# Oracle Contact Center Anywhere Network Manager Guide

Version 8.1.3, Rev. A

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**ORACLE**®

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# 1 What's New in This Release

## What's New in Oracle Contact Center Anywhere Network Manager Guide, Version 8.1.3, Rev. A

Table 1 lists changes described in this version of the documentation to support release 8.1.3 of the software.

Table 1.    New Product Features in Oracle Contact Center Anywhere Network Manager Guide, Version 8.1.3, Rev. A

| Topic | Description |
|---|---|
| Starting All Dedicated Resources for One Company on page 79 | Modified topic. It describes how to start all dedicated resources for one companies. |
| Starting All Dedicated Resources for All Companies on page 80 | Modified topic. It describes how to start all dedicated resources for all companies. |
| Stopping Resources on page 81 | New chapter. It describes how to stop resources. |
| Stopping a Resource for a Company on page 81 | New topic. It describes how to stop a resource for a company. |
| Stopping a Resource for a Host Manager on page 81 | New topic. It describes how to stop a resource for a host manager. |
| Stopping All Dedicated Resources for a Company on page 82 | New topic. It describes how to stop all dedicated resources for a company. |
| Stopping All Dedicated Resources for a Host Manager on page 83 | New topic. It describes how to stop all dedicated resources for a host manager. |
| Stopping All Resources Using Advanced Options on page 83 | New topic. It describes how to stop all resources using Advanced Options. |

Table 2.    New Product Features in Oracle Contact Center Anywhere Network Manager Guide, Version 8.1.3

| Topic | Description |
|---|---|
| Call Center Server on page 13 | Modified topic to include IVR information which describes the shared resource and configuration through the CTI. |
| MP3 Converter on page 14 | Modified topic. The MP3 converter allows the playing of recordings in WAV and MP3 formats. |

Table 2.    New Product Features in Oracle Contact Center Anywhere Network Manager Guide,
           Version 8.1.3

| Topic | Description |
|-------|-------------|
| Specifying the Database Type for Oracle Contact Center Anywhere on page 24 | Modified topic. Oracle Contact Center Anywhere supports a primary and backup database configuration. Information about database replication was added to the topic. |
| Setting Up an FTP Configuration on page 28 | New topic. It describes setting up an FTP configuration. |
| Configuring a Standard FTP Configuration on page 28 | New topic. It describes configuring a standard FTP configuration. |
| Changing the Trace Log Level for the TCP/IP Bus on page 36 | New topic. It describes modifying the run-time log level for a TCP/IP bus resource. |
| Installing Host Manager on page 43 | Modified topic. Changed the field label for Number of Logs and added standard value example. The value range was changed from 0 to 5 and a normal production default value was added to the trace level field definition. |
| Adding a New Contact Center Server Resource on page 47 | Modified topic. Added the recommended production default value to the trace level field definition. <br><br> Changed the field description for the field, Start Reserved. |
| Adding a License Server Resource on page 56 | Modified topic. Added the recommended production default value to the trace level field definition. |
| Adding an MCU Server Resource on page 58 | Modified topic. Added the recommended production default value to the trace level field definition. |
| Adding a Redirect Server Resource on page 59 | Modified topic. Added the recommended production default value to the trace level field definition. |
| Adding a Music Server Resource on page 60 | Modified topic. Added the recommended production default value to the trace level field definition. |
| Adding an SNMP Agent Resource on page 62 | Modified topic. Added the recommended production default value to the trace level field definition. |
| Adding a Unified Messenger Resource on page 62 | Modified topic. Added the recommended production default value to the trace level field definition. |
| Adding an MP3 Converter Resource on page 63 | Modified topic. Added the recommended production default value to the trace level field definition. A note regarding MP3 conversion software was also added to topic. |
| Adding an SMSC Gateway Server Resource on page 64 | Modified topic. Added the recommended production default value to the trace level field definition. |
| Adding an ACD Server Resource on page 67 | Modified topic. Added the normal production default value to the trace level field definition. |
| Adding a CTI Server Resource on page 68 | Modified topic. Added the normal production default value to the trace level field definition. |

