the shift for the day you want to change. A heavy border appears around the shift showing that it is selected.
2	Drag the shift to its new start or end time. The shift is crosshatched to indicate that it is locked and will not be changed by Forecasting and Scheduling. See "Locking and Unlocking Shifts, Shift Activities, and Calendar Events" (page 150).

—End—

Custom shifts You can manually change the time, length, and type of a shift. When you complete your changes, the shift is locked (see ["Locking and Unlocking Shifts, Shift Activities, and Calendar Events"](#) (page 150)). If you change the shift's parameters outside those defined for the shift, you create a custom shift.

A custom shift is a you change so that it violates the parameters set in the Shifts tab of the Work Rules module. (See "The Shifts Tab" (page 100)). For example:

- Its start time is outside the shift start time window.
- Its length is different than that defined for the shift.
- It has a different type or number of shift activities than those defined for the shift.
- Its shift activities have a different start time or length than those defined for the shift.

Note: A custom shift cannot be unlocked in the same way as other shifts. To unlock a custom shift, you must first change the custom shift's parameters so that they do not violate those defined for the shift.

Creating New Calendar Events Calendar events are scheduled independently and are not necessarily associated with shifts. Some examples are vacations, meetings, and leave of absence.

To create a new calendar event:

Step	Action
1	Select the employee, and then right-click the shift when you want the event to occur.
2	Choose New > Create Calendar Event . The Regular Calendar Event dialog box appears.
3	Use the Regular Calendar Event dialog box to set the employee's availability during the shift period: <ul style="list-style-type: none"> • Start date/time, End date/time—Type a start and an end date and time for the event. Events must be set in 15-minute intervals. • Activity—Select an activity. (The activities displayed are those specified as usable for calendar events on the Activities tab of the Activities module.) • Comments—Type descriptive comments about this event. • Must occur during a shift—Click if the event must be scheduled when the assigned agents are working. • Can occur at any time—Click if the event can be scheduled at any time during the organization's hours of operation. • Attendees—In the left pane, select employees participating in the event, and then click Add. To remove employees from the event, click them in the right pane, and then click Remove.

Note 1: When you remove an employee from this pane, it clears the event from their calendar.

Note 2: The employee filter controls the attendee list. For example, if the employee filter is set to display part-time employees, only part-time employees are listed in the attendee field.

—End—

Adding Vacation Days Vacation days are treated as a special kind of event if they are selected from the right-click menu.

- The start and end times for vacation day are automatically set to the organization's start and end hours for the vacation day.
- The **Rule for counting toward min/max hours** is automatically set to **Use underlying shift**.

Where should vacations be added?

You can add or change vacation days from any calendar in the **Employee** or **Calendar** modules in Organization and Campaign modes. In general:

- Add vacation days in the Organization mode's **Employees** module for vacations during time periods that have not been scheduled.
- Add vacation days in the Campaign mode's **Calendar** module for vacations during time periods that have already been scheduled. This gives you a view of the overall schedule for the period of the vacation and lets you assess its impact. Remember to refresh the service levels after the vacation has been added. You might also want to reschedule at this time.

To create a vacation day:

Step	Action
1	Select the employee's name.
2	In the lower calendar tab, right-click the day or shift and select Make Vacation Day . The entire day is marked as a vacation day.
3	To create multiple vacation days, right-click the vacation day you just created, select Edit Time Off , and then click Add Recurrence to create a recurring time-off event with Vacation as the activity, and set the recurrence time, period, and pattern.

—End—

To remove a vacation day, click anywhere in the vacation day, and then click the **Delete** button on the toolbar.

You can also add vacations by right-clicking the calendar and selecting **New > Create Time Off**. See "[Creating and Modifying Time Off Events](#)" (page 143).

Creating Floating Events You can create a Calendar Event and make the event "float," that is, make its start time a range to accommodate employee schedules. In the Calendar, right-click and choose **Create Floating Event**.

Note: You must reschedule events to have the Forecasting and Scheduling scheduler distribute the floating events after they have been entered. When you initially create a floating event, it is placed at the earliest start time of the event.

- **Event Attributes**—Specify all attributes of the Calendar Event.
- **Possible Days**—Click the days the event can take place, the earliest time it can start, and the latest time it can start (or select a number and use the arrows) on each day.
- **Time Zone**—The time zone of the organization. This field cannot be changed.

When a floating event is scheduled, it is scheduled around the schedules of those participants.

Creating Recurring Floating Events In Campaign mode, you can create a calendar event and make the event simultaneously "float" and "recurring," that is, make its start time a range to accommodate employee schedules, with this range potentially recurring over a period of time.

To create a recurring floating event:

Step	Action
------	--------

- | | |
|---|--|
| 1 | In the Calendar, right-click and choose Create Recurring Floating Event . |
|---|--|

Note: You must reschedule events to have the Forecasting and Scheduling scheduler distribute the recurring floating events after they have been entered. When you initially create a recurring floating event, it is placed at the earliest start time of the event in each recurring period.

- | | |
|---|-----------------------------------|
| 2 | Specify values for the following: |
|---|-----------------------------------|

- **Event Attributes**—Specify all attributes of the calendar event.
- **Possible Days**—Click the days the event can take place, the earliest time it can start, and the latest time it can start (or select a number and use the arrows) on each day.
- **Recurrence Properties**—Select the start and end dates of the recurring period and specify how often the event is to recur.
- **Time Zone**—The time zone of the organization. This field can't be changed.

When a recurring floating event is scheduled, it is scheduled around the schedules of those participants.

—End—

Creating an Unavailability An unavailability is a general category that simply indicates that an employee is unavailable for scheduling. An employee can be unavailable for a short period (8:00 - 10:00 a.m., for example), for an entire day, or for the same period across several days. Unavailabilities are typically used to prevent Forecasting and Scheduling from scheduling a shift when the employee cannot be at work.

To make a period unavailable:

- Drag across the period you want to make unavailable. The period is marked unavailable.

To create a day-long unavailability for a single day:

- Right-click anywhere next to the employee, and then select **Make Unavailable**. The entire day is marked as unavailable.

Note: If an employee will always be unavailable on a particular day, create the unavailability as a recurring calendar event. See ["Recurring Unavailability Events" \(page 148\)](#).

To make the same period unavailable over more than one day:

- If the employee is unavailable during the same time period over several days, drag across the period and the days.

Note: Multiple-day dragging works in the employee personal calendar in either Organization or Campaign mode. Click the **Calendar** tab in the **Employees** module or double-click the employee's name in the **Calendar** module.

Creating Recurring Event Templates

You can create a Calendar Event, Time Off, or Unavailability that automatically recurs at regular intervals, such as a meeting that takes place every Monday and Friday. In the Calendar, right click, and then choose **New > Create Recurring Event**. The **Recurrence Attributes** window opens, which has the following sections:

- **General**—Specify the type of event and when it can occur.
- **Event time for each recurrence day**—Specify the start time, end time, and length of the event.
- **Recurrence period**—Select the start and end dates of the recurring event.
- **Recurrence pattern**—Type the frequency in **Recur every ... weeks**. Select the days of the week when the event will take place. (For an event recurring multiple days in the same week, the frequency of weeks should be one, with multiple days selected.)
- **Attendees**—Use the **Add >>** and **<< Remove** buttons to select the employees affected by the event.

Note: In Organization mode, when you add an unavailability, it is set as a recurring event ending in the year 2038. When you add an unavailability in Campaign mode, it applies only to the current scheduling period.

Recurring Multiple-Day Unavailabilities

Forecasting and Scheduling treats multiple-day unavailabilities as a single unavailability that recurs each selected day.

- If the multiple-day unavailability is created in the Organization mode, it is automatically set to recur each week. For example, the unavailability shown above is set to recur each Monday, Tuesday, and Wednesday each week until 1/1/2038. To limit it to one week, you must remove the recurrence.
- If the multiple-day unavailability is created in the Campaign mode, it is only set for the dates and times selected. The last day the event will recur is the last date selected during the drag.

To delete an unavailability:

Step	Action
1	Click the unavailable period to highlight it.
2	Press the Delete key on your keyboard. Do this for each unavailable period.

—End—

Locking and Unlocking Shifts, Shift Activities, and Calendar Events Forecasting and Scheduling does not adjust or reschedule locked shifts, shift activities, and calendar events. Locked periods are crosshatched.

To lock a shift, shift activity, or calendar event:

Step	Action
1	Right-click the shift, shift activity, or calendar event, and then select Lock Shift or Lock Shift Activity from the menu. Or Drag the shift, shift activity, or calendar event to a new time. Or Change the time of the shift in the dialog box or the calendar event in the Edit Calendar Event dialog box. Set the time of a shift activity in the Edit Shift Activity dialog box.

—End—

To unlock a shift, shift activity, or calendar event:

Step	Action
1	Right-click the shift, shift activity, or calendar event.
2	Select Unlock Shift or Unlock Shift Activity from the menu. Note: You cannot use the Lock/Unlock Multiple... command in Organization mode. See " Locking and Unlocking Multiple Shifts " (page 196) for information on using this command in campaign mode.

—End—

Adding Employee Preferences

Use the Preferences tab to set employee preferences for days off and shift start times. Preferences are indicated by a number between 1 (highest) and 99 (lowest). You can set preferences for blocks of starting times (Start Early, Start Late) on the Employee grid. The block preferences are used when individual user-defined preferences cannot be met.

Note: Employee preferences are used in combination with other preferences and with seniority and ranking settings. See "Preferences and Priorities" (page 442).

Preferences are independent of time, and do not change from scheduling period to scheduling period.

To add start-time preferences:

Step	Action
1	Click the employee's name to highlight it, and then click the Preferences tab in the lower pane. (You can set preferences for only one employee at a time.)
2	Click a single time cell, or drag across a block of cells, and then type a number. Preferences are indicated by a number between 1 (highest) and 99 (lowest). This number is used as the preference in all highlighted cells. <ul style="list-style-type: none"> • Click the border around the cell, move the cursor till it turns to a +, and drag to select adjacent cells. • Highlight an area and drag it to move it to a new location. <p>If a group of cells with different preferences is highlighted and a new number is entered, all highlighted cells are changed to the new preference.</p>

—End—

To add days-off preferences:

- In the **Days Off** column, type a preference for each day off.

Note: The days-off preference is a part of the start-time preferences. For example, a Monday with a preference of 5 is more important than a start time with a preference of 10, but less important than a start-time preference of 4.

To delete preferences:

- Select a cell or group of cells, and then press the **Delete** key to clear preferences from the highlighted cells.

**WARNING**

Do NOT use the **Delete** button on the toolbar—this deletes the selected employee.

Start Early/Start Late

You set preferences for blocks of starting times (Start Early, Start Late) on the Employee grid. Forecasting and Scheduling uses block preferences when individual user-defined preferences cannot be met.

Assigning Work Patterns to Employees

Use the **Work Patterns** tab to assign the patterns created in the **Work Rules** module (see "[The Work Patterns Tab](#)" (page 103)) to each employee.

Note: Although it is possible to assign agents a work pattern for which they do not have appropriate skills, the agents are never scheduled for that work pattern.

To assign a work pattern to an employee:**Step Action**

- 1 Click the **Work Patterns** tab in the lower pane. Since each work pattern is assigned to an employee type (full-time, part-time, and so forth), only patterns appropriate to the selected employee's type are displayed.
- 2 In the **OK** column, click a pattern with a **Delete** button. A green **OK** button is displayed showing that the pattern can be assigned.
- 3 Add the employee's preference for that shift—a number between 1 (highest) and 99 (lowest). This preference is used when scheduling. See "[Preferences and Priorities](#)" (page 442).

Note: Remember that Forecasting and Scheduling selects only one pattern per week for each employee. In the preceding illustration, the employee will be assigned either the SF - Full Time 1, SF - Full Time 2, SF Full Time 1 with no weekends, or SF Full Time 2 with no weekends, not a mixture of the four.

The work pattern is selected/deselected, and its preference value set for the period displayed in the **Start Date** and **End Date** columns of the work pattern display.

—End—

To select a different period:**Step Action**

- 1 Click the **Effective Dates** button (resembles a calendar) on the employee row for which you want to change the period.
A dialog box appears, allowing you to set the effective dates. See ["Effective Dates" \(page 118\)](#) for more details.

—End—

Assigning Rotations to Employees

Note: If a rotation is assigned to an employee, the Work Patterns tab is not available.

Use the **Rotations** tab to assign shift rotation patterns to employees. Rotations are created in the **Work Rules** module (see ["Rotations" \(page 96\)](#)).

To assign a rotation to an employee:**Step Action**

- 1 Click the **Rotations** tab in the lower pane.
- 2 In the **OK** column, click a pattern with a red X. A green check is displayed showing that the rotation has been assigned. Only one rotation can be assigned.
- 3 Select the Work Pattern on which the rotation will start. Only the work patterns assigned to this rotation are available.

Note: If you change the work pattern, the rotation positioning changes for all the weeks in the pattern.

—End—

Assigning Assignment Rules to Employees

Use the Assignment Rules tab to assign assignment rules to employees. You create assignment rules and rotations in the Work Rules module (see ["Using Assignment Rules" \(page 94\)](#)).

Each assignment rule can be applied on a scheduling period-to-scheduling period recurring basis independently from the other rules.

To assign an assignment rule to an employee:

Step	Action
1	Click the Assignment Rules tab in the lower pane.
2	In the OK column, click a pattern with a red X. A green check mark is displayed showing that the rule has been assigned.
—End—	

To have the rule recur according to a weekly pattern:

Step	Action
1	Type the frequency at which the pattern recurs in the Weeks column. You can enter 1 to 26 weeks.
2	Select whether the pattern is active or not active during each weekly cycle.
3	Set the week of the cycle you are now in. Note: If you change the week of the cycle, the rotation positioning changes for all the weeks in the cycle.
—End—	

Assigning Skills to Employees

Use the Skills tab to assign skills to employees. You create skills in Settings. For complete information about skill-based scheduling, see "[Multi-Contact and Skill-Based Scheduling](#)" (page 213).

To assign a skill to an employee:

Step	Action
1	Click the Skills tab in the lower pane.
2	In the OK column, click a pattern with a red X. A green check mark is displayed showing that the skill has been assigned.
3	Assign a proficiency level for the skill. If you use proficiencies to schedule, the level entered in the employee grid (see " Employee Grid Fields " (page 120)) is ignored and the skill-related proficiencies are used.

- 4 Assign a priority to each skill. Lower numbers mean that the skill has a higher priority for that agent. The queue listed as 1 is considered to be the agent's primary queue. Priority 2 is the secondary queue, and so forth.
- 5 Assign a classification for the agent's skill. Possible choices are **Primary Skill**, **Reserve 1**, **Reserve 2**. These classifications allow you to specify when an agent is a reserve agent (sometimes referred to as an overflow agent) for a queue.

—End—

The skill will be selected/deselected and its related entries set for the period displayed in the **Start Date** and **End Date** columns of the work pattern display.

To select a different period:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Select the Calendar icon on the employee row desired.

A dialog box pops up, allowing you to set it for the dates specified. See " Effective Dates " (page 118) for more details. |
|---|--|
-

—End—

Skill Priorities

Priorities are used in skill-based scheduling to simulate contact routing when the schedule is created. They determine how contacts will be routed to your agents:

- If all priorities are equal, a contact is normally routed to the next available agent assigned to (scheduled for) the contact's queue.
- If two or more agents are available, the contact is assigned to the agent with the highest priority.
- If an agent with two or more skills is the only person available to take a contact and contacts from more than one queue are waiting, the contact from the agent's highest priority queue determines which contact is routed to the agent.

Note: Priorities are one of several factors used to route a contact. Other factors, such as the length of time a contact has been holding and the time since an agent last received a contact, are also taken into account.

Skill Classifications

An increasing number of contact centers use various sorts of reserve and overflow agents. The Primary Skill, Reserve 1, and Reserve 2 classifications enable you to designate such reserve agents.

The primary difference between normal skill assignment and reserve skill assignment is that reserve skills are only active when a certain condition is met. Otherwise, an agent is not considered eligible to answer a call needing this skill. The condition that triggers the reserve status is an expected wait time threshold that is specified in the Service Goal window. See "[Reserve Thresholds](#)" (page 180) for more information.

Exporting Employee Data

You can export employee data to a tabbed text (*.txt) file, an Excel 5 or higher (*.xls) file, or an HTML (*.htm) file.

To export employee data:

Step	Action
1	From the File menu, select Export . The Employee Export dialog box appears.
2	Type a file to which you want to export the employee data, or click Browse , and then select a file.
3	Click OK to export the information.

—End—

Note 1: Employees are filtered and sorted during export in the same way they appear in the current employee list. See "[Sorting and Filtering the Employee Grid](#)" (page 119).

Note 2: No effectivity data is exported; the data exported is based on the data currently displayed in the grid or detailed employee dialog boxes (on the first date of the viewing period currently displayed).

The Calendar Module

The Calendar module is displayed when you click the **Calendar** icon.

Use the Calendar module to view your organization's overall employee schedule and make shift or event changes for individual employees. For general instructions and information about Forecasting and Scheduling's calendar grids, see "[Using Calendars](#)" (page 34).

Note: This is not where you create schedules. You create schedules in the Campaign Mode Calendar module. See "[The Calendar Module](#)" (page 188).

To display or hide the legend of activities and their colors below the calendar:

Step	Action
------	--------

- | | |
|---|---|
| 1 | From the View menu, select Legend .
The legend is toggled on or off. |
|---|---|
-

—End—

To display additional information about an individual employee:

Step	Action
------	--------

- | | |
|---|---|
| 1 | Double-click an employee's name. A window similar to the lower pane of the Employees module is displayed (see " The Employee Personal Calendar " (page 123)). |
|---|---|
-

—End—

Sorting and Filtering Calendar Entries

Employees in the Organization calendar are initially sorted and filtered the same way they are in the Employees module (see "[The Employees Module](#)" (page 115)).

To change the general employee sort order:

- Return to the **Employees** module and change the sort order there.

The following items on the **Calendar > Sort** menu allow you to sort employees:

- Sort Ascending (Up) (alphabetical, for example, A-Z)
- Sort Descending (alphabetical)
- Use Employee Sort (sorts the same as set in the Employees module)
- Sort by Shift Start Time
- Sort by Shift End Time
- Sort by Shift Length
- Sort by Shift Type

- Sort by Event Start Time
- Sort by Work Pattern
- Sort by First Name
- Sort by Last Name

To use a sort option, for example, to sort employees by start times:

Step	Action
------	--------

- | | |
|---|--|
| 1 | From the Calendar menu, select Sort by Shift Start Time . Employees are sorted with the earliest start time at the top. Clear Sort by Shift Start Time to return to the original order. |
|---|--|
-

—End—

To display a subset of employees:

Step	Action
------	--------

- | | |
|---|---|
| 1 | From the Calendar menu, select Employee Filter . For information about this filter, see " Sorting and Filtering the Employee Grid " (page 119).

The filters in the Employees and Calendar modules interact. When you set or clear the filter in one module, you take the same action in the other. |
|---|---|
-

—End—

To display a subset of shifts or calendar events:

Step	Action
------	--------

- | | |
|---|---|
| 1 | From the Calendar menu, select Event Filter . The Assignment/Event filter is displayed. |
| 2 | In the left pane, click Shift assignments of selected types , and then click the shifts you want to display. |
| 3 | In the right pane, click Calendar events of selected types , and then click the events you want to display. |
| 4 | Click OK . The calendar shows only the selected shift and event types. |

—End—

Creating and Modifying Shift Activities and Calendar Events

Forecasting and Scheduling schedules shift activities in accordance with the parameters you set up in the Work Rules modules. You can also create or modify shift activities manually.

To create a shift activity:

Step	Action
1	Right-click on the employee's schedule row, and then select New > Create Shift Activity .
2	Set the shift activities parameters.
3	Click OK .

—End—

To change a shift activity:

Step	Action
1	Click the event, and then drag it to the new time period. It is locked there (see "Locking and Unlocking Shifts, Shift Activities, and Calendar Events" (page 150)).
	Or
	Right-click the shift activity, select Edit Shift Activity , and then set the new shift activity parameters. Click OK . The shift activity is locked (see "Locking and Unlocking Shifts, Shift Activities, and Calendar Events" (page 150)).

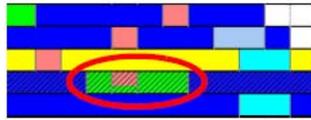
—End—

You can broadly divide shift activities into two types, work-related shift activities, and break-related shift activities, based on their activity. If the activity can be used in a shift, it is considered work-related; if it cannot be used in a shift, it is considered break-related.

As you edit shift activities, whether by dragging or through the Edit Shift Activity menu item, you cannot place a break-related activity such that it overlaps another break-related activity.

You can place a break-related activity over a work-related activity, though. For example, if the agent were scheduled for a 2-hour shift activity answering e-mail or performing a queue-hopping activity (see "Queue Hopping" (page 239)), you could place a lunch or other type of break within that shift activity.

On the calendar, such superimposed break-related shift activities are displayed with the underlying activity also visible, as shown in the following graphic:



The fourth row in the portion of schedule shown above has such a superimposed break-related shift activity, shown circled in red, a 15-minute break starting 15 minutes into a 1-hour email shift activity.

Note: As scheduler, you can see the underlying email activity within Forecasting and Scheduling. However, when agents view their schedule in the web application, they do not see the underlying activity. They see on their calendar 15 minutes of email, 15 minutes of break, and then 30 minutes of email.

Creating and Modifying Calendar Events

Calendar events are scheduled independently and are not necessarily associated with shifts. Some examples are vacations, meetings, and leave of absence. Calendar events can occur once or can be set to recur on a continuing basis. You can select a time or let Forecasting and Scheduling pick the best time.

To create or edit a calendar event:

Step	Action
1	Right-click outside a calendar event in a grid, and then select New > Create Calendar Event . (To edit a calendar event, right-click a calendar event in a grid, and then select Edit Calendar Event . You can also double-click the shift.)
2	Specify the time and Activity.
3	Specify when the event can occur. <ul style="list-style-type: none"> • Must occur during a shift—The event must occur when the attendees are scheduled. If this event is included on the calendar

before the period is scheduled, the attendees are scheduled to work at that time or a conflict is generated.

- **Can occur at any time**—The event can take place at any time without referring to the attendees' schedules.

4 Specify attendees.

- To add another attendee, select the employee in the box on the left, and then click **Add >>**.
- To remove attendees, select the employee in the box on the right, and then click **<< Remove**.

Note 1: When you remove employees from this pane, it clears the event from their calendar.

Note 2: The employee filter controls the attendee list. For example, if the employee filter is set to display part-time employees, only part-time employees are listed in the attendee field.

Note 3: Attendees for calendar events can be marked as not attending. Only people that have been selected as attendees of an event can be marked as not attending. To see who has been marked as not attending, select one or more events, and then right-click in the list box displaying the attendee list. If attendees are marked as not attending, their names are displayed with a thin red line drawn through them.

Forecasting and Scheduling ignores events in which attendees are marked as not attending when it calculates staffing statistics (for example, Number scheduled, Staffing with Quality). The scheduler also ignores the events for those not attending. This feature is only enabled for regular calendar events (not time offs or unavailability).

- 5** To make the calendar event a recurring event, click Add Recurrence..., and then fill out the fields as appropriate in the Recurrence Attributes for Normal Calendar Event window (see "Recurring Calendar Events" (page 142)).
- 6** To make the calendar event a floating event, click Add Floating... Floating events (see "Creating Floating Events" (page 127), and "Creating Recurring Floating Events" (page 127)).
- 7** Click **OK**.

—End—

To delete a calendar event:

Step	Action
1	Select a calendar event, and then click Delete on the Edit menu, or click Delete on the toolbar.

—End—

To remove recurrence attributes:

Step	Action
1	Double-click the recurring calendar event, or right-click the recurring event, and then select Edit Recurring Calendar Event .
2	When prompted, make sure the radio button Open this recurrence is selected, and then click OK .
3	Click the button Remove Recurrence . All instances of the recurring calendar event are removed, except for the instance you opened.

—End—

Recurring Calendar Events

You have another way available to create a calendar event that automatically recurs at regular intervals. In the Calendar, right click, and then choose **New > Create Recurring Event...** The window **Recurrence Attributes for Normal Calendar Event** opens.

This window has the following sections:

- **General**—Allows you to specify whether the event must occur during a shift or can occur at any time, and select the activity associated with the event. Also summarizes the recurrence pattern defined by the window's settings, and the time zone of the organization.
- **Event time for each recurrence day**—Specify the start time, end time, and length of the recurring event.
- **Recurrence period**—Select the start and end dates of the recurring event.
- **Recurrence pattern**—Type the frequency in **Repeat every ... week(s) on:**. Select the days of the week that the event will take place. (For an event recurring multiple days in the same week, the frequency of weeks should be one, with multiple days selected.)

- **Attendees**—Use the **Add >>** and **<< Remove** buttons to select the employees affected by the event.

Creating and Modifying Time Off Events

Time off events represent agents who are absent from work for some activity, such as vacation, sick leave, or jury duty. Time off events are placed on top of s and calendar events.

To create time off:

Step	Action
1	<p>Right-click outside a time-off event in a grid, and then select New > Create Time Off.... (You can also click the New button.)</p> <p>(To edit Time Off, right-click time off in a grid, and then select Edit Time Off.... You can also double-click the time off.)</p> <p>You can also select the Make Absence... item from the right-click menu. A submenu appears, listing all of the various time off activities available. Select one of these to create a time off that is linked to the underlying shift (see item 4 below) and occupies the entire shift from start to finish. The other options described below are bypassed. (You can right-click to get the full edit dialog box.)</p>
2	Specify the start date and time, end date and time, and activity.
3	<p>Use the check box to specify how many hours the time off counts as.</p> <ul style="list-style-type: none"> • If Use underlying shift is checked, the number of Time Off hours is equal to the paid time in the Shift Assignments underneath the Time Off. If this event is included on the calendar before the period is scheduled, the attendees may be scheduled to work Shift Assignments at that time depending on their work rules and the Service Goal. • If Use underlying shift is not checked, you directly specify the number of Time Off hours for the event. If this event is included on the calendar before the period is scheduled, the attendees are scheduled to work the specified number of hours at that time or a conflict will be generated.
4	<p>Link to the underlying shift activity.</p> <p>Time off events can be linked to underlying shift assignments. When time off events are linked, they move when an underlying shift assignment is moved, and cannot be resized to extend past the beginning or end of the shift. Overtime and overtime gaps are included as part of the shift for this determination. In addition, linked events are deleted when the underlying shift is deleted.</p>

Linking a time off event to a shift manually locks the shift. If this shift is subsequently unlocked, the time off event remains linked. However, the linked time off event is deleted when you schedule the campaign. If the shift remains locked during scheduling, the linked time off event is not modified.

- 5 Specify attendees.
 - To add another attendee, select the employee in the box on the left, and then click **Add >>**.
 - To remove attendees, select the employee in the box on the right, and then click **<< Remove**.
- 6 To make the time off event a recurring event, click **Add Recurrence...**, and then fill out the fields as appropriate in the **Recurrence Attributes for Time Off Event** window (see ["Recurring Time Off Events"](#) (page 145)).
- 7 Click **OK**.

—End—

To delete time off:

Step	Action
------	--------

- | | |
|---|---|
| 1 | Select the time off, and then click Delete on the Edit menu, or click Delete on the toolbar. |
|---|---|

—End—

To create a vacation day:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Right-click anywhere next to the employee's name, and then select Make Vacation Day . A time off event with the Vacation activity is created for the entire day. |
|---|--|

—End—

To remove a vacation day:

Step	Action
1	Click anywhere in the vacation day, and then click Delete on the toolbar. The employee's shift assignment for that day is cleared.
—End—	

To remove recurrence attributes:

Step	Action
1	Double-click the recurring time off event, or right-click the recurring event, and then select Edit Recurring Time Off...
2	When prompted, make sure the Open this recurrence radio button is selected, and then click OK .
3	Click the Remove Recurrence button. All instances of the recurring time off event are removed, except for the instance you opened.
—End—	

Recurring Time Off Events

You can also create a Time Off event that automatically recurs at regular intervals by right-clicking in the calendar and then choosing **New > Create Recurring Time Off...** The **Recurrence Attributes for Time Off Event** window opens.

This window has the following sections:

- **General**—Allows you to specify whether to use the underlying shift or specify the number of hours, and select the activity associated with the time off. Also summarizes the recurrence pattern defined by the window's settings, and the time zone of the organization.

Note: You can specify partial hours as well using decimals, such as 10.25.
- **Event time for each recurrence day**—Specify the start time, end time, and length of the event.
- **Recurrence period**—Select the start and end dates of the recurring event.

- **Recurrence pattern**—Type the frequency in Repeat every ... week(s) on:. Select the days of the week that the event will take place. (For an event recurring multiple days in the same week, the frequency of weeks should be one, with multiple days selected.)
- **Attendees**—Use the **Add >>** and **<< Remove** buttons to select the employees affected by the event.

Creating and Modifying Unavailabilities

An unavailability indicates that an employee is unavailable for scheduling. An employee can be unavailable for a short period (8:00 to 10:00 a.m., for example), or for an entire day. Shift Assignments created by the scheduling engine or created manually cannot overlap an unavailability.

To make a period unavailable:

Step	Action
1	Right-click outside an unavailability in a grid, and then select New > Create Unavailability.... Or Drag across the period you want to make unavailable. The period is marked unavailable.

—End—

To make a period unavailable across several days for a specific employee:

Step	Action
1	Double-click the employee's name. The weekly calendar window for that employee opens.
2	Drag down across the days you want the period to be unavailable. The days are marked unavailable. (Multiple-day dragging works in the employee personal calendar in either Organization or Campaign mode.)

—End—

To create a day-long unavailability:**Step Action**

- 1 Right-click anywhere next to the employee, and then select **Make Unavailable**. The entire day is marked as unavailable.

Note: In Organization mode, when you drag to create an unavailability, it is set as a recurring event ending in the year 2038. When you add an unavailability in Campaign mode, it applies only to the current scheduling period.

—End—

To edit an unavailability:**Step Action**

- 1 Right-click an unavailability in a grid, and then select **Edit Unavailability**. You can also double-click the unavailability.
- 2 Specify the time and Activity.
- 3 Specify Attendees.
 - To add another attendee, select the employee in the box on the left, and then click **Add >>**.
 - To remove attendees, select the employee in the box on the right, and then click **<< Remove**.
- 4 To make the unavailability event a recurring event, click Add Recurrence..., and then fill out the fields as appropriate in the Recurrence Attributes for Unavailability Event window (see "[Recurring Unavailability Events](#)" (page 148)).
- 5 Click **OK**.

—End—

To delete an unavailability:**Step Action**

- 1 Click the unavailable period, and then press the Delete key on your keyboard.

—End—

To remove recurrence attributes:

Step	Action
1	Double-click the recurring unavailability event, or right-click the recurring event, and then select Edit Recurring Unavailability....
2	When prompted, make sure the Open this recurrence radio button is selected, and then click OK .
3	Click the Remove Recurrence button. All instances of the recurring unavailability event are removed, except for the instance you opened.

—End—

Recurring Unavailability Events

You can create an unavailability event that automatically recurs at regular intervals. In the Calendar, right-click, and then choose **New > Create Recurring Unavailability....** The **Recurrence Attributes for Unavailability Event** window opens.

This window has the following sections:

- **General**—Allows you to select the activity associated with the event. Also summarizes the recurrence pattern defined by the window's settings, and the time zone of the organization.
- **Event time for each recurrence day**—Specify the start time, end time, and length of the event.
- **Recurrence period**—Select the start and end dates of the recurring event.
- **Recurrence pattern**—Type the frequency in Repeat every ... week(s) on:. Select the days of the week that the event will take place. (For an event recurring multiple days in the same week, the frequency of weeks should be one, with multiple days selected.)
- **Attendees**—Use the Add >> and << Remove buttons to select the employees affected by the event.

Viewing Classes

The Class Viewer displays all of the classes and sessions, as well as the attendees for each (including those attendees not currently assigned to a session).

Note: Since the amount of this information can potentially be quite large, you can resize the class viewer so that the display is larger (or smaller), as desired.

You access the Class Viewer by clicking the View All Classes... menu item in the menu that pops up when you right-click on any item in the Calendar grid.

Note: Classes and sessions cannot be modified in organization mode.

Resolving Conflicts

If you create a recurring event, including a vacation day, that occurs at the same time as an employee's shift assignment and the employee is marked as unavailable, Forecasting and Scheduling displays a Calendar Conflicts and Rule Violation Warnings dialog box.

You can accept the conflict by clicking **OK** (and optionally click the check box to suppress further warnings), or click **Details** to display the **Conflicts** window.

(If you accepted a conflict, a red exclamation point is shown next to the employee's name. Double-clicking the exclamation point also opens the Conflicts window.)

To resolve a conflict:

Step	Action
1	In the Conflicts window, click Resolve to open the Resolve Calendar Conflicts window.
2	Select: Mark <employee> as not attending the Meeting. The employee <employee> is removed from the Attendee list when there are conflicts. Or Ignore this conflict until a new schedule is created. The conflicting shift assignment or event is ignored. When a new schedule is generated, the scheduling engine attempts to resolve the conflict at that time. Or Select the employee's name in the Attendees list, click the button << Remove , and then click OK .

—End—

Locking and Unlocking Shifts, Shift Activities, and Calendar Events

Forecasting and Scheduling does not adjust locked shifts, shift activities, or calendar events. Locked periods are crosshatched.

To lock a shift, shift activity, or calendar event:

Step	Action
1	<p>Right-click the shift, shift activity, or calendar event, and then, from the menu, select Lock Shift or Lock Shift Activity.</p> <p>Or</p> <p>Drag the shift, shift activity, or calendar event to a new time.</p> <p>Change the time of the shift in the Shift Assignment dialog box or the calendar event in the Edit Calendar Event dialog box, or change the time of the shift activity in the Edit Shift Activity dialog box.</p>

—End—

To unlock a shift, shift activity, or calendar event:

Step	Action
1	<p>Right-click the shift, shift activity, or calendar event, and then, from the menu, select Unlock Shift or Unlock Shift Activity.</p> <p>Note: You cannot unlock a custom shift. See "Creating New Calendar Events" (page 125).</p>

—End—

Printing the Calendar

Forecasting and Scheduling lets you print calendar schedules for all employees, individual agents, or selected groups. The next section provides steps to set up and print a calendar. You can find detailed information about each of the screens and options on "[Printing the Calendar](#)" (page 208).

To set up and print a calendar:

Step	Action
1	<p>From the File menu, select Page Setup (see "Page Setup" (page 208)). Set the printing style, calendar layout style, days to print, sorting options, and other print options. Click Settings. The Pattern Setting window is displayed (see "Settings" (page 210)).</p>

- 2 Set a print pattern for each period and event by double-clicking the current pattern and selecting from the Pattern Selection window. Click **OK** to set each pattern. When you have selected all patterns, set the scale and non-phone font. Click **OK** to return to the **Page Setup** window.
- 3 In the Page Setup window, click Preview to see what your schedule will look like when printed (see "[Preview](#)" (page 210)).
- 4 Click **Print** to open the **Window Print** dialog (see "[Print](#)" (page 211)).
- 5 Set up your options, and then click Print to print the schedule.

—End—

Publishing the Schedule

Although schedule publishing is typically done in Campaign mode (see "[Publishing the Schedule](#)" (page 211)), you can click the **Publish** button to republish the schedules of employees who have already been published. When you republish, you update the schedules of employees who already have a published schedule for the time period specified; if one or more employees have no published schedule for the time period specified, their schedule for that period does not change.

Once published, schedules are made available to managers, supervisors, and agents, and are viewable in a number of places in the web application, including:

- My Home module, My Schedule section
 - Summary tab
 - Personal tab
 - Group tab
- My Home module, My Time section
 - Schedule tab
- People module
 - Schedules tab

You can publish schedules for one agent, all agents, or the current filtered set of agents. Additionally, you can publish the entire scheduling period, or some defined time period.

The Pulse Module

The web application's Tracking module, Pulse section, Pulse tab is displayed when you click the Pulse icon. See "[The Pulse Module](#)" (page 212) for more information on using the Pulse tab.

Campaign Mode Modules and Tasks

This chapter describes each Forecasting and Scheduling Campaign mode module and task in detail. It contains the following topics:

- ["The Operations Module" \(page 157\)](#)
Setting up your campaign, establishing its hours, and linking it to organizations, queues, and skills.
- ["The Activities Module" \(page 160\)](#)
Viewing your campaigns' Activity Types as well as the Activities that fall under the Activity Types. You can also specify here if the activity types should be visible in the web application's My Home module, My Time section, and the schedule usage of specific activities (for example, whether they're Time Off, Shift Activity, Calendar Events).
- ["The Work Rules Module" \(page 160\)](#)
Establishing work rules for your scheduling period.
- ["The Employees Module" \(page 160\)](#)
Adding employees to your campaign and setting their work patterns.
- ["The Forecast Module" \(page 164\)](#)
Using histories and profiles to forecast contact volume.
- ["The Service Goals Module" \(page 177\)](#)
Establishing service level goals for your campaign.
- ["The Agent Requirements Module" \(page 182\)](#)
Viewing your campaign's staffing requirements.
- ["The Calendar Module" \(page 188\)](#)
Scheduling your employees to meet your forecast.
- ["The Pulse Module" \(page 212\)](#)
Tracking your campaign's performance.

Campaign Mode

You use Campaign mode to forecast your contact center's workload and create schedules to meet those needs. Each campaign is linked to a different set of data source queues, such as an ACD, for which it is responsible. Organizations are linked to each campaign, and the campaigns inherit their employees and work rules from the modules in the Organization mode. Each campaign uses schedules called scheduling periods to let you forecast contact behavior and allow you to set service goals for a particular period. They then calculate agent requirements and individual employees are scheduled to meet those requirements.

Campaigns let you schedule employees of different organizations in one or more time zones to create "virtual" contact centers dedicated to a single objective, such as billing, sales, or customer support. You can have one campaign or you can create as many campaigns as you need.

Tasks You Can Perform in Campaign Mode

You can perform the following general tasks in Campaign mode:

- Create new campaigns and scheduling periods with queues and resources from one or more organizations. Link skills to queues.
- View your campaigns' Activity Types as well as the Activities that fall under the Activity Types, specify if the activity types should be visible in the web application's My Home module, My Time section, and specify the schedule usage of specific activities (for example, whether they're Time Off, Shift Activity, Calendar Events).
- Link work patterns to campaigns and create new ones.
- Link employees to campaigns.
- Use history and other data to forecast contact volume and agent requirements.
- Set campaign service goals.
- Generate and modify agent schedules to match campaign goals and requirements.

Adding a Campaign

To add a new campaign:

Step	Action
1	Click Work on a Campaign on the Forecasting and Scheduling Startup window. Or Click the Campaign icon on the Toolbar.

The **Work on a Campaign** window appears.

- 2 Click **Campaigns**, and then click **New**. The **New Campaign** dialog box appears.
- 3 Enter a name, time zone, start day, and day boundary for the campaign. The start day and day boundary determine the scheduling period that will be scheduled.

ATTENTION

You cannot change the name of the campaign, its time zone, start day, or day boundary once the campaign is established.

- 4 Click **OK**. The new campaign appears in the **Work on a Campaign** window.

—End—

To delete a campaign:

Step	Action
------	--------

- | | |
|---|---|
| 1 | Click the campaign in the Work on a Campaign window. |
| 2 | Click Delete , and then click Yes to confirm the deletion. The campaign is deleted. |

—End—

Adding a Scheduling Period to a Campaign

Each campaign uses a scheduling period to forecast contact center requirements and schedule agents to meet those requirements. Each campaign has its own set of scheduling periods.

To add a scheduling period:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Click the campaign you want to schedule. |
| 2 | Click New . The New Scheduling Period dialog box appears. Weeks that have already been added to a campaign are displayed in bold type. |

Note: The **OK** button and options are disabled if the scheduling period being created overlaps an existing scheduling period for this campaign.

- 3 Click in the scheduling period you want to schedule. The scheduling period is highlighted.
- 4 Choose an initialization option:
 - Create as empty—The profile includes no data.
 - Copy data from the previous week(s)—The profile includes data from the previous week(s). This data includes queues, organizations, employees, work rules, forecasts, service goals, and locked shift assignments.
 - Copy data from the selected period—The profile includes data from a previous period selected in the drop-down list.
 - Customize week selection—Use weekly data from various period(s) you select.
 - Copy Employee Min/Max Hour, Skill, and Work Pattern Assignments—When you copy the data from existing scheduling period(s), you can also copy to the new scheduling period the min/max hours, skills, and work pattern assignments that were in effect for the scheduling period being copied.
- 5 Click **OK**. The scheduling period is added to the list of scheduling periods in this campaign.

Note 1: If your company has a Multi-Site license, you are editing a distributed campaign, creating a new scheduling period will create a new scheduling period for the distributed campaign and every sub-campaign.

Note 2: The dates for the scheduling period that are displayed in the Work on a Campaign window are shown in your system time regardless of the time zone of the campaign. For example, if a scheduling period starts at 12:00 a.m. Eastern time on Monday, March 8, 1999, and your system is set to Pacific time, the starting date of the scheduling period is displayed as 3/7/99. This applies only to the Work on a Campaign window.

—End—

To delete a scheduling period:

Step	Action
1	Click the scheduling period in the Work on a Campaign window.
2	Click Delete , and then click Yes to confirm the deletion. The scheduling period is deleted.

—End—

Opening a Scheduling Period**To open an existing scheduling period:**

Step	Action
1	Click the scheduling period in the Work on a Campaign window.
2	Click OK .

Note: If **Open** is unavailable (appears dimmed), you might not have access rights to the scheduling period. See your administrator for access privileges.

—End—

The Operations Module

The Operations module is displayed when you open a campaign or click the Operations icon. Information entered in this module applies to the open campaign and its schedules for the selected scheduling period. (This information can later be copied for use in another scheduling period.)

The Operations view data is usual uniform across each week in the scheduling period. So we provide editing from two zoom levels: Week and Period. The Week and Period views look identical, but save data on the dates based on the zoom level. If you use the Period zoom level, you edit the Operations view data, and the individual entries are applied to each week in the scheduling period. If you use the Week zoom level to edit the Operations view data, the entries only apply to the current week being viewed. The entry box is blue in the period zoom mode if the values are different for different weeks.

In the created scenario shown in the previous graphic, the company closed for a day and a half, Monday, and half the day Tuesday, for maintenance, so the values for one of the weeks are different and appear in blue.

The Campaign Information Group

Enter descriptive information about the campaign under this group:

- Campaign, Range, and Description—The name you assigned to the campaign when it was created and the dates of the schedule (see ["Adding a Scheduling Period to a Campaign" \(page 155\)](#)). These cannot be changed. The description is optional.
- Time Zone—The time zone you selected when the campaign was created. Time zones cannot be changed.
- Skill-based—Select this check box to permit skill-based scheduling. See ["Multi-Contact and Skill-Based Scheduling" \(page 213\)](#).

The Organizations Group

A schedule inherits its hours of operation, employees, and work rules from the organizations linked to it. Any number of organizations from any location or any level in the hierarchy can be linked to a schedule. If your current schedule includes organizations from previous profiles, you can unlink them and link new ones.

To link an organization to the schedule:

Step	Action
1	Click Link . The Link to Organization dialog box is displayed.
2	Click the organization you want to link. Click OK .
3	Repeat steps 1 and 2 for each organization that you want to add.

—End—

The Hours of Operation Group

Note: Unless your display time zone is the same as the campaign's time zone, items in this group are unavailable. See ["Getting Help" \(page 37\)](#).

- The day boundary is set when you create the campaign and cannot be changed.
- The hours of operation are set by the organizations you link to the schedule. If you link multiple organizations to your profile, you should expand the hours of operation to include the earliest start and latest start times of organizations with the same day boundary in the same time zone as the campaign. You can adjust these hours to create a unique schedule for the scheduling period, if you want.
- The hours of operation for your campaign should not exceed the hours of operation of your organization.

ATTENTION

If all days have the same schedule, first clear each day's check box, and then select the first day of the week. Enter the start and end times for that day. Select the other days, and the start and end times will automatically reflect the first day's times.

The Queues Group

Your automatic call distributor (ACD) and other data sources use queues to sort and route contacts to the appropriate agents. They are set up and deleted in the App Admin module of the web application.

Use the Queues group to link your schedule to specific queues and to link a skill to each queue (skill-based scheduling only).

To link a queue to a schedule:

Step	Action
1	Click Link . The Link to Queue dialog box is displayed.
2	Click one or more queues to link them. Click a queue a second time to clear it.
3	Click OK to link the queues.

—End—

To link a skill to a queue (skill-based scheduling only):

Step	Action
1	Make sure the Skill-based check box (see " The Organization Group " (page 82)) is selected.
2	Select the queue you want to link a skill to.
3	Click Link . The Map Skills to Queue dialog box is displayed.
4	Click the skill you want to map to the selected queue.
5	Click OK .

ATTENTION

In skill-based scheduling, you must link a skill to every queue.

—End—

The Activities Module

The Activities module is displayed when you click the Activities icon.

The Activity Types tab allows you to view the preconfigured activity types and those created for your organization's campaign. The set of preconfigured activity types include:

- Absence Activities (such as vacation or jury duty)
- Assigned Work Activities (such as phone or research)
- Learning Activities (such as training sessions using Nortel Competency-based Learning)
- Planned Events (such as training or a staff meeting)
- Shift Activities (such as lunch or a coffee break)

You can add additional activity types in Organization mode.

The Activities tab in Campaign mode allows you to view your campaign's existing activities within Forecasting and Scheduling. You can add additional activities in Organization mode.

See "[The Activities Module](#)" (page 84) for more information on creating activity types and activities.

The Work Rules Module

The Work Rules module is displayed when you click the Work Rules icon.

Your schedule inherits its work rules from the organizations it is linked to. While work rules are normally entered in the Organization mode (see "[The Work Rules Module](#)" (page 86)), you can enter them here for this weekly schedule only. Work rules entered in Campaign mode have an organization of Local. You can only add and modify complex work rules in Organization mode.

For information about creating and using work rules, see "[The Work Rules Module](#)" (page 86)

As in Organization mode, you can export information about a campaign's shifts and work patterns. Refer to "[Exporting Shift and Work Pattern Information](#)" (page 113) for more information.

The Employees Module

The Employees module is displayed when you click the Employees icon.

Note 1: Items that cannot be edited are shown in gray. In addition, you cannot edit the contents of the Skills tab.

Note 2: Whether you are editing information from the grid or on the detailed dialog, employee data that can be edited in campaign mode requires you to bring up the effective date dialog. You are limited to setting employee data within the current dates selected, which will in fact always be inside the current scheduling period.

Like the Work Rules module, the Campaign mode Employees module gets its information from the organizations you selected in the Operations module. It lets you add all the available employees in those organizations and includes their associated work patterns. You can add or change the availability and work patterns and skills of individual employees to meet the requirements of your campaign.

Note: You can also add employees, their associated work patterns, and skills in Organization mode. For detailed instructions for using the Employees module in Organization mode, see "[The Employees Module](#)" (page 115).

You can also add staffing profiles to the campaign in this module. Like employees, the available staffing profiles are determined by the organizations linked to the scheduling period.

This section provides instructions for actions that are unique to the Campaign mode.

To add an employee to a schedule:

Step	Action
1	Click New on the toolbar. The Add Employees dialog box is displayed:
2	Employees already scheduled to work appear in blue. Click the left column next to the employees you want to add. Use the Shift and Ctrl keys to select groups of employees. Hold the cursor over a column head and drag to move the column. Click Reset Columns to restore the original order.
3	Click OK . The employees are added to your profile.

—End—

To remove an employee from the schedule:

Step	Action
1	Select the employee.
2	Click the Delete button on the toolbar. The employee is removed from the schedule only. The employee is not removed from the employee database.
—End—	

To add a work pattern for an employee:

Step	Action
1	Click the Work Patterns tab in the lower pane.
2	In the OK column, click a pattern with a red X. A green check mark is displayed showing that the pattern can be assigned. Note: Work patterns assigned to employees in Campaign mode appear in magenta and apply only to the current scheduling period.
3	If you assign a work pattern to an employee from a different organization, you are asked to confirm the assignment. Click OK to assign the work pattern.
4	Add the employee's preference for that shift (1 to 99). This preference can be used when scheduling. See " Scheduling Using Agent Preferences " (page 190).
—End—	

Effectivities

As described previously in "[Effective Dates](#)" (page 118), the Employee module allows you to maintain historical information for some of its fields. On the employee grid, some of the items have a blue icon on the left side their cell. This icon, which looks like a calendar, is the Effective Dates button. The button brings up a dialog box that displays all of the historical information for the field and any fields that share the effective date.

The dialog box also provides three options:

- Update value for current period – Allows you to set a new value based on the effective date period of the current value displayed.

Note: The value displayed is always based on the effective value on the first date of the Viewing Display Period, which is displayed on the tool bar at the top of the Forecasting and Scheduling window.

- Insert value for period from – Allows you to set a new value for the exact Viewing Display Period shown on the toolbar at the top of the Forecasting and Scheduling window.
- Insert value from – Allows you to set a new value from the first date of the Viewing Display Period through the end date of the employee.

The effective date dialogs are also available from the employee's detailed dialog window. When you are editing more than one employee at a time (referred to as multi-editing), the effective date dialog options display "*****" in place of the dates for option one. When you select this option, it still results in the new value being used for each individual employee's effective dates for the value valid on the first day of the Viewing Display Period. You cannot edit any of the fields if one or more are secure fields.

The following fields have effective date dialogs:

- Organization with Supervisor, Team Lead, and Job Title
- Minimum/Maximum Paid Hours, with Minimum/Maximum Daily and Weekly VTO and OT Hours
- Rank
- Proficiency
- Quality Service
- Wage
- Work Patterns
- Skills

You can only edit employees through the effective date dialogs when in Campaign mode. All the fields specified for effective date dialogs, except for those related to organization, are available for editing. When you edit in campaign mode, the effective date dialog automatically pops up, displaying only the Insert value for period from option as available. The Insert value for period from option allows you to set a value for this field that is only valid during the campaign period currently being edited. Values after this period are returned to their previous state.

Note: The changes can be viewed from both Organization and Campaign modes by bringing up the effective date dialog that relates to the employee parameter of interest.

The Forecast Module

The Forecast module is displayed when you click the Forecast icon. It displays for the full scheduling period graphs, a grid showing historical weeks (when displaying a week or day zoom level), and a table (when you select Table from the View menu.)

If you are viewing a multi-week scheduling period in the Forecast module, you can zoom in to the weekly mode to view the data for an individual week or day in the scheduling period. Only in weekly or daily zoom can you add historical data weeks. Historical data is always exactly one week long. The historical week data used to create the forecast for a single week in the scheduling period will be displayed above the graph data.

The Forecast module helps you estimate contact volume and average handle time for each queue in your scheduling period. These forecasts are the most important factor in creating agent schedules that meet your contact center's requirements.

Forecasts for each scheduling period are based on historical data imported from your ACD or other data source for the queues you designated in the Operations module (see "[The Queues Group](#)" (page 159)), or on historical data that you enter from other sources.

Note: If any notes have been created in Pulse for the historical weeks you are using to forecast, an icon will be shown in the Notes column.

Forecasting and Scheduling lets you forecast for one or more queues during a single scheduling period. Each queue can be forecast separately, since each queue contains information based on different conditions—for example, the volume of sales calls is higher before Christmas, while the volume of product support calls is higher after Christmas.

ATTENTION

Although you can import contact history data into the Forecast module, it will not be saved as historical data for reuse in future scheduling periods. To save the data for reuse, first import it into the web application's Tracking module, Pulse section, History tab. It is then available as contact history data anytime you want to use it.

Pulse Notes

If any notes have been created in Pulse for the historical weeks you are using to forecast, an icon will be shown in the Notes column.

There are two cases where viewing notes can be helpful in the Forecast module:

1. During the history week selection process

2. When viewing the history week

When selecting a history week the knowledge of any special situations which occurred during the week can assist in identifying an appropriate week. As you scroll through the weeks, the icon that indicates that the week has notes, or the icon that indicates the week has no notes. You can click the icon to drill down for more information. If you drill down, a read-only notes display page is shown, which provides a list of any notes pertaining to the current queue(s) selected on one or more of the days currently selected.

When you are just viewing an already established forecast, a grid appears at the top of the screen displaying the weeks of history that were used to generate the AHT and CV forecast. Each row of the grid has a column for the purpose of displaying the notes icon described above, the icon that indicates the week has notes, or the icon that indicates the week has no notes. You can also drill down here to review the read-only page of notes pertaining to the history week selected.

Profiles

You use profiles to speed the process of forecasting. They are not required, but are useful to track different contact behavior and patterns. Profiles let you create a weighted average of contact behavior that you consider typical of a certain time period or particular business conditions. This is done by combining weeks of historical data to create a sample of contact patterns. For instance, you might create a profile for the two weeks before Christmas and another profile for the weeks after invoices are mailed.

By averaging the data from several weeks, a profile can smooth out the random quirks that can distort your forecast. At the same time, averaging can blur distinctions that let you anticipate patterns in your contact volume. To avoid this, Forecasting and Scheduling lets you use weighted averages, assigning lesser weight to de-emphasize weeks with irregular behavior or greater weight to emphasize weeks with important patterns.

Profiles can consist of:

- An average of absolute weeks—for example, the weeks of December 28 and January 4.
- An average of relative weeks—for example, the three previous weeks.
- A particular set of forecast numbers.

To create a profile:

Step	Action
------	--------

- | | |
|---|---|
| 1 | Use the weeks grid to select the data that represents the contact behavior you want to forecast. You can use any Pulse Notes that |
|---|---|

may be attached to the historical week to verify you are selecting the desired week.

- 2 Set the weight for each week if desired.
- 3 Adjust the data manually.
- 4 Save the profile to be used in the future.

For detailed instructions about creating and saving profiles, see ["Loading and Editing Profiles" \(page 172\)](#).

—End—

Forecasting for Queues

You designate queues for scheduling periods in the Campaign mode's Operations module (see ["The Queues Group" \(page 159\)](#)); they are listed in the Queue list at the top of the Forecast module.

Individual Queue Forecasting

Forecasting is always done for individual queues. When a specific queue is selected, a profile for that queue can be loaded and the weeks in the profile are displayed in the grid above the graphs. The graphs then reflect the forecast for that queue only. If your scheduling period uses only one queue, you will use this method.

Multiple Queue Forecasting

If you have linked more than one queue to a scheduling period, an additional entry called **<Combined>** is listed and you are provided additional options for the way you want to forecast. When **<Combined>** is selected, it displays the combined forecast for all queues. You can use this combined mode to apply a profile to all queues at once, or you can make changes to each queue individually. Here are some tips for forecasting using multiple queues:

- If you change the week selection or load a profile in the combined view, the same set of weeks is assigned to all of the individual queues.
- If you modify the data in the combined view (see ["Adjusting the Forecast" \(page 170\)](#)), the change is distributed proportionally to all the queues.
- If all queues use the same weeks of data, those weeks are listed in the grid when in day or week zoom level.
- If the queues use different weeks of data, no weeks are listed.
- If you modify the data in a single queue, this change is automatically reflected in the combined queue.

Note: Multiple queue forecasting is always used for skill-based scheduling. The scheduler evaluates the contact volume of each queue separately. See ["Forecasting and Setting Service Goals for Skill-Based Scheduling"](#) (page 216).

For non-skill-based scheduling, the scheduler uses the combined forecast. Individual queues are used for tracking purposes only.

The Forecast Graphs

- The thick red line is your current forecast. Colors for the other scheduling periods are indicated in the **Legend** column of the grid.
- The summary columns to the left of the graph show the total contact volume and average handle time (AHT) for each day, week, and scheduling period. The day/week currently selected is shown in yellow. Click a day/week to display that day or week's graphs.
- The table at the right of the graph, which appears when you click the Table icon on the toolbar or on the **View** menu, displays the current day's forecast. These are the same as the values shown by the red line. You can edit this data directly (see ["Adjusting the Forecast"](#) (page 170)).
- The default display is one day. Use the **Zoom Out** button on the Toolbar to display a week's data or scheduling period's data in the graph and tables. Use the **Zoom In** button to return to a week's data or a single day's data.

