



# TELEVANTAGE CALL CENTER ADMINISTRATOR'S GUIDE

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**TELEVANTAGE 7**



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#97-6604 Edition 7 September 2005

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# **INTRODUCTION**

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## About TeleVantage call centers

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TeleVantage provides the following two systems of setting up call centers:

- Call center queues
- ACD workgroups

For a detailed comparison of the features available using call center queues or ACD workgroups, see the table beginning on page 1-3.

With either method, you can set up a call center that automatically distributes incoming calls to a group of agents. Examples of call centers include a sales workgroup, a customer support department, or any department in which multiple agents answer calls to a single number.

### Call center queues

TeleVantage call center queues provide a full-featured call distribution system. A call center queue automatically answers calls, puts them in a queue, and then distributes them to ready agents. With call center queues you can customize the caller's waiting experience, play single or repeating prompts, prompt callers to enter data, configure call priority, grant specialized supervisor permissions such as the ability to monitor calls, and use the TeleVantage Call Center Reporter to run a variety of reports on call center activity.

To use call center queues, you must have purchased Call Center Agent licenses. See *Administering TeleVantage*.

Call center queues are described in Chapter 2 through Chapter 5 of this manual.

For instructions for agents who participate in call center queues, see Chapter 5.

### ACD workgroups

ACD workgroups have fewer features than call center queues. They are an alternative for those who have not purchased Call Center Agent licenses.

Creating ACD workgroups and participating in them as agents are described in Chapter 6 of this manual.

## Call center queue and ACD workgroup features

The following table compares the features of a call center queue to those of an ACD workgroup.

Feature	Call Center Queue	ACD Workgroup
<b>Administration</b>		
Single-point interface to create	✓	
Take a queue or ACD workgroup off-line and send its calls to voicemail	✓	✓
Automatically take a queue off-line when all agents are unavailable	✓	
Choice of language for system prompts	✓	✓
E-mail and pager notification of new voicemail	✓	✓
Voice titles for call center extensions	✓	✓
Overflow groups of agents for times when primary agents are busy	✓	✓
Overflow agents with individual overflow levels	✓	
Overflow agents only called after all agents are busy for a time you configure	✓	
Agents automatically placed on break if they let queue calls ring unanswered	✓	
Callers redirected if the queue is too busy, callers are waiting too long, there are not enough agents, or there are no agents with matching skills	✓	
Individual permissions for whether an agent can use personal status to make himself or herself unavailable	✓	
View call center and personal Call Log in the same ViewPoint application	✓	✓
Queue logs for troubleshooting	✓	
Separate licensing required per agent	✓	
<b>Caller Experience</b>		

<b>Feature</b>	<b>Call Center Queue</b>	<b>ACD Workgroup</b>
Call center automatically answers incoming calls	✓	✓
Hold music	✓	✓
Different hold music for each queue or ACD workgroup	✓	
Extension or DID number to dial queues or ACD workgroups	✓	✓
Call center extensions listed in the dial-by-name directory	✓	✓
Greetings to welcome callers	✓	✓
Repeating messages for waiting callers	✓	✓
Conditional messages for waiting callers	✓	
Priority for individual callers that reduces wait time	✓	
Messages that tell callers their expected wait times	✓	
Messages that tell callers how many callers are ahead of them	✓	
Caller options to stop waiting and leave voicemail or transfer out of the queue to an extension	✓	
Ability to prompt callers to enter data	✓	
<b>Agent Experience</b>		
Call Monitor tabs for agents	✓	✓
Agents can answer any call using TeleVantage ViewPoint	✓	✓
Agents can work from home or any remote location	✓	✓
Call center listed in Extensions folder in ViewPoint	✓	✓
Individually configurable agent wrap-up time	✓	

Feature	Call Center Queue	ACD Workgroup
Agents can manually end their wrap-up time early	✓	
System-wide wrapup time		✓
Special personal statuses for agents: Available (Queue only), Available (Non-Queue) and On Break	✓	
Agents can make themselves ready or unavailable to receive calls using ViewPoint or telephone commands	✓	
Agents can sign in and out of individual queues using ViewPoint or telephone commands	✓	
Visual indication of which agent will get the next call	✓	
Agents can place calls as the queue, enabling supervision and reporting of outbound calls	✓	
<b>Supervision</b>		
Changing an agent's personal status	✓	✓
Signing an agent in or out of a queue	✓	
Comprehensive Queue Monitor to view real-time queue and agent statistics	✓	
Customizable shift periods for comparative statistic display	✓	
Critical queue statistics available by phone in audio format	✓	
Coaching and monitoring of agents	✓	
Viewing agents who are being monitored	✓	
Automatically setting absent agents to On Break status	✓	
Automatically recording of agent and call center calls on a periodic basis	✓	
<b>Call Distribution</b>		

<b>Feature</b>	<b>Call Center Queue</b>	<b>ACD Workgroup</b>
Sequentially by agent order	✓	✓
Round robin (each agent in turn)	✓	✓
Simultaneously (ring all agents)	✓	✓
To longest idle agent	✓	
To agent with fewest calls	✓	
To agent with least talk time	✓	
To agent with best matching skills	✓	
To agent via custom routing method	✓	
<b>Reports</b>		
Separate licensing required for reports	✓	✓
User Activity Report for agents includes personal status breakdown and call center details section	✓	
All other reports	✓	✓

## TeleVantage documentation

TeleVantage provides documentation in several easy-to-access online formats that provide the benefits of instant hypertext navigation. This section describes the different TeleVantage documents and how to access them in various formats.

### Ordering printed documentation

You can order printed versions of TeleVantage documents. To do so, contact your TeleVantage reseller or visit [www.artisoft.com/manuals](http://www.artisoft.com/manuals).

## The TeleVantage documentation set

The following table describes the TeleVantage documents and the formats in which each is available. See the next section for instructions on using each format.

Document	Audience	Available in print	HTML book	Acrobat PDF
<p><b>Installing TeleVantage</b> This manual covers the requirements and installation process for upgrades and fresh installations, and describes how to order telephone company services, add licenses, configure advanced settings, and troubleshoot problems.</p>	Administrators and TeleVantage providers	Yes	Yes	Yes
<p><b>Installing Intel Telephony Components</b> This manual covers the requirements and installation process for upgrades and fresh installations, and describes how to change hardware and troubleshoot problems.</p>	Administrators and TeleVantage providers	Yes	Yes	Yes
<p><b>Administering TeleVantage</b> This manual describes setting up, managing and monitoring your TeleVantage system, including using the TeleVantage Administrator to configure system settings, trunks, stations, users, call routing, IP telephony, and more.</p>	Administrators	Yes	Yes*	Yes
<p><b>Using TeleVantage</b> This manual covers how to use the TeleVantage system, including the telephone commands, TeleVantage ViewPoint, ViewPoint Web Access, working from remote locations, call center participation, and more.</p>	All audiences	Yes	Yes	Yes
<p><b>TeleVantage QuickStart Guide</b> This small guide provides easy-to-read instructions for first-time users and basic TeleVantage use, including a complete telephone command reference and coverage of ViewPoint fundamentals.</p>	All audiences	Yes	Yes	Yes

Document	Audience	Available in print	HTML book	Acrobat PDF
<p><b>TeleVantage Call Center Administrator's Guide</b></p> <p>This manual describes configuring, maintaining, supervising, and participating in a TeleVantage call center. Contains separate sections for administrators and agents. Includes instructions for running call center queues, ACD workgroups, and TeleVantage call center reports.</p>	Administrators	Yes	Yes*	Yes
<p><b>TeleVantage Developer's Guide</b></p> <p>This reference describes how to extend TeleVantage's built-in features using the Client API, the Add-in API, the IVR Plug-in API, the Device Status API, and TAPI.</p>	Programmers	Yes	No	Yes
<p><b>TeleVantage Pocket Reference Card</b></p> <p>This wallet-sized card is a convenient reference for the most-used TeleVantage telephone commands.</p>	All audiences	Yes	No	Yes

\* *Administering TeleVantage* and the *TeleVantage Call Center Administrator's Guide* are combined into a single online book called *Administering TeleVantage and Call Centers*.

## Accessing online documentation

You can access TeleVantage's online documentation in the following formats.

### Online Help

From any TeleVantage application window, you can press F1 or click **Help** to get context-sensitive Help describing the window and its individual fields. For overviews of features, see the online or PDF books, not the online Help.

### HTML books

TeleVantage provides complete compiled HTML Help (.CHM) versions of four of its printed manuals, enhanced with hypertext navigation panes and links. To access the HTML books from within ViewPoint or the Administrator, choose **Help > Online Books**.

To access the HTML books without ViewPoint or the Administrator, open the following files, located in C:\Program Files\Common Files\Vertical\TeleVantage:

- **AdministeringTV.chm.** Contains *Administering TeleVantage* and the *TeleVantage Call Center Administrator's Guide*.
- **InstallingTV.chm.** Contains *Installing TeleVantage*.
- **UsingTV.chm.** Contains *Using TeleVantage*.

### **Adobe Acrobat PDF books**

The .PDF versions of TeleVantage manuals are the same files that Vertical sends to be professionally printed, and can be used for your own printing or browsing. They are available on the TeleVantage Master CD in the \Manuals directory. To view and print these files, use the Adobe Acrobat Reader, available on the TeleVantage Master CD in the \Adobe directory.

## **Getting technical support**

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Contact your TeleVantage administrator for technical support.



# **CREATING A CALL CENTER QUEUE**

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## About call center queues

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TeleVantage call center queues provide a full-featured system for distributing calls to agents.

This chapter describes creating and maintaining a queue. For information about working as an agent in a call center queue, see Chapter 5. For information about working as a supervisor or manager in a call center queue, see Chapter 6.

For information on ACD workgroups, see Chapter 7.

### When agents receive queue calls

For an agent to receive calls from a queue, the following four conditions must be true:

- **The agent is defined as a member of the queue.** A TeleVantage user who is not a member of a queue can see no part of that queue in ViewPoint, and never receives calls from that queue. The queue administrator adds and deletes agents as members of a queue.
- **The agent is signed in to the queue.** This setting determines whether the agent receives calls from this particular queue. Agents must be signed in to the queue to receive calls from it. An agent who is signed out does not receive calls from that queue, but can still see and monitor the queue in ViewPoint—a useful state for supervisors. An agent might be signed into some queues and signed out of others at any given time. The queue administrator determines which agents are signed in or out of each queue. You can also give individual agents permission to sign themselves in and out.
- **The agent is in an available personal status.** To receive queue calls, an agent must be in the personal status Available, Available (Queue Only), or any personal status with the **Queue calls** field set to Yes. Agents in any personal status with **Queue calls** set to No—for example, Available (Non Queue) or Do Not Disturb—do not receive calls from any queue. Agents can change their own personal status if they have permission to do so, and it can also be changed by others if they have permission to do so.
- **The agent is ready.** This agent state, viewable in the Queue Monitor (see “The Agents pane” on page 6-3), determines whether the agent is currently eligible to receive queue calls. Agents are ready when they are signed into at least one queue, are in an available personal status, and are not currently in a call or the wrap-up period following a call.

### What agents experience

Agents can work in a queue using the telephone alone or in conjunction with TeleVantage ViewPoint. Agents can change their personal status to begin their shifts, take breaks, and end their shifts. After finishing each call, agents have a wrap-up time to complete paperwork before they receive the next call.

By default agents have permission to change their own personal status, enabling them to control their own workflow. You can revoke this permission for individual agents, so that a supervisor must change their personal status for them. See “Preventing agents from changing their personal status” on page 2-16.

## What callers experience

Callers reach the queue either by dialing its extension directly or choosing it from your company's auto attendant (for example, "for Technical Support, press 2"). They hear an initial message, called a Welcome prompt, that introduces them to the queue. You can also have the queue prompt them to enter data at this point, such as a customer number, that can optionally modify their waiting experience. If no agents are ready, the callers are then placed on the queue to wait.

While waiting, callers hear hold music. Occasionally they hear other messages called Hold prompts. These are messages that you record to assure callers that their calls will be answered, to play them an advertisement, and so on. You can define Hold prompts that play only once, play on a repeating basis, or change based on how close the call is to being answered. Instead of waiting, callers can choose to leave a voice message or transfer out of the queue to an extension you define, such as an Operator or your auto attendant.

When an agent becomes ready, the caller is transferred to that agent.

## Basic call center queue terminology

To work in a call center queue as an administrator, supervisor, or agent, you should be familiar with the following call center queue terms:

- **Agent.** A TeleVantage user who answers incoming calls to the call center.
- **Queue.** A call center that is set up at a single extension. Callers to that extension who are waiting are said to be "in the queue." A call center can have more than one queue. For example, a technical support department can have one queue for Product A and another queue for Product B. Each queue has its own list of agents who answer calls and its own method of distributing calls to agents. A user can be an agent for more than one queue.
- **Supervisor.** An agent who has special permissions. Supervisors can perform administrative maintenance on a queue by using the TeleVantage Administrator application, and they can view current queue statistics in ViewPoint. Agents can have varying levels of supervisor permission. If you have supervisor permissions, see Chapter 6 for further information.
- **Overflow agent.** A user who answers calls to a queue only when all the queue's regular agents are busy (standby or unavailable).
- **Personal calls.** Any calls directly to an agent's extension, as opposed to calls the agent receives from a queue.

## Agents, call forwarding and routing lists

Queue calls to agents do not use the agents' routing lists or call rules, so they cannot try an agent at multiple locations. Queue calls do follow the agents' call forwarding / Where I Am settings.

## ***Viewing queue configuration and setup***

The Call Center Queue Information report shows general information about each queue in your system, including a list of agents and their current settings. You can use this report to get a snapshot of a queue's setup. For more information, see Chapter 8.

## **About creating a call center queue**

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The queue is the backbone of a call center. A queue defines the primary and overflow agents who receive call center calls, the method by which calls are distributed to those agents, what callers experience while they are waiting, and so forth.

### ***Licenses and permissions***

To create a call center queue, you must have the appropriate licenses and permissions.

#### **Agent licenses**

To create a queue, you must first purchase and enter one Call Center Agent license for each call center agent. Only one license is required for each agent, even if agents are members of multiple queues. See *Administering TeleVantage* for more information about entering licenses.

#### **Queue folder permission**

To create or edit a queue, you must have the general TeleVantage permission **Access Queues Folder** set to **View and Edit**. You do not need other Administrator permissions, so you can manage queues without being a full TeleVantage system administrator. To set permissions, use the Users view of the Administrator. See *Administering TeleVantage*.

### ***Overview of creating a queue***

You create a queue in the TeleVantage Administrator using the tabs in the Queue dialog box, accessed by choosing **File > New > Queue**. The sections in this chapter describe each feature you can use.

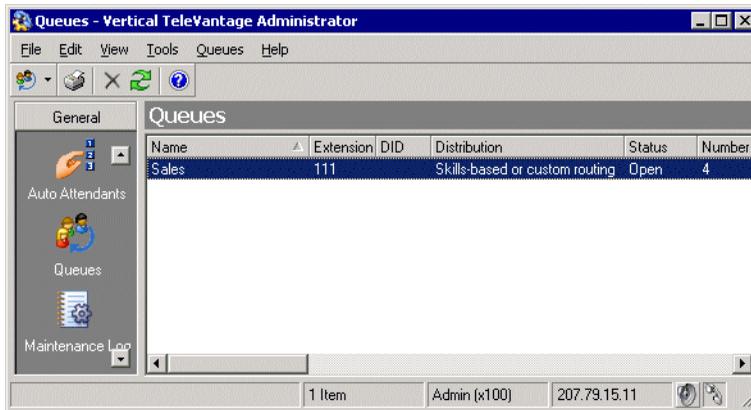
When you have finished creating a queue, you can then set up one or more methods of directing calls to it. You can:

- Create an auto attendant menu choice that sends callers to the queue. See “Setting up a menu choice for a queue” on page 2-51.
- Give the queue a DID number or route a trunk directly to the queue. See *Administering TeleVantage*.
- Create a utility user that receives calls and automatically routes them to the queue. By doing this you can use TeleVantage's advanced call-handling features with a queue, for example contact identification, intelligent call routing, time scheduling, and more. By using a utility user you can give your VIP callers special treatment. See Chapter 4.

After you have set up a method of directing calls to the queue, the queue is complete and available.

## The Queues view

To create or edit a queue, open the Queues view in the TeleVantage Administrator by clicking its button in the view bar.



Each queue that you create appears as a row in the view. The following table shows the information that is displayed for each queue in the Queues view.

Column	Description
<b>Name</b>	Name of the queue
<b>Extension</b>	Extension dialed to reach the queue from the auto attendant or when transferring a call
<b>DID</b>	Direct Inward Dial—Phone number dialed to reach the queue directly
<b>Distribution</b>	Algorithm used to distribute calls to agents
<b>Status</b>	Whether the queue is currently distributing calls to agents. The possible statuses are: <b>Open.</b> The queue is distributing its calls to ready agents as normal. <b>Closed.</b> The queue is closed. No calls are being distributed to agents. <b>Closed - No agents.</b> All agents in the queue are currently signed out, so the queue is automatically sending its calls directly to voicemail.
<b>Number of Agents</b>	Total number of agents who are members of the queue.
<b>Record Nth Call</b>	If checked, the queue is set to record its calls.

<b>Column</b>	<b>Description</b>
<b>Change Hold Music To</b>	The name of the music-on-hold source being used for the queue's hold music, if any.
<b>Hold Callback</b>	The amount of time that the queue waits before ringing back an agent who leaves a call on hold or parked. "Off" indicates that ringback is not being used.
<b>Priority</b>	If checked, the queue has a priority variable that can be used for assigning some callers a higher priority than others.
<b>Overflow</b>	If checked, the queue is using overflow agents.
<b>Redirect</b>	Separate columns for <b>Too Busy</b> , <b>Maximum Wait</b> , and <b>Queue Closed</b> . If checked, the queue is set to redirect callers when the circumstance occurs.
<b>Mail Usage</b>	Percentage of allocated voicemail space currently used.
<b>Greeting Usage</b>	Percentage of allocated space for greetings currently being used.
<b>Disk Usage</b>	Amount of disk space (in megabytes) used by the queue's audio files, including voicemail and greetings.
<b>Mailbox size</b>	How much space (in minutes) the queue's voice mailbox has.
<b>Greeting size</b>	How much space (in minutes) is allocated to the queue for greetings.
<b>Comments</b>	Any comments about the queue

### ***Opening the Queue dialog box***

Use the Queue dialog box to create or edit a queue. To open it, do one of the following:

- To create a new queue, choose **File > New > Queue**.
- To edit an existing queue, double-click its row in the Queues view.

## Entering general information about a queue

Click the Queue tab in the Queue dialog box.

The screenshot shows a window titled "Sales - Queue" with a tree view on the left and a form on the right. The tree view includes categories like Queue, Skills, Agents, Distribution, Redirection, Hold, Voice Mail, Caller Entry, Dial-by-name Directory, Security, Audio, Recording, and Statistics. The "Queue" category is expanded. The form fields are: Name (Sales), Extension (111), Password (empty), Confirmation (empty), DID number (empty), Operator (Operator (x 0)), and Comments (empty). At the bottom, there are two checkboxes: "Queue is closed" and "Trace queue and agent activity to queue logs".

1. Enter the following information for the queue:
  - **Name.** Give the queue a short name that will easily identify it, such as “Sales queue.” When users transfer a call to this queue using ViewPoint, they will select it by name.
  - **Extension.** Enter an extension for the queue. Users can then transfer calls to the queue by phone. The extension is generally not used by callers to dial the queue from an auto attendant. Callers should reach the queue either by dialing a Direct Inward Dial number or by making a choice on the auto attendant menu. See “Setting up a menu choice for a queue” on page 2-51.
  - **Password.** Give the queue a unique numeric password. You will need to log in with the password if you want to change the queue configuration or check the queue’s voice messages when you are at a remote phone. For example, on a day when your business is closed unexpectedly, you can call, log in, and change the queue’s voicemail greeting so that callers are aware of the situation.
  - **DID Number.** Optionally, you can give the queue a Direct Inward Dial number from the block of numbers provided by your telephone company. Callers can then dial the queue directly, without going through an auto attendant.

To assign multiple DID numbers to a queue, separate each number by a comma. For example, enter 1234,1235,1236.
  - **Operator.** Select the extension to which callers will be transferred if they press 0 while they are leaving voicemail for the queue.
  - **Comments.** Enter any descriptive information about the queue.
  - **Queue is closed.** See the next section.

- **Trace queue and agent activity to queue logs.** Check to create queue logs that record detailed agent and queue activity for troubleshooting purposes. See Appendix B for more details.
2. Click **OK** to save the queue as you have defined it so far or go to the next section.

## ***Closing the queue***

You can close the queue and prevent new incoming calls from being routed to agents, for example after business hours when your department is closed. When a queue is closed, incoming calls to it are automatically handled according to the selections you make on the Redirect tab (see “Redirecting calls when the queue is closed” on page 2-33).

### **To close the queue**

1. Click the Queue tab of the Queue dialog box.
2. Check **Queue is closed**.
3. Click **OK** to save the queue as you have defined it so far or go to the next section.

**Note:** You can have the queue close itself automatically when there are no agents signed in. See “Redirecting calls when the queue is closed” on page 2-33.

### **Queue status when closed**

Queue status displays in ViewPoint’s Extensions list in the Personal Status Name column, and lets you see at a glance whether the queue is currently accepting calls or not. The queue statuses are:

- **Open.** The queue is distributing to its calls to ready agents as normal.
- **Closed.** The queue is redirecting calls as specified on the Redirect tab.
- **Closed - No agents.** All agents in the queue are currently signed out or unavailable, so the queue is automatically redirecting calls as specified on the Redirect tab.

For more about ViewPoint’s Extensions list, see *Using TeleVantage*.

## ***Defining call logging for the queue***

Click the Queue \ Call Log tab.

1. Enter the following information:
  - **Log this queue’s calls.** Specify which of this queue’s calls appear in the Call Log. You can log inbound calls, outbound calls, both, or none. To log no calls, uncheck the field.  
**Important:** If you turn off call logging for the queue, you cannot run reports on this queue.
  - **Organization.** If you are using Organizations, check to associate this queue with the Organization you select from the dropdown list. Click  to create a new

Organization. Inbound calls to the queue that did not reach an agent will be logged as belonging to the selected Organization (for example, abandoned calls and calls where the caller left a voice message).

Organizations are a means to represent different companies or tenants that share a TeleVantage Server. For more information, see *Administering TeleVantage*.

**Note:** Outbound calls made by users calling as the queue are not associated with the queue's Organization. They are always associated with the user's Organization, even if the user has no associated Organization.

2. Click **OK** to save the queue as you have defined it so far or go to the next section.

## ***Setting ISDN Caller ID information for outbound queue calls***

Agents can place outbound calls that are marked as being from the queue rather than their personal extension (see “Placing calls from a queue” on page 5-8). For outbound queue calls that are placed over ISDN trunks, you can determine the Caller ID information that accompanies the call.

### **Notes**

- Caller ID information entered here is overridden by any ISDN Outbound Caller ID entered for the ISDN span. See *Administering TeleVantage*.
- On trunk types other than ISDN, outbound Caller ID is always set by the telephone company.

### **To set ISDN outbound Caller ID for the queue**

1. Click the Queue \ ISDN Outbound Caller ID tab.
2. From the **Calling party presentation** dropdown list, select one of the following:
  - **System default.** Outbound Caller ID will be whatever you have specified under **Tools > System Settings** for the TeleVantage system as a whole. The current setting is displayed in parentheses.
  - **Custom.** You can specify your own Caller ID number to accompany outbound calls from the queue. Enter the Caller ID number in **Calling party number**.
  - **Set by telephone company.** No specific Caller ID is attached to outbound calls from the queue. Outbound Caller ID is assigned by your telephone company network.
  - **Blocked.** Caller ID is blocked on outbound calls from the queue. Note that the system still sends Caller ID information even though it is blocked: this is a requirement, because some institutions have the right to read blocked Caller ID, for example emergency services and 800-numbers.
3. Click **OK** to save the queue as you have defined it so far or go to the next section.

## Including the queue in the dial-by-name directory

You can include the queue in the dial-by-name directory so that, for example, a caller could dial SALES to reach your Sales queue.

If you include the queue in the dial-by-name directory, you should record its voice title. See “Recording a voice title for the queue” on page 2-46.

### To include the queue in the dial-by-name directory

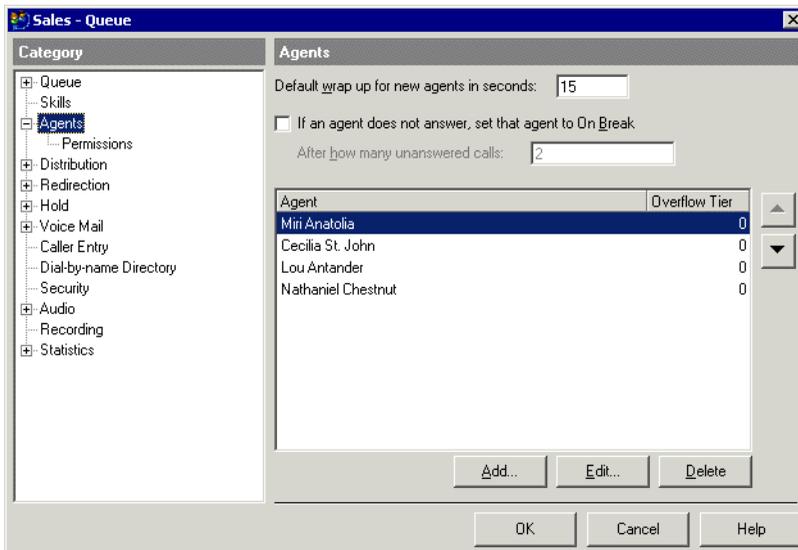
1. Click the Dial-by-name Directory tab of the Queue dialog box.
2. Check **List in dial-by-name directory**.
3. To play a user's extension along with the user's name when callers choose the user from the dial-by-name directory, check **Play extension to the caller**.
4. Click **OK** to save the queue as you have defined it so far or go to the next section.

## Defining agents for the queue

Use the Agents tab in the Queue dialog box to define agents for the queue. Both primary agents and overflow agents must be defined as agents on this tab. *Primary agents* are agents whose primary task is answering queue calls. *Overflow agents* are agents whose primary task is not answering queue calls, but who receive them when all primary agents are busy. See page 2-25 for further information about defining overflow agents for your queue.

For an agent to work in more than one queue, you must add the agent separately to each of those queues.

Agents must be TeleVantage users before you can add them to a queue (see *Administering TeleVantage* for information about creating TeleVantage users).



## Changing wrap-up time and permission defaults

You can set defaults for agent wrap-up time and permissions. There are two benefits to doing this:

- **To save time when adding agents.** Before adding agents, set the defaults to the way you want them to be for a typical agent. The default settings will then appear as each new agent's settings, which you can then modify for an individual agent if necessary.
- **To change a permission for several agents at once.** When you change a default agent permission, you change it for all existing agents except agents for whom you have specified an unchanging permission. For example, you might give your agents the Queue Sign In/Out permission, and then later decide to disallow it. This effect works only for permissions, not wrap-up time.

### To set a default wrap-up time

On the Agents tab, enter a number of seconds in **Default wrap-up for new agents in seconds**.

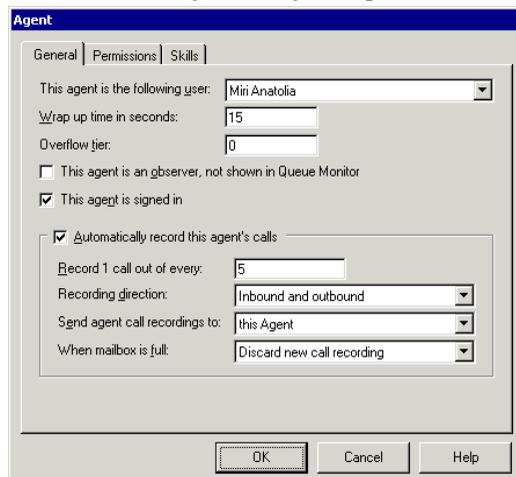
### To set default agent permissions

1. Click the Agents \ Permission tab.
2. To set a default permission, click the **Value** column in its row in the list, then select the permission level you want from the dropdown list. For a description of the permissions and permission levels, see "Agent permissions" on page 2-14.
3. Click **OK** to save the queue as you have defined it so far or go to the next section.

## Adding agents to the queue

Click the Agents tab of the Queue dialog box.

1. Click **Add**. The Agent dialog box opens at the General tab.



2. For **This agent is the following user**, select a user from the list.

3. For **Wrap up time in seconds**, accept the default or enter a different wrap-up time.  
Agents can terminate their wrap-up period early and make themselves ready to receive calls. See Chapter 5 for complete instructions on being a call center queue agent.
4. For **Overflow tier**, leave the default value of 0 unless you want the agent to be an overflow agent. See “Setting up overflow agents” on page 2-25.
5. For **This agent is an observer, not shown in Queue Monitor**, check to make this agent an observer who can monitor queue activity without being seen by other agents in the queue. If checked:
  - Other agents cannot see the agent in ViewPoint in the Agents pane of the Queue Monitor (see “Viewing queue statistics in the Queue Monitor folder” on page 6-3) or the queue’s tab in the Extensions list.
  - The agent is automatically signed out and cannot sign in, so that the agent does not receive calls from the queue (see the next step).
  - The agent cannot be given the permission **Queue Sign In/Out**.

The observer agent can view queue activity in the Queue Monitor and Call Monitor, supervise other agents’ calls and perform other supervisory actions. The observer agent can also take queue calls manually by using the **Take Call** command in the Call Monitor.

If the checkbox is cleared, the agent appears in the Agents pane of the Queue Monitor, and can be signed in or out.

6. For **This agent is signed in**, select the check box if the agent receives calls from the queue when the agent is ready. Clear the check box to define a supervisor who can monitor the queue but does not receive calls from the queue.

When the check box is cleared, calls from this queue are not sent to the agent, even when the agent is ready. However, the agent still sees the tab for this queue in the Call Monitor and can answer queue calls using the **Take Call** command.

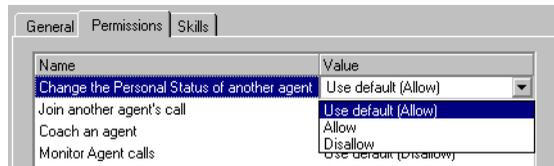
**Note:** To receive calls from a queue, an agent must be both signed in, available for queue calls, and ready. See “When agents receive queue calls” on page 2-2.

You can use this check box to switch an agent from one queue to another, by signing the agent in for one queue and out for the other queue.

You can also give agents the permission to sign themselves in and out of a queue. See “Agent permissions” on page 2-14 and “Signing in and out of a queue” on page 5-5.

7. To change the agent’s permissions from the queue’s defaults, click the Permissions tab, click the permission, click the arrow in the **Value** column, and select a value for the permission. If you choose “Use Default,” the value changes when you change the

default permission (see “Changing wrap-up time and permission defaults” on page 2-11). For an explanation of permissions, see “Agent permissions” on page 2-14.



You do not need to use the Skills tab unless you are using skills-based routing. See Chapter 3.

8. To set automatic call recording for this agent, check **Automatically record this agent's calls**. See the next section for details.
9. When you have finished defining the agent, click **OK**. The Agent dialog box closes and you return to the Agents tab in the Queue dialog box.

### Automatically recording an agent's calls

You can have TeleVantage automatically record an agent's queue calls on a periodic basis. The recorded calls appear as new voice messages in the voice mailbox that you select. The system records both inbound and outbound queue calls.

If you want to record all user calls, use system call recording instead. See *Administering TeleVantage*.

#### Notes

- You can include a repeating beep on queue call recordings to indicate to the agent and caller that the call is being recorded. See Chapter 4 of *Administering TeleVantage*.
- In some U.S. states, it is illegal to record a call without notifying the caller. If you are using TeleVantage in such a state, your queue's Welcome prompt should inform callers that their calls may be recorded, and you may want to play a regular beep during call recording. See “Warning callers that their calls may be recorded” on page 2-47.

### To automatically record an agent's inbound queue calls

1. Click the General tab in the Agent dialog box.
2. Check **Automatically record this agent's calls**.
3. In **Record 1 call out of every**, enter a number. Enter 1 to record every call to this agent, 2 to record every other call, 3 to record every third call, and so on.  
**Note:** All calls that an agent handles count for purposes of counting his or her calls.
4. From the **Recording direction** dropdown list, select whether to record inbound calls only, outbound calls only, or both. Selecting both means that you get one recording per *n* calls regardless of the calls' direction.
5. From the **Send agent call recordings to** dropdown list, select the mailbox that will receive the call recordings as new voice messages.

6. From the **When mailbox is full** dropdown list, select what happens if the destination mailbox is full when TeleVantage attempts to store a new call recording there:
  - **Discard new call recording.** TeleVantage deletes the new call recording instead of storing it.
  - **Delete oldest call recording.** TeleVantage deletes the oldest call recording in the mailbox to make room for the new recording. Only call recordings can be deleted by this method. TeleVantage never deletes voice messages in this way.
7. Click **OK**. The Agent dialog box closes.

**Note:** You can also record a general sampling of calls to the queue, regardless of which agent answers them. See “Automatically recording queue calls” on page 2-48.

## Agent permissions

You can give agents permissions in the following areas:

Agent Permissions		
Permission	Description	Default value
<b>Change the personal status of another user</b>	<p>The agent can manage other agents' workflow by changing their personal status. See “Changing an agent's personal status” on page 6-20.</p> <p>If agents are prevented from changing their own personal status, you must create a supervisor with this permission to manage their workflow is . See “Preventing agents from changing their personal status” on page 2-16.</p>	Allow
<b>Join another agent's call</b>	The agent can enter another agent's call, such that all parties in the call hear each other. See “Supervising other agents' calls” on page 6-17.	Disallow
<b>Coach an agent</b>	The agent can enter another agent's call and be heard by the coached agent but not by the caller. See “Supervising other agents' calls” on page 6-17.	Disallow

## Agent Permissions

<b>Monitor Agent calls</b>	The agent can listen in on other agents' calls without being heard by the monitored agent or the callers. See "Supervising other agents' calls" on page 6-17.	Disallow
<b>Monitor Queue statistics</b>	The agent can view real-time queue statistics in ViewPoint's Queue Monitor folder or listen to statistics using the telephone command *55. See "Monitoring queue statistics" on page 6-3.	Allow
<b>Queue sign in/out</b>	<p>The agent can sign in or out of individual queues. See "Signing in and out of a queue" on page 5-5.</p> <p><b>Note:</b> If an agent has the general TeleVantage permission <b>Access Queues folder</b> set to "View and Edit," and is not an observer agent, the agent can sign in and out of all queues regardless of how this queue permission is set.</p>	Disallow
<b>Sign in/out other agents</b>	The agent can sign other agents in and out of queues from the Queue Monitor.	Disallow
<b>View agents being monitored</b>	The agent can see when agents' calls—including their own—are being monitored. With this permission, agents whose calls are being monitored display in the Call Monitor with the monitoring party attached as an indented line. See "Viewing when agents are being monitored" on page 6-18.	Disallow
<b>Access Queue call log</b>	The agent can view a record of calls to the queue. With "View and Edit," the agent can perform all actions in the folder. See <i>Using TeleVantage</i> .	View only

## Agent Permissions

<b>Access Queue call monitor</b>	The agent can see queue calls on a tab in ViewPoint's Call Monitor folder. With "View and Edit," the agent can perform all actions in the folder. See "Using the Call Monitor tabs" on page 5-7.	No access
<b>Access queue mailbox</b>	The agent can view and play voice messages in the queue's voice mailbox. With "View and Edit," the agent can perform all actions in the folder. See "Managing a queue's voice mailbox" on page 6-21.	View and Edit

Permissions are granted to call center agents using the following levels:

- **Use default.** The agent's permission level is whatever the default is for that permission. The current default is shown in parentheses. If the default changes, the agent's permission changes with it. See "Changing wrap-up time and permission defaults" on page 2-11.
- **Allow.** The agent can perform the specified operation.
- **Disallow.** The agent cannot perform the specified operation.
- **No access.** The agent cannot view this part of the ViewPoint interface.
- **View only.** The agent can view the information in ViewPoint, but cannot perform any commands on an item. For example, if **Access queue call monitor** is set to **View only**, the agent can see queue calls but cannot answer or transfer them.
- **View and Edit.** The agent can view the information and perform all commands.

### Preventing agents from changing their personal status

By default, TeleVantage allows agents (and all users) to change their own personal status. If you want, you can prevent agents from changing their personal status by setting their user permission **Change Personal Status** to Disallow (see *Administering TeleVantage* for instructions). When on duty, such agents are unable to select a personal status to stop receiving queue calls, for example Do Not Disturb or On Break. Supervisors can still change the agents' personal status to start and end their workday and let them take breaks.

**Note:** When you prevent users from changing their personal status, they cannot use any of the personal status features described in *Using TeleVantage*.

### Agent skills

The Skills tab of the Agent dialog box is used only if you are using skills-based routing. See Chapter 3.

## Changing the order of agents

On the Agents tab in the Queues dialog box, click the arrow buttons to change the order of agents.

If you are using the **top down** or **round robin** algorithms to distribute calls to agents, the order of agents in the queue is especially important, because it determines the order in which agents receive calls.

The order of agents can also be important when using other distribution algorithms. For example, if you are using the **fewest calls** algorithm, and three agents are tied for the fewest calls, the topmost of those agents in the order gets the next call. Note that at the end of a shift all statistics are reset to zero, so all agents are tied in statistical categories, and agent order briefly becomes the method of distributing calls, until new statistics are accumulated.

For a description of the distribution algorithms, see “Configuring call distribution” on page 2-18.

## Using remote agents

If you have call center agents who work primarily at a remote phone (for example, from their home or cell phone, or an IP phone), you should give them external stations. If they mostly work on an internal office station but occasionally work from home, you should assign them an internal station but make sure they use the "Imitate a station" feature and turn on call forwarding when working at home. See *Administering TeleVantage* for instructions on assigning users external stations, and *Using TeleVantage* for instructions on using a remote phone with TeleVantage.

## Using roaming agents, or hot-desking

If your call center agents frequently move from desk to desk, or take calls at whatever internal phone happens to be nearest, you can set up your call center to ensure the accuracy of statistics and reports, as follows:

1. Give all agents a station ID of 0.
2. For each desk, create a placeholder user with the station ID of the desk's phone. Name the user after the desk, for example, “Cube 101” or “Desk 5.”
3. Tell agents to add the following steps to their routine for beginning and ending their shifts. Following these steps ensures that TeleVantage correctly displays and reports on agent activity no matter what phones they use.
  - When agents first sit down at a new phone to receive calls, before they mark themselves as ready, they should log in and forward their calls to their current location. They can use either of the following methods:
    - To use the telephone commands, pick up the phone and log in by pressing # <extension> # <password> #. Once logged in, press **5 1** to forward calls to their current location.

- To use TeleVantage ViewPoint, start ViewPoint. The Select Station dialog appears. Select the second login option, **Use station <x> to place and answer calls as <name>**. Check **Forward my calls to this station**.
- When agents are finished using a phone, log out from it. This ensures that subsequent calls from that phone are not added to the agent's record. To log out from a phone, either pick up the phone and press **\*00**, or choose the ViewPoint command **File > Exit and Log Off**.

For more information, see “Working at different phones” on page 5-4.

### ***When you have finished defining agents***

Click **OK** in the Queue dialog box to save the queue as you have defined it so far or go to the next section.

## **Configuring call distribution**

---

Click the Distribution tab in the Queue dialog box to perform the following tasks:

- “Choosing how queue calls are distributed to agents” (next section)
- “Placing agents on break if they do not answer calls” on page 2-21
- “Closing the queue” on page 2-8

## Choosing how queue calls are distributed to agents

There are several methods by which you can distribute incoming queue calls to agents. Note that calls are distributed only among agents who are both signed in and ready (see “When agents receive queue calls” on page 2-2 and “Starting your shift” on page 5-2).

### To specify how the queue distributes calls to agents

1. Click the Distribution \ Agent Scoring tab of the Queue dialog box.

**Distribution \ Agent Scoring**

Agent scoring algorithm: Skills-based or custom routing

Distribution calculations are based on queue calls occurring in:

Time period: Day

Direction: Inbound only

Determine which agent gets the next call using the following agent attributes:

Agent attributes	Use	Weight
Proficiency in call's skills	<input checked="" type="checkbox"/>	1.000
[-] Attributes		
[-] Standard agent scoring algorithms		

The agent's average proficiency in the skills required by the call. The queue configuration may give more weight to some skills. This value will be between 0 and 100.

2. From the **Agent scoring algorithm** dropdown list, select one of the following:
  - **Top down.** The call moves through the list of agents—from the top of the list downward—until it reaches a ready agent. For this algorithm, the order of agents in the queue is important. See “Changing the order of agents” on page 2-17.
  - **Round robin.** Agents receive calls in the same sequence as with Top Down, but starting with a different agent each time. Each call starts with the agent after the one who answered the previous call.
  - **Longest idle agent.** The ready agent who has waited the longest time for a call receives the next call. This algorithm is calculated by determining which agent has gone the longest period of time without being in an Active state. Non-queue calls count as being “idle,” because they put an agent in the Standby state. See the Agent State column under “Agents Pane Information” on page 6-4.
  - **Fewest calls.** The ready agent who has answered the fewest calls from this queue since beginning their work shift receives the next call.
  - **Least talk time.** The ready agent who has spent the least amount of time on calls from this queue since beginning their work shift receives the next call. This agent may be someone other than the agent who has handled the fewest calls.

- **Simultaneous ring.** All agents' phones ring at the same time. The agent who answers first takes the call. This feature is especially useful for small offices or departments.
  - **Skills-based or custom routing.** This option lets you construct your own distribution algorithm, using agent skills and other attributes. It is more complex to set up, but can be more flexible. See Chapter 3 for further instructions.
3. If you chose Longest idle agent, Fewest calls, Least talk time, or Skills-based or custom routing, choose the following options under **Distribution calculations are based on...**
    - **Time period.** Choose whether to distribute calls based on totals for the current shift or the current day (since midnight). For more information about shifts, see "Collecting queue statistics" on page 2-50.
    - **Direction.** Choose whether the algorithm counts inbound calls only, or both inbound and outbound calls.
  4. Click **OK** to save the queue as you have defined it so far or go to the next section.

**Note:** By default, outbound queue calls are not recognized by distribution algorithms. For example, "Longest Idle Agent" counts agents as idle unless they are on an inbound queue call. To have distribution algorithms recognize outbound queue calls, use the TeleVantage Advanced Settings Editor to set the database registry setting Server\CCRouteOutbound to 1. See Appendix A of *Administering TeleVantage* for instructions.

## Distribution when the score is tied

When two or more agents tie for the same score (for example, with the "Fewest calls" algorithm, three agents have 0 calls each), the call always goes to the longest idle of the tied agents.

## Notes on simultaneous ring

Simultaneous ring does not ring the phones of overflow agents unless the overflow wait time has been exceeded. At that point it rings the phones of all agents. See "Setting up overflow agents" on page 2-25.

When an agent answers a call with simultaneous ring, it does not count as an unanswered call for the other agents, for purposes of putting the agent automatically in On Break status. However, if all agents fail to answer the call while it is ringing, it counts as an unanswered call for all of them. See "Placing agents on break if they do not answer calls" on page 2-21.

## Note on Longest idle agent

The TeleVantage Advanced Setting Server\LongestIdleFromSignIn governs how the “Longest idle agent” algorithm treats newly-logged-in agents.