Table 2.    New Product Features in Oracle Contact Center Anywhere Network Manager Guide, Version 8.1.3

| Topic | Description |
|---|---|
| Adding a Chat Server Resource on page 69 | Modified topic. Added the normal production default value to the trace level field definition. |
| Adding an Email Server Resource on page 70 | Modified topic. Added the normal production default value to the trace level field definition. |
| Adding an Internet Manager Server Resource on page 71 | Modified topic. Added the normal production default value to the trace level field definition. |
| Adding an IVR Server Resource on page 71 | Modified topic. Added the normal production default value to the trace level field definition. |
| Adding a Schedule Server Resource on page 72 | Modified topic. Added the normal production default value to the trace level field definition. |
| Adding a Predictive Server Resource on page 73 | Modified topic. Added the normal production default value to the trace level field definition. |
| Adding a Stats Server Resource on page 74 | Modified topic. Added the recommended production default value to the trace level field definition. |
| Adding an SMS Server Resource on page 74 | Modified topic. Added the normal production default value to the trace level field definition. |
| Using Telnet to View Resource Activity on page 85 | Modified topic. Added SMSCG Resource information. |

# 2 Introduction

This chapter provides an overview of Oracle Contact Center Anywhere Network Manager and identifies its components. It includes the following topics:

## Oracle Contact Center Anywhere Network Manager Overview

Oracle Contact Center Anywhere Network Manager is the control center for the call and data processing components of the contact center. Oracle Contact Center Anywhere consists of distributed server applications or resources that perform specific duties in the operation of the contact center using a network-based inter-resource communications.

You can view, manage, and control distributed resources from a central console. More specifically, you can:

- Add, configure, and delete resources for Oracle Contact Center Anywhere companies

- Configure telephony boards for handling Oracle Contact Center Anywhere interactions for voice and fax in a Dialogic environment

- Set up least-cost call routing schemes for companies

- View the real-time status of all Oracle Contact Center Anywhere resources

- Start, shut down, and initialize Oracle Contact Center Anywhere resources:

  - Start all shared resources

    For more information on shared resources, see Shared Resources on page 13.

  - Start all dedicated resources.

    For more information on shared resources, see Dedicated Resources on page 15.

- Set alarm policies for failing resources

- Set backup policies for all resources

# Identifying Oracle Contact Center Anywhere Media Types

Network Manager controls the following media types:

■ Phone Calls (VoIP, TDM, IVR, Outbound)

■ Web Chat

■ Email

■ Fax

■ Voice Mail

■ Web and ACD Callback

■ SMS

# About Oracle Contact Center Anywhere Shared and Dedicated Resources

There are two types of Oracle Contact Center Anywhere resources, Shared and Dedicated.

■ Shared Resources are resources that many different companies can use.

■ Dedicated Resources are resources that are exclusive to a single company.

Table 3 lists the Shared and Dedicated Resources.

Table 3.    Oracle Contact Center Anywhere Shared and Dedicated Resources

| Shared Resources | Dedicated Resources |
| --- | --- |
| Call Center Server on page 13 | ACD Server on page 16 |
| CTI Bridge on page 13 | Chat Server on page 16 |
| License Server on page 13 | CTI Server on page 17 |
| MCU Server on page 14 | Email Distributor on page 17 |
| MP3 Converter on page 14 | IM Server on page 17 |
| Music Server on page 14 | IVR Server on page 18 |
| Redirect Server on page 14 | Predictive Server on page 19 |
| SNMP Agent on page 15 | Schedule Server on page 19 |
| Unified Messenger on page 15 | Statistics Server on page 19 |
| SMSC Gateway Server on page 15 | SMS Server on page 19 |

# Shared Resources

The following topics provide additional information about each of the shared resources. For more information about the types of resources, see About Oracle Contact Center Anywhere Shared and Dedicated Resources on page 12.