Creating a Forecast

Forecasting and Scheduling uses historical data to forecast three critical aspects of your contact center: contact volume, average handle time (AHT), and shrinkage. The forecast of contact volume and AHT is based on one of the following options. You may:

- Create and load profiles consisting of one of the following:
 - An average of absolute weeks—for example, the weeks of December 28 and January 4. See ["Absolute and Relative Weeks"](#) (page 175).
 - An average of relative weeks—for example, the three previous weeks.
 - A particular set of forecast numbers.

- Load a profile and modify it to suit your needs.

Note: Forecasting and Scheduling does not require profiles to forecast.

- Select individual weeks of historical data that represent the expected contact center volume, handle time, and shrinkage. You can then save these as a new profile if you wish.

- Import a set of data from a text file.

To create a new forecast:

Step	Action
1	Select the week and the queue for which you wish to create the forecast.
2	Click a cell in the History Week column.
3	Click the ellipsis button to open the History Selector dialog box.
4	Use the date selector (see "Using Calendars" (page 34)) to select a week to add to your profile. (Weeks containing data are shown in bold.) A weekly graph and summary for the selected week is displayed.
5	If the week has a Note related to any of the data in the week selected, a notes icon appears on the top right of the window. Select the note icon to bring up a window to display all notes related to this history week. (Notes can only be created or edited from Pulse.)
6	Click OK . The week is added to the grid.
7	Repeat as desired to add additional weeks to the grid.

—End—

You can also create a forecast by importing contact volume and AHT data, as described in the next section.

Importing and Exporting Contact Volume and AHT Data

Contact volume and AHT data can be imported from your ACD or other source in a text file.

To import a forecast:

Step	Action
1	On the File menu, click Import . The Forecast Import dialog box is displayed. Note: Data imported into the Forecast module is not saved as historical data. To save the imported data as contact history, import it into the web application's Tracking module, Pulse section, History tab.

- 2 Type the name of the file containing the information, or click **Browse** and locate it.
- 3 Select the delimiter (tab, comma, or semicolon) used by the file.
- 4 Select the queue to import the forecast into.
- 5 Type the number of lines at the top of the data containing header or other information that will be ignored during the import.
- 6 Select the import interval for the data: **15 minutes**, **30 minutes**, or **60 minutes**.
- 7 Select the fields to import and their column order. Time is a key field and must be included. Fields other than **Contact Volume** and **AHT** are ignored. (Times in the import file are offset to account for differences in the campaign's day boundary.
- 8 If you select **AHT**, choose a time frame (seconds, minutes, or hours).
- 9 Click **OK** to import the data. A file called ImportForecast.log is created that contains the results of your import action.

Note: If your imported file exceeds the number of data points required for this scheduling period, Forecasting and Scheduling uses the set at the beginning of the file. If your imported file has less data points than required for this scheduling, Forecasting and Scheduling populates the days at the beginning of the scheduling period.

—End—

To export a forecast:

- | Step | Action |
|------|--|
| 1 | On the File menu, click Export . The Forecast Export dialog box is displayed. |
| 2 | Type the name of the file containing the information, or click Browse and locate it. |
| 3 | Select the queue and the time frame for AHT. |
| 4 | Select the time interval for the data. |
| 5 | Select the appropriate time zone. |
| 6 | Click OK to export the data. |

—End—

Adjusting the Forecast

After you have created a forecast by any of the available methods, such as adding historical data, importing contact volume and AHT data, or loading existing profiles or other data you want to use, you can adjust the forecast.

To edit the current forecast:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Display the tables to the right of the grid (see " The Forecast Graphs " (page 167)) . |
| 2 | Change the numbers as needed. The graph updates when you click outside the field you changed. The Weeks grid is grayed to show that your forecast has been modified manually. You cannot add additional weeks in this state. |

Note: Use this method to enter your own numbers without referring to previous weeks. You can also drag the Forecasted line in the graph to a new value.

—End—

To remove any changes to the forecast:

Step	Action
------	--------

- | | |
|---|--|
| 1 | On the toolbar, click the Restore button. Table values are returned to their original numbers and scaling is reset to 0. The Weeks grid becomes active and you can add new weeks. |
|---|--|

—End—

Scaling You might want to keep an existing contact pattern but adjust the overall parameters to match the change in your business. Scaling lets you change the totals while keeping the overall distribution of contacts.

You can scale both contact volume and average handle time (AHT).

Scaling can be performed at daily, weekly and period zoom levels. Depending on what zoom level you are in, the scale dialog will be brought up in a corresponding view. In addition, selecting individual cells on the grid allows you to even specify your scaling date selection even to a finer detail.

To change the current contact volume by fixed amounts:

Step	Action
1	On the toolbar, click the Scale Contact Volume button. The Modify Contact Volume dialog box is displayed.
2	Edit the Contact Volume Scaled column by typing new whole numbers. Or Edit the % Change column by typing new percentages (or using the buttons). As you change either column, the amount in the corresponding column and the totals are automatically updated.
3	Click OK . The Weeks grid is grayed to show that your forecast has been modified manually. You cannot add additional weeks in this state.

—End—

To change the current average handle time by fixed amounts:

Step	Action
1	On the toolbar, click the Scale AHT button. The Modify Average Handle Time dialog box is displayed.
2	Edit the Average Handle Time (sec) Scaled column by typing new whole numbers. Or Edit the % Change column by typing new percentages (or using the buttons). As you change either column, the amount in the corresponding column and the totals are automatically updated.
3	Click OK . The Weeks grid is grayed to show that your forecast has been modified manually. You cannot add additional weeks in this state.

—End—

To clear the forecast and start over:

Step	Action
1	Click Clear . The forecast data is cleared and all values for the week are set to 0. The Weeks grid becomes active and you can add new weeks.

—End—

Loading and Editing Profiles

Once you have created a forecast that accurately forecasts your Center's contact volume and contact patterns, you can save that forecast as a weekly profile. You can then use that weekly profile in future scheduling periods.

To create a new profile:

Step	Action
1	Select the week zoom level for the week you want to create the profile. (If you are not defining the week here, the Save Profile dialog box gives you a chance to select the week to be saved.)
2	Load the data you want to include in the new profile. You can use any Pulse Notes that may be attached to the historical week to verify you are selecting the desired week.
3	From the File menu, select Save Profile , or on the toolbar, click Save Profile . The New Profile dialog box appears. Note: The first week of the Save Profile dialog box contains the week specified, or a drop down menu when you are in a multi-week scheduling period and zoomed out to period view.
4	Type a name and description for the profile.
5	Click the Save as relative weeks check box to save a relative profile. If this check box is not selected, the profile is saved as absolute weeks. See " Absolute and Relative Weeks " (page 175) for examples.
6	Click OK . Note: Saving and loading of data is specific to the media/queue combination you currently have selected. When you save a profile, you are only saving for the selected media/queue combination, as follows: <ul style="list-style-type: none"> • Saving unaltered data saves the historical weeks. • Saving altered data saves the trace data.

- Saving a combination of altered and unaltered data saves it as altered data.

This behavior has implications for loading profiles.

—End—

To load an existing profile:

Step	Action
------	--------

- | | |
|---|---|
| 1 | <p>Select a queue if necessary. See "Forecasting for Queues" (page 166). To load the same profile for all queues, select Combined.</p> <p>To load a profile into a single week, select the week or a day in that week first. To load the same profile for each of the weeks in a multiple week scheduling period, select the period zoom level.</p> <p>Note: A profile consists of one week's worth of data. If you are loading a profile into a multiple-week scheduling period, you can either zoom into the week period to which it should be applied first, or choose the whole period, and have that profile be applied individually to each week in the period.</p> |
| 2 | <p>Select the weekly zoom level and the week desired for the weekly profile. If you are in period zoom level, you will be warned and allowed to proceed, but the profile loaded will be applied individually to each week in the scheduling period.</p> |
| 3 | <p>On the File menu, select Profile, and then click Load, or click Load Profile on the toolbar. The Load Profile dialog box is displayed.</p> |
| 4 | <p>Click the profile you want to load. The historical weeks included in the profile and their weight are shown in the right pane.</p> |
| 5 | <p>Click Load. If you are in a scheduling period zoom level and have more than one week, you will need to confirm that you intend to copy this profile to each week in the period. The profile is loaded and the historical weeks and their weight are displayed in the grid and the Contact Volume and AHT graphs.</p> <p>Note: Saving and loading of data is specific to the media/queue combination you currently have selected. If you are loading, no matter what media/queue you saved originally, Forecasting and Scheduling attempts to load the data into the currently selected media/queue combination.</p> |

Saving unaltered data saves the historical weeks. Therefore, if you load this profile into any queue, Forecasting and Scheduling looks for these historical weeks of data for the queue(s) being loaded. Queues that do not have data for this historical week will not have data loaded. Because the load is context sensitive to your currently selected media and queue(s), if you have multiple media and want to load all queues for each media, you should load this profile in combined mode for each media.

Saving altered data saves the trace data. Therefore, if you load it into the same media type containing the same queues from "combined," Forecasting and Scheduling loads it into the individual queues exactly as saved. If you load it into a different media, or the same media containing a different set of queues, Forecasting and Scheduling splits the data evenly among the different queues in this media. At the combined level, the data looks the same.

Saving a combination of altered and unaltered data saves it as altered data and works the same as described above for altered data.

—End—

To delete a profile:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Click Load Profile . The Load Profile dialog box is displayed. |
| 2 | Click the profile you want to delete. |
| 3 | Click Delete . The profile is permanently removed. |
-

—End—

To add a week to a profile:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Load the profile you want to modify. |
| 2 | Click in the Week column of the empty field (with the *) on the grid. |
| 3 | Click ellipsis to open the History Selector dialog box. |

Note: A notes icon will be displayed at the top right of the screen if there is a note related to the week of data being viewed. You

can select this icon to have a window pop up, where you can view Pulse notes related to this week.

- 4 Use the date selector (see ["Using Calendars" \(page 34\)](#)) to select a week to add to your profile. A weekly graph and summary for the selected week is displayed.
- 5 Click **OK**. The week is added to the grid.
- 6 To save the new week into the loaded profile, click Save Profile, and then click **OK** to save it with the same name.

Or

To save the data as a new profile, type a new name and description.

—End—

Absolute and Relative Weeks Absolute weeks are specific, identifiable weeks during the year. They are useful in identifying contact volumes and patterns that occur at certain times of the year or in conjunction with certain events. For example, the two weeks before Christmas, 1999, are absolute weeks. If you mail invoices on the 15th of each month, the week after the 15th is an absolute week. The data in absolute weeks never changes.

Relative weeks are determined by their relationship to the current week (the scheduling period that you are forecasting for). They are useful in identifying trends in contact volumes and patterns that occur during normal operations. For example, suppose, on the first of May, you create a profile containing the four preceding weeks in April and save it as relative weeks. If you select that profile on the first of June, the profile will contain data for the four preceding weeks, that is, the last four weeks in May. The data in relative weeks changes with each scheduling period. (If you really want to save the exact data from April, save the profile using absolute weeks.)

Note: If Agent Requirements have been manually modified (see ["Entering Agent Requirements Manually" \(page 185\)](#)), saving a Forecast (by moving to another module) causes the following reminder to be displayed:

Since the Agent Requirements have been manually modified, the changes made to the Forecast will not affect the Edited Agent Requirements and will not be considered by the scheduler. Would you like to save your changes?

Click **Yes** to save your changes and move to the other module, **No** to discard your changes and move to the other module, and **Cancel** to continue working in the Forecast module.

Forecasting Shrinkage

Shrinkage refers to the total number of agents who are not on the phone as scheduled. This includes absent agents as well as agents taking unscheduled breaks. Based on your shrinkage input, the system compensates for shrinkage by scheduling more agents.

You can enter your expected shrinkage using modeling values and/or percentage values. You can enter each value at either an hourly or daily interval.

When using modeling values, the Agent Requirements calculation is expanded or contracted by the sum of the shrinkage + modeling factor for each interval just as is done for shrinkage. The FTEs are adjusted based on the shrinkage for each interval.

To forecast shrinkage:

Step	Action
1	On the toolbar, Click Shrinkage . The Shrinkage dialog box is displayed.
2	For each day your contact center is open, type a number for the estimated shrinkage percentage. And/or For each day or hour per day your contact center is open, type a positive or negative number for the shrinkage modeling factor.
3	Click OK . Forecasting and Scheduling takes those percentages and numbers into account when generating your schedule.

—End—

Setting Strategic Forecast Weight

After creating a forecast via historical weeks, you can add a strategic forecast to the forecast with some weighting.

Note: This feature requires that a strategic forecast has been created in Strategic Planning and then exported to Forecasting and Scheduling.

To add a strategic forecast weight:

Step	Action
1	Select an individual queue and zoom to weekly or daily mode.
2	Click the button next to the strategic forecast weight label.

The forecast from the historical weeks is now displayed as the "tactical forecast," and the forecast from strategic planning is displayed as the "strategic forecast." A strategic forecast weight can now be entered for contact volume and for average handle time. As you change the weight, the amounts in the corresponding column are automatically updated.

The weighting determines how much of the strategic forecast is applied to the tactical forecast in order to create the "final forecast." If the weighting is 100%, the final forecast values will be identical to the strategic forecast and the historical weeks will only be used for patterning. If the weighting is 50%, the final forecast values will be half way between the tactical and the strategic forecast.

3 Click **OK**.

Note: Strategic Forecasts can only be used for inbound queues.

—End—

The Service Goals Module

The Service Goals module is displayed when you click the Service Goals icon.

Use the Service Goals module to set goals for how quickly you want calls to be answered and to enter information about your abandonment assumptions. Forecasting and Scheduling uses these goals together with your forecast (see "[The Forecast Module](#)" (page 164)) to predict the number of agents that will be required at any time of the day. These requirements are then used to generate the employees' schedules.

In the Service Goals module, changes are applied only to the period that is displayed. The default display when the module is opened is the entire scheduling period. To display or modify data for a single day, on the toolbar use **Zoom In**. Use **Zoom Out** to return to the whole scheduling period.

Types of Service Goals

You can use either of two criteria for your service goals:

- **Service Level**—The percentage of calls that will be answered within the specified time.
- **Average Speed to Answer—ASA**. The average length of time it takes to answer all calls. ASA is not available if you are using skill-based scheduling.

Note: You might find that Service Level is a better indicator of performance than Average Speed to Answer. A good average speed might hide the fact that while some calls are answered very quickly, others are answered very slowly.

If you are licensed for the optional Operations features, and are using an Operations media type in Forecasting and Scheduling, you can also set deadline goals.

Note: Certain terminology within Forecasting and Scheduling changes if you are licensed for the Operations features. The following table lists the changes that occur with the Operations features:

Term	Operations-Equivalent
queue	work queue
contact volume (or CV)	volume (or V)
average handle time	activity handle time

A deadline goal is used to represent an objective of finishing work arriving in certain interval by a set time of day. For instance, all work arriving between 6 a.m. and 3:30 p.m., today, must be completed by 5:15 p.m., today; work arriving from 3:30 p.m., today, through 6 a.m., tomorrow, must be completed by 10 a.m., tomorrow.

You can vary not only the percentage of work handled within the service goal, but also vary the service goal time threshold by time of day.

See "[Deadline Goal Modeling](#)" (page 258) for more information on deadline goals.

Making Goals Constant

You can set service goals for an entire scheduling period, for an individual day, or on an hour-by-hour basis.

You can apply these goals to the entire scheduling period or to a single day by clicking Make goals constant. Goals for each day are listed to the left of the graph, and the displayed date is listed in yellow. The Total reflects the average for the scheduling period.

Set your goals first for the entire scheduling period, and then zoom in to adjust them for each day.

Setting Goals for Queues (Skill-Based Scheduling Only)

If your campaign is skill-based, the Queue menu is displayed. If the campaign is linked to more than one queue (see "[The Queues Group](#)" (page 159)), you must set service goals for each queue.

Setting Goals for Quality

If the quality goal is set to Schedule X % of Agents with a Score of at Least Y, the scheduling engine first staffs to meet the service goal. Next, the scheduling engine adds or removes agents such that at least X percent of the staffing necessary to meet the service goal also meet the quality goal.

If the quality goal is set to Schedule X # of Agents with a Score of at Least Y, the scheduling engine treats this goal just as it treats the Schedule At Least X Agents option (see "[Scheduling Algorithm Behavior](#)" (page 192)). Specifically, the scheduling engine schedules this minimum amount of agents even if doing so causes overstaffing of the queue.

Abandonment

Abandoned calls are those in which the caller hangs up before the contact is answered. In non-skill-based scheduling, a single abandonment percentage is used to track these. In skill-based scheduling, a patience factor for each queue is used because callers will often stay on the phone longer for some types of calls than for others.

Setting Abandons (Non-Skill-Based Scheduling Only)

Abandons affect both forecasted ASA and Agent Requirements from ASA Service Goals:

- If you are using ASA Service Goals, as you change your abandon rate, your Agent Requirements (see "[The Agent Requirements Module](#)" (page 182)) vary inversely. In other words, if you increase the abandonment rate, the agent requirements decrease by an equivalent amount. This is because the abandoned contact percentage is subtracted from the forecasted number of calls and the agent requirements are adjusted accordingly.

Note: Because Forecasting and Scheduling uses the abandon percentage to generate your schedule, you should base it on historical data rather than setting it as a goal.

To set the abandon rate:

- Type the percentage of calls you expect to be abandoned during the period of the weekly schedule.

Setting Patience for Queues (Skill-Based Scheduling Only)

If you are using skill-based scheduling, you should set a patience factor for each queue. This is the amount of time you expect a caller to remain on the line for each queue before hanging up. You might, for example, set a longer patience factor for a contact in a Tech Support queue than in a Sales queue. This figure should be based on actual experience rather than setting it as a goal.

To set the patience level:

Step	Action
------	--------

- | | |
|---|--|
| 1 | From the Queue menu, select a queue. |
| 2 | Type a patience factor in seconds for the queue. |
| 3 | Repeat for each queue. |

—End—

Reserve Thresholds

Some ACDs allow you to give agents reserve or overflow skills. Under normal circumstances, these agents do not take calls on the queues corresponding to their reserve skills. However, if the predicted wait time on the queue is expected to exceed a certain threshold (the reserve threshold), the agents become active in the queue until the queue is cleared out. Additional agents can be given a secondary reserve skill with a higher threshold, and only take calls on the queue if the expected wait time exceeds the higher threshold. This situation is modeled in Forecasting and Scheduling by assigning the agents Reserve 1 or Reserve 2 skills for these queues in the Employees module in Organization mode. The wait time thresholds for each queue are defined in the Service Goals module in Campaign mode.

Setting Your Service Goals

To set your service goal for the entire scheduling period:

Step	Action
------	--------

- | | |
|---|---|
| 1 | If you are using skill-based scheduling (see " Multi-Contact and Skill-Based Scheduling " (page 213)), select a media type and a queue. If the campaign is linked to more than one queue you must set service goals for each queue. |
|---|---|

- 2 To set goals for the entire scheduling period, click **Zoom Out** on the Toolbar if the entire scheduling period is not displayed. If a single day is displayed, only goals for that day will be set.
- 3 Click **Service Level** and type the percentage of calls you want answered within the number of seconds you enter.
Or
Click **Average speed to answer**, and then type the average number of seconds you want all calls answered in.

Note 1: You might find that Service level is a better indicator of performance than Average Speed to Answer. A good average speed might hide the fact that while some calls are answered very quickly, others are answered very slowly.

Note 2: If the service goal percentage is set to 0% for one or more hours, the scheduler treats that time as if the queue were closed. During these intervals, the scheduler will not schedule any employees unless forced to by work rules like minimum hours. Without this feature, the scheduler could sometimes schedule people in these intervals to meet minimum agent requirements or to distribute over-staffing evenly.
- 4 Click **Make goals constant** to apply the percentage or time to all calls at all times during the displayed period.
- 5 Type the percentage or number of agents and the quality goal value that these agent must meet. This feature allows you to have input into your expectations of the quality of agents to be answering phones based on the displayed period. The quality value for each employee is either directly entered into the Employees module, or can be automatically generated and populated for each employee from another configured data source, such as Nortel Evaluations.
- 6 Type the percentage of calls you expect to be abandoned if you are using non-skills scheduling or, if you are using skill-based scheduling, type a Patience factor in seconds. This number represents the length of time a caller will wait before hanging up. Since this number is used by Forecasting and Scheduling to generate your schedule, you should base it on historical data rather than setting it as a goal.

—End—

To set service goals for a single day:

Step Action

- 1 On the toolbar, Click **Zoom In**. Select the week of the scheduling period or day of the week you wish to fine tune from the date selector, or by clicking the week/day to the left of the graph. You can now adjust the week's or day's goals by doing one or both of the following:
 1. Type a new goal, and then click **Make goals constant** to apply it during the entire week/day.
 2. On the **View** menu, click **Table**. A table of values is displayed to the right of the graph. You can fine-tune your hourly percentages or times by typing new values. (You can also click the graph and drag the line to change the percentage or time.)

The graph is automatically adjusted and the summary is updated to reflect the new figure

- 2 Repeat step 1 for each week of the period, or day of the week you want to fine-tune.

Note: If Agent Requirements have been manually modified (see "[Entering Agent Requirements Manually](#)" (page 185)), saving a Service Goal (by moving to another module) causes the following reminder to be displayed:

Since the Agent Requirements have been manually modified, the changes made to the Service Goal will not affect the Edited Agent Requirements and will not be considered by the scheduler. Do you want to continue?

Click **Yes** to save your changes and move to the other module. Click **No** to discard your changes and continue working in the Service Goals module.

—End—

The Agent Requirements Module

The Agent Requirements module is displayed when you click the Agent Requirements icon.

The Agent Requirements module typically uses the contact volume forecast and the service level goal you established to predict the number of agents that need to be scheduled. Some organizations schedule differently,

however, and explicitly enter their agent requirements manually, usually through importing a file. The manual method of inputting agent requirements is discussed in ["Entering Agent Requirements Manually" \(page 185\)](#).

Note: Agent requirements are available if you are using skill-based scheduling, but they are defined as FTE requirements, the number of dedicated agents that would be required for each queue.. See ["Multi-Contact and Skill-Based Scheduling" \(page 213\)](#) for more information on skill-based scheduling.

Viewing Your Agent Requirements

The Agent Requirements graph shows the number of agents needed to meet the predicted contact volume at the established service level goals, taking into account AHT and shrinkage. It is divided into 15-minute intervals throughout the selected day/week.

If your campaign is linked to multiple queues, the agent requirements are based on the combined forecast for those queues. See ["Multiple Queue Forecasting" \(page 166\)](#).

The summary column to the left of the graph shows the staffing hours for each day or week (that is, hours answering contacts), and the total hours for the scheduling period. The current day is highlighted in yellow. Click a day/week to display it in the graph or choose a day/week from the date selector.

On the View menu, click Table. A table of values is displayed to the right of the graph. These numbers are read-only.

The default display is one day. On the toolbar, use Zoom Out () to display a week's data or full scheduling period in the graph and the tables. Use Zoom In () to return to a single day or week.

Calculating the Cost of Your Schedule

Forecasting and Scheduling includes a Full-Time Equivalent (FTE) calculator that lets you see in advance what staffing levels your forecast and actual schedules will require and what their cost will be.

Note: Use the FTE Calculator in non-skills mode only.

To use the FTE Calculator:

Step	Action
1	On the View menu, click FTE Calculator . The calculator is displayed.

- 2 Enter the data as requested, and then click **Recalculate**. The hours, number of full-time equivalent employees, and their cost is displayed for both the forecast and for the actual schedule after it has been generated.

—End—

FTE Data

This section discusses the data the FTE Calculator uses and the calculations it makes.

A. Input Data Enter each of the following parameters:

A1)	The number of shifts a full-time equivalent employee works each week.
A2)	The average length of each shift.
A3)	The number of paid hours each shift.
A4)	The average number of hours the employee spends on the phone.
A5)	The FTE employee's hourly wage.

B. Estimates Based on the Forecast and Service Level

Requirements The following estimates use the data entered in section A and the forecasted agent and service level requirements:

B1)	Estimated staffing hours—The same as the total required staffing hours estimated by the Agent Requirements module (see above).
B2)	FTEs needed—Estimated staffing hours (B1) divided by the product of the number of shifts (A1) and the time spent on the phone (A4); that is, $B2 = B1/(A1 \cdot A4)$.
B3)	Total cost—FTEs needed (B2) times the number of shifts per week (A1) times the paid hours in the shift (A3) times the hourly wage (A5); that is, $B3 = B2 \cdot A1 \cdot A3 \cdot A5$.

C. Estimates Based on the Current Schedule The following estimates use the data entered in section A and the schedule that is currently displayed in the calendar.

C1)	Paid hours scheduled—The total of the currently scheduled shift assignments corrected for paid and non-paid shift activities.
C2)	Hours scheduled answering contacts—The total hours an agent is scheduled to perform immediate, deferred, or blended activities.

C3)	FTEs according to the current schedule—Hours scheduled answering contacts (C2) divided by the product of the number of shifts (A1) and the time spent on the phone (A4); that is, $C3=C2/(A1*A4)$.
C4)	Total Schedule Cost—The sum of the hours worked by each employee multiplied by his or her hourly wage (listed in the Hourly Wage field in the Employees module. If no hourly wage is listed, the FTE employee's hourly wage (A5) will be used.
C5)	Max number of concurrent employees—The number of employees scheduled during the 15-minute period when the most employees are on the phone simultaneously.
C6)	Min number of concurrent employees—The number of employees scheduled during the 15-minute period when the fewest employees are on the phone simultaneously.

Entering Agent Requirements Manually

The typical workflow for scheduling in the contact center world is:

1. Generate a contact volume forecast.
2. Enter service requirements.
3. Enter other factors, such as shrinkage.
4. Enter in schedule parameters.
5. Obtain preliminary agent requirements.
6. Create a schedule to meet these agent requirements.

This general workflow has been the standard and is still used in the majority of contact centers.

Some contact centers do not generate schedules based on their historical forecast. Instead, they are given specific agent requirements to meet. Steps 1 through 4 above do not occur as part of the normal scheduling process, although they might still be used for forecasting and tracking. Step 5 is not an output step, it is an input step instead. Rather than using data from the previous steps to generate an agent requirement graph, such centers manually input their requirements based on their contracts. Step 6 is also slightly different in that the agent requirements are a minimum, rather than a goal. That is, instead of trying to meet the agent requirements exactly, such contact centers see them as a bottom limit below which the scheduler should not go.

To enter agent requirements manually (ignoring any forecast and service goals that have been calculated):

Step	Action
------	--------

- | | |
|---|---|
| 1 | From the Edit menu, select the Allow Editing of Requirements menu item . When editing is enabled, this menu item displays a check mark to its left. |
|---|---|

Note: Once you've enabled this menu item and modified agent requirements, you cannot disable the menu item until you leave the Agent Requirements module without saving your changes.

- | | |
|---|--|
| 2 | From the View menu, select Table . |
|---|--|

You can edit the requirements in the table:

- Manually
- Using cut and paste.
- By importing a text file (.TXT)

The text file has a simple format. It should have three columns, separated by tabs, for the date (DD/MM/YYYY), time (HH:MM in 15-minute intervals, as listed in the table), and the staffing requirements. For example:

Date	Time	Staffing
10/11/2004	00:00	0
10/11/2004	00:15	0
10/11/2004	00:30	0
10/11/2004	00:45	0
10/11/2004	01:00	0
10/11/2004	01:15	0
10/11/2004	01:30	0
10/11/2004	01:45	0
10/11/2004	02:00	0
10/11/2004	02:15	0
10/11/2004	02:30	0
10/11/2004	02:45	0
10/11/2004	03:00	0
10/11/2004	03:15	0
10/11/2004	03:30	0
10/11/2004	03:45	0

Date	Time	Staffing
10/11/2004	04:00	0
10/11/2004	04:15	0
10/11/2004	04:30	0
10/11/2004	04:45	0
10/11/2004	05:00	0
10/11/2004	05:15	0
10/11/2004	05:30	0
10/11/2004	05:45	0
10/11/2004	06:00	0
10/11/2004	06:15	0
10/11/2004	06:30	0
10/11/2004	06:45	0
10/11/2004	07:00	0
10/11/2004	07:15	0
10/11/2004	07:30	0
10/11/2004	07:45	0
10/11/2004	08:00	12
10/11/2004	08:15	12
10/11/2004	08:30	12
10/11/2004	08:45	12

- 3 As necessary, use the Scale and the Restore buttons on the toolbar, or the corresponding menu items on the Edit menu to respectively scale the numbers that you have entered manually (similar to the scaling function in forecasts described in "[Scaling](#)" (page 170)), or to discard any changes that you have made to agent requirements.

When you select a different module within Forecasting and Scheduling, you are prompted to save your changes as follows:

Agent Requirements have been manually modified. The scheduler will no longer consider the forecast or service goals. Do you want to save your changes?

Click **Yes** to save your changes and move to the other module. Click **No** to discard your changes and move to the other module. Click **Cancel** to continue working in the **Agent Requirements** module.

—End—

The Calendar Module

The Calendar module is displayed when you click the Calendar icon.

The Calendar module uses the forecast, service levels, agent requirements, employees, and work patterns to generate a scheduling period's schedule for your contact center. The schedule section is blank until you generate a schedule for the scheduling period. It will contain items such as vacations, meetings, or unavailability that have been prearranged.

By default, the left side of the Calendar window shows three columns for each employee: last name, first name, and a third column where schedule conflicts are flagged.

You can, however, configure this area to show additional columns, which is particularly useful when you have a number of employees with similar names, such as John Smith.

To configure the left side of the Calendar window, on the View menu, use the Extra Employee Headers menu item. The Define Extra Header Information dialog window is displayed.

Select those items you want to add to the employee table, and then click the Add >> and Remove >> buttons to add and remove items respectively. Once you have selected those items that you want, click OK to close the window. The Calendar window refreshes to display the additional information.

Generating a Schedule

Forecasting and Scheduling offers a wide range of options that you can set before you generate a schedule. After the scheduler is complete, you can edit the schedule directly or reschedule with a different set of options, if you want.

Analyzing the Schedule and Resolving Conflicts

You can perform an initial analysis to search for potential issues and conflicts before you actually create the schedule. An analysis performs all the scheduling tasks up to the actual creation of the schedule and indicates scheduling conflicts, min/max hour issues, and assignment rule conflicts. You can then resolve these conflicts before scheduling.

To analyze the schedule:

- On the toolbar, click **Analyze**. Forecasting and Scheduling analyzes your schedule and provides a list of issues. These can be sorted by type of issue or by employee.

Setting Up the Scheduler

The **Scheduler Setup** dialog box lets you enter your options and start the scheduling process.

To open the Scheduler Setup dialog box:

Step	Action
------	--------

- | | |
|---|---|
| 1 | <p>On the toolbar, click Scheduler.</p> <p>Or</p> <p>On the Calendar menu, select Schedule.</p> <p>The Scheduler Setup dialog box is displayed.</p> |
|---|---|

—End—

Choose Days to Schedule

Click the days to schedule:

- Schedule Entire Period—Schedule (or reschedule) the whole week.
- Schedule Today Only—Schedule the current day (which is displayed in place of Today) only. If you only want to schedule a part of the current day, set those times.
- Schedule Today Forward—Schedule the rest of the period, starting with the current day (which is displayed in place of Today) only. If you only want to schedule part of the current day, set those times and the schedule will begin at the time you set and run through the rest of the scheduling period.

Note: The current day is the day displayed in the Date Selector in the Calendar module.

Rescheduling Options

Select options you want used when you reschedule:

- Schedule shift assignments:
 - Add shift assignments—You can add additional employees to the schedule when this is selected. Deselect it if you do not want to add shift schedules.
 - Remove shift assignments—You can remove existing shift schedules from the schedule when this is selected. Deselect it if you do not want to remove shift schedules.
- Schedule shift activities—You can schedule shift activities, such as breaks, lunches, training, and so forth. This box is automatically checked if Schedule shift assignments is checked.

- Schedule calendar event—You can schedule calendar events, such as floating events and classes.
- OT / VTO Scheduling—OT extensions and VTO events will be scheduled. If this box is checked, Schedule shift assignments is unchecked and unavailable. Several additional OT/VTO scheduling options are displayed. This option is only available if your company has an intra-day optimization license.

Note: If you select OT / VTO Scheduling, the General Scheduling tab described on "General Scheduling" (page 192) is hidden, and the OT/VTO Scheduling tab is displayed. For information on this tab and scheduling with overtime or voluntary time off, see "Intra-Day Optimization" (page 223).

Scheduling Using Agent Preferences Choose whether agent preferences (see "Assigning Work Patterns to Employees" (page 132)) are to be used by Forecasting and Scheduling when scheduling.

- No preferences—Preferences are ignored when scheduling.
- Preferences by ranking—Preferences are used based on the ranking given in the Employees module (see "Employee Grid Fields" (page 120)).
- Preferences by seniority—Preferences are used based on the employee's start date (see "Employee Grid Fields" (page 120)).
- Preferences by seniority/ranking—Preferences are used based on a combination of seniority and ranking.
- Favor Service Level/Favor Preferences—Use the slider to determine the relative weight the scheduler will give to meeting service level requirements or to meeting employee preferences.
- When you move the preference slider bar towards Favor preference, the scheduling algorithm makes giving an agent one of their top X% of preferences (also known as one of their favored preferences) a higher priority than maximizing service goal, but less important than work rules. (Even if you prefer to have every day off, you still need to work your minimum hours, for instance.)

Whenever the Scheduling engine pauses during the scheduling process to show you potential problems, or at the end of the scheduling process if no problems are encountered, click the View favored preferences button to see how the scheduling preferences for the employees were accommodated. A sample excerpt of a preferences report is shown following:

Favored Preferences

Park, Julie - Start Date 1/2/2000 - top 6% of options favored each day:

8/9/2004 - 38 start time/day off options - 6 favored: Day
Off,09:45,10:00,10:15,10:30,10:45

8/10/2004 - 38 start time/day off options - 6 favored: Day
Off,09:45,10:00,10:15,10:30,10:45

8/11/2004 - 38 start time/day off options - 6 favored: Day
Off,09:45,10:00,10:15,10:30,10:45

8/12/2004 - 38 start time/day off options - 6 favored: Day
Off,09:45,10:00,10:15,10:30,10:45

8/13/2004 - 38 start time/day off options - 6 favored: Day
Off,09:45,10:00,10:15,10:30,10:45

8/14/2004 - No start time/day off options favored

8/15/2004 - No start time/day off options favored

Koza, Frederick - Start Date 1/17/2000 - top 10% of options favored each day:

8/9/2004 - No start time/day off options favored

8/10/2004 - No start time/day off options favored

8/11/2004 - No start time/day off options favored

8/12/2004 - No start time/day off options favored

8/13/2004 - No start time/day off options favored

8/14/2004 - No start time/day off options favored

8/15/2004 - No start time/day off options favored

Spielberg, Lisa - Start Date 12/12/2001 - top 63% of options favored each day:

8/9/2004 - No start time/day off options favored

8/10/2004 - No start time/day off options favored

8/11/2004 - No start time/day off options favored

8/12/2004 - No start time/day off options favored

8/13/2004 - No start time/day off options favored

8/14/2004 - No start time/day off options favored

8/15/2004 - No start time/day off options favored

Whistler, Aaron - Start Date 12/15/2001 - top 65% of options favored each day:

8/9/2004 - 18 start time/day off options - 13 favored:
07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45,10:00

8/10/2004 - 18 start time/day off options - 12 favored:
07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

8/11/2004 - 18 start time/day off options - 12 favored:
07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

8/12/2004 - 18 start time/day off options - 12 favored:
07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

8/13/2004 - 18 start time/day off options - 13 favored: Day Off,07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

8/14/2004 - No start time/day off options favored

8/15/2004 - No start time/day off options favored

Scheduling Algorithm Behavior You can set additional scheduling preferences for periods when the perfect schedule cannot be generated.

- Prefer Understaffing/Prefer Overstaffing—Use the slider to determine whether the scheduler will schedule more employees to increase the service level or fewer employees to lessen operational costs.
- Minimize spikes in service level/Maximize overall (weekly) service level—Use the slider to determine whether the scheduler should
 1. Favor less variance in the schedule, creating a smoother curve but a lower overall service level (minimize spikes)Or
 2. Favor better overall service by allowing poor service during some periods, creating “spiky” agent requirements (maximize overall service level)
- Schedule at least __ agents per queue—Type the minimum number of agents that must be scheduled. The system will never schedule fewer than this number.
- Minimize Class Sessions over Service Level—If this box is checked, the scheduling engine minimizes the number of class sessions (at the expense of service level). This situation often results in all sessions being filled up with the maximum number of attendees. If this box is unchecked, the scheduling engine maximizes service level. This situation will often result in the maximum number of class sessions being created (given the constraint for the minimum number of attendees).

General Scheduling General Scheduling contains three sections:

- Scheduling using agent preferences:

Choose agent preferences.

- No preferences—Preferences are ignored when scheduling.
- Preferences by ranking—Preferences are used based on the ranking given in the Employees module. See ["Adding Employees" \(page 116\)](#)
- Preferences by seniority—Preferences are used based on the employee's start date.
- Preferences by seniority/ranking—Preferences are used based on a combination of seniority and ranking.
- Favor Service Level/Favor Preferences—Use the slider to determine the relative weight the scheduler gives to meeting service level requirements or to meeting employee preferences.

- Amount of Time to Spend Scheduling

Depending on the number of employees and the complexity of their work patterns and scheduling options, Forecasting and Scheduling can take a considerable amount of time to create a schedule. Select the amount of time you want to spend.

- Normal—Forecasting and Scheduling spends enough time to provide a good schedule.
- Advanced—Forecasting and Scheduling spends more time attempting to resolve conflicts and rule violations.
- Schedule until interrupted—Forecasting and Scheduling continues to refine the schedule until the process is stopped.

Note: If you reschedule a scheduling period, the scheduler begins working with the current schedule. If you interrupt the scheduling process using the Stop & Save Best Schedule button (see below), and then restart it, the process starts where you left off. To start the scheduling process again from scratch, first right-click the schedule, and then select Clear Schedule.

- Agents to Schedule

Select the type of agent to schedule.

- Select Employees only if you are not using workforce planning.
- For additional information about scheduling Staffing Profiles, see ["Adding Staffing Profiles to the Schedule" \(page 248\)](#).

Start Scheduling Click **OK** to start the scheduling process. The Scheduler window is displayed. As the scheduling proceeds, progress messages are displayed below the progress chart.

- Click **Stop & Save Best Schedule** to accept the current schedule.
- Click **Cancel** to quit the scheduling process without creating a schedule.

Scheduling Warnings and Error Messages Forecasting and Scheduling notifies you of any warnings or violations while scheduling, helping you to know where to go to fix any problems. These warnings or violations can be very detailed and can be displayed and saved in Notepad. See "[Understanding the Schedule Checker Messages](#)" (page 421) for information about specific warning messages.

You might see these messages more than once. You are if any of the errors must be fixed before the system can create a schedule.

Viewing the Schedule

When the scheduler finishes, a calendar is displayed for the current day.

Schedule Statistics

Forecasting and Scheduling provides statistics above the schedule.

Staffing differentials	2	60	62	50	52	62	14	49	61	62	62	49
Service level	16	100	100	100	100	100	100	100	100	100	100	100
ASA	188	0	0	0	0	0	0	0	0	0	0	0
Number scheduled	2	60	62	50	52	62	14	49	61	62	62	49

- **Staffing Differentials**—The difference between the available number of agents and the required number. Negative numbers indicate understaffing. (Not available in skill-based scheduling.)
- **Service Level**—The predicted service level based on the current schedule.
- **ASA**—The predicted average speed to answer. (Not available in skill-based scheduling.)
- **Number Scheduled**—The number of people scheduled to be answering contacts.

Scheduling Conflicts

Forecasting and Scheduling indicates employees with scheduling conflicts by an exclamation point next to their name. A button with a blue exclamation point indicates a potential conflict that cannot be resolved here.

Conflict Warnings If the employee's schedule makes it possible that the requirements of one or more scheduling rules cannot be filled, the rules are listed in the Conflicts window that opens when you click on a blue exclamation point.

Statistical Comparisons

In addition to the complete statistical information available in the Tracking module, Pulse section, Pulse tab, a quick comparison of the predicted and required staffing and service level statistics is available in the Calendar module. For detailed descriptions of the statistics, see "[Schedule Required versus Predicted Statistics](#)" (page 443).

To display the required versus predicted comparison:

Step	Action
1	On the Tool bar, click Recalculate to update the statistics, and then click Report . The Required vs. predicted comparison window is displayed.
2	Select a media type or queue. Click Show Table to display the values for each 15-minute period.

—End—

Changing the View Dates for the Schedule

The schedule shows one day by default.

- Use the date selector to move between days.
- On the tool bar, use **Zoom Out** on the toolbar to display a week's data in the calendar. Use **Zoom In** to return to a single day.

Locking and Unlocking Shifts, Shift Activities, and Calendar Events

Forecasting and Scheduling does not adjust or reschedule locked shifts, shift activities, or calendar events, including class sessions and floating events. Locked periods are crosshatched.

To lock a shift, shift activity, or calendar event:

- Right-click the shift, shift activity, or calendar event, and then, from the menu, select **Lock Shift** or **Lock Event**.

Or

- Drag the shift, shift activity, calendar event, or class to a new time.

Or

- Change the time of the shift in the **Shift Assignment** dialog box or the calendar event in the **Edit Calendar Event** dialog box.

To unlock a shift, shift activity, calendar event, or class:

- Right-click the shift, shift activity, calendar event, or class, and then, from the menu, select **Unlock Shift** or **Unlock Event**.

Locking and Unlocking Multiple Shifts

You can lock and unlock all shifts for your weekly schedule. (See "[Locking and Unlocking Shifts, Shift Activities, and Calendar Events](#)" (page 150).)

Note: You can also use this command to unlock all shifts and shift activities that you have locked manually. To lock or unlock schedules for individual employees, see below.

To lock all shifts in the current period schedule:

Step	Action
1	Right-click in the calendar, and then select Lock/Unlock Multiple . The Lock/Unlock Multiple dialog box is displayed.
2	Click Lock , and then select the type of period to lock: <ul style="list-style-type: none"> • Floating Events/Sessions—Only floating events and class sessions are locked. Shifts and shift activities remain unlocked. • Shift Assignments: Shift activities only—Only the shift activities are locked. Shifts, calendar events, floating events, and class sessions remain unlocked. Or <ul style="list-style-type: none"> • Shift Assignments: Shift activities and shifts—Both shifts and shift activities are locked. Floating events and class sessions remain unlocked.
3	Select the time period you want locked: <ul style="list-style-type: none"> • For the entire period—All selected periods during the current weekly schedule are locked. • From selected day forward—Only selected periods from the day you right-clicked to the end of the current period are locked. • For the selected day only—Only selected periods on the day you right-clicked are locked.

—End—

To unlock all shifts in the current weekly schedule:

Step	Action
------	--------

- | | |
|---|---|
| 1 | Right-click in the calendar, and then select Lock/Unlock Multiple . The Lock/Unlock Multiple dialog box appears. |
| 2 | Click Unlock , and then select the type of period to unlock: <ul style="list-style-type: none"> • Floating Events/Sessions—Only floating events and class sessions are unlocked. Shifts and shift activities remain locked. • Shift Assignments: Shift activities only—Only the shift activities are unlocked. Shifts, calendar events, floating events, and class sessions remain locked. <p>Or</p> <ul style="list-style-type: none"> • Shift Assignments: Shift activities and shifts—Both shifts and shift activities are unlocked. Floating events and class sessions remain locked. |
| 3 | Select the time period you want unlocked: <ul style="list-style-type: none"> • For the entire period—All selected events for the selected employee during the current period will be unlocked. • From selected day forward—Only selected periods from the day you right-clicked to the end of the current period will be unlocked. • For the selected day only—Only selected periods on the day you right-clicked will be unlocked. |

If your site is licensed for integration with Competency-based Learning, and your administrator has enabled the integration, you can also lock/unlock learning breaks as described on "[Viewing Learning Assignments](#)" (page 198).

—End—

Editing the Schedule

You can make changes to the schedule using the same techniques discussed previously in "[Organization Mode Modules and Tasks](#)" (page 77). Depending on the change you are making, refer to one of the following sections:

- "[Creating and Modifying Shift Activities and Calendar Events](#)" (page 139)
- "[Creating and Modifying Calendar Events](#)" (page 140)
- "[Creating and Modifying Time Off Events](#)" (page 143)

- ["Creating and Modifying Unavailabilities" \(page 146\)](#)

Viewing Learning Assignments

If your site is licensed for integration with Nortel Competency-based Learning, and your administrator has enabled the integration, learning assignments generated in the Learning system are used by Forecasting and Scheduling to create floating learning breaks in the schedule. These breaks correspond to the lesson assignments for the scheduling period.

To view these learning assignments:

Step	Action
------	--------

- | | |
|---|--|
| 1 | From the Calendar menu, use the View Learning Assignments menu item. |
|---|--|

The **View Learning Assignments** dialog box opens, which allows you to select one or more employees and view all of their learning assignments.

Each learning assignment has one of three states, which are displayed in the **Needs Attention** column. These states reflect what actions are required for that learning assignment, and consist of:

- **Create** – You need to create new floating breaks for this assignment.
- **Delete** – You need to delete one or more breaks that are currently scheduled.
- **None** – You do not need to take any action for this assignment.

- | | |
|---|--|
| 2 | Click the button labeled Display only learning assignments needing attention at the bottom of the dialog box to exclude from the list those assignments with a None attention status. |
|---|--|

All of the buttons on the bottom of the dialog box specify actions that can be performed on the selected assignments. If no assignments are selected, these actions apply to all assignments:

- Click **Update** to delete all breaks associated with the selected assignments, and then display the **Create Learning Breaks** dialog box, where you can specify the time periods allowed for the breaks. For each created break, the values of the two editable fields in the grid control the number of breaks created and their maximum length. These two fields are:
 - **Time to Schedule (this period)** – Defaults to the total time left to schedule for the entire assignment. This is also the maximum allowable value.

— Maximum Break Length – Specifies the longest possible break. If this value is less than the above value, multiple breaks are created.

- Click **Update and Optimize** to perform the same actions as for Update, and, after breaks are deleted and/or created, to run the scheduling engine.
- Click **Edit Breaks** to bring up the **Edit Learning Breaks** dialog box, where you can manipulate all of the individual learning breaks currently active (for all weeks).
- Click **Close** to close the dialog box.
- Click **Help** to display the Help topic for this dialog box.

3 Once you've clicked **Edit Breaks**, the dialog box that opens allows you to manipulate actual learning breaks associated with the assignments selected in the **View Learning Assignments** dialog box. The various actions listed below are always applied to the selected breaks:

- Click **Edit** to bring up the parent learning break definition dialog box so that various attributes can be modified. This dialog is a simplified version of the floating event definition dialog. If you change any of the parameters that result in a new break being created, the original breaks list in the dialog is not refreshed. You must click **OK**, and then reopen the dialog to see the new break(s) that were created.
- Click **Delete** to remove all of the specified breaks and their break definitions (including the floating events associated with the breaks). This button is only activated if one or more breaks are selected.
- Click **Lock/Unlock** to lock/unlock all of the selected breaks. This button is only activated if one or more breaks are selected.
- Click **Close** to exit the dialog box.
- Click **Help** to display the Help topic for this dialog box.

—End—

Column Manipulation

You can move and resize the columns as desired. The settings are remembered when you exit the application and return. If you want to restore the default column positions and widths, right-click anywhere in the header row, and then select the appropriate menu item. From this menu, you can also select to resize the columns based on their contents if desired.

Grid Column Definitions

A few of these columns have been discussed previously, but are included here for completeness:

- Employee – Last name, first name (locale-specific).
- Lesson Assignment – Name of the assignment.
- Time to Schedule (this period) – Total time to allocate for this period. This is an editable field. The default value is the total time remaining to be scheduled. If this field is edited, the maximum value is the total time remaining.

The time to schedule can be 0 if no sessions should be scheduled.

- Maximum Break Length – The default value is the time to schedule this period. The maximum is the time to schedule. If the time to schedule is 0, then this field displays 0 and is not editable. If the total time to schedule is not 0, the maximum is this value and the minimum is 1 minute. This field is editable.
- Needs Attention – Status indicating what needs to be done.
- None – No attention required.
- Create – One or more breaks need to be created.
- Delete – One or more breaks in the future need to be deleted.
- Priority – Lesson importance. This value is passed directly from the Learning system. Higher numbers reflect higher priority.
- Status – Current status. The possible values for this status are:
 - Assigned – The assignment has been assigned to the person, but no further action has been done on it (this is the initial status).
 - Not Started – The assignment has not yet been attempted (same as Assigned).
 - In Progress – The assignment has been launched at least once, but not finished. Possible reasons are either because the student is actually currently taking the lesson, or the student exited the lesson in the middle.
 - Failed – The student got a score below the passing score.
 - Bookmarked – The same as In Progress.

- Under Adjustment – The lesson was changed to this status by a supervisor.
 - Disallowed – The lesson was changed to this status by a supervisor.
 - Done – The student finished a lesson with no passing score. This status exists from the time that the student finishes the lesson until the lesson is scored.
 - Passed – The student got a score on or above the passing score.
 - Completed – All lessons are finished for a particular block.
 - Deleted – The learning assignment was deleted from the Learning system.
- Status Date - The last date/time the status was updated.
 - Available Date - The date/time the assignment starts.
 - Due Date - The date/time by which the assignment must be completed.
 - Total Length - The total amount of time for which to schedule breaks.
 - Already Scheduled - The amount of time in the schedule currently allocated for this assignment.
 - Scheduled (this period) - The amount of Learning time already scheduled for this period.
 - Time remaining to schedule - The total amount of time left to be scheduled. This is the total time - scheduled time. The scheduled time for Failed status is only the time scheduled in the future, otherwise the scheduled time is all time scheduled for this assignment for all scheduling periods.

Creating Learning Breaks

You can open the **Create Learning Breaks** dialog box by clicking the **Update** or **Update and Optimize** buttons in the **View Learning Assignments** dialog box. The dialog box consists of seven windows where you can select the start and end times for each day where learning breaks can be assigned. If you are creating learning breaks for a campaign that encompasses or intersects with the current viewing time, then the earliest day you can select is today's date. The default start time for that day is between 15 and 30 minutes (rounded to a 15-minute boundary) in the future.

If the learning assignment is wholly in the past or wholly in the future, the campaign's hours of operation are used as the defaults.

Editing Learning Breaks

This dialog box allows you to manipulate actual learning breaks associated with the assignments selected in the **View Learning Assignments** dialog box. The various actions listed below are always applied to the selected breaks:

- Click **Edit** to bring up the parent learning break definition dialog box so that various attributes can be modified. This dialog box is a simplified version of the floating event definition dialog box (see "[Creating Floating Events](#)" (page 127)). If you change any of the parameters that result in a new break being created, the original breaks list in the dialog is not refreshed. You must click **OK**, and then reopen the dialog to see the new break(s) that were created.
- Click **Delete** to remove all of the specified breaks and their break definitions (including the floating events associated with the breaks). This button is only activated if one or more breaks are selected.
- Click **Lock/Unlock** to lock/unlock all of the selected breaks. This button is only activated if one or more breaks are selected.
- Click **Close** to exit the dialog box.
- Click **Help** to display the help topic for this dialog box.

Viewing and Changing Employee Schedules

Forecasting and Scheduling allows you to view and edit schedules for individual employees.

To display detailed information for an employee:

Step	Action
1	<p>Double-click an employee's name. The Employee Detail dialog box is displayed.</p> <p>You can use the techniques explained earlier (see "Creating and Modifying Shift Activities and Calendar Events" (page 139)) to edit individual schedules, add absences, and so forth.</p>

—End—

Scheduling Classes

Forecasting and Scheduling allows you to schedule employee classes (during employee availability) or other such activities while minimizing the cost of holding these classes and minimizing the disruption to service level that holding these classes might cause.

There are many factors governing the optimal placement of employee classes, making it a difficult task to do manually. By scheduling classes at the same time as shifts for these employees, Forecasting and Scheduling can move shifts around if necessary to accommodate the classes.

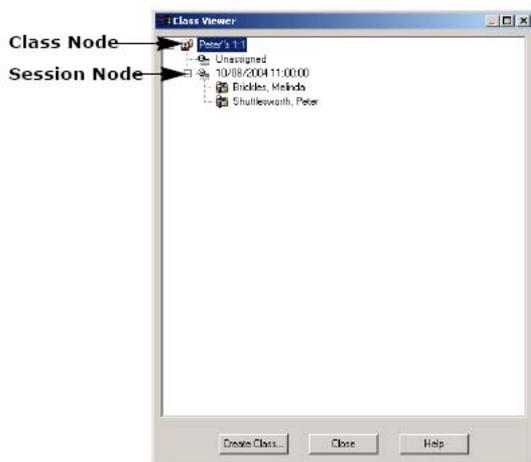
Some of the factors affecting class scheduling include:

- Number of class sessions required
 - How many class sessions are required to satisfy the employee demand for this class?
 - For each class sessions, there is an implied cost, so it might be necessary to minimize the number of sessions.
 - Employees might not always be available at the same time; therefore, additional sessions might be required.
 - If you place all employees into a single session, it might be too damaging to service level, so smaller sessions (and, therefore, more sessions) might be required.
 - The Min/Max Sessions attribute might force a minimum or maximum number of sessions.
- Optimal time to schedule the class sessions
 - When you schedule employees into a class, it removes them from the phone, so sessions should ideally be scheduled during periods of overstaffing, or overlapping scheduled activities that do not contribute to queue work (activities that are considered shift work [that is, not lunch or break, for example] but not linked to a media).
 - The Max Simultaneous Sessions attribute may prevent sessions from overlapping one another. The attribute is meant to model resource constraints. For example, if only one instructor is available to teach a class, multiple overlapping sessions cannot be scheduled. Likewise, a single room in which to teach a class prohibits multiple overlapping sessions.
- Into which sessions to schedule an employee
 - The Min/Max Attendee attribute will affect what session an employee is placed. This attribute models room size and other class size constraints.
 - Maximizing Service Level is another factor.
- Given that employees must attend these classes, the optimal placement of their shift assignments

- Employee shifts are scheduled so that employees required to attend the same class during some week would be available at the same time (subject to min/max attendee and service level considerations).

Viewing Classes

The Class Viewer displays all of the classes and sessions, as well as the attendees for each (including those attendees not currently assigned to a session).



Note: Since the amount of this information can potentially be quite large, you can resize the class viewer so that the display is larger (or smaller), as desired.

You access the Class Viewer by clicking on the View All Classes... menu item in the menu that pops up when you right-click on any item in the Calendar grid.

There are a large number of class and session editing facilities available from within the Class Viewer. You can:

- Assign attendees to a session by moving them from the Unassigned tree node to a session node.
- Move attendees from one session to another.
- Unassign attendees by moving them from a session node to the Unassigned tree node.

You can perform a variety of actions by right-clicking on one of the nodes. If you right-click on a class node, you get the following pop-up menu:



When you lock a session, the scheduler cannot change the time it occurs.

When you lock an attendee, the session cannot move that attendee to a different session.

If you right-click on a session (except for the unassigned node), you get the following menu:



When you edit a class or session, it brings up the appropriate edit dialog box from which you can make desired changes.

You can also edit a class or session simply by double-clicking either the class or session node. You can also toggle the locked status of a session or attendee by clicking the icon attached to that node.

When you lock an attendee, the session also locks. If you want to unlock the session, you can do so; however, unlocking the session also unlocks all previously locked attendees.

Creating Classes

You can create a class in one of three ways:

Step	Action
1	Use the right-mouse button menu (New > Create Class).
2	Double-click a class session, and then select Edit the class .
3	From the Class Viewer.

When you create or edit a class, the **Class Attributes** window appears.

This window has the following sections:

- **General**—Allows you to specify: whether sessions must overlap a shift; the class name (must be unique within a campaign); the activity to use for each class.
- **Event time windows**—Allows you to specify the class length, and the allowed time window within which the class can appear for each day of the campaign.
- **Class Attributes**—Allows you to specify the limits that you wish to impose on the meeting optimizer when it schedules classes. Note that you can override these limits inside the class viewer, these values are used both to determine the way that sessions are placed initially as well as during scheduling.
- **Attendees**—The list on the left contains the employees not currently attending the class; the list on the right shows the current attendees. Select which employees you want to attend the class by using the Add >> and << Remove buttons.

The **View Sessions** button allows you to pop up the Class Viewer to see the sessions as they are currently placed. It is grayed when you create a class because the sessions are not placed until you exit the dialog box.