- If set to false (the default), the behavior is the same as in previous versions of TeleVantage. The algorithm treats newly logged in agents as being idle since the beginning of the day or shift. This can result in those agents receiving calls ahead of agents who have been idle longer.
- If set to true, the algorithm takes account of sign in time. When an agent signs in after the start of the day or shift, the agent's idle time is counted from the sign in time, and not from the start of the day or shift.

For more information on advanced settings, see Appendix J of *Installing TeleVantage*.

## Placing agents on break if they do not answer calls

You can have TeleVantage automatically place agents in the On Break personal status if they fail to answer one or more consecutive queue calls. Placing a missing agent On Break ensures that the queue does not send calls to that agent and provides the caller with a smoother waiting experience. This feature is a safeguard against agents leaving their phones and forgetting to place themselves in the On Break personal status.

### To automatically place missing agents On Break

1. Click the Agents tab of the Queue dialog box.
2. Check **If an agent does not answer, set that agent to On Break**.
3. In **After how many unanswered calls**, enter the number of consecutive unanswered queue calls that must occur for TeleVantage to automatically place an agent in the On Break personal status.
4. Click **OK** to save the queue as you have defined it so far or go to the next section.

If an agent declines a queue call by using the call announcing options, that action is considered an unanswered call. See *Using TeleVantage* for an explanation of call announcing.

You can keep track of how often the queue automatically puts agents into On Break status, using the Queue Monitor statistics Away, No Answer, and Forced Break. See “The Agents pane” on page 6-3.

**Note:** Supervisors can also manually place agents in the On Break personal status or in any other personal status. See “Changing an agent’s personal status” on page 6-20.

See *Using TeleVantage* for more information about using the On Break personal status and other personal statuses.

## Defining how calls are scored

---

When several calls are waiting in the queue, the queue scores each call to determine the order in which they will be sent to agents. The call with the highest score is the next one sent when an agent becomes available.

By default, a call's score is the number of seconds it has been waiting in the queue. The call with the highest score is the one that has been waiting the longest and will be the next one sent to an agent. However, you can manipulate call scoring to give certain calls a higher score, bumping them closer to the front of the queue so that they will be answered sooner. You can increase a call's score using the following methods:

- Basing a call's score on time in queue or time in system. See page 2-22
- Giving some calls higher priority. See page 2-23.
- Increasing a call's score for skill matches. See page 2-25.

To use any of these methods, open the Queue dialog box and go to the Distribution \ Call Scoring tab.

Distribution \ Call Scoring

A call's score is based on:

Time in this queue, in seconds

Time in the system, in seconds

Certain calls have a higher priority than other calls

Priority is stored in custom variable: PriorityCaller

For each unit of the variable's value add 0 to the call's score

For all skills required by the call:

Add the agent's average proficiency times 60 to the call's score

### Choosing by how much to increase a call's score

A call's score is based on its wait time in seconds, so it's helpful to think in terms of seconds when deciding by how much to increase a call's score. For example, if you want a high-priority call to jump ahead of a call that has been waiting for a minute, you would want to add 60 to its score. To have it jump ahead of a call that has been waiting 5 minutes, you would want to add 300.

### ***Basing a call's score on time in queue or time in system***

You can choose whether a call's score is based on the length of time (in seconds) it has spent in that queue or in the TeleVantage system as a whole. If based on time in queue, then calls transferred between queues resume waiting anew with a score of 0. You might want to base call score on time in system if your calls often move from queue to queue, or are returned to the queue after talking to an agent or leaving voicemail.

To choose the basis for call scoring, click either **Time in this queue, in seconds** or **Time in the system, in seconds** on the Distribution \ Call Scoring tab.

## Giving some calls higher priority

You can give some queue calls a higher priority than other queue calls. Calls with higher priority get a higher call score and advance to the head of the queue quicker than other calls.

You assign priority to calls in the following way:

1. Define a custom data variable to use for call priority (the “priority variable”).
2. Set a “priority multiple” that determines the weight priority carries in the call score.
3. Identify high-priority calls when they enter the queue and assign priority appropriately using the custom data variable.

The value of a call’s priority variable is multiplied by the priority multiple and the result is added to the call’s score. The higher the priority multiple, the greater the effect of a high priority number. For example, if the priority multiple is 60, each unit of priority is worth a minute, so a call with priority 5 is equal to 5 minutes of wait time. If the priority multiple is 480, each unit of priority is worth 8 minutes, so a call with priority 5 is equal to 40 minutes of wait time.

### Examples

The following tables illustrate how priority changes the order in which calls are answered.

<b>Priority Multiple = 120 (Each unit of priority = 120 seconds or 2 minutes)</b>					
<b>Order received</b>	<b>Base Wait Time (sec.)</b>	<b>Priority</b>	<b>Priority score</b>	<b>Call score</b>	<b>Queue order</b>
First	900	0	0	900	Second
Second	600	0	0	600	Fourth
Third	300	5	600	900	Third
Fourth	60	2	240	300	Fifth
Fifth	30	10	1200	<b>1230</b>	<b>First</b>
Sixth	10	1	120	130	Sixth

<b>Priority Multiple = 500 (Each unit of priority = 500 seconds or 8 minutes 20 seconds)</b>					
<b>Order received</b>	<b>Base Wait Time (sec.)</b>	<b>Priority</b>	<b>Priority score</b>	<b>Call score</b>	<b>Queue order</b>
First	900	0	0	900	Fourth
Second	600	0	0	600	Fifth
Third	300	5	2500	2800	Second
Fourth	60	2	1000	1060	Third
Fifth	30	10	5000	<b>5030</b>	<b>First</b>
Sixth	10	1	500	510	Sixth

**Note:** Redirection overrides caller priority. If the queue is currently redirecting callers based on the criteria you defined (see “Configuring the queue to redirect calls” on page 2-30), then calls are redirected no matter how high their priority would have been.

## Configuring a queue to use call priority

To configure a queue for call priority, you must specify the custom data variable to use for priority (or create a new one) and specify the priority multiple, as follows:

1. On the Distribution \ Call Scoring tab, Check **Certain callers have a higher priority than other callers**.
2. Under **Priority is stored in custom variable**, do one of the following:
  - Select an existing custom data variable.
  - Click  to create a new custom data variable. For instructions see “Creating a custom data variable” on page 2-55.

Make sure the variable is of **Data Type** Long and has a **Default value** of 0.

The variable you select here is the queue’s priority variable.

3. In **For each unit of the variable’s value add \_\_ to the call’s score**, enter the priority multiple. This number is multiplied by the value of a call’s priority variable to determine by how much the call’s score is increased.
4. Click **OK** to save the queue as you have defined it so far or go to the next section.

## Assigning priority to calls

You assign priority to an incoming call by assigning a value to the custom data variable that you selected in the previous procedure. You can assign value to the variable using any of the following methods:

- **With an auto attendant.** Callers receive priority based on the phone number that they dial or menu choice they select. You could have a special phone number that you give out to your premier customers that gives them a high priority when they call that number. See *Administering TeleVantage* for more information about creating custom data variables.
- **With an IVR Plug-in.** Your IVR Plug-in application can assign priority based on analysis of the call (for example, you could give international callers a high priority) or based on information that the caller enters (for example, account number). See *Administering TeleVantage* for more information about creating custom data variables.
- **With queue data entry.** The queue can assign priority directly from a number that the caller enters (for example, you could give out customer numbers that range from 1 to 10 and have the queue prompt callers to enter them). See “Setting up caller data entry” on page 2-42 for more information about creating custom variables.
- **With the TeleVantage Call Classifier.** This TeleVantage add-on application can benefit call centers in many ways. Among other things it can automatically assign priority to calls based on issue number, Caller ID, or caller identification against your company

database. For more information about the Call Classifier, see “Using the Call Classifier” on page 2-53.

## ***Increasing a call's score for skill matches***

If you are using skill-based routing, you can increase a call's score based on the available agents' appropriate skills. See “Reducing wait time for calls with skill requirement matches” on page 3-11.

## **Setting up overflow agents**

---

*Overflow agents* are agents who receive calls from a queue only if the queue's primary agents are all busy for a certain number of minutes. Overflow agents can be users whose main focus is another task, but who are available to take queue calls if needed. You can set up multiple tiers of overflow agents, so that tier 1 agents receive calls only when all primary agents are busy, tier 2 agents receive calls only when all primary agents and tier 1 agents are busy, and so on.

Calls are distributed among each tier of overflow agents according to the queue's distribution algorithm. For example, if the algorithm is Top Down, the call rings the topmost ready primary agent. If all primary agents are busy, the call rings the topmost ready tier 1 agent. If all primary and tier 1 agents are busy, the call rings the topmost ready tier 2 agent, and so on.

**Note:** With the Simultaneous Ring algorithm, if the overflow wait time has been exceeded, the phones of all primary and overflow agents ring regardless of overflow level.

Setting up overflow agents consists of the following tasks:

- Assigning an overflow tier to agents
- Setting up the overflow wait time and options

## ***Assigning an overflow tier to agents***

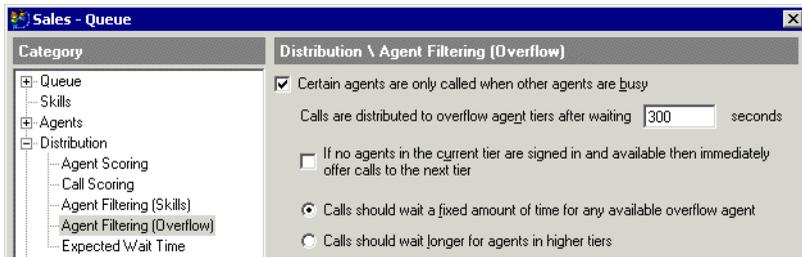
To create overflow agents, first add them to the queue as you would normal agents (see “Adding agents to the queue” on page 2-11). When defining the agent on the General tab, set **Overflow tier** to the tier level you want. Tier 0 corresponds to a primary agent.

**Note:** You do not have to number tier levels sequentially. Only the order is important. For example, you could have tier levels 1, 5, 6, and 10.

## ***Setting up the overflow wait time and options***

To use overflow agents, set up how your system handles them, as follows:

1. Click the Distribution \ Agent Filtering (Overflow) tab in the Queue dialog box.



2. Check **Certain agents are only called when other agents are busy**.

With this field unchecked, overflow tiers are ignored and all agents are treated as primary agents.

3. Set any of the following overflow options:

- **Calls are distributed to overflow agent tiers after waiting \_\_\_ seconds.**

This field determines how long calls wait for a primary agent before being sent to an overflow agent. For example, by default calls must wait 5 minutes without being answered by a primary agent before being sent to an overflow agent.

You can choose whether or not the wait time applies individually to each overflow tier. See the **Callers should wait** option.

- **If no agents in the current tier are signed in and available then immediately offer calls to the next tier.**

If checked, the queue bypasses the overflow wait time if no primary agents are signed in and available. In that case calls are sent immediately to overflow agents. Note that for purposes of this check, an agent in On Break status is considered to be available. For the bypass to occur, primary agents must all be either signed out or signed in with a personal status other Available, Available (Queue Only), or On Break.

The bypass also occurs between overflow tiers. For example, if all primary and tier 1 agents are signed out, calls are immediately sent to tier 2 agents. If all primary, tier 1, and tier 2 agents are signed out, calls are immediately sent to tier 3.

Leave unchecked to use the wait time in all cases, even when a tier is signed out. For example, in the changeover between shifts there might be a moment when all primary agents are signed out, but you might still want calls to wait rather than ringing overflow agent phones.

- **Callers should wait...**

This choice determines whether the overflow wait time applies only once, or separately for each overflow tier.

- Choose **Callers should wait a fixed amount of time for any available agent** to apply the overflow wait time only once. If no primary agents answer during the wait time, the call is sent to the lowest-tier ready overflow agent, regardless

of what tier that might be. For example, if all tier 1 agents are On Break when the overflow wait time expires, the call is sent to a tier 2 agent.

- Choose **Callers should wait longer for agents with higher skill values** to have calls wait longer before being sent to higher overflow tiers. With this option selected, the wait time is multiplied by the tier level to determine how long a call must wait before being sent to that tier. For example, if the wait time is 5 minutes, a call must wait 5 minutes before being sent to tier 1, 10 minutes before being sent to tier 2, 15 minutes before being sent to tier 3, and so on.

Note that by changing the overflow tier value, you can increase the wait time for a tier. For example, if you define three overflow tiers with tier values of 1, 2, and 10, then the wait times for the tiers would be 5 minutes, 10 minutes, and 50 minutes. In this way you can refine the circumstances in which an overflow tier is pulled into queue activity.

4. Click **OK**.

## Configuring expected wait time

---

The queue continuously calculates the expected wait time for each caller. You can use expected wait time in the following ways:

- Announce it to callers as a courtesy to inform them of the expected wait. See “Creating Hold prompts” on page 2-36.
- Use it to determine whether or not a conditional Hold prompt plays to a caller. See “Creating conditional Hold prompts” on page 2-38.
- Automatically redirect new callers when the expected wait time is too high. See “Redirecting calls when the queue is too busy” on page 2-30.

### ***About the expected wait time estimate***

Expected wait time is an estimate based on how many agents are currently ready to take queue calls and the average length of a call. The formula is as follows:

$$6 + \text{MinWaitTime} + \text{AvgCallLnth} * (\text{CallerPosition} - 1) / (\max(\text{AgentsAvailable}, \text{MinimumAgents}))$$

Parameter	Description
MinWaitTime	Minimum wait time if entered (see the next section)
AvgCallLnth	Estimated average call length (see the next section)
CallerPosition	Position of the caller in the queue (includes priority)
AgentsAvailable	Number of agents currently signed in and in the personal status Available or Available (Queue Only).
MinimumAgents	Minimum agent count if entered (see the next section)

**Note:** The formula uses whichever is larger, AgentsAvailable or MinimumAgents.

**Example:** in a queue with 10 available agents and an estimated average call length of 300 seconds, with MinWaitTime of 60, the expected wait time for the fifth caller in the queue would be:

$$6 + 60 + 300 * (4 / 10) = 186 \text{ seconds (about 3 minutes).}$$

This calculation is most reliable in a call center with many agents and short calls, and in which agents take calls from only one queue at a time. Though you can improve the estimate (see the next section), you should consider not using expected wait time if your call center has very few agents and long calls, or if most of your agents work in multiple queues at once.

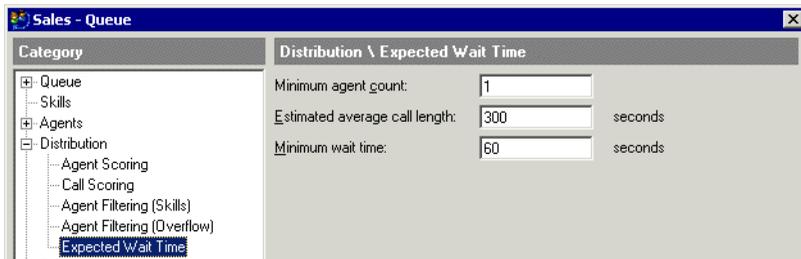
## ***Expected wait time and overflow tier levels***

When calculating the expected wait time, TeleVantage includes overflow tiers if the wait time among primary agents only is longer than the overflow wait time. For example, if the expected wait time among primary agents is 5 minutes, and tier 1 overflow agents are activated after 3 minutes, TeleVantage recalculates the expected wait time including primary and tier 1 agents. The process is then repeated for each overflow tier until the expected wait time is less than an overflow wait time or until all overflow tiers are included. The final expected wait time is then presented to the caller.

## ***Improving the expected wait time estimate***

You can improve the expected wait time estimate, and make queue behavior based on it smoother. To do so:

1. Choose the Distribution \ Expected Wait Time tab in the Queue dialog box.



2. Enter the following parameters:
  - **Minimum agent count.** If you enter a minimum agent count, the expected wait time estimate will never be based on fewer available agents than this number, even if there are in fact fewer available agents. A minimum agent count makes the calculation more accurate over brief drops in agent availability.

For example, if the queue is redirecting calls based on expected wait time, it can be vulnerable to agents taking short breaks or a general shift changeover. With fewer available agents, even for a moment, the expected wait time rises and incoming calls may be redirected when there would have been agents available in a few minutes to take them. Entering a minimum agent count overcomes that problem.

- **Estimated average call length.** This number is crucial to the accuracy of the expected wait time calculation. Enter the average length of a call in this queue, in seconds. Include only the talk time plus wrap-up time, not the wait time. To get the best estimate, use the Queue Monitor's Avg. Talk Time statistic at the end of a period or shift (see "The Queue Statistics pane" on page 6-9), and the Activity History by Queue report (see "Activity History by Queue worksheet totals" on page 8-22). More importantly, base the number on your overall experience with the queue.

If you have agents who work in multiple queues, make this number higher to account for the time they spend in calls from other queues. In general you can adjust this number to correct for expected wait time inaccuracies. See the next section.

- **Minimum wait time.** If you enter a minimum wait time, the calculated expected wait time will never be less than this number, even when it otherwise would have been. Using a minimum wait time can avoid inaccurate results for the first callers into a queue. Note that if an agent is ready when a call enters the queue, the expected wait time is still 0 and the call is sent immediately to that agent.

3. Click **OK** to save the queue as you have defined it so far or go to the next section.

## ***Correcting expected wait time inaccuracies***

Various factors may cause the expected wait time calculation to consistently be too high or too low. For example, agents working in multiple queues at once can cause it to be too low.

You can easily adjust the expected wait time result by adjusting the **Estimated average call length** number (see the previous section). Raising this number makes the expected wait time result higher; lowering it makes the result lower.

You can also adjust the 6 seconds that is added to the expected wait time (displayed at the beginning of the expected wait time calculation on page 2-27). To do so, add the following registry key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Artisoft\TeleVantage\Server\Settings\ExpWaitRingCycleLength
```

Specify the added time in milliseconds.

## ***Announcing expected wait time in minutes and seconds***

By default, the expected wait time prompt announces the wait time in minutes only. To have TeleVantage announce the expected wait time in minutes and seconds, add the following registry key to the TeleVantage Server and set it to 1:

```
HKeyLocalMachine\Software\Artisoft\TeleVantage\Server\Settings\PlayInSeconds
```

## Configuring the queue to redirect calls

You can define how incoming calls to the queue are handled in the following situations:

- When the queue is too busy (next section)
- When a call exceeds the maximum wait time (page 2-32)
- When the queue is closed (page 2-33)
- When there are no agents with matching skills (page 2-34)

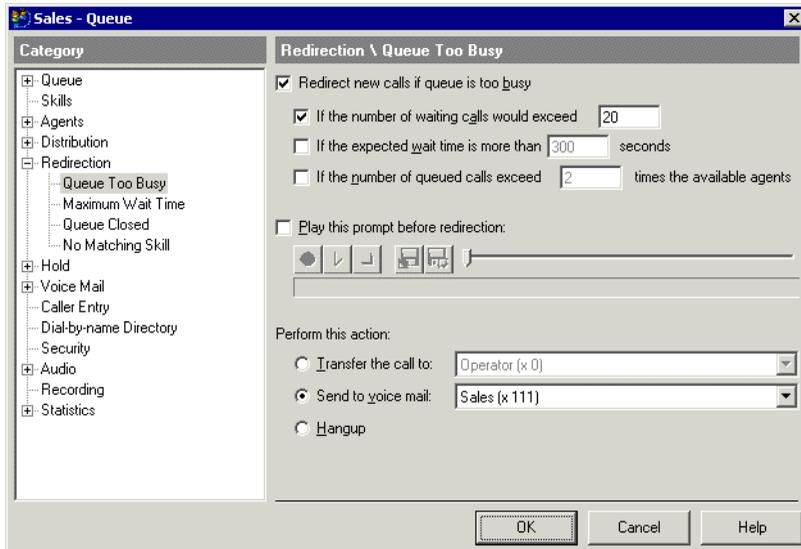
**Note:** You can follow how many calls a queue is redirecting using the Redirection statistic in the Queue Monitor. See “The Queue Statistics pane” on page 6-9.

### *Redirecting calls when the queue is too busy*

You can have the queue automatically divert new calls out of the queue when the queue hits a certain level of traffic that you define. For example, if the expected wait time is longer than 30 minutes, you can play a message to callers telling them that the queue is currently too busy to accept new calls, then transfer them to another destination such as voicemail or your auto attendant.

#### To define redirect options when the queue is too busy

1. Click the Redirection \ Queue Too Busy tab of the Queue dialog box.



2. To have the queue redirect calls when it becomes too busy, check **Redirect callers if queue is too busy**. If this field is unchecked, all incoming calls enter the queue regardless of how busy it is.

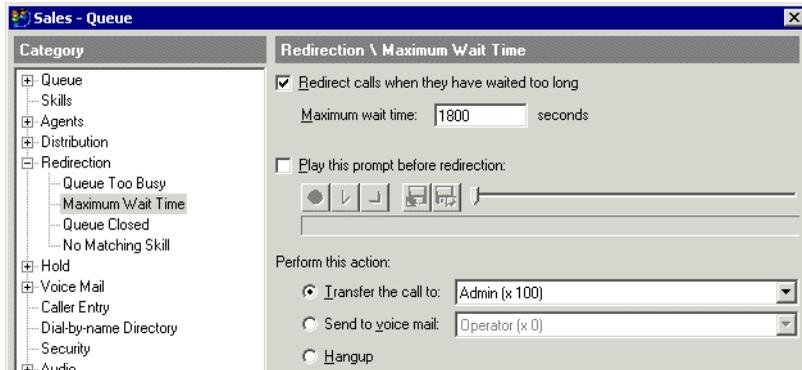
3. To define the “too busy” threshold at which the queue begins to redirect new calls, choose any combination of the following options. New calls are redirected if any of the checked thresholds are met.
  - **If the number of waiting callers would exceed \_\_.** Check this option to redirect new calls if they would cause the number of calls in the queue to exceed the number you enter. Calls in the queue include those connected with agents as well as those waiting.
  - **If the expected wait time is more than \_\_ seconds.** Check this option to redirect calls when the expected wait time meets or exceeds the number of seconds you enter. For information on how the expected wait time is calculated and how to improve its accuracy, see “Configuring expected wait time” on page 2-27.
  - **If the number of queued callers exceeds \_\_ times the number of available agents.** Check this option to redirect calls when the number of calls waiting in the queue is greater than the number of available agents by the factor you enter. For example, if you enter 2 then redirection begins when there are twice as many calls waiting in the queue as available agents. Available agents are signed-in agents in the personal status Available or Available (Queue Only).
4. To play a message to callers who are about to be redirected, check **Play this prompt before redirection**. Use the audio controls to record or import the message.
5. To define how calls are redirected, choose one of the following options under **Perform this action**:
  - **Transfer the call to.** Redirected calls are transferred to the extension you select.
  - **Send to voicemail.** Redirected calls are transferred directly to the voicemail of the extension you select.

**Note:**If you chose to play a redirection message in step 4, the caller will hear the redirection message followed by the voicemail greeting. You can use the combination to create full messages. For example, the redirection message can say “I’m sorry, we’re temporarily closed,” and the voicemail greeting can add, “Please leave a message.”
  - **Hangup.** Redirected calls are disconnected.
6. Click **OK** to save the Queue as you have defined it so far or go to the next section.

## Defining a maximum wait time

You can have individuals calls automatically redirected when they have waited on the queue for a length of time that you define.

1. Click the Redirection / Maximum Wait Time tab of the Queue dialog box.

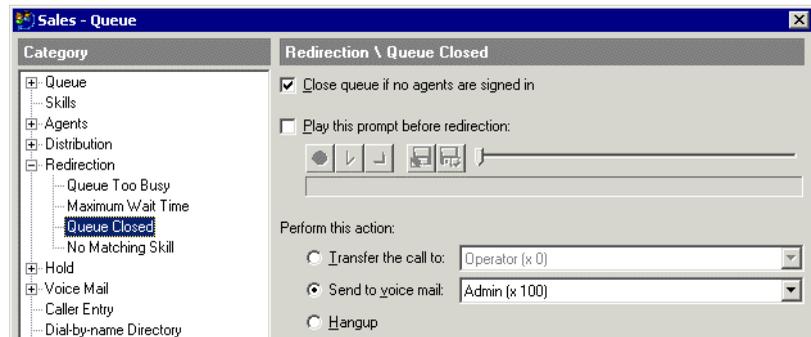


2. To redirect calls that meet the maximum wait time, check **Redirect callers when they have waited too long**. If unchecked, the maximum wait time has no effect.
3. Enter the maximum wait time in **Maximum wait time**.
4. To play a message to callers who are about to be redirected, check **Play this prompt before redirection**. Use the audio controls to record or import the message.
5. To define how calls are redirected, choose an option under **Perform this action**:
  - **Transfer the call to**. Redirected calls are transferred to the extension you select.
  - **Send to voicemail**. Redirected calls are transferred directly to the voicemail of the extension you select.
  - **Hangup**. Redirected calls are disconnected.
6. Click **OK** to save the Queue as you have defined it so far or go to the next section.

## Redirecting calls when the queue is closed

This section describes how to redirect incoming calls when the queue is closed. To close the queue, use the **Queue is closed** checkbox on the Distribution tab (see “Closing the queue” on page 2-8). You can also have the queue close automatically whenever there are no agents signed in, as described in the following steps.

1. Click the Redirection \ Queue Closed tab of the Queue dialog box.



2. To have the queue close automatically when no agents are signed in, check **Close queue if no agents are signed in**.

**Note:** Agents On Break will not cause the queue to close. For the queue to close, all agents must be either signed out, or in a personal status other than Available, Available (Queue Only), and On Break.

If the queue closes for this reason, it will reopen automatically when an agent signs in. You can also reopen it manually by unchecking this field.

**Note:** This field does not affect the **Queue is closed** checkbox on the Distribution tab. For example, if that field is checked the queue remains closed regardless of how many agents are signed in or out.

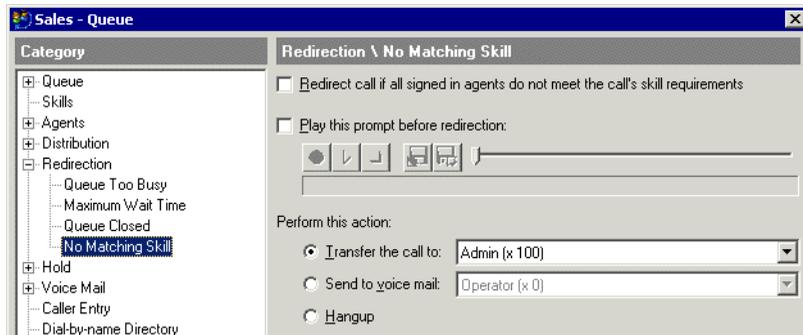
3. To play a message to callers who are about to be redirected, check **Play this prompt before redirection**. Use the audio controls to record or import the message.
4. To define how calls are redirected, choose an option under **Perform this action:**
  - **Transfer the call to.** Redirected calls are transferred to the extension you select.
  - **Send to voicemail.** Redirected calls are transferred directly to the voicemail of the extension you select.
  - **Hangup.** Redirected calls are disconnected.
5. Click **OK** to save the Queue as you have defined it so far or go to the next section.

## Redirecting calls when there are no matching skills

This section describes how to redirect incoming calls when none of the signed-in agents in the queue have skills that match that call's skill requirements. For more about using skills-based routing, see Chapter 3.

**Note:** If you have set the queue to reduce calls' skill requirements over time (see "Adjusting skill requirements over time" on page 3-9), then calls are not redirected for lack of matching skills.

1. Click the Redirection \ No Matching Skills tab of the Queue dialog box.



2. To have the queue redirect callers for whom no agents with matching skills are signed in, check **Redirect call if all signed-in agents do not meet the call's skill requirements**.
3. To play a message to callers who are about to be redirected, check **Play this prompt before redirection**. Use the audio controls to record or import the message.
4. To define how calls are redirected, choose an option under **Perform this action:**
  - **Transfer the call to.** Redirected calls are transferred to the extension you select.
  - **Send to voicemail.** Redirected calls are transferred directly to the voicemail of the extension you select.
  - **Hangup.** Redirected calls are disconnected.
5. Click **OK** to save the Queue as you have defined it so far or go to the next section.

## Setting up the caller's hold experience

You can configure the following aspects of the caller's experience while waiting on the queue:

- Setting up hold music
- Configuring hold and park ringback
- Offering the caller options while waiting on the queue
- Creating Hold prompts

## Setting up hold music

By default, callers waiting on this queue hear the hold music that you have specified for the system as a whole (see *Administering TeleVantage*). Optionally, you can have each queue play hold music from a different music-on-hold device. To do so:

1. Click the Hold tab of the Queue dialog box.
2. Check **Change hold music to** and select a music-on-hold source from the dropdown list. See *Administering TeleVantage* for instructions on adding music-on-hold sources. If unchecked, callers hear the system hold music while they are waiting.
3. Click **OK** to save the Queue as you have defined it so far or go to the next section.

## Configuring hold and park ringback

If an agent places a queue call on hold or parks it, you can have TeleVantage automatically ring the agent's phone after a certain amount of time to reconnect him or her with the call. To do so:

1. Click the Hold tab of the Queue dialog box.
2. Check **Ring back if an agent leaves a call on hold or parked for over \_\_ seconds**, and enter the number of seconds before ringback occurs.
3. Click **OK** to save the Queue as you have defined it so far or go to the next section.

## Offering the caller options while waiting on the queue

You can give waiting callers the ability to redirect themselves out of the queue to another extension or voicemail. To do so:

1. Click the Hold \ Special Keys tab of the Queue dialog box.
2. Under **Special keys**, check any of the following options to offer them to waiting callers:
  - **Leave voicemail key.** Available only if the queue has a voice mailbox (see “Setting up the queue’s voice mailbox” on page 2-40). Callers can press a key to stop waiting and be transferred to the queue’s voice mailbox. Select the key that you want callers to press.
  - **Transfer out of queue key.** Callers can transfer out of the queue to a destination you define. This destination can be a supervisor’s voice mailbox, an auto attendant, another queue, or any other extension. Select the key that you want callers to press and then select the transfer destination under **The caller will be transferred to**.

**Note:** If you offer callers these options, you should mention them in your queue’s Welcome prompt or in a Hold prompt.

3. Use the **Conserve voice resources on supported telephony boards** check box to reduce voice resource use by making the special keys active only while Hold prompts are playing.

**Note:** This field does not apply if your system uses Springware analog trunk boards, including the D/120JCT, D80SC4LS, D160SC8LS, D41ESC, D41JCT, and VFX41

boards. On all other telephony boards, the field works as described.

When checked, if a caller presses special keys between prompts—for example, during hold music—the system does not respond. A voice resource is allocated to a waiting caller only while a prompt plays for that caller. Because prompts play to different callers at different times, only a few voice resources are needed to support several waiting callers.

If you check the field, be sure to record a few seconds of silence at the end of each prompt so that callers have enough time to press the keys before the keys become inactive. See “Creating Hold prompts” on page 2-36.

If unchecked, the special keys are active at all times, even during hold music and silence. The system allocates one voice resource to each waiting caller for the entire wait time, and callers can press the special keys at any time.

For more information about voice resources, see Appendix A of *Installing TeleVantage*.

4. Click **OK** to save the Queue as you have defined it so far or go to the next section.

## ***Creating Hold prompts***

You can make one or more recordings for callers to hear while waiting, for example, to reassure them that they are still in the queue. You can choose to have a Hold prompt play only once, play on a repeating basis, or play only when a certain condition has been met. A Hold prompt might say, “Your call is very important to us. Please wait for the next available representative.”

Hold prompts are listed on the Hold tab under **Hold prompts**. They are listed in the order that they play to callers. While the caller is waiting, TeleVantage plays the Hold prompts from the top to the bottom of the list—with customizable pauses between them—and then repeats the cycle, starting at the top again. The cycle of Hold prompts repeats as long as the caller remains waiting.

You can choose whether a Hold prompt is part of the repeat cycle or whether it is played to the caller only once. If it is played only once, TeleVantage plays it the first time through the cycle and then skips it on subsequent cycles.

**Note:** If the system hardware has no voice resources available when a prompt would normally play to a caller, the prompt is delayed slightly until a voice resource becomes available. An entry appears in the Windows Event Log if this occurs (see *Administering TeleVantage*).

For instructions on recording a Welcome prompt, which plays callers once when they first enter the queue, see “Creating a Welcome prompt for the queue” on page 2-46.

## To create a Hold prompt

1. Click the Hold \ Prompts tab in the Queue dialog box. The tab shows existing Hold prompts in the order that they play to the caller.
2. Click **Add**. The Hold Prompt dialog box opens.

**Hold Prompt**

**General**

Prompt name:

Seconds before this prompt:

Play this prompt every repeat cycle

**Play this audio**

Prompt:

Sentence:

Use the following condition

Condition variable:

Minimum variable or value:

Maximum variable or value:

3. Under **General**, enter the following information about the Hold prompt:
  - **Prompt name.** A descriptive name for the prompt.
  - **Seconds before this prompt.** The amount of time between the end of the previous prompt and the playing of this prompt. If you set this to 0, callers will not hear hold music before this prompt, even if it is the first prompt.
  - **Play this prompt every repeat cycle.** Check to have this prompt play every time in the repeat cycle. Uncheck to have the prompt play only once. If unchecked, the prompt will play only the first time through the cycle (unless it is a conditional prompt that does not play at all because the required condition has not been met).
4. Under **Play this audio**, choose one of the following options for the Hold prompt recording:
  - **Prompt.** Record the Hold prompt yourself using the audio controls. See *Administering TeleVantage* for instructions. Enter the text of the prompt or a description in the text field.

**Note:** If you are offering special-key options in this queue, with the special keys active only during prompts, then you should record a few seconds of silence at the end of each Hold prompt to give callers time to press the special keys before they become inactive. See “Offering the caller options while waiting on the queue” on page 2-35.

- **Sentence: Queue length.** Choose this option to play the prerecorded message: “There are <number> callers waiting ahead of you,” where <number> is the number of callers that TeleVantage detects are ahead of a caller in the queue. If there is no one ahead of the caller in the queue, the message changes to: “Your call will be handled by the next available agent.”
- **Sentence: Wait time.** Choose this option to play the prerecorded message: “The expected wait time is <number> minutes” where <number> is the number of minutes that TeleVantage estimates will elapse before the call is answered. For information on how TeleVantage calculates this number, and how to make it more accurate, see “Configuring expected wait time” on page 2-27.

**Note:**You can have the expected wait time announce minutes and seconds instead of just minutes. See “Announcing expected wait time in minutes and seconds” on page 2-29.

5. Optionally, select or create a condition under which this Hold prompt plays. See the next section, “Creating conditional Hold prompts.”
6. Click **OK** to add the Hold prompt to the list on the Hold \ Prompts tab.
7. Click **OK** to save the queue as defined so far or go to the next section.

## Creating conditional Hold prompts

You can create Hold prompts that play only when a certain condition is met. For example, if the estimated wait time on the queue is 10 minutes or longer, you could play a prompt that says, “We are currently experiencing a heavy volume of calls. We recommend that you call back later or leave a voice message.”

Conditional Hold prompts can either repeat in the repeat cycle or play only once. If they repeat, the condition is checked each time through the cycle. For example, a prompt that played when the estimated wait time was over 10 minutes would repeat until the wait time dropped below 10 minutes and then stop playing.

### To create a conditional Hold prompt

1. On the Hold \ Prompts tab in the Queue dialog box, click **Add**. The Hold prompt dialog box opens.
2. Enter the general information and create the audio for the Hold prompt as shown in the previous section.
3. Check **Use the following condition**.
4. From the **Condition variable** dropdown list, select the custom data variable whose value the system will use to determine if the prompt plays.

TeleVantage comes with two predefined custom data variables to be used as Hold prompt conditions:

- **Number of people ahead.** Returns the number of waiting callers who entered the queue before this one.

- **Expected Wait Time.** Returns the estimated number of seconds until the call is answered. For information on how TeleVantage calculates this number, and how to make it more accurate, see “Configuring expected wait time” on page 2-27.

You can also create your own condition variable by clicking  next to the **Condition variable** field. See the next section, “Using custom data variables to play conditional Hold prompts.”

5. In **Minimum variable or value** and **Maximum variable or value**, enter the minimum and maximum values that will cause the prompt to play. The prompt plays if the value is  $\geq$  the minimum and  $\leq$  the maximum.

For example, to play the prompt when the expected wait time is 10 minutes or more, select **Expected wait time** and set **Minimum variable or value** to 600 (600 seconds=10 minutes). If you are using a custom variable of Account Number (see the example in the next section), you could set the prompt to play for callers with a Account Number value within a specific range.

6. Click **OK**.

## Using custom data variables to play conditional Hold prompts

Whatever variable you select in the **Condition variable** field of the Hold prompt dialog box is the one whose value is used to determine whether the prompt plays. You can create your own custom data variables and use them to trigger Hold prompts. For instructions on creating a custom data variable, see “Creating a custom data variable” on page 2-55.

**Example:** By creating a variable called Account Number, you can play a Hold prompt only for certain customers, such as your newest customers. First, you prompt callers to enter their account numbers, which you store in the Account Number variable (see “Setting up caller data entry” on page 2-42). Then you create a conditional Hold prompt that plays only if Account Number is within a certain range. A range of 1000 to 2000 might represent your newest customers, and you could specify that range for your Hold prompt, which would play only for your newest customers.

**Note:** Text variables are sorted alphabetically and so can have a “range,” for example A-E. A range of A-E means that the Hold prompt will play if the variable value begins with an A, B, C, D, or E.

You can also use auto attendant menu choices and IVR Plug-ins to pass custom variables to a queue and use those variables as Hold prompt condition variables. See “Using IVR Plug-ins with a call center queue” on page 2-53. For more information, see *Administering TeleVantage*.

## Setting up the queue's voice mailbox

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The queue can have its own voice mailbox and can receive voice messages if you give callers the option of leaving voicemail instead of waiting in the queue (see “Configuring call distribution” on page 2-18).

With the proper permissions, agents can see the queue's voice mailbox (in addition to their own mailboxes) using ViewPoint's voicemail folders. See *Using TeleVantage* for instructions. Users can also log on to the queue's account over the phone by using the telephone commands.

**Note:** To access the queue's voice mailbox, agents must have the **Access queue mailbox** privilege. See “Agent permissions” on page 2-14.

If you do not want queue callers to leave voicemail, select **No mailbox** on the Voice Mail tab (see the next section).

### ***Setting mailbox size and maximum message length***

To define size limits for the voice mailbox and individual voice messages, do the following:

1. Click the Voice Mail tab of the Queue dialog box.
2. To give the queue a voice mailbox, click **Mailbox with \_\_\_ minutes max size**, and enter the size of the mailbox.

To have a queue without a voice mailbox, click **No mailbox**.

3. Enter the maximum amount of voice message minutes that the queue's mailbox can hold in **Maximum size of mailbox (minutes)**. A minute of voice recording occupies roughly .5 MB of disk space. If the voice mailbox is full, it cannot accept new voice messages. The maximum size is 999,999 minutes.

**Note:** If you expect to keep thousands of voice messages in the queue's mailbox you should configure TeleVantage to automatically archive the recordings in the queue mailbox, and use the Archived Recording Browser instead of ViewPoint to manage and listen to the recordings. See Chapter 4 of *Administering TeleVantage* for instructions on archiving recordings, and Appendix E of *Using TeleVantage* for instructions on using the Archived Recording Browser.

4. Enter the maximum length in seconds for any voice message in **Maximum message length (seconds)**. When a voice message reaches the maximum, it is cut off and the caller hears the message option prompts.
5. Click **OK** to save the queue as defined so far or go to the next section.

## ***Synchronizing with Microsoft Exchange server***

To enable synchronization of the queue's voice messages with the corresponding e-mail notifications in Microsoft Exchange, do the following:

1. Click the voicemail tab of the Queue dialog box.
2. Check **Synchronize with Exchange server mailbox**. If this control is disabled, you must first set up Exchange server notification (see *Administering TeleVantage*).
3. Enter the name of the queue's Exchange server mailbox. You can obtain this name from Microsoft Exchange.

**Note:** Exchange server mailboxes should not be confused with the e-mail address supplied when setting up e-mail notification for the queue (see "Setting up voicemail notifications" on page 2-41). One of the e-mail addresses specified for the queue for e-mail notification must route e-mail to the Exchange server mailbox that you specify here.

4. Click **OK** to save the queue as defined so far or go to the next section.

For more information about synchronization with Microsoft Exchange, see *Administering TeleVantage*.

## ***Setting up voicemail notifications***

TeleVantage can automatically notify you by e-mail, pager, or call whenever the queue receives a new voice message. Click the voicemail \ Notification tabs to set up notification of new queue voice messages. The feature is identical to the notification feature for users (see *Administering TeleVantage* or *Using TeleVantage*).

## Setting up caller data entry

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You can set up the queue to prompt callers to enter data by using the keys on their telephones. Data entry prompts play immediately after the Welcome prompt. You can, for example, prompt callers to enter their customer identification numbers. The data is stored in a custom data variable that you define. The data accompanies the call, and you can then use the data in the following ways:

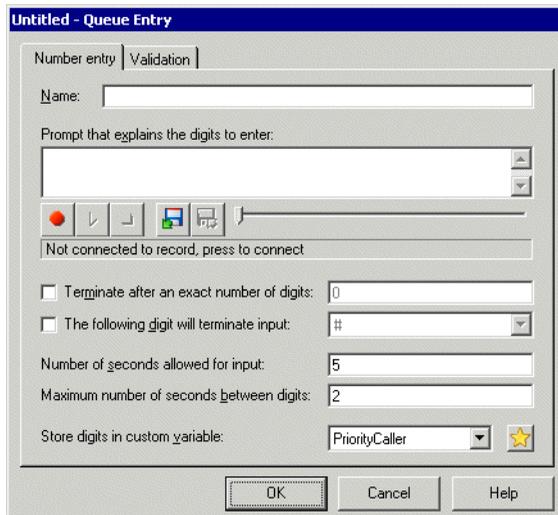
- As a condition for a Hold prompt to play. See “Using custom data variables to play conditional Hold prompts” on page 2-39.
- As a column displayed in agents’ Call Monitors.

You can create as many data entry prompts as you want. They play in the order that they are listed on the Entry tab of the Queue dialog box. To move a data entry prompt up or down in the list, click the arrows to the right of the list.



### To prompt the caller to enter data

1. Click the Caller Entry tab in the Queue dialog box.
2. Click **Add**. The Queue Entry dialog box opens.



3. In **Name**, enter a name for the data that you are collecting.
4. Under **Prompt that explains the digits to enter**, type the text of the prompt or a description of it.

5. Use the audio controls to record the prompt that tells the caller to enter data. See *Administering TeleVantage* for instructions. For example, “Please enter your customer ID number followed by the pound key. If you don’t have a customer ID number, just press the pound key.”

**Note:** While callers are entering data, they can press \* and they will return to the previous data entry prompt. If callers press \* during the first data entry prompt, they can choose to end the call or stay on the line. If they choose to stay on the line, they are transferred either to the auto attendant (if they started there) or to the queue operator (if they dialed the queue directly). You can optionally describe these options in your data entry prompts.

6. Specify the following optional information about the data entry:
  - **Terminate after an exact number of digits.** If the data must be an exact length, check this box and enter the number of digits.
  - **The following digit will terminate input.** To speed up data entry, check this box and select a key for callers to press when they have finished entering digits. The terminate key is usually #. Be sure to mention this key in the prompt that you record. If you do not specify a terminate key, TeleVantage assumes the data is complete whenever the caller exceeds the **Maximum number of seconds between digits** setting.
  - **Number of seconds allowed for input.** Specify the length of time within which the caller can enter the data. If the caller does not complete data entry within that time, TeleVantage attempts to validate the data. If you are not validating the data (see “Validating caller data” on page 2-43), the call proceeds into the queue without any data.
  - **Maximum number of seconds between digits.** Specify how long callers can pause while entering digits. If the caller exceeds that pause, TeleVantage assumes that the data entry is complete.
7. In the **Store digits in custom variable** dropdown list, select the custom variable that will hold the data entered by callers. To create a new custom variable, click ★ next to the list (for instructions see “Creating a custom data variable” on page 2-55).
8. Click **OK** to return to the Entry tab in the Queue dialog box.
9. Click **OK** to save the queue as defined so far or go to the next section.

## ***Validating caller data***

The queue can validate the data or accept it exactly as the caller enters it. When you validate data, you are checking it for accuracy.

## To set up validation for data entry

1. Click the Caller Entry tab in the Queue dialog box.
2. Click **Add**. The Queue Entry dialog box opens. Click the Validation tab in the Queue Entry dialog box.

The screenshot shows the 'Queue Entry' dialog box with the 'Validation' tab selected. The dialog has two tabs: 'Number entry' and 'Validation'. Under the 'Validation' tab, there are several options and input fields:

- Ask the caller to confirm the digits entered
- Minimum number of digits:
- Maximum number of retries:
- Validate digits according to range
  - The minimum value allowed is:
  - The maximum value allowed is:
- After the maximum number of retries:
  - Continue
  - Hang up
  - Transfer to:

At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

3. In **Minimum number of digits**, enter a number. The length of the data must be equal to or greater than the number that will be validated. If the length of the data is less than the number in this field, the caller will be prompted to enter the data again.
4. In **Maximum number of retries**, enter the maximum number of times the caller can reject an entry and enter it again. For what happens to callers who fail the maximum number of retries, see step 6.
5. Choose either or both of the following methods of validating data:
  - Check **Ask the caller to confirm the digits entered** to have TeleVantage repeat the caller's entry back to them and prompt the caller to confirm that the number is correct. If the entry is incorrect, the caller can enter it again.
  - Check **Validate data according to range** to compare the entry made to an acceptable range of values. To use this method, enter the minimum acceptable value in **The minimum value allowed is**, and enter the maximum acceptable value in **The maximum value allowed is**. If the entry falls within the range, it is validated. If it falls outside the range, the caller is prompted to enter it again.
6. Choose how to handle callers whose data is not validated after a specific number of attempts. Under **After the maximum number of retries**, choose one of the following options:
  - **Continue**. Continue with the next data entry prompt. If this is the last data entry prompt, place the caller on the queue without any data associated with the call.
  - **Hangup**. Terminate the call.

- **Transfer to.** Select the destination to which the caller is transferred.
7. Click **OK** to return to the Entry tab in the Queue dialog box.
  8. Click **OK** to save the queue as defined so far or go to the next section.

**Note:** If you need more validation or data entry options, use the TeleVantage Call Classifier, which can prompt callers for any numeric information, validate it based on any ODBC database, then send the resulting profile information to the agent. See “Using the Call Classifier” on page 2-53.

## Managing the queue’s security

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Use the options on the Security tab of the Queue dialog box to protect the queue’s account and your TeleVantage system from unauthorized access and toll fraud. For more information about toll fraud, see Appendix C of *Administering TeleVantage*.

The following security options are available:

- **Password never expires.** If checked, the queue’s password does not expire, although you can always manually change it or force it to be changed. If unchecked, the password may expire as determined by your system settings (see *Administering TeleVantage*).  
**Note:** Checking this field is a security risk, as long-standing passwords are easier to guess.
- **Password must be changed on next logon.** If checked, the system requires the password to be changed the next time someone logs on to the queue’s account, using any workstation application or the telephone commands.
- **Queue is locked out.** If checked, the queue’s account cannot log on to the system, even with the correct username and password. Depending on your system settings, lockout can occur automatically if someone repeatedly tried and failed to log on to the account. Uncheck the field to unlock the account and permit normal logging on.

## Managing the queue's audio recordings

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In addition to Hold prompts (see “Creating Hold prompts” on page 2-36), you can configure and record the following audio messages for the queue:

- **Telephone prompts.** You can choose the language in which the system's telephone prompts play for callers to the queue.
- **Voice Title.** A queue can have a voice title like a user, a recording of its name that TeleVantage plays to callers during transfers and other operations.
- **Welcome prompt.** A Welcome prompt is a message played once to all callers when they first reach the queue.
- **Greetings.** You can record greetings for the queue's voice mailbox.

### ***Choosing the language for the queue's telephone prompts***

1. Click the Audio tab of the Queue dialog box.
2. From the **Telephone prompts** dropdown list, choose the language in which the telephone prompts play to callers to the queue. The list shows the languages that you have installed with TeleVantage. For information about installing new languages, see *Installing TeleVantage*.
3. Click **OK** to save the queue as defined so far or go to the next section.

### ***Recording a voice title for the queue***

1. Click the Audio \ Voice Title tab of the Queue dialog box.
2. Use the audio controls to record the voice title. See *Administering TeleVantage* for instructions. The voice title should be a short recording of only the queue's name.
3. Click **OK** to save the queue as defined so far or go to the next section.

### ***Creating a Welcome prompt for the queue***

Callers hear the Welcome prompt once when they reach the queue. It might say, “Thank you for calling Julep technical support. Please hold. The next available agent will be with you shortly.”

#### **To record a Welcome prompt for the queue**

1. Click the Audio \ Welcome Prompt tab of the Queue dialog box.
2. Type the text of the prompt or a description of it.
3. Record the Welcome prompt using the audio controls. See *Administering TeleVantage* for instructions.
4. Click **OK** to save the queue as you have defined it so far or go to the next section.

## Warning callers that their calls may be recorded

In some U.S. states it is illegal to record a call without notifying the caller. TeleVantage provides a professionally-recorded prompt, *MayBeMonitored.vox*, that you can import as a Welcome prompt. It says, “Your call may be monitored or recorded.” By default the prompt is in the following location:

```
C:\Program Files\TeleVantage Server\files\EN00\MayBeMonitored.Vox
```

You can also include a beep on calls that are being recorded. See Chapter 4 of *Administering TeleVantage*.

## Creating voicemail greetings for the queue

You can create and store as many different voicemail greetings as you want, and you can easily change the active greeting, which is the one played to callers who reach the queue’s voicemail. The greetings appear on the Audio \ Greetings tab of the Queue dialog box. The active greeting appears in bold.

## Enabling callers to leave a callback phone number

While leaving voicemail, callers can press 7 and then enter a phone number at which an agent can call them back. If callers use this feature, agents can call them back quickly by selecting the message in any Voice Messages folder and choosing Speed Dial. This method of getting callback numbers is often a better alternative to asking callers to record their own phone numbers on the voice message.

If you want callers to enter a callback phone number, record instructions for how to do so in your voicemail greeting. For example, your greeting might say, “We’re sorry no one was available to take your call. To leave a message and have an agent call you back, press 7.” Callers can press 7 during your greeting, while recording their message, or after recording their message.

**Note:** Entering a callback number while recording the message ends the message. However, the caller can then add more to the message by pressing 4.

## To create a voicemail greeting

1. Click the Audio \ Greetings tab of the Queue dialog box.
2. Click **Add**. The Greeting dialog box opens.



3. Under **Name**, enter a name for the greeting.
4. Under **Contents**, type the text of the greeting or a description of it.
5. Record the greeting using the audio controls. See *Administering TeleVantage* for instructions.
6. Click **OK** to save the greeting, which will now appear in the list on the Audio \ Greetings tab.
7. To make this greeting the active greeting, click **Set Active** on the Audio \ Greetings tab.
8. Click **OK** to save the queue as you have defined it so far or go to the next section.

### Setting a maximum size of greetings

In **Maximum size of greetings (minutes)** on the Audio \ Greetings tab, enter the maximum number (in minutes) for all voicemail greetings for the queue.

## Automatically recording queue calls

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You can have TeleVantage automatically record a queue's calls on a periodic basis. The recorded calls appear as new voice messages in the voice mailbox that you select. The system records both inbound and outbound queue calls.

To automatically record all calls in the TeleVantage system, queue or otherwise, use system call recording as described in *Administering TeleVantage*.

### Notes

- In some U.S. states, it is illegal to record a call without notifying the caller. If you are using TeleVantage in such a state, your queue's Welcome prompt should inform callers that their calls may be recorded. See "Warning callers that their calls may be recorded" on page 2-47.
- You can include a repeating beep on queue call recordings to indicate to the agent and caller that the call is being recorded. See Chapter 4 of *Administering TeleVantage*.
- If you expect to keep thousands of voice messages in the queue's mailbox you should configure TeleVantage to automatically archive the recordings in the queue mailbox, and use the Archived Recording Browser instead of ViewPoint to manage and listen to the recordings. See Chapter 4 of *Administering TeleVantage* for instructions on archiving recordings, and Appendix E of *Using TeleVantage* for instructions on using the Archived Recording Browser.

### To record a queue's calls

1. Click the Recording tab of the Queue dialog box.
2. Check **Automatically record queue calls**.

3. In **Record 1 call out of every**, enter a number. Enter 1 to record every call, 2 to record every other call, 3 to record every third call, and so on.

**Note:** A call is considered a “queue call” for counting purposes only if the call was placed or answered by an agent in that queue. Calls transferred into that queue, for example, are not counted.

4. From the **Recording direction** dropdown list, select whether to record inbound calls only, outbound calls only, or both. Selecting both means that you get one recording per *n* calls regardless of the calls’ direction.
5. From the **Send queue call recordings to** dropdown list, select the mailbox that will receive the call recordings as new voice messages.
6. From the **When mailbox is full** dropdown list, select what happens if the destination mailbox is full when TeleVantage attempts to store a new recorded message there:
  - **Discard new call recording.** TeleVantage deletes the new call recording instead of storing it.
  - **Delete oldest call recording.** TeleVantage deletes the oldest call recording in the mailbox to make room for the new recording. Only call recordings can be deleted by this method. Voice messages are never deleted this way.
7. Click **OK** to save the queue as you have defined it so far or go to the next section.

You can also automatically record an individual agent’s calls. See “Automatically recording an agent’s calls” on page 2-13.

## Stopping recording for calls transferred out of the queue

By default, when the queue is set to record calls, incoming queue calls that are then transferred out of the queue continue to be recorded. You can change this behavior so that recording stops as soon as the call leaves the queue.

### To stop recording calls when they leave the queue

1. Add the following new (DWORD) registry key:  
HKLM\Software\Artisoft\TeleVantage\Server\Settings\6E23WK
2. Set the value of this key to 1.
3. Restart the TeleVantage Server.

## Collecting queue statistics

---

TeleVantage call centers record a wide variety of statistics that measure caller experience and agent effectiveness. Agents with the required permission can view real-time queue statistics by using ViewPoint's Queue Monitor folder. See "Monitoring queue statistics" on page 6-3.

In the TeleVantage Administrator, you can set the following options for how statistics are displayed:

- The statistics period
- Shifts

Both are used for display purposes only, to compare previous with current performance. The Queue Monitor displays statistics for the previous period and current period, and for the previous shift and current shift.

### *Defining the statistics period*

Click the Statistics tab of the Queue dialog box and use the **Statistics period** dropdown list to select how often the statistics period changes. The statistics period defines a length of time that you use to compare performance throughout the day. For example, if you set the statistics period to one hour, the Queue Monitor displays totals for the previous hour and the current hour.

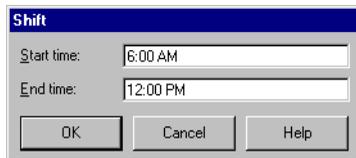
### *Configuring shifts*

ViewPoint shows agent statistics by shift. It shows queue statistics for the current shift and the previous shift. These shifts are arbitrary divisions of the workday that you define for the sole purpose of grouping statistics for display. For example, you can break the workday into a morning shift and an afternoon shift. During the afternoon you can then view the statistics for the ongoing afternoon shift and compare them to the statistics for the morning shift.

Defining shifts is unrelated to scheduling agent work periods, which is something you do outside of TeleVantage. It can be helpful to define your shifts that govern statistics display so that they match your company's actual work schedules, but it is not required.

#### **To break the workday into shifts for statistics display**

1. Click the Statistics \ Shifts tab of the Queue dialog box.
2. Click **Add**. The Shift dialog box opens.



3. Enter the beginning time and end time of the shift in **Start time** and **End time**.

**Note:** The duration of a shift must be greater than the statistics period of the queue.

4. Click **OK**.
5. Repeat to add as many shifts per day as you want.
6. When you are done adding shifts, click **OK** to close the Queue dialog box.

**Note:** It is recommended that you configure one shift to begin on the same minute that another one leaves off, for example a 9:00 AM - 12:00 PM shift followed by a 12:00 PM - 5:00 PM shift. If you leave a gap between shifts, calls that begin and end in the gap will not be included in the Queue Monitor totals.

## Setting up a menu choice for a queue ---

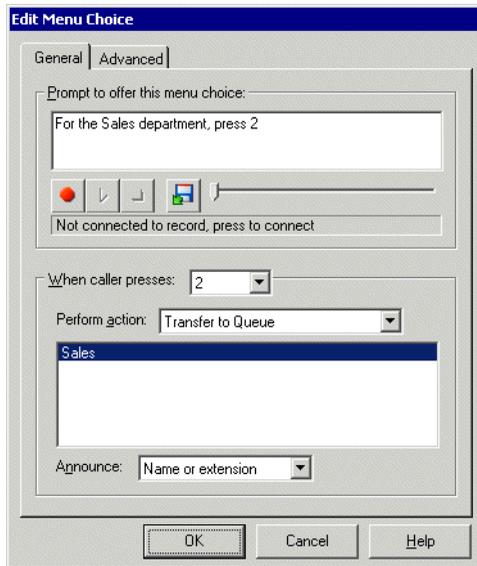
When your queue is ready to be used by the public, you can create a menu choice that transfers callers to the queue from your company's main auto attendant. For example, your menu choice could be, "For sales, press 2."

You can also give the queue a full phone number, so that callers can dial it directly. To do so, give it a DID number on the General tab (see "Entering general information about a queue" on page 2-7). Your phone lines must support DID to use this option. You can also direct a trunk line to the queue (see *Administering TeleVantage*).

### To set up a menu choice in an auto attendant for a queue

1. In the Administrator, open the Auto Attendants view and double-click the auto attendant that you want to use to offer the queue to callers. The Auto Attendant dialog box opens.  
  
If you have multiple auto attendants, perform these steps for each one on which you want to offer callers the choice of transferring to the queue.
2. Click the Menu Choices tab.

3. Click **Add**. The Edit Menu Choice dialog box opens.



4. Record the prompt that you want callers to hear as part of your main menu, for example, “For the Sales department, press 2.”
5. From the **When Caller Presses** dropdown list, select the key that you want callers to press to be transferred to the queue.
6. Do one of the following in the **Perform Action** dropdown list:
  - Select **Transfer to Queue** and select the queue to which you want to transfer callers.
  - If you are using a utility user to transfer calls to the queue, select **Transfer to user** and select the utility user. See Chapter 4 for instructions on using a utility user.
7. Click **OK** in the Edit Menu Choice dialog box.
8. Click **OK** in the Auto Attendant dialog box.

## Using IVR Plug-ins with a call center queue

---

An *IVR Plug-in* is a custom application that acts as an extension on the TeleVantage system. You can use an IVR Plug-in to answer incoming calls to a call center queue. You also can capture caller information such as customer ID, address, and so forth by using an IVR Plug-in. You can then pass that information to the queue in the form of custom variables. The queue can use that information in the following ways:

- The information can be presented to agents in their Call Monitor folders.
- You can pass call priority to the queue. See “Giving some calls higher priority” on page 2-23.
- You can create conditional Hold prompts that play based on the information. See “Using custom data variables to play conditional Hold prompts” on page 2-39.

### ***Passing information from an IVR Plug-in to a queue***

TeleVantage passes information from an IVR Plug-in to a queue by means of custom variables. As long as the same variable exists in both the IVR Plug-in and the TeleVantage queue, the information is automatically passed to the queue from the IVR Plug-in.

#### **To pass information from an IVR Plug-in to a queue**

1. Create an IVR Plug-in that answers calls to the queue and then passes them to the queue.  
  
For instructions, see *TeleVantage Developer's Guide*, available as a PDF file, TvSDK.pdf. The default location of the file is C:\Program Files\TeleVantage SDK\TvSDK.pdf on the TeleVantage Server computer.
2. Create a custom variable in the IVR Plug-in and set its value using the SetCustomPartyData or GetCustomPartyData methods. Make a note of the custom variable's name.  
  
For instructions, see *TeleVantage Developer's Guide*.
3. Create a custom variable in the queue that has the same name as the variable in the IVR Plug-in. When you type the name, match uppercase and lowercase letters.  
  
For instructions, see “Creating a custom data variable” in the next section.

### ***Using the Call Classifier***

The TeleVantage Call Classifier is a powerful TeleVantage Add-on Solution that can greatly improve the productivity of call centers. It connects with TeleVantage as an IVR Plug-in and can identify callers, intelligently route calls, and present call center agents with scripts and related caller information before they answer the phone.

To display detailed caller information on agents' screens, the Call Classifier can query any ODBC-compliant database (for example, Microsoft Access, SQL Server, Excel, Oracle, etc.) or the ThinkDirectMarketing DigitalDATA service of more than 120 million North American businesses and residences. In addition the Call Classifier can verify caller data and route callers to the optimal agent using custom business rules.

For more information about the Call Classifier, see [www.artisoft.com](http://www.artisoft.com) or contact your TeleVantage provider.

## Managing custom data variables

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Custom data variables let you attach any kind of information to incoming calls. Each custom data variable represents a different field of information—for example, caller priority—and the value of that variable can be set individually for each incoming call—for example, each call can have a different priority value.

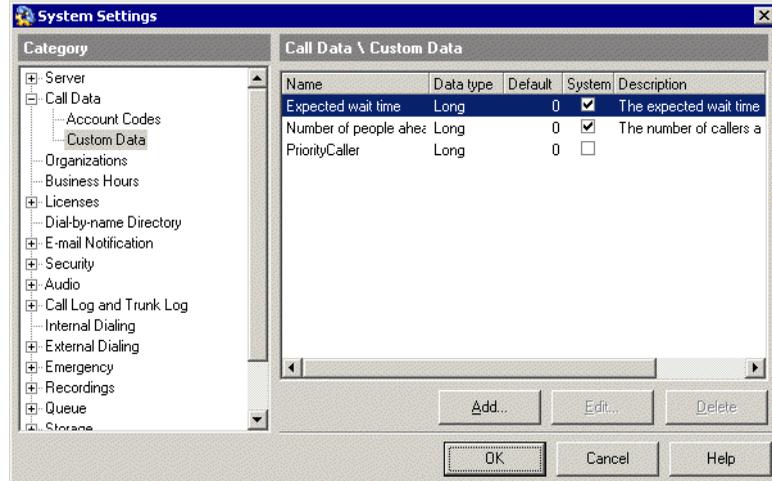
You can use custom data variables with a call center queue in the following ways:

- To determine whether a Hold prompt plays. See “Creating conditional Hold prompts” on page 2-38.
- To give high-priority callers less wait time. See “Giving some calls higher priority” on page 2-23.
- To prompt callers to enter information that is then displayed to agents. See “Setting up caller data entry” on page 2-42.

## Creating a custom data variable

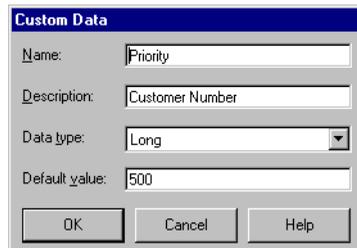
Use the following procedure to create a custom data variable for any of the above uses:

1. Choose **Tools > System Settings**. The System Settings dialog box opens.
2. Choose the Call Data \ Custom Data tab. The tab shows any existing variables.



**Note:** TeleVantage comes with two pre-defined custom data variables, Expected wait time and Number of people ahead. For instructions on using them with conditional Hold prompts, see “Creating conditional Hold prompts” on page 2-38.

3. Click **Add**. The Custom Data dialog box opens.



4. Enter the following information:
  - **Name.** Enter the variable’s name. If you are using a variable that is passed from an IVR Plug-in, be sure to spell the variable name correctly. Upper and lower case letters are important.
  - **Description.** Enter a description that helps you remember the purpose of the variable.

- **Data type.** Choose one of the following:
  - **Long.** The variable holds integer numbers only.
  - **Double.** The variable can hold integer numbers or decimal point numbers.
  - **Boolean.** The variable can hold the numbers 0 or 1 only.
  - **String.** The variable holds text.

**Note:** If you are creating a custom data variable to set caller priority, select type Long.

- **Default value.** The variable will be set to the value you enter for every caller that enters the queue, if it has not received a value elsewhere.
5. Click **OK**. The variable appears in the list.
  6. Click **OK** to close the System Settings dialog box.

# **USING SKILLS-BASED AND CUSTOM ROUTING**

## **CHAPTER CONTENTS**

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## About skills-based and custom routing

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Skills-based and custom routing let you go beyond the predefined algorithms for distributing calls to agents. You can define your own system for how a queue chooses an agent for a given call, based on any combination of the following:

- **Skills.** Calls have varying skill requirements attached and are routed to agents with the matching skills. For example, Spanish callers within a queue are routed to Spanish-speaking agents. Skills are a powerful way to maximize your call center resources by making sure calls go to the agents who are best equipped to handle them.
- **Cost.** You can factor the cost of an agent into call distribution. For example, you may want your most expensive agents to take fewer calls, freeing them to work on other tasks. Alternatively, you may want your most expensive agents to take the most calls, since they have the most expertise.
- **Other agent attributes.** You can define custom attributes for agents that affect call distribution. For example, you can have an attribute that represents “Time with company” so that your newest agents take fewer calls, giving them space to learn the workflow.
- **Predefined distribution algorithms.** You can blend your custom distribution choices with the predefined algorithms. For example, you can use the Least talk time algorithm while factoring in Cost.

### *Do I need to use skills-based or custom routing?*

The predefined distribution algorithms are easier to use and in many cases will be sufficient for your call center needs. You should use skills-based or custom routing only if you want to distribute calls based on the following characteristics:

- Two or more caller requirements within a single queue. For example, Spanish and English calls are all sent to one queue, where your Spanish-speaking agents are mixed in with your English-speaking agents. If you use different queues, you do not need to use skills-based routing because each queue can be staffed by the appropriately skilled agents, and you can use an auto attendant to send the caller to the right queue for that skill.
- Two or more relevant agent skills or attributes within a single queue. For example, some callers require either Spanish-speaking agents, or experts in South American travel, or both. If only one skill was relevant—for example, South American travel—you could create a separate queue for South American travel that uses the top-down distribution algorithm to reflect agents’ skill.

## Overview of skills-based routing

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The bulk of this chapter describes defining and using agent skills to route calls.

### ***How skills-based routing works***

When a call arrives, you can attach skill requirements to it at the auto-attendant or an IVR Plug-in before sending the call to the queue. The queue then tries to route the call to the available agent with the best matching skill. You define to what degree skill is emphasized in the routing algorithm—you can have the call wait indefinitely for an agent with the right skill, or be eventually routed to a less-skilled or unskilled agent.

You can attach multiple skill requirements to calls, and agents can have multiple skills at different values. You define how important each skill is in routing calls.

**Example:** Your queue routes calls based on two skills: Spanish and Product Expertise. Your auto attendant has menu prompts separating Spanish from English callers; calls that choose the Spanish prompt have a Spanish skill requirement attached to them. Also, all calls start with a high Product Expertise requirement. You have defined that calls requiring Spanish can never be routed to an agent without the Spanish skill. However, the longer a call waits, the lower the Product Expertise requirement becomes, so that after 15 minutes of waiting a call can be sent to agents with the lowest Product Expertise skill.

### ***Setting up skills-based routing***

Setting up skills-based routing involves the following procedures:

1. Define one or more skills. See the next section.
2. Assign skills to users. See “Assigning skills and attributes to users” on page 3-4.
3. Set up an auto attendant to define skill requirements for incoming calls. See “Adding skill requirements to calls” on page 3-6.  
**Note:** Skill requirements can also be defined by IVR Plug-ins.
4. Select which skills are relevant to the queue. See “Selecting and weighting relevant skills for a queue” on page 3-7.
5. Configure the queue to use skills-based routing based on settings you define. See “Setting up skills-based routing for a queue” on page 3-8.

### ***Tools to prepare for and analyze skills-based routing***

TeleVantage provides an Excel spreadsheet that you can use to quickly see the impact of using different skills and weights, and calculate what would happen to calls in various scenarios. See “Experimenting with agent and call scoring” on page 3-15 for details.

TeleVantage’s easy-to-read queue logs show the routing and scoring decisions queues make while they are handling calls. See Appendix B.

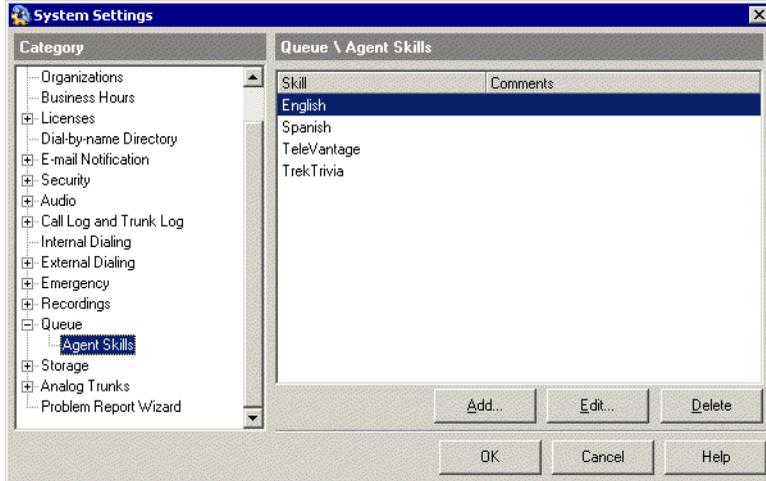
## Defining skills

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As the first step to using skills-based routing you must define a set of skills, that you can then assign to users, calls, and queues.

### To define skills

1. Choose **Tools > System Settings**, and go to the Queue \ Agents Skills tab.



2. Click **Add**. The Agent Skill dialog box opens.
3. Under **Name**, enter the name of the skill. Spaces and colons (:) are not legal characters. Letters, numbers, and other characters are legal as long as a letter is the first character. Skill names are not case sensitive, so you cannot use the same skill name twice with different case.
4. If necessary, enter any **Comments** to help identify the skill.
5. Click **OK**.  
**Note:** You cannot delete a skill from that list if that skill is assigned to a user or queue.
6. When you are done entering skills, click **OK** to close the System Settings dialog box.

## Assigning skills and attributes to users

---

Skills can be defined at the queue level or the user level. When a user has a skill, it overrides the queue's default value for that skill. If a queue uses a skill that the agent does not have, the agent is treated as though he or she had the skill at the queue's default value. For example, if a queue uses Spanish with a default value of 50, then an agent without the Spanish skill is treated as though he or she had a Spanish skill of 50. To represent an agent with no skill in Spanish, you should add the Spanish skill to the user with a value of 0.

You can also assign attributes other than skills to users, for example the cost of the agent, and have them factor into a custom routing algorithm.

## The skill value scale

The scale for skills and attributes is 0-100, where 0 represents no skill and 100 represents the highest possible skill. This scale balances skills with other factors if you use custom routing (see “Using custom agent scoring” on page 3-12).

## Assigning skills to a user

1. Double-click the user in the User’s view to open the User dialog box, and go to the Queue \ Skills tab.
2. Click **Add**. The Queue Skill dialog box opens.



3. Select the skill from the **Skill** dropdown list. To add another skill at the system level, click the star icon, and see the previous section.
4. Under **Proficiency**, enter the user’s skill value (0-100).
5. Click **OK**.

## Assigning attributes to users

You can assign users the following non-skill attributes for call routing purposes:

- **Cost.** A measure of how expensive an agent is to you. For example, you may want your most expensive agents to take fewer calls, freeing them to work on other tasks. Alternatively, you may want your most expensive agents to take the most calls, since they have the most expertise.
- **Custom attributes.** You can define up to three custom attributes for agents and have them affect call distribution. For example, you can define an attribute that represents “Time with company” so that your newest agents take fewer calls, giving them space to learn the workflow.

### To assign attributes to users

1. Double-click the user in the User’s view to open the User dialog box, and go to the Queue \ Attributes tab.
2. To define the user’s level in **Cost** and any of the **Custom** attributes, enter a value (0-100).
3. Click **OK**.

For the queue to route calls based on an attribute, you must configure the queue to use it in agent scoring. See “Setting up custom agent scoring” on page 3-13.

## Adding skill requirements to calls

---

This section describes configuring an auto attendant to add skill requirements to incoming calls. An auto attendant can attach skill requirements to a call in the following ways:

- To all callers who enter the auto attendant.
- To callers who select a particular menu choice.

You can also attach skill requirements to calls using the following methods other than auto attendants:

- IVR Plug-ins. See *Installing TeleVantage*.
- The TeleVantage Call Classifier add-on. This requires Call Classifier version 3.5 or higher.

### To have an auto attendant attach skill requirements to calls

1. Edit the auto attendant by double-clicking it in the Auto Attendants view to open the Auto Attendant dialog box.
2. Do one of the following:
  - To attach skill requirements to all callers who enter the auto attendant, click the Advanced tab of the Auto Attendant dialog box.
  - To attach skill requirements based on a particular menu choice, go to the Menu Choices tab, **Add** or **Edit** that menu choice, and click the Advanced tab of the Menu Choice dialog box.
3. Click **Add**. The Custom Data / Skill Requirement dialog box opens.



4. Click **Agent skill**, and select the skill that you want to attach as a requirement to the call. You can click the star icon to create a new skill at the system level (see “Defining skills” on page 3-4).
5. Under **Minimum value** and **Maximum value**, enter the range (from 0 to 100) that an agent’s skill value must be within to qualify for taking the call.

**Note:** You can set up skills-based routing to ignore **Maximum value**, so that no agent

is considered “overqualified” for a call. You can also set up skills-based routing to gradually relax the minimum requirements as the caller’s wait increases. See “Defining how skills are used in routing” on page 3-9.

6. Click **OK**.
7. When you are done adding skill requirements, click **OK** to close all dialog boxes and return to the Auto Attendants view.

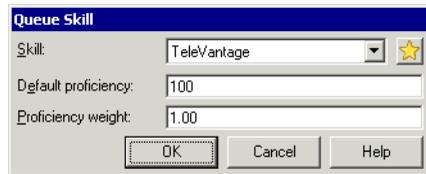
For complete instructions on setting up and using auto attendants, see Chapter 10 of *Administering TeleVantage*.

## Selecting and weighting relevant skills for a queue

For each queue that will use skills-based routing, you must select which skills are relevant to the queue, and define the relative weight of those skills in selecting agents for a call. Skills in your system that are not assigned to the queue play no part in routing the queue’s calls, even if calls require these skills and agents have them.

### To select and weight a queue’s skills

1. Edit the queue by double-clicking it in the Queues view to open the Queue dialog box, and go to the Skills tab.
2. Click **Add**. The Queue Skill dialog box opens.



3. Select the skill from the **Skill** dropdown list. To add another skill at the system level, click the star icon, and see “Defining skills” on page 3-4.
4. Under **Default proficiency**, enter a default value for this skill in this queue. Agents without the skill will be treated as though they had the skill at this value. Agents with this skill override the default.

The best value scale is 0-100, where 0 represents no skill and 100 represents the highest possible skill. This scale balances skills with other factors if you use custom routing (see “Using custom agent scoring” on page 3-12).

5. Under **Proficiency weight**, enter a number to define how important this skill is relative to other skills and factors when routing calls to matching agents in this queue. The agent’s skill value is multiplied by this number and added to the agent’s total score (see “The agent scoring formula” on page 3-14).

**Example:** By giving Spanish a weight of 1 and Expertise a weight of 5, you make Expertise five times as valuable when selecting an agent for a call. An agent with Spanish 50 and Expertise 20 will get 50 points for Spanish and 100 points (20 \* 5) for

Expertise.

Weight can have a range from -1000 to 1000. With a negative weight, the agent's skill is multiplied by the weight and then subtracted from the agent's score, meaning aptitude makes the agent less eligible to receive matching calls.

6. Click **OK**.
7. When you are done adding the relevant skills for the queue, click **OK** to close the Queue dialog box.

## Setting up skills-based routing for a queue

---

Before setting up a queue for skills-based routing, you should have already defined skills and assigned them to the queue and to the users who will be agents in it. See the previous sections in this chapter.

To begin setting up a queue for skills-based routing, edit the queue by double-clicking it in the Queues view to open the Queue dialog box. Then perform the following procedures as needed:

- Choose skills-based or custom routing as the distribution algorithm. See the next section.
- Define how skills are used in routing. See page 3-9.

### Choosing skills-based or custom routing

To select skills-based or custom routing, click the Distribution \ Agent Scoring tab.

Agent attributes	Use	Weight
Proficiency in call's skills	<input checked="" type="checkbox"/>	1,000
⊕ Attributes		
⊕ Standard agent scoring algorithms		

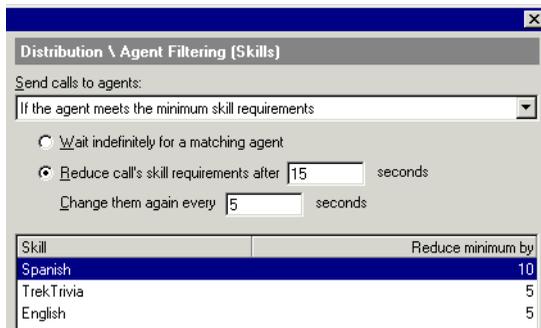
The agent's average proficiency in the skills required by the call. The queue configuration may give more weight to some skills. This value will be between 0 and 100.

Choose the following settings:

- Under **Agent scoring algorithm** select “Skills-based or custom routing.”
- In the **Determine which agent...** table, check the **Use** column for **Proficiency in call skills**. For more information on **Weight** and the rest of this table, see “Using custom agent scoring” on page 3-12.

## Defining how skills are used in routing

To define how the system uses each skill to filter out unqualified agents, click the Distribution \ Agent Filtering tab.



Skill	Reduce minimum by
Spanish	10
Trek Trivia	5
English	5

## Using skill minimum and maximum requirements

A skill requirement on a call includes a minimum and maximum required value (see “Adding skill requirements to calls” on page 3-6). You can choose whether the queue filters out agents who are “underqualified” only (they fail to meet the minimum skill requirement), or whether it also filters out “overqualified” agents (they exceed the maximum skill requirement).

Under **Send calls to agents**, select one of the following:

- **If the agent meets the minimum skill requirements.** Calls will be routed only to agents whose skill values meet or exceed the calls’ minimum proficiency requirements for those skills. Calls’ maximum proficiency requirements are ignored, so no agents are considered “overqualified” for a call.
- **If the agent’s skills are between the minimum and maximum requirements.** Calls will be routed only to agents whose skill values are within the range of the calls’ minimum and maximum proficiency requirements for those skills.

Selecting **Ignoring the call’s skill requirements** disables the filtering step. If you select this, calls are distributed to agents whether or not the agents meet the call’s skill requirements.

Routing is based entirely on non-skill factors, such as the weight of agents’ attributes and the queue’s standard agent scoring algorithms (see “Using custom agent scoring” on page 3-12).

## Adjusting skill requirements over time

You can define whether minimum skill requirements get reduced as the caller waits, so that eventually the call may be sent to a less-skilled or unskilled agent. If you are using maximum skill requirements (see the previous section), you can have those increase over time, allowing more highly-skilled agents to take the call. Choose one of the following:

- **Wait indefinitely for a matching agent.** Calls with skill requirements wait indefinitely until an appropriately skilled agent is available. They are never sent to agents who do not meet those requirements.

- **Reduce call's skill requirements after \_\_ seconds.** One or more skill requirements get adjusted as callers wait. You determine which skill requirements get adjusted and how quickly using the following options:
  - **Reduce call's skill requirements after \_\_ seconds.** Enter a time (in seconds) to define an initial threshold of waiting, during which the call's skill requirements remain intact. As soon as the initial threshold is passed, skill requirements are adjusted once.
  - **Change them again every \_\_ seconds.** Enter an interval (in seconds) to determine how often the skill requirements are adjusted, after the first adjustment following the initial waiting threshold.
  - In the table, define by how much each skill requirement is adjusted whenever the system makes an adjustment pass. You can have the system adjust different skill requirements at different rates. For each skill, click the **Reduce minimum by** column to enter a number by which the skill minimum will be reduced. If you are using skill maximums (see the previous section), then you can click the **Increase maximum by** column and enter a number by which the skill maximum will be increased.

Entering a value of 0 means that skill requirement is never adjusted, and the call waits indefinitely for an agent who has the required skill value. (Setting all skills to 0 is equivalent to selecting **Wait indefinitely for a matching agent** above).

### ***Redirecting calls when there are no agents with matching skills***

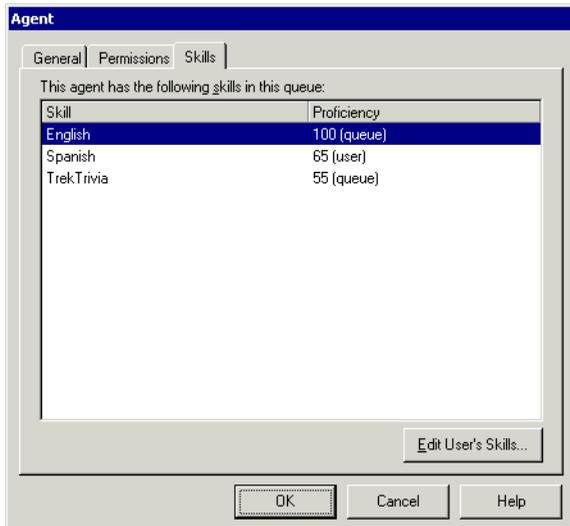
You can have the queue automatically redirect calls when there are no signed-in agents with skills that match the call's skill requirements. See "Redirecting calls when there are no matching skills" on page 2-34 for instructions.

**Note:** If you have set the queue to reduce calls' skill requirements over time (see the previous section), then calls are not redirected for lack of matching skills.

## Viewing an agent's skills within a queue

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To see an agent's skills within a queue, edit the agent (see "Adding agents to the queue" on page 2-11) and click the Skills tab.



The Skills tab lists all the agent's skills that are relevant within this queue. This user may have other skills, but they do not appear if they are not relevant to the queue. To view or edit a complete list of the user's skills, click **Edit User's Skills**, and see "Assigning skills and attributes to users" on page 3-4.

To change which skills are relevant to the queue, see "Selecting and weighting relevant skills for a queue" on page 3-7.

### The source of an agent's skill value

The **Proficiency** column displays the agent's ability in that skill. It also indicates whether the agent's skill value comes from his or her own native skill set at the user level ("user"), or the queue's default value for that skill ("queue"). A user's native skill value always overrides the queue default value. Queue default values are used only if the user does not have a skill that is relevant to the queue.

## Reducing wait time for calls with skill requirement matches

---

By default, calls are routed to agents in the order received, regardless of skill requirements. In fact, calls with skill requirements may wait longer, since they are waiting on a smaller pool of agents who have the required skills. You can counterbalance this by sending a call ahead in the queue when an appropriately skilled agent for that call becomes available. In essence, you are giving calls higher priority when their skill requirements are met by an available agent.

**Example:** Your queue uses the skills Spanish, Japan Travel, and China Travel. Only one agent has all three skills, so that by default a call requiring all three skills would have to wait in the queue for that one agent, while in the meantime the agent might be taking calls that could be handled by other agents. If you reduce wait time based on skill, then as soon as the matching agent became available, the call would jump ahead in the queue, increasing the efficiency of your queue.

### To reduce wait time for calls with skill requirement matches

1. Click the Distribution \ Call Scoring tab.
2. Check **Add the agent's average proficiency times \_\_ to the call's score**. Enter a number that determines how much a call moves ahead in the queue when one or more of its skill requirements find a matching available agent. When an agent with a matching skill becomes available, his or her skill value is multiplied by that number and added to the call's score. The higher the multiplier, the more matching calls are advanced in the queue.

In cases where the call has multiple skill requirements, the agent's applicable skill values are averaged, and that average value is multiplied by the number you enter.

3. Click **OK**.

Note that this setting applies only when comparing calls with skill requirements to calls with no skill requirements. In cases where different calls have different skill requirements, this setting is ignored, and skills change the call's score based only on their weight in the queue (see "Selecting and weighting relevant skills for a queue" on page 3-7).

## Using custom agent scoring

---

A queue uses agent scoring when a call arrives and several agents are available to take it, to determine which agent gets the call. For each incoming call with more than one agent available, the queue does the following:

1. Filters out those agents who are unable to take the call, for example, because they do not meet the call's skill requirements.
2. Calculates scores for the remaining agents.
3. Sends the call to the agent with the highest score.

**Note:** When two or more agents tie for the highest score, the call always goes to the longest idle of the tied agents.

When you use a predefined routing algorithm, agent scores are calculated from 0 to 100. For example, when using the "Top down" algorithm, the topmost agent gets a score of 100, the bottom agent gets a score of 0, and those in between get percentage scores representing how close they are to the top.

You can create your own customized agent scoring system that scores agents according to a variety of factors. You determine how much weight each factor carries in determining the agents' scores. With custom agent scoring you can do the following:

- **Blend two or more predefined algorithms.** For example, you could blend “Round robin” and “Longest idle,” so that the randomness of round-robin distribution doesn't leave an agent waiting too long.
- **Incorporate agents' skill values.** If a call requires Spanish and several agents with Spanish are available, the agent with the highest Spanish skill will get a higher score. You can weight individual skills differently, for example, a 20 skill in Kazakhstan Travel could increase the agent's score by more than a 100 skill in Spanish.
- **Incorporate agents' cost and custom attributes.** See “Assigning attributes to users” on page 3-5. After assigning cost and custom attributes to agents, you can weight them appropriately and use them in routing. For example, you could blend “Least talk time” with a negative “Cost,” so that your most expensive agents take fewer calls, freeing them for other tasks.

## Setting up custom agent scoring

To set up custom agent scoring, do the following:

1. Go to the Distribution \ Agent Scoring tab of the Queue dialog box.

Agent attributes	Use	Weight
Proficiency in call's skills	<input checked="" type="checkbox"/>	1.000
<b>Attributes</b>		
Cost	<input checked="" type="checkbox"/>	-1.000
Custom1	<input type="checkbox"/>	1.000
Custom2	<input type="checkbox"/>	1.000
Custom3	<input type="checkbox"/>	1.000
<b>Standard agent scoring algorithms</b>		
Time down rank	<input checked="" type="checkbox"/>	1.150

This term ranks agents by agent order. The first agent will have a rank of 100 and the last agent will have a rank of 0.

2. In the **Determine which agent gets the next call using the following agent attributes** table, expand the categories and do the following:
  - Check **Use** for each factor that you want to include in the agent's score. Note that checking “Proficiency in call's skills” makes all skills a factor. To adjust the weight of individual skills, see “Selecting and weighting relevant skills for a queue” on page 3-7.

- To change the weight of a factor, click the **Weight** column for that factor and enter the new number. The factor's value will be multiplied by that number and added to the agent's score. **Weight** has a range of -1000 to 1000. To choose a negative weight, meaning the value will be subtracted from the agent's score, use the minus sign to enter a negative number (for example, "-1"). Setting **Weight** to 0 is equivalent to unchecking **Use**, as it will always add 0 to an agent's score.

3. Click **OK**.

## The agent scoring formula

Agents are scored as follows:

**Required skill proficiency weighted average** (see below) \* skill factor weight

*plus* Cost \* cost weight

*plus* Custom 1 \* custom 1 weight

*plus* Custom 2 \* custom 2 weight

*plus* Custom 3 \* custom 3 weight

*plus* Idle time algorithm rank \* idle time weight

*plus* Talk time algorithm rank \* talk time weight

*plus* Number of calls algorithm rank \* number of calls weight

*plus* Top down algorithm order \* top down weight

*plus* Round robin algorithm order \* round robin weight

*equals* Agent score

The **Required skill proficiency weighted average** is as follows:

*plus* Required skill 1 proficiency \* that skill's proficiency weight

*plus* Required skill 2 proficiency \* that skill's proficiency weight

*plus* ... the same for each skill required by the interaction

*over* The sum of all proficiency weights

## Example

Agent 1			
Factor	Value	Weight	Score
Round robin	100	1	100
Longest Idle	33	2	66
Spanish	50	1	50
Kazakhstan	20	10	200
Cost (neg)	50	1	-50
<b>Total</b>			<b>366</b>

Agent 2			
Factor	Value	Weight	Score
Round robin	0	1	0
Longest Idle	100	2	200
Spanish	100	1	100
Kazakhstan	0	10	0
Cost (neg)	100	1	-100
<b>Total</b>			<b>200</b>

## Experimenting with agent and call scoring

TeleVantage provides a sample Microsoft Excel spreadsheet, SkillsWorksheet.xls, that you can use to experiment with different values for agent proficiencies, queue configurations, and call skill requirements. You can use it to see how much different factors affect agent and call scores.

The spreadsheet is installed on any PC with the TeleVantage Administrator in the following directory:

C:\Program Files\TeleVantage\Administrator\SkillsWorksheet.xls

After opening it in Excel, follow the on-screen instructions to input different agent scoring parameters, then view the results. Note that there are three tabs along the bottom of the spreadsheet, that you can use to fill out information on agent scoring and call scoring, and read summary data.

The screenshot shows the Microsoft Excel interface for the SkillsWorksheet.xls file. The spreadsheet is divided into several sections:

- Skills Worksheet Instructions:** A blue header section with instructions on how to use the spreadsheet for "what if" analysis. It includes three numbered steps: 1. Fill out Queue, Agent and call details in the yellow cells; 2. Cells in this color are calculated; 3. Values in green answer "which agent will get which call".
- Queue Skills Configuration:** A section for configuring skills. It includes a table for "Queue's default skill proficiency" and "Queue's proficiency weight for this skill".
- User Queue Attributes:** A table with columns for Cost, Custom1, Custom2, and Custom3.
- User Queue Skills:** A table with columns for Skill1, Skill2, Skill3, and Skill4.
- Queue Agent Skills:** A table with columns for Skill1 and Skill2.
- Queue Distribution Agent Scoring Attributes:** A table for defining agent scoring attributes, including Proficiency, Cost, Custom1, Custom2, Custom3, and Top down rank, with columns for Weight and Check d? (Yes/No).

The spreadsheet is currently showing the "Summary" tab, with "Agent Scoring Detail" and "Call Scoring Detail" tabs also visible at the bottom.

**Note:** The cells governing the worksheet formulas are locked. To unlock them for editing, choose **Tools > Protection > Protect/Unprotect Sheet** for each worksheet you want to edit. Be aware that editing or rearranging protected cells can cause the worksheet to malfunction.

## Viewing agent and call scoring decisions

You can use the queue logs to review and analyze the step-by-step logic used by the queue to route calls to your agents, including how it followed your custom agent scoring setup. See Appendix B, "Troubleshooting Queue Behavior."



# **USING CONTACTS AND CALL RULES WITH A QUEUE**

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Setting up a utility user for a queue. . . . . 4-3

Creating and sharing queue contacts . . . . . 4-4

Setting up call rules for a queue . . . . . 4-5

## About using contacts and call rules with a queue

---

This chapter describes how to use contacts and call rules with a queue. This procedure is optional—you can run a call center queue without using contacts and call rules.

For complete information about contacts and call rules, see *Using TeleVantage*.

To use contacts and call rules with a queue, you create a *utility user*, which is a dummy user whose routing list contains only a final action of transferring calls to the queue. The utility user does not represent a real person. Its function is to receive queue calls, identify the callers if possible, apply call rules when appropriate, and then transfer the calls to the queue for distribution to agents. Callers are not aware of the utility user.

### Benefits of using contacts with a queue

By setting up contacts for the queue that represent important customers or business contacts, you can enjoy the following benefits:

- TeleVantage can identify the queue's contacts when they call, so that calls appear in the agents' Call Monitors labelled with the contact's name.
- All agents in the queue can view the queue's contacts in their Shared Folders lists and place calls to them if necessary.
- After a call, an agent can update a contact's record with notes that all other agents can see.

### Benefits of applying call rules to queue calls

By applying call rules to incoming queue calls, you can handle individual calls based upon the caller and the time of day. For example, you can:

- Greet important customers with a special message before they enter the queue. You can record a Welcome message that gives callers a code for a special discount, and you can play the message only to favored customers.
- Change greetings and automatically transfer calls based upon the time of day. For example, instead of using the manual **Queue is closed** field (see "Closing the queue" on page 2-8), you can use your Business Hours schedule to have the queue automatically play a "We're closed" greeting and route calls to a voice mailbox when your business is closed. You can use different schedules for different queues.

You can use an auto attendant as well as a utility user to play greetings and transfer calls based on time of day (see *Administering TeleVantage*).

## Setting up a utility user for a queue

---

To set up a utility user for a queue, you must complete the following tasks, which are described in detail in the next two procedures in this section:

- Creating the utility user
- Editing the utility user's routing list

### *Creating the utility user*

Use the following procedure to create a utility user:

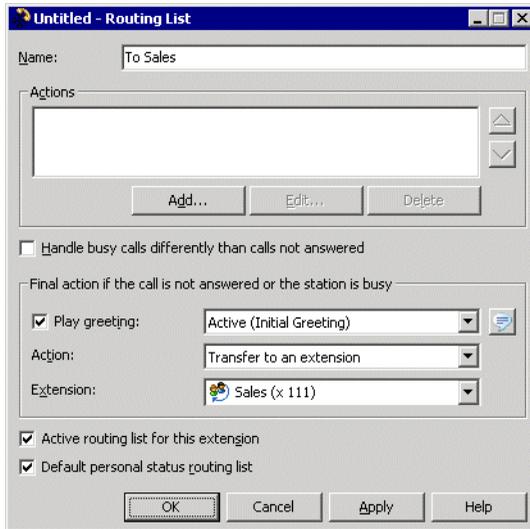
1. In the Administrator, choose **File > New > User**. The User dialog box opens.
2. Under **Type**, choose **User**.
3. Give the user a **Last Name** that identifies the queue for anyone transferring calls to it. For example, "Sales." Users who transfer calls to the queue will do so by transferring them to this user.
4. Give the user an **Extension** and **Password**.
5. Give the user a **Station ID** of 0. The utility user has no phone associated with it.
6. Click the Recordings tab.
7. Select **No Mailbox**. Voice messages for the queue will be stored in the queue's voice mailbox, so the utility user does not need one.
8. Under **Voice title**, use the audio controls to record the queue's name, for example, "Sales queue."
9. Click the Call Handling tab.
10. Under **Call handling**, uncheck all options.
11. Check **List in dial-by-name directory** if you want callers and users to be able to find the queue by name. If you do, you should uncheck this field for the queue itself, so users do not hear two entries for the queue.
12. Click **OK**.

### *Editing the utility user's routing list*

1. Log on to ViewPoint using the utility user's name and password.
2. Choose **File > New > Routing List**. The Routing List dialog box opens.
3. Give the Routing List a **Name** to help you identify it with the queue, such as "To Sales."
4. Select the action "Call Me Where I Am" and click **Delete**. The Actions list should be empty. If it is not, delete all other actions in the list.

5. Under **Final action if the call is not answered**, do the following:
  - Uncheck **Play greeting**.
  - Under **Action**, select **Transfer to an extension**.
  - Under **Extension**, select the queue to which you want the utility user to send calls.
6. Check **Active routing list for this extension**.
7. Check **Default personal status routing list**.

Your dialog box should look similar to the following example:



8. Click **OK**.

When you are finished editing the utility user's routing list, make sure the utility's user's personal status is set to Available. See *Using TeleVantage* for instructions on selecting a personal status.

## Creating and sharing queue contacts

You create contacts for the queue by creating contacts for the utility user and then sharing these contacts with the agents, as follows:

1. Log on to ViewPoint as the utility user.
2. Choose **File > New > Contact** to add a contact. See *Using TeleVantage* for instructions. Repeat this step to add as many contacts as you want.
3. Choose **File > Folder > Share "Contacts."** The Contacts Properties dialog box opens at the Sharing tab.
4. In the **Available Users** pane, select the agents or other users to whom you want to give access to the queue's contacts. Press CTRL as you click users to select multiple users.

The users with whom you share access to the queue's contacts do not need to be the users who are the agents in the queue.

5. Click **Add** to move the selected users to the **Share with these users** pane.
6. Use the **Permission** dropdown list to determine each user's level of access to the queue's contacts. The options are:
  - **View only.** The user can view the queue's contacts, place calls to them, and associate calls with them.
  - **View and Edit.** The user can view, edit, and delete shared queue contacts.
7. Click **OK**.

For instructions on how users access shared queue contacts, see *Using TeleVantage*.

## Setting up call rules for a queue

---

You set up call rules for a queue by creating call rules for the utility user, as follows:

1. Log on to ViewPoint as the utility user.
2. Choose **File > New > Call Rule**. The Call Rule dialog box opens.
3. Define the call rule as described in the next section, "Using routing lists to define queue call rules." See *Using TeleVantage* for complete information about defining call rules.

To activate call rules based on individual callers, define those callers as contacts for the utility user. See "Creating and sharing queue contacts" on page 4-4.
4. Make sure that **Enable this call rule** is checked.
5. Click **OK**. Repeat this procedure to create other call rules.

### Using routing lists to define queue call rules

Each call rule that you define for a queue must handle calls by using a particular routing list. Use only the call rule's **Routing List** field and custom non-active routing lists to determine how calls are handled. Do not use the call rule's Personal Status or Taking Calls fields. If you use these fields, calls may be lost.

**Example:** To define a call rule that plays certain callers (contacts) a special Welcome message before they enter the queue, you would create a call rule that sends calls to a custom routing list (a routing list created for the utility user) that has the following features:

- No actions
- A greeting that plays the Welcome message before the final action
- A final action of **Transfer to Extension** that transfers calls to the queue



# **WORKING AS AN AGENT IN A CALL CENTER QUEUE**

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## Whether this chapter applies to you

---

This chapter provides instructions for working as an agent in a TeleVantage call center. Whether or not this chapter applies to you depends on the TeleVantage call distribution method that your office uses, as follows:

- **Use this chapter** if you are an agent in a TeleVantage call center queue that was set up using separately licensed call center agent licenses.
- **Do not use this chapter** if you are an agent in a TeleVantage ACD workgroup that was set up by using an ACD workgroup user and a routing list that sends calls to agents who are members of a workgroup. If you are an agent in an ACD workgroup, see “Participating in an ACD workgroup” on page 7-14.

## Starting and ending your shift, and taking breaks

---

**Important:** *Do not use this section* if you are disallowed from changing your own personal status. In that case, a supervisor will control your workflow. Talk to your queue manager or administrator about how to work in the queue.

As a call center agent, you control your workday by changing your personal status. At the beginning of your shift, you make yourself ready. At the end of your shift, you make yourself unavailable. While you are ready, you receive calls from all queues for which you are signed in. When you make yourself unavailable, queues stop sending calls to you.

**Note:** If you have to temporarily leave your phone during your shift, choose TeleVantage’s On Break personal status.

The following sections describe which personal statuses to use to make yourself ready and unavailable. For instructions on changing your personal status, see *Using TeleVantage*.

### **Starting your shift**

To start your shift and begin receiving queue calls, make yourself ready by doing either of the following:

- Using your telephone keypad, press either of the following at a dial tone:
  - **\*50.** This selects the Available personal status.
  - **\*51.** This selects the Available (Queue Only) personal status.
- In ViewPoint, select either of the following personal statuses:
  - **Available.** You receive personal calls (calls to your extension) as well as queue calls.
  - **Available (Queue Only).** You receive only queue calls. Personal calls are sent directly to your voicemail.

If you will be making outgoing calls from the queue, see “Placing calls from a queue” on page 5-8.

## Ending your shift

**Note:** Use this procedure at the end of your shift only. To take a break during your shift, use the **On Break** personal status to ensure the integrity of call center statistics. See the next section, “Taking a break.”

To end your shift and stop receiving queue calls, make yourself unavailable by doing either of the following:

- Using your telephone keypad, press **\*52** at a dial tone. This selects the personal status Available (Non-Queue).
- In ViewPoint, select any personal status whose **Queue calls** preference is set to No, other than On Break. For example, select the Personal status Available (Non-Queue) to receive personal calls without receiving queue calls.

**Important:** If you have marked your outbound calls as being from the queue, you must switch back to calling as yourself. Otherwise your outbound calls will continue to be marked as coming from the queue (and may be monitored), even though you have ended your shift. See “Placing calls from a queue” on page 5-8.

## Taking a break

To take a break from answering queue calls during your shift, do one of the following:

- Pick up the phone and press **\*53**.
- In ViewPoint, select the personal status **On Break**.

**Note:** Select the On Break personal status whenever you leave your phone during your shift, even for a short time. If you leave your phone without selecting On Break, queue calls might be sent to your phone, and callers will hear an interval of ringing before they are placed back on the queue.

When you finish your break and are ready to receive calls again, make yourself ready again. Press **\*51** on your phone or select the personal status **Available** or **Available (Queue Only)**.

## What call center agents need to know to get the job done \_\_\_\_\_

If you are working as a call center agent, you should be aware of the following:

- **While you are ready, always take queue calls that are sent to you.** If a queue call rings your phone and you do not answer, the caller will hear ringing and then be placed back on the queue. Also, if you do not pick up a ringing queue call, or decline it using the call announcing options, the queue might automatically place you in the On Break personal status.
- **Use the On Break personal status only to leave your phone during your shift.** Making yourself unavailable by using other statuses, such as Available (Non-Queue) or Do Not Disturb, signals TeleVantage that you are ending your shift (these statistics are reset daily).

- **Your personal status can be changed by others.** If you do not answer queue calls that ring your phone, the queue can automatically place you in the On Break personal status. Also, a supervisor can change your personal status at any time.

## Agents, call forwarding and routing lists

Queue calls sent to you do not use your routing list, so they cannot try you at multiple locations. Queue calls do follow your call forwarding / Where I Am settings.

## Working at different phones

If you need to work at a phone other than your default station, or if you have no default station and always work at a variety of phones, add the following steps to your routine:

1. When you first sit down at a new phone to receive calls, before marking yourself as Available, log on and forward your calls to your current location. Otherwise, your call center performance might be logged under another agent's name. Use either of the following methods:
  - Pick up the phone and log in by pressing # <extension> # <password> #. Once logged in, press **5 1** to forward calls to your current location.
  - Start ViewPoint. The Select Your ViewPoint Phone dialog box opens. Select the second logon option, **Use station <x> to place and answer calls as <your name>**. Check **Forward my calls to this station**.



2. After you have logged on, make yourself ready as described in “Starting your shift” on page 5-2.
3. When you are finished using a phone, log off by either picking up the phone and pressing **\*0 0**, or by exiting ViewPoint.

**Note:** When you are logged in at a station other than your own, voice message indicators apply to you. For example, if you hear stutter dial tone or see a message waiting light on the phone, it

means you have new voice messages.

**Note:** When an agent at a phone other than his or her own logs out with \*0 0, the agent's hook state can remain red (off-hook) indefinitely. To correct this issue, use the registry setting HKEY\_LOCAL\_MACHINE\Software\Artisoft\TeleVantage\Server\Settings\MonitorLocPbe. For instructions on advanced settings see Appendix J of *Installing TeleVantage*.

## Signing in and out of a queue

---

You can be either signed in or signed out of each queue to which you belong. Only when you are signed in do you receive calls from the queue. When you are signed out of a queue, you can see and affect its calls in the Call Monitor, but the queue does not send calls to your phone.

As an agent, you might be signed out for the following reasons:

- You are a supervisor who wants to observe a queue and manually take calls if necessary, but you do not want queue calls to ring your phone.
- You are an agent who is a member of multiple queues, and you periodically change which queue you receive calls from. You receive calls only from the queues to which you are signed in.

**Note:** Other agents with permission can sign you in or out of a queue.

### *To sign in or out of a queue*

You must have permission to sign yourself in or out of queues. If you do not have permission, talk to your TeleVantage system administrator about signing in and out.

### Using ViewPoint

1. Choose **Tools > Queue Sign In/Out**. The Queue Sign In/Out dialog box opens, displaying all queues for which you are a member. A check mark for a queue indicates that you are signed in to that queue.
2. Check the box next to a queue's name to sign in to that queue, or clear the checkbox to sign out.
3. Click **OK**.

**Note:** In the Queue Monitor or Call Monitor folder, you can also right-click a queue tab to sign in or out of that queue.

### Using the telephone

Using your telephone keypad, press \*56 at a dial tone. Enter the extension of the queue for which you want to sign in or out followed by #, for example, “\*56 102 #”.

## Seeing whether you are signed in or out of a queue

In the Queue Monitor and Call Monitor views, the tab for a queue displays an asterisk (\*) if you are signed out from that queue.



## Receiving and handling queue calls

---

You can receive and handle queue calls by using either the telephone commands or ViewPoint. When the queue sends a call to you, your phone rings and the call appears in ViewPoint's Call Monitor folder. Queue calls ignore your routing list and only ring your "Where I Am" location (your station or call forwarding number).

To answer a call, do either of the following:

- Pick up the phone.
- Click the incoming call in the Call Monitor and choose **Actions > Take Call**. If your phone is on-hook, it rings to connect you to the call.

After you are connected to a queue call, you can use most TeleVantage call-handling features such as transfer, park, mute, and so forth. For instructions on handling calls using the phone or TeleVantage ViewPoint, see *Using TeleVantage*.

### Notes

- You cannot use the **Hold** command on a ringing queue call. You can only put a queue call on hold after answering it.
- Your queue calls are not shared, even if you are sharing your Call Monitor folder.

## Viewing your position in the queue

If you have permission to see ViewPoint's Queue Monitor folder, you can use it to monitor your position in the queue, and determine when you are likely to receive the next call. See "Monitoring the position of agents in the queue" on page 6-14.

## Being monitored or coached by a supervisor

Call Center supervisors have the ability to supervise your queue calls on the following levels:

- **Monitoring.** A supervisor may listen in on any of your calls without you or the caller hearing. You will be unaware of the monitoring unless you have the permission **View agents being monitored**. If you do, the monitor appears in the Call Monitor as an indented line under the call.
- **Coaching.** A supervisor may speak to you during a call without the caller hearing. Coaching appears in the Call Monitor as a separate line under the call. If you are being

coached, try not to speak to the coach, as the caller will not be aware of the coach's presence on the line.

- **Joining.** A supervisor may join your call, essentially creating a three-way conference call in which all parties can hear each other. For more about conference calls, see *Using TeleVantage*.

By default, only queue calls are susceptible to being supervised. This includes inbound queue calls and outbound calls that you have associated with a queue (see “Placing calls from a queue” on page 5-8).

## Having your calls recorded

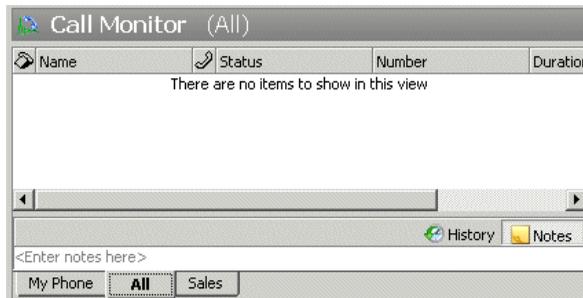
The queue may be configured to record some or all of your queue calls. You receive no indication that a call is being recorded. The queue may be configured to place call recordings in your Inbox as new voice messages.

Your non-queue calls will not be recorded unless the TeleVantage system has been configured to record all calls.

## Using the Call Monitor tabs

When you are an agent in a call center queue, your Call Monitor folder displays the following tabs:

- A tab that shows the queue's calls, with the name of the queue on it. If the tab name appears with an asterisk, it means that you are signed out from that queue.  
**Note:** You must have permission to see this tab. If you do not see it, see your TeleVantage system administrator.
- The My Phone tab, which shows all the calls that are being handled by your phone, including any queue calls you have taken.
- The All tab, which shows all your queue and personal calls together.



If you are an agent in multiple queues, the Call Monitor displays a tab for each queue.

Click the My Phone tab or a queue tab to view only the calls for that tab. Click the All tab to view all calls at once.

**Note:** Your Call Monitor folder may display other tabs than the ones described in this section.

See *Using TeleVantage* for a full description of the Call Monitor.

## ***Wrap-up time***

After you finish a queue call, you are given wrap-up time to complete any work relating to the call. During your wrap-up time you will not receive any queue calls. Your TeleVantage system administrator sets how much wrap-up time you have.

While you are in wrap-up time,  appears in the ViewPoint status bar.

## **Terminating your wrap-up time early**

To terminate your wrap-up time early and mark yourself as ready to take queue calls again, do either of the following:

- Click  in the ViewPoint status bar.
- Using your telephone keypad, press \*54 at a dial tone.

## ***Viewing queue activity***

The Queue Monitor in ViewPoint displays a list of agents in the queue and up-to-date queue statistics. You can use it to see the status of other agents in the queue and your current position in the queue, among other things.

To see the Queue Monitor folder in your ViewPoint, you must have the appropriate permission. For a description of the Queue Monitor folder, see “Monitoring queue statistics” on page 6-3.

## **Placing calls from a queue**

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If you are a call center agent and you place a call at your desk using the telephone or ViewPoint, by default TeleVantage treats the call as one made by you. You can choose instead to place calls as a queue, which may be necessary for your work as a call center agent. When you place calls as a queue, TeleVantage treats the call as if the queue placed it. Other agents can see it in their Call Monitors, it can be monitored by supervisors, and statistics and reports can accurately reflect queue activity.

When calling as a queue, your calls appear on both the My Phone tab and the queue tab in your Call Monitor. The calls are logged both in your personal Call Log and the queue’s Call Log, with the queue name in the **From** column.

**Important:** When you are done placing calls as a queue, be sure to switch back to calling as yourself. If you don’t, your personal calls will be treated as queue calls, meaning they will be seen by all agents and will throw off queue statistics.

## To place calls as a queue using ViewPoint

On the ViewPoint status bar, your name and extension are a dropdown list. Pull down the list and select the queue as which you want to place calls.



To switch back to calling as yourself, select yourself from the dropdown list.

## To place calls as a queue using the telephone

Pick up your phone and press **\*14<queue's extension>#** at a dial tone.

To switch back to calling as yourself, press **\*14#** at a dial tone.

## Determining who you are calling as

ViewPoint's status bar displays whether the system is treating outbound calls from its station as being from you or from someone else.

You can also learn from whom a station is placing outbound calls by picking up the station and pressing **\*0**. The station information recording includes the line, "The current extension is **<Ext.>** calling as **<Queue>**."

- **<Ext.>** is the extension of the last user who logged in at the station.
- **<Queue>** is the name of the queue that outbound calls are marked as being from.

For example, the recording might say, "The current extension is **555**, calling as **Sales Queue**."

## Popping up caller information

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You can use the TeleVantage Contact Manager Assistant to pop up information about callers that you have in another contact manager application. Callers must be contacts in one of the following contact manager or customer relationship management applications:

- Act! 3.0, 4.0, 6.0, and 2000
- Goldmine 4.0 and 5.0, and Goldmine Business Contact Manager 5.7
- Goldmine FrontOffice 2000
- Microsoft Outlook 98, 2000, 2003, and XP

For instructions on configuring the TeleVantage Contact Manager Assistant, see its online Help.

Act! can pop up contact information on its own, without the Contact Manager Assistant.

**Note:** Your office might also use a custom screen pop application created with the ViewPoint API. If this is the case, see your TeleVantage system administrator for instructions on using it.

## Working remotely

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If you have an external station, you can work remotely using that station.

You can work at remote phone that is not a remote station by forwarding your calls. For instructions on using ViewPoint remotely, see *Using TeleVantage*.

### ***Call center agents and H.323 Gateways***

If an H.323 Gateway user is added to a call center queue, by default the corresponding user on the remote Server does not have access to the call center personal statuses (Available Queue Only, Available Non Queue, and On Break). To give the user access to those statuses, do the following:

1. Edit the full user (not the H.323 Gateway user) in the TeleVantage Administrator to open the User dialog box, and click the Queue tab.
2. Check **Show queue-related personal statuses**.
3. Click **OK**.

# SUPERVISING A CALL CENTER QUEUE

## CHAPTER CONTENTS

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## About supervising queues

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You can assign agents any number of queue permissions that give them the ability to supervise a queue. Supervisors are merely agents with extra permissions. Supervisory tasks include the following:

- Configuring the queue in the Administrator, including the agents that belong to it
- Signing agents in or out for the queue
- Viewing real-time queue statistics in TeleVantage ViewPoint
- Changing an agent's personal status
- Managing a queue's voice mailbox
- Supervising agent conversations by monitoring or coaching

You assign permissions separately for each queue. To give an agent supervisor permissions in more than one queue, you must edit the agent separately in each queue.

For instructions on adding agents to a queue and setting their permission levels, see “Defining agents for the queue” on page 2-10. For a list of queue permissions, see “Agent permissions” on page 2-14.

### ***Exempting supervisors from receiving queue calls***

Because supervisors are agents in the queue, by default they receive queue calls when they are ready, just as other agents do. To exempt an agent from receiving calls from a queue, sign the agent out for that queue, or configure the agent as an Observer (see “Adding agents to the queue” on page 2-11).

When supervisors are signed out from a queue, the queue does not send calls to them. However, supervisors can watch queue calls in the Call Monitor folder and answer them if necessary using the **Take call** command. They can also perform all other queue monitoring and managing tasks when they are signed out.

For instructions on signing a supervisor out, see “Signing agents in or out of a queue” on page 6-19.

## Viewing current queue calls

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Agents with the permission **Access Queue call monitor** can view all current queue activity on the queue's tab in ViewPoint's Call Monitor folder. Note that only calls associated with the queue appear in the queue's tab. If the agent is on a personal call or a call from another queue, it does not appear in the queue tab.

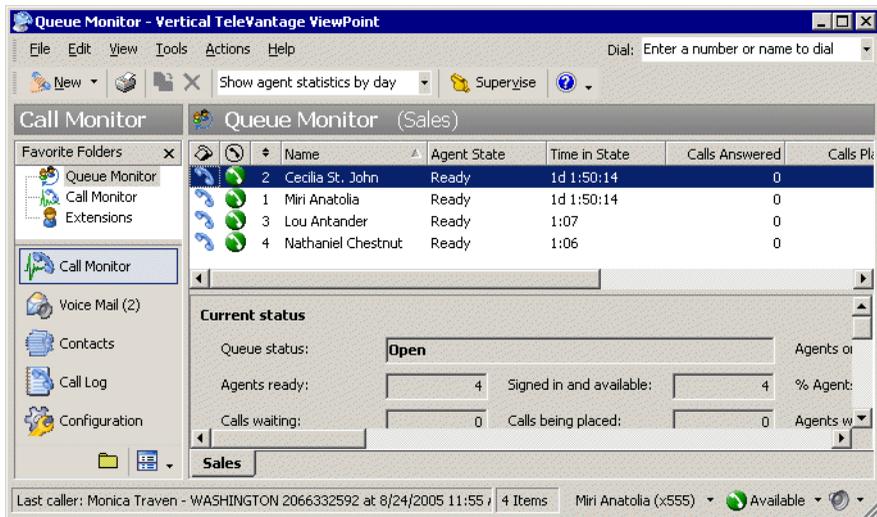
For more information, see “Using the Call Monitor tabs” on page 5-7.

## Monitoring queue statistics

Agents who have the permission **Monitor queue statistics** set to Allow can monitor a queue's performance by using either the telephone commands or the Queue Monitor folder in ViewPoint.

### Viewing queue statistics in the Queue Monitor folder

To open the Queue Monitor folder, click **Call Monitor > Queue Monitor** in the navigation pane.



Each queue for which you have permission to view statistics appears as a tab at the bottom of the folder. Click a queue's tab to see statistics for that queue and the agents in that queue.

For a detailed description of when Queue Monitor statistics reset to zero, see “When statistics are reset” on page 6-13.

**Note:** You can continue to use the Call Monitor while you are in the Queue Monitor. Choose **View > Calls Pane** to add the Call Monitor to the Queue Monitor folder as a separate pane.

### The Agents pane

At the top of the Queue Monitor folder, the Agents pane displays the names of all agents in the queue, their current statuses, and their performance, including inbound and outbound calls.

You can have the Agents pane display statistics by day or by shift. Choose **Actions > Show agent statistics by day/shift**. For information about shifts, see “Configuring shifts” on page 2-50.

**Note:** The Agents pane's statistics are those for the selected queue only. For example, the **Calls answered** field shows the number of calls an agent has answered for this queue. The agent may have answered other calls such as personal calls or calls from other queues.

The Agents pane displays the information shown in the following table. Some columns may be hidden by default. To show them, choose **View > Current View > Show Columns**.

<b>Agents Pane Information</b>	
 <b>Availability</b>	Icon showing the agent's phone as on-hook or off-hook.
 <b>Personal Status icon</b>	Icon for the agent's current personal status.
 <b>Distribution Order</b>	<p>The order in which agents are scheduled to receive calls. The order is dependent on the queue's distribution algorithm. The agent who will receive the next call is the agent with the lowest number among currently Ready agents.</p> <p>This column may be disabled. See "Enabling and disabling the Distribution Order column" on page 6-16.</p>
<b>Name</b>	Agent's name.

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## Agents Pane Information

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### Agent State

Agent's current level of availability to take calls from this queue. Note that an agent can be in different states for different queues at the same time. The possible states are:

**Ready.** The agent is signed in, and in the personal status Available or Available (Queue Only), and the phone is on-hook. The agent is ready to take a call.

**Active Inbound.** The agent is on an inbound call from this queue.

**Active Outbound.** The agent is on an outbound call associated with this queue.

**Wrap-up Inbound.** The agent is in the wrap-up period immediately following the end of an inbound call associated with this queue.

**Wrap-up Outbound.** The agent is in the wrap-up period immediately following the end of an outbound call associated with this queue.

**Dialing.** The agent is in the process of dialing an outbound call as the queue.

**Standby.** The agent is On Break, or is in a non-queue call (such as a personal call or a call from another queue.)

**Signed out.** The agent is signed out of this queue and so is not taking calls from this queue.

**Unavailable.** The agent is in a personal status other than Available or Available (Queue Only), and so is not taking queue calls.

**No answer.** The agent did not answer the last queue call. The queue does not send calls to agents in the No Answer status. TeleVantage automatically removes the agent from No Answer status after a certain time based on what caused the No Answer status.

**Offering.** The agent's phone is ringing with a call from this queue, but the agent has not accepted the call yet.

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## Agents Pane Information

<b>Time in State</b>	The length of time that the agent has been in the current state for this queue. Times are displayed in the following format: days: hours:minutes:seconds.
<b>Calls answered</b>	Number of incoming calls from this queue that the agent has answered since the beginning of the queue's current display period. Does not include calls the agent participated in but did not answer (see Total Calls - All)
<b>Calls placed</b>	Number of outbound calls associated with this queue that the agent has placed since the beginning of the queue's current display period. Does not include calls the agent participated in but did not place (see Total Calls - All)
<b>Time on calls</b>	The total time the agent has spent on this queue's calls since the beginning of the shift. You can show this column separately for inbound calls, outbound calls, and all calls.
<b>Longest call</b>	The length of time of the longest queue call (including wrap-up time) that the agent handled since the beginning of the shift. You can show this column separately for inbound calls, outbound calls, and all calls.
<b>Avg. call</b>	Average length of the agents' queue calls (including wrap-up time) since the beginning of the shift. You can show this column separately for inbound calls, outbound calls, and all calls.
<b>Longest talk</b>	The length of time of the longest single call the agent handled (not including wrap-up time). You can show this column separately for inbound calls, outbound calls, and all calls.

## Agents Pane Information

<b>Away</b>	A check mark indicates that the agent has been automatically placed in On Break status by the queue for having let his or her most recent queue calls ring unanswered. See “Placing agents on break if they do not answer calls” on page 2-21.
<b>Forced Break</b>	Number of times the queue has automatically placed the agent in On Break status for letting queue calls ring unanswered, since the beginning of the current display period. See “Placing agents on break if they do not answer calls” on page 2-21.
<b>Inbound Calls</b>	Number of incoming queue calls that the agent has participated in since the beginning of the queue's current display period, including inbound calls transferred from other agents in the queue.
<b>Longest wrap-up</b>	The length of time that the agent spent in the longest wrap-up after a call.
<b>No Answer</b>	Number of queue calls to the agent that rang unanswered, since the beginning of the current display period.
<b>Outbound Calls</b>	Number of outbound queue calls that the agent has participated in since the beginning of the queue's current display period, including outbound bound calls placed by other agents in the queue and then transferred to this agent.
<b>Overflow</b>	The agent's overflow tier. If no number is listed the agent is a primary agent (assuming the overflow skill default is set to 0).
<b>Personal Status Name</b>	Name of the agent's current personal status.
<b>Queue</b>	Name of the agent's queue.
<b>Signed in</b>	A check mark indicates that the agent is signed in to this queue.

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## Agents Pane Information

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<b>Total calls - All</b>	The total number of calls associated with this queue in which the agent has participated since the beginning of the queue's current display period. Includes inbound and outbound calls, and calls where the agent did not answer or place the call (for example, joining another agent in a conference call or having another agent transfer a call to him)
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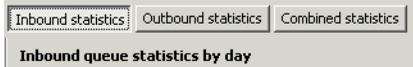
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## The Queue Statistics pane

At the bottom of the Queue Monitor folder, the Queue Statistics pane displays statistics for the queue as a whole. To show or hide the Queue Statistics pane, choose **View > Queue Statistics Pane**.

You can display queue statistics for inbound calls only, outbound calls only, or all calls, by clicking the appropriate button above the **Queue statistics by day** section.



**Note:** For outbound calls to appear in the Outbound Statistics section, agents must place calls as the queue. See “Placing calls from a queue” on page 5-8.

The Queue Statistics pane is divided into the following sections:

- **Current status.** Statistics for the number of agents and calls currently in the queue.
- **Queue statistics by day.** Statistics for calls since the beginning of the current day. These statistics automatically reset to zero at midnight.
- **Queue statistics by period and shift.** Statistics for calls during the current period and shift, compared to the previous period and shift. When the current period or shift ends, the current statistics automatically reset to zero, and the totals that had accumulated are moved into the **Previous** column.

For instructions on defining the statistics period and shifts, see “Collecting queue statistics” on page 2-50. For detailed descriptions of when day, period, and shift statistics reset to zero, see “When statistics are reset” on page 6-13.

**Note:** Queue statistics by shift are not updated during gaps between shifts. For example, if one shift ends at noon and the next shift begins at 12:30, queue activity between 12:00 and 12:30 is not reflected in the shift totals.

The Queue Statistics pane displays the statistics shown in the following table.

Queue Statistics Pane	
Current Status	
<b>Queue status</b>	Whether the queue is currently distributing calls to agents. The possible statuses are: <ul style="list-style-type: none"><li><b>Open.</b> The queue is distributing its calls to ready agents as normal.</li><li><b>Closed.</b> The queue is closed. No calls are being distributed to agents.</li><li><b>Closed - No agents.</b> All agents in the queue are currently signed out, so the queue is automatically sending its calls directly to voicemail.</li></ul>

## Queue Statistics Pane

<b>Agents on break</b>	Number of agents currently signed in and in the On Break personal status.
<b>Agents ready</b>	Number of agents waiting to receive queue calls. Ready agents are those who are signed in, have their personal statuses set to Available or Available (Queue Only), and are not currently off hook or in a wrap-up period.
<b>Signed in and available</b>	Number of agents eligible to receive queue calls, including those currently on a call or in wrap-up period. To receive queue calls an agent must be signed in and in a personal status whose <b>Queue calls</b> field is set to “Yes,” such as Available or Available (Queue Only.)
<b>% agents ready</b>	The percentage of agents eligible to receive queue calls who are currently waiting for a call. The others are either off hook or in a wrap-up period.
<b>Calls waiting</b>	Number of calls currently waiting on the queue.
<b>Calls being placed</b>	Number outbound calls in the process of being placed. (Connected outbound calls are not counted.)
<b>Agents wrap-up</b>	Number of agents currently in the wrap-up period following a queue call.
<b>Inbound Statistics</b>	
<b>Calls answered</b>	Number of calls answered by an agent.
<b>Calls transferred out</b>	Number of calls transferred out of the queue without being handled by an agent, as a result of callers pressing the transfer key. (See “Offering the caller options while waiting on the queue” on page 2-35.)
<b>Calls received</b>	Total number of calls received, including abandoned calls.
<b>Calls abandoned</b>	Number of callers who hung up without talking to an agent.

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### Queue Statistics Pane

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<b>Calls completed</b>	Number of completed calls in which a caller finished talked with an agent. Completed calls are calls that ended by hanging up or transferring.
<b>Avg. talk time</b>	Length of the average time that callers spent talking with agents.
<b>Calls to voice mail</b>	Number of calls that went to voicemail without being handled by an agent, as a result of callers pressing the key to leave voicemail. (See “Offering the caller options while waiting on the queue” on page 2-35.)
<b>Total talk time</b>	Total number of minutes that callers have spent talking with agents.
<b>Longest time</b>	Length of the longest time in each of the following categories (by day only): <b>Talk time.</b> Time spent talking with an agent. <b>Wait time.</b> Time spent waiting on the queue.
<b>Average wait time</b>	Average length of time callers waited on the queue for each of the following categories: <b>All calls.</b> All inbound calls to the queue. <b>Answered calls.</b> All calls to the queue in which the caller spoke with an agent. <b>Abandoned calls.</b> All calls to the queue in which the caller hung up or left a voice message.

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## Queue Statistics Pane

<b>Redirection</b>	Number of calls that have been automatically redirected by the queue, for each of the following categories:  <b>Maximum hold.</b> Calls that reached the maximum wait time without being answered (see page 2-32).  <b>Queue busy.</b> Calls that were redirected because the queue was too busy (see page 2-30).  <b>Queue closed.</b> Calls that were redirected because the queue was closed (see page 2-8).
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### Outbound Statistics

<b>Calls placed</b>	Number of outbound calls placed by this queue.
<b>Calls completed</b>	Number of connected calls that are now over.
<b>Calls connected</b>	Number of calls that have connected with the called party.
<b>Longest time*</b>	Length of the longest time by one call.
<b>Average time*</b>	Length of the average time over all calls.
<b>Total time*</b>	Total number of minutes from all calls.

\* Talk time = Time spent talking with an agent.

### Combined Statistics

<b>Calls attempted</b>	Total number of inbound calls received and outbound calls placed.
<b>Calls completed</b>	Total number of inbound and outbound calls completed.
<b>Calls connected</b>	Total number of inbound calls that were answered and outbound calls that were connected with the called party.
<b>Longest time*</b>	Longest talk time counting both inbound and outbound calls.
<b>Average time*</b>	Average talk time counting both inbound and outbound calls.

## Queue Statistics Pane

<b>Total time*</b>	Total talk time adding inbound and outbound calls.
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\* Talk time = Time spent talking with an agent.

### ***When statistics are reset***

Statistics are reset to zero at the following times:

<b>Statistic type</b>	<b>When reset</b>
Statistics by day	At midnight, or when the Server is restarted.
Statistics by period	<p>On 15, 30, or 60 minute intervals, depending on your configuration for <b>Statistics period</b> interval (see “Defining the statistics period” on page 2-50). The intervals are counted from midnight, so a 15-minute interval would reset at 12:15, 12:30, 12:45, etc.</p> <p>All queues that share the same statistics period interval reset at the same clock time.</p> <p><b>Note:</b> Period statistics are always reset counting from midnight, not from the time of a Server restart. This could result in a short period. For example, if the Server was started at 9:50, the period would still end at 10:00, resulting in a 10-minute period.</p>
Statistics by shift	At the end of the shift, as you defined it (see “Configuring shifts” on page 2-50).

**Note:** When a call overlaps a reset time, some statistics for it will appear in the first grouping, some in the second, depending on when the statistic is counted. For example, Calls Answered is counted as soon as the call is answered, while Calls Completed is counted when the call ends. Therefore, if a call lasts from 11:58 PM to 12:20 AM, it would be counted as a Call Answered in Day 1, and a Call Completed in Day 2.

## ***When statistics are refreshed***

By default the Queue Monitor folder refreshes with new statistics as soon as they become available, providing a real-time picture of queue activity. You can enter a slower refresh rate to improve the responsiveness of agents' ViewPoint applications. You should change this setting if you find that agents' ViewPoint applications are responding too slowly.

### **To change the Queue Monitor refresh rate**

1. In the TeleVantage Administrator, choose **Tools > System Settings**. The System Settings dialog box opens.
2. Choose the Queue tab.
3. Enter the refresh rate you want (in milliseconds) in **Queue statistics refresh interval**.
4. Click **OK**.

## ***About agents' personal status and state***

It is important to distinguish between an agent's personal status and state.

- **Personal status.** Determines whether the agent receives queue calls. An agent's personal status is the same across all queues.
- **State.** Displays the agent's current activity, for example, whether the agent is currently in a queue call. An agent's state can be different in different queues. For example, if an agent is a member of Queue A and Queue B, and the agent is currently in a call for Queue A, his state would be Active in Queue A and Standby in Queue B.

For a description of agent states, see the Agent State column in the Agents pane table on page 6-4.

## ***Monitoring the position of agents in the queue***

The Queue Monitor's Distribution Order column—displayed as  in the Agents pane—shows the order in which ready agents are scheduled to receive calls. The agent with a 1 in the column is scheduled to receive the next call, followed by the agent with a 2 in the column, and so on. Unavailable agents do not receive a position number. Unavailable agents include agents who are signed out or in a personal status that makes them unavailable such as Do Not Disturb or Available (Non-Queue).

**Note:** You can enable or disable the Distribution Order column. See the next section.

The agent with a 1 in the distribution order will not necessarily receive the next call. The distribution order reflects the scheduled order according to the queue's distribution algorithm, but it does *not* reflect which agents are currently Ready. A Ready agent might have 5 in the Distribution Order column and yet receive the next call because all other agents are busy at the moment. The agent who will receive the next call is the agent with the lowest distribution order number among Ready agents.

Distribution order numbers for overflow agents follow those for primary agents. For example, if a queue has 10 ready primary agents, the first scheduled overflow agent will display 11 in the Distribution Order column. The distribution order of overflow agents is determined first by tier, and then within each tier by the queue’s distribution algorithm. For more about overflow agents, see “Setting up overflow agents” on page 2-25.

The following table shows how agent positions are calculated for each distribution algorithm. The descriptions apply separately to primary agents and to each tier of overflow agents.

<b>Algorithm</b>	<b>Agent positions</b>
<b>Top down</b>	Agents’ positions are ordered by their order in the queue and do not change.
<b>Round robin</b>	Agents’ positions are reordered according to which agent answered the previous queue call. Whenever an agent answers a queue call, the next agent down in the list becomes 1, the agent after that becomes 2, and so on. When the bottom of the queue is reached, the order continues from the top down until it meets the agent who answered the most recent call.
<b>Longest idle agent</b>	<p>Agent positions are ordered according to the length of time without being in an Active state. The agent who has gone the longest without being Active inbound is in position 1.</p> <p>Note that talking on non-queue calls and being in the On Break personal status place an agent in the Standby state, so that the time since the agent was Active continues to increase. Likewise, Wrap-up is not an Active state, so agents' wrap-up time also increases their “idle” time. Only receiving a queue call makes an agent Active and resets the agent’s “idle” time.</p> <p>An agent's position is reduced by 1 whenever an agent with a longer time since being Active receives or places a queue call. The only way for an agent's position to increase is for the agent to receive a queue call.</p>

<b>Algorithm</b>	<b>Agent positions</b>
<b>Fewest calls</b>	<p>Agent positions are ordered according to which agent has received the fewest queue calls during the current display period. The agent who has received the fewest queue calls since the beginning of the shift is at position 1.</p> <p>Note that the length of time spent on a queue call is not significant for adjusting position, only the number of queue calls participated in.</p>
<b>Least talk time</b>	<p>Agent positions are ordered according to which agent has spent the least time on inbound queue calls during the current display period. The agent who has spent the least time on inbound queue calls since the beginning of the shift is at position 1.</p> <p>Note that only calls from a queue count as talk time in that queue. An agent working in two queues will have a different talk time in each.</p>
<b>Simultaneous ring</b>	<p>Agents have no position, as each call rings all agents' phones simultaneously.</p>
<b>Skills-based or custom routing</b>	<p>Agent positions are ordered according to their agent score, to select the best-qualified agent for each call. See "Using custom agent scoring" on page 3-12.</p>

**Note:** The distribution algorithms Longest idle, Fewest calls, Least talk time count inbound queue calls only.

## Enabling and disabling the Distribution Order column

You can enable or disable the Distribution Order column in the Agents pane of the Queue Monitor. Disabling the column can speed up system performance.

### To enable or disable the Distribution Order column

1. In the Administrator, choose **Tools > System Settings**. The System Settings dialog box opens.
2. Choose the **Queue** tab.
3. Check or uncheck **Update Agent Distribution Order column in Queue Monitor**.
4. Click **OK**.

## Monitoring queue statistics using the phone

Agents who have permission to monitor queue statistics can hear the current statistics for a queue at any time by picking up a TeleVantage phone and dialing \*55. The system prompts them to select the queue for which they want to hear statistics.

Dialing \*55 plays the queue statistics shown in the following table. Statistic totals are kept since midnight at the beginning of the current day.

<b>*55 Queue Statistics</b>	
<b>Callers waiting</b>	Number of callers waiting on the queue.
<b>Expected wait time</b>	Rough estimate of how long callers can expect to wait if they called right now. The formula used is <total wait time of all answered calls so far this day> / <number of answered calls so far this day>.
<b>Active agents</b>	Number of agents currently available. This includes all agents who are signed in and in the personal status Available or Available (Queue Only).
<b>Total calls</b>	Total number of calls received today (since the last midnight).
<b>Abandon rate</b>	Abandoned calls as a percentage of total calls.

## Supervising other agents' calls

You can assign agents permission to supervise other agents' calls in the following ways:

- **Monitoring an agent's call.** The supervisor can listen to another agent's call without being heard by the other agent or the caller.
- **Coaching an agent on a call.** The supervisor can coach another agent without being heard by the caller. The agent hears the supervisor but the caller does not. The supervisors can hear all parties.
- **Joining an agent's call.** The supervisor can be conferenced in to another agent's call as a full participant and be heard by both parties.

Supervising in a call center is a separate feature from supervising personal calls, and the two are controlled by different permissions, as follows:

- **Supervising personal calls.** Supervising personal calls requires TeleVantage user permissions set up by your system administrator. Users with only these permissions cannot supervise call center calls.
- **Supervising call center calls.** To supervise call center calls, you must be a call center agent with agent permissions set up per queue by your queue administrator. As a call center supervisor, you can supervise only other agents in your queue, and only their queue calls, not their personal calls.

**Note:** You can supervise an agent’s outbound queue calls only if the agent has associated his or her outbound calls with the queue. See “Placing calls from a queue” on page 5-8.

If the agent whose call you are supervising transfers the call to another party, or parks it and it is unparked by another party, you are disconnected.

## How monitoring and coaching appear in the Call Monitor

When you are monitoring or coaching an agent on a call, the call appears in your Call Monitor showing all three parties to the call. Your row, the top row in the call, is labelled “Monitoring” or Coaching.”

Name	Status	NU
Monitoring	Active	
Unknown	Active	Un
Agent 3	Active	30

Name	Status	NU
Coaching	Active	
Unknown	Active	Un
Agent 3	Being Coached	30

If you are coaching an agent, the agent sees you as a party in the call. If you are monitoring an agent, the agent does not see you as a party, unless that agent has the permission **View agents being monitored** set to Allow. See the next section.

**Note:** When you join another agent’s call, the call appears as a normal conference call.

## Viewing when agents are being monitored

Agents who have the permission **View agents being monitored** set to Allow can see when an agent is being monitored by another agent. The monitoring agent appears in the Call Monitor as another party in the call, identified by the Status “Monitoring.”

Name	Status	NU
Conference	Active	
Unknown	Active	Un
Agent 1	Monitoring	10

Agents who have the permission set to Disallow (the default) cannot see when they or other agents are being monitored.

## Notes

- When a supervisor begins supervising a queue call, any call notes disappear from the Call Monitor. This is because the notes are stored for the queue, not the agents. To see the call notes, look at the queue's Call Log. Agent notes made after the call will show in the agent's Call Log.
- The Call Log does not keep a record of whether agents were monitored.

## Managing agents' status

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With supervisor permissions, agents can directly control the status of other agents in the queue in the following ways:

- Signing agents in or out of a queue
- Changing an agent's personal status

### *Signing agents in or out of a queue*

An agent who is signed in to a queue receives calls from that queue when ready. When signed out, the agent is still a member of the queue, but does not receive queue calls. An agent who is signed out can still view queue calls in the Call Monitor folder and answer them if necessary by using the **Take Call** command.

Supervisors with the **Sign In/Out other agents** permission can use sign other agents in or out of a queue. You can use this feature to move agents among queues without having to delete them from one queue and add them to another. For example, if Kim works as an agent in the Sales queue in the morning and in the Support queue in the afternoon, a supervisor can sign Kim out for the Sales queue at midday and sign her in for the Support queue.

**Note:** Agents with the **Queue Sign In/Out** permission can sign themselves in and out of the queue. See "Signing in and out of a queue" on page 5-5.

You can sign agents in or out using either ViewPoint or the Administrator.

### **Signing agents in or out using ViewPoint**

To use this procedure you must have the agent permission **Sign In/Out other agents** (see "Agent permissions" on page 2-14) and the general TeleVantage permission **Access Queues folder** (see *Administering TeleVantage*).

1. Open the Queue Monitor folder by clicking its icon in the Folder List.
2. If there are tabs for more than one queue, click the tab of the queue for which you want to sign the agent in or out.
3. In the Agents pane, select the agent.
4. Choose **Actions > Sign this agent into queue** or **Sign this agent out of queue**. The command signs the agent in or out.

## Signing agents in or out using the Administrator

To use this procedure you must have the general TeleVantage permission **Access Queues Folder** (see *Administering TeleVantage*).

1. Open the Queues folder and double-click the queue for which you want the agent to be signed in or out. The Queue dialog box opens.
2. Click the Agents tab and double-click the agent's name in the **Agents in this queue** list. The Agent dialog box opens.
3. Check or uncheck **This agent is signed in**.
4. Click **OK** to close the Agent dialog box.
5. Click **OK** to close the Queue dialog box.

## Changing an agent's personal status

A agent who has the permission **Change an agent's personal status** set to Allow can directly change the personal statuses of agents in the queue. A supervisor can use this feature in the following situations:

- When agents are prevented from changing their own personal status. In this case you must manage their workflow for them, changing their personal status to begin and end their workday and to let them take breaks.
- When agents leave their phones and forget to change their personal statuses themselves. In this case, you can set the personal statuses of the agents to On Break.
- When the queue is configured to automatically place agents On Break if they let calls from the queue go unanswered. In this case, you ensure that agents become ready when they return to their desks.
- When agents leave for the day and are still ready. In this case, you can change their personal statuses to make the agents unavailable.

**Important:** If agents leave at the end of their workday without making themselves unavailable, you must make them unavailable before the start of the next workday, or the reports data will be inaccurate.

### To change an agent's personal status

1. In ViewPoint, select the agent on the appropriate tab in any of the following locations:
  - The Extensions folder
  - The Extensions pane in the Call Monitor folder
  - The Agents pane in the Queue Monitor folder
2. Choose **Actions > Apply Personal Status**, and then select a personal status.

For more information about how to use personal statuses, see *Using TeleVantage*.

## Managing a queue's voice mailbox

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Agents who have the permission **Access queue mailbox** set to View and Edit can manage voice messages that callers leave in the queue's voice mailbox. They can listen to messages, reply to them, and delete them. They also can create voice mailbox folders and move messages among those folders.

Agents who have the permission set to View Only can see and listen to voice messages, but not perform any other commands on them.

To access the queue's voice mailbox, click **voicemail** in the navigation bar, then click the folder with the queue's name in the Favorite Folders list.

For complete instructions on managing voice messages using ViewPoint, see *Using TeleVantage*.

### ***Managing queue voice messages on the telephone***

You can also manage a queue's voicemail using the telephone by logging in as the queue. When logging in, use the queue's extension and password.

For instructions on logging in and managing voice messages using the telephone commands, see *Using TeleVantage*.



# **ACD WORKGROUPS**

**CHAPTER CONTENTS**

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## About ACD workgroups

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This chapter provides instructions for setting up and using an Automatic Call Distribution (ACD) workgroup. ACD workgroups enable you to distribute incoming calls among several agents. If all agents are busy, calls remain on hold until agents become ready to answer them. You can use an ACD workgroup in a sales department, a customer support organization, or any department in which multiple agents answer calls to a single number.

ACD workgroups are an alternative to the separately-licensed TeleVantage call center queues system (see Chapter 2 through Chapter 6). It is recommended that you use call center queues as your call center system, since they provide more features. However, you can use either system with TeleVantage.

### ***TeleVantage ACD features***

For a full list of ACD features, and a comparison with call center features, see “Call center queue and ACD workgroup features” on page 1-3.

#### **What agents experience**

Ready ACD agents can wait for their phones to ring or they can answer calls by choosing **Actions > Take Call** in the Call Monitor folder in ViewPoint. Taking calls in this way does not affect their position if they are in a round-robin workgroup. To use ViewPoint with the ACD workgroup, agents log on to their own accounts and view ACD workgroup calls in a shared Call Monitor folder tab. All agents can see the ACD workgroup’s calls. After an agent answers a call, the other agents continue to see it in their Call Monitor views, but they cannot interrupt or affect it.

For instructions on participating as an agent in an ACD workgroup, see “Participating in an ACD workgroup” on page 7-14.

#### **What callers experience**

Callers choose an option from the auto attendant main menu to go to a department (for example, “For Sales, press 2”). If all agents in the ACD workgroup are busy, callers are placed on hold. They hear a recorded message periodically that you can customize. While they are on hold, callers can enter **1** to stop waiting and leave a voice message. They can also enter **0** to transfer to the Operator, or they can remain on hold indefinitely until the call is answered.

You also can create an overflow workgroup that handles calls when all agents are busy, and you can create multiple groups that handle different work shifts. Both of these options are described in “Creating an overflow workgroup” on page 7-11.

**Important:** It is highly recommended that you use music-on-hold for callers who are waiting for an agent. If you do not have a station set up to play music-on-hold, callers hear the ringing tone as they wait for an agent.

## Overview of setting up an ACD workgroup

To set up an ACD workgroup, you must create the following items:

- A new TeleVantage user of the type **ACD workgroup user**. This user does not represent a real person. It functions as a mechanism for distributing calls to agents.
- A new TeleVantage workgroup whose members are the users who will work as agents.
- A routing list for the ACD workgroup user that directs incoming calls to the workgroup.

**Note:** The term *ACD workgroup* refers to the complete system that exists after the three items in the previous list have been created.

### How to direct calls to the ACD workgroup

You direct incoming calls to the ACD workgroup by sending them to the ACD workgroup user. The ACD workgroup user's routing list then automatically distributes the calls to agents (see the next section).

You can send calls to the ACD workgroup user in any of the ways that you send calls to a normal user, as follows:

- Give the ACD workgroup user's extension a menu option from the auto attendant, so that callers can choose, for example, "Press 1 for Technical Support." The option transfers the call to the ACD workgroup user.
- Give the ACD workgroup user a DID number, which allows callers to dial a complete phone number and reach the ACD workgroup user directly. Your phone lines must support DID to use this option.
- Dedicate a trunk to the ACD workgroup user, so that all incoming calls on the trunk are sent to the ACD workgroup user.
- Give the ACD workgroup user an extension, so that other users in the company can transfer calls to the ACD workgroup.

### How calls are distributed to agents

Calls to the ACD workgroup are automatically distributed to agents by means of the ACD workgroup user's routing list. When calls are sent to the ACD workgroup user (see the previous section), its routing list automatically puts them on hold until an agent becomes ready, plays them any messages that you record for that purpose, and finally transfers them to a ready agent.

You can customize several aspects of the routing list, such as what messages play to callers while they wait on hold and how calls are distributed among ready agents.

## Creating an ACD workgroup

---

To set up an ACD workgroup, you will use both the TeleVantage Administrator and TeleVantage ViewPoint.

Creating an ACD workgroup involves the following steps. The first sentence in each step corresponds to the heading of a section in this chapter that explains the step in detail.

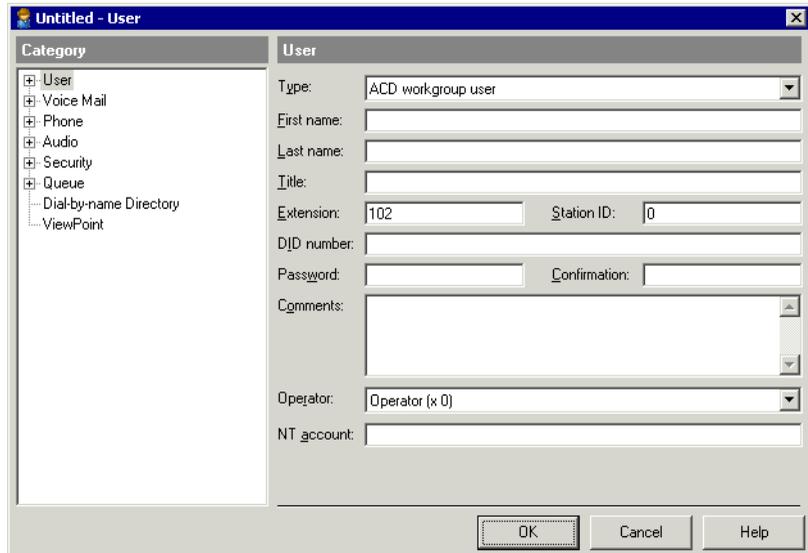
1. **Creating the ACD workgroup user.** In the Administrator, create a new user of the type **ACD workgroup user**. Name it for the ACD workgroup (for example, “Sales”). See page 7-5.
2. **Creating the workgroup for the ACD agents.** In ViewPoint, create a workgroup that contains the agents who will participate in the ACD workgroup. You can create more than one workgroup of agents if you want a primary workgroup and backup groups. See page 7-6.
3. **Creating the ACD workgroup user’s routing list.** In ViewPoint, give the ACD workgroup user an active routing list with the “Call me at multiple locations” action. This routing list then distributes calls to the agents in the workgroup. Give the routing list a final action of Hold/Restart, so that if all agents are busy, the caller remains on hold until an agent is ready. See page 7-7.
4. **Sharing the ACD workgroup user’s Call Monitor, voice message folders, Call Log, and Contacts folders.** In ViewPoint, share these folders to the workgroup of agents, so that the agents can manage incoming queue calls, the queue’s voicemail, the queue’s call history, and the queue’s contacts. See page 7-11.
5. **Creating the menu choice in the auto attendant.** In the Administrator, create an auto attendant menu choice that transfers callers to the ACD workgroup user’s extension (for example, “For Sales, press 2”). See page 7-13.

## Creating the ACD workgroup user

The ACD workgroup user does not represent a real person with a phone. It is a mechanism that keeps calls on hold and then sends them to members of one or more workgroups.

### To create the ACD workgroup user

1. In the Administrator, choose **File > New > User**.



2. From the **Type** dropdown list, select **ACD workgroup user**.
3. Name the user after the workgroup that you will create. In the example given here, the workgroup represents the Sales department, so the name “Sales” has been entered in the **Last name** field.
4. Accept the extension suggested or enter a different one. Give the user a password. Assign a station ID of 0. The workgroup user does not have a phone and calls to this extension are routed to the agents’ phones by the user’s routing list in ViewPoint.

**Note:** You can also give the ACD workgroup user a Direct Inward Dial (DID) number if you want a dedicated phone number for the workgroup. This number can be instead of or in addition to a menu choice from the auto attendant. Your phone lines must support DID to use this option.

5. Click the Recordings tab. As a voice title for the ACD workgroup user, record the name of the workgroup (for example, “Sales”). Callers who choose the workgroup from the main menu will hear “Transferring to” followed by the voice title.
6. On the Recordings tab you can give the ACD workgroup user a mailbox so that callers can leave a voice message instead of waiting on hold. It is recommended that you increase the size of the mailbox if the number of agents in the workgroup or the volume of calls is high.

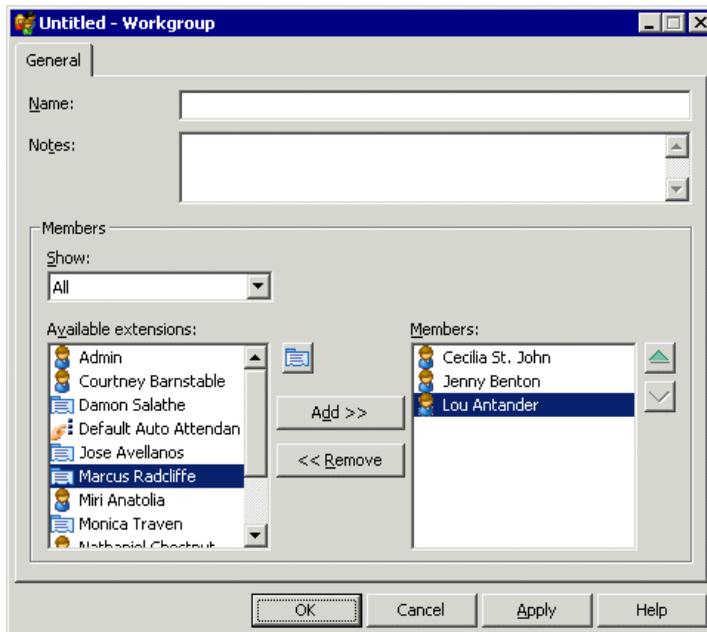
7. Click the Call Handling tab. Under **Screen and announce the caller for these types of calls**, uncheck **Internal**, **External**, and **External Direct**. If these types of calls are left checked, callers receive prompts to state their names.
8. Click **OK**.

### Agent vs. workgroup user call screening settings

A TeleVantage advanced setting, **ServerUseUserScreeningSetting**, governs how call screening settings interact with ACD workgroups when an agent is forwarding calls. For example, an ACD workgroup agent might have **Prompt recipient to accept or decline call** checked in his forwarding options, while the ACD workgroup user has call screening unchecked for all calls. The advanced setting governs which call screening settings are used in case of conflicts. For more information on advanced settings, see Appendix J of *Installing TeleVantage*.

### Creating the workgroup for the ACD agents

1. Log on to ViewPoint as the ACD workgroup user.
2. Choose **File > New > Workgroup**. The Workgroup dialog box opens.



3. Name the workgroup after the ACD workgroup, for example, “Sales.”
4. Build the workgroup by selecting each agent in the **Available Extensions** list, and then clicking **Add**. Press CTRL to select multiple agents. Added agents appear in the **Members** list.

To have agents answer calls from home, have them forward their calls to the external phone. You could also define them as contacts and add them to the workgroup here.