## Call Center Server

The Call Center Server is the interface between the telephony server resources and the other application resources. The Call Center Server controls all voice, fax, and IVR processing, including database queries and initiation of web service calls to the report servers. It reads ANI and DNIS information for use by other resources when making routing decisions. It also bridges calls to selected agents.

It performs the following functions and controls all:

- Voice
- Fax
- IVR Routing capabilities

The Call Center Server reads ANI/DNIS to provide information to other resources for routing decisions and bridges calls to selected agents.

**NOTE:** Though the Call Center Server is a shared resource, the contact center can be configured through the CTI for dedicated operation.

## CTI Bridge

The CTI Bridge (an optional shared resource) allows the bridging of calls across hardware resources in the Dialogic environment.

The CTI Bridge is used in situations where multiple boxes are linked together by means of an ATM. Therefore, it requires that the ATM connection and the appropriate configuration files be set up before the Bridge can function.

## License Server

The License Server performs real-time tracking of the number of active interactions for each company in Oracle Contact Center Anywhere, and enforces the Interaction limits imposed by each company's license.

The License Server performs the following tasks:

- **Company License Management.** Blocks user login attempts that exceed the limits configured for the company and interactions arriving for a company in excess of the maximum simultaneous interactions allowed for that company and are configured in the Oracle Contact Center Anywhere Administration Manager.

■ **System-wide License Management.** Blocks any Interactions in excess of the maximum allowed for the entire system (all companies).

■ **Resource Status tracking and Automatic Resource Backup.** Tracks which resources are running or are absent. Promotes Backup resources to Master status in the event that a Master resource fails or is deactivated. The longest running of two identical resources is always made the Master in the event that the License Server must make this distinction.

■ **Resource Status Reporting.** Accepts verify resource status requests from Network Manager and verifies the status of running resources for reporting back to Network Manager.

■ **Email Notification of License Violation.** The License Server is responsible for Email notification of license violation. This is based on parameters and thresholds set at implementation.

■ **Data Retention.** License Server also involves in data retention function by sending a message to the Web server to call the compression/purging functions.

## MCU Server

The MCU Server supports voice conferences and call monitoring. MCU Server is responsible for creating and managing conference resources to be used by outside callers and Oracle Contact Center Anywhere agents. Conference resources are used for establishing conference calls, and for Oracle Contact Center Anywhere Supervision Manager functions such as listen, whisper coach and join.

## MP3 Converter

MP3 Converter is responsible for converting voice recordings from WAV format to MP3 format. This conversion increases the capacity for storing voice recordings on the Oracle Contact Center Anywhere file server.

**NOTE:** Oracle Contact Center Anywhere allows the playing of recordings in WAV and MP3 formats.

This service should be loaded on the File Server Host and requires a third party piece of freeware that must be downloaded (LAME.EXE). It issues a strong reminder of this placement when the selection is made from the Resource Mode drop-down control.

## Music Server

The Music Server (an optional shared resource) is responsible for playing music (RTP music stream) to callers who have been placed on hold, or are waiting in a queue.

## Redirect Server

The Redirect Server (an optional shared resource) is responsible for matching calls coming into VoIP gateways to contact center resources.

The Redirect Server redirects SIP INVITE messages to a contact center server with available RTP Streams. It is used for load balancing. If you choose to deploy this service, you should utilize two or more contact center servers to be effective.

The Redirect Server only considers contact center resources that are specifically used in by the Redirect Server. If no contact center resources are specifically used by the Redirect Server then no calls handled by the Redirect Server will reach a contact center resource.

## SNMP Agent

The SNMP Agent (an optional shared resource) monitors and provides (to a connected SNMP Browser) data for all Oracle Contact Center Anywhere objects defined in Oracle Management Information Base.