When you click **OK** from this window, class sessions are created and class sessions are filled up with employees. This initial placement of sessions and employees into those sessions is only meant as a viewable placeholder for the sessions and attending employees. At this point, some of the class attributes may be violated. Scheduling will resolve any of these violations.

Note: When you edit an existing class, all existing sessions are deleted and then recreated as above.

—End—

Creating a Class Session

You can create or edit a class session in the Class Viewer window, or edit it by double-clicking the session in the calendar grid and selecting **Edit the session** from the pop-up dialog box that appears.

The **Edit Class Session** window is displayed.

This window has the following sections:

- **General**—Allows you to specify the time and activity type of the session.
- **Overlap Rule**—Allows you to specify if the event must overlap the shift.

- **Attendees**—Use the Add >> and << Remove buttons to select which employees you wish added to the event. Attendees can be locked into the event (checked) or free to float within one event to another.

The **Lock Session** check box allows you to specify if the session is locked or not. Locking an attendee automatically sets this check box, although you are free to uncheck it.

Importing Outsourcer Schedules

For contact centers that share calls across their own sites and outsourced centers, forecasted workload or staffing requirements' information can be shared with the outsourcers to allow them to schedule their staff. The outsourcers' schedules can then be imported back into the contact center's model allowing an increased level of coordination.

To access the **Import Outsourcer Schedule** dialog box, click the **Import Outsourcer Schedule** menu item on the **Calendar** menu in the Calendar module.

Imported outsourcer schedules appear on the calendar as staffing profiles named after the organization that is imported. These schedules are locked. When importing schedules for multiple organizations, schedules for different organizations append to each other, while schedules for same organization overwrite existing ones.

You can specify the time window for which you want to import data by specifying Start date and End date.

Only organizations that are configured to import outsourcer schedules in the Integration Server can be imported.

Exporting the Schedule

The schedule you have created can be exported to a tabbed text (*.txt) file, an Excel 5 (*.xls) file, or an HTML (*.htm) file

Note: Use the Employee Filter to select and export schedules for groups or individuals. See "[Sorting and Filtering the Employee Grid](#)" (page 119).

To export your schedule:

Step	Action
1	From the File menu, select Export . The Calendar Export dialog box appears.
2	Type a file to which to export the schedule, or click Browse and select a file.

- 3 Select either **Employee start/end times** or **Employee activity assignments**.
- 4 Select the start and end dates.
- 5 Click **OK** to export the information.

—End—

Printing the Calendar

Forecasting and Scheduling lets you print calendar schedules for all employees, individual agents, or selected groups. The next section provides steps to set up and print a calendar.

Note: Use the Employee Filter to select and print schedules for groups or individuals. See "[Sorting and Filtering the Employee Grid](#)" (page 119).

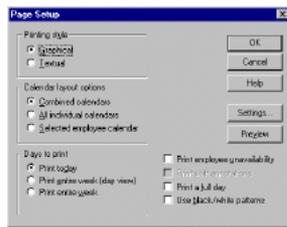
To set up and print a calendar:

Step	Action
1	From the File menu, select Page Setup (see below). Set the printing style, calendar layout style, days to print (current day, current period in day view, or the entire current period), sorting options, and other print options. Click Settings . The Pattern Setting window appears (see " Settings " (page 210)).
2	Set a print pattern for each period and event by double-clicking the current pattern and selecting from the Pattern Selection window. Click OK to set each pattern. When you have selected all patterns, set the scale and non-phone font. Click OK to return to the Page Setup window.
3	In the Page Setup window, click Preview to see what your schedule will look like when printed (see " Preview " (page 210)).
4	Click Print to open the Windows Print dialog box.
5	Set up your options, and then click Print to print the schedule.

—End—

Page Setup

The Calendar module's **Page Setup** dialog box lets you set style, layout, and sorting options, determine the days to print, and set other options. The availability of several options is determined by the print style. Unavailable options are dimmed.



Printing Style There are two printing styles:

- Graphical—Schedules are printed in a graphic format similar to the one displayed on the Forecasting and Scheduling calendar.
- Textual—Schedules are printed as a text table.

Calendar Layout Options You have three choices for the Calendar layout:

- Combined calendars—Prints a combined schedule for all employees shown in the Calendar module.
- All individual calendars—Prints individual schedules for each employee shown in the Calendar module.
- Selected employee calendar—Prints only the schedule for the highlighted employee.

Days to Print You can choose to:

- Print today—Prints the current day (the day displayed in the Calendar module).
- Print entire week (day view)—Prints daily schedules for the current week. Prints 12 hours per page.
- Print entire week—Prints a combined schedule for the current week. Less detail is available than in day view.

Other Options The other options available here include:

- Print employee unavailability—Includes periods of employee unavailability in the schedule. Available only when graphical printing style is selected.
- Print shift annotations—Includes any comments found in the Comments field of the Edit Shift Assignment dialog box. Available only when textual printing style is selected.
- Print a full day—Prints an entire day's schedule on a single page. Available only when graphical printing style is selected.

- Use black/white patterns—Prints the schedule using the grayscale patterns (see below). Click this option when you are printing in grayscale on a color printer.

Settings

The Settings dialog box lets you customize the graphic schedule. Patterns are displayed in color or grayscale, depending on the printer you have selected in the Print dialog box.

Note: If you use a color printer to print a grayscale or black/white schedule, be sure to select Use black/white patterns in the Page Setup window.

You can also fit the schedule on a specific number of pages or set the scale of the printout, and you can choose the font color (black or white) for non-phone events.

To modify a setting:

Step	Action
1	Double-click the graphic pattern or color you want to change. The Settings dialog box is displayed.
2	Click the new graphic or color you want to use, and then click OK .

—End—

To fit the schedule to a specific number of pages:

- Select the **Fit to page(s)** check box, and then type the number of pages wide and the number of pages high. Type 1 in each field to print the schedule on a single page.

To change the scale of the schedule printout:

- Be sure the **Fit to page(s)** check box is not selected. Type the percentage of the schedule's original size you want the printout to use.

To set the non-phone font color:

- Click **Black** or **White**.
Click **OK** to return to the **Page Setup** dialog box.

Preview

The **Print Preview** window lets you preview a copy of your schedule before you print it.

Use the buttons at the top of the window to open the print dialog box, move from page to page, display two pages at a time, zoom in or out, open the Page Setup dialog box, and close the preview window.

Print

Use the Forecasting and Scheduling **Print** dialog box to select your printer, set the number of copies of the selected schedule you want to print, and change the orientation of the page from portrait to landscape.

- To change the orientation of the page, click **Properties**. The **Properties** dialog box varies with each printer, so be sure and look at each tab for **Portrait** and **Landscape**. Select the **Rotate** check box if one exists.

Click **OK** to print your schedules.

Publishing the Schedule

Click **Publish** to make schedules available to managers, supervisors, and agents.

Once published, schedules are viewable in a number of places in the web application, including:

- My Home module, My Schedule section
 - Summary tab
 - Personal tab
 - Group tab
- My Home module, My Time section
 - Schedule tab
- People module
 - Schedules tab

You can publish schedules for one agent, all agents, or the current filtered set of agents. Additionally, you can publish the entire period, some defined time period, or you can just publish time-off events.

Note: Publishing works somewhat differently in Organization mode than in Campaign mode. See "[Publishing the Schedule](#)" (page 151).

Unpublishing Schedules

Click **Unpublish** to make the schedule for the selected period unavailable to agents. You can unpublish schedules for one agent, all agents, or the current filtered set of agents. Additionally, you can unpublish the entire period, or some defined time period. (The **Time off events only** check box is not enabled when you are unpublishing schedules.)

Reverting to Published Schedules

Click **Revert to Published Schedule** to return the schedules for this period to their published state. Any changes made after publishing are rolled back. (The **Time off events only** check box is not enabled when you are unpublishing schedules.) This function is only available if schedules have been published for the current period.

Note: If you revert a published schedule after you have deleted a class that was part of the schedule (see "[Creating Classes](#)" (page 205)), the previously deleted class sessions reappear in the schedule, but are converted to regular events. They are no longer considered instances of a class, and must be edited or deleted one by one.

The Pulse Module

The web application's Tracking module, Pulse section, Pulse tab is displayed when you click the Pulse icon. The Pulse tab will reflect the current scheduling period and zoom level you are using in Forecasting and Scheduling. See "[The Pulse Tab](#)" (page 331).

Multi-Contact and Skill-Based Scheduling

For organizations that are licensed for the optional multi-contact functions of Forecasting and Scheduling, Forecasting and Scheduling offers an innovative, easy-to-use solution to the complex problems involved in skill-based scheduling. To implement skill-based scheduling, you simply determine the skills your contact center requires, associate those skills and the appropriate media with your agents, and link the skills to your queues. Forecasting and Scheduling does the rest, scheduling the right number of people with the right skills at the right times.

Skill-based scheduling is completely integrated with the rest of Forecasting and Scheduling's forecasting and scheduling tools, and, once established, is completely transparent.

Note: This section offers a brief overview of skill-based scheduling. See the referenced portions of this guide for complete information.

As customer contact centers have become more sophisticated, their agents have been required to respond to customers through a variety of media. Forecasting and Scheduling incorporates features designed to help contact center managers efficiently schedule agent resources to handle customer contact through these different media types.

Forecasting and Scheduling associates media-type with a queue. This lets you leverage your understanding of Nortel's existing multi-queue technology to model your alternative media queues. You can associate a queue or skill with one of the following six medias: phone, email, fax, web chat, call back, or voice over IP. These media are categorized as immediate or deferred answering types. Phone, chat and voice over IP are immediate, and fax, call back and email are deferred. Skills definitions are expanded to include the media associated with a skill.

Forecasting and Scheduling can model three types of multi-contact routing:

- The first (and simplest) is a dedicated agent groups model. In this model, each media has a group of agents who handle only that media and do not handle contacts from any other queue. While there may be

skill-based routing within each media, there is no mixing of contacts between the medias.

- The second model is media hopping. Here an agent will work with one media type for a length of time and then switch to another type. While agents may work more than one media type in the course of a day, they will not work more than one answer type at any time.
- The third model is true blending. Here, agents can be routed contacts from any media at any time. An agent can be handling a phone call, then an email, and then another phone call.

Setting Up Media and Activity Associations

For organizations that are licensed for the optional multi-contact functions of Forecasting and Scheduling, you can associate an activity with media. See "[Creating Your Activity Types and Activities](#)" (page 70) for additional information.

You can select more than one media to associate with an activity. Media can be enabled only when **Timeoff**, **Use In Calendar Event**, and **Unavailability** are unchecked.

To use media hopping, a feature that allows agents to switch between working different combinations of media during a day or on different days, you can create multiple activities, each with different media.

For example, you might create a Phone + VOIP activity and a Email only activity. You can then create multiple shifts and shift activities using these activities, such as an Email only shift and a Phone + VOIP shift with a 1-hour Email shift activity.

Setting Up Skill Types

Once you have decided on an appropriate set of skills for your agents, use Forecasting and Scheduling's Settings module to enter them. There is no limit to the number of skills you can create.

To set up your skill types:

Step	Action
1	On the File menu, click Settings .
2	Click the Skills tab and type the skills you will assign. Assign each skill a media type. The media type determines the skills that can be linked to a queue. For example, only phone skills can be linked to a phone queue.

—End—

Assigning Skills to Employees

Skills are assigned to employees in the Employees module (see page "Assigning Skills to Employees" (page 134)).

Note: You can use the employee filter (see "Sorting and Filtering the Employee Grid" (page 119)) to determine which employees have specific skills.

To assign skills to employees:

Step	Action
1	Click the Employees icon to open the Employees module.
2	Highlight the employee or group of employees you want to assign skills to, and then click the Skills tab.
3	In the OK column, click a pattern with a red X. A green check mark is displayed showing that the pattern has been assigned. If you have selected a group of employees, a yellow question mark (?) indicates that some, but not all, of the selected employees have that skill.
4	Assign a proficiency level for each skill. This level is used in creating your skill-based schedule. An agent with 1.0 has an average handle time, an agent with 2.0 takes twice as long, and an agent with 0.5 takes half as long to handle calls. This setting overrides any proficiency you set up in the employee grid. See "Employee Grid Fields" (page 120).
5	Assign a priority to each skill. Lower numbers mean that the skill has a higher priority for that agent. The queue listed as 1 is considered to be the agent's primary queue. Priority 2 is the secondary queue, and so forth.

—End—

Skill Priorities

Priorities are used by the skill-based scheduler to simulate contact routing when the schedule is created. They determine how contacts will be routed to your agents:

- If no priorities are set (or all priorities are equal), a contact is normally routed to the next available agent assigned to (scheduled for) the contact's queue.

- If two or more agents are available, the contact is assigned to the agent with the highest priority.
- If an agent with two or more skills is the only person available to take a contact and contacts from more than one queue are waiting, the contact from the agent's highest priority queue will determine which contact is routed to her.

Note: Priorities are one of several factors used to route a contact. Other factors, such as the length of time a contact has been holding and the time since an agent last received a contact, are also taken into account.

Assigning Skills to Queues

Once skills have been assigned to your employees, you must first determine the skill required to answer each type of contact and associate that skill with the incoming contact queues. This is done in the Campaign mode Operations module (see "[The Operations Module](#)" (page 82)).

To assign skills to queues:

Step	Action
1	In the Campaign mode, click the Operations icon to open the Operations module.
2	Click the Skill-based check box.
3	Link the appropriate queue to your campaign (see " The Queues Group " (page 159)).
4	Select each queue and link the skill set needed by that queue (see " The Queues Group " (page 159)).
	Agents will receive calls from that queue only if they have the required skill.
—End—	

Forecasting and Setting Service Goals for Skill-Based Scheduling

To use skill-based scheduling, you must create forecasts and service goals for each queue you are scheduling. See "[Forecasting for Queues](#)" (page 166) and "[Setting Your Service Goals](#)" (page 180).

To create a forecast:

Step	Action
1	In Campaign mode, click the Forecast icon to open the Forecast module.
2	Select the queue for which you want to forecast. Note: If you use the same profile or weeks of history for all queues, you can forecast using the <Combined> queue.
3	Load the profile or weeks of history you want to use (see "Loading and Editing Profiles" (page 172)).
4	Make any adjustments to the forecast (see "Adjusting the Forecast" (page 170)), and then save it.
5	Repeat steps 2 to 4 for each additional queue (unless you use the <Combined> queue).

—End—

To set your service goals:

Step	Action
1	In the Campaign mode, click the Service Goals icon to open the Service Goals module.
2	Select the queue you want to set service goals for.
3	Select the type of service goal to use, and then enter the parameters.
4	Repeat steps 2 and 3 for each additional queue.

—End—

Generating the Schedule

The final step is to generate a schedule. Forecasting and Scheduling schedules agents with the required skills to meet the forecasted contact volume and service goals for each queue. Schedules are optimized to ensure that you have the right mix of agents available at any time.

To generate a skill-based schedule:

Step	Action
1	In the Campaign mode, click the Calendar icon to open the Calendar module.
2	On the toolbar, click Schedule .
3	In the Scheduler Setup dialog box (see " Setting Up the Scheduler " (page 189)), select the days to schedule.
4	(Optional) Select the preference determinant. If you select Rank, make sure each employee is ranked.
5	Use the sliders to select your scheduling preferences.
6	Click OK to generate a schedule for the period of the campaign.

—End—

Multi-Site Scheduling

To support multi-site operations that share calls, but do not have a virtual environment, Forecasting and Scheduling provides, as a separately licensed feature, functions to allow you to create centralized forecasts and distributed schedules. Generally, a multi-site environment operates using a static call allocation that can vary through the day, and can be adjusted in real time to compensate for variations in the original plan.

To support such environments, Forecasting and Scheduling provides the following components:

1. A two-tiered campaign structure, where a main or parent campaign can have one or more sub-campaigns associated with it. A parent campaign generally represents an entire collection of calls and the agents from all sites that take these calls. The sub-campaigns are used to represent agents from each individual site (or more accurately, those that log into a specific ACD). Both the parent campaigns and the sub-campaigns have individual scheduling periods. See ["Using Virtual Queues" \(page 222\)](#) for more detailed information.
2. A differentiation of queue types into three types:
 - The queue type that has existed all along in Forecasting and Scheduling, the normal queue.

The normal queue is the default type for all new queues that you create. The normal queue type is mapped directly to data source groups in the Queue Group Mapping tab. In the Queue Group Mapping tab, only normal queues are shown on the left side of the window, and only normal queues are available to be mapped to either of the two parent type queues, discussed next.
 - The distributed queue.

The distributed queue is used in Main campaigns where calls are distributed among multiple sites using a percent allocation method. This type of queue can only be added to a Main campaign that has at least one defined sub-campaign.
 - The virtual queue.

The other type of queue is the virtual queue, which is used in campaigns where calls are distributed among multiple sites using a dynamic method of distribution. Only certain types of ACDs support dynamic distribution, such as Cisco, Genesys, Avaya BSR, and Look Ahead Interflow. You can add this type of queue only to a stand-alone campaign. Campaigns that are sub-campaigns or that allow sub-campaigns cannot have virtual queues.

Refer to the *Workforce Management Administration Guide* (NN44480-600) for more information on creating and managing queues and sub-queues.

Using Distributed Queues

Note: Steps 1 through 4 below are performed in the web application's App Admin module, under the Queues section. Refer to the *Workforce Management Administration Guide* (NN44480-660) for more information.

To create a distributed queue:

Step	Action
1	As required for your installation, create the appropriate normal queues (using the Settings tab). You will map these normal queues to distributed queues in step 4.
2	As required for your installation, map the normal queues to a data source (using the Queue Group Mapping tab).
3	Create the required distributed queues (using the Settings tab). If your site has a multi-site scheduling license, you can select the type of queue using the Type drop-down menu.
4	Map the appropriate normal queues to the distributed queues (using the Parent Queue Mapping tab).
5	As required for your installation, create the appropriate distributed campaigns. See "Adding a Campaign" (page 154) for information on creating campaigns. If your site is licensed for multi-site scheduling, the New Campaign window has an additional check box, Distributed Campaign . Check this box to create a distributed campaign.
6	Create two or more sub-campaigns for the distributed campaign. (In the Work on a Campaign window, select your distributed campaign and click New Campaign to create the sub-campaign.)

- 7 Create scheduling periods for the distributed campaign. Any scheduling period you create for the distributed campaign is automatically propagated to its existing sub-campaigns.

Note: If a campaign is a normal campaign, only normal queues (that are not sub-queues) or virtual queues can be linked. Distributed queues, distributed sub-queues, and virtual sub-queues cannot be linked.
If a campaign is a distributed campaign, no queues can be linked. Instead, the top-level queues of the queues linked to the sub-campaigns are displayed.
- 8 For each sub-campaign, link it in the Operations module to the appropriate sub-queues, skills, and organizations, as described in ["The Queues Group" \(page 159\)](#).
- 9 For each organization you linked in the previous step, in the Employees module add the appropriate employees to the sub-campaigns, as described in ["The Employees Module" \(page 160\)](#).
- 10 At the distributed campaign level, go to the Forecast module and create a forecast (see ["Creating a Forecast" \(page 167\)](#)).
- 11 Move to the **Service Goals** module, and then enter service goals for the distributed campaign.
- 12 Allocate percentages as follows:
 1. If you already know the allocation percentages, type them manually in the Forecast module.
 2. Otherwise, create a schedule for the distributed campaign and accept the allocation percentages that are calculated for the schedule.
- 13 If desired, each site can then create and publish a schedule for each of its sub-campaigns, using the allocation percentages derived in step 2 above.

Note: To move quickly within a distributed campaign, right-click over the module bar. The menu that appears allows you to move from a distributed campaign to one of its sub-campaigns, or from a sub-campaign to another peer sub-campaign or the distributed campaign of which it is a part. The same menu also allows you to change Forecasting and Scheduling module at the same time. When you use this right-click menu, it is equivalent to selecting another module or another campaign using the Module bar or Tool bar. As with using the Module bar or Tool bar, you are

prompted to save any changes that were in progress before you leave the current module or campaign/sub-campaign.

—End—

Using Virtual Queues

As discussed previously, virtual queues are used in campaigns where calls are distributed among multiple sites using a dynamic method of distribution. Only certain types of ACDs support dynamic distribution, such as Cisco, Genesys, Avaya BSR, and Look Ahead Interflow.

Note: Steps 1 through 4 below are performed in the web application's App Admin module, under the Queues section. Refer to the *Workforce Management Administration Guide* (NN44480-600) for more information.

To create a virtual queue:

Step	Action
1	As required for your installation, create the appropriate normal queues (using the Settings tab). You will map these normal queues to distributed queues in step 4.
2	As required for your installation, map the normal queues to a data source (using the Queue Group Mapping tab).
3	Create the required virtual queues (using the Settings tab).
4	Map the appropriate normal queues to the virtual queues (using the Parent Queue Mapping tab).
5	Link the virtual queues to a normal campaign.

From this point onward, virtual queues behave exactly as normal queues. Refer to ["Setting Up Campaign-Specific Work Rules"](#) (page 73) through the end of ["Scheduling with Forecasting and Scheduling"](#) (page 67) for more information.

—End—

Intra-Day Optimization

No matter how good the information on which your schedules and plans are based, they are always subject to variations on a real time and intra-day basis. Workforce Management has a separately licensed feature, Intra-Day Optimization, that allows you to run your operations more effectively and more efficiently by responding to and adjusting for these variations. Essentially, Intra-Day Optimization allows you to:

1. Identify the variations.

You can easily identify and be alerted to real time variations from the plan, including being alerted to changes such as in call volume, handle time, service level deviations from the plan, and variations in staffing from the schedule. This information can be sent to you in the form of an email alert or by your monitoring a Pulse view that automatically refreshes.

2. Understand the reason for the variation.

Once you are aware of these deviations, you can dig in deeper to understand the current and potential future impacts, using a Pulse view. This view provides information, such as staffing numbers for skills-based environments, and future-looking trend lines.

3. Resolve the situation.

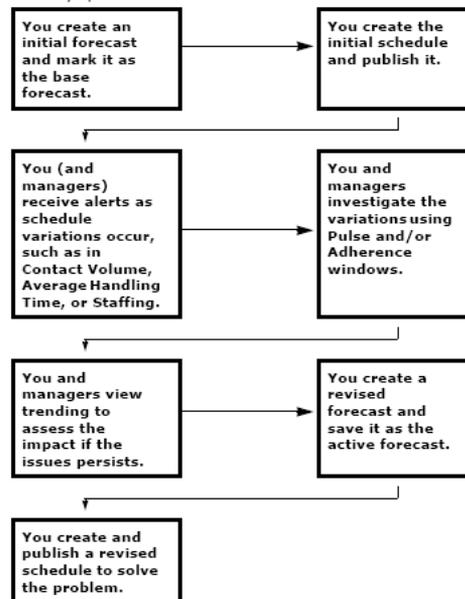
After being alerted to an issue, and gaining an understanding of the problem, you can quickly take action to resolve these issues. Based on the trending of the call arrivals and handle time compared to your base forecast, you can easily reforecast to see the potential future effects if these trends continue. You can then publish a revised forecast to modify the schedule. With this new forecast, you can then take corrective actions, such as:

- canceling certain activities
- adding overtime (OT)
- asking people to take voluntary time off (VTO) as appropriate

You can directly schedule both the addition of OT and VTO based on agent settings and preferences.

The General Workflow

The following diagram shows the workflow you typically follow in situations where you need to do intra-day optimization.



Creating an Initial Forecast

The process of creating an initial forecast is generic to the scheduling process, whether you have an intra-day optimization license or not. It is covered in detail in ["Creating a Forecast" \(page 167\)](#).

A key concept in intra-day optimization is the distinction between the active forecast, the base forecast, and saved forecasts.

The active forecast is the one that is being displayed.

You can explicitly save the active forecast as base using the Forecast menu's Set Forecast as Base item. However, a copy of the active forecast is automatically saved as base when you initially publish a schedule, as described in ["Creating and Publishing a Schedule" \(page 225\)](#).

Creating and Publishing a Schedule

As for creating a forecast, the process of creating and publishing a schedule is generic to the scheduling process, whether you have an intra-day optimization license or not. It is covered in detail in "[The Calendar Module](#)" (page 188).

When you generate and then publish a schedule from the active forecast, a copy of the active forecast is saved as the base forecast (unless there is already an existing base forecast for the scheduling period).

Once a base forecast has been created for a scheduling period, anyone (with sufficient privileges) can publish the schedule again; the base forecast is left unchanged. If a base forecast can be saved, a warning appears asking you to confirm that you want to do this. If the base forecast cannot be saved for any reason, an error message is displayed that the base forecast cannot be saved, along with the reason and whatever remedial steps are required.

Using Alerts for Pulse Thresholds

For the purposes of intra-day optimization, you need to be alerted to potential problems. Three categories of data comparison can be configured to alert you of problems:

1. Actual statistics vs. goal
Allows you to compare the actual service level or average speed to answer with the respective goal.
2. Actual statistics vs. forecast
Allows you to compare a variety of different statistics, such as abandons, service level, and backlog, with their forecasted values.
3. Actual statistics out of range
Allows you to compare a variety of different statistics, such as abandons, service level, and backlog, with a value range that you specify.

For each of these categories, a specific rule template is provided. These templates are configured in the web application, on the Campaign tab of the Alert Rules section of the Tracking module. (See "[Campaign Tab](#)" (page 369) for additional information on configuring these alerts.)

On the above-mentioned Campaign tab in the web application, the selection pane displays all defined campaigns. When you select a campaign in the selection pane, the following information about the campaign then displays in the Campaign Alert Rules container to its right:

- the rule name
- whether the rule is enabled
- the rule definition

- those users, if any, to whom alert e-mails will be sent
- the campaign for which the rule is defined

Buttons at the bottom of the tab allow you to create a new rule, edit an existing rule (if a rule is selected in the right pane), or delete a rule.

Note: If a rule is created using a Combined queue, the rule always applies to all queues in that campaign, even if the queues linked to that campaign change in the future.

If a rule is created for an individual queue, or a selection combining several individual queues, the rule always applies to the specific queues, even if the queues are unlinked from the campaign and/or linked to a new campaign.

Creating Campaign Alert Rules for Intra-day Optimization

The general process of creating alert rules is covered, as mentioned above, on "[Campaign Tab](#)" (page 369).

This section contains information particularly relevant to those alerts used in intra-day optimization.

Once you have clicked **Create**, the right side of the window refreshes and displays the following containers:

- general information
- rule definition
- e-mail configuration

Of these containers, the rule definition container's contents change depending on which category of rule you are defining. The other containers are the same, regardless of the rule category.

As mentioned previously, you can define three different rule categories:

1. Actual Statistics vs. Goal
2. Actual Statistics vs. Forecast
3. Actual Statistics Out of Range

Actual Statistics vs. Goal

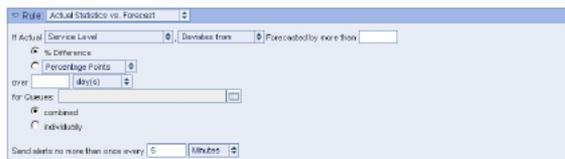
When you select Actual Statistics vs. Goal, it allows you to compare the actual service level or average speed to answer with the respective goal. The rule definition container changes to show the following:



The rule has a sentence-like structure, and is described in detail in "Campaign Tab" (page 369):

Actual Statistics vs. Forecast

Selecting Actual Statistics vs. Forecast allows you to compare a variety of different statistics, such as abandons, service level, and backlog, with their forecasted values. The rule definition container changes to show the following:



The rule has a sentence-like structure, and is described in detail in "Campaign Tab" (page 369):

Actual Statistics Out of Range

Selecting Actual Statistics Out of Range allows you to compare a variety of different statistics, such as abandons, service level, and backlog, with a value range that you specify. The rule definition container changes to show the following:



The rule has a sentence-like structure, and is described in detail in "Campaign Tab" (page 369):

Viewing Trends in Pulse

A powerful and versatile way of picking deviations in your forecasts from the actual data is to use trends within Pulse. Trends allow you to compare and display your actual data with your forecast, and these trends can later be

saved as a new forecast for which a revised schedule can be published. These trends are visible when a single queue, multiple queues, or the combined queue is selected.

You can view trends for the following statistics:

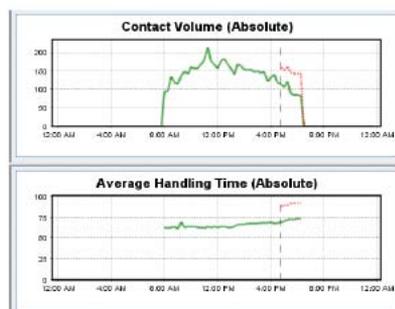
- Contact Volume (CV)
- Average Handling Time (AHT) (can be saved as part of the new forecast)
- Average Speed to Answer (ASA) (based on the trend of AHT, CV, and scheduled Staffing)
- Service Level (SL) (based on the trend of AHT, CV, and scheduled Staffing)
- Backlog (based on the trend of AHT, CV, scheduled Staffing, and current backlog)
- Abandons (based on the trend of AHT, CV, and scheduled Staffing)
- Occupancy (based on the trend of AHT, CV, and scheduled Staffing)

The forecasted Contact Volume and Average Handling Time data are compared to the actual data. Intervals where the actual data is null are excluded from the calculation.

To display trends:

Step	Action
1	Select either Create View or Edit View , as described in "Using the Tracking Module" (page 327). A window opens (labeled either Create View or Edit View , depending on which button you clicked).
2	Make sure the Show Trends box is checked.
3	Save your changes as appropriate to a new view or the view you just edited.

The Pulse graph changes as shown below:



The dotted red line shows the direction of the trend.

Note: You can compare the actual data with the trend-based data by displaying the data table and toggling **Show Trend** on and off for your view.

—End—

Configuring Trends

In addition to displaying the trend, you can configure various characteristics of the trend by clicking **Configure Trends** at the bottom of the **Pulse** tab to open the **Trends Configurations** window.

Note: The **Configure Trends** button is only active when you are viewing the current scheduling period (Schedule Period mode).

The three containers of the Trends Configurations window allow you to configure:

- the starting time upon which the trend's calculations should be based. (The default is the starting time of the scheduling period.)

- Past Time Intervals to Exclude

You may specify up to two different time intervals when the trend's calculations should be excluded.

- Trend Parameters:

- End Point.

You choose when the trend's calculations is to end. (The default is the end of the current day.)

- Convergence Effect.

You choose how the trend should be calculated, based on the convergence rate of the trend's effect.

Convergence Effect

The convergence effect determines how quickly you want the trend to converge back to your forecast. You can choose one of four convergence effects for your trend:

- **No Convergence**

The trending effect is applied through the entire time range of the campaign with no decrease. This is the default setting.

- **Linear Convergence**

The trending effect converges linearly through the entire time period.

- **Late Convergence**

The trending effect is applied through most of the time range with convergence taking place near the end of the range.

- **Early Convergence**

The trending effect converges quickly and trails off gradually through the rest of the time period.

Saving the Trend as a New Forecast

Once you have defined and modified your trend, you can save the future trend combined with the baseline forecast up to the point where the future trending starts as a new forecast.

To save the forecast:

Step	Action
------	--------

1	Click Reforecast .
---	---------------------------

Note: The **Reforecast** button is only active under certain conditions:

- Trending must be enabled in the view.
- Pulse must be in **Schedule Period** mode. This means that a Campaign must be selected in the left frame, and the schedule period must be selected in the SP Selector. If the date range selector is shown instead of the SP Selector, the date range chosen must exactly match the SP start and end dates.
- The date range is the current week.
- You cannot reforecast if an Outbound or Project queue is selected (or if a combined queue is selected that has an outbound/project queue as one of its children). An outbound queue is a queue assigned to the Phone - Outbound media type. A Project queue is a queue assigned to the Project media type.
- You cannot reforecast if the selected queue is the child of a distributed or virtual queue.
- You cannot reforecast unless both CV and AHT are shown in the view.
- Your role must have been assigned the Reforecast privilege, and you must have been given campaign scope for the selected campaign.

The **Reforecast** pop-up window is displayed:

- 2 Type a name for your forecast.
- 3 Select the information you want to save in your forecast. You have the option of saving one of the following sets of information:
 - Contact volume only
 - Average handling time only
 - Both contact volume and average handling time

Note: In the Contact volume only and Average handling time only options, the actual Queue History Time Series that is stored consists of the new data chosen and the active forecast version of the statistic not chosen, thus ensuring that when loaded, a complete forecast is available.

If multiple queues or the combined queue are chosen, a complete Queue History Time Series is always saved for each queue.

This allows only a subset (for example, only one queue, or only contact volume, as opposed to contact volume and average handling time) of what was saved to be loaded, and ensures when you load multiple queues at once, or the combined queue, that the data is correctly distributed among the queues.

- 4 Click **Save** to save the forecast, or click **Save & Launch** to save the forecast and launch the **Forecast** module of Forecasting and Scheduling.
- 5 In the **Forecast** module, click the **Load** button to load your revised forecast into Forecasting and Scheduling.

When you leave the **Forecast** module, you are prompted to save your changes to the forecast.
- 6 Click **Yes**.

—End—

Revising the Schedule

Now that you have created a revised forecast and made it the active forecast, you can use this updated forecast to make changes to the schedule.

As mentioned previously, you can take corrective actions on the schedule to accommodate the new forecast by:

- canceling certain activities
- adding overtime (OT)

- asking people to take voluntary time off (VTO) as appropriate

Canceling activities is straightforward, but adding overtime and voluntary time off merit additional discussion.

Beyond adjusting activities, when a contact center finds itself overstaffed or understaffed, it will generally need to have people work overtime or take voluntary time off to compensate for the staffing misalignment.

Setting Up Overtime and Voluntary Time Off

Overtime (OT extensions) is a shift type and Voluntary Time Off (VTO Events) is an activity type.

To use either or both, the following sequence must be followed:

1. You need to define OT extensions and VTO events at the organization level in the Work Rules module.
2. These OT extensions and VTO events must be linked to work patterns at the organization level in the Work Rules module.
3. The work patterns must be linked to individual employees at the organization level in the Employees module. (These links may already be in place in your company.)
4. The maximum amount of overtime and voluntary time off must be specified for each employee at the organization level in the Employees module.

Note: If you intend on using OT and VTO preference information, your employees must have set their preferences in the Schedule Preferences tab of the My Profile section of the My Home module in the web application.

Defining VTO Events

In organization mode, you define VTO events in the Work Rules module.

Step	Action
1	Click the VTO Event tab.
2	Double-click the asterisk to the left of the empty column, or click the New button on the toolbar. The VTO Event Detail window opens.
3	Fill in a name for the VTO event, a brief description, and specify the minimum and maximum duration of the event.

Note: Verify that your VTO event lengths are valid for the organization's start and end times.

- 4 Click **OK** to save the VTO event.

—End—

Defining OT Extensions

OT extensions represent additional time that can be added to extend the time agents work in case of understaffing. They can be added before or after shift assignments. They have many attributes that are similar to shift assignments including duration, activity, and linked shift activities. Additionally, they have attributes called Min Gap and Max Gap that represent the minimum and maximum allowable time between the shift assignment and the OT extension that is placed before or after the shift assignment.

In organization mode, you define OT extensions in the Work Rules module.

Step Action

- 1 Click the OT Extension tab.
- 2 Double-click the asterisk to the left of the empty column, or click the **New** button on the toolbar.
The **OT Extension Detail** window opens.
- 3 Fill in the following information:
 - The name of the OT extension.
 - Its length.
 - The underlying shift activity.

Note: Shift activities can be linked to OT extensions in exactly the same way that shift activities can be linked to shifts. See "[Linking Shifts and Shift Activities](#)" (page 102).

- The minimum allowable time between the shift assignment and the OT extension.
- The maximum allowable time between the shift assignment and the OT extension.
- A description of the extension.

Note: Verify that your OT Extension lengths and min/max gaps are valid for the organization's start and end times.

-
- 4 Click **OK** to save the OT extension.
-

—End—

Linking OT Extensions and VTO Events to Work Patterns

You create the link between a work pattern and the OT extension or VTO event in the organization's Work Rules module.

To create such a link:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Click the Work Patterns tab of the Work Rules module. |
| 2 | Select the work pattern you want to link to an OT extension or to a VTO event. |
| 3 | In the bottom portion of the window, click the VTO Events or OT Extensions tab, as appropriate. |
| 4 | Click an empty row or the asterisk at the right of the empty row, and then click on the ellipsis symbol that appears on the right side of the Name field. |

The **Select VTO event to Link** window or **Select OT Extensions** window opens, depending on which of them you are linking to the work pattern.

- | | |
|---|---|
| 5 | Select one or more VTO events or OT extensions you wish to link and click OK . |
|---|---|

The new shifts are displayed on the Work Rules grid on the lower pane of the work pattern grid.

Next to each of the OT extensions, you can specify if the OT extension can occur before shifts, after shifts, or before or after shifts. Next to each of the VTO events, you can specify if the VTO event can occur at the beginning of shifts, at the end of shifts, or at the beginning or end of shifts.

—End—

Linking Employees to Work Patterns

For any new work patterns you created, or existing ones you've modified, you need to verify that each employee is linked to the correct work pattern.

Linking employees to work patterns is done in the Employees module, and is described in "[Assigning Work Patterns to Employees](#)" (page 132).

Specifying Maximum OT and VTO Time

You specify the maximum amount of overtime and voluntary time off for each employee in the Employees module.

Step	Action
1	Double-click the employee's row. The employee's information is displayed in a pop-up window.
2	In the Scheduling section, specify the maximum amount of OT and VTO for the employee per day and per week.
3	Verify that the employee's preferences are shown in the Preferences section of this window. You can override the settings if necessary.
4	Click OK to save your changes. Note: We recommend that you always set maximum OT and VTO hours in Organization mode. Although you can also set these in Campaign mode, the changes are specific to that scheduling period only, whereas the Organization mode settings are effective across all campaigns in which the employee is included.

—End—

Scheduling with Overtime and Voluntary Time Off

You create a schedule with overtime or voluntary time off to accommodate your revised active forecast in Campaign mode in the Calendar module.

Step	Action
1	On the Toolbar, click the Schedule button.
2	In the Rescheduling options area, make sure the check box OT / VTO scheduling is checked. The OT/VTO Scheduling tab (near the midpoint of the window) is automatically displayed when OT/VTO scheduling is enabled.
3	Select which user preferences settings you want to use for this schedule: <ul style="list-style-type: none"> • No preferences—Preferences are ignored when scheduling. • Preferences by ranking—Preferences are used based on the ranking given in the Employees module.

- Preferences by seniority—Preferences are used based on the employee's start date.
- Preferences by seniority/ranking—Preferences are used based on a combination of seniority and ranking.

See "[Preference Scheduling](#)" (page 236) for additional information on the effects of using preference settings in scheduling.

4 Specify the OT/ VTO Scheduling parameters:

- Add OT before Shifts—OT extensions can be added before shift assignments.
- Add OT after Shifts— OT extensions can be added after shift assignments.
- Total Maximum OT Hours—The total duration of OT extension time that can be added to all the employees (of the filtered set of employees) being scheduled.
- Add VTO before Shifts—VTO events can be added at the beginning of shift assignments.
- Add VTO after Shifts—VTO events can be added at the end of shift assignments.
- Total Maximum VTO Hours—The total duration of OT extension time that can be added to all the employees (of the filtered set of employees) being scheduled.

5 Click **OK** to start generating the schedule, as described in "[Generating a Schedule](#)" (page 188).

—End—

Preference Scheduling

When preferences are used, overtime is assigned to employees based on their preferences and their rank (or seniority), using the following hierarchy:

1. Overtime is first assigned to employees who prefer overtime and have a high rank.
2. Overtime is then assigned to employees who prefer overtime and have a lower rank.
3. Overtime is subsequently assigned to employees who have indicated no preference towards overtime.
4. If overtime is still needed, it is assigned to employees who do not prefer overtime and have low rank.

5. Finally, if overtime is still needed, it is assigned to employees who do not prefer overtime and have higher rank.

This means that employees who do not prefer overtime might still be assigned it (although it is less likely for high-ranked employees).

Note: If you want to ensure that no overtime is assigned to agents who do not prefer it, either assign these agents 0 maximum hours in the Employees module or filter the employees to show only agents who prefer overtime before scheduling.

The same hierarchy is used for assigning voluntary time off.

Manually Adding OT Extensions or VTO Events

You also have the option of manually adding OT extensions or VTO events to a schedule in the Calendar module.

To add an OT extension manually to an employee schedule:

Step	Action
1	Right-click on the employee's shift assignment.
2	From the menu, select Edit Shift Assignment . A window showing the shift assignment's details opens.
3	In the Overtime Before and Overtime After sections, select the extension name and the activity, and specify the overtime length and gap.
4	Click OK to save your changes and add the OT extension to the employee's schedule.

—End—

To add a VTO event manually to an employee schedule:

Step	Action
1	Right-click the employee's shift assignment.
2	From the menu, select Make Voluntary Time Off . A graphical marker (by default a black bar) overlays the shift assignment to indicate the VTO event.

—End—

You can edit the VTO event by right-clicking the event, and then selecting the Edit Time Off... menu item. For more details on editing time off events, see ["Creating and Modifying Shift Assignments and Calendar Events"](#) (page 123).

Republishing the Schedule

Once you have a schedule that meets your revised requirements, you can publish the schedule, using the same procedures described in ["Publishing the Schedule"](#) (page 211).

Queue Hopping

Forecasting and Scheduling provides an optional license for its queue hopping feature. Queue hopping is defined as agents working (and being scheduled to work) on different queues at different times. Some centers and outsourcers use queue hopping for several purposes:

1. **Capacity Tracking:** Some centers and outsourcers need to track the exact capacity they have for a specific queue at a specific time without worrying about the capacity being split up among numerous skills.
2. **Context Switching Difficulties:** Agents might find it difficult to switch between certain complex tasks, so solid blocks of scheduled time are preferred.
3. **Technology Limitations:** It might not be feasible to route from any skill due to the ACD or dialer, or the use of multiple ACDs and dialers.
4. **Software or Workstation Limitations:** Often as a result of mergers and acquisitions, it might be necessary for the agents to use a different application and/or PC/workstation to work on some of the workload they are skilled to do.
5. **Emergency Response Team Approach:** Some centers will move lower skilled agents to take a different set of calls during emergency situations, such as an exceptionally high volume on one queue.

Queue hopping affects a number of areas of the Workforce Management user interface; some features are added that are specific to queue hopping while some other areas have been enhanced with features that not only support queue hopping but are more generally usable. These features include:

- Subordinate data sources (dependent on queue hopping license)
- Enhancements to Forecasting and Scheduling's Activities module (dependent on queue hopping license)
- Flexible shift activities in Work Rules (not dependent on queue hopping license)

- The ability to create and edit "break" shift activities within "work" shift activities (not dependent on queue hopping license)

Subordinate Data Sources

Forecasting and Scheduling accommodates queue hopping and queue hopping adherence for organizations that give agents different ACD login IDs for each of their queue hopping activities. A new concept that has been added is that of a uniquely named subordinate data source of another data source. When you assign a data source to an agent, you can specify which subordinate data source is being assigned. These subordinate data sources have their own activity mappings, which act as overrides to the primary activity mapping. Adapters and interfaces for Streaming Time Collection and Historical Time Collection use the ACD login ID to determine which subordinate data source to use and which mappings to determine the activity to be used for the time entry.

Subordinate data sources (sometimes referred to as child data sources) are created in the same way as other data sources, in the web application, in **System >Data Sources >Settings**. See the *Workforce Management Administration Guide* (NN44480-600) for information on creating data sources.

Activities Module—Queue Hopping

If you are licensed for queue hopping, two additional columns are visible in the grid of the Activities tab of the Activities module.

The Queue Hopping column contains a check box for each activity.

You can check this box only if the activity can be used for shifts and the activity is linked to one or more media. The media are used as a filter for the types of queues that can be linked to the activity. You must also assign one or more queues to a queue hopping activity.

Note: Creating and editing activities is done in Organization mode.

To assign a queue to a queue hopping activity:

Step	Action
1	Double-click in the far-left column the grey box to the left of the row containing the queue hopping activity. The Activity Detail window opens.
2	Check the Queue Hopping box if it is not already checked.
3	Click the ellipses to the right of the Queues field to open the Queue Selection window:

- 4 Click those queues you want to assign to the activity, and then click the arrow pointing right to list the queues under the **Selected Queues:** side of the window.
- 5 Click **OK**.

Note: If you do not have a multi-contact license (see ["Multi-Contact and Skill-Based Scheduling" \(page 213\)](#)), check the **Queue Hopping** check box to automatically assign the Phone media to the activity.

—End—

Flexible Activities

You can use flexible activities independently of queue hopping. Refer to ["Shift Activities Grid Fields" \(page 98\)](#) for information on creating flexible activities.

Enhancements to the Calendar Module

Several enhancements to the Calendar module have a particular benefit for queue hopping schedules:

- You can create and edit all characteristics of a shift activity assignment within a shift.

For example, you can right-click on a shift assignment and create a new shift activity assignment.

- You can insert break-related shift activities within work-related shift activities.

For example, you can assign a queue hopping shift activity of two hours to an employee, and create a break or a lunch break within that queue hopping activity.

See ["Creating and Modifying Shift Activities and Calendar Events" \(page 139\)](#) for additional information on these enhancements.

Workforce Planning

This chapter describes Forecasting and Scheduling's workforce planning features. Workforce planning lets you determine the number and type of agents needed to meet your service goals and skill requirements.

Workforce Planning—An Overview

One of the major challenges facing all types of contact centers is workforce planning—determining the staffing level a contact center requires to meet its service goals. Forecasting and Scheduling's goal seek scheduling process uses real schedules and forecasts to determine the number of agents required to meet the goals of any given scheduling period. This can be the total required to staff a center or a campaign from scratch, or the number of new agents a center needs to add to its current staffing.

Creating a Workforce Plan

Forecasting and Scheduling's goal-seek scheduling process creates a workforce plan in five steps.

To create a workforce plan:

Step	Action
1	Define staffing profiles for the types of agents. See " Creating Staffing Profiles " (page 244).
2	Define the percentage of each type of staffing profile to be scheduled for a given scheduling period—for example, 30% full-time profile, 70% part-time profile. See " Allocating the Staffing Profiles " (page 246).
3	Define the acceptable percentage your staffing profiles can deviate from the scheduling period's service goals.
4	Create a workforce plan by creating a schedule for the scheduling period. See " Scheduling Staffing Profiles " (page 248). The scheduler uses goal seeking to add "phantom agents" based on the profiles and create the optimal schedule.

-
- 5 Use the results to determine the FTEs, cost, and agent staffing requirements. See ["Calculating Full-Time Equivalents"](#) (page 249).
-

—End—

Creating Staffing Profiles

Staffing profiles describe the type of agents a contact center needs, their work patterns, skills, and assignment rules. Only one profile is necessary for each type of agent—Forecasting and Scheduling will automatically create the correct number of each type of agent according to your scheduling requirements.

Building Staffing Profiles

Staffing profiles are created in the Organization mode's Employees module. They flow up the organization hierarchy—in other words, they can be viewed and changed by organizations above the level at which they are created. They cannot be seen or used by organizations at the same level or below. See ["Understanding Organizational Hierarchies"](#) (page 78). They can, however, be assigned to a different organization. See the Organization field description in step 3 below.

To create a staffing profile:

Step	Action
1	Open the organization you want to create the profile for, and then enter the Employees module.
2	Click the Staffing Profile tab at the top of the employee grid. The Staffing Profile grid is displayed.
3	Fill in the information for each grid field: <ul style="list-style-type: none"> • Profile Name—A descriptive name for the profile. • Work Pattern—Select the work pattern (see "The Work Patterns Tab" (page 103)) you want to profile. When Forecasting and Scheduling creates a schedule using this profile, the shifts and times are selected using this work pattern. A list of work patterns is available from the drop-down menu. • Wage—Type an average wage for the profile. • Organization—The current organization is entered automatically. Select a different organization from the drop-down menu to assign the profile to that organization. • Proficiency—Type the required proficiency level for the profile. 1.0 is average proficiency.

Forecasting and Scheduling uses this number when scheduling agents. An agent with 1.0 has an average handle time, an agent with 2.0 takes twice as long, and an agent with 0.5 takes half as long to handle calls.

- Chat sessions—Type the number of simultaneous chat sessions for the profile.

- 4 Click **OK**.
- 5 Select the Assignment Rules (see ["Using Assignment Rules" \(page 94\)](#)) that apply to the profile. In the **OK** column, click a pattern with a red X. A green check mark is displayed showing that the rule has been assigned.

Note: While you cannot assign minimum or maximum hours to a profile, you can create an assignment rule that accomplishes the same thing.

- 6 Click the Skills tab and select the skills that apply to the profile. In the OK column, click a pattern with a red . A green is displayed showing that the skill has been assigned. Assign a proficiency level and priority to the skill. See ["Assigning Skills to Employees" \(page 134\)](#).

Note: You can add assignment rules and skills to groups of profiles by selecting all the profiles you want to apply the rule or skill to. A yellow question mark (?) shows that some, but not all, of the profiles are assigned the rule or skill.

—End—

Adding the Staffing Profiles to a Scheduling Period

The staffing profiles created in the Organization mode are added to a scheduling period the same way employees are. They are then allocated by percentage or number of agents. Profiles are available in a campaign only if the organization the profile is assigned to (or one above it in the hierarchy) is linked to the campaign.

To assign a staffing profile to a scheduling period:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Open the scheduling period you want to schedule. Make sure the organization with the profile you want to use is linked to the campaign. See "The Organizations Group" (page 158) . |
| 2 | Open the Employees module, and then click the Staffing Profile tab. A blank tab is displayed. |

- 3 On the Toolbar, Click the **New** button. The **Add Profiles** dialog box is displayed.
- 4 Profiles already included in the scheduling period appear in blue. Click the left column next to the profiles you want to add. Use the **Shift** and **Ctrl** keys to select multiple profiles. Place your cursor at the head of a column and drag it to move it to a different location. Click **Reset Columns** to restore them to their original order.
- 5 Click **OK**. The profiles are added to the scheduling period.

—End—

To delete a staffing profile from a scheduling period:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Highlight the profile, and then, on the Toolbar, click Delete . The profile is removed from the scheduling period only. The profile is not removed permanently. |
|---|--|

—End—

Allocating the Staffing Profiles

Once the staffing profiles have been added to your scheduling period, you can set a target ratio by percentage for each profile. You can also enter the minimum and maximum number of agents you want assigned to each profile, and specify separately the absolute minimum and maximum number of agents for the aggregate of all profiles in the scheduling period.

Setting the Target Agent Ratio

During the scheduling process, Forecasting and Scheduling will attempt to create a schedule using this ratio. Keep in mind that the ratio is a target.

- To give the scheduler the most freedom to determine the optimal ratio of employee types, leave all **At Least** fields set to 0% and all **At Most** fields set to 100%. This is the default setting.
- Other percentage allocations are used as targets and will be approached as closely as possible. Impossible ratios (for example, two or more **At Least** fields set to 100%) are ignored by the scheduler. Ratios that exceed the agent limits (see below) are also ignored.
- To set an exact allocation, fill in both the **At Least** and **At Most** fields. For example, if you want an allocation of exactly 60% full-time and 40% part-time agents, type **60** in both the **At Least** and **At Most** fields for

the full-time profile, and then type **40** in both the **At Least** and **At Most** fields for the part-time profile.

To set a target agent ratio:

Step	Action
1	For each profile, enter a percentage in the At Least and At Most fields.

—End—

Limiting the Number of Agents

You can set the absolute minimum and maximum number of agents that will be scheduled. These limits are absolute and will not be exceeded. These limits override any conflicts with target agent ratios (see above).

- To give the scheduler the greatest freedom to determine the optimal number of agents, leave all **At Least** fields set to 0 and all **At Most** fields set to 9999.
- To set an exact number of agents you want scheduled for a profile, type that number in both the **At Least** and **At Most** fields for the profile.

You can also set the total minimum and total maximum number of agents for the aggregate of all the profiles in the scheduling period.

For example, if you have a number of profiles that represent skills that are hard to staff, you can specify per profile the minimum number needed of agents with those skills and the maximum number of those agents you have on staff. You can then specify the total maximum number of agents for all profiles as equal to your seats for that site. The scheduler then selects the remaining number of agents needed from any of the profiles, without exceeding the maximum numbers specified for a specific profile, or the maximum number specified for all profiles (in this example, your maximum number of seats).

To set agent limits:

Step	Action
1	For each profile, type a number of agents in the At Least and At Most fields.
2	If desired, type a total minimum and/or a total maximum number of agents for the aggregate of all the profiles in the scheduling period.

—End—

Scheduling Staffing Profiles

After you have created the staffing profiles, added them to the scheduling period, and established service goals for them, you must schedule them to create your staffing plan. The process is identical to creating a schedule in any other scheduling period; the profiles are used by the scheduler to create and add “phantom agents” to the schedule.

Adding Staffing Profiles to the Schedule

Staffing profiles are added to the schedule in the Campaign mode Calendar module, in the **Schedule Setup** dialog box. You can determine whether they will be scheduled by themselves, with “real” employees, or not at all.

To add or remove staffing profiles:

Step	Action
1	Open the Campaign mode's Calendar module.
2	Open the Scheduler Setup dialog box by doing one of the following: <ul style="list-style-type: none"> On the Toolbar, click the Scheduler button. On the Calendar menu, select Schedule. <p>The Scheduler Setup dialog box is displayed. (See "Setting Up the Scheduler" (page 189) for additional information about this dialog box.)</p>
3	In the Agents to Schedule section, select one of the choices: <ul style="list-style-type: none"> Employees Only—Only employees are scheduled. Staffing profiles are ignored. This is the default option. Staffing Profiles Only—Only staffing profiles are scheduled. The scheduler uses goal seeking to add enough phantom agents to meet the skills required and the service levels you have set. <p>This option is not available if there are employees assigned to the scheduling period. To use this option, first delete all employees from the scheduling period (see <i>to remove an employee from the schedule</i> in "The Employees Module" (page 160).)</p> Employees and Staffing Profiles—Employees are scheduled, and then phantom agents are created and scheduled as necessary to meet the skills required and the service levels you have set. <p>If the current employee schedules are locked (see "Locking and Unlocking Multiple Shifts" (page 196)), their portion of the</p>

schedule is unchanged and phantom agents are added to the existing schedule.

If the current employee schedules are unlocked, they are scheduled first, and then phantom agents are added to the schedule.

- 4 Click **OK** to generate the schedule. When the schedule is complete, the phantom agents are listed in blue below the employees. They are named after their staffing profile—Full-Time 1, Full-Time 2, for example, with the pattern as the last name and the number as the first name.

—End—

To hide or display the phantom agents:

Step	Action
------	--------

- | | |
|---|--|
| 1 | From the View menu, select Hide Profile Schedules to hide or display the phantom agents and their schedules. |
|---|--|

The statistics for the current display are shown in the **Staffing differentials** and **Number scheduled** rows at the top of the schedule grid. Toggle the profiles on and off for a quick comparison of the schedule with and without the phantom agents.

—End—

To clear the phantom agents from the schedule:

Step	Action
------	--------

- | | |
|---|---|
| 1 | Right-click the calendar, and then select Remove Profile Schedules. All phantom agents are removed from the schedule. You must reschedule the period (see "Adding Staffing Profiles to the Schedule" (page 248)) to add them back. |
|---|---|

—End—

Calculating Full-Time Equivalent

Information about the staffing profile is available from the FTE Calculator (FTE stands for Full-Time Equivalent). The calculator also lets you determine the cost of the additional phantom agents you have scheduled.

Note: To see the statistics for your profiles, make sure the Staffing Profiles are not hidden (see above). If the Staffing Profiles are hidden, the FTE Calculator uses only the actual employees.

To view the profile statistics:

Step	Action
------	--------

1 From the **View** menu, select **FTE Calculator**. The calculator is displayed.

Complete the requested information, and then click **Recalculate** to set the values for one FTE.

Note: The **Estimates based on current schedule** section includes all agents displayed on your schedule.

2 Click **Staffing Profile Statistics**. The **Staffing Profile Statistics** window displays statistics for the profiles currently displayed on your schedule.