**Note:** Contacts in an ACD workgroup and users with call forwarding are ignored if you use the Simultaneous distribution method.

5. Use the arrows next to the **Members** list to change the order of agents in the workgroup. The Top Down method of distributing calls starts at the top of the workgroup, so if you are using that method you might want your most skilled agent listed first. The Round Robin method is also slightly affected by the order of the workgroup. For the Simultaneous method, workgroup order is ignored.
6. Click **Apply** or **OK**.

Repeat the steps above if you need to create other workgroups. You might create more than one workgroup if you are defining overflow agents or shifts. See “Using multiple groups for specific shifts” on page 7-10 and “Creating an overflow workgroup” on page 7-11.

**Note:** Agents can answer incoming calls for a workgroup whether or not they are in the workgroup. As long as you have shared the ACD workgroup user’s Call Monitor folder with them, they can answer incoming calls by using the **Actions > Take Call** command in the Call Monitor folder. The Take Call command overrides the first-in, first-out hold sequence. In this way their phones do not ring with ACD calls, but they can relieve the burden on workgroup members if several callers are waiting on hold.

## **Creating an Extensions folder tab that shows the agents**

You can have the agents of the ACD workgroup appear in a separate tab in ViewPoint’s Extensions folder. The tab shows the members of the workgroup, making it easy to see all agents and their current status. The tab is visible to all agents.

### **To create an Extensions folder tab for the agents**

1. Using the Administrator, create a new public workgroup.
2. Populate the workgroup with the ACD workgroup agents, just like the personal workgroup that you created in the previous section. Include in the public workgroup all the ACD workgroup’s agents, even if you had split them between multiple personal workgroups to create overflow agents or shifts.

Because the workgroup is public, it automatically appears as a tab in the Extensions folder of its members. The ACD workgroup does not use this workgroup to distribute calls—the workgroup’s only function is to provide the Extensions folder tab.

**Note:** If you add or remove agents from the personal workgroup attached to the ACD workgroup user’s routing list, remember to add or remove the same agents from the public workgroup.

## ***Creating the ACD workgroup user’s routing list***

The ACD workgroup user’s routing list takes incoming calls to the ACD workgroup user and distributes them to the agents. To do this, the routing list uses the action **Call a workgroup**, which rings agents in a workgroup.

If an agent is already on the phone, the routing list skips that agent and proceeds to the next agent in the workgroup. If an agent does not answer the phone, the routing list rings it for the number of seconds that you specify and then proceeds to the next agent. If all agents are unavailable, the call continues to the next action in the routing list, if there is one. You can configure the next action to send calls to a second, overflow workgroup.

If no one in the workgroup is ready, TeleVantage plays the caller a hold message, and the routing list begins at the first action again. The call continues to cycle until it is answered or until the caller chooses to stop waiting.

**Important:** It is highly recommended that you use music on hold for callers waiting for an agent. If you do not have a station set up to play music on hold, callers hear the ringing tone as they wait for their calls to be answered. For more information about playing music for callers on hold, see *Administering TeleVantage*.

### To create the ACD workgroup user's routing list

1. Log on to ViewPoint as the ACD workgroup user.
2. In the Routing Lists folder, choose **Routing Lists > New Routing List**. The Routing List dialog box opens.

The screenshot shows a dialog box titled "Untitled - Routing List". It has a "Name:" field with the text "Sales RL". Below this is an "Actions" list containing one item: "Call everyone in Sales Department individually". There are "Add...", "Edit...", and "Delete" buttons below the list. A checkbox labeled "Handle busy calls differently than calls not answered" is unchecked. Below that is a section for "Final action if the call is not answered or the station is busy". It contains three fields: "Play greeting:" with a dropdown menu showing "System hold greeting", "Action:" with a dropdown menu showing "Pause and repeat", and "Pause duration:" with a text box containing "30" and the label "seconds". At the bottom of this section are two checked checkboxes: "Active routing list for this extension" and "Default personal status routing list". At the very bottom of the dialog are four buttons: "OK", "Cancel", "Apply", and "Help".

3. Enter a name for the routing list.
4. Delete the action **Call me where I am** from the **ACTIONS** list. You will add the new action in step 7.
5. Under **Final action if the call is not answered**, set the following options:

- Under **Action**, choose **Pause and Repeat**. This setting ensures that if all agents are busy, callers remain on hold and cycle through the routing list again. The result is that they remain on hold until their calls are answered.
- Optionally, change the greeting in the **Play Greeting** dropdown list, or uncheck the field to have no greeting play. Note that if all agents are busy, callers hear the greeting multiple times, separated by the **Pause Duration** setting, until their calls are answered. This recording can be a special one that you make that assures callers that their calls are important and will be answered. You can choose the System Hold Greeting, which says, “The person you are calling is unavailable. To hold, please stay on the line. To leave a message, press 1.” To record a new greeting directly from this dialog box, click the button next to the field. See *Using TeleVantage* for instructions on how to record greetings.

**Note:**The caller options of pressing **0** or **1** (to transfer out of hold or leave voicemail) work only while the greeting is playing. After the caller goes back on hold, key presses are inactivated. Therefore, be sure to record a few seconds of silence at the end of your greeting so that the caller has enough time to press a key.

- Under **Pause Duration**, specify how long calls pause after each cycle before beginning the routing list again. If you play a greeting, you should set this to at least 30 seconds, because if all agents in the routing list are busy, callers will hear the greeting over and over again, separated only by the time you enter here.
6. Check **Active routing list for this extension** and **Default personal status routing list**.
  7. Click **Add** to add a new routing list action to the **Actions** list that will distribute calls to the ACD agent workgroup. The Routing List Action dialog box opens.



8. From the **Action** dropdown list, select **Call a workgroup**.
9. From the **Workgroup** dropdown list, select the workgroup that contains the ACD agents. Be sure to select the ACD workgroup user’s personal workgroup, not the

public workgroup that you created for purposes of showing Extensions folder tabs (see “Creating the workgroup for the ACD agents” on page 7-6).

You can create a new workgroup directly from this dialog box by clicking the button next to the field.

**10.** Choose one of the following distribution methods:

- **Sequentially from the top down.** Calls try the agents in a fixed sequence. Each call goes to the agent at the top of the list first. If that agent is busy, the call goes to the next agent on the list, and so on.
- **Individually in a round robin.** Calls try the agents in the same sequence as with Top Down, but starting with the next agent each time. If the first call was answered by the first agent on the list, the next call starts by trying the second agent on the list, and so on. This option distributes calls equally throughout your workgroup.
- **Simultaneously.** All phones ring at once, and the first agent to answer the call takes it. This feature is especially handy for small offices or departments. Call forwarding is ignored, so that only the agents’ default phones are tried. Any contacts in the workgroup are ignored, unlike the other two methods.

**Note:** For information about reordering a workgroup, see “Creating the workgroup for the ACD agents” on page 7-6.

**11.** In the **Ring duration** field, set the minimum number of seconds that TeleVantage should ring each agent. TeleVantage rings each ready agent in the workgroup for the amount of time entered here. External contacts ring for at least 30 seconds even if you specify a lower number.

**12.** Under **When calling an external number**, uncheck **Prompt recipient for password**. This setting ensures that agents working at external phones can answer ACD calls without any delay.

**13.** Uncheck **Prompt caller before trying this action**.

**14.** Click **OK** to close the Routing List Action dialog box.

**15.** In the Routing List dialog box, click **OK**.

See *Using TeleVantage* for more information about routing lists.

**Note:** Always set the routing list to send calls to a workgroup as described here. If you set the routing list to send calls to individual agents, first-in, first-out (FIFO) hold will not work.

## Using multiple groups for specific shifts

If your ACD workgroup has different agents that replace each other in shifts, you can create multiple groups to represent the different shifts of agents. When a shift changes, you can edit the routing list so that it points to the new workgroup, as follows:

- 1.** In the Routing List folder in ViewPoint, double-click the active routing list for the ACD workgroup user.
- 2.** Double-click the action **Call workgroup**.

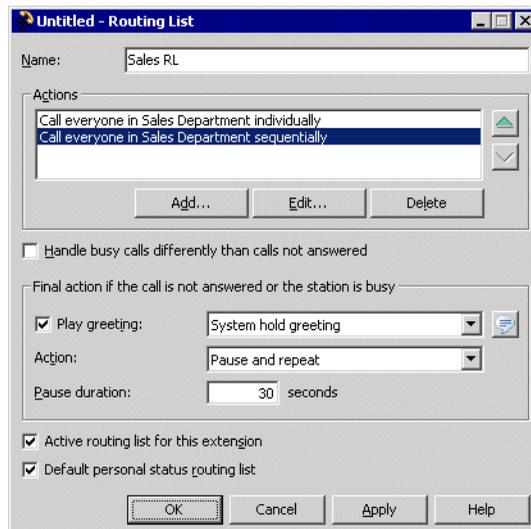
3. Under **Workgroup**, select a different workgroup.
4. Click **OK** to close the Routing List Action dialog box.
5. Click **OK** to close the Routing List dialog box.

You can also create different routing lists for the ACD workgroup user, each of which points to a different workgroup, then create a call rule for the ACD workgroup user that automatically switches routing lists at the times of day when the shifts change. For more about call rules, see Chapter 17 of *Using TeleVantage*.

## Creating an overflow workgroup

You can create one or more overflow groups of agents that receive ACD calls if all agents in the primary ACD workgroup are busy.

1. Create a second workgroup that contains the agents that you want to be in the overflow workgroup. See “Creating the workgroup for the ACD agents” on page 7-6 for instructions.
2. Create a second action in the ACD workgroup user’s routing list that is similar to the first action, but that points instead to the overflow workgroup. A call cycles through all agents in the first workgroup. If they are busy, the call proceeds to the overflow workgroup.



Continue creating the routing list action as shown in “Creating the ACD workgroup user’s routing list” on page 7-7.

## Sharing the ACD workgroup user’s folders to the agents

You can share the following folders from the ACD workgroup user’s account to the agents, giving the agents the ability to access the folders in their ViewPoints.

- **The Call Monitor.** Agents can see a separate tab in their Call Monitor views that displays ACD workgroup calls. Agents can switch between that tab and the All tab, which shows their ACD and non-ACD calls together.
- **Voice message folders.** If you share the Inbox, agents can listen to and manage the queue's new voice messages. If you share the Deleted folder, agents can delete the queue's voice messages. If you share other voice message folders, such as the Saved folder, agents can move the queue's messages between folders.
- **The Call Log.** Agents can view and respond to the queue's call history.
- **Contacts folders.** Agents can view and edit the queue's contacts.

### To share an ACD workgroup user's folder to the agents

1. Log on to ViewPoint as the ACD workgroup user.
2. If the Folder List is not showing, choose **View > Folder List**.
3. Right-click a folder that you want to share and choose **Share**. The Folder Properties dialog box opens to the Sharing tab.
4. In the **Available users** list, select the ACD workgroup.
5. Click **Add**. The members of the workgroup are added to the **Share with these users** list.
6. Click **OK**.
7. Repeat steps 3-6 to share other folders.

### Notes

- You do not have to share every folder with every agent. For example, you could share the voice message folders only with certain agents, so that only they would be able to manage the queue's voicemail. To remove an agent from the **Share with these users** list, select the agent and click **Remove**.
- You can share a folder with other users in addition to agents by adding them to the **Share with these users** list. Because the other users are not in the workgroup, they will not receive ACD workgroup calls. However, they will be able to see and manage the ACD workgroup folders. If you share the Call Monitor to other users, they will see ACD workgroup calls in their Call Monitor views, and they will be able to answer a call using the **Take Call** command.

## Creating the menu choice in the auto attendant

This step adds a choice to your company's auto attendant main menu that transfers callers to the ACD workgroup user.

**Important:** When you complete the following procedure, your ACD workgroup will be available to callers, and you might start receiving calls. For information about taking the ACD workgroup temporarily offline, so that calls to it are sent directly to voicemail, see "Taking the ACD workgroup offline" on page 7-17.

For other ways to direct calls to the ACD workgroup user, see "Overview of setting up an ACD workgroup" on page 7-3.

### To create the menu choice in the auto attendant

1. In the Administrator, open the Auto Attendants view and double-click your auto attendant. The Auto Attendant dialog box opens.

If you have multiple auto attendants, perform these steps for each auto attendant in which you want to offer callers the menu choice of transferring to the ACD workgroup.

2. Click the Menu Choices tab.
3. Click **Add**. The Edit Menu Choice dialog box opens.

**Edit Menu Choice**

General | Advanced

Prompt to offer this menu choice:

For the Sales department, press 2

Not connected to record, press to connect

When caller presses: 2

Perform action: Transfer to Queue

Sales

Announce: Name or extension

OK Cancel Help

4. Record the prompt that you want callers to hear as part of your main menu, for example, "For the Sales department, press 2."

5. From the **When caller presses** dropdown list, choose the key that the caller must press to be transferred to the ACD workgroup.
6. From the **Perform action** dropdown list, choose **Transfer to user**, and then click the name of the ACD workgroup user in the list of users.
7. Click **OK** to close the Edit Menu Choice dialog box and then click **OK** in the Auto Attendant dialog box to close it.

## Participating in an ACD workgroup

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This section describes how agents participate in an ACD workgroup.

**Important:** This section covers instructions for working in an ACD workgroup only. For instructions on working in a call center queue, see Chapter 5.

### ***Enabling personal status for ACD workgroup agents***

By default, agents in an ACD workgroup must begin and end their shifts by checking and unchecking the **Accept ACD Workgroup calls** field in ViewPoint (see the following sections). However, if you enable the advanced setting **Server\UseGroupMemberDNDSSetting**, ACD workgroup users can use begin and end their shifts by placing themselves in the Available and Do Not Disturb personal statuses, which they can do using either ViewPoint or the telephone commands.

If **Server\UseGroupMemberDNDSSetting** is enabled, when an ACD workgroup agent places himself or herself in the Available personal status, it automatically checks the **Accept ACD Workgroup calls** field, letting the agent receive ACD workgroup calls. Likewise, selecting the Do Not Disturb personal status automatically unchecks **Accept ACD Workgroup calls**, preventing the agent from receiving ACD workgroup calls.

**Note:** With **Server\UseGroupMemberDNDSSetting** disabled, the Do Not Disturb personal status does not prevent ACD workgroup calls, unless the agent also manually unchecks **Accept ACD Workgroup calls**.

For instructions on enabling **Server\UseGroupMemberDNDSSetting**, see Appendix J of *Installing TeleVantage*. For instructions on using personal status, see *Using TeleVantage*.

### ***Marking yourself ready and unavailable***

To mark yourself as ready to receive ACD workgroup calls:

1. Log on to ViewPoint using your own name and password.
2. Click **Tools > Options**.
3. Click the Incoming calls tab.
4. Check **Accept ACD Workgroup calls**.
5. Click **OK**.

To mark yourself as unavailable, which stops ACD workgroup calls from being sent to you, uncheck **Accept ACD Workgroup calls**.

**Note:** If your ACD workgroup uses the simultaneous ring method, you cannot make yourself available while a call is ringing and answer it. Because you were not available when the call started ringing, your phone will not be rung for that call.

## Using the Call Monitor

To use the Call Monitor to handle ACD workgroup calls, agents log on to ViewPoint using their own names and passwords. They can view incoming ACD workgroup calls by using the ACD workgroup tab in their Call Monitor views.



Call Monitor folder tabs work as follows:

- **My Phone.** Displays non-ACD calls.
- **<ACD workgroup user name>.** Displays ACD workgroup calls only.
- **All.** Displays all calls together.

**Important:** For agents to see the ACD workgroup tab in their Call Monitor views, you must have shared the ACD workgroup user's Call Monitor with them. See "Sharing the ACD workgroup user's folders to the agents" on page 7-11.

## Receiving a call

When a call to the ACD workgroup arrives, the phones in the workgroup ring according to the method specified by the routing list. Calls continue to ring agents until they are answered or until the caller chooses to leave a message or hang up.

Incoming calls appear in all participating agents' Call Monitor views immediately. Agents do not have to wait for their phones to ring to take a call. As soon as an incoming call appears, they can click it in the Call Monitor folder and choose **Actions > Take Call**.

The status of a call in progress appears in agents' Call Monitor views as "Active." Agents cannot affect other agents' active calls. However, they can perform any action on their own calls, such as Hold, Transfer, Mute, and so forth.

## Placing ACD workgroup calls

If you are an ACD workgroup agent and you place a call at your desk using the telephone or ViewPoint, by default TeleVantage marks the call as a call made by you. However, you may need to place outgoing calls as part of your work as an ACD workgroup agent. Such calls in TeleVantage can be marked as calls from the ACD workgroup—not as calls from your extension—so that reports on ACD workgroup activity accurately reflect agent performance.

To mark all subsequent outbound calls as ACD workgroup calls, use your telephone keypad to press **\*14<ACD workgroup user's extension>#** at a dial tone. All calls that are made from your station are now logged as calls that are made by the ACD workgroup user. The calls appear in the Call Monitors of all agents in the workgroup. The calls do not appear on the My Phone tab in your Call Monitor. The calls are logged both in your personal Call Log and the ACD workgroup user's Call Log, with the queue name in the **From** column.

To switch back, and mark subsequent outbound calls as being from you, press **\*14#** at a dial tone again. All subsequent calls from your station are now marked as being placed by you. These calls appear only in your Call Monitor and only in your Call Log.

## Taking a break

To take a break during your work shift, uncheck **Accept ACD Workgroup calls** as described in “Marking yourself ready and unavailable” on page 7-14.

**Note:** The Do Not Disturb personal status does not stop ACD workgroup calls from ringing your phone.

## Listening to the ACD workgroup's voicemail

If you have shared the ACD workgroup user's Inbox with other agents, and given those agents the required permission, they can play and respond to the ACD workgroup's voice messages. To do so, they go to the ACD workgroup's Inbox under **Shared Folders** in the Folder List.



Agents can play and respond to the ACD workgroup's voice messages exactly as they work with their own voice messages.

## Viewing the ACD workgroup's contacts and Call Log

If the ACD workgroup's contacts and Call Log have been shared with you, you can view those folders under **Shared Folders** in the Folder List.

## Taking the ACD workgroup offline

You can take the entire ACD workgroup offline by logging on to the ACD workgroup user's account and selecting the Do Not Disturb personal status. All calls to the ACD workgroup are then sent directly to voicemail.

To bring the ACD workgroup back online, select the Available personal status for the ACD workgroup user.

## Analyzing ACD workgroup traffic

The Call Log folder in TeleVantage ViewPoint is an excellent tool for analyzing ACD workgroup traffic. The Call Log folder is described in detail in *Using TeleVantage*. This section focuses on the columns in the Call Log that are of particular interest when analyzing ACD traffic.

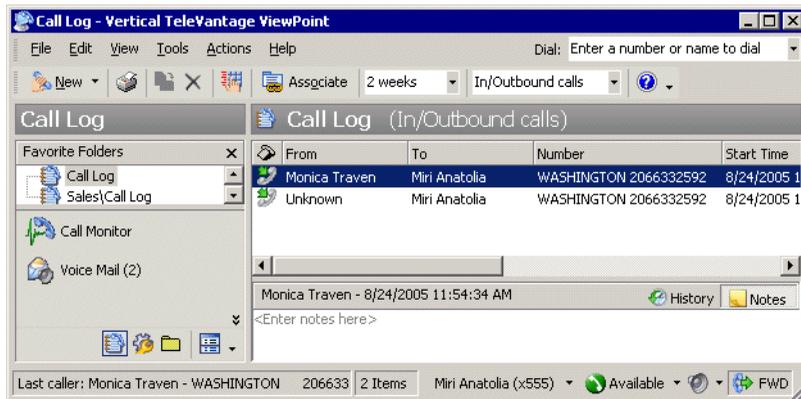
A more comprehensive tool for analyzing ACD traffic is the TeleVantage Call Center Reporter, which generates detailed reports in Microsoft Excel. For information about licensing and using the Call Center Reporter, see Chapter 8, "Running Call Center Reports."

### Viewing Call Log folder columns

Some of the Call Log columns that are helpful for analyzing ACD traffic are hidden by default. To view them, choose **View > Current View > Show Columns**.

### Reading the Call Log folder

Using the Call Log folder is discussed in detail in *Using TeleVantage*.



Columns of interest in analyzing ACD workgroup activity are:

- **Wait Time.** Shows how long the caller waited on hold beginning at the moment a menu choice was made that transferred the caller to the workgroup and ending at the moment the call was answered.
- **Answered by.** Shows the name of the agent who accepted the call.
- **Placed by.** Shows the name of the agent who placed place an outbound call associated with the ACD workgroup.
- **Duration.** Shows how long the active call lasted, beginning at the moment the connection began and ending when the call was disconnected.
- **Left message.** If checked, the caller left a message.
- **Result.** Shows how the call ended. The possible results are:
  - **Abandoned.** The caller hung up before the call was answered.
    - **Connected.** The call was accepted by an agent.
    - **To voicemail.** The caller was sent to voicemail. This result does not necessarily mean that the caller left a message. If the caller left a message, the Left Message column is checked.
    - **Blind transfer/Supervised transfer.** The caller was transferred to a new party at some point during the call.

## ***Sorting by column***

Click a column header to sort the information according to that column. Click the header again to sort in the opposite direction. By sorting on different columns you can see various aspects of agent and workgroup performance, such as:

- The agent who handled the most calls
- The agents who had the longest calls
- The time of day during which callers wait longest on hold
- The agents who handled calls from specific callers

# **RUNNING CALL CENTER REPORTS**

**CHAPTER CONTENTS**

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## About the Call Center Reporter

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The Call Center Reporter allows you to run more than a dozen detailed reports on call activity and telephone usage in TeleVantage. You run reports on both queue calls and activity that has nothing to do with queues, such as general user and trunk usage. By carefully tracking the relevant call activity, you can quickly identify how effectively your phone system is being used by agents, queues, or trunks.

With the Call Center Reporter, you can analyze data from both types of TeleVantage call distribution systems—call center queues and ACD workgroups—depending on the report. You can also analyze general system data not related to call distribution systems, such as the activity on your trunks.

You can configure each report to show information over any time period, from a single day to months or even years.

### Important notes

- You cannot run reports on time periods for which you have archived the Call Log. Archiving removes information from the TeleVantage database and makes it unavailable for reports.
- If you are running the Call Center Reporter on a computer other than the TeleVantage Server computer, make sure that the clocks on the two computers are synchronized. All report times and dates are based on the clock of the local PC.

### Call Center Reporter requirements

To run the Call Center Reporter, you need the following:

- Microsoft Excel 2000, XP or 2003 installed on your system. TeleVantage uses Excel to display reports. Excel 97 is not supported.
- Permission to run reports. You must have the permission **Access Call Center Reporter** set to Allow. See *Administering TeleVantage* for instructions on setting permissions.
- One Reporter license.

### ***Reporting on data from an earlier version of TeleVantage***

Some reports cannot include data from earlier versions of TeleVantage. When you run those reports, you see only data since the date of your upgrade, even if you select a time range that begins earlier. The table in the next section shows which reports can and cannot report on data from earlier versions of TeleVantage.

## Running a report

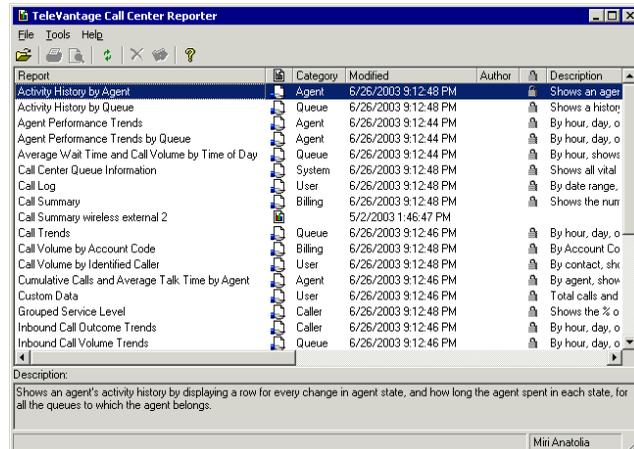
The following steps describe how to start the Call Center Reporter and run a report.

To run some reports, you must first define general Reporter Options. See “Setting general Reporter options” on page 8-7.

**Note:** You can run reports on ACD workgroups only, not public or personal workgroups. To run a report on an ACD workgroup, select the name of the ACD workgroup user.

1. Do one of the following:
  - In TeleVantage ViewPoint, choose **Tools > Reports**.
  - Run the program `TVReporter.exe`. If you start the Reporter using this method you must log on using your user name and password. By default, the full path for this file is:  
`C:\Program Files\TeleVantage\Client\Reporter\TVReporter.exe`

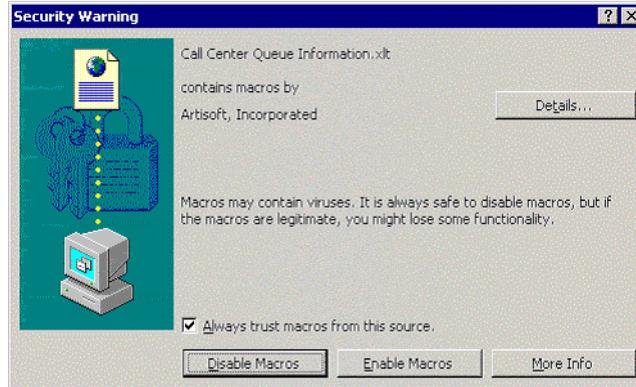
The TeleVantage Call Center Reporter dialog box opens.



2. In the **Report** column, double-click the name of the report that you want to run. The report template opens in Microsoft Excel and shows data according to the options most recently set for that report.

If the following prompt regarding macros appears while Excel is opening, check

**Always trust macros from this source.** Then click **Enable Macros**.



3. The Options dialog box for the selected report should appear. If not, you can click **Report Options** on the Excel Reporter toolbar. See “Using the Call Center Reporter toolbar in Excel” on page 8-4. Enter information in the fields of the Options dialog box to specify the parameters of the report. See “Using individual report options” on page 8-8 for more information.
4. Click **OK**. The report runs and appears in Excel.
5. Use Excel’s options to view the report in graphical or spreadsheet format.

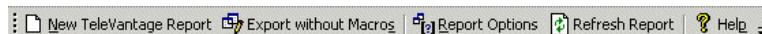
The Reports dialog box remains open. To run another report, double-click another report name in the Reports dialog box.

## Viewing report headers and footers

You must have a printer installed on your computer in order to view the headers and footers on reports. The headers and footers include such data as report title, agent and queue name, date range, date printed, and the days of the week for the report. If you do not have a printer (local or network) configured on your computer, the headers and footers will be blank.

## Using the Call Center Reporter toolbar in Excel

TeleVantage makes Call Center Reporter options available to you from within Excel on a Reporter toolbar. To display the Call Center Reporter Toolbar in Excel, choose **View > Toolbars > Call Center Reporter Toolbar**.



**Note:** For the Call Center Reporter toolbar to be available, you must have opened a report from the TeleVantage Call Center Reporter dialog box.

The Call Center Reporter toolbar offers buttons for the commands listed in the following table.

Call Center Reporter toolbar buttons	
	<b>New TeleVantage Report.</b> Opens the Reports dialog box or brings it to the front if it is already open, so that you can select a report to run. See “Running a report” on page 8-3.
	<b>Export without Macros.</b> Saves the report so that it can be opened in Excel on any PC. Reports saved with macros can be opened only on PCs with TeleVantage applications installed.
	<b>Report Options.</b> Opens the Report Options dialog box for the report currently showing, so that you can change the report parameters and run the report again.
	<b>Refresh Report.</b> Runs the report again with the same options as were used to generate the current report. Use to update the report with the latest data.
	<b>Help.</b> Opens the TeleVantage Call Center Reporter online Help.

## Shared and local reports

Reports can be either shared or local, as follows:

- **Shared reports** are stored on the TeleVantage Server computer and can be run from any TeleVantage ViewPoint workstation. Shared reports are indicated in the Reporter dialog box by  or  in the Shared/Data column.

The default path for shared reports on the Server computer is  
C:\Program Files\TeleVantage Server\Reports

- **Local reports** are stored on TeleVantage ViewPoint computer and can only be run from that computer. Local reports are indicated in the Reports dialog box by  in the Shared/Data column.

The default path for local reports is  
C:\Program Files\TeleVantage\Client\Reporter\Reports

The reports that come with TeleVantage are all shared reports.

## To share a local report

1. Select the report in the Reports dialog box.
2. Choose **File > Share**.

After sharing a report, click the **Refresh** button on the Reports dialog box toolbar (  ) to see the shared report in the Reports dialog box.

## Do not edit local TeleVantage report templates

TeleVantage maintains template (.XLT) files for its reports on the local computer for its internal use. Do not modify these as a means of editing the TeleVantage reports. If you do, your changes will be lost, because TeleVantage regularly overwrites the reports.

To modify a report template, save the .XLT file with a different name so that it is not overwritten by the Reporter.

## *Reporting on internal calls*

Whether or not your reports include internal (station-to-station) calls depends on whether you are logging that data. To specify whether or not you are logging internal calls, do the following:

1. In the Administrator, choose **Tools > System Settings**.
2. Click the Call Log and Trunk Log tab.
3. To log internal calls, select **Log internal calls**.  
To stop logging internal calls, clear the check box.
4. Click **OK**.

## *Reporting on outbound call center calls*

For agents' outbound calls to appear in reports, the agents must mark their outbound calls as calls that are placed from the call center. See "Placing calls from a queue" on page 5-8 and "Placing ACD workgroup calls" on page 7-16.

## *Backups of original reports*

Because a user can accidentally overwrite a shared report by sharing one of his own reports with the same name, backup copies of the original TeleVantage report templates are provided in the Reports\_backup directory in the TeleVantage Server directory.

## Setting general Reporter options

Some reports will not run unless you have set general Reporter options. To set general Reporter options, you must have Administrator permissions.

1. From the Reporter, choose **Tools > Options**. The Options dialog box opens.

The screenshot shows the 'Options' dialog box with the following details:

- Toll free options:** A text box contains '800,866,877,888'. Below it, an example reads: 'Example: 800, 877, 617, 508452, 508673'.
- In-state options:** A label 'Label for in-state category:' is followed by a text box containing 'In-state'. Below it, a text box for 'Enter in-state area codes/exchanges separated by commas:' is empty. An example below reads: 'Example: 617, 978, 508452, 508673'.
- Criteria for counting calls:** Four input fields with labels and units:
  - Minimum outbound number length: 10 digits
  - Minimum outbound call duration: 3 seconds
  - Minimum inbound call duration: 0 seconds
  - Short call duration: 10 seconds
- Buttons: OK, Cancel, Help.

2. Under **Toll-free options**, enter the prefixes of phone numbers that are free to dial from the local TeleVantage Server. These include your local area code as well as any toll-free area codes such as 800 and 888. Separate entries with commas. You do not need to enter long-distance prefix digits, such as the “1” in the U.S.

If your entire local area code is not free, you can enter each free exchange as the area code plus exchange, for example 508452, 508673.

3. Under **In-state options**, use the following fields to define how in-state calls appear on the outbound call reports:
  - **Label for in-state category.** Type the name for in-state calls that will appear on the x-axis of reports that use this option.
  - **Enter in-state...** Enter a list of area code and exchanges that are in your State but not free, for example area codes in your State other than your local one. You do not need to enter long-distance prefix digits, such as the “1” in the U.S.
4. Under **Criteria for counting outbound calls**, use the following fields to define which calls are counted in various report categories:
  - **Minimum outbound number length.** In North America this field should be left at 10 so that the reports pick up all long-distance calls. Further filtering, for example

for the Outbound Long Distance Summary report, will be provided by the toll-free and in-state fields above.

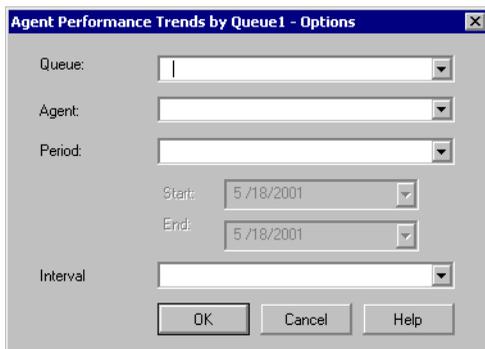
- **Minimum inbound/outbound call duration.** These two fields ensure that the reports count only calls that were connected. You can adjust the setting as desired. A setting of 1 second is generally sufficient to include all connected calls.
- **Short call duration.** Enter the number of seconds at or below which a call is considered a “short call” by various reports, such as the Agent Performance by Skill report.

5. Click **OK**.

## Using individual report options

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The Options dialog box appears automatically whenever you run a report, letting you specify the parameters for the report. You can also click **Report Options** on the Reporter toolbar to change a report’s parameters and run it again, for example, with a different date range. The following figure shows the Report Options dialog box for the Agent Performance Trends by Queue report.



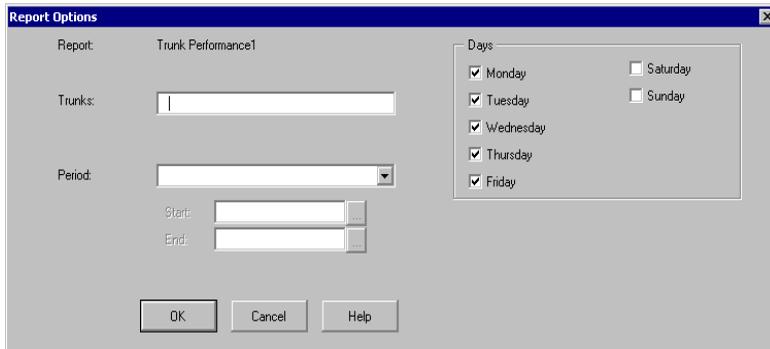
The following options are available for most reports:

- **Queue.** Select the queue on which you want to run the report.
- **Agent.** Select the agent on whom you want to run the report.
- **Period.** Select the time frame for which you want to report. Use the **Start** and **End** fields for custom time frames.
- **Interval.** Select the length of time reflected by the report, such as hours, days, or months. The time periods appear on the x-axis of the report.

Click **OK** in the Report Options dialog box to run the report according to the options that you selected.

## Report Options for the Trunk Performance report

The Trunk Performance report has specific fields that do not appear in the Options dialog box for other reports.



Under **Trunks**, enter the TeleVantage trunk numbers of the trunks on which you want to report. Use hyphens to indicate a range of trunks and commas to separate individual trunk numbers or a series of trunk ranges. The following examples are all valid entries:

- 1, 2, 3
- 1-10
- 1-10, 15-20
- 1, 4, 5, 10-20, 25-30, 40

Do not use overlapping trunk ranges, such as 1-10, 9-15. Be sure to use commas, not semicolons, to separate entries.

Under **Days**, check each day of the week for which you want trunk usage reported. For example, to report on weekday trunk performance, check each day except Saturday and Sunday.

Under **Period**, select a date range as with other reports (see the previous section). The report will cover the time from the first call through the selected trunks within the date range, to the last call through the selected trunks within the date range. The report ignores calls made before the upgrade to TeleVantage 4.0.

## Using the Excel tabs

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Most TeleVantage reports contain the following tabs in Excel:

- **Report.** A graphical presentation of the data.
- **Data.** A numerical presentation of the data.
- **Report Options.** A worksheet showing the options selected for the report.

## Totals on the Data tab

Sometimes totals on the Data tab appear to be inaccurate. This is usually due to the way Excel presents numbers, rounding them to the number of displayed digits. The total is always formed by taking the sum of the complete numbers, then rounding. For example:

	Displayed numbers	Complete numbers
	6.47	6.4650
	5.87	5.8699
Totals	12.33	12.3349

## Using the Report Options tab in Excel

Most users should not try to change the report parameters by changing the data on the Report Options tab. Instead, click **Report Options** on the Reporter toolbar and enter new parameters in the Options dialog box, as described earlier in this section.

The Report Options tab in Excel is for those who want to print out the full workbook, with a record of the selected options. Macro writers and other skilled spreadsheet users can also use the tab to generate reports without using the TeleVantage Report Options dialog box.

## Printing and scheduling reports with the Report Runner

The Report Runner enables you to create a desktop shortcut for running and printing a report. You can then run the report just by clicking the shortcut. You can choose whether to send the report to a printer or a file.

You can also use the Windows Task Scheduler to run the Report Runner at any time and interval you choose. See Windows Online Help for the Task Scheduler for more information.

### To create a Report Runner shortcut for running a report

1. Create a shortcut to the Report Runner file, `Tvrrun.exe`. The default location for the Report Runner file is:

`C:\Program Files\TeleVantage\Client\reporter\Tvrrun.exe`

For instructions on creating a shortcut, see your Microsoft Windows documentation.

2. Right-click the shortcut and choose **Properties**.
3. In the **Target** field, add the following after the path:
  - The path to the .xls file of the report you want to run.
  - (optional) -C to send the chart report to your default printer.
  - (optional) -T to send the data report to your default printer.

- (optional) -S <output file> to print the report to a file. If you do not specify an output file, the new report overwrites the source .xls file. **Note:** Do not use quotes around the file path.

See the next section for examples of the **Target** statement.

4. To set report options, such as queue name or selected hours, use the Report Options tab in your saved .xls spreadsheet file. See “Using the Report Options tab in Excel” on page 8-10.
5. Click **OK**.

## Examples of the shortcut Target statement

The following are examples of how the shortcut’s **Target** field might look:

- C:\Program Files\TeleVantage\Client\reporter\Reports\Tvrrun.exe C:\Program Files\TeleVantage\Client\reporter\Reports\Wait by Outcome1.xls -C

The chart for the Wait by Outcome1.xls report is sent to the printer.

- C:\Program Files\TeleVantage\Client\reporter\Reports\Tvrrun.exe C:\Program Files\TeleVantage\Client\reporter\Reports\Trunk Performance.xls -C -T

The chart and the data sheet for the Trunk Performance Report are sent to the printer.

- C:\Program Files\TeleVantage\Client\reporter\Reports\Tvrrun.exe C:\Program Files\TeleVantage\Client\reporter\Reports\User Activity.xls -S

The .xls file of the User Activity report is overwritten with the new report.

- C:\Program Files\TeleVantage\Client\reporter\Reports\Tvrrun.exe C:\Program Files\TeleVantage\Client\reporter\Reports\User Activity.xls -S C:\Program Files\TeleVantage\Client\reporter\Reports\Fred\_Sanders.xls

The User Activity report is written to the file Fred\_Sanders.xls in the Reports directory (Note no quotes around the file path).

## ***Procedure for using the Report Runner***

When running or scheduling reports automatically with the Report Runner, you must do the following:

1. Run the report manually for the user you want and for the period you want.
2. Clear all sheets except for the “Report Options” sheet. (Click the top left cell to select all, then press **Delete**.)
3. On the “Report Options” sheet, do the following:
  - Clear the date range in the “Period” row (column B).
  - Clear the data in the “Days” row (columns B and C).
  - In “Days” row (column B ) enter 1,2,3,4,5,6,7.
  - In the “Days” row (column C) enter Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday.

4. Save the report (name it something like “User Template.xls”).
5. Set up the Report Runner to use this template every day to generate the report. An example command line would look like this:

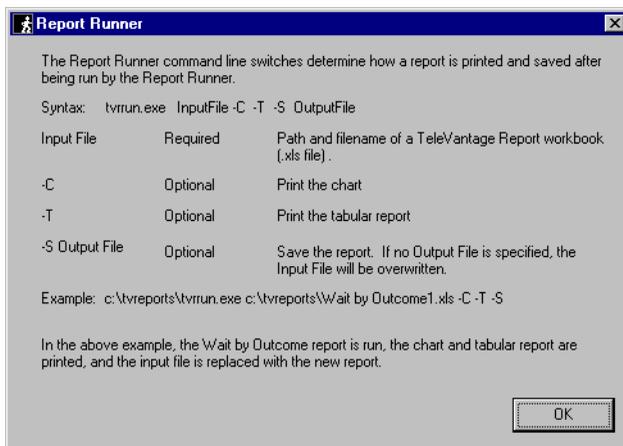
```
C:\Reports\User Template.xls -S C:\Reports\User3.xls
```

Note the following:

- If the query generates no data, the existing report will be cleared , so you won't see the data from the previous execution.
- The “Days” option in the template will be ignored if the period is “Today” or “Yesterday.” In that case the day used will be the appropriate one for the period chosen.

## ***Running the Report Runner without a command line statement***

If you run the file `Tvrrun.exe` without modifying its command line, the system opens a Help topic that explains the Report Runner commands.



## List of reports

You can produce the reports listed in the following table. For detailed examples of the reports, see the sections referenced in the table.

Call Center Reports			
Name	Description	Requires data from this version or higher	Queue / ACD workgroup
<b>Activity History by Agent report</b> (see page 8-19)	Shows an agent's activity history by displaying a row for every change in agent state and personal status, and how long the agent spent in each state and personal status, for all the queues to which the agent belongs.	5.0	Queue only
<b>Activity History by Queue report</b> (see page 8-21)	Shows a history of all of the agent activity in a queue by displaying a row for every change in agent state and personal status, and how long each agent in the queue spent in each state and personal status. Shows data for all agent activity in the queue.	5.0	Queue only
<b>Agent by Queue and Skill Configuration report</b> (see page 8-23)	Lists each agent, showing to which queues he or she belongs and which skills he or she possesses.	7.0	Queue only
<b>Agent Call Trends report</b> (see page 8-24)	Shows the number of calls an agent made or received and the agent's average talk time.	4.0	Queue only
<b>Agent Performance Trends by Queue report</b> (see page 8-25)	By hour, day, or any time interval, shows number of calls an agent made or received while working in a queue and average talk time.	3.5	
<b>Agent Performance by Skill report</b> (see page 8-26)	Provides summary data showing how each agent in a queue performed in a given period by skill	7.0	Queue only
<b>Agent State Summary report</b> (see page 8-27)	By hour, day, or any time interval, shows the amount of time an agent spent in each state for each queue to which he or she belonged.	4.0	Queue only

## Call Center Reports

Name	Description	Requires data from this version or higher	Queue / ACD workgroup
<b>Agent State Summary by Queue report</b> (see page 8-28)	By hour, day, or any time interval, shows the amount of time each agent spent in each state for a queue.	4.0	Queue only
<b>Average Wait Time and Call Volume by Time of Day report</b> (see page 8-29)	By hour, shows average wait time and inbound call volume for a queue or workgroup.	4.0	Queue or ACD workgroup
<b>Call Center Queue Information report</b> (see page 8-30)	Lists all general information for each queue in your system, including a list of all agents and their settings.	3.5	Queue only
<b>Call Distribution by Skill and Agent report</b> (see page 8-31)	Provides a summary of how many calls were answered per selected agents and selected skills.	7.0	Queue only
<b>Call Distribution by Skill and Queue report</b> (see page 8-32)	Provides a summary of how many calls were answered per selected queues and selected skills.	7.0	Queue only
<b>Call Log report</b> (see page 8-33)	By any time interval, shows all the information that appears in the Call Log for the entire system or the selected user or queue, in a spreadsheet form that is easy to sort or filter.	3.5	Queue or ACD workgroup
<b>Call Result by Skill report</b> (see page 8-34)	Shows comparative call results for all calls with skill requirements.	7.0	Queue only
<b>Call Transfer report</b>	By any time interval, reports on all of the calls that a user or queue transferred to other entities.	6.0	Queue or ACD workgroup
<b>Call Trends report</b> (see page 8-37)	By hour, day, or any time interval, shows total outbound calls made by agents in a queue.	3.5	Queue or ACD workgroup

## Call Center Reports

Name	Description	Requires data from this version or higher	Queue / ACD workgroup
<b>Call Summary report</b> (see page 8-35)	By extension or workgroup, shows the total number of calls and the average duration of calls placed.	5.0	Queue or ACD workgroup
<b>Call Volume by Account Code report</b> (see page 8-38)	By account code, shows the number of inbound and outbound calls made using each account code and the total talk time, for a user, queue, workgroup, or all calls in the system.	4.0	Queue or ACD workgroup
<b>Call Volume by Identified Caller report</b> (see page 8-39)	By TeleVantage contact, shows total calls a user, queue, or workgroup received and average talk duration. For example, if you created 5 contacts, each to track a different promotional advertisement code (using PIN numbers to identify each contact), this report would show how many people called for each promotion.	4.0	Queue or ACD workgroup
<b>Cumulative Calls and Average Talk Time by Agent report</b> (see page 8-40)	By agent, shows total calls made and received and average talk time for any queue or workgroup.	3.5	Queue or ACD workgroup
<b>Custom Data</b> (see page 8-41)	Total calls and average talk time associated with calls from a user, queue, or all system calls, that are identified by a specific custom data variable. For example, an auto attendant could be configured to set the "Product" custom variable to "Apples" or "Oranges" based on the menu choice selected. This report would show how many callers selected Apples versus Oranges, and the average length of those calls.	4.0	Queue or ACD workgroup

## Call Center Reports

Name	Description	Requires data from this version or higher	Queue / ACD workgroup
<b>Grouped Service Level report</b> (see page 8-42)	By five-second increments, shows wait time for all calls that were answered by a user..	6.0	Neither
<b>Inbound Call Outcome Trends report</b> (see page 8-43)	By hour, day, or any time interval, shows total calls handled by one agent, multiple agents, abandoned, sent to voicemail, and the total number of calls for any queue.	4.0	Queue or ACD workgroup
<b>Inbound Call Volume Trends report</b> (see page 8-44)	By hour, day, or any time interval, shows the total calls a queue received, average wait time, and longest wait time.	4.0	Queue or ACD workgroup
<b>Outbound Call Comparison report</b> (see page 8-45)	Shows the number and duration of outbound calls in the following categories: In-state, Toll-free, and Other.	5.0	Neither
<b>Outbound Calls by Phone Number report</b> (see page 8-46)	Shows the number and duration of outbound calls placed to prefixes that you specify, for example 800 or 212.	5.0	Neither
<b>Outbound Long Distance Summary report</b> (see page 8-47)	By any time interval, shows your outbound long-distance phone traffic and estimates your phone bill.	5.0	Neither
<b>Queue Call History Detail report</b> (see page 8-49)	Shows the call history for a selected queue, including the skill requirements for each call.	7.0	Queue or ACD workgroup
<b>Queue Comparison report</b> (see page 8-50)	Compares all queues on total number of calls, average wait time, and total calls handled, abandoned, and sent to voicemail. For example, you can see how well your sales queue performs compared to your technical support queue.	4.0	Queue or ACD workgroup

## Call Center Reports

Name	Description	Requires data from this version or higher	Queue / ACD workgroup
<b>Queue Performance Summary by Agent report</b> (see page 8-51)	Lists performance information for each agent in a queue, including inbound, outbound, and internal call statistics, as well as the percentage of time spent in each agent state.	7.0	Queue only
<b>Service Level report</b> (see page 8-52)	By wait time, shows the percentage of calls answered, abandoned, or sent to voicemail during a time range for a queue.	4.0	Queue or ACD workgroup
<b>Service Level by Skill report</b> (see page 8-53)	By wait time, shows the percentage of calls with a single skill requirement in a single queue that were answered, abandoned, or sent to voicemail.	7.0	Queue only
<b>Skill Assignment by Agent report</b> (see page 8-54)	Shows which agents have which skills within which queues.	7.0	Queue only
<b>Trunk Performance report</b> (see page 8-55)	By hour, shows the average number of inbound and outbound calls handled by the trunks you specify and the percentage of these trunks in use. Tells you if you need to add or remove trunks from your TeleVantage system, and can also help you predict future trunk performance.	4.0	Neither
<b>Trunk Usage report</b> (see page 8-57)	By any time interval, reports on all trunks within a dialing service in terms of the amount of time the trunks were busy.	5.0	Neither
<b>Unanswered Calls During Business Hours report</b> (see page 8-58)	By any time interval, shows inbound calls during your TeleVantage business hours that were not answered by a user..	5.0	Neither

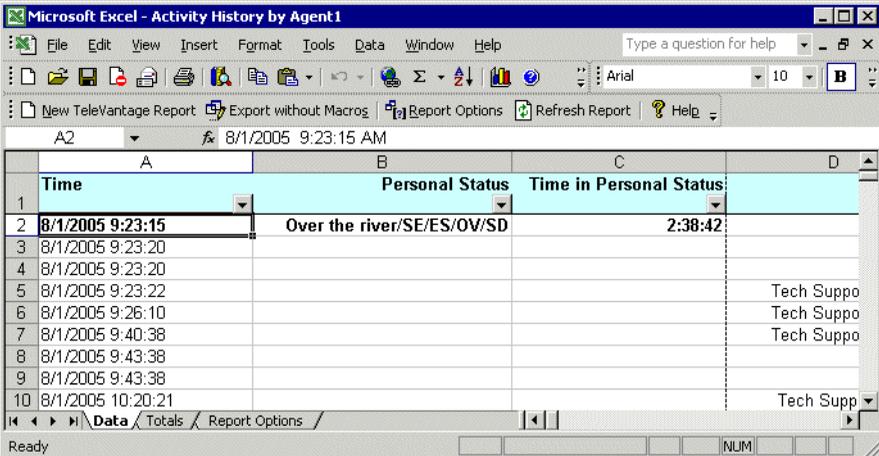
## Call Center Reports

Name	Description	Requires data from this version or higher	Queue / ACD workgroup
<b>User Activity report</b> (see page 8-59)	Pie charts showing the percentage of an agent's time spent in active versus other statuses. Shows the kinds of calls that make up the active calls.	4.0	Neither
<b>User Call Trends report</b> (see page 8-60)	Shows the number of calls a user made or received and the user's average talk time..	5.0	Queue or ACD workgroup
<b>Wait by Outcome report</b> (see page 8-61)	By hour, day, or any time interval, shows how long callers waited before their calls were handled, abandoned, or sent to voicemail.	4.0	Queue or ACD workgroup

## Activity History by Agent report

The Activity History by Agent report displays a row for every change in agent state and personal status, and how long the agent spent in each state, for all the queues to which the agent belongs.

**Note:** This report can return a very large amount of data, so you should run it for only the date range that you need, otherwise it could affect network performance.



	A	B	C	D
1	Time	Personal Status	Time in Personal Status	
2	8/1/2005 9:23:15	Over the river/SE/ES/OV/SD	2:38:42	
3	8/1/2005 9:23:20			
4	8/1/2005 9:23:20			
5	8/1/2005 9:23:22			
6	8/1/2005 9:26:10			Tech Supp
7	8/1/2005 9:40:38			Tech Supp
8	8/1/2005 9:43:38			
9	8/1/2005 9:43:38			
10	8/1/2005 10:20:21			Tech Supp

### Reading this report

This report is in data form only. It shows the following data by column:

- **Time.** Date/time at which the agent changed state.
- **Personal Status.** The agent's history of personal status changes.
- **Time in personal status.** The amount of time spent in each instance of a personal status.
- **Queue.** Name of the queue in which this state change was made. A blank cell indicates that the change applied to all queues in which the agent was a member.
- **State.** The state to which the agent changed. For an explanation of states see “The Agents pane” on page 6-3.
- **Duration.** How long the agent remained in the state.

### Filtering the report

To view all the entries of one type only, click the arrow button in any column header and select the element you want to view. The report is filtered to display only the records for that element. For example, you could filter the State column for “Standby” to see how many times the agent was checking voicemail, or filter the Personal Status column for “On Break.”

## Activity History by Agent worksheet totals

To view performance subtotals for the agent, click the Totals tab at the bottom of the report.

	A	B	C	D	E	
1	Date	Calls Answered	Calls Placed	Total Calls - All	Time on Calls Inbound	Time
47	8/23/2005	2:17:25	2:11:02	16:00:09		
48	8/24/2005	5:39:21	1:45:00	15:59:39		
49	8/25/2005	5:02:22	1:52:18	15:50:22		
50	8/26/2005		1:54:08	1:15:29		
51	8/29/2005	6:20:46		15:59:40		
52	8/30/2005	2:20:28	2:55:00	18:36:03		
53	8/31/2005	5:46:56	2:17:18	16:06:34		
54						
55	<b>Totals</b>	<b>84:00:26</b>	<b>48:30:26</b>	<b>523:11:39</b>	<b>0:00:06</b>	

The worksheet for the Activity History by Agent report displays the following statistics for the agent for each date in the date range:

**Calls answered.** Total inbound calls answered.

**Calls placed.** Total outbound calls placed.

**Inbound calls.** Total number of inbound calls

**Outbound calls.** Total number of outbound calls.

**Total calls.** Total number of calls including inbound and outbound.

**Time on calls.** Total time on queue calls for inbound, outbound, and all calls.

**Avg. call.** The average length of a call, for inbound, outbound, and all calls.

**First Activity.** Time of the agents' first state change that day.

**Last Activity.** Time of the agents' last state change that day.

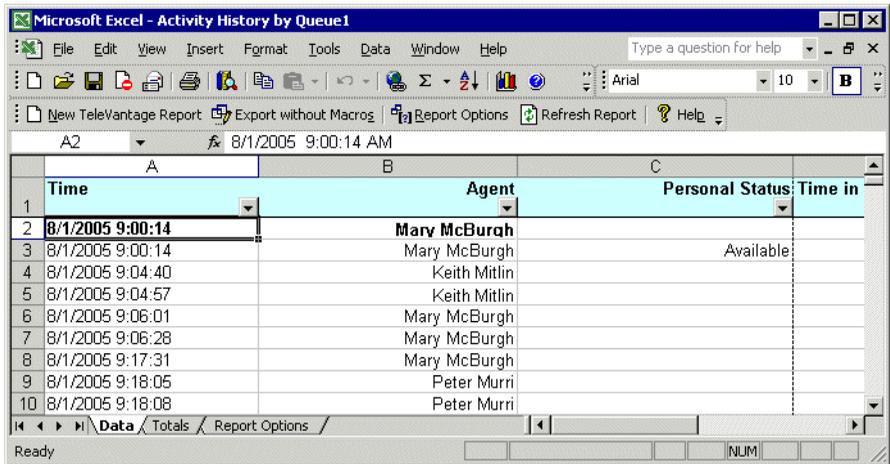
**First Queue Call.** Time of the agent's first queue call that day.

**Last Queue Call.** Time of the agent's last queue call that day.

## Activity History by Queue report

The Activity History by Queue report shows a row for every change in agent state and personal status, and how long each agent in the queue spent in each state.

This report can return a very large amount of data, so you should run it for only the date range that you need, otherwise it could affect network performance.



	A	B	C	
	Time	Agent	Personal Status	Time in
1				
2	<b>8/1/2005 9:00:14</b>	<b>Mary McBurgh</b>		
3	8/1/2005 9:00:14	Mary McBurgh	Available	
4	8/1/2005 9:04:40	Keith Mitlin		
5	8/1/2005 9:04:57	Keith Mitlin		
6	8/1/2005 9:06:01	Mary McBurgh		
7	8/1/2005 9:06:28	Mary McBurgh		
8	8/1/2005 9:17:31	Mary McBurgh		
9	8/1/2005 9:18:05	Peter Murri		
10	8/1/2005 9:18:08	Peter Murri		

### Reading this report

This report is in data form only. It shows the following data by column:

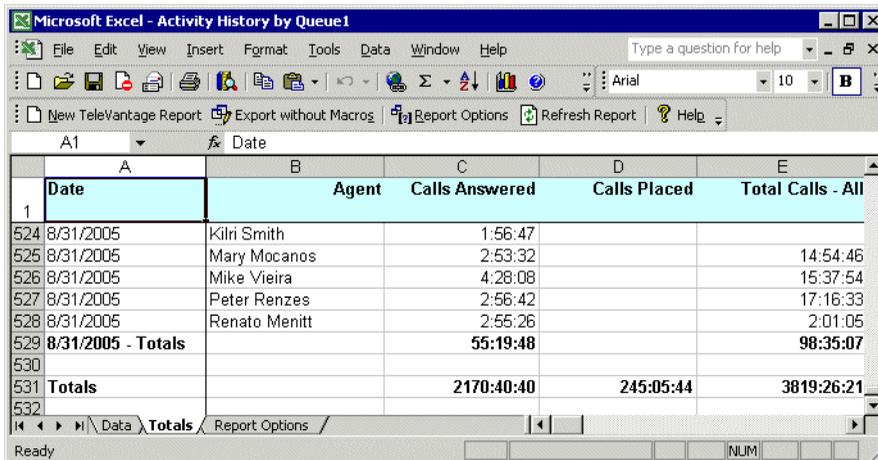
- **Time.** Date/time at which the agent changed state or personal status.
- **Agent.** Agent's name. The first and last activity of each day is displayed in bold face for each agent.
- **Personal status.** The personal status that the agent selected.
- **Time in personal status.** The length of time the agent spent in that iteration of the personal status.
- **State.** The state to which the agent changed. For an explanation of states see "The Agents pane" on page 6-3.
- **Time in state.** The length of time the agent spent in that iteration of the state.
- **Duration.** How long the agent remained in the state.
- **Signed in/out.** Displays when an agent signed in or out of the queue.

### Filtering the report

To view all the entries of one type only, click the arrow button in any column header and select the element you want to view. The report is filtered to display only the records for that element. For example, you could filter by The Agent column for "Melody Altan" to see the activity of that agent only.

## Activity History by Queue worksheet totals

To view performance subtotals for each agent and totals for the queue as a whole, click the Totals tab at the bottom of the report.



	A	B	C	D	E
1	Date	Agent	Calls Answered	Calls Placed	Total Calls - All
524	8/31/2005	Kilri Smith	1:56:47		
525	8/31/2005	Mary Mocanos	2:53:32		14:54:46
526	8/31/2005	Mike Vieira	4:28:08		15:37:54
527	8/31/2005	Peter Renzes	2:56:42		17:16:33