The following statistics are displayed:

- **Name**—The name of the profile and the last name of each scheduled phantom agent using the profile.
- **# on schedule**—The number of phantom agents using this profile that are scheduled. The minimum and maximum number of phantom agents can be set in the Profiles tab of the Campaign mode Work Rules module. See "[Limiting the Number of Agents](#)" (page 247).
- **% on schedule**—The percentage of phantom agents using this profile. Percentage goals are set in the Profiles tab of the Campaign mode Work Rules module. See "[Setting the Target Agent Ratio](#)" (page 246).
- **# FTE**—The number of full-time equivalents. FTEs are determined by the settings in the top portion of the FTE Calculator.
- **Cost**—The total cost of the FTEs. Cost is determined using the hourly wage set for the profile in the Profiles tab of the Organization mode Work Rules module. See "[Building Staffing Profiles](#)" (page 244).

—End—

OutBound Scheduling

In addition to the more traditional, in-bound calls handled by call centers, a growing number of call centers are involved in out-bound calling, making calls using a predictive dialer or manually dialing a list of customers or prospects, for such purposes as collections, pro-active customer service, and telemarketing. The optional OutBound-Media license for Forecasting and Scheduling enhances Forecasting and Scheduling to encompass the calling statistics associated with outbound calls. These statistics include:

Statistic	Description
Abandons	The total count of connects that occurred, but had to be dropped because no agent accepted the connect.
Backlog	The total count of numbers that are entered in the dialer and still need to be dialed or re-dialed because the right party has not yet been connected.
Connect AHT	The average talk time of all connects in this interval.
Connect Rate	The percentage of dials that connected to someone, equivalent to Connects/Dials.
Connects	The total count of outbound dials that were made in a given interval that connected to a person.
Dials	The total count of outbound dials that were made in a given interval. This count includes connects, right party connects, and dials that did not connect to a person.
FTEs	Full Time Equivalents. Where an agent might work on multiple queues during an interval, this represents the amount of time agents contributed to this particular queue.
Occupancy	The percentage of time that agents who were logged into this queue spent on the phone with connects in this interval.
Right Party Connect AHT	The average talk time of all right party connects in this interval.
Right Party Connect Rate	The percentage of dials that connected to the intended party, equivalent to Right Party Connects/Dials.

Statistic	Description
Right Party Connects	The total count of outbound dials that were made in a given interval that connected to the person that was intended to be reached. These numbers will not be redialed because the right party has been reached.
Staffing	The total count of agents logged into this queue in this interval.

Note: You associate outbound queues with outbound data sources using the web application's **App Admin** module's **Queues** section.

Outbound scheduling affects the following modules of Forecasting and Scheduling:

- Forecast
- Service Goals
- Agent Requirements
- Calendar
- Pulse

Forecast Module—Outbound

Selecting one of the outbound media causes an additional section to be displayed at the top of the **Forecast** window, **Forecasted Lists**.

Forecasts are created for incoming lists based on the actual lists from the historical weeks that you add. Dialer lists are defined per queue per scheduling period. When you add a week of history to the forecast, you also add all historical lists that intersected that week where the volume is multiplied by ($\frac{\text{historical week's weight}}{\text{sum of all weeks' weights}}$), You can manually edit the list forecast, and you can import and export lists.

- Each list forecast has four attributes:
 - List Start Date: When the dialer can begin dialing this list
 - List End Date: When the dialer must stop dialing this list
 - Length: The amount of numbers on this list that can be dialed.
 - Retries Allowed: The number of retries allowed for each number

The information shown under the **Forecasted Lists** section includes these attributes, as well as the queue associated with the list.

The lower part of the **Forecast** window shows one of two sets of graphs. The first set consists of a graph of:

- Connect Rate

- Connect AHT

To display the second set of graphs, use the **View Right Party Connect Forecast** menu item from the **Forecast** menu or the **View Right Party Connects** button. (Use these items to toggle between the two sets of graphs.) The second set consists of graphs of:

- Right Party Connect Rate
- Right Party Connect AHT

For outbound media, the **Right Party Connect Rate** and **Right Party Connect AHT** can have significant effects on the schedule. These statistics might not be available for all centers; however, when they are, they should be made part of the forecast. Note that these statistics can represent different things in different centers: in a collections center, they would represent the person from whom the center is trying to collect; in a sales center, they would represent a potential customer or a successful sale.

Note: Daily and combined totals for **Right Party Connect Rate** are averaged and daily and combined totals for **Right Party Connect AHT** are averaged weighted on the rates. This is inconsistent with **Pulse**, where rates are weighted on dials and AHT is weighted on connects, because these statistics are not yet available at this stage of the outbound scheduling process.

These four time series forecasts are needed for you to create an outbound schedule.

Service Goals—Outbound

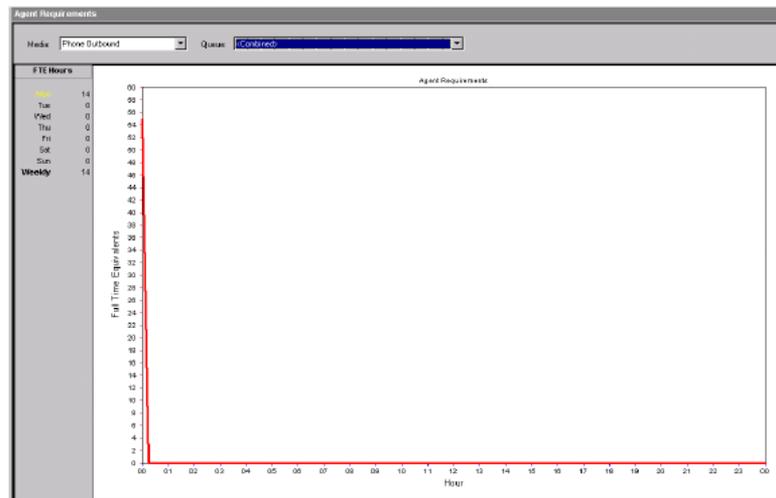
For an outbound queue, the Service Goals module allows you to enter the maximum dials per hour and the percentage of the lists that you want to either connect to, or right party connect to, before the list ends.

Note: Right Party goals should only be used if you have right party forecasts.

The maximum dials per hour can be set per queue. You can set the value of the maximum dials per hour to 0, which halts calls on that list, or you can set it to represent a dialing plan for the queue.

Agent Requirements—Outbound

Agent requirements in FTE hours are only shown as non-zero for the start date of the list (sometimes referred as the list arrival time). The hours shown for that date are the total workload for that list.



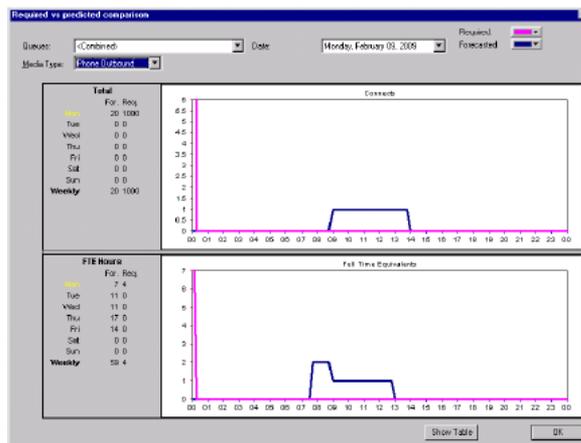
Calendar Module—Outbound

When you create an outbound schedule, the scheduling engine schedules as many agents as possible at the peak Right Party Connect times without exceeding the service goal. The results include both the agent schedules and the dialing plan that should be used along with them.

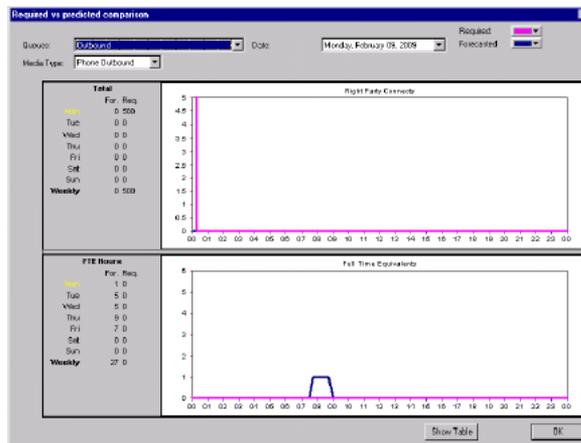
These schedules are reasonable across multiple outbound queues. Furthermore, the outbound service levels trade off with inbound service levels (instead of being strictly higher or strictly lower priority than inbound).

The only other area of the Calendar module affected by outbound media is the Comparison Tool.

If your service goal for the outbound media was expressed as a percentage of connects (see "[Service Goals—Outbound](#)" (page 253)), the Comparison Tool will show graphs for connects and full time equivalents for outbound media types and queues.



If, however, your Service Goal was expressed as a percentage of right party connects (also see "Service Goals—Outbound" (page 253)), the Comparison Tool shows graphs for right party connects and full time equivalents for outbound media types and queues.



Pulse Module—Outbound

The statistics associated with outbound media, such as Dials, Right Party Connects, and Right Party Connect AHT, can be viewed within the Pulse module, which is part of the web application's Tracking module. In addition, Dials can be exported for use as a dialing plan.

Refer to the *Workforce Management Managers Guide* (NN44480-113) for more information.

Operations

The Operations functionality is a separately-licensed feature that enhances the Workforce Management packages to provide support for Financial Services Operations. It integrates some of the functionality provided by Demos Solutions' StaffSmart[®] Enterprise (SSE) product:

- Volume Capture Tool (VCT)
- Deadline goal modeling
- Reports for Capacity Planning, VCT Events, and Productivity

Multiple areas in the Workforce Management product were enhanced or added to provide the Financial Services Operations support, specifically:

- In the web application's **My Home** module, a new section, **My Volumes**, was added, with two tabs: **Work** and **History**. These tabs are primarily used by agents.
- In the web application's **Tracking** module, a new section, **Volumes**, was added, with two tabs: **Work** and **History**. These tabs are primarily used by managers, supervisors, and administrators.
- In the web application's **App Admin** module, in the section, **Queues**, two new tabs were added: **Work Queue Configuration** and **Arrival Patterns**. These tabs are primarily used by managers, supervisors, and administrators.
- In the web application's **Reports** module, three new Operations reports were added: Capacity Planning, VC Events, and Productivity. These reports are primarily used by managers, supervisors, and administrators.
- Three new adapters were added to Integration Server:
 - Operations – Arrival Processing
 - Operations – Event File Import
 - Operations – Event File Import and Transform
- Several new privileges were added for Operations.

- Certain terminology within Forecasting and Scheduling changes if you are licensed for the Operations features. The following table lists the changes that occur with the Operations features.

Term	Operations-Equivalent
queue	work queue
contact volume (or CV)	volume (or V)
average handle time	activity handle time

The remainder of this chapter discusses the enhancements for Operations that are specific to Forecasting and Scheduling:

- The Service Goals module was enhanced to support deadline goal modeling for the Operations media type.
- Project scheduling functions, a separately-licensed feature, were added within Forecasting and Scheduling. These functions expand the solution's functionality to meet the needs of these non-customer-facing activities.

Deadline Goal Modeling

If you are licensed for the optional Operations features, and are using an Operations media type in Forecasting and Scheduling, you can also set deadline goals as an alternation to Service Goals.

A deadline goal is used to represent an objective of finishing work arriving in certain interval by a set time of day. For instance, all work arriving between 6 a.m. and 3:30 p.m., today, must be completed by 5:15 p.m., today; work arriving from 3:30 p.m., today, through 6 a.m., tomorrow, must be completed by 10 a.m., tomorrow.

You can vary not only the percentage of work handled within the service goal, but also vary the service goal time threshold by time of day.

Deadline goals function similarly to ASA in terms of implications on the Agent Requirements module and the scheduling engine.

1. Agent requirements are not impacted by service goals, including deadline goals.
2. The scheduling engine has to predict agent requirements based on deadline goals.
3. The scheduling engine has to schedule agents to meet deadline goals.

To set deadline goals:

Step	Action
------	--------

- | | |
|---|-------------------------------|
| 1 | Click Deadline goals . |
|---|-------------------------------|

- 2 Specify the percentage of arriving work to be completed in the % of volume field. (Only values from 1 to 100 are valid.)
- 3 Specify the time within which the above specified percentage of work is to be completed, in the **Completed within time in minutes** field.

Note: If you have changed the time unit for the Operations media type, the above field label changes to reflect the current time unit.

For example, if you were to set the deadline goals for a 24-hour shift so that all work arriving at any hourly bucket gets done by the end of day, you would set up a deadline goal series as follows:

- The first hour would have % of volume = 100 and Completed within time in minutes = 24 hours or 1440 minutes
- The second hour would have % of volume = 100 and Completed within time in minutes = 23 hours or 1380 minutes, and so on.
- The 23rd hour would have % of volume = 100 and Completed within time in minutes = one hour or 60 minutes.

—End—

You can fine tune the settings, if desired:

Step	Action
------	--------

- | | |
|---|---|
| 1 | On the View menu or toolbar, click Table . A table of values displays to the right of the graph. You can fine-tune your deadline goals or deadline times by typing new values. (You can also click on the graph and drag the line to change the goals or time.) |
|---|---|

The graph is automatically adjusted and the summary is updated to reflect the new figures.

—End—

Project Scheduling

In the Operations industry, employees process volume-driven work as well as processing work, such as filing, inventories, etc., that is not volume-driven. Project scheduling, a separately-licensed feature within Forecasting and Scheduling, expands the solution's functionality to meet the needs of these non-customer-facing activities.

Basically, Project Scheduling involves a given requested quantity of work with:

- Work Rules, such as:
 - Window of time work can be done each day of the week
 - Length of time for a segment of work
 - Maximum simultaneous employees assigned
 - Maximum count for day and week per employee
- A forecast, defined as:
 - Work Activity
 - Start/End Date
 - Total Duration Requirements

If your license includes project scheduling, the following areas of the Workforce Management solution have been affected:

- A new Project media type has been added. (See ["Adding To or Modifying Forecasting and Scheduling Settings"](#) (page 68) for information on media types.)
- Project data is represented in Project queues. (Queues are created in the web application, as described in ["Work Queues"](#) (page 388).)
- You will need to create skills that can be assigned to the projects. This will result in defining which employees can be assigned time on the projects. Skills are created as described in ["Multi-Contact and Skill-Based Scheduling"](#) (page 213).
- A new **Project Rules** tab has been added to the **Work Rules** module, similar to **VTO Event** and **OT Extension** tabs. You define the project's rules using this tab.
- Selecting a Projects queue in Campaign mode's Forecast module allows for history selection and setting of forecasting data.
- The Scheduling engine uses the work rules and forecasts to add jobs to the employees in the scheduling period. The Required vs. Predicted comparison for project queues compares the amount of work desired versus the amount scheduled.
- The **Operations** module always includes the project forecast data when cloning scheduling periods forward to create new scheduling periods.

Note: Project queues are not available in the Service Goals and Agent Requirements modules.

Project Workflow

In general, to use project scheduling, you would follow this workflow:

Step	Action
1	<p>Create a project queue. That is, create a queue and assign it a Media type of Project.</p> <p>Note: Project queues require another type of queue, such as operations, to exist in the campaign. You cannot have project type queues alone in the campaign, because project activities are laid on top of shift assignments.</p>
2	Create a project activity (an activity that has a media type of Project) and select one queue from the selection of project queues. See "Creating Project Activities" (page 262) .
3	Create a project work rule. (These rules are created from the Project Rules tab and are associated with a project activity and a work unit length.) See "Creating Project Work Rules" (page 262) .
4	Create a project skill (a skill with a media type of Project) and assign the project skill to one or more employees. See "Creating and Assigning Project Skills" (page 264) .
5	Create a Campaign Scheduling Period and select queues including one or more project queues. See "Creating a Campaign Schedule Period with Project Queues" (page 264) .
6	Create a project forecast (a project queue, populated by calculations from historical Volume and AHT week data or by manually entering the start date/ stop date and a duration for the project). The project queue is used to designate which project rules apply. See "Creating a Project Forecast" (page 264) .
7	Create a schedule. The scheduling algorithm assigns project activities based on project rule unit length to employees with this project skill to meet the project forecast. See "Creating a Schedule" (page 265) .

—End—

Creating a Project Queue

As mentioned previously, project queues are created in the web application, as described in ["Work Queues" \(page 388\)](#). Make sure to select Project as the media for the queue.

Creating Project Activities

You can define project activities in both Organization and Campaign mode.

When creating an activity, you assign one or more media to the activity. For project activities, you select the **Project** media option. If the **Project** media option is selected, you must specify the specific project queue. No more than one project queue can be assigned to an individual activity.

A **Project Queue** drop-down selector has been added to both the grid and **Activity Detail** dialog box. The drop-down selector on the grid is grayed out until you select a Project media. The drop-down selector on the **Activity Detail** dialog box is not displayed until you select a Project media. Queues are displayed in the selectors in alphabetical order; the first queue displayed is the default project queue.

When you select a Project media for an activity, it must be the sole media selected for that activity. If you select a Project media for an activity that already has one or more other media selected, you are prompted to have all other media be automatically deselected, or to cancel the Project media selection. If you select a media while a Project media is selected, you are prompted to have the Project media automatically deselected, or to cancel the new media's selection.

Selecting Project for the media deselects and makes read-only the following options:

- Queue Hopping
- Unavailability
- Time off
- Used in Requests
- Time Off with Allotment

Selecting Project for the media selects and makes read-only the following option:

- Use in Calendar Event

Scorecards usage features are validated as off when saved.

All Activity Manager features are enabled.

Creating Project Work Rules

Project work rules can be created in either Organization or Campaign mode.

The **Projects Rules** tab in the Work Rules module provides a grid format of all the data entry items for projects. Double-clicking an item or the asterisk on the blank row, or using the **New** button or the **New** item on the **Edit** menu brings up the **Project Rules details** dialog box.

Note: The **New** menu item on the **Edit** menu and the blank line on the grid are only available if there is an activity defined that has the Project media selected.

The dialog box contains the same information as the grid, but in a window layout.

- Name—Type a descriptive name for the rule.
- Length—Type the length of time for a segment of work in hours and minutes, in 15-minute increments.
- Activity—Use the drop-down menu to select a Project media activity.
- Daily Max Count—The maximum number of project work segments per employee in a day. This value is 1 or more, or Unlimited (the default). This field is similar to the Maximum Time in Activity option on the Activities grid (see **Activity Manager Usage** in "[Creating or Editing Activities](#)" (page 85))
- Weekly Max Count—The maximum number of project work segments per employee in a week. This value is 1 or more, or Unlimited (the default).
- Max simultaneous employees—The maximum number of employees who can be assigned to this project. This value is 1 or more, or Unlimited (the default).
- Description—Type a description of the rule in this field (optional).
- Organization—The organization that the project belongs to (read-only field).
- Start times—The project start times in text format of each day of the work week.

Click the **Rules Detail** button to bring up the start time grid to select the start time for that particular day. The grid has rows for each hour and columns for 15-minute increments. Drag your mouse across the range of

times the shift can start, or click individual time blocks. A red “X” appears in any time block that falls outside the shift’s acceptable range, which is determined by the organization’s hours and the length of the shift. Drag across or click selected times to clear them. If no start times are allocated, the grid text is red for that row. The times displayed are midnight to midnight, regardless of the day boundary. The times are based on the Campaign time zone, regardless of the time zone of the employees, and are saved to the database in GMT format.

Creating and Assigning Project Skills

The process of creating project skills and assigning them to employees is virtually identical to creating skills and assigning them to employees working on non-project activities. Refer to ["Setting Up Skill Types" \(page 214\)](#) and ["Assigning Skills to Employees" \(page 215\)](#)

For project skills, make sure to select the Project media type for the skill.

Creating a Campaign Schedule Period with Project Queues

The process of creating a campaign schedule period is virtually identical to that described in ["Adding a Scheduling Period to a Campaign" \(page 155\)](#).

Note that when you create a new scheduling period and copy data from a previous week(s), the project forecasts are copied forward. Scheduled project tasks (which are calendar events) are not copied forward; only shift assignments are copied.

Creating a Project Forecast

Forecasts for each project’s scheduling period are based on historical data imported from a data source for the queues you designated in the Operations module (see ["The Operations Module" \(page 157\)](#)), or on historical data that you enter from other sources.

When you select Project from the **Media** drop-down menu, the Queue dropdown provides a list of all projects available for this scheduling period.

The Forecast window view is different for a project compared to the standard summary grid/graph model. Instead, you see a grid in the lower half of the window where you can enter the projects for an individual week.

Clicking on a cell in the **Queue** column, and then clicking the ellipsis at the right side of the cell opens **Forecasted Project Detail** window, which allows you to specify the following.

- **Start Date/time and End Date/time**—Dates are restricted to be within the limits of the scheduling period. The default dates for a new project are the start and end date of the current view, based on the zoom level. A calendar dropdown or list of dates. The date selection is not limited to being within the scheduling period or viewing period, but it must

intersect. One Queue can not have multiple projects with intersecting start end dates.

- Queue—The name of the queue for which you are forecasting.
- Total duration (hours)—The total duration of this project (displayed in decimal to the second place (for example, 20.25 means 20 hours and 15 minutes)

Zooming in or out only affects which projects are displayed. If one or more dates from the project intersect the viewing period, the project is displayed.

Creating a project forecast is not, however, limited to the viewing period, only the scheduling period. If the new project does not intersect the viewing period, you are notified that you will not be able to see this project based on the current viewing period, and told to zoom out to view this project.

Adding Historical Weeks Projects can be based on historical weeks provided those weeks have actual volumes and handle time populated through groups or VCT chaining. (VCT chaining is discussed in the section on Work Queue Configuration in the *Workforce Management Administration Guide* (NN44480-600).)

When you add a week, you select if the volume should be imported into daily projects or weekly projects.

Historical weeks can only be added when no manually created projects exist, so you could not add historical weeks if you had a project on day 1-2. Instead, if you have no projects defined, and you add a historical week you get either:

- One project for the week, where the length is equal to the total volume multiplied by the standard time for the historical week.
- One project for every day, where the length is equal to the total volume multiplied by the standard time for the historical days.

Note: Project queues do not support options for entering backlog data, using strategic forecasting weights, or reforecasting.

If there is no project data, or you want to modify the results of history weeks manually, you can edit the data in the column **Total Length (hours)**. Once you have modified a value, the section for **Historical weeks to use when forecasting** is grayed out. You can no longer select additional weeks of historical data to use until you click either the **Clear** button or the **Restore** button.

Creating a Schedule

The process of creating a schedule including projects is essentially identical to that described in "[Generating a Schedule](#)" (page 188).

The scheduling engine places Calendar Event Assignments on the calendar to fit the project time, similar to class scheduling (see "[Scheduling Classes](#)" (page 202)) higher priority than service levels. No additional events past the number needed to meet the forecast are scheduled. (In other words, there is no over staffing on projects.)

The scheduling engine looks at the activity queue mapping to decide which activities to add to the Calendar to staff the forecasted projects.

The scheduling engine schedules projects based on the following rules:

1. It must occur during the window specified in the Project work rules.
2. The employee's maximum projects per day and week are also set in the Project work rules.
3. It must occur during a work portion of the employee's shifts.

Note: Project queues are not available from the drop-down queue selector for the Required vs. Predicted Graph window.

FTE Calculator The FTE Calculator has been enhanced for use with projects.

A new button has been added: **Project Statistics**.

Clicking the **Project Statistics** button brings up a window with a grid.

The grid contains the following data columns:

- Queue Name
- # scheduled: The number of employees with one or more project assignments.
- Assignment Re: The amount of assignments requested.
- Assignment Sc: The amount of assignments scheduled.
- Cost: This is prorated for the project overlap against the scheduling period window.

In addition, an exclamation point (!) flag, similar to that used for conflicts, is displayed for Over/Under situations.

Workforce Management Basics

This chapter provides a short introduction to the Workforce Management portion of the Workforce Optimization Solution. It includes the following sections:

- ["Understanding Roles and Access Rights" \(page 267\)](#)
Controlling users' access to all functions in Workforce Management through the use of assigned roles.
- ["Starting the Workforce Optimization Solution" \(page 269\)](#)
Opening and logging into the Workforce Optimization Solution.
- ["Getting Around in Workforce Management" \(page 271\)](#)
Introducing the Workforce Optimization Solution's setup and workflow, navigating in the Workforce Optimization Solution, using its pages, and entering data.
- ["Setting Preferences" \(page 279\)](#)
Setting your local time zone, opening page, and other personal preferences.
- ["Getting Help" \(page 37\)](#)
Using Impact 360's Help system and other documentation.
- ["Logging Off the System" \(page 281\)](#)
Exiting Workforce Management.
- ["What If Mode" \(page 281\)](#)
Working with hypothetical schedule information without altering the contents of your production database.

Understanding Roles and Access Rights

Access to all functions is controlled through the use of roles. See Roles Setup in the *Workforce Management Administration Guide* (NN44480_600). A role defines a user's access rights; each user must be assigned a role in

order to log into Nortel Workforce Management and Workforce Management will display or enable only those functions to which a user's role provides access. In Scorecards, your participation in KPIs is based on roles.

Each user's role is also assigned a scope. The scope can be either the organization level to which the role applies, campaign to which the role applies, or group to which the role applies. For example, a manager may have access to the records of people in his own organization but not those in other organizations, or a scheduler can have rights to schedule Campaign A, but not Campaign B. Roles limited to generic (non-organizational and non-campaign) functions do not have scopes.

ATTENTION

The roles and associated access to the various functions, modules, sections, and tabs within Impact 360 are described in the documentation set as they would be for a new installation. If your systems has been upgraded from a previous release, your previous settings are maintained, making it possible that users might not have access to certain features. If you want to grant access to these features, you will need to manually modify the role's access rights, as described in Roles Setup in the *Workforce Management Administration Guide* (NN44480-600). Refer to the *Workforce Management Roles and Privileges Guide* to determine what the various privileges control, as well as their default role assignments.

Workforce Management comes preconfigured with nine different roles:

- **Adhoc Query Analyst**—Adhoc Query Analysts by default have access only to the Ad Hoc Reports section of the Reports module. This section lets them create, edit, and delete ad hoc reports, which are created using the Cognos Query Studio.
- **Administrator**—Administrators can generally set up and administer the Workforce Optimization Suite's functions and organizations, such as Organization Setup, Security Setup, System Setup, Scorecards Setup, and Request Management Setup. Administrators are responsible for operational and business configuration, not for the functions typically performed by Information Technology (IT) organizations.
- **Agent**—Agents can generally view schedules, request timeoff, request shift swaps, participate in shift bidding, run Learning lessons, enter their time and activities, and view their scorecards.
- **Branch Administrator**—Branch administrators can generally set up and administer the Workforce Optimization Solution's functions and organizations, in the context of retail financial services, which use a subset of the Workforce Management features.
- **Branch Employee**—Branch employees can generally view schedules, and enter their time and activities, and view their scorecards. They are

similar to agents, but in the context of retail financial services, which use a subset of the Workforce Management features.

- **Branch Manager**—Branch managers combine some of the functions of managers and schedulers (see below), again in the context of retail financial services, which use a subset of the Workforce Management features.
- **Manager**—Managers can generally manage people, view group schedules, approve agents' requests, view adherence status, authorize adherence exceptions, create and view reports, and view and configure employees scorecards.
- **Scheduler**—In addition to their use of Forecasting and Scheduling, schedulers can use Workforce Management's web application for a variety of tasks, including publishing schedules, viewing adherence data, managing requests, and viewing their own scorecards and organization scorecards.
- **Supervisor**—Supervisors have a more limited set of permissions than managers. They can view scorecards for themselves and their employees, and view highlights. They also can use the Reports module.

Starting the Workforce Optimization Solution

There are two ways to start the web application in Workforce Management, depending on how your system is configured:

- **Single sign-on**
When your system has been configured for single sign-on, you do not log into Workforce Management, or indeed, any of the Impact 360 applications, such as eLearning, or Quality Monitoring version 7.8 SP1. All authentication is done when you log into Windows on your computer.
- **Application-dependent sign-on**
You must log into each Impact 360 application independently.

To start Workforce Management:

Step	Action
1	<p>Open your web browser and type the URL of the server location where Workforce Management is installed.</p> <p>If your system is configured for single sign-on, Workforce Management displays the default page for your role, or the page that you have selected in Preferences. You can start working with Workforce Management.</p> <p>If your system is not configured for single sign-on, the Login page opens, a portion of which is shown below:</p>



- 2 Type your Username and Password (both are case-sensitive), then click Login. Workforce Management opens to the default page for your role or the one you have selected in Preferences.

Note: The following are special characters, and cannot be used within Impact 360:

- ([) left square bracket
- (]) right square bracket
- (<) less-than sign
- (>) greater-than sign
- (\) reverse solidus (backslash)
- (") quotation mark
- (&) ampersand
- (!) exclamation point
- (?) question mark

Individual pages within Impact 360 might restrict the use of some other characters.

—End—

If users have forgotten their password, and provided your company's networking and security environment permits, they can click **Reset Password**. The system will prompt them for certain data to identify them (the same data specified in the section Self-Identification of the *Workforce Management Administration Guide* (NN44480-600)), and if an e-mail address has been registered for them, it will send a temporary password to their e-mail address. They can use this temporary password to log in; the system will then require them to change the temporary password and log in using the new password they have selected.

Note: If an e-mail address is not registered for them, they will be instructed to contact their system administrator either to reset their password or register an e-mail address for them, so they can reset it themselves.

Seat-Based Licensing

Licensing is based either on the total number of employees, or the number of concurrently scheduled employees, also referred to as seats.

If your license is based on seats, and your current schedules, published or unpublished, exceed the number of seats for which you are licensed, all users will see one or both of the following error messages displayed on the login page:

<x> seats are scheduled from <y> to <z> Your license does not allow more than <n> seats. Please contact your system administrator for assistance.

<x> seats are published from <y> to <z> Your license does not allow more than <n> seats. Please contact your system administrator for assistance.

These error messages will continue to appear until the number of seats problem has been rectified. If this situation occurs for you and your users, please contact your Nortel sales representative as quickly as possible to resolve this situation.

Getting Around in Workforce Management

Workforce Management uses a web-browser-based interface with a navigation bar and multiple levels of tabs.



The topmost level of navigation consists of modules, such as the following:



The next level of navigation is referred to as a section, such as the following:



The next level of navigation is referred to as a tab, such as the following:



Note: In some modules, there is no need for a section level. Instead, the next navigation level consists of tabs.

In addition, if a role has access to only one module (as is the case for the default agent role), that module is hidden, and the sections below it are displayed as modules. For example, an agent would not see the My Home module, but its sections, such as My Schedule, would be displayed as modules. This behavior allows agents to see more information on the screen without having to scroll.

Finally, a different type of lower-level navigation, consisting of sidebar elements, is only used for administrators in the System module's Administration section.

General controls are located above the navigation bar:

- Click **Refresh** to update the data on your page.
- Click **Print** to print a copy of the current page.
- Click **Send Message** to send a pop-up alert to selected target users. See *Sending Messages*.
- Click **Enter What If** to enter What If mode. See *What If Mode*.
- Click **Preferences** to open the Preferences window. See *Setting Preferences*.
- Click **Help** to open the Workforce Optimization Solution Help system and display help for the current page. See *Getting Help*.
- Click **Logout** to log out of the Workforce Optimization Solution. See *Logging Out*.

Navigate by clicking the appropriate button for the module, section, tab, or sidebar element you want to use.

Note that the button configuration changes depending on the user's role.

Note 1: If you resize your browser window, the rightmost buttons on the button bar may be hidden. Resize your browser window, scroll horizontally, or change your screen resolution to see them.

Note 2: If you find yourself frequently changing among two or three tabs, you can open multiple sessions in separate browser windows to make your access to these tabs quicker and easier.

Expanding Pages

Some pages in Workforce Management use two panes with a selection list on the left and an action page on the right.

Either side of these pages can be expanded by clicking one of the arrow buttons between the panes.

- Click the button facing right to expand the left pane into a summary list.

- Click the button facing left to expand the right pane into a full page display.
- To return to the original display, click the single-arrow button to the side of the display. To switch the pages displayed, click the double-arrow.

The pane on the right may consist of one or more groupings, referred to as containers, as shown below:

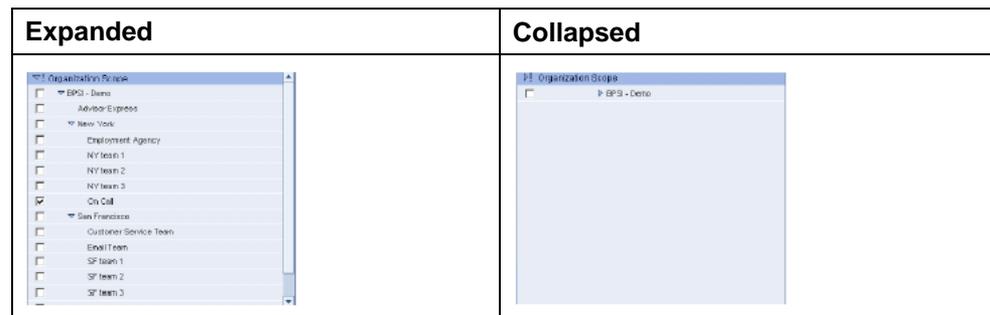
Each container has its own title and can be collapsed or expanded. Containers may contain multiple collapsed levels.

Expanding and Collapsing Lists

Some lists have controls that allow you to expand the list completely, or to collapse it.

- Click the button facing right to expand the list.
- Click the button facing left to collapse the list.

For example, the following graphic shows the Organization Scope list in both its expanded and collapsed form:



Selecting Items in a Drop-Down Menu

You set the value of some items in the web interface using drop-down menus. There are two types of drop-down menus:

- single-selection
You can only select one item from the drop-down menu.
- multi-selection
You can select one or more items, using the **Ctrl** key to select non-adjacent items or the **Shift** key to select a contiguous range of items.

The type of drop-down menu is indicated with the following buttons:

Single-selection	
Multi-selection	

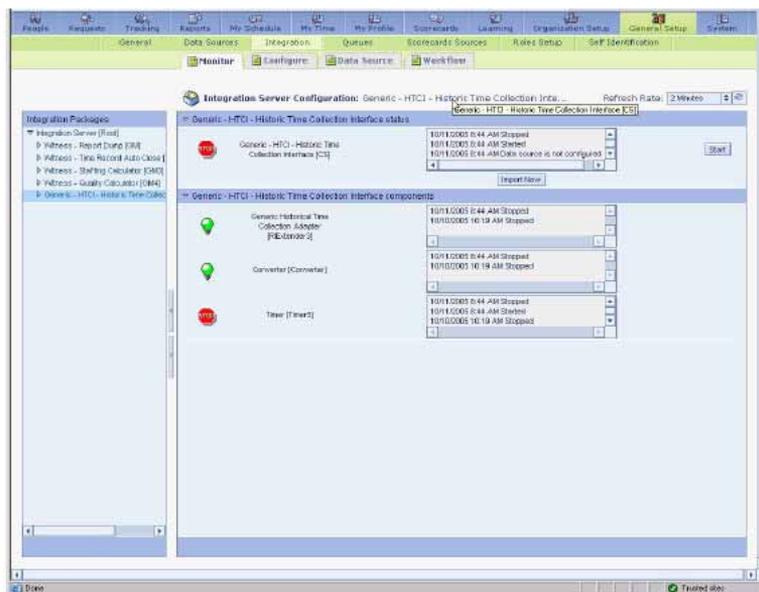
Note 1: Once you've finished multi-selecting, click **Multi-selection** again.

Note 2: If the items you have selected cannot be fully displayed in the selection box, position your cursor over the selection for a few seconds (known as hovering). The selected items will be displayed as a tool-tip. This same technique can be used for both single and multi-selections.

Expanding Truncated Text

Some windows automatically truncate text in the Content Title area of the window. To indicate that the text has been truncated, the system adds an ellipsis (...) to the end of the displayed text.

To expand the text so you can see it in its entirety, position your cursor over the text for a few seconds (referred to as hovering). The full text then appears in a pop-up box, as shown in the following figure:



Sorting Data

Many pages contain columns of information that can be sorted.

To sort information:**Step Action**

- 1 Click the name of the column to be sorted. The column head turns darker and a small arrow indicates the sort order of the column.
- 2 To reverse the sort order, click the name of the column again.

—End—

Printing a Page**To print a page:****Step Action**

- 1 Click **Print** on the navigation bar. The **Print** dialog box opens.
- 2 On the **Options** tab, select **Print frames as laid out on screen**.
- 3 Click **Print**.

—End—

Sending Pop-Up Messages

You can use the **Send Message** button to send pop-up alerts to other employees.

When you click the **Send Message** button, the **Send Pop-up Message** pop-up window opens.

To create a new alert message, you need to provide the pop-up alert target information (to whom) and the message itself.

Providing Target Information

You can send pop-up alerts to employees in a number of ways:

1. You can select employees by name, by checking the **Employees** check box. To select specific employees, click the employee icon. The employee selector screen appears. Select the employees as desired and click **Save**.
2. You can send pop-up alerts to all employees selected by an existing filter or one that you create or edit at the time of sending the alert by checking the **Employee Filter** check box.

3. You can send pop-up alerts to employees using their Workforce Management login names, separated one from the other by semi-colons, by checking the **Additional users by login names (semicolon separated)** check box.
4. You can send pop-up alerts to employees by role, checking the **Additional users by role** check box, and selecting the desired role from the drop-down list.
5. You can send pop-up alerts to employees using their Windows login names, separated one from the other by semi-colons, by checking the **Additional delivery targets (semicolon separated)** check box, provided you have specified these in the **Pop-up Address** field on the **Profiles** tab of the **People** module.

You can select targets using one or more of the above methods, if desired.

Providing Message Information

To provide the message information:

Step	Action
1	Insert the subject line and the message text in the available text boxes.
2	Select the delivery template from the drop-down list.

—End—

Message Templates

Three different templates are used for pop-up messages:

- **Normal**
Normal pop-up messages display a banner at the bottom right of the screen. This banner resembles a sheet of ruled note paper, and shows the subject of the message against a yellow background, and the sender and the date and time the message was sent against a white background. Clicking the banner opens a separate window showing the entire message.
- **High**
Messages sent using the High template are meant to be read immediately. For that reason, no banner is displayed, but the message is displayed in a separate window.
- **Confidential**

Confidential pop-up messages display a banner at the bottom right of the screen. This banner resembles a sheet of ruled note paper, and shows the text **Confidential message received...** against a yellow background. To maintain the confidentiality of the message, the sender and the date and time the message was sent are not displayed. Instead, the text *****CONFIDENTIAL***** is displayed. Clicking the banner opens a separate window with a button that enables the reader to show the entire message (an additional level of security).

Sending the Message

To send the pop-up alert message:

Step	Action
1	Click Send Message to send the alert message.
2	Click Done if you want to close the form without sending the message. The form closes and you return to the web application.

—End—

Receiving Pop-Up Alert Messages

The pop-up messages you receive can be sent to you in two different ways:

- As a result of alerts that your administrator has configured. Alerts can be sent for such conditions as one of your KPIs being out of range, or your being out of adherence.
- When an administrator, manager, supervisor, or scheduler uses the Send Message button at the top of the web application window.

Message Templates

As described previously, three different templates are used for pop-up messages:

- Normal

Normal pop-up messages display a banner at the bottom right of the screen. This banner resembles a sheet of ruled note paper, and shows the subject of the message against a yellow background, and the sender and the date and time the message was sent against a white background. Clicking the banner opens a separate window showing the entire message. Click the green check mark to close the message or click the red X to delete the message. If you take no action, the banner

fades away, but the message is not lost; pop-up messages are kept for the duration of your session within Workforce Management.

- High

Messages sent using the High template are meant to be read immediately. For that reason, no banner is displayed, but the message is displayed in a separate window.

- Confidential

Confidential pop-up messages display a banner at the bottom right of the screen. This banner resembles a sheet of ruled note paper, and shows the text **Confidential message received...** against a yellow background. To maintain the confidentiality of the message, the sender and the date and time the message was sent are not displayed. Instead, the text *****CONFIDENTIAL***** is displayed. Clicking the banner opens a separate window with a button that enables the reader to show the entire message (an additional level of security). Click the green check mark to close the message or click the red X to delete the message. If you take no action, the banner fades away, but the message is not lost; pop-up messages are kept for the duration of your session within Workforce Management.

Reading Messages

As mentioned previously, you can click the message banner (for Normal and Confidential messages) to open the message in a separate window.

If the banner is no longer visible, you can click the **Banner** icon on the Windows taskbar.

The window that opens displays an **Alerts** tab, consisting of the following message elements:

- Navigation icons
- Header
- Controls
- Body

Navigation Icons

Icons are displayed for each message. Icons for the first and last message are always displayed. When more than ten messages exist for the current session, an icon resembling multiple pages is shown, allowing you to move from one group of ten to the next.



Clicking on the icon labeled 11-21 above would change the navigation display to the following:



When you select a particular message icon, the color changes to red for High template messages, and yellow for Normal and Confidential template messages.

Header

The message header is displayed just below the navigation icons. It resembles the pop-up banner described previously, and varies according to the message template:

- Normal
- High
- Confidential

Controls

Message controls are displayed to the right of the message header. All messages, regardless of the template used, have a **Delete** button. Click the **Delete** button to delete a message.

In addition, **Confidential** messages have the **Show** button. Click the **Show** button to display the sender and message body of a confidential message. (Until you click this button, the sender is displayed as the string *********, and the message body as the string *****Confidential*****.)

Body

The message body is found below the message header area. Messages are shown in plain text for both Normal and High template messages.

Note: HTML tags can be used in the message text.

Confidential messages are not shown in plain text until you click the **Show** button described previously. Instead, the string ********* is shown in place of the sender (in the window header), *****CONFIDENTIAL***** in place of the text, and the string **Confidential message received...** is shown in place of the subject.

Setting Preferences

You can set your viewing preferences by clicking **Preferences** on the navigation bar. These settings remain in effect until you change them.

Note: These settings affect only your display. Some of the preference settings shown might not be applicable to you, depending on your license.

Preferences allow you to choose the following display options:

General

- **Default Language**—available languages are determined by your license and made available by your administrator through the Licensed Languages container of the System module's Administration section's General sidebar element. If only one language is available, this option is not displayed.
- **Default Regional Format**—sets the default format for:
 - Date (short and long formats, order, separator)
 - Time (12 or 24 hour and relevant symbols, separator, leading zero)
 - Currency (symbol, number settings)
 - Number settings (000 separator, decimal point character)
 - First day of week (in calendars)

The localized setting will be used anywhere dates, times, currency figures and numbers are displayed.

- **Default Time Zone**—activity times and schedules are displayed to you in this time zone.
- **Default Screen at Login**—the screen that first appears each time you log in.

User Interface

- **Show Navigation Images**—toggles the display of the images shown above the module names in the navigation bar. Suppressing the display of the images allows more information to be displayed on your monitor, somewhat reducing the need to scroll.
- **Show Organization Dropdown in Hierarchical Order**—determines how organizations are displayed in drop-down menus. If this parameter is checked, organizations are displayed in hierarchical order, that is, indentation is used to show peer, parent, and child relationships. All organizations are shown, even those not in a user's scope.

If this parameter is not checked, organizations are listed alphabetically. Only organizations in a user's scope are shown.

- **Repeat Header Every N Rows**—the frequency a table or report header will be displayed as you scroll through a list. Type a number in the text

box. A blank box sets the number to the default, 30. Enter a zero (0) if you don't want the header to repeat.

- Default Rows in a page—for pages that support pagination, the number of rows to display by default for tabular data.
- Adherence Auto-Refresh (Today Only)—How often to auto-refresh adherence data. (Adherence is a separately licensed feature, and may not be relevant for your organization.)
- Adherence Timeline Collapsed View—Which of the three time lines shown in expanded adherence data should be displayed when the data is shown in collapsed format. The choices are Scheduled, Actual, and Exception. (Adherence is a separately licensed feature, and may not be relevant for your organization.)
- Pulse Auto-Refresh (Today in Date Range Only)—How often to auto-refresh Pulse data.
- Getting Help

Help for each Workforce Optimization Solution web page is available by clicking the **Help** link on the navigation bar.

On the **Help** page, click the **User Guides** button to access the major Workforce Management user guides.

Click the **About** button to view statements about intellectual property, open source attribution, and the user license.

Click the **Close** button to return to the main page.

Logging Off the System

You can log out of the Workforce Optimization Solution at any time.

To log out of the Workforce Optimization Solution:

- Click **Logout** on the navigation bar.

What If Mode

A special mode exists in both the web application and Forecasting and Scheduling that allows you to work with hypothetical schedule information without inadvertently altering the contents of your production database. For more information on What If mode, please see the chapter on Forecasting and Scheduling's Work Modes.

Viewing Your Information: The My Home Module

The **My Home** module allows you to access the following sections:

Section	Description
My Schedule	View schedule summary information for each day in a selected range for multiple employees in their own organizations and other organizations as specified in the Time Off settings.
My Scorecards	Allows users to view their scorecards. This section is documented in a separate guide, the <i>Scorecards User Guide</i> .
My Learning	Allows users to view advanced eLearning tools that deliver customized lessons to your desktop. These lessons are designed to increase your performance and competency rank. This section is documented in a separate guide, the <i>Competency-based Learning Student User Guide</i> .
My Profile	View your personal information and update your password.

Depending on your license, you might have access to additional sections and tabs. These sections can include the following:

Section	Description
My Dashboards	Part of the optional and separately licensed Dashboards feature, this section allows you to view certain tables in a graph format.
My Learning	Allows users to view advanced eLearning tools that deliver customized lessons to your desktop. These lessons are designed to increase your performance and competency rank. This section is documented in a separate guide, the <i>Competency-based Learning Student User Guide</i> .
My Coaching	Part of the optional and separately license Coaching feature. See the <i>Coaching Addendum</i> for more information on this feature.

Viewing Your Schedule: My Schedule

For a manager, the My Schedule section contains one tab:

- Displays schedule summary information for each day in a selected range for multiple employees.

The Group Tab

This page by default displays schedule summary information for each day in a selected range for multiple employees.

Choosing the Schedule Display Format

The information can be displayed for multiple employees in one of three formats (also called views or modes):

- each day in a selected range in tabular format (Multiday view)
- a single day in tabular format (Text view)
- a single day in graphical format (Graph view)

Multiday View In Multiday view, each date in the date range for each person is represented by an entry in the table. The entry may be one of:

- the start and end of the work period
- No shift
- Not published
- Time Off
- Closed

The start and end usually represent the start and end of the shift, except when the shift is extended by an adjacent calendar event or when it is trimmed by a time-off event.

You can change the dates displayed by clicking on the date range selector icon next to the shown dates and select the date range.

When selecting the date range, you can click one of the following at the bottom of the pop-up:

- Today
- Tomorrow
- This week
- Next week

Alternatively, you can select a start date on the left calendar, an end date on the right calendar, and click **Set**.

Note: You can move both calendars in synch using the arrow buttons on either side of the window title Select Date Range. To move each calendar independently, use the arrow buttons on either side of the month's name. The « and » buttons move in increments of a year; the < and > buttons move in increments of a month.

If you do not want to change the date range in the selector, click **Cancel**.

To switch among the views, use the View drop-down selector on the top right of the page.

Changing the Sort Order Use the Sort by drop-down selector to select the sorting criterion. If you are not viewing the first page in a multipage list of the selected group of employees, changing the sort order takes you back to the first page.

You can sort the information on this screen by one of the following:

- Last Name
- First Name
- Start Time (Shift Start Time)
- End Time (Shift End Time)
- Length (Shift Length)

Controlling the Amount of Information Displayed If the list of selected employees in the group is long, you can use the pagination drop-down selector at the bottom left of the window to limit the number of employees being displayed, thus allowing the page to render quickly.

To move to the next or previous page in a long list, use the next (right arrow) or previous (left arrow) buttons in the pagination control.

Additionally, when you scroll through a long list of employees on a page, the column headers repeat every certain number of rows. You can set this number in the Preferences window.

Changing Groups You can also change the group of employees being viewed by clicking on the group selector icon next to the name of the current group. The Select Organization / Campaign Group window appears as a pop-up window, allowing you to select a group of employees using their organization and/or campaign associations.

Step	Action
1	Select one organization in the left-hand tree, or select one campaign in the right-hand list, or select both an organization and a campaign. When selecting an organization, you can expand and collapse organization tree branches by clicking the triangular icons to the left of the organization names.
2	Click Save .

—End—

If both an organization and campaign are selected (highlighted), the selection will affect employees from the selected organization who are working in the selected campaign, a subset of both organization and campaign.

If only an organization name is selected, you are selecting all the employees in this organization.

If only a campaign name is selected, you are selecting all the employees working for this campaign, regardless of their organization.

Text View This page displays detailed schedule information for one day for multiple employees. It is best suited for printing daily group schedules.

Each employee in the selected group is represented by one row in the table with possible multiple subrows for different activities. The name of employee is shown in the Name column. The name of the current user is highlighted.

The record in the Shift column for any employee may show the shift start and end times, or No shift, or Not published.

The color box on the left of the shift shows the main shift activity. If you see a yellow information icon next to the shift end time, you can hover the mouse over it and read the shift comment.

The data in the Activities column shows all events during this day for the employee. Each activity during a day is represented by a row, which shows activity color box, activity name, activity start and end times, and optional Description icon. The description is displayed when you hover the mouse over the yellow information icon.

A shift overtime period is displayed in a separate line in the Shift column and activities that are covered by an overtime period have a cross-hatch pattern on top of the color icon box next to the activity name in the Activities column.

You can change the dates displayed by clicking on the date range selector next to the dates shown and selecting the date range. When selecting the date range, you can click one of the following at the bottom of the pop-up:

- Today
- Tomorrow
- This week
- Next week

Alternatively, you can select a start date on the left calendar, an end date on the right calendar, and click **Set** . If you do not want to change the date range in the selector, click **Cancel**.

Changing the Sort Order Use the Sort by drop-down selector to select the sorting criterion. If you are not viewing the first page in a multipage list of the selected group of employees, changing the sort order takes you back to the first page.

You can sort the information on this screen by one of the following:

- Last Name
- First Name
- Start Time (Shift Start Time)
- End Time (Shift End Time)
- Length (Shift Length)

Controlling the Amount of Information Displayed If the list of selected employees in the group is long, you can use the pagination drop-down selector at the bottom left of the window to limit the number of employees being displayed, thus allowing the page to render quickly.

To move to the next or previous page in a long list, use the next (right arrow) or previous (left arrow) buttons in the pagination control.

Additionally, when you scroll through a long list of employees on a page, the column headers repeat every certain number of rows. You can set this number in the Preferences window. (See "[Setting Preferences](#)" (page 49)).

Changing Groups You can also change the group of employees being viewed by clicking on the group selector icon next to the name of the current group. The group selector window appears as a pop-up window, allowing you to select a group of employees using their organization and/or campaign associations.

Step	Action
1	Select one organization in the left-hand tree, or select one campaign in the right-hand list, or select both an organization and a campaign. When selecting an organization, you can expand and collapse organization tree branches by clicking the triangular icons to the left of the organization names.
2	Click Save .

—End—

If both an organization and campaign are selected (highlighted), the selection will affect employees from the selected organization who are working in the selected campaign, a subset of both organization and campaign.

If only an organization name is selected, you are selecting all the employees in this organization.

If only a campaign name is selected, you are selecting all the employees working for this campaign, regardless of their organization.

Graph View This page displays the schedule graph for one day for multiple employees.

Each employee in the selected group is represented by one row in the table with possible multiple subrows for different activities. The name of employee is shown in the Name column. The name of the current user is highlighted.

Each activity is shown in its color with its duration. Rows are not selectable nor clickable. The names of the activities are shown in the legend. An empty row means that employee either does not have any scheduled activity on a given date, or that the schedule for the selected date is not published. Check the text view for the exact description.

When a shift assignment has an overtime period, either before the normal start or after the normal end of the shift, a cross-hatched pattern covers the overtime period. This pattern can cover any event and background color.

You can change the dates displayed by clicking on the date range selector next to the dates shown and selecting the date range. When selecting the date range, you can click one of the following at the bottom of the pop-up:

- Today
- Tomorrow

- This week
- Next week

Alternatively, you can select a start date on the left calendar, an end date on the right calendar, and click **Set** . If you do not want to change the date range in the selector, click **Cancel**.

Changing the Sort Order Use the Sort by drop-down selector to select the sorting criterion. If you are not viewing the first page in a multipage list of the selected group of employees, changing the sort order takes you back to the first page.

You can sort the information on this screen by one of the following:

- Last Name
- First Name
- Start Time (Shift Start Time)
- End Time (Shift End Time)
- Length (Shift Length)

Controlling the Amount of Information Displayed If the list of selected employees in the group is long, you can use the pagination drop-down selector at the bottom left of the window to limit the number of employees being displayed, thus allowing the page to render quickly.

To move to the next or previous page in a long list, use the next (right arrow) or previous (left arrow) buttons in the pagination control.

Additionally, when you scroll through a long list of employees on a page, the column headers repeat every certain number of rows. You can set this number in the Preferences window.

Changing Groups You can also change the group of employees being viewed by clicking on the group selector icon next to the name of the current group. The group selector window appears as a pop-up window, allowing you to select a group of employees using their organization and/or campaign associations.

Step	Action
------	--------

- | | |
|---|--|
| 1 | Select one organization in the left-hand tree, or select one campaign in the right-hand list, or select both an organization and a campaign. When selecting an organization, you can expand and collapse |
|---|--|

organization tree branches by clicking the triangular icons to the left of the organization names.

- 2 Click **Save**.

—End—

If both an organization and campaign are selected (highlighted), the selection will affect employees from the selected organization who are working in the selected campaign, a subset of both organization and campaign.

If only an organization name is selected, you are selecting all the employees in this organization.

If only a campaign name is selected, you are selecting all the employees working for this campaign, regardless of their organization.

Viewing Your Personal Information: My Profile

Note: Privileges to view and edit information are set by your system administrator. Depending on your role and privileges, some information may not be available.

Use the Personal Information tab of the My Profile section of the My Home module to review your personal information and change your password if desired.

Use the arrow buttons to expand or contract each section.

Changing Your Password

Use the Login Data container of the My Profile section to change your password.

To change your password:

Step	Action
------	--------

- 1 Expand the **Login Data** container if necessary.
- 2 Click the selector icon to the right of the **Password** field
A pop-window appears, as shown in the following illustration:

- 3 Type a new password and confirm it. Remember, passwords are case-sensitive.
- 4 Click **Set** to save your new password.
- 5 Click **Save** at the bottom of the **Personal Information** pane to save all changes made, including any password changes.

—End—

Viewing Dashboards

This page allows you to view those dashboards that have been configured by your system administrator and for which you have view privileges.

A dashboard can show up to three columns, each containing one or more graphic tables.

The drop-down selector at the top right of the page allows you to select which dashboard you want to see.

Up to three mode buttons can appear to the right of each graph:

- View mode
The default mode, which is viewing the graph.
- Edit mode
Allows you to set or change the run-time parameters for a particular graph.
- Configure mode
Typically this mode button is only shown for administrators and those with privileges to edit dashboards.

If you have changed the run-time parameters for the graphs on a dashboard, you can save those changes to a new dashboard, provided that your administrator has enabled this functionality. To save a new dashboard, click **Save As** at the bottom right of the page. Click **Delete** to delete the dashboard being displayed. Click **Reset** to cancel any unsaved changes and revert to the settings in use before you changed anything.

Request Management

Workforce Management schedulers typically also have access to the Requests module of the web application.

The Requests module allows you to:

- approve and deny time-off and shift-swap requests
- withdraw approved time-off requests on the behalf of employees
- approve and deny withdrawal of approved time-off requests
- waitlist denied time-off requests on the behalf of employees
- approve and deny waitlisted time-off requests
- set up and manage shift bid auctions.

Note: This module is a component of Time Off Management, which is part of the Advanced Workforce Management solution.

Time Off Management is an optional addition to the Operational Workforce Management solution.

Shift bidding is an optional feature available for either the Operational or Advanced Workforce Management solution.

An agent can request time off as one of three different types:

1. Use my time-off hours to schedule my absence (counts as X hours time off)
2. Schedule around my time-off request if possible (use underlying shifts time off)
3. Mark as unavailable and schedule around this time (unavailability request)

Unavailability requests are only available for activities that are requestable and specified as able to be used for unavailability. If the request is approved, an unavailability event is created.

Types 1 and 2 behave differently depending on whether a schedule has already been published for the time that is being requested. Therefore, there are four distinct possibilities for an agent's time off request:

- "Count as X hours time off" when there is no published schedule
- "Count as X hours time off" when there is a published schedule
- "Use underlying shifts time off" when there is no published schedule
- "Use underlying shifts time off" when there is a published schedule

The system considers dates prior to the last published shift assignment for an employee to be published, and considers time after this to be unpublished.

Here are specific details of how each of the four use cases works:

"Count as X hours time off" when there is no published schedule

Uses the number of minutes specified for the event, regardless of whether the event overlaps with any shifts. To determine the number of minutes to be specified when creating the event from request management, the scheduling engine uses the following rules:

1. If the time-off event is less than the length of the default time-off length provided for that agent, the event length is used.
2. If the time-off event length is equal to or greater than the default length provided for that agent, the agent's default length is used.
3. If there is no default length specified (the field is null) for an agent, the request is allowed, but it causes a validation alert stating that the request cannot be approved.

Once an event is created, if the user edits the number of minutes for an event already marked as using a specific number of minutes, the current settings of the event are used regardless of the three points above.

Under no circumstances is an underlying shift used as the basis for calculating the hours of events that are not marked as "use underlying shift."

If this time is scheduled, the scheduler will try to place X hours of paid Shift Assignments underneath the Time Off.

"Count as X hours time off" when there is a published schedule

Uses the total paid time in shifts and shift activities currently published from the start date of the request until the end date of the request.

Once the event is created, if the user edits the number of minutes for an event already marked as using a specific number of minutes, the current settings of the event are used.

Under no circumstances is an underlying shift used as the basis for calculating the hours of events that are not marked as “use underlying shift.”

If this time is rescheduled, the scheduler will try to place X hours of paid shift assignments underneath the time off.

"Use underlying shifts time off" when there is no published schedule

When the event is created, the following rules are used:

1. If the time-off event is less than the length of the default time-off length provided for that agent, the event length is used.
2. If the time-off event length is equal to or greater than the default length provided for that agent, the agent default length is used.
3. If there is no default length specified (the field is null) for an agent, the request is denied.

If the default lengths for the agent are edited, it affects the calculation on unpublished weeks.

Once the schedule is published, the paid time underlying the time off is used.

If this time is scheduled, the scheduling engine might place any amount of staffing underneath this time in order to satisfy the agent’s work rules and meet the service goals of the campaign.

"Use underlying shifts time off" when there is a published schedule

Uses the paid time of the overlapping published shifts and shift activities. This is true regardless of any settings the agent might have for default time.

If the schedule is republished, the paid time underlying the Time Off is used.

If this time is rescheduled, the scheduling engine might place any amount of staffing underneath this time in order to satisfy the agent’s work rules and meet the service goals of the campaign.

Using the Agents Requests Section: Viewing and Managing Requests

Use the Agent Requests section of the Requests module to view agent requests. Click on the top of a column to sort by the column. Click again to reverse the sort order.

Use the date range selector to filter requests by their start and end dates.

The columns displayed on the Agent Requests page are determined by the type of request you are displaying. If you are viewing multiple types of requests at the same time (the default), you see only those columns that the request types have in common.

For your reference, a brief description of each column is listed below:

Column	Description
Name	The employee's name.
Status	An icon showing the current stage in the request processing, such as pending, approved, denied. The name of the status is displayed when you hover the cursor over the icon. The status icons are:
	 The request has been approved. Below this icon you may see an additional icon if you have requested withdrawing the time-off request.
	 A request to withdraw the approved time-off request is in progress.
	 A request to withdraw the approved time-off request has been rejected.
	 The request has been denied.
	 The request has been escalated.
	 The request has expired.
	 The request is in negotiation.
	 The request is invalid.
	 The request is pending approval.
 The request has been waitlisted. (A request that has been denied can be waitlisted for approval if conditions change.)	
 The request has been tentatively approved.	
 The request has been withdrawn.	
Type	The type of request: time off, shift swap, or shift bidding.
Submitted	The date on which the request was submitted.
Last modified	The date on which the request was last changed.
Expired	Whether the request has expired (Yes) or not.
Comments	The text of any comments entered by the manager or agent.

Column	Description
Alerts	Icons showing which request validation rules are violated by this request. The rule name is displayed when you hover the cursor over the icon. See the alerts list in "Managing Time-Off Requests One By One" (page 300) for more information on these icons.
Actions	Clickable icons for editing, approving, denying, or other status changes for the request. See the table in "Managing Time-Off Requests One By One" (page 300) for more information on the action icons.

The following columns are specific to Time Off requests:

Column	Description
Start	The time stamp of the beginning of the requested time off.
End	The time stamp of the end of the requested time off.
Length	The duration of the requested time off.
Hours Accounted	The number of the employee's time-off hours involved in the request.
Seniority	Start date for agents associated with the request.

The following columns are specific to Shift Swap requests:

Column	Description
Shift Date	The date on which the shift offered for swap takes place.
Start	The time (in the viewing time zone) when the shift starts.
End	The time (in the viewing time zone) when the shift ends.
Post Expires	The time by which agents expect the swap to be finalized.
Swap Type	Whether the swap is one-way or two-way. (In a one-way swap, one agent takes over another's shift without giving one in return.)
Partial Shift	Shows whether the shift swap being proposed is partial. (Shifts can be swapped either entirely or partially. In a partial shift swap, the agent can propose swapping only a portion of the shift, or can propose dividing the shift into multiple portions, each of which can be swapped.)

The following columns are specific to Shift Bid requests:

Column	Description
Bid Name	The name given by the agent to the request.

Column	Description
Use Points	Whether the employee has chosen to use accumulated bonus points in this bid. See "Deleting an Existing Shift Bid Auction" (page 312).
Seniority	The employee's start date in the company.
Rank	The employee's rank in the company.
Points	Bonus points are provided to encourage employees to bid on unpopular schedules. This column shows the number of bonus points available to the employee.
Bonus	The number of bonus points awarded for this shift.
Score	The calculated score of the shift bidding request. The score weights the request against other requests for the same shift. See "Sorting and Filtering Shift Bid Requests" (page 317).
Preference	The preference level selected by the employee for the specific schedule that is being requested.

Filtering Requests

By default, the Agent Requests section of the Requests module uses the predefined filter All Active, which does not include expired and withdrawn requests of all three types, or invalid requests of Time Off and Shift Swap type. In addition, you can select the predefined filter Active, which display all the requests for the selected time range.

You can also create your own filters.

To filter out unwanted requests:

Step	Action
------	--------

- | | |
|---|---|
| 1 | In the View field at the top left of the page, select one of the predefined filters or select Create Filter or Edit Filter to create or edit a filter. When you select Create Filter or Edit Filter , the Request Filter page is displayed. |
|---|---|

—End—

To create a new filter:

Step	Action
------	--------

- | | |
|---|---|
| 1 | In the upper left pane, select the organization(s) to filter. When you select an organization, all its suborganizations are automatically selected as well. |
|---|---|

- 2 Select the request type.
The working pane refreshes to display the items relevant to the selected request type.
 - All Request Types
 - Time Off
 - Shift Swap
 - Shift Bid
- 3 For each item you want to filter by, type a value or make a selection from the drop-down menus.
- 4 Click **Save As**, and then type a name at the top of the pop-up window.
- 5 Click **Save** to save the filter and return to the previous page.

—End—

To edit an existing filter:

Step	Action
------	--------

- | | |
|---|---|
| 1 | For each field you want to change, select or deselect an operator and type or select a value from the list. |
| 2 | Click Save to save the filter and return to the previous page. |

—End—

To delete an existing filter:

Step	Action
------	--------

- | | |
|---|---|
| 1 | From the Filter menu on the upper right, select the filter you want to delete. |
| 2 | Click Delete , and then click OK to confirm the deletion and return to the previous page. |

—End—

To show only requests for a specific agent, in the **Find** field at the top left of the page, specify the agent's name, and then click the Go button beside it. The agent name criteria is applied on top of the selected filter.

Customizing the Columns Displayed

To customize the columns displayed:

Step	Action
1	In the Customize field at the top right of the page, select Edit . The List Configuration page opens.
2	Select the desired configuration to edit using the drop-down list.
3	Move the desired properties from the left pane to the right pane using the arrows in the middle.
4	Click Save if you are editing an existing configuration setting, or click Save As to save a new configuration using a new name.
5	Click Done to exit this window without saving.

—End—

Managing Requests

You can manage requests either one by one, or as a group.

Managing Time-Off Requests One By One

The icon buttons in the **Actions** columns allow you to manage pending requests. (If you do not see the **Actions** column, you need to customize the display to make sure it is chosen.)

The available buttons are:

Icon	Usage
	Approve the request. The schedule information is updated for Forecasting and Scheduling, and alerts, if configured, are sent.
	Approve a request for withdrawal of an approved time-off request.
	Cancel a request for withdrawal of an approved time-off request.
	Deny the request.
	Edit the request.
	Withdraw the request.
	Reject a request for withdrawal of an approved time-off request.

Icon	Usage
	Tentatively approve the request. Requests that have been tentatively approved display the status Pending to the agents that submitted them, but display the status Tentative to you until you either confirm the request or publish the schedule.
	<p>View the details of the request. A pop-up window opens that provides several groups of information, each in its own container. For Time-Off Requests, you see:</p> <ul style="list-style-type: none"> • Summary Information: Contains information such as the Employee Name, Time Off Type, and Time Off Hours. • Alerts Information: Displays the icons and a description for any failed validations. • Time Off Choice(s) Information: Contains Time Off Choice(s) information associated with the Time Off Request, such as choice ranking, dates, total duration, number of hours debited against time off, and choice alerts. Each possible choice for a time off request is validated independently. For each failed validation, this area shows the icon and description of the validation, similar to that described in the previous section on the alerts information. • Status Information: Contains the modification history (audit trail) of the Time Off Requests.

ATTENTION

Be aware that time-off requests that are tentatively approved do change the schedule with Forecasting and Scheduling. If a scheduler or other person with appropriate privileges then publishes a schedule with tentative approvals, the approvals change from tentative to approved. Shift swap requests stay marked invalid.

The **Alerts** column shows you any violations of filing rules for the requests using the icons in the following table:

Icon	Type of Rule	Rule and Description
	Time Off	Organization has available time off hours. This rule is violated if the total length of scheduled time-off events during the requested day(s) is greater than the number of hours entered in the App Admin > Request Management > Available Time Off page for the organization, to which the requester belongs. If available time off hours are entered for the organization branch, then this rule is affected by time-off events for all employees in this branch.
	Time Off	Employee has enough time off hours. This rule is violated if the total length of scheduled time-off events for this employee during the time off year exceeds the yearly allotment entered on the People > Time Off page. Time Off year may be either the employee anniversary year or a calendar year, as configured in the App Admin > Request Management > Settings page.
	Time Off	Request complies with filing rules. This rule is violated if the request submittal date violates at least one of the filing rules applicable to the requester's organization.
	Time Off	Request avoids blackout days. This rule is violated if the request covers a day marked as a blackout day on the App Admin > Request Management > Available Time Off page.
	Time Off	Requested time off is not being swapped. This rule is violated if one or more request choices overlaps a shift that will be received or given away as the result of a pending shift swap request (state of shift swap request is either pending, in negotiation, or escalated).
	Time Off	Request avoids scheduled calendar events. This rule is violated if the requested time off period overlaps with another scheduled calendar event.
	Approved Time Off Withdrawn	Request complies with filing rules. This rule is violated if the request submittal date violates at least one of the filing rules applicable to the requester's organization.

Managing Shift-Swap Requests One By One

The icon buttons in the **Actions** columns allow you to manage pending requests. (If you do not see the **Actions** column, you need to customize the display to make sure it is chosen.)

The available buttons are:

Icon	Usage
	Approve the request. The schedule information is updated for Forecasting and Scheduling, and alerts, if configured, are sent.
	Deny the request.
	Edit the request.
	Withdraw the request.
	Tentatively approve the request. Requests that have been tentatively approved display the status Pending to the agents that submitted them, but display the status Tentative to you until you either confirm the request or publish the schedule.
	View the details of the request. A pop-up window opens that provides several groups of information, each in its own container. For Shift Swap Requests, you see: <ul style="list-style-type: none"> • General Information: This container lists the employees' shifts to be swapped. Shift information includes shift type and date. It also contains information regarding the expiration of the request. • Alerts Information: Displays the icons and a description for any failed validations. See the following table for additional information. • Status Information: Contains the modification history (audit trail) of the Shift Swap Requests.

The **Alerts** column shows you any violations of filing rules for the requests using the icons in the following table:

Icon	Type of Rule	Rule and Description
	Shift Swap	Both agents are from the same organization. This rule is violated if employees are assigned to different organizations.
	Shift Swap	Both agents are from the same campaign. This rule is violated if both shifts in a swap do not belong to the same campaign. They can be in different campaign-weeks.
	Shift Swap	Both agents have the same skills for the active campaign queue. This rule is violated if the receiving agent does not have the same skills as the agent currently scheduled to work the shift.

Icon	Type of Rule	Rule and Description
	Shift Swap	Both agents have the same proficiencies for the active campaign queue. This rule is violated if the receiving agent does not have the same skills and proficiencies as the agent currently scheduled to work the shift.
	Shift Swap	Request complies with filing rules. This rule is violated if the request submittal date violates at least one of the filing rules applicable to the requester's organization.
	Shift Swap	Both agents comply with min/max hours. This rule is violated if, after the swap, at least one of the employees will not comply with the min/max hours during the corresponding week(s) of the shift they get and the shift they give away in the swap.
	Shift Swap	Swapped shifts start on the same organization week. This rule is violated if the shift swap request fails the earlier validation rule, both agents are from the same organization, or if the swapped shifts do not fall within the same organization week.
	Shift Swap	Swapped shifts have the same paid hours. This rule is violated if the total duration of paid time in the two shifts is different.
	Shift Swap	Swapped shifts must overlap the exact same portion with scheduled calendar events and time offs, and not overlap unavailabilities. This rule validates the following for each employee: <ul style="list-style-type: none"> • Calendar events, which may or may not be inside a shift, do not overlap the exact same portion of the swapped-in shift. • Time-off events, which may or may not be inside a shift, do not overlap the exact same portion of the swapped-in shift. • Any unavailability type event does not overlap with the swapped shifts as the result of the swap.
	Shift Swap	Swapped shifts will overlap scheduled calendar events that must occur during a shift. This rule is violated if calendar events, which have to be inside a shift, fall outside of shifts as the result of the swap.
	Shift Swap	Partial Shift Swap: Minimum duration of the shift that can be swapped: <x> Minutes/Percent. This rule is violated if the duration of the swapped shift is less than the specified duration.

Icon	Type of Rule	Rule and Description
	Shift Swap	Partial Shift Swap: Minimum duration of the shift to leave after pickup: <x> Minutes/Percent. This rule is violated if the remaining shift duration after the swap is less than the specified duration.
	Shift Swap	Partial Shift Swap: Maximum shift duration allowed: <x> minutes per Organization Day/Rolling 24 Hour Period. This rule is violated if the total shift duration as a result of the swap is greater than the specified maximum. This rule can be applied in two ways: <ol style="list-style-type: none"> 1. For the organization day: the shift duration is calculated using the organization day boundaries. 2. For a rolling 24-hour period: the rule considers a rolling 24-hour period before and after the shift for the duration calculation.
	Shift Swap	Partial Shift Swap: Activities that cannot be included in the swap: <activity name(s) from drop-down>. This rule is violated if the swap includes any of the specified activities.
	Shift Swap	Partial Shift Swap: Gap should be between <x> and <y> minutes, or at least (z) minutes. This rule is violated if the gap created as a result of the swap is outside the specified range, or if the gap is less than the specified duration. If both the range and the minimum are specified, the rule will be violated only if both the conditions are violated.
	Shift Swap	Partial Shift Swap: Maximum overlap with an existing shift: <x> minutes. This rule is violated if the overlap with an existing shift caused due to the swap is greater than the specified duration.

Managing Shift-Bid Requests One by One

The icon buttons in the Actions columns allow you to manage pending requests. (If you do not see the Actions column, you need to customize the display to make sure it is chosen.)

The available buttons are:

Icon	Description
	Approve the request. The schedule information is updated for Forecasting and Scheduling, and alerts, if configured, are sent. In serialized shift bid auctions (see "Adding Employees to an Auction Serially" (page 315)), employees can withdraw a shift bid request, even when it has already been approved.
	Deny the request.
	Edit the request.
	Withdraw the request.
	Tentatively approve the request. Requests that have been tentatively approved display the status Pending to the agents that submitted them, but display the status Tentative to you until you either confirm the request or publish the schedule.
	<p>View the details of the request. A pop-up window opens that provides several groups of information, each in its own container. For Shift Bidding Requests, you see:</p> <ul style="list-style-type: none"> <p>• Shift Bid Request Information: This container displays Shift Bid Request information, and is editable when you are creating or updating a Shift Bid Request. The information includes the Bid Name, Preference Level (if applicable), and comments associated with the requests. When an Auction is configured to use Bonus Points, a check box allowing you to specify Use Points is displayed. Keep in mind that using points might affect the rank on the Shift Bid Requests. This information is displayed in the Shift Bid Auction section of this Form.</p> <p>• Shift Bid Auction Information: This container displays associated Shift Bid Auction information and is not editable. The information in this container includes Scheduling Period and Deadlines.</p> <p>• Biddable Schedule Information: This container displays Shifts Assignment information for one or more selected Biddable Schedules and is not editable.</p> <p>• Alerts Information: Displays the icons and a description for any failed validations. See the following table for additional information.</p> <p>• Status Information: Contains the modification history (audit trail) of the Shift Bid Requests.</p>

The **Alerts** column shows you any violations of filing rules for the requests using the icons in the following table:

Icon	Type of Rule	Rule and Description
	Shift Bidding	Request complies with filing rules. This rule is violated if the request submittal date violates at least one of the filing rules applicable to the requester's organization.
	Shift Bidding	Agent's schedule complies with min/max hours. This rule is violated if the requested schedule does not comply with the employee's min/max hours for the week of the auction.
	Shift Bidding	Agent has sufficient skills for the selected schedule. This rule is violated if the employee does not have the same skills as the phantom employee for whom the schedule is generated.
	Shift Bidding	Agent's schedule complies with organization hours of operation. This rule is violated if any of the requested shifts in the shift bid fall outside of the employee organization's hours of operation.

Managing Requests as a Group

To manage the requests as a Group, on the Tool bar, click Group Actions; a menu appears listing the available Group Actions.

The options listed are:

- Approve all without Violations
- Tentatively Approve all without Violations
- Deny any with Violations
- Confirm all Tentative Approvals
- Remove all Tentative Approvals

Creating a Time-Off Request

Note: You can create only time-off requests for your agents from this page.

To create a new time-off request:

Step	Action
------	--------

1	On the Tool bar, click Create New Request .
---	--

A pop-up window is displayed, enabling you to create a new time-off request.

You should specify information such as **Time Off Type**, **Time Off Hours** and **Comment**.

You must provide at least one time-off choice. You can specify the rank of the time-off choice by selecting the Time Off Choices row, and then using the Tool bar button to move it up or down.

You can also choose to have your request waitlisted if it cannot be approved at this time. See ["Waitlisting" \(page 308\)](#) for more information.

- 2 To add a new Time Off Choice, click **Add**.
- 3 To delete a Time Off Choice, select it and click **Delete**.

—End—

Withdrawing Approved Time-Off Requests

Previously, agents could only withdraw pending time-off requests. Agents can now attempt to withdraw requests for time-off that have already been approved.

When a time-off request is withdrawn, the hours used from the Time-Off allocation are restored and made available for other agents. Once the request has been withdrawn, the agent's schedule that is underlying the time-off will be published. Alternatively, managers can set up an approval process so that they can manually approve the withdrawal. Filing rules can be applied for auto-approval or a withdrawal request.

Waitlisting

Normally, when an agent withdraws an approved time-off request, the system checks to see if there are any other pending requests that can use the time-off allocation. However, when auto-processing rules are being used, requests filed at a time when there is no available time-off allocation available are denied, and not left pending.

To respond to this situation, managers can now add waitlist criteria to time-off auto-processing rules, as well as manually waitlist agents' requests, approve waitlisted requests, or deny waitlisted requests when they manually process requests.

Using the Time Off Calendar Section

The Time Off Calendar section of the Requests module provides an overview of a group's time off activity in a graphical format.

The display has two viewing modes:

- Year at a glance
- 2 months (current and next)

In addition, the 2-month mode has two possible display views:

- Organization
- Personal

In 2-month mode, each day of the month contains three numbers displayed below the calendar date:

- **hours available**

In the Organization display view, the hours available indicate the total number of time-off hours allocated for that day to the current organization. This number can be set by administrators and schedulers in the Request Management section of the App Admin module, on the **Available Time Off** tab.

In the Personal display view, the hours available indicate the remaining number of time-off hours allocated for that day to the current organization.

- **hours pending**

The number of time-off hours for that day that have not been approved or denied.

- **scheduled time off**

The number of time-off hours approved for the day.

To change organization, select a different organization in the Selection Pane at the left side of the page.

To select a new date for the calendar display, use the date selector near the top of the page.

Using the Schedule Auctions Section: Managing Shift Bid Auctions

If you have licensed the optional Shift Bidding feature, in order for a shift auction to exist, you need a schedule. Moreover, you need a schedule with shifts not assigned to specific employees. The shifts available for bidding are created within Forecasting and Scheduling, when your scheduler generates a schedule in one of two ways:

- by scheduling either both employees and employee templates (also known as phantoms), or just employee templates
- by scheduling employees, and then converting one or more specific employee shift assignments to phantoms

Once the phantom shifts exist, you can allow employees to submit bids for their preferred schedules. Bids can be prioritized based on a variety of criteria, including a scoring system of accrued points.

Settings Tab

Use this tab to view or modify Shift Bid Auction settings.

If you have not selected an auction name in the Selection Pane at the left, the right side of the window allows you to create a new one. If you have selected an auction, the right side allows you to edit its settings.

Note: If you have already selected an existing shift bid auction, but you want to create a new one, click the **Create** button.

Creating a New Auction

To create a new shift bid auction (when you have not selected an auction name in the Selection Pane at the left):

Step	Action
------	--------

- | | |
|---|---|
| 1 | Specify a name for the new Shift Bid Auction. |
| 2 | Select a status (Open or Closed). |

ATTENTION

If an auction's status is Closed, employees cannot submit bids for that auction. You can use this restriction if you cannot complete an auction's settings in one session. Until you complete the auction's settings, keep its status Closed. Then, once you have completed the settings, change its status to Open, thus allowing employees to submit bids.

- | | |
|---|---|
| 3 | Select the scheduling period.

Note: To create a Shift Bid Auction, you require the availability of future scheduling periods for campaigns to which the user has privileges. |
| 4 | Select the bidding mode, either full period schedules or a combination of individual shifts.

(When an agent bids on a full period schedule, it means that the agent bids on a specific schedule for the whole scheduling period, whereas bidding on a combination of individual shifts allows the agent to pick and choose different shifts from each day of the scheduling period. As an example, if there are five possible shifts on which to bid, shift A through shift E, a full period schedule means the agent must select A, B, C, D, or E. A combination of individual shifts allows the agent to select A for one day, D for the next day, and so on.) |
| 5 | Specify the deadline for bids. |

- 6 If appropriate, type the number of bonus points to be awarded to those employees who have placed bids on this auction but did not get any of their requests approved.
- 7 Specify by clicking the check box whether the scoring system should be used for this auction (that is, whether employees can use their accumulated points for this auction).

Note: Employees can use their points when placing a bid to improve their Bid Rank when an auction is configured to use scoring.
- 8 Specify whether employees can only bid on the schedule for their own organization.
- 9 Click **Save**.

—End—

Updating Existing Auctions

To update an existing shift bid auction:

Step	Action
------	--------

- 1 From the Selection Pane, select an existing shift bid auction.
- 2 Change the information as needed.

Note: Some information cannot be modified once an auction has been created.
- 3 Click **Save**.

—End—

Closing an Existing Shift Bid Auction

To close an existing shift bid auction:

Step	Action
------	--------

- 1 From the Selection Pane, select an existing shift bid auction.
- 2 Click **Close Auction**.

A pop-up menu is displayed with two buttons:

 - **Close and Assign None Approved Bonus**

- **Close without Assigning None Approved Bonus**

3 Click one of the two buttons as appropriate.

Note: Duplicate None Approved Bonus Points are assigned if the same auction is opened or closed more than once and you click **Close** and **Assign None Approved Bonus** each time.

—End—

Deleting an Existing Shift Bid Auction

To delete an existing shift bid auction:

Step	Action
------	--------

- | | |
|---|--|
| 1 | From the Selection Pane, select an existing shift bid auction. |
| 2 | Make sure the auction is closed. If not, change its Auction Status to Closed , and then click Save . |
| 3 | Click Delete . (The Delete button is only enabled when you have selected a closed auction) |

—End—

Definition of Some Terms

The following terms are important to understand in the context of Shift Bid Auctions:

- **None Approved Bonus**

Bonus Points assigned to employees who have placed bids on this auction but did not get any of their requests approved.

- **Use Scoring**

Specifies whether employees can use their accumulated points for this auction.

Note: Employees can use their points when placing a bid to improve their Bid Rank when an auction is configured to use scoring.

Schedules Tab: Viewing and Modifying Bonus Points

Use the **Schedules** tab to view biddable schedules and specify the bonus points associated with them.

Note: Schedules are only displayed if they contain phantom shift assignments. As mentioned previously, there are two ways for a

scheduler to create phantom shift assignments within Forecasting and Scheduling, which can be used concurrently.

The first method is to generate the schedule using Staffing Profiles (also referred to as Employee Templates). Phantom shift assignments are created for the Staffing Profiles.

The second method is to convert specific employee shift assignments to phantoms.

To view schedules associated with a Shift Bid Auction, from the Selection Pane, select a shift-bid auction.

The associated biddable schedules are shown in the Work Pane.

To update any schedules associated with a shift-bid auction:

Step	Action
------	--------

1	From the Selection Pane, select a shift-bid auction.
---	--

2	Specify bonus points for each schedule.
---	---

Note: These bonus points are provided to encourage employees to bid on unpopular schedules. The Bonus Point item on the Schedule Page is enabled even in auctions where Use Scoring is not enabled, allowing employees to accumulate these points for future use.

3	Click Save to update the schedule information.
---	---

—End—

Employees Tab

Use the **Employees** tab to view or modify the employees (bidders) associated with a shift bid auction.

To view the employees associated with a shift bid auction, select a shift bid auction from the Selection Pane. Those employees without a shift assignment for that auction are shown in the working pane, which is labeled Employees. Note that you can paginate the information displayed, that is, you can control the number of employees displayed at a time.

To add employees to a selected shift bid auction:

Step	Action
------	--------

1	Select one or more employees displayed in the Employees working pane who have not yet been added to the auction.
---	---

Note: Employees do not need to be selected if you are adding all employees currently waiting to be added.

- 2 Click **Add to Auction**. A form is displayed allowing you to specify such information as the bidding deadline.

You must add those employees who are not being displayed because of the pagination settings separately, as you are informed by the note at the top of the form: **Action will only apply to records in current page**.

Note: The typical way in which employees are notified that they have been added to a shift bid auction is by email. Depending on the employee's privileges and the manager's privileges, the email they receive might contain a link that will open Workforce Management with the relevant request displayed.

Unless your particular situation allows you to personally notify your employees, verify with your administrator that email alerts have been configured.

—End—

To remove one or more employees from a selected shift bid auction:

Step	Action
1	In the Employees working pane, select one or more employees (who were added to the auction).
2	Click Remove from Auction .

—End—

Depending on your system's configuration, you can change bid deadlines and bonus points for employees currently part of the auction.

To change bid deadlines or bonus points:

Step	Action
1	Change the deadline. If the shift bid auction is configured to use bonus points, the Bonus column is shown.
2	Change the bonus points assigned to an employee as appropriate.

3 Click **Save**.

Note: Bonus points given in this way are not accumulated. They are used at your discretion to give an advantage in this shift auction for selected employees.

—End—

To enter a bid for an employee:**Step Action**

- | Step | Action |
|------|---|
| 1 | Select a single employee who has already been added to the auction. |
| 2 | Click Bid for Employee . Fill in, as appropriate, the Bid Options page that is displayed. |

—End—

Adding Employees to an Auction Serially

In conjunction with auto-approval of shift bid requests, you can add eligible employees to an auction serially. Eligible employees are those who:

- have been added to the campaign
- have not yet been added to the auction
- have not yet been assigned a shift for the campaign

To add employees serially to a selected Shift Bid Auction**Step Action**

- | Step | Action |
|------|-----------------------------|
| 1 | Click Add Serially . |

A pop-up dialog box allows you to specify the order in which employees are to be added (by seniority, rank, score, or bonus). The dialog box also allows you to specify a maximum time interval for an employee to submit a bid.

You must add those employees who are not being displayed because of the pagination settings separately, as you are informed by the note at the top of the form: **Action will only apply to records in current page.**

Once an employee has been added to the auction, an alert message is sent to the employee (see the previous note about configuring alerts), who then has to submit a schedule bid within the specified interval. The next employee is added and notified either when the

current employee's shift bid is approved, or when the time limit expires. (The expiration timer only runs during the campaign's hours of operations.)

An employee whose time has expired is still allowed to submit shift bids, but runs the risk of having to bid for the less desirable schedules.

Once clicked, the **Add Serially** button changes to **Stop Serialized Add**. You can stop the serial addition of employees to the auction by clicking this button and answering **Yes** to the confirming pop-up window that appears. To restart the process, click **Add Serially** again.

Note: You can add an employee to the auction manually, bypassing serialization mode, but in this case, employees might be competing for the same schedule. The one whose request is auto-approved first gets the schedule. The other request turns into an invalid request.

—End—

For information on closing an auction, see "[Closing an Existing Shift Bid Auction](#)" (page 311).

Bid Options Tab

Use this tab to view available biddable schedules or to create bids for employees.

To view schedules associated with a shift-bid auction:

Step	Action
------	--------

- | | |
|---|---|
| 1 | From the Selection Pane, select a shift-bid auction.
The associated biddable schedules are shown on the Work Pane. |
|---|---|

—End—

To submit a bid on behalf of an employee:

Step	Action
------	--------

- | | |
|---|---|
| 1 | From the Employee drop-down menu located on the top right of the screen, select an employee. |
|---|---|

- 2 Select a schedule if the auction is configured to bid on **Full Schedule**.
- 3 Select multiple schedules if the auction is configured to bid on Individual Shifts.
- 4 Click **Create**. The **Shift Bid Request Form** opens, allowing you to create a Shift Bid.

—End—

Understanding Bid Rank Information

Bid Rank shows the employee's rank for the biddable schedule.

In schedules for shift-bid auctions that use scoring, you might see a bid rank shown as 3(1). In such cases, the value in parentheses represents the bid rank if the employee were to apply points to the bid. The value outside of the parentheses represents the bid rank if the employee were not to apply points to the bid.

Sorting and Filtering Shift Bid Requests

You can sort the biddable schedules by clicking the column heading. An arrow appears to the right of the column heading, showing the direction of the sort.

You can click on additional columns—the system sorts the biddable schedules by the last three columns selected. The last column selected is the primary sort. For example, by clicking on the Preference column, then the Bonus column, and then twice on the Hours column, the display is sorted primarily by the number of hours, highest to lowest, then by Bonus (lowest to highest), and then by Preference, lowest to highest.

When you click one of the date column headers, it brings up a pop-up menu that allows you to sort that column by one of:

- Shift Start
- Shift End
- Shift Length

You can display the settings that you currently have active for sorting by using the Filter and Sort Settings controls above the table showing your bid options.

You can scroll through the contents of the Filter and Sort Settings area using the scroll controls at its right side, or click the **Expand** button to expand the area to show all your current settings:

You can also filter requests.

To create a filter:**Step Action**

- 1 Click the **Filter** button.
The **Request Filter Configuration** window opens.
- 2 Select the options as desired for shifts and schedules, activities, and skills, and then click **Save**.

The available options provide a great flexibility for filtering, and are described in the following table:

Option	Description
Shifts and Schedules	
Template Name	You can filter on the name of the template. Template names are assigned to the phantom schedules by Forecasting and Scheduling, using the names the scheduler gave them on the Work Patterns tab of the Work Rules module. Template names are used for the phantom schedules only when the original scheduling within Forecasting and Scheduling was done with Agents to Schedule set to either Staffing Profiles Only or Employees and Staffing Profiles .
Availability	You can filter on the number of instances of a particular template that have not yet been bid upon. (Refer to the column Available on the Bid Options tab.) Choices are: <ul style="list-style-type: none"> • Any Number of Options No filtering is done for this characteristic. • Equal To Causes a field to appear where you specify the number of instances. • No More Than Causes a field to appear where you specify the number of instances. • No Less Than Causes a field to appear where you specify the number of instances.

Option	Description
	<ul style="list-style-type: none"> • Between Causes two fields to appear, where you can specify the range of instances.
Schedule Length	<p>You can filter on the length (in hours) of a particular template. (Refer to the column Hours on the Bid Options tab.) Choices are:</p> <ul style="list-style-type: none"> • Any Length No filtering is done for this characteristic. • Equal To Causes a field to appear where you specify the number of hours. • No More Than Causes a field to appear where you specify the number of hours. • No Less Than Causes a field to appear where you specify the number of hours. • Between Causes two fields to appear, where you can specify the range of the number of hours.
Shift Name	<p>Similar in use to the Template Name option described previously. Shift names are used for the phantom schedules only when the original scheduling within Forecasting and Scheduling was done with Agents to Schedule set to Employees Only and, subsequently, the employees were converted to phantoms.</p>

Option	Description
Shift Length	<p>You can filter on the length (in hours) of a particular shift (the number of hours on a particular day). Choices are:</p> <ul style="list-style-type: none"> • Any Length No filtering is done for this characteristic. • Equal To Causes a field to appear where you specify the number of hours. • No More Than Causes a field to appear where you specify the number of hours. • No Less Than Causes a field to appear where you specify the number of hours. • Between Causes two fields to appear, where you can specify the range of the number of hours..
Shifts Starting	<p>You can sort on the time that a shift starts. Choices are:</p> <ul style="list-style-type: none"> • Any Time No filtering is done for this characteristic. • At Causes a time selector to be displayed, where you can select the exact shift start time on which you want to filter. A Match all shifts in schedule check box also is displayed, which filters all of the shifts in the schedule based on the same time constraint. • Not After Causes a time selector to be displayed, where you can select the time at or before which the filtered shifts should begin (similar to a less than or equal to constraint). A Match all shifts in schedule check box

Option	Description
	<p>also is displayed, which filters all of the shifts in the schedule based on the same time constraint.</p> <ul style="list-style-type: none"> • Not Before Causes a time selector to be displayed, where you can select the time at or after which the filtered shifts should begin (similar to a greater than or equal to constraint). A Match all shifts in schedule check box also is displayed, which filters all of the shifts in the schedule based on the same time constraint. • Between Causes a time range selector to be displayed, where you can select a time range between which the filtered shifts should begin. A Match all shifts in schedule check box also is displayed, which filters all of the shifts in the schedule based on the same time constraint.
Shifts Ending	<p>You can sort on the time that a shift ends. Choices are:</p> <ul style="list-style-type: none"> • Any Time No filtering is done for this characteristic. • At Causes a time selector to be displayed, where you can select the exact shift end time on which you want to filter. A Match all shifts in schedule check box also is displayed, which filters all of the shifts in the schedule based on the same time constraint. • Not After Causes a time selector to be displayed, where you can select the time at or before which the filtered shifts should end (similar to a less than or equal to constraint). A Match all shifts in schedule check box

Option	Description
	<p>also is displayed, which filters all of the shifts in the schedule based on the same time constraint.</p> <ul style="list-style-type: none"> • Not Before Causes a time selector to be displayed, where you can select the time at or after which the filtered shifts should end (similar to a greater than or equal to constraint). A Match all shifts in schedule check box also is displayed, which filters all of the shifts in the schedule based on the same time constraint. • Between Causes a time range selector to be displayed, where you can select a time range between which the filtered shifts should end. A Match all shifts in schedule check box also is displayed, which filters all of the shifts in the schedule based on the same time constraint.
Activities	
Activity Name	<p>You can filter on the name of up to two activities within the schedules displayed. The activities shown are a function of the activities that your scheduler has created in Forecasting and Scheduling, and has checked as able to be part of a shift activity. For example:</p> <ul style="list-style-type: none"> • Break • CKA • Late • Learning Break

Option	Description
Length	<p>You can filter on the length (in hours) of a particular activity. Choices are:</p> <ul style="list-style-type: none"> • Any Length No filtering is done for this characteristic. • Equal To Causes a field to appear where you specify the number of hours. • No More Than Causes a field to appear where you specify the number of hours. • No Less Than Causes a field to appear where you specify the number of hours. • Between Causes two fields to appear, where you can specify the range of the number of hours.
Starting	<p>You can sort on the time that an activity starts. Choices are:</p> <ul style="list-style-type: none"> • Any Time No filtering is done for this characteristic. • At Causes a time selector to be displayed, where you can select the exact activity start time on which you want to filter. A Match all shifts in schedule check box also is displayed, which filters all of the shifts in the schedule based on the same time constraint for that activity. • Not After Causes a time selector to be displayed, where you can select the time at or before which the filtered shifts should begin (similar to a less than or equal to constraint). A Match all shifts in schedule check box also

Option	Description
	<p>is displayed, which filters all of the shifts in the schedule based on the same time constraint for that activity.</p> <ul style="list-style-type: none"> • Not Before Causes a time selector to be displayed, where you can select the time at or after which the filtered shifts should begin (similar to a greater than or equal to constraint). A Match all shifts in schedule check box also is displayed, which filters all of the shifts in the schedule based on the same time constraint for that activity. • Between Causes a time range selector to be displayed, where you can select a time range between which the filtered shifts should begin. A Match all shifts in schedule check box also is displayed, which filters all of the shifts in the schedule based on the same time constraint for that activity.
Skills	
Skills Associated with Shift	<p>Displays a two-column table. For managers, all skills defined are shown in the Available Skills column. (Agents only see the skills they themselves have.) Select (or multi-select) the skills on which you want to filter, and then click the greater than arrows to move the skill(s) to the Selected Skills column (or the smaller than arrows to remove a skill from the Selected Skills column).</p> <p>Additional radio buttons allow you to specify whether you want to filter for an exact match for the skills you have selected, or whether you want to see other possible matches. The available radio buttons are:</p> <ul style="list-style-type: none"> • At Least These Skills You want to see any shifts that include the selected skills. • At Most These Skills

Option	Description
	<p>You do want to see any shifts that include skills other than the ones you've selected, but you do want to see shifts that might not include all of the skills you have selected.</p> <ul style="list-style-type: none"> <li data-bbox="900 468 1206 499">• Exactly These Skills <p>You only want to see shifts that include the selected skills.</p>

—End—

Purging Requests

Use the **Purging** tab of the **Request Management** section of the **App Admin** module to purge (remove) requests from the database.

This page has the following controls:

- **Request Type**—Choose the type of request to be purged.
The purge can be applied to the agents of the current organization or can include the agents at the child organizations.
- **For requests created from**—You can purge requests from the current organization or from an entire organization branch.

You can limit the effects of the purge using one of the following:

- **All requests of this type**—Purge this type of request without considering a date.
- **Requests created more than <number> days in the past**—Select a date boundary based on the requests' creation date for the purge.
- **Requests created during <start_range> - <end_range>**—Select a date range for a purge based on the requests' creation date.
- **Requests created during <start_range> - <end_range>**—Select a date range for a purge based on the requests' start date.

Click **Delete Requests** to remove the requests.

Click **Revert** to cancel your changes.

Using the Tracking Module

The Tracking module is used to view the time records for individuals or groups of individuals, work with adherence, track a contact center's performance, and configure rules for alerting specific users when potential problems occur.

- **Adherence**

A performance assessment tool that lets managers and schedulers analyze employee adherence to schedules at any point during the day or to assess trends and potential problems.

- **Quick View**

Displays a snapshot of the current adherence information of selected agents. See "[Adherence Quick View](#)" (page 328).

- **Pulse**

Helps you track contact center performance. It collects your contact center data throughout the day from their ACD and compares your actual performance with forecast and required values, enabling you to analyze your performance and apply corrections as needed. See "[Pulse](#)" (page 331).

- **History**

Allows you to enter historical data into the application and edit it.

- **Alert Rules**

Allows you to view alert rules for three different scopes: organizations, campaigns, and the system as a whole. This section, "[Alert Rules](#)" (page 361), contains the following tabs:

- **Organization:** View alert rules pertaining to an organization.
- **Campaign:** View alert rules pertaining to a campaign.
- **System:** View alert rules pertaining to the Workforce Management system.

Note: As mentioned previously, there are two "flavors" of adherence available:

- Basic Adherence, which allows Real-time agent adherence tracking for phone-based activities.
- Advanced Adherence, which provides on top of Basic Adherence added adherence management capabilities for monitoring adherence to schedule for phone media, including aux codes and non-phone-based activities, as well as enabling management of adherence exceptions.

At the present time, the Operational Workforce Management, Advanced Workforce Management, Strategic Workforce Management, Workforce Management Express, and Performance Management Workforce Management solutions all include Advanced Adherence. Basic Adherence is available as an option for some other packages.

Adherence Quick View

Use the Quick View tab of the Adherence section of the Tracking module to display a snapshot of the current adherence information of selected agents. (Note that the following illustration shows the agents' organization. Your administrator can configure whether the organization column is displayed or not.)

Employee Selection

Employees are listed in the left pane of the **Time Records** window. You must select the employees you want to view in this pane.

- To view information, click one or more employees to highlight them, then click **View**.
- Use the **Ctrl** key to select groups of employees, or click **Select All** to highlight all the employees.
- Click **Select None** to deselect all the employees.
- Type a name in the **Find** box and click **Go** to locate a specific employee.

Filters

You can filter the **Name** list by selecting a filter from the **View** menu at the top of pane. Select **Create Filter** or **Edit Filters** to create a new filter or change an existing one.

The Quick View Pane

This pane consists of three containers:

- Adherence Status Summary
- Day Summary (up to now)

- a tabular display

Adherence Status Summary

The Adherence Status Summary container provides aggregate information for the selected employees:

- **Total Selected**—The total number of employees selected.
- **Total In**—The total number of selected employees currently logged onto the ACD system.
- **Out Of Adherence**—The number of selected employees currently out of adherence.
- **Too Long In Activity**—The number of selected employees currently exceeding the Maximum time in activity set in the Organization Activity setup.
- **Activity**—The activities that are scheduled and are actually being performed by the selected employees.

Day Summary (up to now)

This container lists information for the current day, for all of the selected employees. This summary data applies only to the current activities that the user(s) are in. In contrast to the other data on this page, the values listed here apply to the entire day, from 12:00 AM to the current time. The container lists the following:

- **Scheduled In-Office Hours:** The total duration of all scheduled activities for the day that do not map to the system-defined **No Activity** activity. This value counts the scheduled hours up to the current time only.

Note: The use of the term In-Office is not related to physically present employees vs. work-at-home employees.
- **Exceptions during In-Office Hours:** The total duration of all unapproved exceptions for the day that occur during scheduled activities that do not map to the system-defined **No Activity** activity. Only the minutes that overlap between the exceptions and the scheduled in-office hours are counted.
- **Day's Adherence:** The percentage of time during scheduled in-office hours that the employees are in adherence. This value is calculated using the following formula: **(1 - (Adherence Exceptions during In-Office Hours / Scheduled In-Office Hours)) * 100**. This value counts the scheduled hours up to the current time only.

Note: This calculation is computed using the exact underlying durations (with millisecond precision) , rather than using the rounded values displayed in the table. Also, the percentage is rounded to

the nearest integer. Therefore, the value displayed may be slightly different than the number you arrive at by your own calculations.

Tabular Display

Use this container to view a summary of the current adherence status for the selected employees.

Note: Collapse the top **Adherence Status Summary** and **Day Summary (up to now)** containers if you want additional room to view the adherence data in the lower container.

- Click the top of any column to sort by that column. Click again to reverse the sort order.
- To set the rate at which the page is updated, select the Refresh Rate from the drop down menu.
- Click the **pushpin** icon to make the selected employee stay at the top of the list when sorted.

The columns display the adherence status for the selected employees as of the displayed time:

- **Name**—The name of the employee.
- **Organization**—The organization to which the employee belongs. Depending on how your system is configured, you might not see this column.
- **Scheduled Activity**—The activity the employee is currently scheduled for.
- **Out of Adherence**—The time the employee has been continuously out of adherence (disregarding authorized exceptions).
- **Actual Activity**—The activity the employee is currently logged onto.
- **Time in Activity**—The amount of time the employee has been in the current state. This is measured against the setting of **Maximum time in activity**, which is set in the Organization Activity setup. If **Time In Activity** is greater than the **Maximum Time In Activity**, the colored box is red, indicating that a **Too Long In Activity** exception has occurred. Otherwise, the colored box is blank (with a solid white border), indicating that a **Too Long In Activity** exception has not occurred.
- **Day's Adherence:** The percentage of time during scheduled in-office hours that the employees are in adherence. This value is calculated using the following formula: **(1 - (Adherence Exceptions during In-Office Hours / Scheduled In-Office Hours)) * 100**. This value counts the scheduled hours up to the current time only.

Note: This calculation is computed using the exact underlying durations (with millisecond precision) , rather than using the rounded values displayed in the table. Also, the percentage is rounded to the nearest integer. Therefore, the value displayed may be slightly different than the number you arrive at by your own calculations.

Pulse

The Pulse section of the Tracking module is designed to help you track your contact center performance. It collects your contact center data throughout the day from your ACD and compares your actual performance with forecasted and required values, enabling you to analyze your performance and apply corrections as needed. Pulse also allows schedulers to enter historical data into the application and edit it.

It contains two tabs:

- **Pulse:** Helps you track your contact center performance. It collects your contact center data throughout the day from your ACD and compares your actual performance with forecast and required values, enabling you to analyze your performance and apply corrections as needed.
- **History:** Allows you to view (and schedulers to enter) historical data into the application and edit it. See "[History](#)" (page 354).

The Pulse Tab

This tab allows you to view call center data throughout the day as well as historical data.

Note: Not all ACDs provide all the statistics tracked by Workforce Management. You may not receive actual data, but you will see predicted and required data.

Queues are listed in the left pane of the Pulse tab. You must select the queues you want to view in this pane.

To view information, click one or more queues to highlight them, then click **View**.

- Use the **Ctrl** key to select groups of queues, or click **Select All** to highlight all the queues.
- Click **Select None** to deselect all the queues.

The right-hand portion of the Pulse tab is made up of three general areas:

1. The top panel
2. The data panel in the center
3. The bottom panel

The top panel contains the following controls, from left to right:

Control	Description
Campaign selector	Allows you to filter the queue list by selecting a campaign from the filter menu at the top of pane. Select a specific campaign for queues in the campaign or select a blank entry to display all queues, regardless of campaign.
Media selector	Allows you to filter the queue list by media type. Select a specific media type or select a blank entry to see all queues, regardless of media type.
View selector	A view defines a list of statistics to display. A dashed line divides the list of views. The views above the dashed lines are public; the views below the dashed lines are private.
Date Range/SP selector	(SP stands for scheduling period.) Specifies the date interval to be retrieved in the data panel. Depending on the setting of the Show SP selector/Show date range selector control, you are either given a list of scheduling periods (SPs) to choose from, or date range fields. You can either enter the from/to dates manually, or by using the date range selector. The maximum date range is 2 months (62 days).
Show SP selector/ Show date range selector	A toggle button that allows you to change the previous Date Range selector to the SP (schedule period) selector. If you have not selected a campaign in the left pane, the SP selector is not enabled, and this toggle is disabled.
Show/Hide Summary Table	Toggle to display or hide the summary tables.
Show/Hide Data Table	Toggle to display or hide the data table in the data panel.
Show Individual/ Aggregated Queues	Toggle to shift between the display of individual queues selected in the left pane queue selector or an aggregated view of the queues.
Show User/Campaign Timezone Queues	Display data in the campaign or users' time zone.
Zoom In	Changes the zoom mode to the next zoom mode level with greater detail. If you are viewing a single-week SP, or when no SP is selected, the only possible zoom mode levels (in order of decreasing detail) are Daily and Period. If you are viewing a multi-week SP, the possible zoom mode levels (in order of decreasing detail) are Daily, Weekly, and Period. If you are already at the Daily zoom mode level, this control is disabled.

Control	Description
Zoom Out	Changes the zoom mode to the next zoom mode level with less detail. If you are viewing a single-week SP, or when no SP is selected, the only possible zoom mode levels (in order of decreasing detail) are Daily and Period. If you are viewing a multi-week SP, the possible zoom mode levels (in order of decreasing detail) are Daily, Weekly, and Period. If you are already at the Period zoom mode level, this control is disabled.
Refresh	When you click this button, the data panel is refreshed with data from the server.

If you have an Operations license, an Organization selector is displayed below the Campaign selector.

If you select an organization, the queue pane shows all work queues that are linked to that organization through the Work Queue Configuration tab of the Work Queues section of the App Admin module.

Depending on the dates you have selected, there are three viewing modes:

- **Schedule Period**
The date ranges represent the same date intervals as a scheduling period. This period could be a single or multi-week scheduling period.
- **Campaign**
The date ranges do not fall exactly during an scheduling period interval, but a campaign is selected in the campaign filter on the left pane selector.
- **Free Range**
A campaign is not selected in the filter in the left pane. (Sometimes referred to as All Queues mode.)

To display your viewing mode, hover the cursor over the name of the queue(s) displayed in the top panel of this window.

The data panel is divided into three areas (from left to right):

1. Summary table

This table displays a summary of all days/weeks in the date range. The first-level column header of the summary table shows the list of queues currently selected. The second level column header shows Act (Actual) to indicate that actual data is being displayed (as opposed to forecasted/required data). Each summary table applies to all of the selected queues in the queue selector, but only to a single statistic defined in the selected view. The name of the statistic and the

calculation type (Absolute, Absolute Deviation, or Percentage Deviation) is displayed in the header of the corresponding graph.

Trend data, if enabled in the view (see "[Pulse Views](#)" (page 337)), is shown in blue and italicized, to distinguish it from other data.

If a multi-week SP is not selected, each data value in this table is an aggregation for a day. The last row in the table is a summary of the entire period. When you click a specific day in the table, the zoom mode level changes to Daily, and the graph and data table show data for the specified day in 15-minute intervals. When you click the last row (Period), the zoom mode level changes to Period, and the graph and data table display data spanning the full time period in 1-hour intervals.

If a multi-week SP is selected, then each data value aggregation displayed is based on the current zoom mode level. The summary table's rows contain data aggregations for each week in the scheduling period, and a Period row, which contains the total value for the entire scheduling period. If the current zoom mode level is Weekly or Daily, the summary table also displays data in daily aggregations for the currently selected week.

When you click the last row in the table (Period):

- The current zoom mode changes to Period zoom level.
- The summary table collapses to show only the weekly aggregations and the total row.
- The graph and data table display data spanning the full time period in 1-day intervals.

When you click a specific week row in the table:

- The current zoom mode changes to Weekly zoom level.
- The summary table expands the selected week to show all of the daily aggregations for that week.
- The graph and data table display data spanning the selected week in 1-hour intervals.

When you click a specific day row in the table:

- The current zoom mode changes to Daily zoom level.
- The graph and data table display data spanning the selected day in 15-minute intervals.

2. Graph

The graph displays the time period on the x-axis and the statistic value on the y-axis. The name of the statistic and the calculation type are

specified in the title of the graph. Each queue can have up to three lines: actual, forecasted, required.

The color of each statistic is specified in the headers of the summary table on the left.

If you hover the cursor over a line, a tool tip shows the line details. A dashed line represents a calculated trend. Trend will appear for the actual line only. A dashed vertical line represents the current time.

3. Data table

This table displays detailed values for the selected queues and statistics. The first level column header shows the statistic and calculation. The second level is the queue name or Aggregated when you are in aggregated mode. The third level denotes the type: Actual, Forecasted, or Required. The columns displayed depend on the queues you've selected in the left pane queue selector, and on the trace view selected in the top panel. The time interval toggles between 1-hour and 15-minute intervals depending on the zoom mode. Data can be copied to the clipboard by highlighting the data and using Ctrl-C.

The bottom panel contains the following controls:

- **Create View** - Click to create a new view.
- **Edit View** – Allows you to edit the current view displayed in the top panel.
- **Reforecast** – Saves the current forecast including the trend as a new forecast. This button is enabled under certain conditions:
 - Trending must be enabled in the view.
 - Pulse must be in Schedule Period mode. This means that a Campaign must be selected in the left frame, and the schedule period must be selected in the SP Selector. If the date range selector is shown instead of the SP Selector, the date range chosen must exactly match the SP start and end dates.
 - The date range is the current week.
 - You cannot reforecast if an Outbound or Project queue is selected (or if a combined queue is selected that has an outbound/project queue as one of its children). An outbound queue is a queue assigned to the Phone - Outbound media type. A Project queue is a queue assigned to the Project media type.
 - You cannot reforecast if the selected queue is the child of a distributed or virtual queue.
 - You cannot reforecast unless both **CV** and **AHT** are shown in the view.

- Your role must have been assigned the Reforecast privilege, and you must have been given campaign scope for the selected campaign.

Refer to ["Intra-Day Optimization" \(page 223\)](#) for more information on using the **Reforecast** button.

- **Configure Trend** – Modifies the parameters that define the trend calculation. This button is enabled when the date range is the current week, the mode is Scheduled Period, and Show Trend has been selected for the view. Refer to ["Intra-Day Optimization" \(page 223\)](#) for more information on using the **Configure Trend** button.
- **Export** – Exports current view data to a file.

Pulse Notes

As mentioned previously, you can create, edit, or view notes, which can be assigned to queues for a particular date/time range.

The page consists of a table that lists all of the notes for the current time period and set of queues.

The table includes the following columns:

Column	Usage
Created	The date when the note was first created. The data in this column is read-only.
Created By	The user name of the user who created the note. The data in this column is read-only.
Modified	The date when the note was last modified. The data in this column is read-only.
Modified By	The user who last modified the note. The data in this column is read-only.
Assigned Queues	The queues to which the note applies. To modify the queue assignments, click inside the Assigned Queues cell for the note to bring up the Assign Queues window.
Time Frame	The date/time range when the note is applicable.
Text	The actual note text. Click inside a note's Text cell to add or edit the text. Each note must be between 1 and 2000 characters long.

Pulse Data Types

Pulse allows you to view three types of data:

- **Actual**—Historical data from the ACD or other sources. See ["Exporting Pulse Data from the Pulse Tab" \(page 340\)](#).

- **Forecasted**—Predicted data derived from the Forecast module and the schedule created in the Calendar module.
- **Required**—Data derived from the Service Goals and Agent Requirements modules.

Pulse Views

A view defines a list of statistics to display. You can configure and save a variety of views. You can display a comparison of Absolute numbers or show the Deviation of the Actual data from the Forecasted and Required data. (Deviation data subtracts the selected statistic from the Actual data.)

To create or edit a customized view definition for Pulse:

Step	Action
------	--------

- | | |
|---|--|
| 1 | <p>Click the Create View or Edit View button found in the bottom panel. A window opens (labeled either Create View or Edit View, depending on which button you clicked).</p> |
|---|--|

This window consists of two sections: a set of general view parameter inputs at the top and a view definition table describing the set of graphs and data to be displayed at the bottom.

The view parameters include:

Parameter Name	Description
Name	The name of the defined view.
Description	The description of the defined view (optional).
Public View	Check this box if the defined view is to be visible to other users. (You must have been given the appropriate privileges to create a public view.)
Display HOO Only	Check this box if the view only displays the Hours of Operation (HOO) in campaign mode. (Any statistics for times and dates not part of the hours of operation are excluded from Pulse calculations if this box is checked.)
Show Trends	Check this box if the view is capable of showing trends.

- | | |
|---|--|
| 2 | <p>Add statistics to the view by clicking Add Statistics at the bottom of the window.</p> |
|---|--|

You can add the following statistics:

- **Contact Volume**—Actual data can be imported from your ACD. Forecasted data comes from the Forecasting and Scheduling

Forecast module. If Actual data is higher than Forecasted data, the volume is higher than expected.