528	8/31/2005	Renato Menitt	2:55:26		2:01:05
529	<b>8/31/2005 - Totals</b>		<b>55:19:48</b>		<b>98:35:07</b>
530					
531	<b>Totals</b>		<b>2170:40:40</b>	<b>245:05:44</b>	<b>3819:26:21</b>
532					

The Totals sheet for the Activity History by Queue report displays the following statistics for each agent and for the queue as a whole:

**Calls answered.** Total inbound calls answered.

**Calls placed.** Total outbound calls placed.

**Total calls.** Total number of calls including inbound and outbound.

**Time on calls.** Total time on queue calls for inbound, outbound, and all calls.

**Avg. call.** The average length of a call, for inbound, outbound, and all calls.

# Agent by Queue and Skill Configuration report \_\_\_\_\_

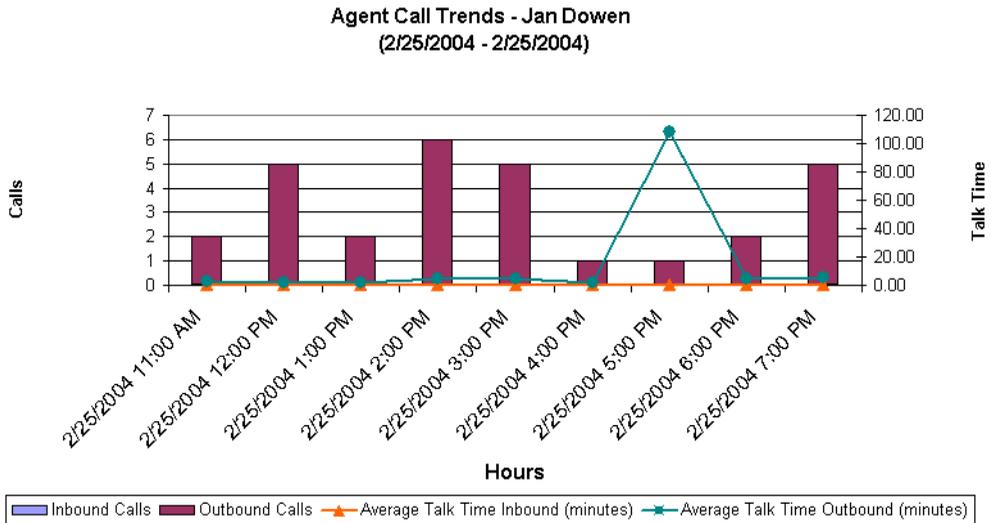
The Agent by Queue and Skill Configuration data report lists each agent, showing which queues he or she belongs to and which skills he or she possesses. There are no report options for this report.

	A	B	C
1	Agent	Queue	Skill
2	Chris Brooks	Sales Queue	DOS
3			InstantOffice
4			TeleVantage
5			Unix
6			
7		Support	DOS
8			Unix
9			
10	Mark Zeeg	Sales Queue	DOS
11			InstantOffice
12			TeleVantage
13			Unix
14			
15	Xiao Doarn	Sales Queue	DOS
16			InstantOffice
17			TeleVantage
18			Unix
19			
20		Support	DOS
21			Unix
22			
23			

Report / Data /

# Agent Call Trends report

The Agent Call Trends report displays the number of inbound and outbound calls an agent handled, with the average talk time for each category.



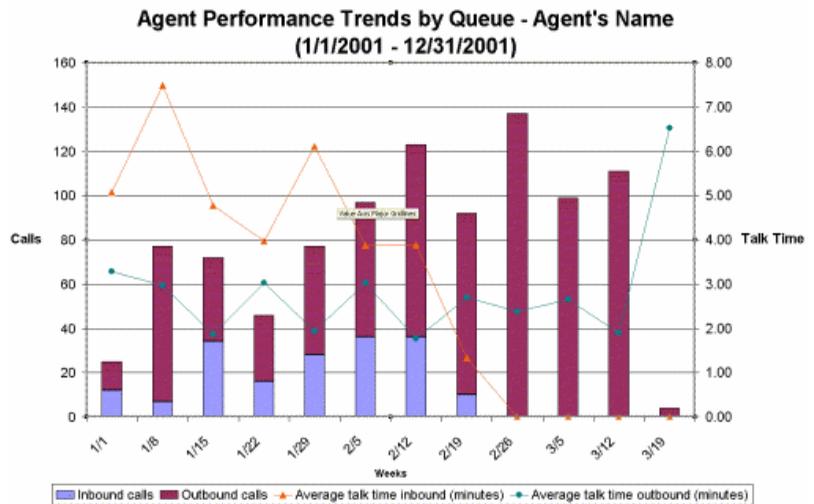
## Reading this report

The following fields appear in this report:

- **Time interval.** Displays as the x-axis of the report.
- **Calls.** The number of calls. Displays as the y-axis of the report.
- **Inbound calls / Outbound calls.** Displays as different-colored bars.
- **Average talk time Inbound/Outbound.** In minutes. Displays as two lines.

## Agent Performance Trends by Queue report

The Agent Performance Trends by Queue report shows the number of calls a user made or received for a particular queue and the average talk time. Personal calls—those sent directly to or made from the user's extension—are not included. Station-to-station calls are not included in this report unless the Administrator selects the Log Internal Calls option.



### Reading this report

The following fields appear in this report:

- **Interval.** Displays as the x-axis of the report.
- **Total number of calls.** Displays as stacked bars, one bar for inbound calls and one bar for outbound calls. Read against the left y-axis of the report.
- **Average talk time.** Displays as two lines, one for inbound calls and one for outbound calls. Read against the right y-axis of the report.

## Agent Performance by Skill report

The Agent Performance by Skill report provides summary data showing how each agent in a queue performed in a given period by skill. This report allows setting various thresholds on Report Options tab in Excel that are colored on the Report and Data tabs if those values exceed the thresholds you specify

	A	B	C	D	E	F
1	<b>Agent Performance by Skills - Sales Queue</b>					
2	(5/1/2005 - 5/31/2005, 9:00 AM - 5:00 PM)					
3	<b>Skill</b>	<b>Date</b>	<b>Agent</b>	<b>Calls Answered</b>	<b>Short Calls Answered</b>	<b>Wrap Up Time</b>
4	DOS	05/23/2005	Mark Zemma	2	0	0:00:10
5			Xiao Douy	1	1	0:00:20
6	Summary			3	1	0:00:30
7						
8	English	05/23/2005	Xiao Douy	1	0	0:00:10
9	Summary			1	0	0:00:10
10						
11	Spanish	05/23/2005	Mark Zemma	2	0	0:00:10
12			Xiao Douy	1	1	0:00:20
13	Summary			3	1	0:00:30
14						
15	Unix	05/23/2005	Xiao Douy	1	0	0:00:10
16	Summary			1	0	0:00:10
17						
18	<b>Report Summary</b>			8	2	0:01:20
19						
20						
21						
22						

### Reading the report

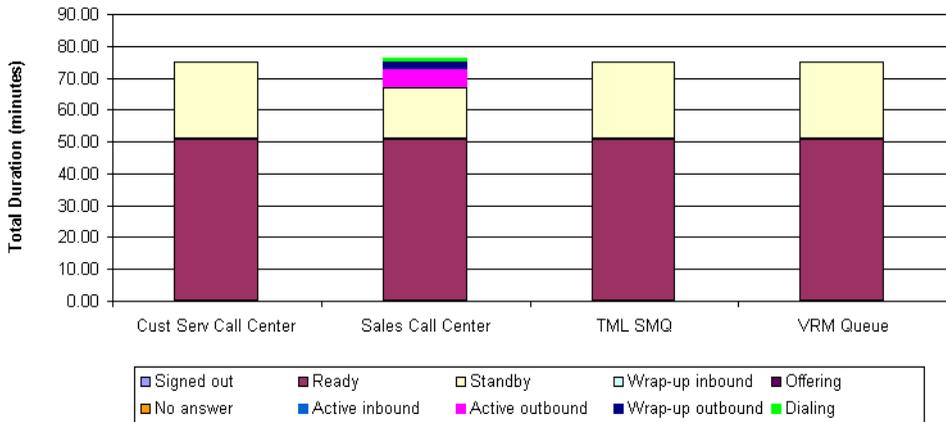
This report is in data form only. For each skill, it shows the queue performance of each agent with that skill as follows:

- **Short Calls Answered.** A call is considered short call if wait time is less or equal to the short call threshold (see “Setting general Reporter options” on page 8-7).
- **Answered.** The number of calls answered including short calls.
- **Wrap Up Time.** The time between calls to finish up paper work.
- **Talk Time.** The total talk time on the answered calls.
- **Average Talk Time.** Talk Time / (Answered + Short Calls Answered).
- **Work Time.** Talk Time + Wrap Up Time.

# Agent State Summary report

The Agent State Summary report shows how much time an agent spent in each state, with separate displays for each queue to which the agent belonged. For an explanation of agent states, see page 6-5.

Agent State Summary - Jan Downen  
(2/26/2004 - 2/26/2004)



## Reading this report

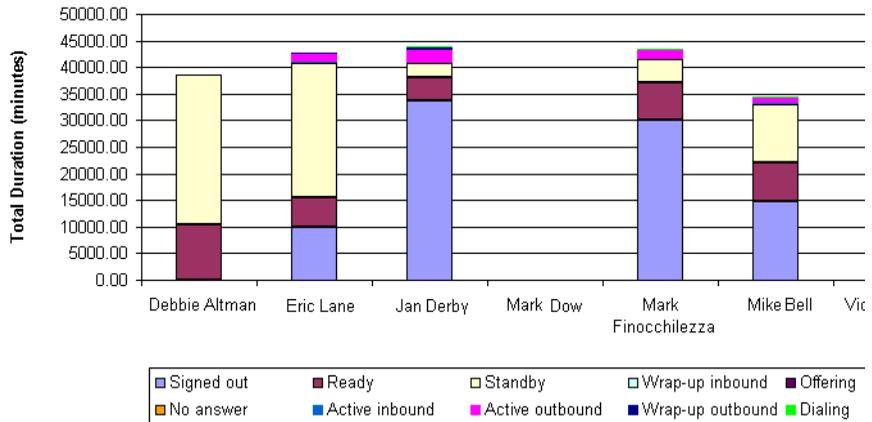
The **Total duration (minutes)** chart, on the y-axis of the report, shows the total length of time the agent spent in all states for each queue.

The x-axis of the report shows each queue as a bar with a color breakdown representing the time spent in each state within that queue. Use the Data tab of the report to see a precise breakdown of how much time the agent spent in each state per queue.

## Agent State Summary by Queue report

The Agent State Summary by Queue report shows how much time each agent in a queue spent in each state. For an explanation of agent states, see page 6-5.

Agent State Summary By Queue - Sales Call Center  
(1/1/2004 - 1/31/2004)



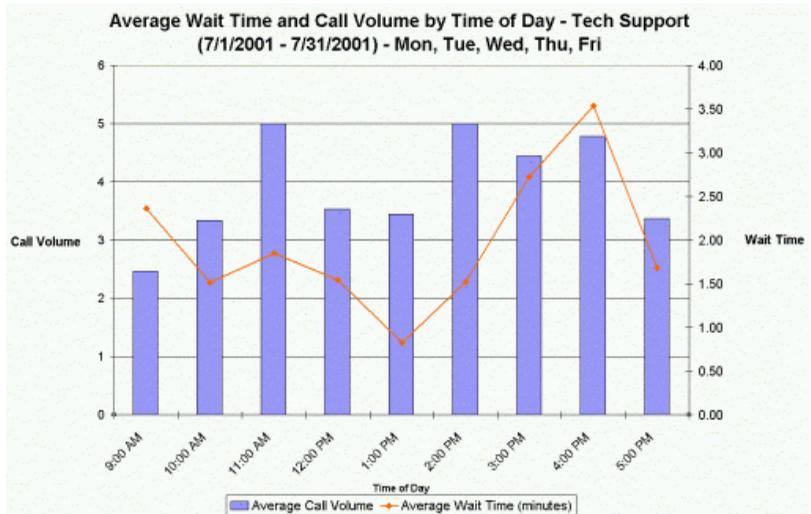
### Reading this report

The **Total duration (minutes)** chart, on the y-axis of the report, shows the total length of time that each agent spent in all states for the queue.

The x-axis of the report shows each agent in the queue as a bar with a color breakdown representing the time spent in each state. Use the Data tab of the report to see a precise breakdown of how much time each agent spent in each state.

## Average Wait Time and Call Volume by Time of Day report

The Average Wait Time and Call Volume by Time of Day report shows the average time that callers waited and the average call volume for all inbound calls to a queue or workgroup, displayed by time of day.



### Reading this report

The following fields appear in this report:

- **Time of Day.** Displays as the x-axis of the report.
- **Average Call Volume.** The average number of calls for each hour. Displays as a bar for that hour. Read against the left y-axis of the report.
- **Average Wait Time.** The time from arrival of the call in the TeleVantage system until an agent answered the call, averaged for all the calls in each hour. Displays as a line. Read against the right y-axis of the report.

**Note:** Calls are logged under the hour in which they arrive in TeleVantage, not the hour in which they are answered. For example, if a call arrives at 1:59 and is answered at 2:01, it is included in the 1:00 group.

# Call Center Queue Information report

The Call Center Queue Information report shows general information about each queue in your system, including a list of agents and their current settings. Use this report to get a snapshot of a queue’s setup without using the Administrator.

	A	B	C	D	E	F
1	Queue	Extension	DID	Distribution	Comments	Mailbox % F
31	Sales Call Center	8092		Round robin	Sales Call Center	21.3
32						
33		Agent	Extension	Signed In	Observer	Record Nth C
		Sarah Cowell	111	Yes	No	
34						
35		John Hartie	180	Yes	No	
		Melissa Amion	110	Yes	No	
36						
37		Aron Storm	112	Yes	No	

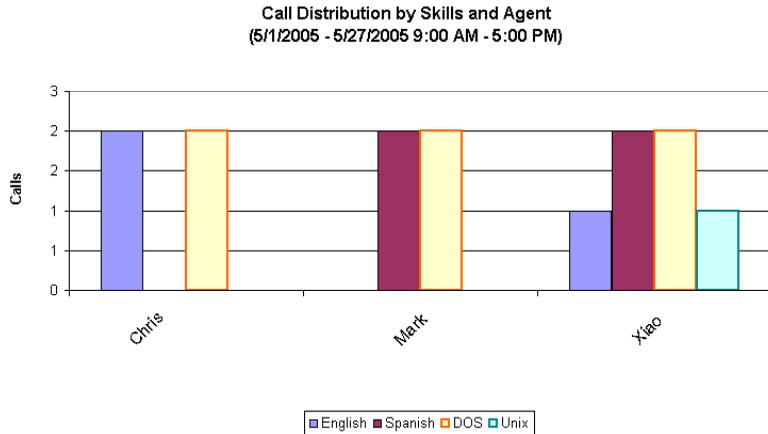
## Reading this report

This report is in data form only. For each queue, it shows general information about the queue on the top line. Below the queue line, it shows the following information for each agent in the queue:

- **Extension.** The agents’ extension.
- **Signed in.** Whether or not the agent can receive calls from the queue. See “Signing in and out of a queue” on page 5-5.
- **Observer.** Whether or not the agent is an observer. Observer agents can monitor the queue without being seen by other agents. See “Adding agents to the queue” on page 2-11.
- **Record Nth Call.** How often TeleVantage automatically records the agent’s queue calls.
- **Permissions.** The agent’s permissions. See “Agent permissions” on page 2-14.
- **Overflow tier.** The agent’s overflow tier. See “Setting up overflow agents” on page 2-25. A value of 0 indicates a primary agent.
- **Skills.** A list of the agent’s skills.

## Call Distribution by Skill and Agent report

The Call Distribution by Skill and Agent report provides a summary of how many calls were answered per agent and per skill. In the Options dialog box you can select one or many agents, one or many skills, and the report period. This report allows setting various thresholds on the Report Options tab in Excel that are colored on the Report and Data tabs if those values exceed the thresholds you specify.



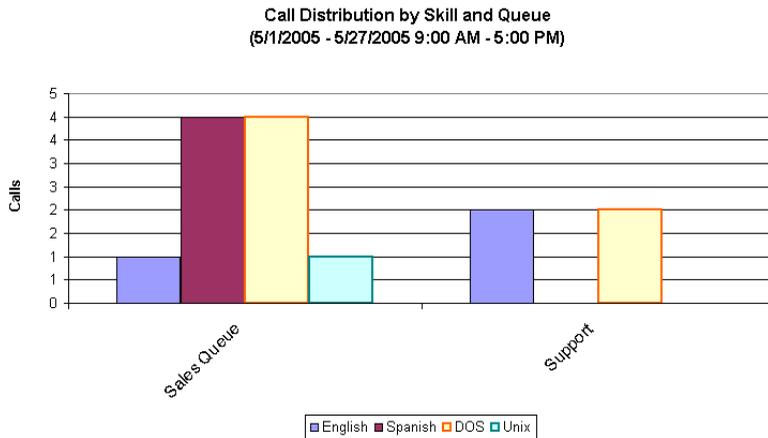
### Reading the report

Each selected agent is displayed along the x-axis. The colored bars refer to skills, with the key at the bottom. The bars indicate how many calls with that skill requirement were answered. A call with multiple skill requirements is counted for each skill.

## Call Distribution by Skill and Queue report

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The Call Distribution by Skill and Queue report provides a summary of how many calls were answered per queue and per skill. In the Options dialog box you can select one or many queues, one or many skills, and the report period. This report allows setting various thresholds on the Report Options tab in Excel that are colored on the Report and Data tabs if those values exceed the thresholds you specify.



### ***Reading the report***

Each selected queue is displayed along the x-axis. The colored bars refer to skills, with the key at the bottom. The bars indicate how many calls with that skill requirement were answered. A call with multiple skill requirements is counted for each skill.

## Call Log report

The Call Log report shows all the information that appears in the Call Log for a user or a queue, in a spreadsheet form that is easy to sort or filter. Using Microsoft Excel's dropdown filtering tools, you can filter by any column to see just the calls you want.

This report should only be run for a small number of days due to the quantity of data it can produce.

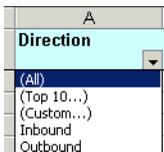
**Note:** By default you can report only on your Call Log and all Call Logs that are shown to you in ViewPoint (for example, a queue's Call Log if you have permission to view it, and any Call Logs that have been shared with you). To report on any Call Log, you must have the TeleVantage permission **Report on all call logs** set to Allow. See *Administering TeleVantage*.

	E	F	G	H	I	J	K	L	M
1	Start Time	End Time	Duration	Result	Left M	No	Org	Acc	Answered By
35	10/14/2002 7:06:29 PM	10/14/2002 7:06:29 PM	00:00:00	Supervised transfer	No				Tech Support Aft
36	10/14/2002 7:52:26 PM	10/14/2002 7:52:26 PM	00:00:00	Supervised transfer	No				Tech Support Aft
37	10/15/2002 9:02:04 AM	10/15/2002 9:02:04 AM	00:00:00	Supervised transfer	Yes				Tech Support Aft
38	10/15/2002 9:21:45 AM	10/15/2002 9:22:55 AM	00:01:10	Connected	No				Rob Simsox
39	10/15/2002 9:26:40 AM	10/15/2002 9:31:53 AM	00:05:13	To voice mail	No				Shane Wilcoh
40	10/15/2002 9:38:17 AM	10/15/2002 9:38:17 AM	00:00:00	Blind transfer	No				Shane Wilcoh
41	10/15/2002 9:32:51 AM	10/15/2002 9:44:26 AM	00:11:35	To voice mail	No				Unknown
42	10/15/2002 9:44:13 AM	10/15/2002 9:46:53 AM	00:02:40	Connected	No				Rob Simsox
43	10/15/2002 9:49:41 AM	10/15/2002 9:50:27 AM	00:00:46	Connected	No				Unknown
44	10/15/2002 9:50:33 AM	10/15/2002 9:55:56 AM	00:05:23	To voice mail	No				Rob Simsox
45	10/15/2002 9:53:43 AM	10/15/2002 9:58:57 AM	00:05:14	To voice mail	No				Shane Wilcoh

For a description of the columns, see the description of the Call Log in *Using TeleVantage* or *Administering TeleVantage*.

### Filtering Call Log data by column

To filter the report by column, click the arrow on any column header. From the dropdown list, select the column entry that you want to display. The report shows only calls with that column entry. Alternately, select **Custom** to filter by more complex criteria.

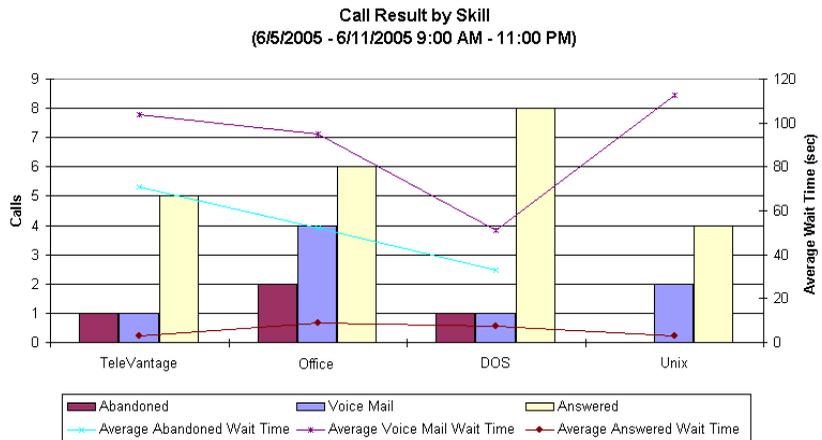


Examples of using the filter include viewing the following:

- All calls with account code 55 (Account Code column)
- All inbound or all outbound calls (Direction column)
- All calls longer than 30 minutes (Duration column, select **Custom**)
- All abandoned calls (Result column)
- All calls that were automatically recorded by the queue (Recorded by Queue column)

## Call Result by Skill report

The Call Result by Skill report shows comparative call results for all calls with skill requirements. In the Report Options dialog box you can select which skills to report on, and which queues to include in the totals, in addition to the report period. This report allows setting various thresholds on the Report Options tab in Excel that are colored on the Report and Data tabs if those values exceed the thresholds you specify.



### Reading the report

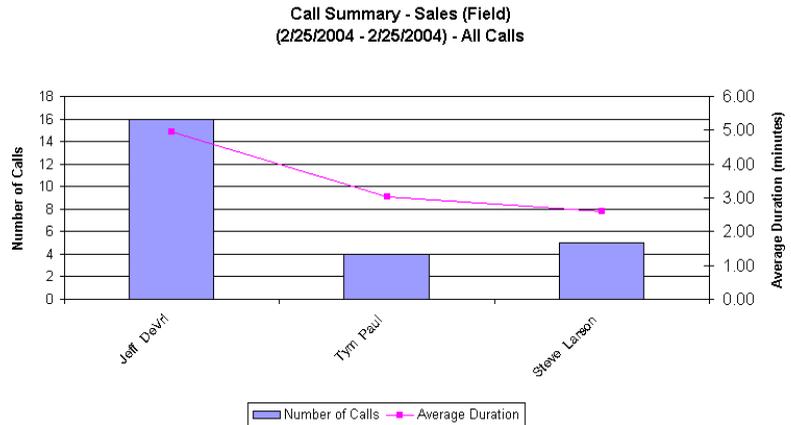
Each selected skill appears as a grouping along the x-axis. Colored bars corresponding to different call results show how many calls had each result per skill.

## Call Summary report

---

This report shows the total number of calls and the average duration of calls placed from an extension or a workgroup. You can choose whether the report shows internal or external calls.

**Note:** When internal calls is selected, the report includes users who are calling from trunks, such as users with IP phones or users calling from remote phones and logging in.



### *Reading this report*

The following fields appear in this report:

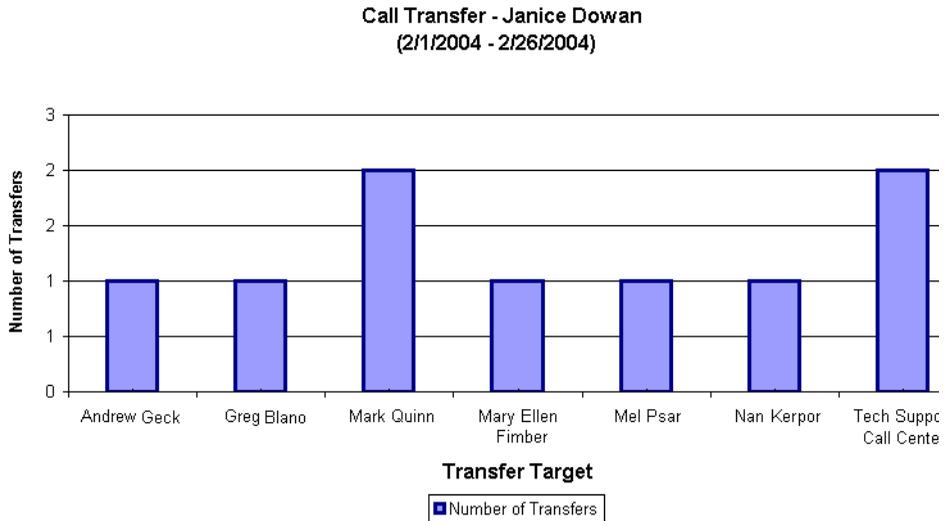
- **Number of calls.** Read against the left y-axis of the report.
- **Average Duration.** Displays as a line. Read against the right y-axis of the report.

The Data tab of this report shows **Total Duration**.

## Call Transfer report

---

This report shows how many calls a user or queue transferred to whom.



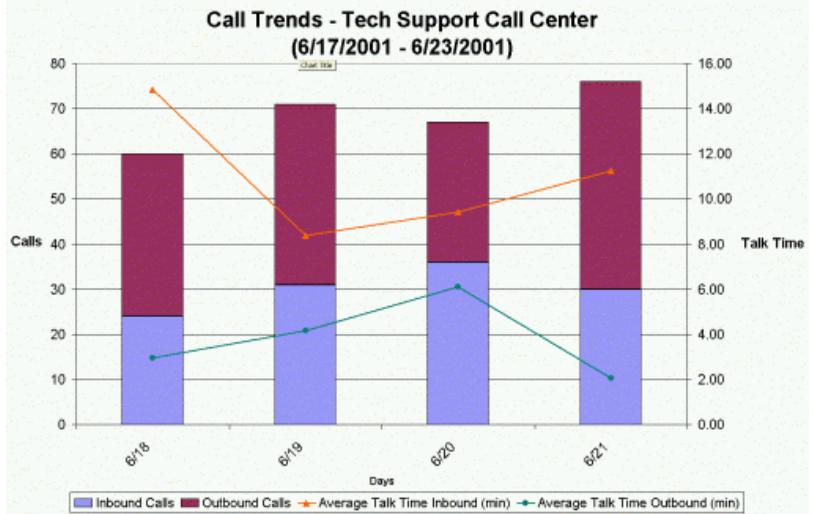
### *Reading this report*

The following fields appear in this report:

- **Number of transfers.** Read against the y-axis of the report.
- **Transfer Target.** Each entity transferred to appears as a bar along the x-axis of the report.

## Call Trends report

The Call Trends report shows total number of inbound and outbound calls for a call center queue or an ACD workgroup by its agents. The agents must place calls as the queue for outbound calls to be reported (see “Placing calls from a queue” on page 5-8). This report is useful for tracking calls made to customers or calls made during marketing campaigns. It does not include personal calls (calls made when the outbound queue-calling feature was not activated).



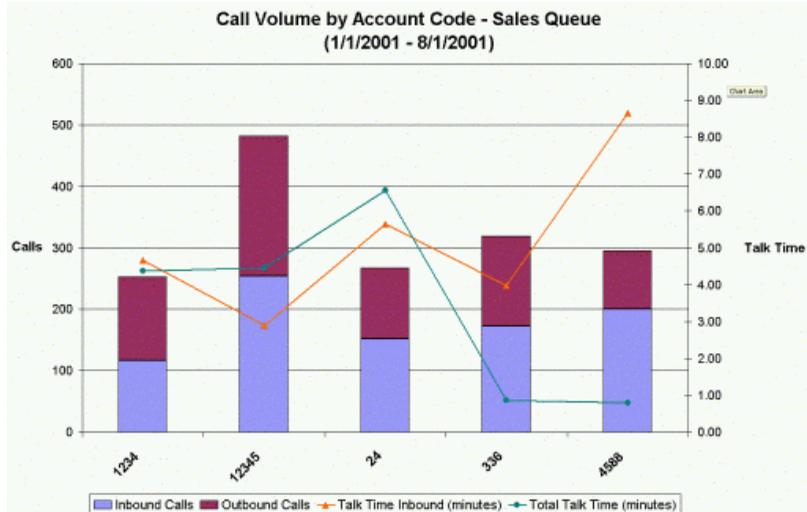
### Reading this report

The following fields appear in this report:

- **Interval.** Displays on the x-axis of the report.
- **Total Outbound Calls.** Displays as bars. Read against the left y-axis of the report.
- **Average Talk Time.** Displays as a line. Read against the right y-axis of the report.

## Call Volume by Account Code report

The Call Volume by Account Code report shows the inbound calls, total calls (inbound and outbound), and talk time for all calls for which an agent entered an account code. This report is useful for billing customers for service given to them over the phone or for tracking marketing campaigns.



You can report on calls that used account codes from any of the following categories:

- All calls handled by a particular agent or other user
- All calls handled by a queue, regardless of the agent involved
- All calls system-wide

### Reading this report

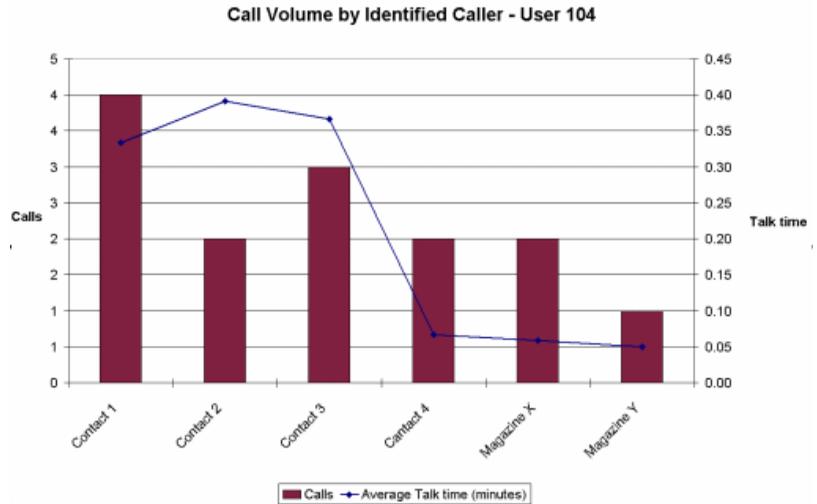
The following fields appear in this report:

- **Account code.** Displays as the x-axis of the report.
- **Inbound Calls and Total Calls.** Displays as stacked bars for each account code. Read against the left y-axis of the report.
- **Total Talk Time for Inbound Calls.** Displays as a line. Read against the right y-axis of the report.
- **Total Talk Time for All Calls.** Displays as a line. Read against the right y-axis of the report.

**Note:** The entire call is included in **Talk Time**, regardless of at what time the account code was entered during the call.

## Call Volume by Identified Caller report

The Call Volume by Identified Caller report shows the number of calls a user or queue received from each identified contact and the average talk time. For example, if you created 5 contacts, each to track a different promotional advertisement code (using PIN #s to identify each contact) this report would show how many people called for each promotion.



### Notes

- To run the report for an ACD workgroup, select the ACD workgroup user.
- When reporting on a queue, only calls from public contacts are listed, since the queue has no personal contacts.
- When reporting on a call center queue agent, all personal calls sent to the agent are listed, even if someone else answered the call. Calls sent to other agents are not reported on, even if the agent answered them.

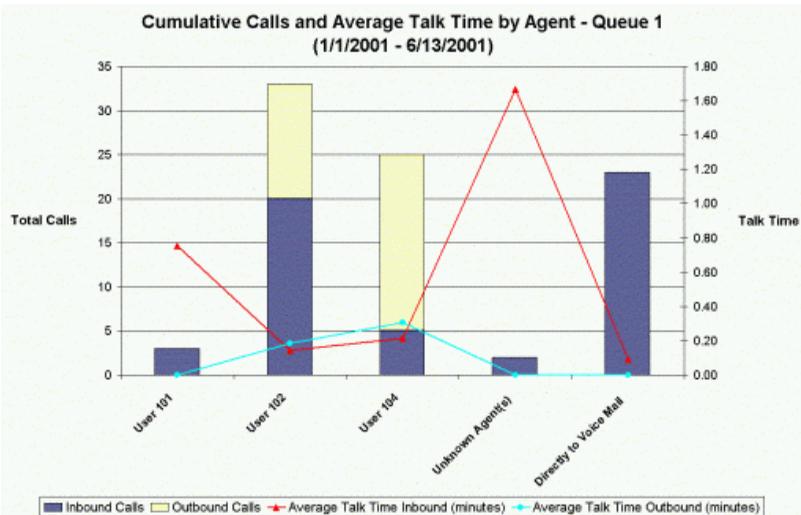
### *Reading this report*

The following fields appear in this report:

- **Contacts.** Displays on the x-axis of the report. Public and private contacts are both listed.
- **Calls.** The total number of calls from each contact. Displays as a bar for each contact. Read against the left y-axis of the report.
- **Average Talk Time.** The average time the agent spent talking with each contact. Displays as a line. Read against the right y-axis of the report.

## Cumulative Calls and Average Talk Time by Agent report

The Cumulative Calls and Average Talk Time by Agent report shows the total queue or workgroup calls an agent received and made (inbound and outbound) and the average talk time. The agent's personal calls are not included in this report.



### Reading this report

The following fields appear in this report:

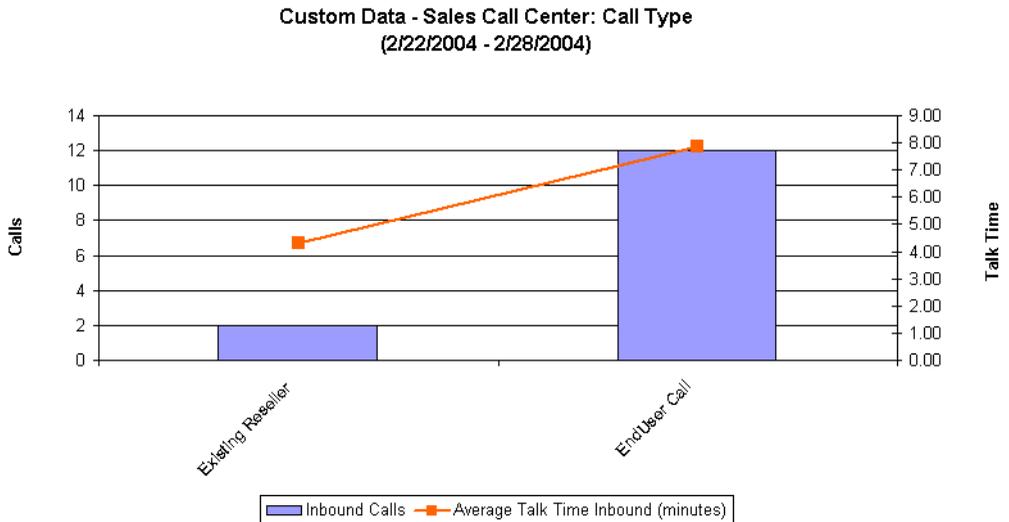
- **Agents.** Displays on the x-axis of the report.
- **Unknown agents.** Calls involving users who have been deleted from TeleVantage.
- **Directly to voicemail.** Calls that the queue sent directly to voicemail without ringing any agent's phone.
- **Inbound and outbound calls.** Displays as stacked bars for each agent. Read against the left y-axis of the report.
- **Average Talk Time for Inbound and Outbound Calls.** Displays as two lines. Read against the right y-axis of the report.

## Custom Data report

---

The Custom Data report shows the total number and average talk time of calls involving a specific custom data variable for a user, queue, or the whole system.

For example, you could configure an auto attendant to set the “Product” custom variable to “Apples” or “Oranges” based on the menu choice selected. You could then run this report to show how many callers selected Apples versus Oranges, and the average length of those calls.



### ***Reading this report***

The following fields appear in this report:

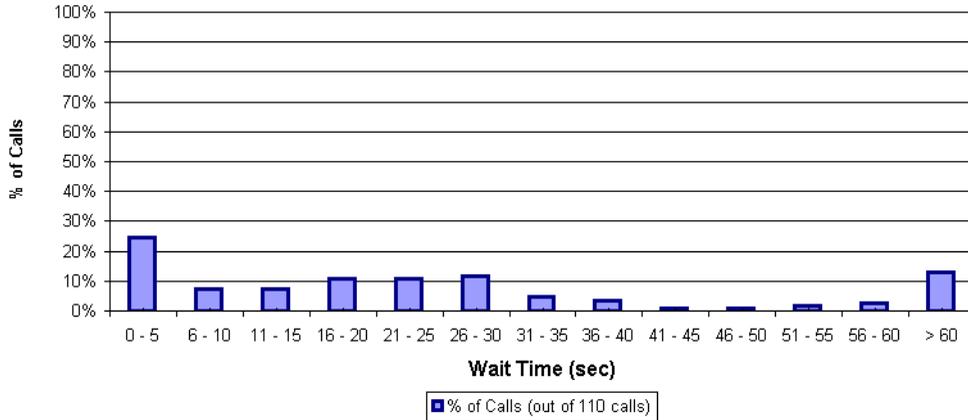
- **Variable values.** Different values for the selected custom data variable. Displays on the x-axis of the report.
- **Calls.** Displays as bars for each variable value. Read against the left y-axis of the report.
- **Average talk time.** Displays as a line. Read against the right y-axis of the report.

## Grouped Service Level report

---

This report shows wait time for all calls, displayed in five-second groupings. Wait time includes the amount of time that the caller waited between the extension being dialed and the user picking up, plus any time spent in a blind transfer later in the call. Note that wait time does not include time that the caller spent on hold, parked, or in a supervised transfer.

**Grouped Service Level - All Calls**  
(2/26/2004 - 2/26/2004)



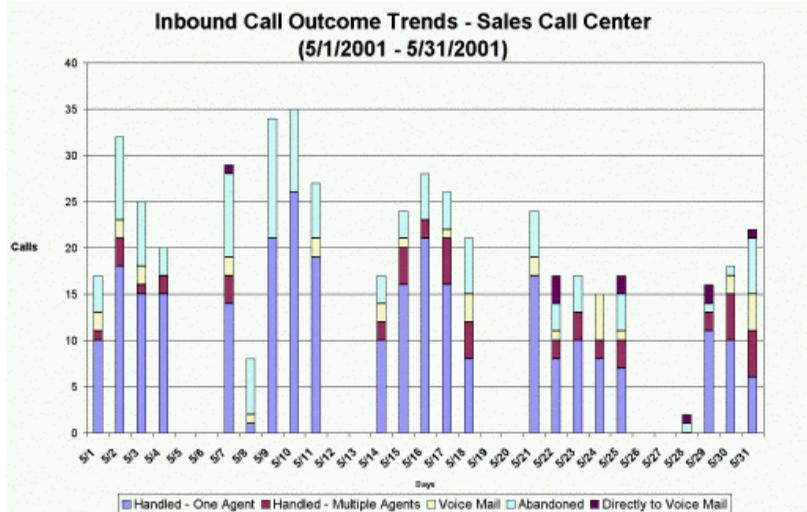
### Reading this report

The following fields appear in this report:

- **Wait Time.** Displays on the x-axis of the report as five-second groupings
- **% of Calls.** Shows how each grouping compares as a percentage of the total number of calls. Displays on the y-axis of the report. The total number of calls is displayed at the bottom of the report.

## Inbound Call Outcome Trends report

The Inbound Call Outcome Trends report shows the total number of calls to a queue and how those calls were handled, including the total calls handled by one agent, handled by multiple agents, sent to voicemail, and abandoned.



### Reading this report

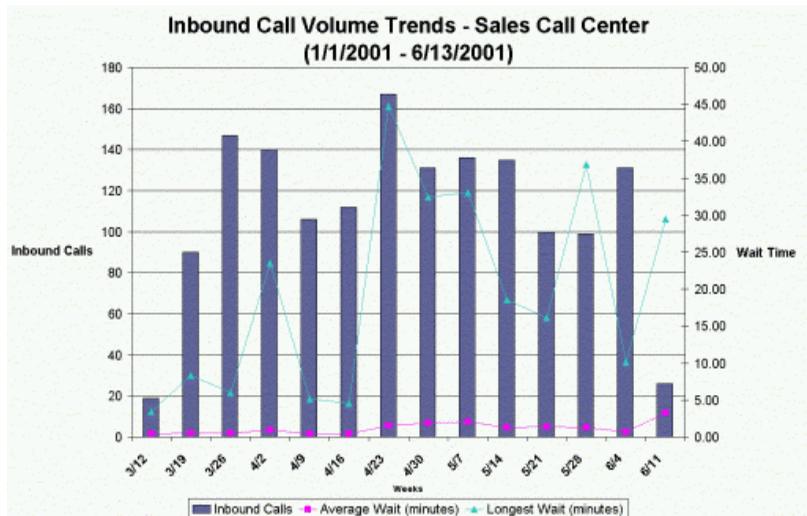
The following fields appear in this report:

- **Period.** Displays as the x-axis of the report.
- **Calls handled by one agent, calls handled by multiple agents, calls sent to voicemail, calls abandoned.** Displays as stacked bars. Read against the left y-axis of the report. For the total number of calls in each category, click the Data tab in Excel.

**Note:** If the queue was configured to send calls directly to voicemail, those calls appear in a separate **Direct to voicemail** bar. The normal **voicemail** category counts calls that went to voicemail while the queue was sending calls to agents.

## Inbound Call Volume Trends report

The Inbound Call Volume Trends report shows the number of calls that a queue received, the average time callers waited, and the longest time a caller waited.



### Reading this report

The following fields appear in this report:

- **Interval.** Displays as the x-axis of the report.
- **Inbound Calls.** The total number of inbound calls. Displays as bars. Read against the left y-axis of the report.
- **Average Wait Time and Longest Wait Time.** Displays as two lines. Read against the right y-axis of the report.

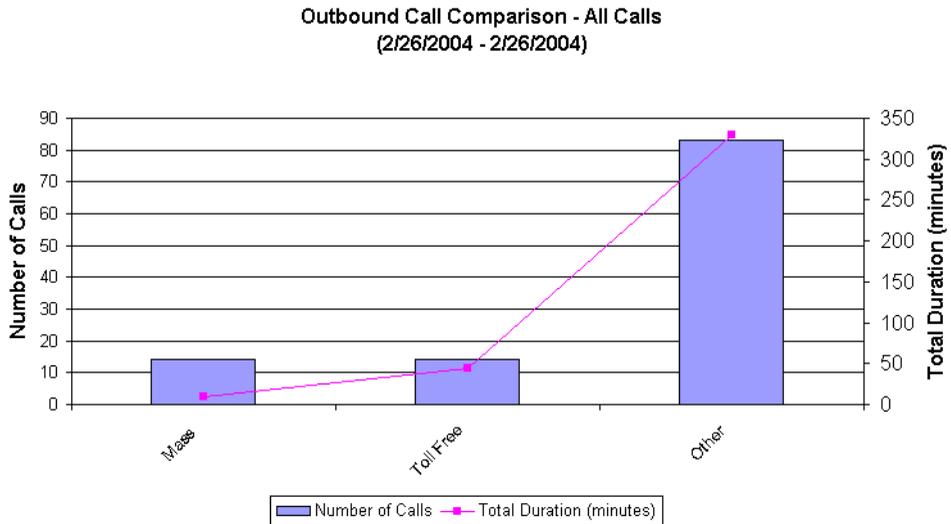
**Note:** If the queue was configured to send calls directly to voicemail, those calls are included in the report and are treated as having a wait time of 0.

## Outbound Call Comparison report

---

The Outbound Call Comparison report separates your outbound calls into three categories: In-state, Toll-free, and Other. The In-state and Toll-free categories depend on your settings in the general Reporter Options dialog box (see “Setting general Reporter options” on page 8-7).

Standard long-distance calls (calls made to non-free area codes) are included under “Other.”



### ***Reading this report***

The following fields appear in this report:

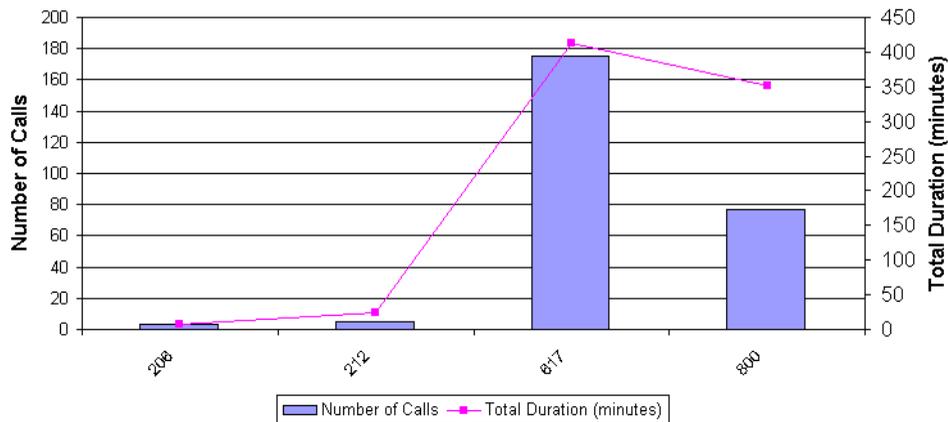
- **Interval.** Displays as the x-axis of the report.
- **Number of Calls.** Displays as bars. Read against the left y-axis of the report.
- **Total Duration.** Displays as a line. Read against the right y-axis of the report.

## Outbound Calls by Phone Number report

This report counts the number and duration of outbound calls placed to a specified list of phone number prefixes. Enter the prefixes in the **Number prefixes** field of the Options dialog box for this report (separate prefixes with commas).

**Note:** If your prefixes overlap, a call can show up in more than one column. For example, if you enter a prefix of 6 and another of 617, calls beginning with 617 will be counted in both columns.

Outbound Calls By Phone Number - All Calls  
(2/22/2004 - 2/28/2004)



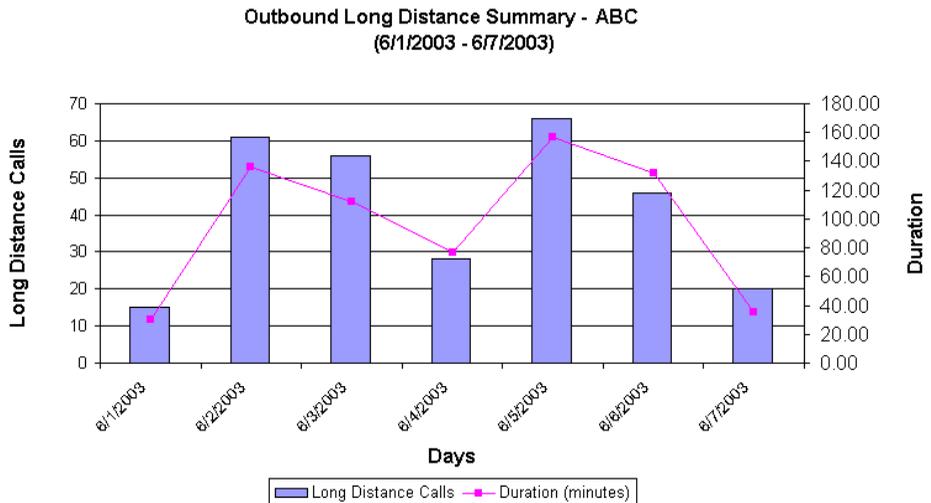
### Reading this report

The following fields appear in this report:

- **Number prefixes.** The prefixes you entered appear as the x-axis of the report.
- **Number of Calls.** Displays as bars. Read against the left y-axis of the report.
- **Total Duration.** Displays as a line. Read against the right y-axis of the report.

## Outbound Long Distance Summary report

You can use this report to track your outbound long-distance phone traffic and estimate a phone bill for a given period. The chart displays the total number of outbound long distance calls and the duration of each. The Data tab shows the estimated cost of your long distance calls.



### Before running this report

You cannot run this report unless your system has been set up in the following way:

- One or more Organizations are defined. See *Administering TeleVantage* for instructions.
- In-state area codes are defined in the Reporter Options dialog.

When setting up the Options for this report, specify the following additional fields. Your long distance carrier can provide you with exact numbers.

- **Cost per minute.** Enter the per-minute cost in dollars of your long-distance calls. For example, enter .05 for five cents a minute.
- **Cost interval in seconds.** The length of the intervals a minute is divided into for the purposes of calculating the cost of the call.

### Reading this report

The following fields appear on this report:

**Interval.** Displays along the x-axis of the report.

**Long Distance Calls.** All outbound trunk calls whose numbers do not begin with any of the digit sequences listed in the **Toll free options** field of the Reporter Options dialog box. Displays as bars. Read against the left y-axis of the report.

**Duration.** Displays as a line. Read against the right y-axis of the report.

The following fields appear on the Data tab of this report. Each is totaled at the bottom.

- **Interval.** The time interval chosen.
- **Outbound calls.** The total number of outbound trunk calls, long distance or otherwise. Note that to count as an outbound call, a call must match the **Criteria for counting outbound calls** defined in the Reporter Options dialog box (see “Setting general Reporter options” on page 8-7).
- **Long distance calls.** The total number of long distance calls.
- **Duration.** The total duration of long distance calls for each interval.
- **Cost.** The total cost of long distance calls for each interval, based on the **Cost per minute** and **Cost interval in seconds** data you entered.

## Queue Call History Detail report

The Queue Call History Detail report shows the call history for a selected queue during the selected time period, including the skill requirements for each call..

	I	J	K	L	M	N	O	
1				Skills				
2	Talk Time	Wrap Up Time	Wait Time	DOS	Office	TeleVantage	Unix	
3	0:00:07	0:00:00	0:00:07					
4	0:00:05	0:00:15	0:00:12					
5	0:00:05	0:00:15	0:00:06					
6	0:02:08	0:00:15	0:00:03					
7			0:00:08					
8	0:00:06	0:00:15	0:01:11					
9			0:00:13					
10	0:00:34	0:00:15	0:00:14	1	1			
11	0:01:21	0:00:10	0:00:03					
12	0:00:27	0:00:25	0:00:03	1	1			
13	0:00:44	0:00:10	0:00:04	1	1			
14	0:02:38	0:00:10	0:00:28	1	1			
15			0:00:51	1	1			
16			0:00:33	1	1			
17	0:00:06	0:00:15	0:00:02	1	1			
18	0:01:52	0:00:15	0:00:03	1		1		
19	0:01:03	0:00:10	0:00:03	1		1		
20	0:00:32	0:00:15	0:00:03	1		1		
21	0:00:28	0:00:15	0:00:03			1	1	
22	0:01:04	0:00:10	0:00:03			1	1	1
23	0:00:15	0:00:15	0:00:03		1		1	1

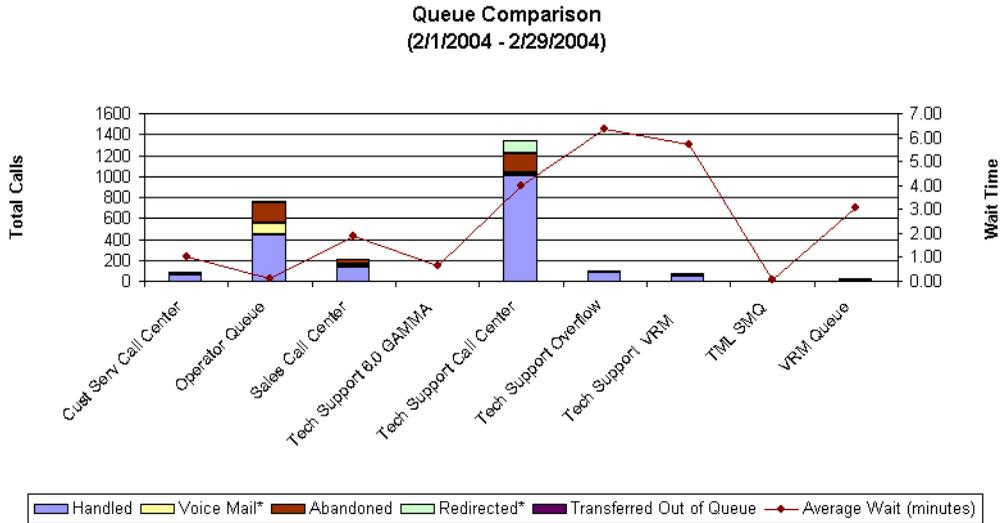
### Reading this report

The report shows the following information for each call:

- Date and time that the call entered the TeleVantage system.
- Call ID. The system ID number of the particular call. Call ID can be displayed as a column in the Call Monitor and Call Log (hidden by default), and it appears in the queue logs (see Appendix B).
- DID. The DID number dialed, if any.
- Result. Whether the call was abandoned, answered, or sent to voicemail.
- Agent. The agent(s) who participated in the call.
- Statistics. The call's wait time, talk time, and warp-up time are displayed.
- Skills. The call's skill requirements are shown.

## Queue Comparison report

The Queue Comparison report compares the performance of all queues in terms of total number of calls, average wait time, and the number of calls handled, abandoned, sent to voicemail, and transferred out of the queue. For example, you can see how well the sales queue performs compared to the technical support queue.



### Reading this report

The following fields appear in this report:

- **Queues.** Displays on the x-axis of the report.
- **Handled, voicemail, Abandoned, Redirected, Transferred out of Queue.** Displays as stacked bars. Read against the left y-axis of the report. For the exact number of each category and a breakdown of voicemail and Redirected, click the Data tab.
- **Average wait time.** Displays as a line. Read against the right y-axis of the report.

## Queue Performance Summary by Agent report

The Queue Performance Summary by Agent report lists performance information for each agent in a queue, including inbound, outbound, and internal call statistics, as well as the percentage of time spent in each agent state.

<input type="checkbox"/> New TeleVantage Report <input type="checkbox"/> Export without Macros <input type="checkbox"/> Report Options <input type="checkbox"/> Refresh Report						
Q26    =						
	A	B	C	D	E	F
1	Agent		Duration	Incoming Calls		
2						
3	Name	Extension	Signed In	Count	Average Length	%
4	Cristy Kramer	5618	5:02:39	13	0:02:21	1.8%
5	CSA - 5620	5620	0:00:00	0	0:00:00	0.0%
6	Drew Hebbon	5625	17:17:16	24	0:02:53	6.7%
7	Kjp Kerrick	5627	1:14:55	9	0:03:30	0.3%
8	Leann Wirtala	5632	5:21:51	22	0:02:42	3.4%
9	Rebecca Rissmann	5621	16:00:00	0	0:00:00	0.0%
10	Sandy Smollack	5622	22:49:40	7	0:03:37	1.8%
11	Theresa Kruize	5626	19:37:26	4	0:02:22	0.8%
12						
13	<b>Total</b>		<b>15:23:47</b>	<b>79</b>	<b>3:45:39</b>	
14	<b>Average</b>		<b>16:55:28</b>	<b>9.9</b>	<b>0:02:51</b>	<b>0.1%</b>
15						

### Reading this report

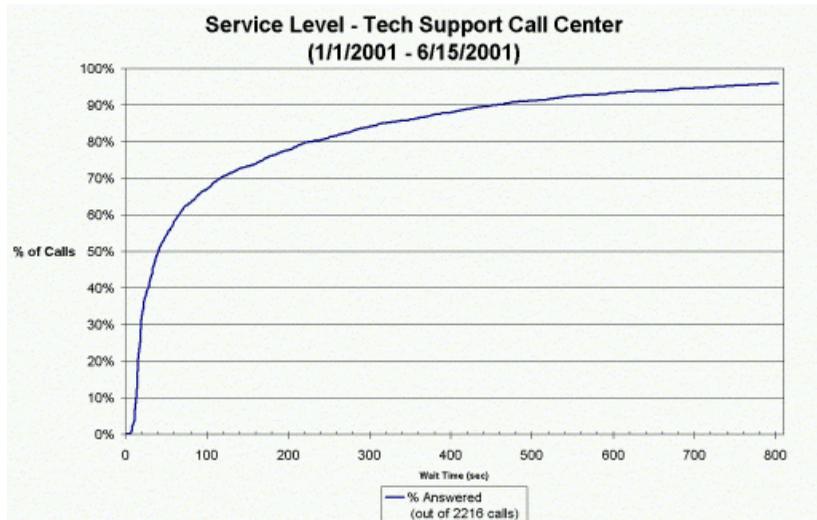
The report displays the following information for each agent:

- **Signed In.** The total time the agent spent in all states other than “signed out.”
- **Incoming/Outgoing/Internal.** The following statistics display for each category of calls:
  - **Count.** The total number of calls.
  - **Average Length.** The average length of those calls.
  - **%.** The percentage of signed-in time spent on those calls.
- **Percent Time per Agent State.** The percentage of signed-in time that the agent spent in each state.
- **Work Time.** The total time and the percentage of signed-in time that the agent spent in the Active (inbound and outbound), Wrap-up (inbound and outbound), and Dialing states.

## Service Level report

---

The Service Level report tracks wait time by showing the percentage of calls to a queue that has been answered, sent to voicemail, and abandoned as wait time progresses. The total number of calls in each category is shown in parentheses at the bottom of the report.



**Note:** In order to plot the curve smoothly on the chart, the curve only shows 100% of the calls if there is not a large difference between the 95th% and the 100th%. Frequently, there are a few calls in a set of records that have an extremely long wait time before something happens to the call. These calls can cause the plotted curve to seem very long and disproportionate. In these cases, TeleVantage plots only the top 95th% of calls (as shown in the preceding illustration).

### ***Reading this report***

The following fields appear in this report:

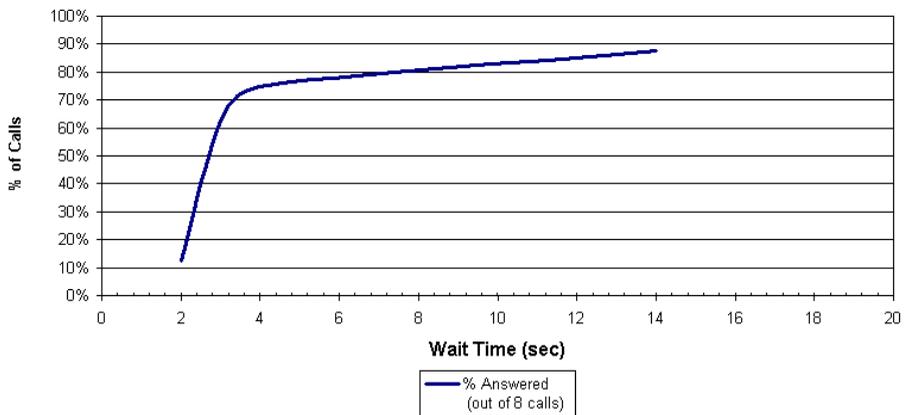
- **Wait time.** Displays on the x-axis of the report.
- **% Answered.** Displays as a line. Read against the x-axis and y-axis of the report to find what percentage of calls reached a result by that length of wait time.

## Service Level by Skill report

---

The Service Level by Skill report tracks wait time for calls with a single selected skill requirement in a single queue by showing the percentage of calls that has been answered, sent to voicemail, and abandoned as wait time progresses. The total number of calls is shown in parentheses at the bottom of the report.

Service Level by Skill - Sales Queue / DOS  
(6/5/2005 - 6/11/2005 9:00 AM - 11:00 PM)



### *Reading this report*

The following fields appear in this report:

- **Wait time.** Displays on the x-axis of the report.
- **% Answered.** Displays as a line. Read against the x-axis and y-axis of the report to find what percentage of calls reached a result by that length of wait time.

## Skill Assignment by Agent report

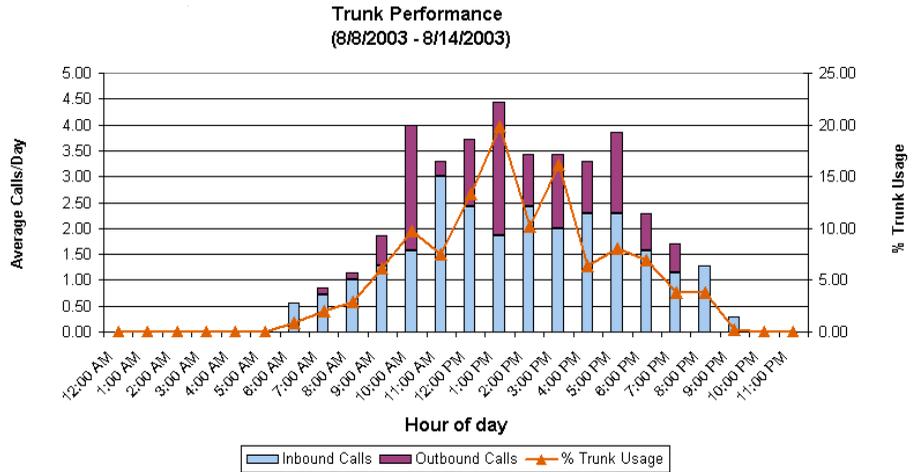
---

The Skill Assignment by Agent report shows which agents have which skills within which queues. There is no Report Options dialog box for this report.

	A	B	C
1	Skill	Agent	Queue
2	DOS	Chris Brooks	Sales Queue
3	DOS	Chris Brooks	Support
4	DOS	Mark Zeeg	Sales Queue
5	DOS	Xiao Doarn	Sales Queue
6	DOS	Xiao Doarn	Support
7	English	Xiao Dong	Sales Queue
8	English	Xiao Doarn	Support
9	Spanish	Mark Zeeg	Sales Queue
10	Unix	Chris Brooks	Sales Queue
11	Unix	Chris Brooks	Support
12	Unix	Xiao Doarn	Sales Queue
13	Unix	Xiao Doarn	Support
14			

# Trunk Performance report

The Trunk Performance report shows the average number of inbound and outbound calls handled by the trunks you specify and the percentage of those trunks that was in use. Use this report to see whether you need to add or remove trunks from the system. This report can also help you to predict future trunk performance. See page 8-9 for the report options for this report.



**Note:** This report is most meaningful when you run it on only the trunks in a single hunt group, because then the failure rate reflects a single phone number. If you run the report for multiple phone numbers, the failure rate is averaged between them, so a high failure rate on one phone number might not be apparent.

## Reading this report

The following fields appear on the Chart tab of this report:

- **Hour of Day.** Displays as the x-axis of the report.
- **Inbound and Outbound Calls.** Displays as stacked bars. Read against the left y-axis of the report.
- **% Trunk Usage.** Displays as a line. Read against the right y-axis of the report.

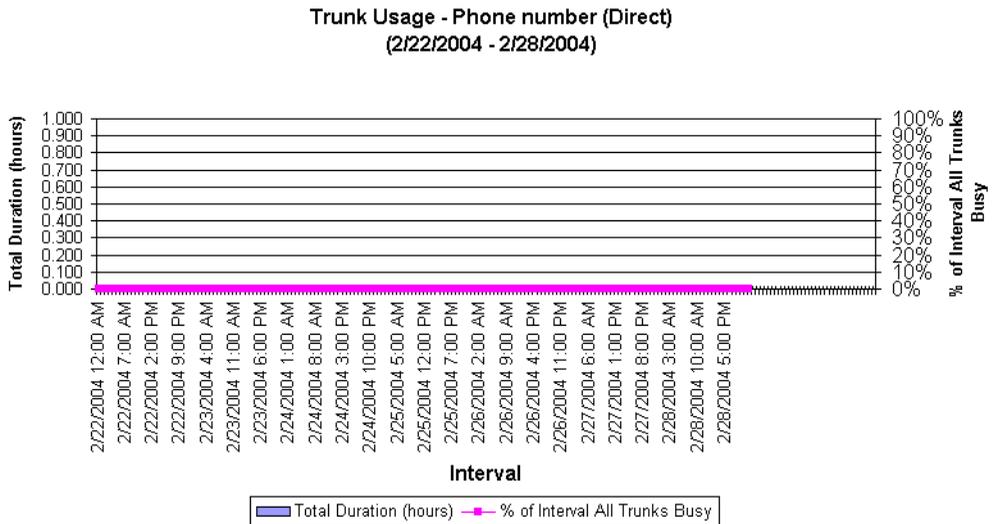
The following fields appear on the Data tab of this report:

- **Busiest Hour.** The hour of the day that had the most trunks in use based on the CCS calculation (see **CCS** in this list).
- **CCS.** 100 call-seconds. One call-second is equivalent to 1 call that was 1 second long.
- **Erlangs.** A decimal number showing the ratio of the time during which a trunk group is occupied to the time that the trunk group is available for calls. The Erlangs value in this report is based on the Busiest Hour calculation (see **Busiest Hour** in this list).
- **Actual Failure Rate.** The percentage of calls that did not go through.
- **Number of trunks.** Initially this number equals the number of trunks that you entered in the report options. You can enter different numbers and use Excel's calculation functions to predict how many trunks you will need to give a desired failure rate.
- **Load Increase.** An expected increase in call volume. You can combine this and the **Number of trunks** entry to decide whether you need to add or remove trunks from your system.
- **Resulting Failure Rate.** The percentage of calls that will be abandoned after calculating your system with the **Number of Trunks** and **Load Increase** fields. You can adjust those two values until you have your optimum failure rate.

# Trunk Usage report

The Trunk Usage report provides an easy way to report on a group of trunks, without having to specify individual trunk numbers as in the Trunk Performance Report. The Trunk Usage report shows the traffic on all trunks within a Dialing Service. You can report on your existing Dialing Services, or you can define special Dialing Services for the purpose of this report, that contain the trunks on which you want to report.

**Note:** This report is not restricted to calls that *use* the selected Dialing Service. It includes all calls on all trunks that are *part of* the Dialing Service. For example, it includes inbound calls on those trunks, even though those calls used no Dialing Service.



## Reading this report

The following fields appear on the Chart or data tab of this report:

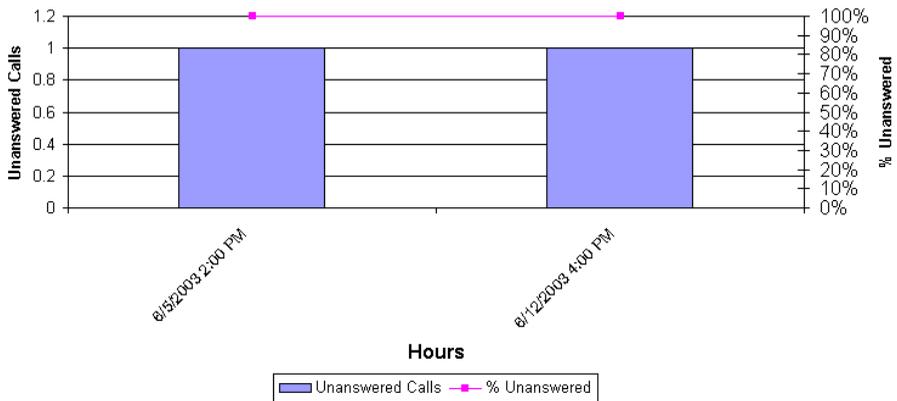
- **Interval.** Displays as the x-axis of the report.
- **Total Duration.** The total duration of all calls on the selected trunks for the interval. Displays as stacked bars. Read against the left y-axis of the report.
- **All Trunks Busy Duration.** The amount of time during the interval in which all selected trunks were in use.
- **% Interval of All Trunks Busy.** The total all busy time divided by the interval in hours.
- **Number of Calls.**

# Unanswered Calls During Business Hours report

The Unanswered Calls report shows inbound calls during your TeleVantage business hours that were not answered by a user. This includes calls that were answered by another extension type, such as a queue or an auto attendant, but never picked up by a user.

**Note:** The report counts calls that show a **Result** of “Abandoned” or “To voicemail” in the Call Log. Because of this, calls that a user answered and then sent to voicemail count as unanswered.

Unanswered Calls During Business Hours - All Calls  
(6/1/2003 - 6/18/2003)



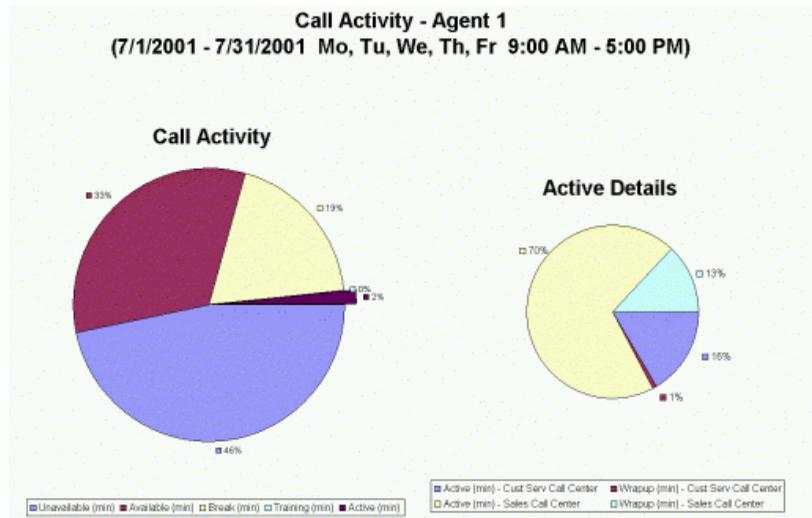
## Reading this report

The following fields appear on the Report tab of this report:

- **Time interval.** Displays as the x-axis of the report.
- **Unanswered Calls.** Total number of unanswered calls. Displays as stacked bars. Read against the left y-axis of the report.
- **% Unanswered Calls.** Unanswered calls as a percentage of all calls. Displays as a line. Read against the right y-axis of the report.

# User Activity report

The User Activity report breaks down an agent's time by activity in pie-chart form, showing both total activity and activity by queue.



**Note:** The **Active Details** pie chart appears only for agents in call center queues.

## Reading this report

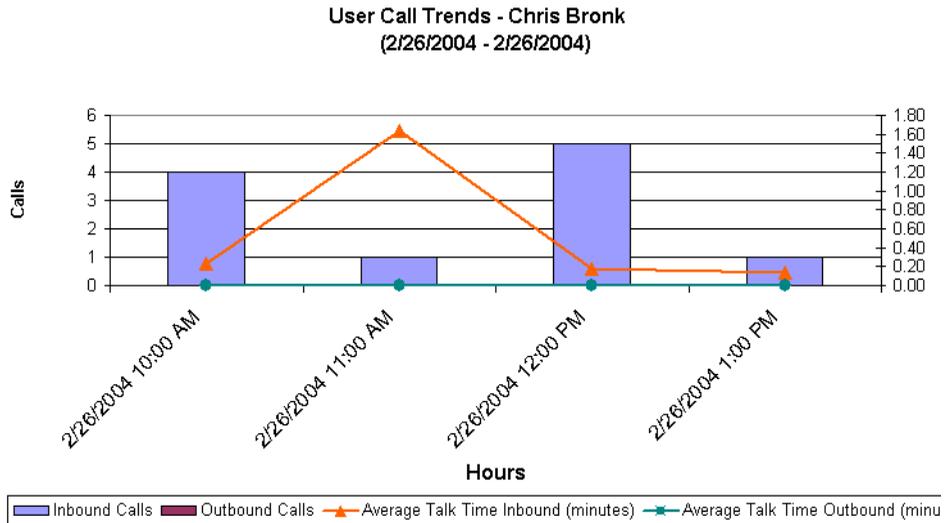
The **User Activity** pie chart shows the percentage of time that the user spent in each of several states. The following table shows how the states correspond to personal statuses and other states for agents and non-agent users.

User Activity States and Personal Statuses		
State	Agent Personal Status	Non-Agent Personal Status
Unavailable	Available (Non-Queue)	N/A
Available	Available Available (Queue Only)	Available
Break	On Break In a personal call	In a Meeting Out of the Office
Training	In a Meeting	N/A
Active	In a queue call	

## User Call Trends report

---

The User Call Trends report displays the number of inbound calls a user received and outbound calls the user placed, with the average talk time for each category.



### ***Reading this report***

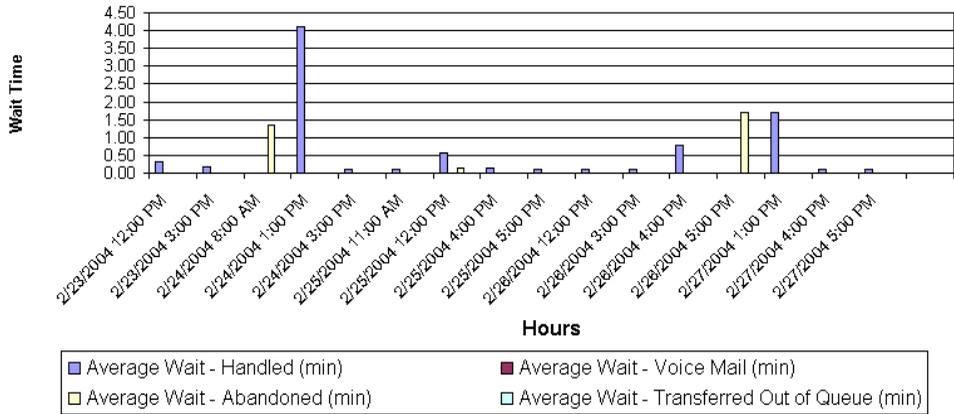
The following fields appear in this report:

- **Time interval.** Displays as the x-axis of the report.
- **Calls.** The number of calls. Displays as the y-axis of the report.
- **Inbound calls / Outbound calls.** Displays as different-colored bars.
- **Average talk time Inbound/Outbound.** In minutes. Displays as two lines.

# Wait by Outcome report

The Wait by Outcome report shows how long callers waited before their calls were handled, abandoned, to voicemail, or transferred out of the queue.

Wait by Outcome - Cust Serv Call Center  
(2/22/2004 - 2/28/2004)



## Reading this report

The following fields appear in this report:

- **Interval.** Displays on the x-axis of the report.
- **Average wait - Handled, Average wait - voicemail, Average wait - Abandoned, Average wait - Transferred out of Queue.** Displays as bars. Read against the y-axis of the report.

## Notes

- Calls in which the caller pressed a key to go to voicemail are counted under voicemail.
- Calls that are redirected to voicemail are not counted in this report.



# **CREATING CUSTOM REPORTS**

## **CHAPTER CONTENTS**

About custom reports .....	B-2
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## About custom reports

---

The database used for the TeleVantage data is Microsoft SQL Server. By using a third-party reporting application such as Microsoft Access®, Microsoft Excel®, or Crystal Reports® to query the SQL Server database, you can create your own reports that report on TeleVantage call center and other data.

This appendix provides the database schema in which TeleVantage report data is stored in the SQL Server database.

## Connecting to the TeleVantage database

---

To access TeleVantage data, use the following settings:

<b>Server</b>	Your TeleVantage Server computer name
<b>Database</b>	TVDB
<b>Login ID</b>	tv_browse
<b>Password</b>	(blank)

These settings provide read-only access.

## The TeleVantage database schema

---

The TeleVantage database contains the following tables that are used for reporting:

- CallLog (next page)
- PartyLog (page B-5)
- QueueEncounter (page B-8)
- AgentStateChange (page B-10)
- UserStateChange (page B-10)
- TrunkLog (page B-11)
- PhoneBookEntry (page B-12)
- ExtensionSettings (page B-12)
- Agent (page B-12)
- QueueSkillDefinitions (page B-13)
- PBEQueueSkills (page B-13)
- PBEQueueAttributes (page B-13)
- PersonalStatus (page B-13)
- Queue (page B-14)
- QueueSkills (page B-14)

- SkillReqLog (page B-14)
- UserPSChange (page B-15)

As call center agent states change and calls are completed, the TeleVantage Server uses SQL Server stored procedures to write the appropriate data into these tables for later reporting. In some cases the stored procedures themselves calculate the values of other fields to improve the performance of later data retrieval.

**Note:** Not all columns in all tables are listed.

## ***The CallLog table***

The CallLog table contains data for each completed call. At the completion of each call, a single row is added to the table. The majority of columns in the table contain redundant data that can be found in other tables; they are included only to speed up data retrieval for the Administrator and ViewPoint application Call Log views.

The following are columns are unique to the CallLog table:

<b>Name</b>	<b>Description</b>
<b>ID</b>	Unique identifier for the call.
<b>Direction</b>	Direction of the call from the point of view of the server: 0 = Inbound 1 = Outbound 2 = Internal (station to station) 3 = Conference
<b>StartTime</b>	Timestamp for when the call started. This is when the server picks up the call.
<b>StopTime</b>	Timestamp for when the call ended. This is when the server drops the call.
<b>AssocPbeID</b>	ID of the row in the PhoneBookEntry table that is associated with this call. This is either the user or contact that one of the users associated with the call.
<b>AssocFirstName</b>	First name of the associated person.
<b>AssocLastName</b>	Last name of the associated person.
<b>HoldTime</b>	Number of seconds the caller was on hold.
<b>PbeList</b>	Separated list of all PhoneBookEntry ID values that were involved in the call. This is used to speed performance of loading the Call Log views.

<b>Name</b>	<b>Description</b>
<b>PartyCount</b>	Number of parties in the call.
<b>AnsweredBy</b>	PhoneBookEntry ID of the person who answered the call.
<b>AnsweredByFirstName</b>	First name of the person who answered the call.
<b>AnsweredByLastName</b>	Last name of the person who answered the call.
<b>PlacedBy</b>	PhoneBookEntry ID of the person who placed the call.
<b>PlacedByFirstName</b>	First name of the person who placed the call.
<b>PlacedByLastName</b>	Last name of the person who placed the call.
<b>FromPhoneNumber</b>	Obsolete.

The following CallLog table columns are copies of data from the PartyLog table (see page B-5) for either the "from" party (the first party in the call), the "to" party (the last party in the call), or both.

<b>"From" Column</b>	<b>"To" Column</b>	<b>PartyLog Column</b>
FromID	ToID	PartyPbeID
FromFirstName	ToFirstName	FirstName
FromLastName	ToLastName	PrimaryName
CallerIDName		CallerIDName
CallerIDNumber	ToPhoneNumber	CallerIDNumber
CallerIDAccessCode	ServiceAccessCode	ServiceAccessCode
CallerIDType	ToPhoneNumberType	CallerIDType
CallerIDQ931Type	ToPhoneNumberSub Type	CallerIDQ931Type
CustomData		CustomData
CallbackAddress		CallbackAddress
Result		Result
DIDNumber		DIDNumber

"From" Column	"To" Column	PartyLog Column
DevID	ToDevID	DevID
MessageID		MessageID
	DialString	DialString
	AccountCode	AccountCode

### ***The PartyLog table***

The PartyLog table contains data for each party in a completed call. Each person in the call counts as a party, so there can be multiple rows in this table for a single row in the CallLog table.

The following are the columns in the PartyLog table:

Name	Description
<b>ID</b>	Unique identifier for the party.
<b>CallID</b>	ID of the call that owns the party row.
<b>PartyPbeID</b>	ID of the row in the PhoneBookEntry table that is associated with this party. This is either the user or contact that represents the party. If TeleVantage does not know who the party is (for example, no contact match) the column contains 33 which is the "unknown" ID.
<b>FirstName</b>	First name of the user or contact represented by the PartyPbeID column.
<b>PrimaryName</b>	Last name of the user or contact represented by the PartyPbeID column.
<b>StartTime</b>	Timestamp for when this party was added to the call.
<b>StopTime</b>	Timestamp for when this party was removed from the call.
<b>CallerIDName</b>	Name portion (if any) for the Caller ID data for this party.
<b>CallerIDNumber</b>	Number portion (if any) for the Caller ID data for this party.
<b>DevID</b>	Device number used for this party. Positive values are stations and negative values are trunks.

Name	Description
<b>MessageID</b>	ID of a row in the Message table for a message (if any) left by this party.
<b>DialString</b>	The exact sequence of digits dialed by the server for this party.
<b>Direction</b>	The direction for this party: 0 = Callee 1 = Caller
<b>Role</b>	What role the party played in the call: 0 = Peer 1 = Monitor 2 = Pupil 3 = Coach
<b>ReasonForLeaving</b>	The reason this party was removed from the call: 0 = No reason 1 = Party hung up 2 = Party was hung up on 3 = Party abandoned call before anyone answered 4 = Party went to voicemail 5 = Party was blind transferred 6 = Party was supervised transferred 7 = Party was merged into a conference call 8 = Party is a user who logged in 9 = Party was sent directly to voicemail 10 = No answer 11 = Call was abandoned on this party 12 = Maximum login attempts failed 13 = Party was redirected by the queue (see the next entry) 14 = Transfer key was pressed by party
<b>ReasonForRedirecting</b>	This clarifies item 13, "Party was redirected by the queue," in the previous entry. The possible reasons for redirection are: 1 = Maximum Wait Time Exceeded 2 = Queue Closed 3 = Queue Closed - No agents 4 = Maximum No. of Callers Exceeded 5 = Caller to Agent Ratio Exceeded 6 = Long Expected Wait Time

Name	Description
<b>DIDNumber</b>	DID digits that were received from the device for this party.
<b>AcceptedTime</b>	Timestamp for when this party accepted the call.
<b>AnsweredBy</b>	ID of the user who accepted the call. This can be different from PartyPbeID for an ACD workgroup situation: in this case the PartyPbeID is the ID of the ACD workgroup and the AnsweredBy value is the ID of the user who answered for the workgroup.
<b>GroupID</b>	ID of the workgroup that accepted the call (if any). In the case of a Routing List that calls several workgroups this will be the ID of the one that accepted.
<b>CallerIDType</b>	The type of phone number used for the Caller ID number: 1 = Phone number 2 = IP address 6 = Centrex or Internal (Internal if ServiceAccessCode is blank, otherwise Centrex)
<b>CallerIDQ931Type</b>	Whether phone number parsing rules were used: 0 = No 8 = Yes
<b>ServiceAccessCode</b>	Access code for the service used by the party. For outbound calls this is the dialing service selected. For inbound calls this is the service that received the call (if known).
<b>CustomData</b>	String containing any custom data written to the call for third-party applications.
<b>CallbackAddress</b>	ID of a row in the Address table that describes the callback number the caller left.
<b>PartyClass</b>	Class value that represents what type of party this is: 1301 = User 0901 = Queue 0501 = Contact

<b>Name</b>	<b>Description</b>
<b>AccountCode</b>	Account code sequence (if any) entered for this party.
<b>PartyNumber</b>	Sequence number (starting at 0) that determines the order the parties entered the call.
<b>ACDPartyNumber</b>	Sequence number (starting at 1) that determines the party in an ACD call.
<b>WrapUpDuration</b>	The time an agent spent in wrap up after the call.

### ***The QueueEncounter table***

Each inbound or outbound call for a queue or ACD workgroup results in a record in this table. A call that travels from one queue to another queue will create two records in this table.

<b>Name</b>	<b>Description</b>
<b>ID</b>	Unique identifier of the encounter entry.
<b>CallID</b>	ID of the CallLog entry for this encounter.
<b>QueueID</b>	ID of the Queue entry that had this encounter.
<b>Time</b>	Timestamp for when the encounter occurred.
<b>WaitTime</b>	Total time in seconds the caller waited.
<b>AgentTalkTime</b>	Total time in seconds that agents talked to the caller.
<b>NumberAgents</b>	How many agents were involved.
<b>Result</b>	Same as the ReasonForLeaving column in the PartyLog table (see p. B-6).

Name	Description
<b>ReasonForRedirecting</b>	<p>When the Result column is 13 (redirecting), this column contains information as to why the call was redirected, as follows:</p> <ul style="list-style-type: none"> <li>1: max wait time reached</li> <li>2: queue closed</li> <li>3: queue closed - no agents in the queue</li> <li>4: queue too busy - exceeded the number of agents</li> <li>5: queue too busy - exceeded caller/agent ratio</li> <li>6: queue too busy - expected wait time is too long</li> <li>7: no matching skills</li> </ul>
<b>Direction</b>	<p>Direction of the call from the point of view of the server:</p> <ul style="list-style-type: none"> <li>0 = Inbound</li> <li>1 = Outbound</li> <li>2 = Internal (station to station)</li> <li>3 = Conference</li> </ul>

## ***The AgentStateChange table***

The AgentStateChange table contains data that tracks the state of agents.

<b>Name</b>	<b>Description</b>
<b>PbeID</b>	ID of the PhoneBookEntry row that represents the user.
<b>QueueID</b>	ID of the Queue row that represents the Queue that this change was made in.
<b>Time</b>	Timestamp for when the user entered the state.
<b>Duration</b>	Number of seconds the user was in the state before it changed.
<b>State</b>	The state the agent was in before the change. The state values are: 0 = Logout 1 = Available 2 = Standby 3 = Wrapup 4 = Offering 5 = No answer 6 = Active 7 = Active outbound 8 = Wrapup outbound
<b>ToState</b>	The state the agent was in after the change. The state values are the same as the <b>State</b> column values.

## ***The UserStateChange table***

The UserStateChange table contains data that tracks the state of users.

<b>Name</b>	<b>Description</b>
<b>PbeID</b>	ID of the PhoneBookEntry row that represents the user.
<b>Time</b>	Timestamp for when the user entered the state.
<b>Duration</b>	Number of seconds the user was in the state before it changed.

Name	Description
<b>State</b>	The state the user was in before the change. The state values are: 0 = Sign out 1 = Ready 2 = Break 3 = Training 4 = Unavailable 5 = ACD Active 6 = Non ACD Active 7 = Sign out Active
<b>ToState</b>	The state the user was in after the change. The state values are the same as the <b>State</b> column values.

### ***The TrunkLog table***

The TrunkLog table contains data that tracks information on trunk usage.

Name	Description
<b>ID</b>	Unique ID of this trunk usage row.
<b>PartyLogID</b>	ID of the PartyLog row whose trunk usage is being reported on.
<b>DeviceID</b>	Device number for the trunk being used.
<b>StartTime</b>	Timestamp for when the trunk started to be used.
<b>StopTime</b>	Timestamp for when the trunk stopped being used.
<b>Direction</b>	The direction for this trunk usage: 0 = Inbound 1 = Outbound
<b>SubIntervalCount</b>	Counter for each portion of an hour the party active. For example, if a party was on a call from 2:45 to 4:15, there will be three TrunkLog rows—one with a value of 0 for the 2:00 hour, one with a value of 1 for the 3:00 hour, and one with a value of 2 for the 4:00 hour.

## ***The PhoneBookEntry table***

Most types of TeleVantage extensions (users, auto attendants, queues, IVR Plug-ins, etc.) have an entry in the PhoneBookEntry table.

<b>Name</b>	<b>Description</b>
<b>ID</b>	Unique identifier of a record.
<b>Primary Name</b>	Last name.
<b>FirstName</b>	First name.
<b>EntryType</b>	1: User, including an ACD workgroup user. 21: Call center queue.

## ***The ExtensionSettings table***

Many types of TeleVantage extensions (users, auto attendants, queues, IVR Plug-ins, etc.) have an entry in the ExtensionSettings table.

<b>Name</b>	<b>Description</b>
<b>ID</b>	Same number as the corresponding record in the PhoneBookEntry table.
<b>Number</b>	Extension number.
<b>UserType</b>	0: normal user 1: ACD workgroup user. Use this column and EntryType in the PhoneBookEntry table to find out if a record is for a normal user, ACD workgroup user, or queue.
<b>LastAppliedStatusID</b>	The current personal status. Refer to the PersonalStatus record.

## ***Agent table***

Each agent in a queue results in a record in this table.

<b>Name</b>	<b>Description</b>
<b>QueueID</b>	Refer to PhoneBookEntry record.
<b>UserID</b>	Refer to PhoneBookEntry record.
<b>Observer</b>	0: signed in. 1: signed out.

Name	Description
RealObserver	0: agent. 1: observer.

### ***QueueSkillDefinitions table***

The system-wide skill list is saved in this table.

Name	Description
ID	Unique identifier of each skill.
Name	Name.

### ***PBEQueueSkills table***

Agent skills are saved in this table.

Name	Description
ID	Refer to agent/user's PhoneBookEntry record.
SkillID	Refer to QueueSkillDefinitions record.
ProficiencyValue	The proficiency value.

### ***PBEQueueAttributes table***

Agent attributes are saved in this table.

Name	Description
ID	Refer to agent/user's PhoneBookEntry record.
Cost	Agent's Cost.
Custom1	Agent's Custom1 value.
Custom2	Agent's Custom2 value.
Custom3	Agent's Custom3 value.

### ***PersonalStatus table***

Each personal status for each user has a record in this table.

Name	Description
ID	Unique ID to identify the record.
OwnerID	Refer to user's PhoneBookEntry record.

Name	Description
<b>Name</b>	The internal name that will be translated into localized names when used.
<b>IsSystem</b>	0: user's custom personal status. 1: system created personal status.

### ***Queue table***

Each queue defined in the system has a record in this table.

Name	Description
<b>ID</b>	Same number used in PhoneBookEntry table.
<b>DistributionType</b>	0: Top Down 1: Round Robin 2: Longest Idle 3: Fewest Call 4: Least Talk Time 5: Simultaneous 6: Skill and Custom

### ***QueueSkills table***

Each skill defined in a queue has a record in this table.

Name	Description
<b>QueueID</b>	Refer to PhoneBookEntry record of the queue
<b>SkillID</b>	Refer to QueueSkillDefinitions record of the skill.

### ***SkillReqLog table***

For each skill requirement of a call, there is a record in this table.

Name	Description
<b>ID</b>	Unique identifier of a record.
<b>CallID</b>	Refer to the record in the CallLog table.
<b>SkillID</b>	Refer to the record in the QueueSkillDefinitions table.
<b>MinReq</b>	Minimum requirement for the skill of the call.
<b>MaxReq</b>	Maximum requirement for the skill of the call.

## ***UserPSChange table***

Each user personal status change results in a record in this table.

<b>Name</b>	<b>Description</b>
<b>ID</b>	Unique identifier of a record.
<b>PbeID</b>	Refer to the user's PhoneBookEntry record.
<b>StartTime</b>	The time of the change.
<b>StatusID</b>	The personal status a user changed to, reference the PersonalStatus table record.
<b>Duration</b>	The duration user stayed in this personal status.



# TROUBLESHOOTING QUEUE BEHAVIOR

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## Using queue logs

---

Queue logs can be an invaluable troubleshooting tool, helping you determine exactly why a call did or did not go to a given agent. It can be especially useful to see the inner workings of skills-based or custom routing (see Chapter 3).

Queue logs are text file logs that show the step-by-step logic of queue routing in easy-to-read detail. The logs list every action taken in or by the queue with timestamps showing when it occurred, including:

- Agents signing in or out or changing status
- New calls arriving
- The process of filtering agents
- The numbers used to score available agents
- The numbers used to score waiting calls

### ***Turning on queue logging***

To turn on queue logging, do the following:

1. Edit the queue in the Queue dialog box.
2. On the Queue tab, check **Trace queue and agent activity to queue logs**.
3. Click **OK**.

### ***Location and size of queue log files***

When enabled, queue logs are created on the TeleVantage Server computer in the C:\Program Files\TeleVantage Server\Logs directory. The filenames are incremented in the format TVQueue\*.txt, for example, TVQueue1.txt, TVQueue2.txt, etc.

The maximum size of a queue log file is 4 MB, and by default the maximum number of queue log files is 20. When 20 4 MB files have been created, the Server begins overwriting the old files beginning with TVQueue1.txt.

To modify the maximum number of queue log files, use the following DWORD registration key:

```
HKLM\SOFTWARE\Artisoft\TeleVantage\Server\Settings\QueueNumLogs
```

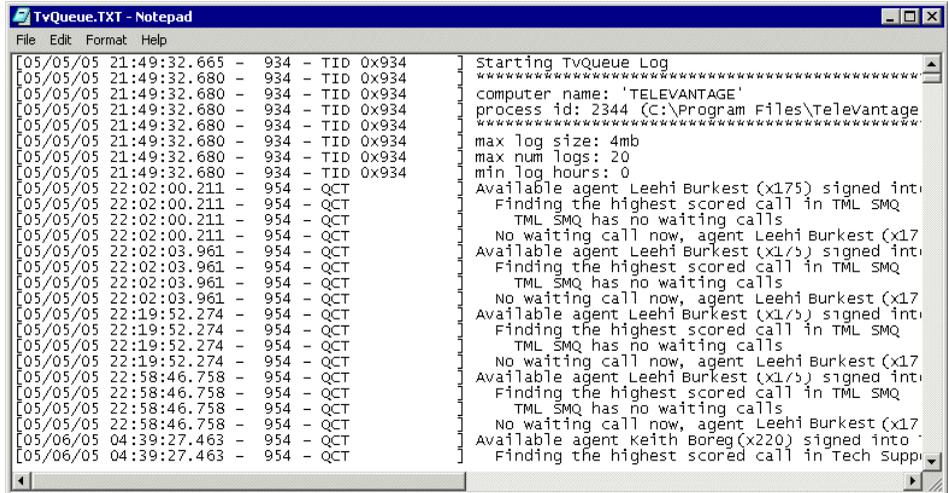
## Opening queue logs

---

Queue logs are created on the TeleVantage Server computer in the C:\Program Files\TeleVantage Server\Logs directory. The filenames are “TVQueue\*.txt,” for example, TVQueue1.txt, TVQueue2.txt, etc.

## Viewing queue logs

You can open a queue log text file in Notepad or any word processor.