- **Average Handle Time**—Actual data can be imported from your ACD. Forecasted data comes from the Forecast module of Forecasting and Scheduling. If Actual data is higher than Forecasted data, the Average Handle Time (AHT) is longer than expected.
- **Service Level**—Actual data can be imported from your ACD. Required data comes from the Service Goals module of Forecasting and Scheduling; Forecasted data comes from the Calendar module of Forecasting and Scheduling. If Actual data is higher than Forecasted or Required data, the service level is better than expected.
- **Average Speed to Answer**—Actual data can be imported from your ACD. Required data comes from the Service Goals module of Forecasting and Scheduling; Forecasted data comes from the Calendar module of Forecasting and Scheduling. If Actual data is higher than Forecasted or Required data, the Average Speed to Answer (ASA) is longer than expected.
- **Abandons**—Actual data can be imported from your ACD. Required data comes from the Service Goals module of Forecasting and Scheduling. If Actual data is higher than Required data, there are more abandonments than expected.
- **Backlog**—The total number of queued contacts (for deferred queues only).
- **Staffing**—Actual data can be imported by schedulers. Required data comes from the Agent Requirements module of Forecasting and Scheduling; Forecasted data comes from the Calendar module of Forecasting and Scheduling. If Actual data is higher than Forecasted or Required data, overstaffing is indicated.
- **Occupancy**—A measure of how busy your agents will be. For example, if out of two hours scheduled to be on the phone, an agent spends one hour on call-related work, then his occupancy is 50%. This figure is based on the scheduling simulations.
- **Full Time Equivalent**—The number of scheduled hours divided by the hours in a full work week gives the hypothetical number of full time equivalent (FTE) employees needed. The hours of several part time agents may add up to one FTE.

If your company is licensed for Outbound Media, the following statistics are also included:

- **Connects**—The total count of outbound dials that were made in a given interval that connected to a person.
- **Dials**—The total count of outbound dials that were made in a given interval. This count includes connects, right party connects, and dials that did not connect to a person.
- **Right Party Connect AHT**—The average talk time of all right party connects in this interval.
- **Right Party Connects**—The total count of outbound dials that were made in a given interval that connected to the person that was intended to be reached. These numbers will not be redialed because the right party has been reached.

If your company is licensed for Operations, the following statistic might also be included (depending on your system's configuration):

- **Volume Handled**—Consists only of actual data (no forecasted, for example), and is used for calculating weighted averages.

- 3 Click on which data to display for the various statistics. Options include:

Display Data	Description
Absolute Actual	Check this box if the view is to display the absolute actual statistics for the given statistic.
Absolute Forecasted	Check this box if the view is to display the absolute forecasted statistics for the given statistic.
Absolute Required	Check this box if the view is to display the absolute required statistics for the given statistic.
Absolute Deviation Forecasted	Check this box if the view is to display the absolute deviation of the forecasted vs. actual statistics for the given statistic.
Absolute Deviation Required	Check this box if the view is to display the absolute deviation of the required vs. actual statistics for the given statistic.

Display Data	Description
Percentage Deviation Forecasted	Check this box if the view is to display the percentage deviation of the forecasted vs. actual statistics for the given statistic.
Percentage Deviation Required	Check this box if the view is to display the percentage deviation of the required vs. actual statistics for the given statistic.

- 4 Rank the various statistics higher or lower using the upward or downward buttons as appropriate.
- 5 Remove any unwanted statistics by clicking the **Withdrawn** button.
- 6 Click **Save** to save the view and return to the main Pulse window.

—End—

Exporting Pulse Data from the Pulse Tab

To export Pulse data from the Pulse tab:

Step	Action
------	--------

- 1 Click **Export** at the bottom right of the tab. The **Pulse Export** dialog box is displayed.

The dialog contains the following parameters:

Parameter	Description
Queues	A read-only text field that enumerates the queues to be exported.
Destination File	The file path where the exported data will be saved.
Time Zone	You choose in which Time Zone data will be exported.
Time Interval	You choose in which time interval data will be exported
Delimiter	You choose which delimiter to put between columns in the exported data file.

- 2 Fill in the **Destination File**, **Time Zone**, **Time Interval**, and **Delimiter** fields as appropriate for your situation.
- 3 Click **Export** to export the data from the current view.

- 4 Click **Cancel** to cancel the export.

—End—

Staffing Requirements in a Skills-Based Campaign

Staffing numbers (requirements and actuals) are often viewed as some of the most critical data for someone running a contact center. Although information on predicted service levels, etc. in a skills-based environment is interesting and helpful, these statistics do not allow you to determine whether you are going to meet your service Level, and if not, what then to do, such as how many agents are needed on the phone, or, if you are overstaffed, how many people can you send home.

Determining the number people you need in a skills-based environment is complex. Generally speaking, it is difficult to determine you need X people, because the number of people that are needed depends on the skills of the individuals available. The Impact 360 provides two different Pulse views into staffing to help you:

1. Staffing (how many actual employees)
2. Full Time Equivalents (the effective contribution needed)

Staffing One way to measure staffing numbers is to look at the number of bodies, or people, that have a given skill. The information shown differs slightly depending on whether you are looking at a single queue in a campaign, or the combined queue for a campaign. For the Staffing graph, you see the following in each of the above-named circumstances for each interval:

- For combined queues:
 - **Actual:** The number of agents from the campaign logged in during the interval (taken from adherence data).
 - **Forecasted:** The number of agents scheduled in the campaign.
 - **Required** (only available in non-skill based campaigns): The equivalent to required FTEs, assuming all agents handle all queues.
- For individual queues:
 - **Actual:** The number of logged-in agents from this campaign that have the required skill (taken from adherence data coupled with employee skill data).
 - **Forecasted:** The number of agents on the schedule with the skill associated to the given queue.
 - **Required:** not available.

- For several individual queues:
 - **Actual:** The number of logged-in agents from this campaign that have any of the required skills linked to the selected queues (taken from adherence data coupled with employee skill data).
 - **Forecasted:** The number of agents on the schedule with the skills associated to all of the selected queues.
 - **Required:** not available.

Determining Agent Count Based on Skill Assignments The association between the skills of an agent and a given queue are determined using the campaign Operations module mapping between skills and queues. This mapping might change from week to week under different campaign weeks.

When you view this data in Pulse on the campaign side, only mappings from the given campaign and campaign week are used. When you view this data on the organization side of Pulse, all campaign weeks defined for the viewing period are referenced to determine the linkages.

- Proficiencies and priorities are not considered when counting bodies staffed.
- Reserve skills are not used when counting bodies staffed.

Determining Actual Staffing from Adherence Information Because of the limitations and inaccuracies involved with obtaining staffing numbers from traditional Direct Contact Statistics (DCS) reports, Workforce Management determines the actual staffing from Adherence and Time Collection information.

To determine if an agent should count towards the Bodies staffing numbers, there the media association of the actual activity being worked is checked. When determining Forecasted bodies from the schedule, this association is also referenced to ensure a fair comparison of data.

The Bodies staffing numbers are displayed in Pulse on a 15-minute basis; the determination of the actual number of bodies for each skill and combination thereof is determined at the end of each 15 minute time interval (e.g., at 10:00, 10:15, 10:30, etc.). Agents must be logged in for at least half of the interval to count as being staffed for the interval.

For agents doing work other than phone work, where they are always logged into the ACD, Workforce Management uses Time Collection data from the Agent Control module (if used), or the auxiliary codes that agents enter into the phone system to indicate that they will be doing work on another media.

Only the agents' skills based on the scheduled activity or recorded actual activity are used in the Bodies calculation.

If any events are auto-closed, or additional changes are made to the actual activities (by the managers), staffing numbers must be recalculated.

FTEs The other way to measure staffing is to look at the effective contribution of each agent given the skill mix. This information differs depending on whether you are looking at a single queue in a campaign, or the combined queue for a campaign. For the FTEs graph, you see the following in each of the above circumstances for each interval:

- For combined queues:
 - **Forecasted FTEs:** The sum of the contributions of all agents scheduled in the campaign over all queues in the campaign. In a non-skills based campaign, you see the contribution of all agents, based on the assumption that all agents can work on all queues. The value shown for FTEs is therefore equal in this case to the values shown for Staffing.
 - **Required FTEs:** The sum of the requirements from each individual queue, assuming that each one is non-skills based. (This figure is identical to that shown using the Comparison Tool for skills campaigns.) In a non-skills based campaign, you see the requirement for all agents, based on the assumption that all agents can work on all queues.
 - **Actual FTEs:** The sum over all queues of the effective contribution based on the actual CV, AHT, Abandons, and SL.
- For individual queues:
 - **Forecasted FTEs:** The contributions of all agents scheduled to work on this queue.
 - **Required FTEs:** The requirement for the queue assuming it is non-skills based. (This figure is identical to that shown using the Comparison Tool for skills campaigns.)
 - **Actual FTEs:** The effective contribution based on the actual CV, AHT, Abandons, and SL.
- For several individual queues:
 - **Forecasted FTEs:** The sum of the contributions of all agents scheduled in the campaign over all selected queues.
 - **Required FTEs:** The sum of the requirements from each selected individual queue, assuming that each one is non-skills based.
 - **Actual FTEs:** The sum over all selected queues of the effective contribution based on the actual CV, AHT, Abandons, and SL.

Pulse Statistics

Pulse collects your contact center data throughout the day from your ACD and compares your actual performance with forecast and required values, enabling you to analyze your performance and apply corrections as needed.

Pulse displays statistics for each media type and queue. The statistics available depend on whether the campaign is in skills or non-skills mode and whether you are using a single or multiple queue setup.

The following tables summarize the statistics and their source for each type of setup.

Non-Skills with a Single Queue

Non-Skills: Single queue linked to Campaign week			
	Required	Forecasted/ Predicted	Actual
Abandons (Abandoned calls)	Does not exist.	This value is based on the call volume you have forecasted in the Forecast module and the % abandons you set in the Service Goals module.	Comes from the ACD
AHT	Does not exist. You will not see the Blue Required Line.	Part of the forecast you generated in the Forecast module by adding historical weeks or profile	Comes from the ACD
ASA	The ASA (number of secs) value you input into the Service Goals module. This is only shown if ASA is the selected goal.	The service levels Forecasting and Scheduling generates only after you create a schedule. ASA is always generated after a schedule even if ASA is not your goal. This represents the predicted time in which you will answer calls based on the number of people on the schedule.	Comes from the ACD

Non-Skills: Single queue linked to Campaign week			
	Required	Forecasted/ Predicted	Actual
Call Volume	Does not exist.	Your forecast is generated in the Forecast modules by adding historical weeks or a profile.	Comes from the ACD
Full Time Equivalents	The effective contribution requirement.	The effective contributions of all agents scheduled to work on this queue.	The effective contribution based on the actual CV, AHT, Abandons, and SL.
Occupancy	Does not exist.	Predicted occupancy is a measure of how busy your agents will be. For example, if an agent spends 1 hour on call related work out of 2 hours scheduled to be on the phone, then his occupancy is 50%.	Comes from the ACD
Service Level	The service level value (% calls in number of secs) you input into the Service Goals module. This is only shown if Service Level is the selected goal in the module.	This number is the expected service level based on the number of people you have on the phones. This is only generated if Service Level is your goal type.	Comes from the ACD
Staffing	Does not exist. See instead Full Time Equivalents above.	Forecasted/Predicted staffing represents the number of agents on the phones on your schedule. Agents in calendar events or shift activities do not count. This number does not exist until you create a schedule. Staffing differentials are forecasted staff minus required staffing.	Comes from the ACD or the staffing calculator.
Volume Handled (if you	Does not exist.	Does not exist.	Comes from the ACD. Volume Handled, when available, is used for

Non-Skills: Single queue linked to Campaign week			
	Required	Forecasted/ Predicted	Actual
are licensed for Operations and configured to use Volume Handled)			calculating weighted averages for Actual Service Level and Actual AHT values.

Non-Skills with Multiple Queues

Non-Skills: <Combined> queue view in multi-queue scenarios			
	Required	Forecasted/ Predicted	Actual
AHT	Does not exist.	Part of the forecast you generated in the Forecast module by adding historical weeks or profile	Comes from the ACD
ASA	The ASA (number of secs) value you input into the Service Goals module. This is only shown if ASA is the selected goal.	The service levels Forecasting and Scheduling generates only after you create a schedule. ASA is always generated after a schedule even if ASA is not your goal. This represents the predicted time in which you will answer calls based on the number of people on the schedule.	Comes from the ACD
Abandons (Abandoned calls)	Does not exist.	This value is based on the call volume you have forecasted in the Forecast module and the % abandons you set in the Service Goals module.	Comes from the ACD
Call Volume	Does not exist. You will not see the Blue Required Line.	Your forecast is generated in the Forecast modules by adding historical weeks or a profile.	Comes from the ACD

Non-Skills: <Combined> queue view in multi-queue scenarios			
	Required	Forecasted/ Predicted	Actual
Full Time Equivalents	The sum of the effective contribution requirements from each individual queue.	The effective contributions of all agents	The sum over all queues of the effective contribution based on the actual CV, AHT, Abandons, and SL.
Occupancy	Does not exist.	Predicted occupancy is a measure of how busy your agents will be. For example, if an agent spends 1 hour on call related work out of 2 hours scheduled to be on the phone, then his occupancy is 50%.	Not available.
Service Level	The service level value (% calls in number of secs) you input into the Service Goals module. This is only shown if Service Level is the selected goal in the module.	This number is the expected service level based on the number of people you have on the phones.	Comes from the ACD
Staffing	Does not exist. See instead Full Time Equivalents previous in this table.	Forecasted/Predicted staffing represents the number of agents on the phones on your schedule. Agents in calendar events or shift activities do not count. This number does not exist until you create a schedule. Staffing differentials are forecasted staff minus required staffing.	This is only available from the Staffing Calculator.
Volume Handled (if you are licensed for Operations and configured to use Volume Handled)	Does not exist.	Does not exist.	Comes from the ACD. Volume Handled, when available, is used for calculating weighted averages for Actual Service Level and Actual AHT values.

Non-Skills: Multiple queues—looking at each individual queue			
	Required	Forecasted/ Predicted	Actual
Abandons (Abandoned calls)	Does not exist.	The value only exists for <Combined>.	Comes from the ACD
AHT	Does not exist.	Part of the forecast you generated in the Forecast module by adding historical weeks or profile. This is the value just for the selected queue, not the <Combined> forecast.	Comes from the ACD
ASA	This value only exists for <Combined>.	The value only exists for <Combined>. You will not see the Green Forecasted Line.	Comes from the ACD
Call Volume	Does not exist.	Forecast your generated in the Forecast modules by adding historical weeks or a profile. This is the value just for the selected queue, not the <Combined> forecast.	Comes from the ACD
Full Time Equivalentents	This value only exists for <Combined>.	This value only exists for <Combined>.	The effective contribution based on the actual CV, AHT, Abandons, and SL.
Occupancy	No such thing	This value only exists for <Combined>.	Comes from the ACD
Service Level	This value only exists for <Combined>.	This value only exists for <Combined>.	Comes from the ACD
Staffing	Does not exist. See instead Full Time Equivalentents previous in this table.	This value only exists for <Combined>.	Comes from the ACD or the Staffing Calculator.

Skills

Skills: <Combined> queue view in multi-queue scenarios			
	Required	Forecasted/ Predicted	Actual
Abandons (Abandoned calls)	Does not exist.	Forecasted abandons at the <Combined> view is equal to the average predicted abandons across all queues.	Sum of the abandons per queue delivered by the ACD.
AHT	Does not exist.	Part of the forecast you generated in the Forecast module by adding historical weeks or profile. This will be the same as you <Combined> forecast.	Comes from the ACD
ASA	ASA is not supported in Skills.	Forecasting and Scheduling generates this for you after you have generated a schedule. This line is a call weighted average of the forecasted ASA calculated for each queue.	Comes from the ACD
Backlog	No such thing	This is the sum of the individual backlogs from all queues.	Comes from the ACD
Call Volume	Does not exist.	Forecast your generated in the Forecast modules by adding historical weeks or a profile. This will be the same as your <Combined> forecast.	Sum of the call volumes presented by the ACD for each of the individual queues.
Full Time Equivalentents	The sum of the effective contribution requirements from each individual queue.	The sum of the effective contributions of all agents scheduled in the campaign over all queues in the campaign.	The sum over all queues of the effective contribution based on the actual CV, AHT, Abandons, and SL.
Occupancy	No such thing	This is the average occupancy across all queues.	Comes from the ACD

Skills: <Combined> queue view in multi-queue scenarios			
	Required	Forecasted/ Predicted	Actual
Service Level	This line is a call weighted average of the goals set in the Service Goals module for each queue.	Forecasting and Scheduling generates this for you after you have generated a schedule. This line is a call weighted average of the forecasted service levels calculated for each queue.	Comes from the ACD
Staffing	You will not see the Blue Required Line. See Full Time Equivalents previous in this table.	Forecasted staffing at the <Combined> number of agents you have on the schedule who are scheduled for phone time.	This is only available from the Staffing Calculator.
Volume Handled (if you are licensed for Operations and configured to use Volume Handled)	Does not exist.	Does not exist.	Comes from the ACD. Volume Handled, when available, is used for calculating weighted averages for Actual Service Level and Actual AHT values.

Skills: Individual queue view in skills scenarios			
	Required	Forecasted/ Predicted	Actual
Abandons (Abandoned calls)	Does not exist.	The predicted abandons for the queue.	Comes from the ACD
AHT	Does not exist.	Part of the forecast you generated in the Forecast module by adding historical weeks or profile.	Comes from the ACD
ASA	ASA is not supported in Skills.	Forecasting and Scheduling generates this for you after you have generated a schedule.	Comes from the ACD

Skills: Individual queue view in skills scenarios			
	Required	Forecasted/ Predicted	Actual
Backlog	No such thing	Forecasting and Scheduling generates this for you after you have generated a schedule.	Comes from the ACD
Call Volume	Does not exist. You will not see the blue Required Line.	Forecast your generated in the Forecast modules by adding historical weeks or a profile.	Comes from the ACD
Full Time Equivalentents	The effective requirements in dedicated agents for each individual queue.	The effective contributions of agents scheduled in the queue.	The effective contribution based on the actual CV, AHT, Abandons, and SL.
Occupancy	No such thing	This is the average occupancy across all queues.	Comes from the ACD
Service Level	The goals set in the Service Goals module for each queue.	Forecasting and Scheduling generates this for you after you have generated a schedule.	Comes from the ACD
Staffing	You will not see the Blue Required Line. See Full Time Equivalentents previous in this table.	The number of agents you have on the schedule who are scheduled for this queue.	Comes from the ACD or from the staffing calculator.

Virtual Queues

Virtual Queue			
	Required	Forecasted/ Predicted	Actual
Abandons (Abandoned calls)	Same as a normal queue.	Same as a normal queue.	Sum of the abandons from the subqueue delivered by the ACD.
AHT	Same as a normal queue.	Same as a normal queue.	Call volume weighted average of the subqueues from the ACD.

Virtual Queue			
	Required	Forecasted/ Predicted	Actual
ASA	Same as a normal queue.	Same as a normal queue.	Call volume weighted average of the subqueues from the ACD.
Backlog	Same as a normal queue.	Same as a normal queue.	The sum over all the subqueues from the ACD.
Call Volume	Same as a normal queue.	Same as a normal queue.	The sum over all the subqueues from the ACD.
Full Time Equivalents	Same as a normal queue.	Same as a normal queue.	The sum over all the subqueues from the ACD.
Occupancy	Same as a normal queue.	Same as a normal queue.	Not available.
Service Level	Same as a normal queue.	Same as a normal queue.	Call volume weighted average of the subqueues from the ACD.
Staffing	Same as a normal queue.	Same as a normal queue.	This is only available from the staffing calculator.
Volume Handled (if you are licensed for Operations and configured to use Volume Handled)	Does not exist.	Does not exist.	Comes from the ACD. Volume Handled, when available, is used for calculating weighted averages for Actual Service Level and Actual AHT values.

Distributed Queues

Distributed Queue or Combined View of Distributed Queues			
	Required	Forecasted/ Predicted	Actual
Abandons (Abandoned calls)	Does not exist.	Sum of the forecasted abandons from the subqueue or the combined queues in the subcampaigns.	Sum of the abandons from the subqueue delivered by the ACD.

Distributed Queue or Combined View of Distributed Queues			
	Required	Forecasted/ Predicted	Actual
AHT	Does not exist.	Call volume weighted average of the subqueues' forecasts.	Call volume weighted average of the subqueues from the ACD.
ASA	Call volume weighted average of the required ASA from the combined queues in the subcampaigns. Only available at the combined level in non-skills campaigns.	Call volume weighted average of the forecasted ASA from the subqueue or the combined queues in the subcampaigns.	Call volume weighted average of the subqueues from the ACD.
Backlog	Does not exist.	Sum of the forecasted backlog from the subqueue or the combined queues in the subcampaigns.	The sum over all the subqueues from the ACD.
Call Volume	Does not exist.	Sum of the subqueues' forecasts.	The sum over all the subqueues from the ACD.
Full Time Equivalents	Sum of the required FTEs from the subqueue or the combined queues in the subcampaigns.	Sum of the forecasted FTEs from the subqueue or the combined queues in the subcampaigns.	The sum over all the subqueues from the ACD.
Occupancy	Does not exist.	Not available.	Not available.
Service Level	Call volume weighted average of the required service levels from the subqueue or the combined queues in the subcampaigns.	Call volume weighted average of the forecasted service levels from the subqueue or the combined queues in the subcampaigns.	Call volume weighted average of the subqueues from the ACD.
Staffing	Does not exist.	Not available.	This is only available from the staffing calculator.
Volume Handled (if you are licensed for Operations and configured to use Volume Handled)	Does not exist.	Does not exist.	Comes from the ACD. Volume Handled, when available, is used for calculating weighted averages for Actual Service Level and Actual AHT values.

History

Use the **History** tab to view historical actual data. (The Schedulers role by default is the only role allowed to edit this information.)

Queues are listed in the left pane of the **History** tab. You must select the queues you want to view in this pane.

To view information:

Step	Action
1	Click one or more queues to highlight them.
2	Click View . <ul style="list-style-type: none"> • Use the Ctrl key to select groups of queues, or click Select All to highlight all the queues. • Click Select None to deselect all the queues.

—End—

The right-hand portion of the History tab is made up of three general areas:

1. The top panel.
2. The data panel in the center.
3. The bottom panel.

The top panel contains the following controls, from left to right:

Control	Description
Campaign selector	Allows you to filter the queue list by selecting a campaign from the filter menu at the top of pane. Select a specific campaign for queues in the campaign or select a blank entry to display all queues, regardless of campaign.
Media selector	Allows you to filter the queue list by media type. Select a specific media type or select a blank entry to see all queues, regardless of media type.
Date Range/ SP selector	(SP stands for scheduling period.) Specifies the date interval to be retrieved in the data panel. Depending on the setting of the Show SP selector/Show date range selector control, you are either given a list of scheduling periods (SPs) to choose from, or date range fields. You can either enter the from/to dates manually, or by using the date range selector. The maximum date range is 2 months (62 days).

Control	Description
Show SP selector/ Show date range selector	A toggle button that allows you to change the previous Date Range selector to the SP (schedule period) selector. If you have not selected a campaign in the left pane, the SP selector is not enabled, and this toggle is disabled.
Show/Hide Summary Table	Toggle to display or hide the summary tables.
Show/Hide Data Table	Toggle to display or hide the data table in the data panel.
Show Individual/ Aggregated Queues	Disabled on this tab.
Show User/Campaign Timezone Queues	Display data in the campaign or users' time zone.
Zoom In	Changes the zoom mode to the next zoom mode level with greater detail. If you are viewing a single-week SP, or when no SP is selected, the only possible zoom mode levels (in order of decreasing detail) are Daily and Period. If you are viewing a multi-week SP, the possible zoom mode levels (in order of decreasing detail) are Daily, Weekly, and Period. If you are already at the Daily zoom mode level, this control is disabled.
Zoom Out	Changes the zoom mode to the next zoom mode level with less detail. If you are viewing a single-week SP, or when no SP is selected, the only possible zoom mode levels (in order of decreasing detail) are Daily and Period. If you are viewing a multi-week SP, the possible zoom mode levels (in order of decreasing detail) are Daily, Weekly, and Period. If you are already at the Period zoom mode level, this control is disabled.
Pulse Notes	Click the Pulse Notes button to open the View/Edit Notes pop-up window, which allows you to create a note for the selected week or scheduling period. Such notes can help you identify any special situations that occurred during the period. This button changes if you select a period that has a note associated with it. Click the button to open the View/Edit Notes pop-up window to view the note.
Refresh	When you click this button, the data panel is refreshed with data from the server.

Depending on the dates you have selected, there are three viewing modes:

- Schedule Period

The date ranges represent the same date intervals as a scheduling period. This period could be a single or multi-week scheduling period.

- Campaign

The date ranges do not fall exactly during an scheduling period interval, but a campaign is selected in the campaign filter on the left pane selector.

- Free Range

A campaign is not selected in the filter in the left pane. (Sometimes referred to as All Queues mode.)

In addition to the three modes mentioned above, Pulse can be in Edit mode, which indicates that you have manually modified or imported some data which has not yet been saved to the database. When you are in Edit mode, auto refresh is disabled.

To display your viewing mode, hover the cursor over the name of the queue(s) displayed in the top panel of this window.

The data panel is divided into three areas (from left to right):

1. Summary table

This table displays a summary of all days/weeks in the date range. The first-level column header of the summary table shows the list of queues currently selected. The second level column header shows Act (Actual) to indicate that actual data is being displayed (as opposed to forecasted/required data). Each summary table applies to all of the selected queues in the queue selector, but only to a single statistic defined in the selected view. The name of the statistic and the calculation type (Absolute) is displayed in the header of the corresponding graph.

If a multi-week SP is not selected, each data value in this table is an aggregation for a day. The last row in the table is a summary of the entire period. When you click a specific day in the table, the zoom mode level changes to Daily, and the graph and data table show data for the specified day in 15-minute intervals. When you click the last row (Period), the zoom mode level changes to Period, and the graph and data table display data spanning the full time period in 1-hour intervals.

If a multi-week SP is selected, then each data value aggregation displayed is based on the current zoom mode level. The summary table's rows contain data aggregations for each week in the scheduling period, and a Period row, which contains the total value for the entire scheduling period. If the current zoom mode level is Weekly or Daily, the summary table also displays data in daily aggregations for the currently selected week.

When you click the last row in the table (Period):

- The current zoom mode changes to Period zoom level.
- The summary table collapses to show only the weekly aggregations and the total row.
- The graph and data table display data spanning the full time period in 1-day intervals.

When you click a specific week row in the table:

- The current zoom mode changes to Weekly zoom level.
- The summary table expands the selected week to show all of the daily aggregations for that week.
- The graph and data table display data spanning the selected week in 1-hour intervals.

When you click a specific day row in the table:

- The current zoom mode changes to Daily zoom level.
- The graph and data table display data spanning the selected day in 15-minute intervals.

2. Graph

The graph displays the time period on the x-axis and the statistic value on the y-axis. The name of the statistic and the calculation type are specified in the title of the graph. Only the actual line is shown for each queue.

The color of each statistic is specified in the headers of the summary table on the left.

If you hover the cursor over a line, a tool tip shows the line details. A dashed vertical line represents the current time.

3. Data table

This table displays detailed values for the selected queues and statistics. The first level column header shows the statistic and calculation. The second level is the queue name. The third level denotes the type Actual. The columns displayed depend on the queues you've selected in the left pane queue selector, and on the statistics you selected using the Edit View button on the bottom panel. The time interval toggles between 1-hour and 15-minute intervals, based on the zoom mode. Data can be copied to the clipboard by highlighting the data and using Ctrl-C.

To make changes to the data, select a cell to edit, and type in the new value. To edit a range of values, select the range and type a value. All cells in the range are modified with the new value. Once you edit some

data, you are in Edit mode until you click the Save or Revert button. Editing of combined queue data or future data is not allowed.

The bottom panel contains the following active control:

- **Edit View** – Allows you to edit the current view displayed in the top panel.
- **Save** – Saves the edited values in the data panel. Once you click **Save**, editing mode is terminated.
- **Revert** – Reverts back to original values before you changed them in edit mode. Once you click **Revert**, editing mode is terminated.
- **Import**—Imports data from a file.
- **Export** – Exports current view data to a file.

Importing Data into the Pulse History Tab

Pulse Actual data can be imported from applications that can create text files that use tabs or commas. Pulse data can be exported in tabbed or comma-separated text. Imported data is saved and can be used to forecast future scheduling requirements.

To import data into Pulse history:

Step	Action
1	<p>Click Import. The Pulse Import dialog box is displayed</p> <p>The dialog box contains the following parameters:</p> <ul style="list-style-type: none"> • Source File – The file path where the data to be imported is located. • Time Zone – You choose in which Time Zone the data will be imported. • Time Interval – You choose in which time interval data will be imported • Delimiter – You choose which delimiter was put between columns in the imported data file, Tab or Comma.

The dialog box also contains a mapping table with a list of available statistics that you can import from the file. You need to map each statistic to its corresponding column number in the file.

The statistics include:

- Contact Volume
- Average Handling Time
- Service Level

- Average Speed to Answer
- Abandons
- Backlog
- Staffing
- Occupancy
- Full Time Equivalents
- Volume Handled

Other columns that also need to be mapped are:

- Queue Name
- Name
- Time

Click **Import** to import the data from the current view.

Click **Cancel** to cancel the export.

—End—

Import File Dependencies Pulse assumes that imported information uses the following default formats for date and time respectively:

- Date: MM/dd/yyyy
- Time: HH:mm (24-hour format)

If the data you want to import does conform to these defaults, you must prepend the following lines to the import file:

```
DATE_TIME_FORMAT
<date_time_format_string>
```

The specification for the <date_time_format_string> can be found at <http://java.sun.com/j2se/1.4.2/docs/api/java/text/SimpleDateFormat.html>.

The following shows an excerpt from a comma-separated file that can be imported into Pulse History. (The symbol ¶ is used in the example to show line breaks; it is not part of the file.)

```
DATE_TIME_FORMAT¶
MM/dd/yyyy h:mm a¶
Queue Name,Date,Time,Time Interval,Contact Volume (Absolute
Act),Contact Volume (Absolute For),Contact Volume (Percentage
Deviation For),Average Handling Time (Absolute Act),Average
```

```

Handling Time (Absolute For),Service Level (Absolute
Act),Service Level (Absolute For),Service Level (Absolute
Req) ¶
Billing,10/04/2004,12:00 AM,00:15,,0,,0,,0,0¶
Billing,10/04/2004,12:15 AM,00:15,,0,,0,,0,0¶
Billing,10/04/2004,12:30 AM,00:15,,0,,0,,0,0¶
Billing,10/04/2004,12:45 AM,00:15,,0,,0,,0,0¶

```

Pulse also requires that dates and times be expressed in GMT timezone terms when you import from All Queues mode. (The only option in the Import window is GMT.) Note that the imported data, however, is displayed in the TimeZone specified in your preferences. (See "[Setting Preferences](#)" (page 279).)

Data imported from Campaign mode (that is, when you have selected a campaign on the left) can be imported either in GTM timezone or the campaign timezone.

Exporting Pulse Data from the History Tab

To export Pulse data from the History tab:

Step	Action
------	--------

- 1 At the bottom right of the tab, click **Export**. The Pulse **Export** dialog box is displayed.

The dialog box contains the following parameters:

Parameter	Description
Queues	A read-only text field that enumerates the queues to be exported.
Destination File	The file path where the exported data will be saved.
Time Zone	You choose in which Time Zone data will be exported.
Time Interval	You choose in which time interval data will be exported.
Delimiter	You choose which delimiter to put between columns in the exported data file.

- 2 Fill in the **Destination File**, **Time Zone**, **Time Interval**, and **Delimiter** fields as appropriate for your situation.
- 3 Click **Export** to export the data from the current view.
- 4 To cancel the export, click **Cancel**.

—End—

Alert Rules

This section contains the following tabs:

Tab	Description
Campaign	View alert rules pertaining to a campaign.
System	View alert rules pertaining to the Impact 360 system.

Alert rules are used to specify events that generate alerts to specified users or targets. Currently, alerts are delivered by email.

Alert rules are defined in relation to a scope (Campaign or System). Some rules are valid only within a certain scope.

Organization Tab

Use the **Organization** tab to create, edit, or delete alert rules for your organizations (depending on your privileges).

The following alert rule templates are currently available in Organization scope:

- **KPI out of range:** An alert is sent when a KPI falls outside a range. The alert is sent
 - for all employees/organizations or any employee who has the job title specified in the rule
 - where the employee's/organization's KPI value/score is of the specified periodicity (daily, weekly, monthly, quarterly, or annually)
 - where the KPI value/score is less than or equal to/greater than or equal to a threshold (Excellent, Good, Average, Poor or Bad in case of score)

and/or

 - the employee/organization has no dependencies on peer value or the employee/organization is below the specified percentile of his organization for <x> out of the last <y> periods (as specified in the periodicity)

Note: Where eLearning is also licensed, this alert rule can also be used to assign selected lessons, and/or assign lessons mapped to a specific competency.

For example, a manager might receive a message similar to the following:

The following employees are found to be below thresholds defined for kpi CompetencyKPI for the rule Alert Rule All:

Canfield, Heather; Jupin, Kimberley; Ligsay, George; Liter, Eric; Onken, Allison; Ruth, David; Yost, Brian

- **Out of Adherence:** An alert is sent when an employee is out of adherence. Out of Adherence alert rules take one of two forms:
 - **Employee out of adherence for more than X minutes for activity Y:** If an employee is in a non-adhering state (continuously, for planned activity Y) for more than X minutes, an alert is sent. (If the duration of the planned activity Y is less than X minutes, the alert will not be triggered even if the employee has been out of adherence for more than X minutes on some other planned activities.)

Note: Employees are not considered to be in a non-adhering state until they have been out of adherence for more than the tolerance (minutes) for the current planned activity.
 - **Employee out of adherence for more than X minutes for any activity:** If an employee is in a non-adhering state (continuously, for any planned activity) for more than X minutes, an alert is sent. In this case, the computation for X minutes is the same as that used for the Out of Adherence column on the Quick View tab (see the chapter “Using the Tracking Module,” in the Workforce Management Managers Guide for more information on the Quick View tab).

For example, the employee’s manager might receive a message similar to the following:

The following employee(s) are out of adherence:

Eckersley, Dennis	
Eckersley, Dennis	
Planned Activity:	
Actual Activity:	Blended
Minutes Out Of Adherence:	33

- **Request Status Change Rule:** An alert is sent when an employee’s time-off or shift-swap request changes status. For example:

time-off

Submitted on	10/19/2007 2:25 PM
Status	approved
Employee	west, agent5
Timeoff type	Vacation
Approved choice	1
Start time	11/27/2007 10:00 PM
End time	11/28/2007 10:00 PM
View Request	Link to Request

Note: Depending on the employee's privileges and the manager's privileges, the email they receive might contain a link that will open Workforce Management with the relevant request displayed.

- **Request Status Change Rule (batch):** The system checks at the specified intervals for changes in the requests of multiple, specified employees. One alert message is sent with the aggregated changes during the specified interval. Compare this rule with Request Status Change Rule, described above.

For example, the employees' manager might receive a message similar to the following:

From: jimth@anycompany.com [mailto:jimth@anycompany.com]
 Sent: Wednesday, August 31, 2005 9:31 AM
 To: John Smith
 Subject: Workforce Optimization Suite Notification
 Importance: Low

time-off

Submitted on	08/31/2005 9:26 AM
Status	pending
Employee	Employee, west1
Timeoff type	test
choice	1
Start time	09/07/2005 12:00 AM
End time	09/10/2005 12:00 AM
choice	2
Start time	09/21/2005 12:00 AM
End time	09/23/2005 12:00 AM

time-off

Submitted on	08/30/2005 9:26 AM
Status	pending
Employee	Employee, west2
Timeoff type	test
choice	1
Start time	09/08/2005 12:00 AM
End time	09/11/2005 12:00 AM
choice	2
Start time	09/25/2005 12:00 AM
End time	09/27/2005 12:00 AM

- **Schedule Change:** An alert is sent when an employee's schedule changes. For example:

Please observe schedule change(s) for the following employee(s):

Eckersley, Dennis

Old Schedule			New Schedule		
Eckersley, Dennis					
Friday, January 7, 2005 (GMT-07:00) Arizona					
Activity	Start	End	Activity	Start	End
Immediate	10:00 AM	12:00 PM	Immediate	11:00 AM	1:00 PM
Break	12:00 PM	12:15 PM	Break	1:00 PM	1:15 PM
Immediate	12:15 PM	6:00 PM	Immediate	1:15 PM	7:00 PM

- **Scheduled Activity Change Reminder:** An alert is sent when an employee's scheduled activity is about to change. For example:

To: Netta Landau
 Subject: *** Schedule change reminder ***
 Importance: Low

Scheduled activity change reminder for **Beardsley, John**
 Activity Name: Blended
 Activity Description: Blended Desc
 Time Start: 3:30 PM 05/17/2007 (GMT-08:00) Pacific Time (US & Canada)

Scheduled activity change reminder for **Gonzalez, Mariana**
 Activity Name: Lunch
 Activity Description: Time for Lunch!
 Time Start: 3:30 PM 05/17/2007 (GMT-08:00) Pacific Time (US & Canada)

- **Scorecards Assessment/Note Added/Updated:** An alert is sent when a new assessment and/or note is added/updated to scorecards of organizations or employees.
- **Serialized Auction Notification Rule:** An alert is sent when the next bidder is added to a serialized auction. Serialized auctions are described in the chapter "Managing Time-Off Requests, Shift Swapping, and Shift Bidding" in the *Workforce Management Managers Guide*.

For example, an agent might receive a message similar to the following:

You (qa, agent3) are currently added to the auction 12-26-2005 Auction. The deadline, after which the next bidder will be added, is 01/31/2006 6:17 PM. Please submit your bid before this deadline expires.

Note: Depending on the employee's privileges and the manager's privileges, the email they receive might contain a link that will open Workforce Management with the relevant request displayed.

If your license includes eLearning, you will also see a number of alerts specifically for eLearning. These include:

- **New Lesson Assigned:** Employees receive an e-mail or pop-up notifying them when new lessons are assigned.

If eLearning is integrated with Quality Monitoring version 7.8 SP1, this alert rule can also be configured to call attention to customer interactions

(contacts) recorded in Quality Monitoring version 7.8 SP1. Contacts on lesson assignment are flagged for evaluation and viewed in Quality Monitoring version 7.8 SP1, and can alert a supervisor to reevaluate an agent's performance after the agent has completed a lesson.

- **Lesson Due Date:** Employees receive an e-mail or pop-up notifying them either that an assigned lesson has a due date within a specified number of days or that the due date has passed. Criteria set when the rule is configured determine whether the notice informs the employee of a due date or a past due date.
- **Lesson Completion:** Employees receive an e-mail notification that lessons have been completed. An administrator can specify whether the e-mail is sent each time a lesson has been completed, or when a specific lesson has been completed.

If eLearning is integrated with Quality Monitoring version 7.8 SP1, this alert rule can also be configured to call attention to customer interactions (contacts) recorded in Quality Monitoring version 7.8 SP1. Contacts on lesson completion are flagged for evaluation and viewed in Quality Monitoring version 7.8 SP1, and can alert a supervisor to reevaluate an agent's performance after the agent has completed a lesson.

- **Competency Due Date:** Employees receive an e-mail notification that an assigned competency has not been acquired or is below the required rank, and is either due within a specified number of days or is past due.
- **Competency Rank:** Employees receive an e-mail notification that an employee has received a competency rank below the required or the rank specified in the alert rule. This alert rule can be configured so that individual lessons and/or lessons mapped to a specified competency are assigned to employees.

For more detailed information on the eLearning alerts, refer to the *Competency-based Learning Administration User Guide*.

If your license includes Operations, you will see the following additional alert rule:

- **Actual Statistics Out of Range:** An alert is sent when a selected actual statistic deviates from a range defined in the alert rule.

The rule has a sentence-like structure as described below:

If Actual statistic, <[Is Between | Is Not Between]> <number1> and <number2> Percentage Points over <number3> <time_units1> for Queue(s): queues <[combined | individually]> Send alerts no more than <number4> <time_units2>

where:

Value	Valuable
<statistic>	<p>Is the statistic you want to compare. Choices are:</p> <ul style="list-style-type: none"> • Abandons • Average Handling Time • Average Speed to Answer • Backlog • Contact Volume • Full Time Equivalents • Occupancy • Service Level • Staffing <p>If your license includes Outbound-Media, you also can choose the following statistics:</p> <ul style="list-style-type: none"> • Connect Rate • Connects • Dials • RPC (Right Party Connects • RPC Average Handling Time • RPC Rate <p>If your license includes Operations, you also can choose the following statistic:</p> <ul style="list-style-type: none"> • Volume Handled
<[Is Between Is Not Between]>	<p>Is the mathematical operation you want to use. Choose one of:</p> <ul style="list-style-type: none"> • Is Between • Is Not Between
<number1>	Is the bottom end of the value range you are specifying.
<number2>	Is the top end of the value range you are specifying.
<number3>	Is the number of the following time units.

Value	Valuable
<time_units1>	Is the time period over which the comparison is to be made. Choices are: <ul style="list-style-type: none"> • Minutes • Hours • Days
<queues>	Is the queue(s) you have selected using the drop-down menu. Only those queues associated with the selected campaign are shown.
<[combined individually]>	Determines if the rule applies to the combination of all the selected queues (combined), or to each queue individually (individually). The default is combined.
<number4>	Is the number of the following time units.
<time_units2>	Is the time unit at which alerts are to be sent. Choices are: <ul style="list-style-type: none"> • Minutes • Hours • Days

Note: The rules above allow you to define deviation alerts for the following actual statistics: Abandons, Average Handling Time, Average Speed To Answer, Backlog, Contact Volume, Full Time Equivalents, Occupancy, Service Level, and Staffing.

If your license includes Outbound-Media, you also can choose the following statistics: Connect Rate, Connects, Dials, RPC (Right Party Connects), RPC Rate, and RPC Average Handling Time.

An example of such an alert is:

Under Organization: Arcturus
For Queue(s): Q4Staffing - phone,
The statistic Staffing
has actual value 5 bodies which is not between the predefined value range from 1 to 2in the last 30 minute(s).

To create a new organization alert rule or change an existing one:

Step	Action
1	Select a rule from the drop-down menu and complete any required rule information. This option is available when creating a rule. The rule section is read-only when you are editing an existing rule.
2	Type the rule name in the Rule Name text box.
3	Select whether it is enabled in the Enabled check box.
4	Provide the Email Action information, click the check box at the top of the container, and: <ul style="list-style-type: none"> • To whom to send the alert: Check the applicable checkboxes (Employees, Direct Supervisors, Additional users by login names (semicolon separated), Additional users by role, Additional E-Mail targets (semicolon separated)). Type the additional user names, select the desired role, and add the additional e-mail addresses of the additional delivery targets, as applicable. • What text to include in the subject line: Check the applicable checkboxes (Text (user-provided text), Employee Names, Organization Names, Rule Name). Provide text for the Text field if applicable. • The e-mail delivery template to be used: Select the e-mail delivery template from the drop-down list (Low, Standard, High).
5	Provide the Pop-up Alert Action information, click the check box at the top of the container, and: <ul style="list-style-type: none"> • To whom to send the alert: Check the applicable checkboxes (Employees, Direct Supervisors, Additional users by login names (semicolon separated), Additional users by role, Additional delivery targets (semicolon separated)). Type the additional user names, select the desired role, and add the additional user names of the additional delivery targets, as applicable. • What text to include in the subject line: Check the applicable checkboxes (Text (user-provided text), Employee Names, Organization Names, Rule Name). Provide text for the Text field if applicable. • The pop-up delivery template to be used: Select the pop-up delivery template from the drop-down list (Normal, High, Confidential).

6 Click **Save**.

Note: When editing an existing alert rule, you cannot change the rule template that was initially selected from the drop-down menu.

—End—

Campaign Tab

Use the Campaign of the web application tab to create, edit, or delete alert rules for your campaigns. (By default, only administrators and schedulers can use this tab.) Campaign alert rules track the deviation of key operational statistics from their forecast, goal, or a specified range of values, and are a valuable management tool in curbing such deviations.

The following alert rule templates are currently available in Campaign scope:

- **Actual Statistics vs. Goal:** An alert is sent when a selected actual statistic deviates from the goal by a certain percentage.

The rule has a sentence-like structure as described below:

If Actual statistic <statistic>, <operation> Goal by more than <amount> <[%Difference | Percentage Points]> over <number1> <time_units1> for Queue(s): <queues> <[combined | individually]> Send alerts no more than <number2> <time_units2>

where

Value	Valuable
<statistic>	Is the statistic you want to compare. Choices are: <ul style="list-style-type: none"> • Service Level • Average Speed to Answer
<operation>	Is the mathematical operation you want to use. Choose one of: <ul style="list-style-type: none"> • Deviates from • Is Greater Than • Is Less Than
<amount>	Is a number you specify, the quantity of the following units of comparison.
<[%Difference Percentage Points]>	Is the unit of comparison. Choose one of % Difference or Percentage Points.

Value	Valuable
<number1>	Is the number of the following time units.
<time_units1>	Is the time period over which the comparison is to be made.
<queues>	Is the queue(s) you have selected using the drop-down menu. Only those queues associated with the selected campaign are shown.
<[combined individually]>	Determines if the rule applies to the combination of all the selected queues (combined), or to each queue individually (individually). The default is combined.
<number2>	Is the number of the following time units.
<time_units2>	Is the time unit at which alerts are to be sent. Choices are: <ul style="list-style-type: none"> • Minutes • Hours • Days

An example of such an alert is:

Under campaign: Promotion 1 Campaign

For Queue(s): QUEUE2,

The statistic Service Level (SL)

has actual value 65 which is less than the predefined service goal value 70 by 5 percentage points in the last 30 minute(s).

- **Actual Statistics vs. Forecast:** An alert is sent when a selected actual statistic deviates from the forecast by a certain percentage.

The rule has a sentence-like structure as described below:

If Actual statistic <statistic>, <operation> Forecasted by more than <amount> <[%Difference | Percentage Points]> over <number1> <time_units1> for Queue(s): <queues> <[combined | individually]> Send alerts no more than <number2> <time_units2>

Value	Valuable
<statistic>	<p>Is the statistic you want to compare. Choices are:</p> <ul style="list-style-type: none"> • Abandons • Average Handling Time • Average Speed to Answer • Backlog • Contact Volume • Occupancy • Staffing (Bodies) • Staffing (FTEs) • Service Level <p>If your license includes Outbound-Media, you also can choose the following statistics:</p> <ul style="list-style-type: none"> • Connects • Dials • Right Party Connects • Right Party Connects AHT
<operation>	<p>Is the mathematical operation you want to use. Choices are:</p> <ul style="list-style-type: none"> • Deviates from • Is Greater Than • Is Less Than
<amount>	Is a number you specify, the quantity of the following units of comparison.
<[%Difference Percentage Points]>	Is the unit of comparison. Choose one of % Difference or Percentage Points.
<number1>	Is the number of the following time units.

Value	Valuable
<time_units1>	Is the time period over which the comparison is to be made. Choices are: <ul style="list-style-type: none"> • Minutes • Hours • Days
<queues>	Is the queue(s) you have selected using the drop-down menu. Only those queues associated with the selected campaign are shown.
<[combined individually]>	Determines if the rule applies to the combination of all the selected queues (combined), or to each queue individually (individually). The default is combined.
<number2>	Is the number of the following time units.
<time_units2>	Is the time unit at which alerts are to be sent. Choices are: <ul style="list-style-type: none"> • Minutes • Hours • Days

An example of such an alert is:

Under campaign: Pulsar Campaign

with media: Phone

For Queue(s):

The statistic Average Handling Time (AHT)

has actual value 147 which deviates from the predefined forecast value 88

**by more than 1 percentage
in the last 30 minute(s).**

- **Actual Statistics Out of Range:** An alert is sent when a selected actual statistic deviates from a range defined in the alert rule.

The rule has a sentence-like structure as described below:

If Actual statistic <[Is Between | Is Not Between]> <number1> and <number2> Percentage Points over <number3> <time_units1> for Queue(s): <queues> <[combined | individually]> Send alerts no more than <number4> <time_units2>

where:

Value	Valuable
<statistic>	<p>Is the statistic you want to compare. Choices are:</p> <ul style="list-style-type: none"> • Abandons • Average Handling Time • Average Speed to Answer • Backlog • Contact Volume • Full Time Equivalents • Occupancy • Service Level • Staffing <p>If your license includes Outbound-Media, you also can choose the following statistics:</p> <ul style="list-style-type: none"> • Connect Rate • Connects • Dials • RPC (Right Party Connects) • RPC Average Handling Time <p>If your license includes Operations, you might also be able to choose the following statistic, depending on how your system has been configured:</p> <ul style="list-style-type: none"> • Volume Handled
<[Is Between Is Not Between]>	<p>Is the mathematical operation you want to use. Choose one of:</p> <ul style="list-style-type: none"> • Is Between • Is Not Between
<number1>	Is the bottom end of the value range you are specifying.
<number2>	Is the top end of the value range you are specifying.
<number3>	Is the number of the following time units.

Value	Valuable
<time_units1>	Is the time period over which the comparison is to be made. Choices are: <ul style="list-style-type: none"> • Minutes • Hours • Days
<queues>	Is the queue(s) you have selected using the drop-down menu. Only those queues associated with the selected campaign are shown.
<[combined individually]>	Determines if the rule applies to the combination of all the selected queues (combined), or to each queue individually (individually). The default is combined.
<number4>	Is the number of the following time units.
<time_units2>	Is the time unit at which alerts are to be sent. Choices are: <ul style="list-style-type: none"> • Minutes • Hours • Days

Note: The rules above allow you to define deviation alerts for the following actual statistics: Abandons, Average Handling Time, Average Speed To Answer, Backlog, Contact Volume, Full Time Equivalents, Occupancy, Service Level, and Staffing.

An example of such an alert is:

**Under campaign: Arcturus
For Queue(s): Q4Staffing - phone,
The statistic Staffing
has actual value 5 bodies which is not between the predefined
value range from 1 to 2
in the last 30 minute(s).**

To create a new campaign alert rule or change an existing one:

Step	Action
1	Select a rule from the drop-down menu and complete any required rule information. This option is available when creating a rule. The rule section is read-only when you are editing an existing rule.
2	Type the rule name in the Rule Name text box.
3	Select whether it is enabled in the Enabled check box.
4	Provide the Email Action information, click the check box at the top of the container, and: <ul style="list-style-type: none"> • To whom to send the alert: Check the applicable checkboxes (Additional users by login names (semicolon separated), Additional users by role, Additional E-Mail targets (semicolon separated)). Type the additional user names, select the desired role, and add the additional e-mail addresses of the additional targets, as applicable. • What text to include in the subject line: Check the applicable checkboxes (Text (user-provided text), Campaign Names, Rule Name, Queue Names). Provide text for the Text field if applicable. • The e-mail delivery template to be used: Select the e-mail delivery template from the drop-down list (Low, Standard, High).
5	Provide the Pop-up Alert Action information, click the check box at the top of the container, and: <ul style="list-style-type: none"> • To whom to send the alert: Check the applicable checkboxes (Employees, Direct Supervisors, Additional users by login names (semicolon separated), Additional users by role, Additional delivery targets (semicolon separated)). Type the additional user names, select the desired role, and add the additional user names of the additional delivery targets, as applicable. • What text to include in the subject line: Check the applicable checkboxes (Text (user-provided text), Campaign Names, Rule Name, Queue Names). Provide text for the Text field if applicable. • The pop-up delivery template to be used: Select the pop-up delivery template from the drop-down list (Normal, High, Confidential).
6	Click Save .

Note: When editing an existing alert rule, you cannot change the rule template that was initially selected from the drop-down menu.

—End—

System Tab

Use this tab to create, edit, or delete alert rules for your system (typically these alerts would go to the administrator or your IT department). Only administrators and schedulers by default can create or modify system alert rules.

The following alert rule templates are currently available for the System scope:

- **Adapter Notification:** An alert is sent to a specific user or e-mail address when any of the adapters fails. Adapter alerts take one of two forms:
 - **If Adapter fails for data source Y:** If an adapter fails for data source Y, an alert is sent.
 - **If Adapter fails for any data source:** If an adapter fails for any data source, an alert is sent.

An example of such a notification is:

The following adapter(s) reported failure:

Avaya CMS Report prior to 4.1 - DCS[CS6]
Time: 01/31/2005 5:44 PM

- **Integration Server Time Collection:** An alert is sent when an ACD link goes down. Integration Server Time Collection alert rules take one of two forms:
 - **If the link is down for more than X minutes for data source Y:** If the connection to the ACD is down (continuously) for data source Y for more than X minutes, an alert is sent.
 - **If the link is down for more than X minutes for any data source:** If the connection to the ACD is down (continuously) for any data source for more than X minutes, an alert is sent.

An example of such a notification is:

ACD link is down for the following data source(s):

Avaya ETLA
Time: 01/22/2005 12:11 AM

- **ETL Rule:** An alert is sent about the results for an ETL run (only shown if you are licensed for Desktop Activity Management). There are three types of alerts that can be generated for ETL runs:
 - ETL starts
 - ETL finishes without error
 - ETL finishes with error

To create a new alert rule or change an existing one, follow the procedure listed previously in the section "[Organization Tab](#)" (page 361).

Reports

Workforce Management schedulers typically also have access to the Report module of the web application. Refer to the *Workforce Management Reports Guide* (NN44480-116) for information on running and viewing reports.

Using the App Admin Module

This chapter provides information about setting up activities, request management, scorecards, and alert rules for organizations.

It covers the following topics:

- Organizations
View organizations and information that is specific to them:
- Settings
View organizations and their subsidiaries. View their time zone, week start day, and day boundary. See "[Settings](#)" (page 383).
- Holidays
View holidays for each organization, their start and end dates and whether they are paid. See "[Holidays](#)" (page 385).
- Job Titles
View job titles for each organization. See "[Job Titles](#)" (page 386).
- Queues
Only visible if you are licensed for Financial Services Operations. Allows you to view and manage your volume work queues and arrival patterns:
- Work Queue Configuration
Only visible if you are licensed for Financial Services Operations. Allows you to define a normal queue as a VCT Queue and link it to an organization.
- Arrival Patterns
Only visible if you are licensed for Financial Services Operations. Allows you to view and edit the patterns that have been created. The purpose of the arrival pattern is to be a close representation of the distribution of intraday work to be done.
- Activities
Set up and configure activities and their supporting information for each organization. See "[Activities](#)" (page 391).

- **Activity Types**
View activity types. Activity types are groups of similar activities. See ["Viewing Activity Types" \(page 393\)](#).
- **Activities**
View activities. Activities represent work an employee can perform. See ["Viewing Activities" \(page 395\)](#).
- **Adherence Mapping**
Map activities to other adhering activities. Adherence mapping lets you select alternate activities that are considered in adherence when an employee is scheduled for a particular activity. See ["Adherence Mapping" \(page 398\)](#).
- **Request Management**
Allows you to control how time-off requests, shift swap requests, and shift bidding are handled in your organization.
- **Settings**
View or change request settings for a specific organization. See ["Request Management" \(page 399\)](#).
- **Validation**
Set validation rules. See ["Validation" \(page 400\)](#).
- **Filing Rules**
View and edit Request Filing Rules. See ["Filing Rules" \(page 400\)](#).
- **Available Time Off**
Allocate time off hours and blackout days for a organization. See ["Available Time Off" \(page 402\)](#).
- **Auto Processing**
Allows you to control the auto-processing rules for time off, shift swap, and shift bidding for each organization. See ["Auto Processing" \(page 403\)](#).
- **Purging**
Purge (remove) requests from the database. See ["Purging" \(page 404\)](#).

Organizations

Use this page to create, view and edit organizational structures and associated information within Workforce Management. This section contains the following tabs:

- **Settings**

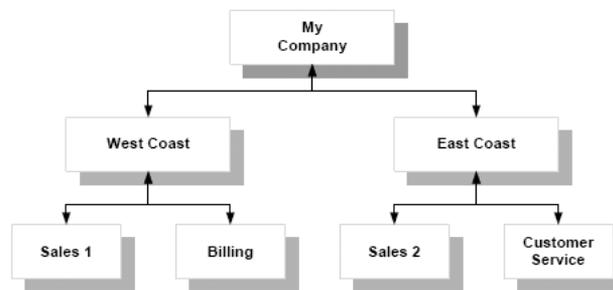
- Holidays
- Job Titles

Understanding Organizational Hierarchies

When you enter employee information, you have the option of arranging your employees into multiple organizations at multiple levels. The organizations you create are hierarchic—in other words, since information flows up and down the organization, data you enter at any level will be reflected up or down the organizational chain.

Note: You do not have to use a hierarchical structure, although it is highly recommended. All employees can be added to a single organization if you want.

In the figure below, My Company has two geographic divisions, West Coast and East Coast. Each division has several subdivisions based on function and supervision. Information in the hierarchy flows both up and down.



Information Flow

Organization information entered in this module flows downward from the organization where it is entered to its suborganizations. Some information, such as holidays and job titles, can be copied to a different organization and changed there. Some information, such as employee information, is entered at the lowest level and is visible to managers higher in the hierarchy.

Settings

Use this tab to view organizations' names and descriptions. Administrators can also create new organizations using this tab.

To create a new organization (administrators only):

Step	Action
------	--------

- | | |
|---|--|
| 1 | Select the parent organization in the left pane. |
| 2 | Click Create New Organization . |

- 3 Type the organization's name and a brief description.
- 4 Select the organization's time zone. This will be the default time zone for the organization and cannot be changed once it is set.
- 5 Select the organization's Week Start Day. This setting cannot be changed once the organization has been created.
- 6 Click the **Clock** icon to set the Day Boundary time. This setting cannot be changed once the organization has been created.
- 7 Click **Save**. The new organization is ready.

—End—

To edit an organization name or description (administrators and schedulers only):

Step Action

- 1 Select the organization in the left pane.
- 2 Type the organization's name and a brief description.
- 3 Click **Save**. The organization is ready.

—End—

To delete an organization (administrators only):

Step Action

- 1 Select the organization in the left pane.

ATTENTION

When you delete an organization, you delete ALL data associated with that organization including any suborganizations and their data.

- 2 Click **Delete**. Confirm that you want to delete the organization and all its associated data. The organization and all its suborganizations are deleted.

—End—

- 2 Click **Copy Holiday**. The **Copy Holiday** dialog box opens.
- 3 Select the organization(s) to copy the holiday to and click **Copy to Selected Organization(s)**.

—End—

To edit a holiday:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Select the holiday in the right pane. |
| 2 | Click Edit Holiday . |
| 3 | Make the desired changes and click Save . |

—End—

To delete a holiday:

Step	Action
------	--------

- | | |
|---|--|
| 1 | Select the holiday in the right pane. |
| 2 | Click Delete Holiday . Confirm the deletion by clicking OK . |

—End—

Job Titles

Administrators can use this page to create, edit, copy, and delete job titles. In Scorecards, KPIs are reported based on job titles. For managers and schedulers, this tab is read-only.

To create a new job title:

Step	Action
------	--------

- | | |
|---|---|
| 1 | Select an organization in the left pane. |
| 2 | Click Create New Job Title . The Create New Job Title page opens. |
| 3 | Type the job title and a short description. |
| 4 | Click Save . The new job title is listed. |

—End—

To copy a job title to a different organization:

Step	Action
1	Select the job title in the right pane.
2	Click Copy Job Title . The Copy Job Title dialog box opens.
3	Select the organization to copy the job title to and click Copy to Selected Organization(s) .

—End—

To edit a job title:

Step	Action
1	Select the job title in the right pane.
2	Click Edit Job Title .
3	Make the desired changes and click Save .

—End—

To delete a job title:

Step	Action
1	Select the job title in the right pane.
2	Click Delete Job Title . Confirm the deletion by clicking OK . Note: As previously mentioned, job titles are integral to Scorecards, and allow you to customize KPI goal values for specific job titles. (See Job Titles for more information on customizing goal values for job titles.)

—End—

Work Queues

This section is only visible if you are licensed for Financial Services Operations. It allows you to view and manage your volume work queues and arrival patterns, and contains the following tabs:

- Work Queue Configuration
- Arrival Patterns

Work Queue Configuration

Use the Work Queue Configuration tab to define a normal work queue as a VCT Work Queue and link it to an organization. A VCT Work Queue not only has volumes associated with it, but also captures employee level productivity data at a finer intraday granularity. This work queue is then available for agents, managers, and supervisors to enter VCT data or productivity tracking data either through the Work and History tabs of My Volumes section of the My Home module, or Volumes section of the Tracking module, or through the Operations – Event File Import and Transform adapter.

There are three types of patterning supported:

- Operational Hours—Arrivals for each day are distributed evenly over the organization's hours of operation.
- Named Patterns—Arrivals for each day are distributed based on definitions you provide.
- No Pattern—Arrivals are converted to volumes as is, at the times they actually occur, without any spread. This pattern can be used if you want volumes to follow the true arrival pattern, and if arrivals are frequent during the organizational hours.

Work Queue Name

Work queues are listed in the Selection pane on the left. You must select the work queue you want to view in this pane.

To view information, click one work queue to highlight it. Only individual work queues can be selected to view the corresponding information in the data pane. Groups of work queues cannot be selected.

Work Queue Configuration

This pane is used to specify the parameters for a VCT work queue. There are three types of VCT work queues:

1. Work Completed, WIP and Inventory: This work queue type has all the VCT Event types of CHECKIN, CHECKOUT and ARRIVAL enabled.
2. Work Completed and Inventory: This work queue type has only ARRIVAL and CHECKIN events enabled; a CHECKOUT event of equivalent value is automatically generated for each CHECKIN event, so there is no WIP, only Work Completed.

3. Work Completed: This work queue type has only the CHECKIN event enabled, which in turn generates an ARRIVAL and a CHECKOUT of equivalent values.

The parameters you can specify are:

- As of: Use this date selector to view and/or set the Activity Handling Time for a specific date.
- Use Volume Capture: Select this option to specify the work queue as a VCT work queue
- Type: Select the work queue type:
 - Work Completed, WIP and Inventory
 - Work Completed and Inventory
 - Work Completed
- Organization: Select the organization. (Only employees belonging to this organization and its child organizations will have access to the work queue.)
- Activity Handling Time (in seconds): Enter the activity handling time (in seconds) for the work queue. Click the pencil icon to the right of the field to enter effectivity dates for the Activity Handling Time.

The top portion of the pop-up window shows the history of effective dates that have been applied to the selected work queue.

The lower part allows you to specify a new Activity Handling Time, and gives you the following options for setting dates:

1. Update value for current period: This selection is the default, and replaces the displayed value for whichever time period it is currently saved. If you always save using this option, it has the same effect as having no effective dates and always resetting the current value. If you are using effective dates, this option updates the AHT for the current applicable period, which will not result in any new mediation in start date or end date.

Note: Editing the AHT value on the Work Queue Configuration page has the same effect as using the Effectivity Pop-Up window with the Update value for current period option.

2. Insert value for period from: Allows you to set the new value from the beginning of the period being viewed into the future to a specified date. If you are using effective dates, a new interval is created. For example, if you have previously set AHT to 10 between 1-1-2006 through no specified end date (that is, forever), and now use this option to set AHT to 20 from 3-1-2008 to 4-1-2008, the end result is similar to the following:

1-1-2006 - 3-1-2008: 10
3-2-2008 - 4-1-2008: 20
4-2-2008 - forever: 10

3. Insert value from: Allows you to set the new value from the beginning of the viewed period into the future, with no specified end date. If you are using effective dates, a new interval is created or deleted. For example, if you have set AHT to 10 from 1-1-2006 through no specified end date, and now use this option to set AHT to 20 from 3-1-2008 to no specified end date, the end result is:

1-1-2006 - 3-1-2008: 10
3-2-2008 - forever: 20

- Arrivals Pattern: Select the Arrival Pattern; the Operations – Arrival Processing adapter uses this pattern to convert the sum total of arrivals into volumes for every 15-minute bucket over the pattern window.
- Multi Selection: Selecting the Add option allows for creating single and/or multi-selection VCT chains. A VCT chain links a source work queue to one or more target work queues by a source VCT Event and a target VCT Event, and by a certain proportion. It represents the flow of work from one VCT work queue to another based on a set of VCT Event trigger rules.

Arrival Patterns

Use the Arrival Patterns tab to view and edit the patterns that have been created. The Operations – Arrival Processing adapter can be configured to use an arrival pattern defined here to convert ARRIVAL VCT Events into volumes by applying the arrival pattern to the sum of ARRIVALS over a defined window. The purpose of the arrival pattern is to be a close representation of the distribution of intraday work to be done.

From this tab, the following options are available from the options displayed in the lower right of the pane:

- Import— Click this option to import a new pattern.
- Create—Click this option to manually create a new pattern.
- Edit—Select an existing pattern and click this option to change the pattern's settings.
- Delete—Select an existing pattern and click this option to delete the pattern.

Importing Arrival Patterns

Clicking the **Import** button opens a page that allows you to import a pattern created from information contained in an external source file. The fields in the source file can be delimited either by Tab characters or commas.

The page contains two areas:

File Setup Use the fields in this section to specify the following:

Field	Description
File to Import	The path and name of the external file to be imported.
Name	The name assigned to the pattern.
Alignment Date	The date the pattern was created.
Duration (in days)	The number of days for which the pattern applies.
Delimiter	Use the drop-down menu to select either Tab or Comma as the field delimiter used in the file.

Field Name and Column Number Use the Field Name checkboxes and Column Number fields to specify the fields to be imported, as follows:

Check box or Field	Description
Date	Used to identify the column in the external file that contains the date.
Time	Used to identify the column in the external file that contains the time.
Weight	Specifies the percentage allocation for each 15-minute interval.
Column Number	Specifies the order (1, 2, 3, etc.) in the external file of the date, time, or weight column.

Creating or Editing Arrival Patterns

The following fields can be edited:

Field	Description
Name	A pattern name that you assign.
Description	A description of the pattern. This field is optional and provided for your convenience.
Alignment Date	The date the pattern was created.
Duration (in days)	The number of days for which the pattern applies.
Delimiter	Use the drop-down menu to select either Tab or Comma as the field delimiter used in the file.
Daily Pattern	The quarter-hour distribution percentage of the pattern.

Activities

Use these pages to view activities types and activities.

Activities are the basic building blocks of Workforce Management. Activities specify the scheduled work and the work actually done.

Activities represent work that agents can perform. Each activity has a name, a description, a setting specifying if the activity is paid, a color, a code, a tolerance, and an activity type.

- If an activity is marked as paid, any time an agent logs into this activity, the resulting entry will also be marked as paid. A manager can override the paid/unpaid status of any time entry on the Day Details page.
- The color and code of an activity are used to display schedules and time records on the Calendar, Schedule Viewing screens, Adherence screen, and other screens.
- An activity's tolerance specifies how long an agent can be out of adherence to a scheduled activity before an exception appears. For example, the Phone activity is assigned a tolerance of 5 minutes. An agent is scheduled to log onto the Phone activity at 9:00 a.m. Instead, he logs on at 9:05 a.m. He was not adhering for 5 minutes and the tolerance is 5 minutes, so no adherence exception will be displayed. However, if the agent logged in at 9:10 a.m., the full 10 minutes from 9:00 a.m. to 9:10 a.m. would show up as an exception.
- Finally, every activity must have an activity type.

Activity types are folders that contain similar activities; they make selecting an activity easier for My Time users. Each activity type has a name, a description, and a setting specifying whether or not My Time users can see this activity type.

Workforce Management comes preconfigured with the following activity types:

- Absence Activities (such as vacation or jury duty)
- Assigned Work Activities (such as phone or research)
- Desktop Monitoring (if included in your license)
- Learning Activities
- Planned Events (such as training or a staff meeting)
- Shift Events (such as lunch or a coffee break)

For example, Assigned Work Activities could contain the Phone activity and the email activity. It should be marked visible to My Time users since agents are expected to log into these activities through the My Time module.

Absence Activities might contain the Sick activity and Jury Duty activity. This activity type would be marked as not visible to My Time users as agents are not expected to log into the Sick activity. Instead, managers would create records containing the Sick activity when an agent calls in sick.

Viewing Activity Types

Use the Activity Types tab to list the Activity Types for each organization. Each activity type serves as an organizer for activities. They are used to make selection of activities simpler in other parts of Workforce Management.

Activity types can be added and modified here, or in Forecasting and Scheduling.

Workforce Management comes preconfigured with the following activity types:

- Absence Activities (such as vacation or jury duty)
- Assigned Work Activities (such as phone or research)
- Desktop Monitoring (if included in your license)
- Learning Activities
- Planned Events (such as training or a staff meeting)
- Shift Events (such as lunch or a coffee break)

Click at the top of a column to sort by that column. Click again to reverse the sort order.

To create an activity type:

Step	Action
1	Select an organization in the left pane.
2	Select the activity type in the right pane.
3	Click Create Activity Type . The Activity Type Details window is displayed.
4	Fill in as appropriate the fields described in the following table:

Field	Description
Organization Name	Name of the organization to which the Activity Type is assigned.
Name	Name of the Activity Type.
Description	Description of the Activity Type.
Visible in My Time	Specifies if the activity type is visible to users of the My Time section.

- 5 Click **Save** to create the activity type and return to the Activity Types page.

—End—

Click **Cancel** to abandon any changes you made and return to the Activity Types page.

Click **Revert** to undo any unsaved changes on the page.

To edit an activity type:

Step	Action
------	--------

- 1 Select an organization in the left pane.
- 2 Select the activity type in the right pane.
- 3 Click **Edit Activity Type**.
- 4 Change the settings for the **Name**, **Description**, and **Visible in My Time** parameters as desired.
- 5 Click **Save** to save your changes and return to the Activity Types page.

—End—

Click **Cancel** to abandon any changes you made and return to the Activity Types page.

Click **Revert** to undo any unsaved changes on the page.

To delete an activity type:

Step	Action
------	--------

- 1 Select an organization in the left pane.
- 2 Select the activity type in the right pane.
- 3 Click **Delete Activity Type**.
- 4 Click **OK** to delete the Activity Type, or **Cancel** to return to the Activity Types page without deleting the Activity Type.

—End—

Viewing Activities

Use this tab to list the activities for each organization. Activities represent types of work an employee can perform. Activities are added and modified here, or in Forecasting and Scheduling.

Click at the top of a column to sort by that column. Click again to reverse the sort order.

To create an activity:

Step	Action
------	--------

- 1 Select an organization in the left pane.
- 2 Click **Create Activity** . The **Activity Details** window is displayed.
- 3 Fill in the fields described in the following table as appropriate:

Section	Field	Description
Activity Details	Organization Name	Name of the organization to which the activity is assigned.
	Name	Name of the activity.
	Description	Description of the activity.
	Activity Type	The Activity Type to which this activity belongs.
	Paid	Specifies if the activity is paid.
	Color	The color used to display schedules and time records on the Adherence page.
	Activity Code	The code used for displaying the activity.
	Time Off	Whether this activity can be used for time off.
	Media	The media to which this activity is mapped.
Scheduling Usage	Use in Shift (Primary Activity)	Specifies if the activity can be used in a shift.
	Use in Shift Event	Specifies if the activity can be used in a shift event.
	Use in Calendar Event	Specifies if the activity can be used in a calendar event.
	Unavailability	Specifies if the activity can be used in an unavailability.

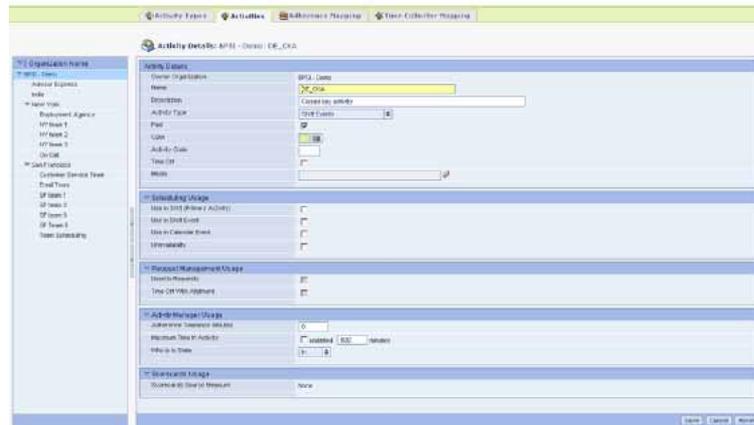
Section	Field	Description
Request Management Usage	Use in Request	Specifies if the activity can be used in a request.
	Time Off With Allotment	Specifies if a time-off activity has been specified as having an allotted number of hours per week or per month for the owner organization.
Activity Manager Usage	Adherence Tolerance Minutes	The number of minutes an employee can be out of adherence in the scheduled activity before an exception is created. This Out of adherence exception will show on the Adherence page and will create an Out of adherence alert for that scheduled activity if an applicable alert rule has been defined and enabled.
	Maximum Time In Activity	The maximum amount of time an agent can remain in the recorded/actual activity before a Too long in activity exception is created. The Too long in activity exception will show in the Quick View tab.
	Who Is In State	Specifies the state that the activity represents for the Who Is In display.
Scorecards Usage	Scorecards Source Measure	Only shown if you are licensed for Scorecards. A source measure reflects a type of measurement used to evaluate a person's or an organization's performance. To make analyzing activity data more practical and meaningful for Scorecards, activities are mapped to a smaller group of source measures. This field specifies the source measure to which the activity has been mapped.

—End—

To edit an activity:

Step	Action
------	--------

- 1 Select an organization in the left pane.
- 2 Select the activity in the right pane.
- 3 Click **Edit Activity**. The following window is displayed.



—End—

To copy an activity:

Step	Action
------	--------

- 1 Select an organization in the left pane.
- 2 Select the activity in the right pane.
- 3 Click **Copy Activity**.
- 4 Select the organization(s) to which you want to copy the information.
- 5 Click **Copy to Selected Organization(s)**.

—End—

To delete an activity:

Step	Action
------	--------

- 1 Select an organization in the left pane.

- 2 Select the activity in the right pane.
- 3 Click **Delete Activity**.
- 4 Click **OK** to delete the activity, or **Cancel** to return to the **Activities** page without deleting the selected activity.

—End—

Adherence Mapping

Use this page to list the adherence mapping for each organization's activities. Adherence mapping lets you select alternate activities that are considered in adherence when an employee is scheduled for a particular activity. For example, if an activity called Email is mapped to the scheduled activity Answercalls, employees are considered in adherence if they are performing either activity.

The page displays the adhering actual activities mapped to the scheduled activities. Scheduled activities are activities that can be used in shifts, shift events, calendar events, unavailabilities, or time off.

To edit an adherence mapping:

Step	Action
------	--------

- 1 Select the scheduled activity in the right pane. (You must have the activity's owner organization selected in the left pane to edit it.)
- 2 Click **Edit Adherence Mapping**. The Adherence Mapping window is displayed.
- 3 Highlight the activity to map and click the **Right** arrows to map it to the scheduled activity.
- 4 Click **Save**. The scheduled activity is listed with the new mapping.

—End—

To map or unmap an activity to other adhering activities:

Step	Action
------	--------

- 1 Highlight the activity and click **Edit Adherence Mapping**. The **Adherence Mapping** page opens.

—End—

To add an adhering activity to an existing mapping:

Step	Action
1	Highlight the activity and click Edit Adherence Mapping . The Adherence Mapping page opens.
2	Highlight an activity to map in the Available Scheduled Activities column and click the Left arrows to map it to the scheduled activity. Use Shift or Ctrl to select multiple activities. The mapped activities appear in the Adhering Actual Activities column.
3	Click Save . The scheduled activity is listed with the new mapping.

—End—

To remove an adherence mapping:

Step	Action
1	Highlight the activity and click Edit Adherence Mapping . The Adherence Mapping page opens.
2	Highlight an activity to map in the Adhering Actual Activities column and click the Left arrows to remove the mapping. Use Shift or Ctrl to select multiple activities.
3	Click Save . The scheduled activity is listed with the updated mapping.

—End—

Note 1: The adherence mapping No Activity is an internal classification used to denote the time interval between shifts, and is ignored in adherence calculations. For activities such as Break, there should be no adherence mapping. (The characters -- should appear in the Adhering Actual Activities column.)

Note 2: No Activity should be explicitly mapped for scheduled activities such as vacation, or training, where the user is not expected to be logged in.

Request Management

Use the **Settings** tab to control how time-off requests, , shift swap requests, and shift bidding are handled for a specific organization.

In addition to the Organization selection pane, the other pane of the **Settings** page consists of the following containers:

- Time Off Management Activation
- Agent Workflow Options
- Time Off Year
- Time Off Waitlist
- Shift Swap
- Shift Bidding (only relevant if you are licensed for the optional Shift Bidding feature)
- Time Off Calendar Colors
- Time Off Management Policies
- Shift Swap Policies
- Shift Bidding Policies (only relevant if you are licensed for the optional Shift Bidding feature)

Validation

Use the **Validation** tab of the **Request Management** section of the App Admin module to set validation rules.

Select the rules you want to use to validate time off, approved time-off withdrawal, swift swap, and shift bidding requests. The validation icon will appear on both the administrator and agent request pages.

Click **Save** to save your changes.

Click **Cancel** to cancel your changes and return to the previous screen.

Click **Revert** to cancel your changes and remain on the current screen.

Filing Rules

Use this page to view and edit request filing rules. Click on the top of a column to sort by the column. Click again to reverse the sort order.

Click **Edit Rule** to modify the selected rule.

Click **Delete Rule** to remove the selected rule. The rule is removed from the selected organization and its child organizations.

Available Time Off

You use the **Available Time Off** tab to allocate the time off that is available to an organization's employees. For instance, if you specify that 32 hours of time off are allocated to an organization for a certain day, employees in that organization can be granted requests for time off for up to a total of 32 hours before no more time off is available.

You have three choices for time off allocation: Current Organization, Organization Branch, and Shared For Branch.

Imagine a call center that has a parent organization called Central, and branch organizations called CST 01, CST 02, and CST 03.

If you choose **Current Organization**, and give Central 32 hours for a given day, the time off calendar will show 32 hours of time off allocated to the Central organization, and none allocated to any of the branch organizations.

If you choose **Organization Branch**, and give Central 32 hours for a given day, the time off calendar will show 32 hours of time off allocated to the Central organization, and 32 hours allocated to each of the branch organizations. This means that there is a total of 32 x 3 worth of hours in total (but CST 01, 02, and 03 get an equal amount of hours, 32 hours each).

If you choose **Shared For Branch**, and give Central 32 hours for a given day, the time off calendar will show 32 hours of time off allocated to the Central organization, and 32 hours allocated to each of the branch organizations. Additionally, the description Allocations will be shared for all the organizations in the branch appears above the calendar. This means that Central, CST 01, CST 02, and CST 03 share the 32 hours.

For days when no time off is allowed, place a check in the check box next to the date, which will make it a blackout date regardless of hours that are allocated. It is also possible to enter a range of blackout dates.

Step	Action
1	Enter the number of hours allocated for a given date.
2	Click on a check box to mark a day as a blackout day.
3	Click Save to save your changes.
4	Click Clear to remove all changes.
5	Click Revert to undo all changes you have made since the last time you clicked Save .

- 6 Click **Import** to invoke a dialog to upload a file to the server.

To import allocations from a text (.txt) file, create the file using the following format:

mm/dd.yyyy <tab> number

For example:

01/10/200350.5

01/11/200355

—End—

Use a Tab character to separate the date and number. Use a new line for each date. Convert other formats, such as MS Excel, to text files before importing them.

Auto Processing

This table allows you to control the auto-processing rules for time off, approved time off withdrawal, shift swap, and shift bidding for each organization.

Apply	Request Type	Withdrawal	Auto-Process	Parent Organization
<input type="checkbox"/>	Shift Bidding	All requests of this type	Approved request with no conditions	Customer Service Team
<input checked="" type="checkbox"/>	Shift Bidding	All requests of this type	Only requests with no conditions	Customer Service Team
<input checked="" type="checkbox"/>	Shift Swaps	All requests of this type	Do not auto approve any requests	Customer Service Team
<input checked="" type="checkbox"/>	Shift Swaps	All requests of this type	Do not auto approve any requests	Customer Service Team
<input checked="" type="checkbox"/>	Time Off	All requests of this type	Only requests with no conditions	Customer Service Team
<input checked="" type="checkbox"/>	Time Off	All requests of this type	Do not auto approve any requests	Customer Service Team
<input checked="" type="checkbox"/>	Time Off	All requests of this type	Only requests with no conditions	Customer Service Team

The following columns are defined on this page.

- **Apply**—This column controls whether the rule is applied to the current organization. The rules of a parent organization flow down to the child organizations. The rules defined in a parent organization can be optionally applied to a child organization. If a rule defined in a parent is not applied to a child organization then the rule is not used for the child organization. It is legal for a grandchild organization to differ with the child organization. When the check box is changed, Save Applied must be used to save changes. When applied settings are saved, the child organizations are changed to match the parent's applied state. Only the changes are copied to the children.

- **Request Type**—This column shows the request type, which can be either time off, approved time off withdrawal, shift swap, or shift bidding.
- **Which Request**—This column shows the criteria that are used to determine which requests are affected by the rule.
- **How to Auto-process**—This column shows the criteria used to approve or deny a request.
- **Owner Organization**—This column shows where the rule was created. A rule can be modified only if you have selected its owner organization.

Click **Save Applied** to save the applied check box column changes.

Click **Create New Rule** to create a new filing rule for Time Off, Approved Time Off Withdrawal, Shift Swap, or Shift Bidding. This button displays a pop-up window to allow you to select the kind of rule to create.

Click **Copy Rule** to copy a selected rule to another organization. It is not necessary to copy a rule to a child organization because rules flow down to child organizations naturally. This button is useful when copying a rule to a sibling organization.

Click **Edit Rule** to modify the selected rule.

Click **Delete Rule** to remove the selected rule. The rule is removed from the selected organization and its child organizations.

Purging

Use the **Purging** tab of the Request Management section of the App Admin module to purge (remove) requests from the database.

The page has the following controls:

- **Request Type**—Choose the type of request to be purged.
The purge can be applied to the agents of the current organization or can include the agents at the child organizations.
- **For requests created from**—You can purge requests from the current organization or from an entire organization branch.

You can limit the effects of the purge using one of the following:

- **All requests of this type**—Purge this type of request without considering a date.
- **Requests created more than <number> days in the past**—Select a date boundary based on the requests' creation date for the purge.
- **Requests created during <start_range> - <end_range>**—Select a date range for a purge based on the requests' creation date.

- **Requests starting during <start_range> - <end_range>**—Select a date range for a purge based on the requests' purge date.

Click **Delete Requests** to remove the requests.

Click **Revert** to cancel your changes.

Appendix A

Frequently Asked Questions

If you are having trouble with Forecasting and Scheduling, read through the following questions and answers before contacting technical support. In many cases, you will find the answer to your question.

Questions and Answers—Organization Mode

Creating an Organization

1. Do I have to create an organizational hierarchy?
No. You can have one organization with all of your employees in it.
2. Does my hierarchy have to be by location?
No. You can have all of your employees on the same floor and break them out into different divisions or units. It is completely dependent on how you want to manage your employees.

Operations

1. Is maximum consecutive work days to schedule just within a week?
No. The maximum days to schedule specifies the number of days in a row that employees can ever be scheduled, even across week boundaries.
2. How is this different from consecutive shift assignments in work rules?
This is a different feature than consecutive shift assignment. This is for employees total scheduled days, regardless of the shifts they are assigned. The consecutive shift assignment rules are on a per shift basis and specify how many days in a row a particular shift may be assigned to an employee.
3. Can my start day be any day?
Yes. When you create the organization, you specify the start day. Anything related to days of the week will automatically adjust to show that start day as the first day. For example, if you set your start day to be

Wednesday, then the hours of operation and all of the calendars will put Wednesday at the head of the list.

4. How do I change the time zone display to see the hours of operation in my own time zone?

You can change the time zone by double-clicking the display time zone in the status bar on the bottom of the screen. You can set up two defaults to switch back and forth. You can only edit data in the time zone of the organization. The time-related data will automatically adjust to the new time zone.

5. Can schedules cross the week boundary?

Yes.

6. Can I schedule different organizations together that are in different time zones?

Yes. Simply add the organization in the Operations module of the Campaign mode and verify the hours of operation are correct for the full range of times you are open. The system takes care of the rest.

7. How do I give an organization its time zone?

You set an organization's time zone when it is created. This cannot be changed, which is why it appears only as a text string on the Operations screen.

8. How do I specify hours for my 7-day, 24-hour operation?

In the Organization mode Operations module, click 24-hour contact center. Your start and stop times are automatically set for you based on the day boundary you set when you created the organization.

Work Rules

1. Do I need to create separate shift activities for each shift?

No. You create a pool of shift activities that any shift can use.

2. How do I create new shift activity types?

Go to the Activities module.

3. How many shift activity types can I have?

As many as you want.

4. How many shifts, shift activities, or work patterns can I have?

As many as you want.

5. Can I create shift activities such as breaks that are less than 15 minutes long?

Yes. You can create a shift activity ranging from one minute to 23 hours, 59 minutes long.

6. Which part of the work rules actually gets associated with an employee?

Work Patterns. Each employee is assigned one or more work patterns and each work pattern can be assigned to as many employees as you want. Rotations and Assignment Rules are also associated with each employee.

7. If I have many organizations in my hierarchy, but they all have the same work rules, do I have to create separate ones for each?

No. You can set the work rules at the parent company and all of the other Organizations will inherit them. This speeds your setup process and helps you control the patterns at a high level.

8. Can I automatically rotate shifts?

Yes. Rotations can be set up in the Organization mode Work Rules module.

9. How long does a work pattern cover?

One week only.

10. How can I define a split shift?

You can define split shifts as one long shift with a big break between the first and second parts. Define a shift that is the total length of the first shift plus the second shift plus the split time. Then, define an unpaid break that is fixed (only one possible start time for the break) occurring between the first and second shifts. (Of course, you can still define other breaks inside the shifts.)

Employees

1. Is there a limit to the number of employees?

The only limit is the number that you are licensed for.

2. What if I have a lot of employees that no longer work for me? Will that count toward the number of employees I have?

No. The licensing mechanism only looks at active employees in the database. When an employee leaves, you simply deactivate them by giving them an end date and they are not counted towards licensing (and they cannot be scheduled) after that date.

3. Can I delete employees?

Yes. Their information from the past will remain valid so that reports (in the Workforce Management web application) and old schedules are correct, but they will not be seen or scheduled as you move into the future.

4. Are there any user-definable fields?

Yes. There are 10 (User1, User2...User10). These fields are given names in the System module, Administration section, General side-bar element of the web application.

5. Where do I set unavailability in Forecasting and Scheduling?

On the Calendar tab in the Employees module. Click and drag to set the hours the employee is unavailable. You will need to make the unavailability a recurring event if the employee is always unavailable during that time. Right-click the unavailability, select Edit Unavailability..., and click Add Recurrence... in the Unavailability Event window.

6. When I create vacations for my employees, can I determine the number of vacation hours that will actually be counted for reporting?

Yes. The system defaults a vacation to 8 hours, but you can edit this value. Forecasting and Scheduling also counts the hours set for vacation hours towards meeting the minimum and maximum paid hours for the week. Double-click the event, then click Event makes employee(s) unavailable, then click Count toward min/max paid hours, and then type the number of hours.

7. What is Proficiency?

Proficiency is a factor of Average Handle Time. It is used mainly to distinguish between fast employees, and employees who take longer to handle calls. 1 is an average employee. A slower employee receives a proficiency of 2, meaning he takes twice as long to handle a contact, while a fast employee has a proficiency of 0.5, meaning he is twice as fast.

8. Is there something to automatically help me determine Proficiency?

No. It is up to you to define and enter that information.

9. When I set a preference, what am I actually setting the preference for?

You are setting a preference for certain start times, days off, or a certain work pattern.

10. Can I set a preference for a shift?

Yes. You can set a preference for a shift by creating a work pattern that contains only that shift.

11. Can I tell the system that an employee prefers to work at a certain time in the day?

You can do this by setting the employee's preferences in the Employees module.

Calendar

1. What sorting options does the calendar provide?

Sorting options include.

- Sort Ascending (Up) (alphabetical, for example, A–Z)
- Sort Descending (alphabetical)
- Sort by Shift Start Time
- Sort by Shift End Time
- Sort by Shift Length
- Sort by Shift Type
- Sort by Event Start Time
- Sort by Work Pattern

2. What filtering options does the calendar provide?

Filtering by shift assignment or calendar event, or filtering by any employee field.

3. How do I create a meeting?

Meetings are created through “classes.” See ["Creating Classes" \(page 205\)](#).

4. I have a staff meeting every Monday morning. Do I need to create one each week?

No. You can use the Recurring Events feature and it will automatically schedule your event for every Monday. Events can recur at any period you may specify.

5. Can the system find the best time to hold the meeting?

Yes. This is achieved through the Floating Events feature. The user can specify the possible days and time range in which the meeting can occur, and specify the invitees. When the system schedules, it finds the best time to hold that meeting based on the current schedule and when service levels would be impacted the least.

6. Can I give the system a series of training periods and have it schedule a general group of people for multiple trainings, say, 10 at a time?

No. When creating an event, you need to explicitly invite the attendees that should be scheduled.

Questions and Answers—Campaign Mode Creating a Campaign

1. So what exactly is a campaign?

The best way to think of a campaign is that it is a group that you need to schedule. Some users will have one campaign only, others will have multiple. A campaign is a line of business that has one or more queues associated with it and employees to take the calls from those queues.

2. What is a scheduling period?

A scheduling period represents one or more weeks that are, or can be, scheduled.

3. Can I copy scheduling period data from scheduling period to scheduling period?

Yes. The data that is copied includes the queues, skills, organizations, employees, forecasts, service goals, and any locked shift assignments from the copied scheduling period.

Operations

1. I see that there is a time zone field for the campaign. Do I have to have organizations from that same time zone?

No. This is just a way to determine the time zone used for the data you enter into the campaign mode. Any user can change the display time zone and see the information in the selected time.

2. Can I have hours of operation for a scheduling period that are different than the hours of operation for the organizations which are linked to it?

Yes. The system is flexible enough to let you set hours that are different at the campaign level. This also helps you to set special hours for holidays, for example.

3. Is there a place in Forecasting and Scheduling where I can specify holidays and their hours?

Forecasting and Scheduling does not have a holiday calendar. However, because of the flexibility of the hours of operation at the campaign level, you can change hours to be different for any day in any scheduling period. This ensures you can set your hours to match any special scenario.

4. When I'm adding an organization to a campaign and I pick a parent organization, will all of its children automatically be selected as well?

Yes.

Work Rules

1. How are work rules used in a campaign?

When you create work rules in the campaign, it enables you to set rules that are only applied to this campaign. It enables you to customize shifts and work patterns to meet the needs of special weeks. Most users set

up their work rules in Organization mode and use those on a regular basis. Campaign work rules provide you with flexibility without changing your global work rules.

2. Do I have to use the Work Rules module in the campaign?

No. Because you can set up general rules in the Organization, once you link that Organization to the campaign, you will automatically see their work rules here. When you link employees, you also see the employee/work pattern linkages you set in the Employees module in the organization.

Employees

1. What happens in the Campaign Employees module?

This is where you specify the individual employees who will be taking calls from the queues you set in the Operations window. When you link an organization, you are automatically given the ability to choose from its employees. When you click the New button in the toolbar, you are provided with a list of employees from the Organizations you linked. You can choose any number of employees.

2. Can I change employee information in Campaign mode?

Yes, but only a limited amount of information can be changed. You can change the following pieces of information: min/max hours, ranking, proficiency, work pattern links, and skills.

3. Can employees be scheduled in multiple campaigns?

Yes. Forecasting and Scheduling will be sure not to destroy any shifts that were created by another campaign.

4. Can an employee be scheduled in multiple campaigns on the same day?

No. Employees can receive only one shift assignment per day from the scheduling engine.

Forecasting

1. Do I need to use profiles to forecast?

No. In Forecasting and Scheduling, you can choose weeks from history, create a profile, or just type in numbers.

2. Can I edit profiles?

Yes. Once they are created they can be edited at any time. Load the profile, make your changes, and then resave the profile.

3. Can profiles be any other length of time than a week?

No. Profiles are limited to a week, but they can contain as many weeks of data as you want.

4. Can Forecasting and Scheduling automatically reforecast?

You can use the Pulse graphs to easily compare forecasted to actuals, and run a Report on the deviation from predicted and/or required. This identifies the adjustment that is necessary. You can then return to the Forecast module and change the forecast by using the Scale feature or by adjusting the numbers in the table.

5. How does the weighting feature work?

By averaging the data from several weeks, a profile can smooth out the random quirks that can distort your forecast. At the same time, averaging can blur distinctions that let you anticipate patterns in your contact volume. To avoid this, Forecasting and Scheduling lets you use weighted averages, assigning lesser weight to de-emphasize weeks with irregular behavior or greater weight to emphasize weeks with important patterns.

6. Can I use absenteeism from this time last year?

Only if you copied the week from a week from last year. Otherwise, you must determine it yourself.

7. Should I import data directly into Forecast?

No. You should import data into Pulse so it will be saved for future use.

Service Level

1. Why is my predicted average speed to answer (ASA) so high?

This usually indicates that there are not enough agents assigned to meet the predicted workload.

When the workload (the total number of seconds of work that needs to be done by the scheduled agents) exceeds the total time available to the agents, the ASA jumps to a very large number because there is no one to answer the calls. The large prediction is accurate.

2. How accurate is the Full-Time Equivalent (FTE) cost calculator? Can I use it for budgeting?

The cost calculation in the FTE calculator should be seen as an estimate to which some overhead needs to be added. The calculated costs are based on the staffing hours required multiplied by a single hourly wage. The result is accurate only if the contact center is perfectly staffed with absolutely no overstaffing or understaffing. In the real world, of course, some overstaffing or understaffing is inevitable due to contact volume spikes and other uncontrollable variables.

Calendar

1. When I create a schedule, John Doe is not scheduled to work at all.

First, check the Employees module to make sure that John's Min hours per week setting is greater than zero. If it is zero, then Forecasting and Scheduling will not use John unless necessary.

If John's minimum hours setting is greater than zero and he is still not being assigned to work, Forecasting and Scheduling could not find a way to use this employee. In the Employees module, make sure there is a shift pattern checked for John. Then check John's calendar for unavailabilities to make sure that John is available for work during the shift times.

2. Jane Doe should work 5 shifts a week and is only scheduled for 4 days.

If you add another shift, it will probably cause Jane to exceed her maximum work hours per week. In the Employees module, check to see that her maximum and minimum work hours are correct. Also, remember that these minimum and maximum hours include all paid time. If you define a break in a shift pattern as paid, then that break time counts against the minimum and maximum hours.

3. Forecasting and Scheduling is not scheduling people even though they are available and there is high demand.

You may be out of seats! In the Organization mode Operations module, check to see how many seats you have given Forecasting and Scheduling for scheduling, and then look at the schedule to see if you are hitting that ceiling.

4. My part-time agents are not being given as many hours as I want. What can I do?

There are a number of things to check.

First, look at the Staffing graph in the Pulse module to see if there is much understaffing. If there is little or no understaffing, then Forecasting and Scheduling is not giving your part-timers many hours because it does not need them to make a good schedule! You can force Forecasting and Scheduling to give hours to part-timers by specifying minimum work hours per week for part-timers in the Employees module.

If there is some understaffing, but part-timers still are not working, try changing the Scheduling algorithms behavior settings in the Schedule Setup window. (To open the Schedule Setup window, click the Re/schedule button in the Calendar module.) Move the slider to Prefer overstaffing. By doing this, you are telling Forecasting and Scheduling that you are willing to accept more overstaffing at times in order to eliminate understaffing.

5. What is the difference between scheduling meetings and scheduling non-phone time?

It is the difference between one-time events and recurring events. Meetings, training sessions, and the like are usually one-time-only

events that you add directly to the schedule on a specific day. Breaks and other non-phone times, however, are usually recurring events that are scheduled for every shift and should be part of the shift pattern.

6. How can I establish a set schedule for an employee?

You can create a set schedule (one that always starts at the same time, for example) by editing the employee's availability or by creating a customized shift pattern.

7. I want to change John Doe's schedule so he does not work Mondays any longer. What's the best way to do this?

If this change is permanent and John is never going to work Mondays again, make the change on John's Calendar in the Employees module. Right-click Monday, and then select Make Unavailable to make the entire day unavailable, and Forecasting and Scheduling will never schedule John for Mondays. If John will be unavailable on Mondays for only a week or two, make the change in the Campaign mode Calendar module. When you generate a week's schedule, start by making John unavailable for Monday if he will not be able to work that day.

8. When the schedule is printed, it looks funny.

In the Campaign mode Calendar module, select Page Setup from the File menu, and then click the Settings button to open the Print Settings window. In this window, you can configure the patterns used for printing schedules. Use the test page to see if your pattern choices print to your liking. One or the other of the two custom settings provided usually works for most printers.

9. When the schedule is printed, I can't distinguish between shifts and breaks.

The print patterns currently selected for shifts and breaks look the same on your particular printer. In the Campaign mode Calendar module, select Page Setup from the File menu, and then click the Settings button to open the Print Settings window. In this window, you can configure the patterns used for printing schedules. Use the test page to see if your pattern choices print to your liking. One of the two custom settings provided will work for most printers.

10. When I print the schedule, it prints out on more than one page. Is there any way I can reduce the size of the printout to fit the schedule onto one page?

You can print the schedule in text formats, which typically take less space than graph formats, or you can resize the graphic schedule printout. To resize the graphic schedule printout, select Page Setup from the File menu, and then click Settings to open the Print Settings window. In the Scale section of this window, you can scale the printout by a percentage

or you set the number of pages you want the schedule printed on, and have Forecasting and Scheduling automatically resize the schedule to fit.

Pulse—Importing Contact History Data

1. I recently installed Forecasting and Scheduling but I have not configured Integration Server to automatically import ACD data. I would like to set up a forecast to create a schedule. How do I import a few weeks of ACD data/contact history into Forecasting and Scheduling?

The best method for importing many weeks of data from many queues is by configuring Integration Server. Manually importing data, which is described below, can be complex and time-consuming if you need to import large amounts of data.

2. Should I import this data into the Forecast module or the Pulse module?

Import your data into the web application's Tracking module, Pulse section, History tab. Contact history data imported into Pulse is saved and can be used for any forecast in the future. Data imported into the Forecast module is not saved as contact history and will be more difficult to reuse in a future forecast.\

If the data imported into Forecast is not saved in Pulse, any changes made to forecast values cannot be undone. For example, if you enter data in a forecast manually and then change some of the contact volumes, the original values are not saved and you cannot undo your changes by clicking Restore. When you load a week of data saved in Pulse into your forecast, you can change the numbers in the Forecast module and can then clear all your changes by clicking Restore.

3. What is the best way to do this manually?

First, create a report on your ACD that will be saved as a text (*.txt) file. Add your data to the report, and then import the data into Pulse.

To create your ACD report file:

- Use one of the following delimiters: Tab, Comma, or Semicolon.
- Make sure each text file contains information for only one queue and for a single week. Do not print more than one queue to a file. To print more than one week to a single file, see the following question.
- Make sure each text file has an interval of 15, 30, or 60 minutes. 15-minute intervals are best.
- Import the following types of data into the **Pulse History** tab (as you require): **Date**, **Time**, **Contact Volume**, **Service Level**, **Abandon**, **ASA**, **AHT**, **Staffing**, and **Occupancy**. No other categories are necessary for this report.

Here is an example of a portion of an ACD tab-delimited text report with a 30-minute time interval (48 total 30-minute intervals per day):

Date	Group	Time	Contact Volume	ASA	SL	Abdn
22/11/1999	5913	00:00	0	0	100	0
22/11/1999	5913	00:30	0	0	100	0
22/11/1999	5913	01:00	0	0	100	0
22/11/1999	5913	01:30	0	0	100	0
22/11/1999	5913	02:00	0	0	100	0
22/11/1999	5913	02:30	0	0	100	0

To illustrate how this report can be imported into Workforce Management, let's assume you have created a text file with the formatting shown above and saved it as C:\Group5913.txt. The contact center has a Monday 12 a.m. start, and the hours of operation are M–F. This file contains 5 days worth of data (Monday, 11/22/99 through Friday, 11/26/99). The only ACD Queue/Group/Skill in this report is Group 5913. Let's also assume that a queue has already been created in Forecasting and Scheduling for Group 5913 (a new queue is created with ACD Utilities), and this queue is already linked to an existing scheduling period.

To import data using this file:

1. Start the web application.
2. Open the **Tracking** module, and select the **History** tab in the **Pulse** section.
3. Select the queue for which you are importing data.
4. Click the **Show Data Table** button . This allows you to see the data you import.
5. From the **Date** selector, select the week to import. In this example, you would click on Monday, 11/22/99.
6. Click **Import** to open the **Import** dialog box:

The dialog box contains the following parameters:

- **Source File** – The file path where the data to be imported is located. Click the browse button at the right of the **Source File** field, locate C:\Group5913.txt, and then click **Open**.
- **Time Zone** – You set **Time zone** to either **Campaign** or **GMT**, depending on the way the report is generated by the ACD. In this example, it should be set to campaign time zone.

- **Time Interval** – You choose in which time interval data will be imported. For this example, set the Importing interval to 30 minutes.
- **Delimiter** – You choose which delimiter was put between columns in the imported data file. In this example, select **Tab** from the **Delimiter** pull-down.

The dialog box also contains a mapping table with a list of available statistics (trace types) that you can import from the file.

You need to map each statistic to its corresponding column number in the file.

The statistics include:

- Contact Volume
- Average Handling Time
- Service Level
- Average Speed to Answer
- Abandons
- Backlog
- Staffing
- Occupancy
- Full Time Equivalent

Other columns that also need to be mapped are:

- Queue Name
- Date
- Time

7. For the example text, place check marks in the following fields and set the column numbers as indicated:

Contact volume = 4

Average Speed to Answer = 5

Service Level = 6

Abandons = 7

8. Click **Import** to import the data from the current view. When the import is complete, you should get a dialog box that states something like this:

Pulse import done.

240 records out of 244

from file C:\Group5913.txt were imported

You have now imported one week's worth of data into Pulse contact history for Queue/Group/Skill 5913. You are now ready to import data for other queues into the same week or import data for more weeks into the same queue.

4. How do I import more than one week in a single file

If you need to import several weeks worth of data, you can create a single text file for a queue that has more than one week in it. Date formats come in several different forms from each ACD, and certain formats cause the import process to fail. Therefore, using the example above, if you want to import 3 weeks of data, you need to add data to the text file to account for the Saturday and Sundays that are closed. There must be at least one hour of data with zero values for Saturday and for Sunday, or the Monday data for the second week will be imported into Saturday of the first week. To adjust for this, do the following:

- a. Set up the first week using 5 days worth of data with all 24 hours accounted for (in this example, 48 lines of 30 minutes report text).
- b. Copy one hour's worth of data and paste it twice between Week 1 and Week 2, and change the date for this data to the Saturday and Sunday dates. If you use the example above, the following four lines would be inserted between Week 1 and Week 2, and dates would be changed. (Only two lines are added because it is a 30-minute report; four lines would be needed for a 15-minute report):

27/11/1999	5913	00:00	0	0	100	0
27/11/1999	5913	00:30	0	0	100	0
28/11/1999	5913	00:00	0	0	100	0
28/11/1999	5913	00:30	0	0	100	0

It is not necessary to change the dates, but it makes it easier to understand the text file by doing so. Insert the Saturday and Sunday data between each week in the text file. You do not need to insert 24 hours of data for each day.

Appendix B

Technical Reference

This appendix contains:

- a list of common error messages ("[Understanding the Schedule Checker Messages](#)" (page 421))
- a description of the way Forecasting and Scheduling uses different text colors ("[Text Colors](#)" (page 440))
- a section on deleting information ("[Deleting Items in Forecasting and Scheduling](#)" (page 441))
- a look at the way Forecasting and Scheduling uses priorities and preferences ("[Preferences and Priorities](#)" (page 442))
- a description of how to do a quick comparison of the predicted and required staffing and service level statistics ("[Schedule Required versus Predicted Statistics](#)" (page 443))

Understanding the Schedule Checker Messages

The heart of Forecasting and Scheduling is its ability to generate schedules for your agents. During the scheduling process, it analyzes many factors to provide an optimum schedule that satisfies your forecast requirements and desired service levels as well as taking into account agent availability and preferences.

If the scheduler cannot generate an optimum schedule, it displays messages that let you know where the difficulty lies. This section lists those messages and offers suggestions that might eliminate them.

General Issues

<Number> profiles without shift assignments were scheduled. This was necessary to satisfy 'Target Agent Ratio' or 'Limit # of Agents to' constraints.

The scheduler created some staffing profiles without any shift assignments to satisfy the Target Agent Ratio or Limit # of Agents To constraints. To address this issue, there are several possibilities:

1. You might want to reduce the Target Agent Ratio percent or the Limit # of Agents To number in the Staffing Profiles tab of the campaign's Employees module so that additional staffing profiles will not be created.
2. You might want to assign an assignment rule such as Employees must work between 30 and 40 hours per week to the staffing profiles in the Staffing Profiles tab of the organization's Employees module. This ensures that the additional staffing profiles that are created will have shift assignments.

It may be difficult to create profiles from Template <profile_name> due to Assignment Rule <assignment_rule_name>.

The scheduler attempted to add the named staffing profile, but was unable to because it could not create a schedule that complied with the staffing profile's assignment rule. Examine the other messages to see how many units were overstaffed or understaffed for the assignment rule. Verify that staffing profile's work pattern is consistent with the assignment rule and could be followed without violating the rule. Also, verify that all other assignment rules assigned to the staffing profile are consistent with the named assignment rule.

It may be difficult to create profiles from Template <profile_name> due to overstaffing.

The scheduler attempted to add the named staffing profile, but was unable to because it causes excessive overstaffing. Although it is unlikely the scheduler will add more staffing profiles to the starting schedule, it might still change the mix of staffing profiles by removing others and replacing them. If you want the scheduler to add more staffing profiles of the given type, there are several possibilities:

1. You can set the Scheduling algorithm behavior slider bar towards Prefer Overstaffing in the scheduler options.
2. You can increase the forecast in the campaign's Forecast module.
3. You can increase the service goal in the campaign's Service Goals module.
4. You can remove existing employees from the calendar.

It may be difficult to create profiles from Template <profile_name> due to the number of seats in Organization <organization_name>.

The scheduler attempted to add the named staffing profile, but was unable to, because the number of seats would have been exceeded in the named organization. If you want to add more staffing profiles from the given organization, you need to increase the number of seats in the organization's Operations module.

It may be difficult to create profiles from Template <profile_name> due to work pattern issues.

The scheduler attempted to add the named staffing profile, but was unable to, because it could not create a schedule that complied with the staffing profile's assigned work pattern. Examine the other messages to see if the work pattern was valid, if there were ignored shifts, or if there was a shift possible on every day. Also, verify that work pattern's occurrence grid is consistent with the work pattern's min/max consecutive shifts and the max consecutive working days specified in the staffing profile's organization.

No agents are scheduled to work between <date> <time> and <date> <time>.

Even though there were contacts arriving between the given dates and times, there are no employees scheduled. The employees' work patterns or work rules, such as Max Hours, might not have allowed them to be scheduled. To address this issue, there are several possibilities:

1. Add more employees to the scheduling period in the campaign's Employees module.
2. Add more shifts to the employees work patterns in the **Work Pattern** tab of the Work Rules module, or add more start times to the shifts in the **Shifts** tab of the Work Rules module.
3. Increase the employees' maximum hours in the Employees module.

Only <number> agents at: <date> <time> are scheduled, but Min Agents constraint requires <number> agents.

The scheduler was not able to satisfy the Min Agents constraint during the given times. The employees' work patterns or work rules such as Max Hours may not have allowed them to be scheduled. To address this issue, there are several possibilities:

1. Add more employees to the scheduling period in the campaign's Employees module.
2. Add more shifts to the employees work patterns in the **Work Pattern** tab of the Work Rules module, or add more start times to the shifts in the **Shifts** tab of the Work Rules module.
3. Increase the employees' maximum hours in the Employees module.
4. Reduce the number of Min Agents specified.

Only <number> agents at <queue_name>:<date> <time> are scheduled, but Min Agents constraint requires <number> agents.

In a skill-based environment, the scheduler tries to meet the Min Agents constraint for every queue. The scheduler was not able to satisfy the Min Agents constraint during the given times. The employees' work patterns or work rules, such as Max Hours, may not have allowed them to be scheduled. To address this issue, there are several possibilities:

1. Add more employees to the scheduling period in the campaign's Employees module.
2. Add more shifts to the employees' work patterns in the **Work Pattern** tab of the Work Rules module, or add more start times to the shifts in the **Shifts** tab of the Work Rules module.
3. Increase the employees' maximum hours in the Employees module.
4. Reduce the number of Min Agents specified.

Organization <organization_name> is misaligned from the current scheduling period by more than 24 hours.

The scheduler always schedules the organization weeks for the employees who are linked to the scheduling period. For example, a campaign has a week start of Sunday. Some employees in the scheduling period are from an organization with a week start of Monday. When this scheduling period is scheduled, those employees are scheduled from Monday to Monday; the scheduler will not modify their schedule on the first Sunday of the scheduling period. This message is given if the organization's week start is more than a day different from the campaign's. In this case, it might be difficult to verify that all shift assignments created by the scheduler are acceptable.

The sum of the maximum target agent ratios for staffing profiles is <number>. This must be at least 100.

It is not possible to schedule less than a 100% ratio of staffing profiles. You must go to the Staffing Profile tab of the campaign's Employees module and increase the maximum target agent ratios until they total at least 100.

The sum of the minimum target agent ratios for staffing profiles is <number>. This must be at least 100.

It is not possible to schedule more than a 100% ratio of staffing profiles. You must go to the **Staffing Profile** tab of the campaign's Employees module and reduce the minimum target agent ratios until they total at most 100.

There are no employees in this scheduling period.

You must go to the campaign's Employees module and add employees before you can generate a schedule.

There is an active employee filter and no employees are selected for this scheduling period.

You must clear or modify your employee filter such that some employees are selected before you can generate a schedule.

Warning: No staffing profiles have been linked to this scheduling period.

You must add staffing profiles to the scheduling period before scheduling staffing profiles. Staffing profiles can be added in the **Staffing Profile** tab of the campaign's Employees module.

Warning: The number of employees from Organization <organization_name> selected to be scheduled in this scheduling period is more than twice the number of seats in that organization.

It is likely your number of seats is too low. The number of seats is set in the organization's Operations module.

Warning: The Workforce Planner will not add any new agents when scheduling with a filter active.

You must clear your employee filter before the scheduler will add any staffing profiles to the scheduling period.

You are scheduling into the past: This scheduling period begins at <day_of_week>, <date>, which is prior to the current time of <day_of_week>, <date>.

You are scheduling a period that starts earlier than the current time. This is not a fatal message—the scheduler will continue to schedule, if you want.

Assignment Rule Issues

Rotation rule <rotation_name> has work patterns of a different employee type.

Typically, employees can only be assigned work patterns of their own employee type, but this rotation contains multiple employee types. The scheduler will still assign the work patterns, but you might want to verify that the employee types are set correctly in the **Work Pattern** tab of the Work Rules module and that the rotation contains the correct work patterns in the **Assignment Rule** tab of the Work Rules module.

Violation: you have overscheduled <employee_name> by <number> <units> or <number>% in period <day_of_week>, <date> to <day_of_week>, <date> for rule <assignment_rule_name>.

The scheduler was unable to create a schedule that satisfied the named assignment rule. Verify that the employee's work pattern and min hours are consistent with the assignment rule and can be followed without violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule.

Violation: you have under-scheduled <employee_name> by <number> <units> or <number>% in period <day_of_week>, <date> to <day_of_week>, <date> for rule <assignment_rule_name>.

The scheduler was unable to create a schedule that satisfied the named assignment rule. Verify that the employee's work pattern and max hours are consistent with the assignment rule and can be followed without violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule.

Warning: it is projected that you may have overscheduled <employee_name> by <number> <units> or <number>% in period <day_of_week>, <date> to <day_of_week>, <date> for rule <assignment_rule_name>.

The scheduler was unable to create a schedule that satisfied the percentage of the multi-week assignment rule that should have been scheduled in the current period. Verify that the employee's work pattern and min hours are consistent with the assignment rule and can be followed without violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule. The scheduler will try to "catch up" by scheduling fewer units in future periods.

Warning: it is projected that you may have under-scheduled <employee_name> by <number> <units> or <number>% in period <day_of_week>, <date> to <day_of_week>, <date> for rule <assignment_rule_name>.