```
File Edit Format Help
[05/05/05 21:49:32.665 - 934 - TID 0x934 Starting TvQueue Log
[05/05/05 21:49:32.680 - 934 - TID 0x934 *****
[05/05/05 21:49:32.680 - 934 - TID 0x934 computer name: 'TELEVANTAGE'
[05/05/05 21:49:32.680 - 934 - TID 0x934 process id: 2344 (C:\Program Files\Teleavantage
[05/05/05 21:49:32.680 - 934 - TID 0x934 *****
[05/05/05 21:49:32.680 - 934 - TID 0x934 max log size: 4mb
[05/05/05 21:49:32.680 - 934 - TID 0x934 max num logs: 20
[05/05/05 21:49:32.680 - 934 - TID 0x934 min log hours: 0
[05/05/05 22:02:00.211 - 954 - QCT Available agent Leehi Burkest (x175) signed into
[05/05/05 22:02:00.211 - 954 - QCT Finding the highest scored call in TML SMQ
[05/05/05 22:02:00.211 - 954 - QCT TML SMQ has no waiting calls
[05/05/05 22:02:00.211 - 954 - QCT No waiting call now, agent Leehi Burkest (x17
[05/05/05 22:02:03.961 - 954 - QCT Available agent Leehi Burkest (x175) signed into
[05/05/05 22:02:03.961 - 954 - QCT Finding the highest scored call in TML SMQ
[05/05/05 22:02:03.961 - 954 - QCT TML SMQ has no waiting calls
[05/05/05 22:02:03.961 - 954 - QCT No waiting call now, agent Leehi Burkest (x17
[05/05/05 22:19:52.274 - 954 - QCT Available agent Leehi Burkest (x175) signed into
[05/05/05 22:19:52.274 - 954 - QCT Finding the highest scored call in TML SMQ
[05/05/05 22:19:52.274 - 954 - QCT TML SMQ has no waiting calls
[05/05/05 22:19:52.274 - 954 - QCT No waiting call now, agent Leehi Burkest (x17
[05/05/05 22:58:46.758 - 954 - QCT Available agent Leehi Burkest (x175) signed into
[05/05/05 22:58:46.758 - 954 - QCT Finding the highest scored call in TML SMQ
[05/05/05 22:58:46.758 - 954 - QCT TML SMQ has no waiting calls
[05/05/05 22:58:46.758 - 954 - QCT No waiting call now, agent Leehi Burkest (x17
[05/06/05 04:39:27.463 - 954 - QCT Available agent Keith Boreg(x220) signed into
[05/06/05 04:39:27.463 - 954 - QCT Finding the highest scored call in Tech Supp
```

Note that each call is listed with its Call ID number in parentheses. You can view the Call ID number in the Administrator or ViewPoint Call Log by showing the Call ID column (hidden by default). Call ID also appears in the Queue Call History Detail report (see page 8-49).



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