The scheduler was unable to create a schedule that satisfied the percentage of the multi-week assignment rule that should have been scheduled in the current period. Verify that the employee's work pattern and max hours are consistent with the assignment rule and can be followed without violating the rule. Also, verify that all other assignment rules assigned to the employee are consistent with the named assignment rule. The scheduler will try to "catch up" by scheduling more units in future periods.

Employees: <employee_name> and <employee_name> are on the same team, but they do not have the same min/max hours.

If the team assignment rule specifies that employees must start at the same time, end at the same time, and work the same days, then the employees must also have the same min/max hours. You should adjust their min/max hours in the Employees module or modify the team assignment rule in the **Assignment Rule** tab of the organization's Work Rules module.

Employees: <employee_name> and <employee_name> are on the same team, but they do not have the same Work Patterns.

If the team assignment rule specifies that employees must start at the same time, end at the same time, and work the same days, then the employees must also have the same work patterns. You should change their work patterns in the **Work Patterns** tab of the Employees module or modify the team assignment rule in the **Assignment Rule** tab of the organization's Work Rules module.

Employee Issues

Employee <employee_name> does not have any work patterns available.

You must assign at least one work pattern to the employee before the employee can be scheduled. Work patterns are assigned to employees in the Employees module.

Employee <employee_name> has 0.0 maximum paid hours per week.

The employee will not be scheduled unless the employee's maximum hours are greater than 0.

Employee <employee_name> has a shift assignment on <date> with an abnormally long duration of <number> hours -- the maximum length of a shift is 23.27 hours.

You cannot schedule a shift that is longer than 23.75 hours. Adjust the length of the shift and reschedule.

Employee <employee_name> has the skills to work <media_type> queues, but is not linked to any shifts that allow the employee to work <media_type> queues.

In multi-contact scheduling, the employee has skills for some media, but is not linked to any work patterns that contain shifts with an activity that includes the media. For example, even if an employee has skills to work

email queues, it is not possible for the employee to work on email unless one of his work patterns contains a shift with an activity that includes the Email media.

Employee <employee_name> is not qualified to work on any of the queues in this scheduling period.

In skill-based scheduling, the employee named does not have any of the skills required by the campaign's queues. To give the employee skills, add them in the **Skills** tab in the Employees module. Skills should be added through the Organization mode's Employees module.

Employee <employee_name> was deleted during the span of the current scheduling period.

An employee has been removed from one of the organizations linked to your campaign and will not be scheduled after the deletion date. The employee's names will remain on the schedule, however, and you can give the employee a shift assignment manually.

Note: Employee <employee_name> has an end date of <date_of_week>, <date>, and the scheduling period ends on <date_of_week>, <date>.

An employee has been terminated from one of the organizations linked to your campaign and will not be scheduled after the termination date. The employee's names will remain on the schedule, however, and you can give the employee a shift assignment manually.

Note: Employee <employee_name> has a start date of <date_of_week>, <date>, and the scheduling period starts on <date_of_week>, <date>.

An employee has been hired during the scheduling period and will not be scheduled before the hire date. The employee's names will remain on the schedule, however, and you can give the employee a shift assignment manually.

Queue Issues

Average proficiency on queue <queue_name> (<number>) is greater than 1.

If the average proficiency is greater than 1, then the AHT used by the scheduler will be greater than the AHT forecast in the Forecast module. Proficiency can be set in the Employees module.

Average proficiency on queue <queue_name> (<number>) is less than 1.

If the average proficiency is less than 1, then the AHT used by the scheduler will be less than the AHT forecast in the Forecast module. Proficiency can be set in the Employees module.

In the forecast, the call volume at <date> <time> is <number>, but the average handling time is 0.000.

If the contact volume is greater than 0, the average handling time (AHT) must also be greater than 0. Adjust these numbers in the Forecast module. If you are unsure why that value is zero, check the historical contact volume you are using for your forecast. If this value is 0, you should check your ACD reports to determine why the AHT was zero. Sometimes, this is due to your ACD reporting calls in one interval (when the contact arrived) and AHT in the next interval (when the contact completed).

Patience for Queue <queue_name> is <number> seconds, which is shorter than the Service Time of <number> seconds.

In a skills-based environment, the patience should be greater than the service goal time. If the patience is less than the service goal time, the service level forecasts will be inaccurate. Adjust the service goal time and patience in the campaign's Service Goals module.

Queue <queue_name>: In the forecast, the call volume at <date> <time> is <number>, but the average handling time is 0.000.

In a skills-based environment, if the contact volume is greater than 0 on the named queue, the average handling time (AHT) must also be greater than 0. Adjust these numbers in the Forecast module. If you are unsure why that value is zero, check the historical contact volume you are using for your forecast. If this value is 0, you should check your ACD reports to determine why the AHT was zero. Sometimes, this is due to your ACD reporting calls in one interval (when the contact arrived) and AHT in the next interval (when the contact completed).

The number of employees qualified to work queue Combined Queue (<number>) is less than the minimum staffing (<number>).

It is likely that the minimum staffing is too high. You should reduce the minimum staffing required in the scheduler options, or add more employees to the scheduling period in the campaign's Employees module.

The number of employees qualified to work queue <queue_name> (<number>) is less than the minimum staffing (<number>).

In a skill-based environment, the scheduler will try to meet the minimum staffing for every queue. It is likely that the minimum staffing is too high. You should reduce the minimum staffing required in the scheduler options, add more employees to the scheduling period in the campaign's Employees module, or give more employees the skill to work on the named queue in the organization's Employees module.

There are no agents qualified to answer calls on queue <queue_name>.

You are using skill-based scheduling and none of the agents have the skills linked to the queue. Either change the skills linked to the queue in the Operations module or assign the skill to some employees in the Employees module.

Warning: No skills are linked to queue <queue_name>. All employees are assumed to be skilled to work this queue.

In a skill-based environment, skills should be linked to all queues. If no skill is linked to a queue, the scheduler assumes every employee has a skill for the queue.

For queue <queue_name>, the reserve threshold is 0. This value should probably be greater than 0.

The reserve threshold time should be greater than 0; otherwise, there is little difference between a primary skill and a reserve skill.

For queue <queue_name>, the reserve threshold is 1 (<number> seconds) is greater than the reserve threshold 2 (<number> seconds).

The second reserve threshold time should be less than the first reserve threshold time since it is assumed that the Agents with reserve 1 skills should be used before agents with reserve 2 skills.

Goal/Forecast Issues

In Queue <queue_name>, the Service Level goal should have some non-zero values. Please ensure that a service level goal has been set for this queue.

You must set service levels for each queue and for each day. Adjust your service levels in the Service Goals module. If you are in a skill-based scenario, be sure to set service goals for all of your queues. If you did set your Service level goals and they are still at 0, check to be sure your hours of operation are set in the Operations module, and check to be sure you have created a forecast in the Forecast module.

Min/Max Hour Issues

Employee <employee_name> is working <number> paid hours, which is greater than the specified maximum <number> paid hours.

Because this message does not include any information about work hours, some other factor is causing this problem. Here are some things to evaluate:

1. Work Pattern issues—Perhaps the occurrence grid or the min consecutive days set in the work pattern does not allow the max hours to be reached.
2. Scheduler options—If you are rescheduling, check to see if you have Don't remove people checked. If this is checked, no shift assignments can be removed.

Employee <employee_name> is working <number> paid hours, which is less than the specified minimum <number> paid hours.

Because this message does not include any information about work hours, some other factor is causing this problem. Here are some things to evaluate:

1. Unavailability and Hours of Operation—Do you have any events that are marked Makes employee unavailable? These unavailability events will prevent the scheduler from adding shifts. The scheduler is also unable to place shifts when the campaign or organization is closed.
2. Number of Seats—Perhaps the scheduler cannot add more hours due to the number of seats for the organization being reached.
3. Work Pattern Issues—Perhaps the occurrence grid or the max consecutive days set in the work pattern do not allow the min hours to be reached.
4. Scheduler Options—If you are rescheduling, check to see if you have Don't add people checked. If this is checked, no additional shift assignments be made. The scheduler can only adjust shifts around.

The maximum paid hours for employee <employee_name> is <number>, but according to his/her work patterns, his/her minimum possible paid hours is <number>.

This message means you have a mismatch between the Max Hours field in the Employees module and the minimum hours that can be worked set by the work patterns you have linked to this employee. You should correct this message before you continue to schedule; otherwise, you must reschedule or manually add shift assignments to ensure the correct number of hours.

Here are some steps to correct it:

1. First, determine what the minimum and maximum hours for this employee should be. Then, re-evaluate the error message.

2. If the maximum paid hours in parentheses are correct, then evaluate the work patterns that are linked to the employee. Check the shifts inside each of the work patterns to ensure they have the right amount of paid time. Make sure your breaks are set correctly to paid/unpaid. Remember, if you get this message, you have too many hours in your work pattern.
3. If the maximum paid hours number is not correct and the number the work patterns provide is correct, return to the Employees module in Organization mode and adjust the Max Pd Hrs field with the correct value. Although you can continue and the employee will be scheduled for the correct number of hours, be sure to fix the mistake.

The maximum paid hours for employee <employee_name> is <number>, but according to his/her work patterns, his/her minimum possible paid hours is <number>.

This message means you have a mismatch between the Min Hours field in the Employees module and the maximum hours that can be worked set by the work patterns you have linked to this employee. This message tells you that you do not have enough paid hours in the work pattern to meet the minimum hours you have set in the Employees module. You should correct this message before you continue to schedule; otherwise, you must reschedule or manually add shift assignments to ensure the correct number of hours.

Here are some steps to correct it:

1. First, determine what the minimum and maximum hours for this employee should be. Then, re-evaluate the error message.
2. If the minimum paid hours are correct, you should evaluate the work patterns that are linked to the employee. Check the shifts inside each of the work patterns to ensure they have the right amount of paid time. Remember, if you get this message you are not scheduling enough hours.
3. Check your shift lengths.
4. Be sure your breaks are set correctly to paid/unpaid.
5. If the minimum hours are not correct and the amount that the work rules supply is correct, simply return to the Employees module in the organization and adjust the MIN PD HRS field with the correct value. Although you can continue and the employee will be scheduled for the correct number of hours, be sure to fix the mistake.

Shift Issues

<employee_name> has not been assigned a shift on <date>, but he/she is not allowed an OFF shift that day in any work pattern.

The scheduler was unable to assign a shift assignment to the named employee on the given date, but that employee was also not allowed to have a day off on that date. There are several possible reasons and resolutions for this issue:

1. Verify that the employee has some shifts “checked” in the employee’s work patterns’ occurrence grids on the given date in the Work Rules module.
2. Check the other warning messages to see if the shifts that are allowed in the employee’s occurrence grid are being ignored.
3. If the number of seats for the employee’s organization has been reached, the scheduler will not schedule the employee for any shift assignment. The number of seats can be increased in the organization’s Operations module.
4. Verify that a shift can be added on the given date without violating the max consecutive days specified in the organization’s Operations module or the min/max consecutive shifts specified in the **Work Pattern** tab of the Work Rules module.

<Work_pattern_name> has an invalid shift linked to it which will be ignored.

The work pattern will be ignored because one of the linked shifts was invalid. Examine the other messages to determine why the shift was invalid. It might be due to the shift activity windows or the hours of operation.

No shifts can occur on <day_of_week> in work pattern <work_pattern_name>.

This tells you that the indicated day is not checked in the Work Pattern Occurrences tab for any shifts or for a possible days off in that work pattern. If you want to have shifts assigned on Mondays for that tab, then the shifts should be checked. If you do not want to have shifts scheduled on that day, you should check **Possible Day Off**.

On <day>, Employee <employee_name> has a custom shift assignment which is in a consistent start group, but has an invalid start time.

The named employee is working a work pattern that has consistent start times set, but the employee also has a custom shift assignment on the given date that was manually modified, such that its start time is not allowed by the shift definition. The scheduler will not be able to schedule other shift assignments of that type start consistently unless the shift assignment is removed or moved to an allowed start time.

Shift <shift_name> cannot be scheduled as shift activities: <shift_activity_name> cannot all fit in the overlapping start/end window.

This shift will be ignored because it is not possible to fit all of the named shift activities within their overlapping start/end window. The start/end windows for the shift activities must be adjusted in the **Shift Activities** tab of the organization's Work Rules module, such that they have less overlap.

Shift <shift_name> does not fit within the hours of operation for any day in the week.

This shift will be ignored because it does not fit inside the hours of operation for its organization on any day in the week. For example, the shift might start at 8 a.m., but the organization is closed on the weekends and only opens at 9 a.m. on the weekdays.

Shift <shift_name> will be ignored for Employee <employee_name> because he/she cannot work shift <shift_name> on any queue this week.

If the shift's primary activity has associated media, but the employee cannot work any queue of the media, then the shift will be ignored. For example, an employee is linked to a work pattern that contains a shift named "Email + Fax 8 hour Shift." This shift has a primary activity named "Email + Fax" that is associated with two media: Email and Fax. Now, if the employee has no skills to work any Email or Fax queues, then this shift will be ignored. Similarly, if no Email or Fax queues are linked to the scheduling period, then this shift will be ignored.

Shift <shift_name> will be ignored for Profile <profile_name> because he/she cannot work shift <shift_name> on any queue this week.

If the shift's primary activity has associated media, but the staffing profile cannot work any queue of the medias, then the shift will be ignored. For example, a profile is linked to a work pattern that contains a shift named "Email + Fax 8 hour Shift." This shift has a primary activity named "Email + Fax" that is associated with two media: Email and Fax. Now, if the profile has no skills to work any Email or Fax queues, then this shift will be ignored. Similarly, if no Email or Fax queues are linked to the scheduling period, then this shift will be ignored.

Shift Activity Issues

Shift <shift_name> has an invalid shift activity.

The shift will be ignored because one of the linked shift activities was invalid. Examine the other messages to determine why the shift activity was invalid. It might be due to an illegal window.

Shift <shift_name> will be ignored for Employee <employee_name> as he/she cannot work shift activity <shift_activity_name> on any queue this week.

If the shift events' activity has associated media, but the employee cannot work any queue of the media, then the shift will be ignored. For example, an employee is linked to a work pattern that contains a shift named "8 hour Shift with 1 hour Email + Fax." This shift has a shift event named "1 hour Email + Fax." This shift event has an activity named "Email + Fax" that is associated with two media: Email and Fax. Now, if the employee has no skills to work any Email or Fax queues, then this shift will be ignored. Similarly, if no Email or Fax queues are linked to the scheduling period, then this shift will be ignored.

Shift <shift_name> will be ignored for Profile Template <employee_name> as he/she cannot work shift activity <shift_activity_name> on any queue this week.

If the shift events' activity has associated media, but the staffing profile cannot work any queue of the media, then the shift will be ignored. For example, a profile is linked to a work pattern that contains a shift named "8 hour Shift with 1 hour Email + Fax." This shift has a shift event named "1 hour Email + Fax." This shift event has an activity named "Email + Fax" that is associated with two Media: Email and Fax. Now, if the profile has no skills to work any Email or Fax queues, then this shift will be ignored. Similarly, if no Email or Fax queues are linked to the scheduling period, then this shift will be ignored.

Shift activity <shift_activity_name> has an illegal window for Shift <shift_name>.

The named shift activity does not fit within the shift or the shift activity's start/end window does not fit in the shift. The shift activity must be modified to have a shorter duration or an earlier start/end window in the **Shift Event** tabs of the organization's Work Rules module.

Number of Seats Issues

All seats for Organization <organization_name> are in use; more hours may not be scheduled unless the Number of Seats is increased.

At some time in the scheduling period, every seat is being used so no more employees or staffing profiles can be scheduled from that organization. If you want more employees to be scheduled, you must increase the number of seats in the organization's Operations module.

From <date> <time> to <date> <time>, the number of employees scheduled in Organization <organization_name> exceeds the number of seats in the call center (<number>).

During the time period specified, employees and staffing profiles from the named organization are using more seats than the specified number of seats. The scheduler will remove shift assignments from the scheduling period until the number of seats is not exceeded. However, the scheduler will not remove shift assignments that are locked. If you want more employees to be scheduled, you must increase the number of seats in the organization's Operations module.

The Number of Seats for organization <organization_name> is 0. Defaulting to unlimited number of seats for the organization.

The number of seats represents the number of phones available at any one time and determines the maximum number of agents that will be scheduled during any single 15-minute interval. If it is set to 0 in the organization's Operations module, the scheduler can schedule more agents than there are seats. Enter the maximum number of seats to avoid this.

Hours of Operations Issues

Employee <employee_name> has Work Pattern <work_pattern_name> which contains Shift <shift_name>, but Shift <shift_name> does not fit in the hours of operation for Organization <organization_name> on <date>.

The named employee has a shift specified in their work patterns' occurrence grid that cannot be scheduled due to their organization's hours of operation. This shift should be removed from the occurrence grid on that day in the **Work Pattern** tab of the organization's Work Rules module. For example:

1. A shift might be "checked" for Sunday in the work pattern's occurrence grid, but this employee's organization is not open on Sunday.
2. A shift that must start at 8 a.m. might be "checked" for Monday in the work pattern's occurrence grid, but this employee's organization does not open until 9 a.m. on Monday.

Event Issues

Employee <employee_name> has shift activity overlapping the Event with comment '<event_comment>' at <date> <time>.

The scheduler attempts to always schedule shift activities outside of calendar events, but it was unable to schedule the named shift activity outside of the listed event. You might need to manually modify the calendar event or the shift activity. Additionally, you can check the start/end windows for the shift activity to see if they can be expanded. If the calendar event is a floating event or a class, you can also check the start/end window of the floating event or class to see if they can be expanded as well.

Class <event_comment> at <date> <time> requires at least <number> attendees but there are only <number>.

The scheduler was unable to satisfy the class attribute Minimum number of Attendees. Here are some possibilities to correct it:

1. Make sure that min/max attendees can accommodate the required attendees (required attendees may not divide into min/max attendees).
2. There may be a group of employees scheduled at some time due to their work patterns, where the size of the group is less than minimum number of attendees.
3. The scheduler option attribute Schedule at least X agents per queue might be preventing agents from attending a class.

Class <event_comment> at <date> <time> requires no more than <number> attendees but there are <number>.

The scheduler was unable to satisfy the class attribute Maximum number of Attendees. Make sure that min/max attendees can accommodate the required attendees (required attendees might not divide into min/max attendees).

Attendee Issues

Employee <employee_name> could not be scheduled to attend the Event with comment '<event_comment>' at <date>.

The named employee does not have a shift assignment “underneath” a calendar event or a floating event that he is required to attend. The employee’s availability might not coincide with the event time. This generally implies that there are other calendar events overlapping available times or the employee’s work patterns do not coincide with the times the event starts.

Employee <employee_name> is not attending class <event_comment> as required.

The named employee does not have a shift assignment “underneath” a class session that the employee is required to attend. Here are some possibilities to correct it:

1. Employee availability may not coincide with class times. This generally implies that there are other calendar events overlapping available class

times or the employee's work patterns do not coincide with the times the class may start.

2. The scheduler option attribute Schedule at least X agents per queue might be preventing agents from attending a class.

Preference Issues

Employee <employee_name> is using both start time/day off preferences and work pattern preferences.

You should not use both work pattern preferences and start time/day off preferences. You can remove work pattern preferences by setting all work pattern preference values to 1 in the **Work Pattern** tab of the Employees module. If both are used, the start time/day off preferences take priority.

Employee <employee_name> was assigned to work pattern <work_pattern_name>. The employee has <number> work patterns which (s)he prefers more than the assigned pattern.

The named employee did not receive his or her most preferred work pattern. There are several possible causes for this:

1. It was not possible for this employee to work the more preferred work patterns due to other work rules, such as min/max hours, assignment rules, and unavailability.
2. The scheduler did not schedule any more preferred work patterns since they were not useful for meeting the service goal.
3. The scheduler did schedule some more preferred work patterns, but they were all assigned to other employees who had higher rank or higher seniority than this employee.
4. The scheduler did schedule some more preferred work patterns, but they were all assigned to other employees who could not "swap" work patterns with this employee due to their work pattern assignments or work rules.

Employee <employee_name> was not scheduled for any of his/her favored preferences on <date>.

The named employee did not receive any of the preferred start times or days off that were favored given the Favor Preferences slider bar position in the scheduler options. You can review the employee's favored preferences by clicking the View Favored Preference button. It is possible that the employee could not work the favored preference due to other work rules, such as min/max hours, assignment rules, and unavailability.

The top 25 percent of <employee_name>'s preferred days off are not possible in any of his/her work patterns.

It is not possible for this employee to get his or her most preferred days off in any of his work patterns. If you want to address this, you can:

1. Ask the employee to modify his preferences in My Profile, My Preferences web page, or day off possibilities
2. You can assign him additional work patterns in the Work Pattern tab of the Employees module.
3. You can modify his work patterns to contain additional days off in the Work Pattern Occurrence tab of the Work Rules module.

The top 25 percent of <employee_name>'s preferred start times are not possible in any of his/her work patterns.

It is not possible for this employee to get his or her most preferred start times in any of his work patterns. If you wish to address this, you can:

1. Ask the employee to modify the preferences in My Profile, My Preferences web page, or day off possibilities.
2. You can assign the employee additional work patterns in the **Work Pattern** tab of the Employees module.
3. You can modify the employee's work patterns to contain additional shifts in the **Work Pattern Occurrence** tab of the Work Rules module.

Additional Messages

In addition to the standard checker messages, a few situations produce special warnings in a dialog box whenever a scheduling run is attempted. These situations require immediate remedy—the scheduling engine cannot be run until they are resolved.

Employee <employee_name> has two shift assignments that start on <date> in the Calendar. One of them must be removed!!

You must delete one of the Shift Assignments before you can generate a schedule.

Illegal scheduling window: The start of the scheduling window (<date> <time>) must be before the end of the scheduling window (<date>).

You must set the start time to before the end time in the scheduler options before you can generate a schedule.

No queues are linked to this scheduling period -- cannot schedule.

You must go to the Campaign Operations module and add queues before you can generate a schedule.

Scheduling cannot continue as Employee <employee_name> has a Shift Assignment overlapping an Unavailability at <date> <time>.

You must delete the Shift Assignment or the Unavailability before you can generate a schedule.

There are no employees selected to be scheduled in scheduling period.

You must go to the campaign's Employees module and add employees before you can generate a schedule.

Text Colors

The following text colors are used in Forecasting and Scheduling:

Red

Where you will see it: The **Shifts** tab within the Work Rules module.

What it means: The data you have entered is invalid and will not be used to schedule. For example:

- The length of a shift is longer than the hours of operation.
- There are invalid start times for a shift set.
- The length of a break is longer than a shift to which it is linked.
- The start window for a break falls outside the length of a shift to which it is attached.

How to make it go away: Change the value in the red field to fall within the Hours of Operation or shift length.

Magenta

Where you will see it: The Employees module in the Campaign mode.

What it means: You have changed an employee's data so that it is different from the default set in the Organization mode. This appears in the employee grid and the employee's tab for work patterns.

How to make it go away: If you do not want to apply the changes you made, remove and re-add the employee.

Gray

Where you will see it: Shifts, Employees, Calendar.

What it means: Something has been deleted or contains an item that has been deleted. For example:

- A gray shift contains a deleted shift activity.

- A gray work pattern contains a deleted shift.
- A grayed employee means the employee has been deleted (Employees module and calendar).

How to make it go away: If it is a work rule, delete the link to the item that has been deleted (for example, the shift activity for the gray shift or the shift in the gray work pattern).

Blue

Where you will see it: In the Campaign mode, in the Add Employee dialog box.

What it means: The employee has already been added to the campaign.

Deleting Items in Forecasting and Scheduling

Since Forecasting and Scheduling uses data in many different ways, the effect of deleting an item depends on the item itself and its links. This section explains the effect of deleting different items.

Deleted from Database

These items are deleted immediately and completely from the database:

- Organizations
- Campaigns
- Scheduling periods
- Organization link to scheduling period
- Queue link to a scheduling period (this automatically deletes the forecast for the queue)
- Queues (queues are deleted in Integration Server)
- Shift activity link to a shift
- Shift link to a work pattern
- Weeks in the Forecast module

Deleted by Inactivating at a Particular Time

The following items will be “deleted” by inactivating them as of the date you select. When you delete these items, it does not remove them from the database and does not automatically unlink them from any other items:

- Shifts
- Shift activities
- Work patterns

- Employees (by setting an end date)

If you are viewing Forecasting and Scheduling in a time frame before the deletion occurred, you can see the item you deleted. For example, if you delete a shift on 12/1/99 and view a scheduling period for 11/21/99, you can see the deleted shift.

If you are viewing Forecasting and Scheduling in a time frame after the deletion occurred, you cannot see the deleted item. For a scheduling period, the time frame is any week after the deletion; for an organization, it is any day after the deletion occurs.

In places where the deleted item was associated with another item prior to the delete, you are notified by a visual cue. For example, the shift deleted on 12/1/99 is displayed in gray in any work patterns it was linked to. It is not removed from that work pattern, but it will not be scheduled.

Preferences and Priorities

Forecasting and Scheduling uses a number of rules, constraints, objectives, and preferences to create an optimum schedule. This section describes those factors and the way the scheduler prioritizes them. They are listed in order from highest to lowest priority.

Fixed Constraints

These items set limits the scheduler cannot violate. All schedules must meet all of these constraints. They are of equal priority.

- **Minimum and maximum consecutive days for a shift**—The minimum and maximum number of days a shift will be assigned to an employee with a work pattern. These numbers will determine how many days in a row an employee will work a shift or how many days in a row an employee will have off. See "[Setting Consecutive Days for a Shift](#)" (page 106).
- **Minimum time between shift assignments**—The minimum number of hours an employee will be given between shift assignments. See "[The Advanced Options Group](#)" (page 83).
- **Maximum consecutive working days to schedule**—The maximum number of days in a row an employee can be scheduled to work. See "[The Advanced Options Group](#)" (page 83).
- **Consistency rules**—Consistent start times and shift activities are assigned to all employees with a work pattern. See "[Setting Consistent Start Times for Shifts and Shift Activities](#)" (page 107).
- **Hours of Operation**—All shift start and finish times must occur during the organization or campaign's hours of operation. See "[The Hours](#)"

of Operation Group" (page 83) and "The Hours of Operation Group" (page 158).

Prioritized Constraints and Preferences

These items are listed in the order they are considered by the scheduling engine.

1. **Maximum number of seats**—The maximum number of agents that can be scheduled at any time for an organization. See "[The Organization Group](#)" (page 82).
2. **Employee's minimum and maximum paid hours**—The minimum and maximum number of paid hours an employee can be scheduled each week. See "[Employee Grid Fields](#)" (page 120).
3. **Assignment Rules**—Priorities for each Assignment Rule are set when the rules are created. See "[The Assignment Rules Tab](#)" (page 108).
4. **Meetings inside shift assignments**—Meetings will, to the greatest extent possible, be scheduled during periods when all attendees are scheduled to work. See "[Creating and Modifying Calendar Events](#)" (page 140).
5. **Not scheduling employees**—At times where the Service Goal is set to 0% on all of their skills.
6. **Meeting the minimum staffing**—As set in the Scheduler Setup dialog box.
7. **Service goals**—Schedules will be created that best reach your service goals. See "[The Service Goals Module](#)" (page 177).
8. **Shift start time and days off preferences**—These preferences are set in the Preferences tab of the Employees module. See "[Adding Employee Preferences](#)" (page 130).
9. **Work pattern preferences**—These preferences are set in the Work Patterns tab of the Employees module. See "[Assigning Work Patterns to Employees](#)" (page 132).
10. **Even spacing of shift activities**—Shift activities will be spaced as evenly as possible throughout each shift.

Schedule Required versus Predicted Statistics

In addition to the complete statistical information available in the Pulse module, a quick comparison of the predicted and required staffing and service level statistics is available in the Calendar module (see "[Statistical Comparisons](#)" (page 195)).

Schedule Statistical Comparison: Non-Skills

Non-Skills: Single queue linked to scheduling period

Non-Skills: Single queue linked to scheduling period or <combined> queue view in multi-queue scenarios or Single queue in multi-queue scenarios		
	Required	Forecasted/Predicted
ASA	The ASA (number of secs) value YOU input into the Service Goals module. This is only shown if ASA is the selected goal.	The service levels Forecasting and Scheduling generates after you create a schedule. ASA is always generated after a schedule even if ASA is not your goal. This represents the predicted time to which you will answer calls based on the number of people on the schedule.
Full Time Equivalentents	For single queues, the effective contribution based on the actual CV, AHT, Abandons, and SL. For multiple queues, the sum of the effective contribution requirements from each individual queue.	For single queues, the effective contribution requirement. For multiple queues, the effective contributions of all agents.
Service Level	The service level value (% calls in number of secs) YOU input into the Service Goals module. This is only shown if Service Level is the selected goal in the module.	Forecasting and Scheduling generates this for you after you have generated a schedule. This line is a call-weighted average of the forecasted service levels calculated for each queue.

Schedule Statistical Comparison: Skills

Skills: Single queue linked to scheduling period or <combined> queue view in multi-queue scenarios		
	Required	Forecasted/Predicted
Full Time Equivalentents	The sum of the effective contribution requirements from each individual queue.	The sum of the effective contributions of all agents scheduled in the campaign over all queues in the campaign.
Service Level	Forecasting and Scheduling generates this for you. This line is a call-weighted	Forecasting and Scheduling generates this for you after you have generated

Skills: Single queue linked to scheduling period or <combined> queue view in multi-queue scenarios		
	Required	Forecasted/Predicted
	average of the goals set in the Service Goals module for each queue.	a schedule. This line is a call-weighted average of the forecasted service levels calculated for each queue.

Skills: Multiple queues—looking at each individual queue		
	Required	Forecasted/Predicted
Full Time Equivalents	Sum of the effective contribution requirements from each selected individual queue, assuming that each one is non-skills-based.	Sum of the effective contributions of all agents scheduled in the campaign over all selected queues.
Service Level	This line represents the Service Goal you determined in the Service Goals module.	Forecasting and Scheduling generates this for you after you have generated a schedule. This is the forecasted staffing for the queue you have selected based on the scheduling simulations.

Appendix C

Preferences Scheduling in Forecasting and Scheduling

This appendix gives you information about the Forecasting and Scheduling preferences scheduling methodology to help you better understand the way it impacts your schedules.

General Preferences Methodology

The Forecasting and Scheduling scheduler uses a set of rankings or preferences to determine when agents are scheduled for work. In a preferences scheduling model, agents with more seniority or higher ranking have their work preferences satisfied before less senior or lower ranking agents. Assignment of work hours is based on the availability of those hours determined initially by the creation of the best possible schedule.

Scheduling using preferences does not impact service level—preferences are used only if it is possible to do so while maintaining the required service level. The only exception to this is defined by the user and is controlled through the preferences slider bar on the schedule setup screen.

Preference-based scheduling is used to ensure that schedules are created that provide the best possible customer service with the most efficient use of agent time, while at the same time promoting agent satisfaction, especially among senior or high-ranking employees.

There are two methods of assigning and scheduling preferences within Forecasting and Scheduling:

- Work pattern preferences enable agents to set a preference for a particular type of weekly pattern or schedule.
- Start time and day off preferences enable agents to set specific preferences for start times or days off.

These two methods can be used in conjunction with each other.

Work Pattern Preferences

This section shows how Forecasting and Scheduling uses work-pattern-based preferences to schedule.

Work pattern preferences show an agent's relative preference for different types of schedules. For example, a call center might have both "5 by 8" and "4 by 10" schedules available for agents. By using work pattern preferences, agents can state a preference for one type of schedule over the other.

Work Pattern Scheduling

To understand how work-pattern-based scheduling preferences work, it is important to understand how Forecasting and Scheduling creates schedules using the work patterns you assign to your employees in the Employees module.

When the Forecasting and Scheduling scheduling engine creates a schedule for an agent, it uses the set of work patterns that are linked to the agent to determine the types of shifts that it can assign. Each agent is assigned shifts from only one work pattern per week. The scheduling engine picks shifts (and, therefore, start times) from that single work pattern. It cannot pick shifts from multiple work patterns.

Here is an example of how Forecasting and Scheduling uses work patterns to give agent schedules:

Scenario 1

An employee has work pattern X assigned to her in the Employees module.

Work pattern X has a shift that can start at any of the following times: 6, 7, 8, 9, 10, or 11 a.m.

Schedule Result: Employee can be scheduled for a shift that starts at any of the start times (6-11a.m.).

Scenario 2

An employee has work patterns A and B assigned to her in the Employees module

- Work pattern A has a shift that can start at 6, 7, or 8 a.m.
- Work pattern B has a shift that can start at 9, 10, or 11 a.m.

The scheduling engine picks either work pattern A or work pattern B to use when it creates the employee's shift assignments.

Schedule Result:

- The employee will start at either 6, 7, or 8 a.m. for the entire week.

Or

- The employee will start at either 9, 10, or 11 for the entire week.

Because the scheduling engine uses only one work pattern, it is impossible to schedule a combination of 6–11 shifts through the week.

Setting Preferences with Work Patterns

Preferences are established for agents at the level of the work pattern. This is done when assigning work patterns to employees in the Employees module.

Work pattern preference enables agents to set preferences for a particular type of shift or weekly schedule. Since work patterns are collections of shifts and their associated shift activities, work pattern preferences allow agents to set relative preferences for different types of shifts or schedules. For example, agents can specify a higher preference (by entering a lower number) for the 4-day by 10-hour work pattern and a lower preference (by entering a higher number) for the 5-day by 8-hour work pattern.

Work pattern preferences can also be used for consistency. For example, you can create two identical work patterns but have consistency turned on for only one of them. By using work pattern preferences, agents can state whether they prefer to have consistent schedules or not.

To set up and use work pattern preferences:

1. Create work patterns that reflect the different types of schedules that agents can select. For this example, create two work patterns. One contains the 5-day, 8-hour shift, while the other contains the 4-day, 10-hour shift.

For individual start time preferences, create the following:

- Work Pattern “10 hour” has a 10-hour shift that can be scheduled on all days.
 - Work Pattern “8 hour” has an 8-hour shift that can be scheduled on all days.
2. Assign agents both of these work patterns, indicating that they can work either one. An agent’s linked work patterns will be:
 - Work Pattern “10 hour”
 - Work Pattern “8 hour”
 3. For each agent, type a preference for each work pattern. Preferences are expressed in numbers; 1 is the highest preference.

Here are three agents who prefer to work 8-hour shifts. In Forecasting and Scheduling, the lower number is always more important. Therefore,

you type a 1 next to the “8 hour” work pattern and a 2 next to the “10 hour” work pattern.

Agent 1 - most senior

Work Pattern	Preference
Work Pattern “10 hour”	2
Work Pattern “8 hour”	1

Agent 2 – second most senior

Work Pattern	Preference
Work Pattern “10 hour”	2
Work Pattern “8 hour”	1

Agent 3 – third most senior

Work Pattern	Preference
Work Pattern “10 hour”	2
Work Pattern “8 hour”	1

These agents each have one preferred work pattern for the entire week. Agents cannot state a preference for each day.

Each agent can have other personal data that determines how the agent is scheduled. This includes unavailabilities, assignment rules, skills, proficiency, and min/max paid hours. Some constraints, such as work rules, agent unavailability, and min/max paid hours, are not violated by the scheduling engine.

Start Time and Day Off Preferences

This section shows how Forecasting and Scheduling uses start-time and day-off preferences to schedule.

Shift Scheduling

To understand how preferences-based scheduling works, you must first understand how Forecasting and Scheduling uses shifts and selects days off.

Without preferences, Forecasting and Scheduling can select any day off that is valid according to the work pattern and any start time that is valid according to the shift. For example, a work pattern can be created using shifts that can start any time between 10 a.m. and 2 p.m., and has possible days off on all days except Monday. Forecasting and Scheduling uses these possible start times and days off to select a combination that provides the

best service level. Each agent is assigned shifts and days off from only one work pattern per week. The scheduling engine chooses shifts (and, therefore, start times) and days off from a single work pattern; it cannot pick shifts and days off from multiple work patterns.

Other factors can affect the start times and days off that are selected. An agent's availability can force Forecasting and Scheduling to schedule an agent in a certain way. For example, an agent can be marked as unavailable on Monday, which means that the agent always gets a day off on Monday. Consistency can affect start times by enabling the scheduling engine to select only one start time for the whole week. Assignment rules can also determine days off and start times, while min/max hours can affect how many days off an agent is assigned.

Setting Preferences with the Preferences Tab

Start time and day off preferences are set on the Preferences tab in the Employees module.

Start time and day off preferences enable agents to indicate their preferences for a particular start time or day off. For example, agents can state their preferences to start work at 9 a.m. and to have a day off on Friday. These preferences can be set separately for each start time and day. That is, agents can state a preference to start on Monday at 6 a.m., Tuesday at 7 a.m., and to have days off on Wednesday and Saturday. Agents can rank any of these choices and can also select multiple preferences and rank them from most to least important. For example, an agent can state that his highest preference is to start work at 9 a.m., his second preference is to start work at 10 a.m. and his third preference is to start work at 11 a.m. Let's take a look at this example to see how this is set within Forecasting and Scheduling.

Calendar Preferences Work Patterns Relations Assignment Rules Skills											
Days Off	Start Times										
	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	
Monday		1	1	1	2	2	2	2	3	3	3
Tuesday		1	1	1	2	2	2	3	3	3	3
Wednesday		1	1	1	2	2	2	3	3	3	3
Thursday		1	1	1	2	2	2	3	3	3	3
Friday		1	1	1	2	2	2	3	3	3	3
Saturday		1	1	1	2	2	2	3	3	3	3
Sunday		1	1	1	2	2	2	3	3	3	3

Now the agent also wants to add day-off preferences. It is important to note that day-off preferences are part of the same preferences scale as start times. By giving a start-time preference a 1 and giving a day-off preference a 2, you are stating that the start-time preference is more important than the day-off preference. If the scheduling engine must choose between assigning this person a start-time or day-off preference, it selects the start-time preference because it is more important. In this case, the agent has selected Friday as his most important preference for a

day off and Tuesday as his second. The agent has also stated that these day-off preferences are less important than his start-time preferences. The preferences are entered like this:

Calendar Preferences Work Patterns Rotations Assignment Rules Skills											
	Days Off	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00		
Monday		1	1	1	1	2	2	2	3	3	3
Tuesday	0	1	1	1	1	2	2	2	3	3	3
Wednesday		1	1	1	1	2	2	2	3	3	3
Thursday		1	1	1	1	2	2	2	3	3	3
Friday	4	1	1	1	1	2	2	2	3	3	3
Saturday		1	1	1	1	2	2	2	3	3	3
Sunday		1	1	1	1	2	2	2	3	3	3

Users also have a choice of selecting a default start-time preference of start early or start late. (This is set on the main employee grid.) This default choice is less important than the user-defined preferences on the grid and is used if no user-defined preferences can be scheduled. That is, if our agent cannot be scheduled for one of his preferred start times of 9 a.m., 10 a.m., or 11 a.m., the default preference is used. This default preference is also used when the agent only states a preference for early or late, and does not select specific start times. For example, if an agent asks for as early a start time as is possible, there is no need to specify start-time preferences in the grid. Instead, just select “start early” in this field.

Preferences Scheduling

This section discusses the way the scheduling engine uses preferences to create a schedule.

How the Scheduling Engine Assigns Preferences

This section shows how preferences are used by the scheduler.

1. The scheduling engine creates the optimal schedule for the forecasted call volume while meeting the service goals as closely as possible. This step takes into account agent unavailability, proficiency, any skills, and min/max hours, but does not include preferences.

Agents are scheduled for one work pattern only out of the group of work patterns they have been assigned. Out of this work pattern, and taking into consideration other factors such as availability, the agent is assigned days off and start times. Preferences are not taken into account at this point.

After the first step, schedules might look like this for patterns with single start times:

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Agent 1	7am	7am	7am	7am		7am	
Agent 2	8am	8am	8am		8am		8am
Agent 3		6am	6am		6am	6am	6am

2. The scheduling engine next tries to rearrange the schedules, or “swap” to give the more senior or higher-ranked agents their preferred work pattern, start time, or day off.

Note: Start-time and day-off preferences are always given priority by the scheduler over work-pattern preferences if both are used.

Any swaps must not impact the service levels generated by the initial schedule. Swaps can only happen if a work pattern, start time, or day off is already on the schedule. Forecasting and Scheduling does not schedule work patterns, days off, or start times simply to provide individual agents with their preferences.

For example, all three employees preferred to work the late work pattern. But, since that work pattern was not scheduled, no employee can receive his or her preferences. In another example, all three agents preferred to start at 9 a.m., but a 9 a.m. start time is not available and no agent—regardless of seniority or ranking—will be assigned it.

The scheduling engine now starts with the most senior agent and looks at the rest of the agents and sees if there is a work pattern, start time, or day off that has been assigned that is preferred by the more senior agent. If one is found, the engine does a swap.

For instance, Agent 1’s top preference is an 8 a.m. start time. According to the original schedule, Agent 1 starts at 7 a.m. and Agent 2 starts at 8 a.m. However, since Agent 1 is more senior, the scheduler swaps the two shifts and gives Agent 1 the 8 a.m. start time. Notice also that the days off were switched in this case, and Agent 1 is now off on Thursday and Saturday instead of Friday and Sunday. This is only done if Agent 1’s day-off preferences match this new schedule or are less important than his start-time preferences.

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Agent 1	8am	8am	8am		8am		8am
Agent 2	7am	7am	7am	7am		7am	
Agent 3		6am	6am		6am	6am	6am

Obstacles to Preferences Being Granted

Preferences are considered to be less important than service level and hard constraints such as min/max hours, availability, and hours of operation.

The scheduler only executes a swap if it does not adversely impact service level or violate a hard constraint. For example, the scheduler will not swap

two Agents' shifts to provide a preferred day off if the change causes an agent to go over the agent's maximum hours. If there is any conflict, the swap is not executed.

- Agents with varying unavailability can present an obstacle to complete Shift Swaps.

For example, if you add some employee unavailability to the first schedule the engine created, you see a schedule like this:

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Agent 1	7am	7am	7am	7am		7am	
Agent 2	8am	8am	8am		8am		8am
Agent 3		6am	6am		6am	6am	6am

The scheduling engine cannot make the swaps necessary to give more senior agents their preferences because unavailability is blocking some of the preferred start times. With start-time and day-off preferences, the scheduling engine can make single day swaps. Therefore, it switches days where possible and might create the following schedule:

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Agent 1	8am	8am	8am			7am	8am
Agent 2	7am	7am	7am	7am	8am		
Agent 3		6am	6am		6am	6am	6am

Switching Monday, Tuesday, and Wednesday was easy in this case. Saturday and Sunday are more difficult. The scheduling engine cannot switch the two shifts because the unavailability makes it impossible to assign these shifts to these agents. Therefore, Friday and Saturday remain as is. You could also have a problem if consistency is turned on for these agents. Consistency is the constraint that requires all shifts during the week for a single agent to have the same start time. If consistency had been turned on, you could not have swapped any days, because doing so while leaving Friday and Saturday the same would have caused a violation in consistency.

- Agents with varying skill sets or proficiencies can limit the ability to satisfy preferences by swapping.

When the system swaps shifts or work patterns, service goals cannot suffer. This means the system must swap agents that have the same skill sets or the same level of proficiency. When you switch one agent for an agent with a different proficiency or skill set, it might cause an adverse affect on the service level for that time period.

- Agents with varying min/max hours can limit the ability to swap.

The hours after a shift or schedule swap must fall within the employee min/max hours, otherwise a swap cannot be made. A swap will not be made that puts agents above their maximum hours or below their minimum hours.

- Assignment rules can limit the ability to swap.

The scheduling engine will not make a swap if that swap causes an assignment rule to be violated. For example, an assignment rule that calls for each agent to work one weekend every two weeks will prevent a swap that would give one agent two weekends off, even if this is a senior agent who prefers to not work weekends.

- Agents from different organizations can cause difficulty swapping shifts.

A swap will not be made if it causes an agent to violate organization parameters. For example, a swap must not put more agents on the schedule at one time from a particular organization than that organization has seats. Also, an employee who prefers to work early will not receive a shift through a swap that would cause that employee to work outside hours of operation.

- Work patterns might limit shift swapping.

When swapping individual shifts, both agents must be eligible for their new shift within the work pattern that the scheduler has selected for the week. If the agent is only eligible for this shift through an assigned work pattern that has not been selected for this week, the swap will not be made.

The Preferences Slider Bar

Many constraints can prevent shift and work pattern swapping, lowering the chances that agents will receive their preferred schedules. The more constraints on a schedule and the more individual agents that have different skills sets, proficiencies, availabilities, and so forth, the more difficult it becomes for the scheduling engine to find a valid swap. For this reason, a preferences slider bar is part of the scheduling setup screen of Forecasting and Scheduling. The preferences slider bar on the scheduling setup screen enables you to determine how important preferences are to you and to override the service level in order to guarantee some agents their preferences.



When the bar is set all the way to the left (its default position), the scheduling engine schedules as described above. Preferences are only given to agents if service level allows it. No special consideration is given to any agent other than the normal swapping described above.

If you move this bar one notch to the right, the scheduling engine tries to guarantee that the top 1 percent of your agents receive the top 1 percent of their preferences. It does this even if service level is impacted. In cases where these agents would have received their preferences anyway, the impact on service level is minimal. However, there could be significant impact in situations where the agents would not normally have received their preferences. Unfortunately, it is impossible to determine ahead of time the impact of guaranteeing preferences to a certain number of agents.

As you move the slider bar to the right, you are guaranteeing that more people get more of their preferences. For example, the first notch to the right of the Favor Service Level position guarantees that the top 1 percent of agents receive the top 1 percent of their preferences but will not guarantee any other agents get any of their preferences. This does not mean that agents lower on the scale will not receive their preferences; they will still be assigned, if possible.

As you move the slider bar to the right, you guarantee that the top 1 percent of people get their top 1 percent of preferences, the top 2 percent receive the top 2 percent of their preferences, the top 3 percent receive the top 3 percent of their preferences, and so on.

Keep in mind that even if the slider bar is set all the way to the right, which should guarantee some agents their preferences, the scheduling engine cannot assign shifts that override hard constraints. For example, if your most senior person requests a start time of 9 a.m. but is not available to start work until 10 a.m., Forecasting and Scheduling's scheduling engine cannot assign the employee a 9 a.m. shift, regardless of the slider's position.

Whenever the Scheduling engine pauses during the scheduling process to show you potential problems, or at the end of the scheduling process if no problems are encountered, click the View favored preferences button to see how the scheduling preferences for the employees were accommodated. A sample preferences report is shown below:

Favored Preferences

Park, Julie - Start Date 1/2/2000 - top 6% of options favored each day:

8/9/2004 - 38 start time/day off options - 6 favored: Day
Off,09:45,10:00,10:15,10:30,10:45

8/10/2004 - 38 start time/day off options - 6 favored: Day
Off,09:45,10:00,10:15,10:30,10:45

8/11/2004 - 38 start time/day off options - 6 favored: Day
Off,09:45,10:00,10:15,10:30,10:45

8/12/2004 - 38 start time/day off options - 6 favored: Day
Off,09:45,10:00,10:15,10:30,10:45

8/13/2004 - 38 start time/day off options - 6 favored: Day
Off,09:45,10:00,10:15,10:30,10:45

8/14/2004 - No start time/day off options favored

8/15/2004 - No start time/day off options favored

Koza, Frederick - Start Date 1/17/2000 - top 10% of options favored each day:

8/9/2004 - No start time/day off options favored

8/10/2004 - No start time/day off options favored

8/11/2004 - No start time/day off options favored

8/12/2004 - No start time/day off options favored

8/13/2004 - No start time/day off options favored

8/14/2004 - No start time/day off options favored

8/15/2004 - No start time/day off options favored

Spielberg, Lisa - Start Date 12/12/2001 - top 63% of options favored each day:

8/9/2004 - No start time/day off options favored

8/10/2004 - No start time/day off options favored

8/11/2004 - No start time/day off options favored

8/12/2004 - No start time/day off options favored

8/13/2004 - No start time/day off options favored

8/14/2004 - No start time/day off options favored

8/15/2004 - No start time/day off options favored

Whistler, Aaron - Start Date 12/15/2001 - top 65% of options favored each day:

8/9/2004 - 18 start time/day off options - 13 favored:
07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45,10:00

8/10/2004 - 18 start time/day off options - 12 favored:
07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

8/11/2004 - 18 start time/day off options - 12 favored:
07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

8/12/2004 - 18 start time/day off options - 12 favored:
07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

8/13/2004 - 18 start time/day off options - 13 favored: Day
Off,07:00,07:15,07:30,07:45,08:00,08:15,08:30,08:45,09:00,09:15,09:30,09:45

8/14/2004 - No start time/day off options favored

8/15/2004 - No start time/day off options favored

Vocavick, Brenda - Start Date 3/15/2004 - top 92% of options favored each day:

8/9/2004 - No start time/day off options favored

8/10/2004 - No start time/day off options favored

8/11/2004 - No start time/day off options favored

8/12/2004 - No start time/day off options favored

8/13/2004 - No start time/day off options favored

8/14/2004 - No start time/day off options favored

8/15/2004 - No start time/day off options favored

Chang, Kevin - Start Date 3/15/2004 - top 94% of options favored each day:

8/9/2004 - No start time/day off options favored

8/10/2004 - No start time/day off options favored

8/11/2004 - No start time/day off options favored

8/12/2004 - No start time/day off options favored

8/13/2004 - No start time/day off options favored

8/14/2004 - No start time/day off options favored

8/15/2004 - No start time/day off options favored

Brannon, Mick - Start Date 3/15/2004 - top 97% of options favored each day:

- 8/9/2004 - No start time/day off options favored**
- 8/10/2004 - No start time/day off options favored**
- 8/11/2004 - No start time/day off options favored**
- 8/12/2004 - No start time/day off options favored**
- 8/13/2004 - No start time/day off options favored**
- 8/14/2004 - No start time/day off options favored**
- 8/15/2004 - No start time/day off options favored**

Corones, Helena - Start Date 3/15/2004 - top 100% of options favored each day:

- 8/9/2004 - No start time/day off options favored**
- 8/10/2004 - No start time/day off options favored**
- 8/11/2004 - No start time/day off options favored**
- 8/12/2004 - No start time/day off options favored**
- 8/13/2004 - No start time/day off options favored**

- 8/14/2004 - No start time/day off options favored**
- 8/15/2004 - No start time/day off options favored**

Terminology

A

Abandonment Rate

Percentage or number of people that hang up before their contact is answered by a contact center agent.

ACD

Automatic Call Distributor.

ACD Queue

Queues are used by your automatic call distributor (ACD) to sort and route phone calls to the appropriate agents. They are set up in Integration Server.

Adherence

A performance assessment tool designed to provide you with real-time information from your ACD that allows you to analyze agent adherence to schedules at any point during the day or to assess trends and potential problems.

Average Handle Time (AHT)

Average length of time spent working on a contact.

Average Speed to Answer (ASA)

The average time per contact it takes for a contact center agent to answer a contact. User-specified requirement for the average length of time to answer a contact the system should consider when creating agent requirements. This is one of two options you can use in the Service Goals module. See "[Service Level](#)" (page 414).

C

Calendar Event

User-scheduled activity outside the usual shift, which is scheduled independently and not necessarily associated with shifts. Some examples are vacations, meetings, and training.

Campaign

A collection of contact types for which you uniquely forecast and schedule. For example, sales, billing, or technical support. Each campaign uses scheduling periods to forecast contact behavior and schedule individual employees.

Campaign Mode

The place in Forecasting and Scheduling where you forecast, schedule, and manage your campaigns. The campaign mode has a set of modules that walk you through the process necessary to create schedules.

Cell

A single square containing information in a table or grid.

D

Display Time Zone

Time zone in which information is currently being displayed. The current time zone is shown on the Forecasting and Scheduling status bar. The display time zone does not affect the established time zone for an organization or your system time.

Distributed queue

Distributed queues are used in campaigns where calls are distributed among multiple sites using a percent allocation method. This type of queue can only be added to a campaign that has at least one defined sub-campaign.

F

Forecast

Prediction of contact center behavior based on historical data such as Contact Volume and Average Handle Time (AHT). Forecasting and Scheduling provides forecasts of contact volume and AHT for 15-minute intervals.

FTEs

Full Time Equivalents. Where an agent might work on multiple queues during an interval, this represents the amount of time agents contributed to this particular queue.

G

Grid

Information displayed in a table. A single square in a grid is called a cell.

M

Menu Bar

Across the top of your screen, the menu bar lets you perform tasks in Forecasting and Scheduling.

Module

A grouping of tasks available in the left side of your screen in Organization mode or Campaign mode. They are arranged sequentially.

Module Bar

Displays module icons on the left side of your screen.

N

None Approved Bonus

Bonus Points assigned to employees who have placed bids on a shift-bid auction but did not get any of their requests approved.

O

Organization

A group of people with something in common, such as supervision, function, or location. Organization information includes employee data, hours of operation, and work rules. Organizations are built into an organizational hierarchy so that they can be viewed individually or as part of a roll-up of organizations.

Organization Mode

The area of Forecasting and Scheduling that presents the information and general rules about your organization, its working hours, its employees, their availability, and their skills.

If you have complex contact center operations, you can create an organizational hierarchy made up of organizations and suborganizations that represent different groups of employees. You cannot create schedules in Organization mode. Scheduling is done in Campaign mode. However, in order to build a schedule, you must enter appropriate information in Organization mode.

P

Profile

A combination of historical contact data which represent prototypical contact patterns, from which you create weekly schedules. Some examples of data that might be included in a profile are the two weeks before Christmas, the week after invoices are mailed, and so forth. Profiles may also be relative profiles, such as the two previous weeks.

Q**Queue**

A mechanism for aggregating work volume. Can be mapped one to one to an ACD queue, but can also have multiple queues mapped to it. See also ACD Queue.

S**Service Level**

User-specified requirement for the quality of service provided. A percentage of calls that must be answered within a certain period of time.

Scheduling Period

A specific week or weeks in a campaign. You forecast and schedule each campaign one scheduling period at a time.

Shrinkage

Percentage of the total number of agents who are not on the phone as scheduled. This includes absent agents, as well as agents taking unscheduled breaks. The system compensates for shrinkage by scheduling more agents. Shrinkage can also be used to compensate for uncertainty in forecasts and differences between the reality of your situation and the overall scheduling model used in Forecasting and Scheduling.

T**Time Zone**

Instructs the system on how to store time-related data, such as open hours of operation for an organization or a campaign. Each organization and campaign has a time zone, which you cannot change. However, you can change the display time zone to show the information for a different time zone on your screen.

Tool bar

The Forecasting and Scheduling Tool bar allows you to quickly access commands. Hold your cursor over a button for a short time to display a description of the button.

You can move the Tool bar to any position on your monitor by clicking on it and dragging it to the desired location. To display or hide the Forecasting and Scheduling Tool bar, on the View menu click Toolbar. You can use the Forecasting and Scheduling Tool bar to perform the following functions:

- Work on an Organization
- Work on a Campaign
- Move to previous module
- Move to next module

- Print
- Print Preview
- New record, new employee, new shift, and so on. See “Using Grids”
- Delete record
- Copy
- Paste
- Zoom in to show a single day
- Zoom out to show several days
- Day of the week selector. Use the arrows to move forward or backward one day, or choose a date from the drop-down menu.
- Sort in ascending order
- Sort in descending order
- Filter employees
- Set up and start the scheduling process
- Recalculate the Service Level and ASA statistics in a calendar

U

Use Scoring

Whether employees can use their accumulated points for a shift-bid auction.

V

Virtual Queue

Virtual queues are used in campaigns where calls are distributed among multiple sites using a dynamic method of distribution. Only certain types of ACDs support dynamic distribution, such as Cisco, Genesys, Avaya BSR, and Look Ahead Interflow. You can add this type of queue only to a stand-alone campaign. Campaigns that are sub-campaigns or that allow sub-campaigns cannot have virtual queues.

W

Work Mode

Two distinct areas of workflow in Forecasting and Scheduling. Each of the two work modes, Organization and Campaign, contain several modules for performing their respective tasks.

Work Rules

Rules for how employees should be scheduled. Included are shifts, shift activities, and work patterns. This module appears in both Organization and Campaign work modes.

Z

Zoom In/Zoom Out Buttons

Zoom in to show a single day. Zoom out to show several days.

Nortel Workforce Management Schedulers' Guide

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