SNMP Agent facilitates Simple Network Management Protocol. This allows for the use of SNMP capable applications for monitoring the Oracle Contact Center Anywhere system. For more information on the SNMP Agent, see *Oracle Contact Center Anywhere SNMP Agent Configuration Guide*.

## Unified Messenger

The Unified Messenger works with Email Server to perform two primary functions:

■ The movement of Voice Mail and Faxes with errors

■ The movement of emails that have an error.

The Unified Messenger attaches a WAV or TIFF file as email attachments, when needed.

## SMSC Gateway Server

The SMSC Gateway Server (an optional shared resource) communicates through Short Message Peer-to-Peer (SMPP) to the external SMSC and inward to the Oracle Contact Center Anywhere SMS server.

# Dedicated Resources

The following topics provide additional information about each of the dedicated resources. For more information about the types of resources, see About Oracle Contact Center Anywhere Shared and Dedicated Resources on page 12.

## ACD Server

The ACD Server prioritizes and distributes interactions to Oracle Contact Center Anywhere workgroups and agents, and tracks the availability of agents. It holds all project routing information for the assigned company and determines which available agent is best suited for the interaction. It also performs these high-level activities:

■ **Determines Agent Scores.** The ACD Server determines the agent score based on the workgroup skill weighting and agent skill ratings. The score is used to determine the best available agent to handle the interaction.

■ **Handles New Interaction Event.** Each multi-media interaction is presented to the queue for handling and distribution.

■ **Handles Available Agent Event.** Agent Events are dynamic and must be factored into the decisions regarding agent availability by the ACD Server. Examples of agent events are:

   ■ An agent finishes an existing call or an interaction

   ■ An agent goes or returns from a break

   ■ An agent logs in

   ■ An agent changes his status to On Break

   ■ An agent is available for a chat session

   ■ An agent is available for an email session

■ **Handles Database Change Event.** Administrators can add, change, and remove workgroups; assign and remove agents; and change workgroup skill weights and agent skill ratings. These changes are dynamic and, when messages are sent, the ACD Server must be able to handle these changes by adjusting the queues and agent selection without the need to restart the ACD Server.

■ **Manages Workgroup Overflow.** The ACD Server checks for overflow conditions in all workgroups every 5 seconds. If the length of time a customer has been waiting in a workgroup queue exceeds the maximum specified by the administrator, or if the number of queued interactions exceeds the maximum by agent or by workgroup queue, the ACD Server implements the overflow action specified by the administrator. These overflow actions can include incrementing an interaction priority, expanding the workgroups, or routing the call to a project menu.

■ **Manages Interaction Priorities.** Network Manager utilizes a 1-5 priority scheme (very high to very low). The project (default) with which the interaction was initially associated defines the interaction's initial priority. This priority can be overridden by the customer priority associated with a known customer. Overflow can further change the priority of an interaction dynamically. The ACD Server uses priority levels to order the interactions in the queue for handling.

## Chat Server

The Chat Server is responsible for triggering the pushing of pages and scoring the responses. It maintains a timer for the agent to accept the interaction and communicates with the Host Manager and Stat Server to save a transcript of a customer's chat message to the customer's history in the database.

## CTI Server

The CTI Server acts as an interface between telephone network resources and the software interface. It performs the following functions:

■ Manages all available telephony resources

■ Acts as the system brain, determining what to do with the available resources

■ Determines which contact center resources the company has access

■ Determines what contact center to connect incoming and outgoing calls for a specific agent

## Email Distributor

The Email Distributor receives incoming email interactions from mail servers and routes them to available agents. The Email Distributor is responsible for:

■ Polling email servers to retrieve email

■ Routing incoming project email to an agent and then back to the originator

■ Updating information from the database regarding email projects and agents

■ Updating (through the Statistics Server) any changes made to database from the Administration Manager

## IM Server

The IM Server bridges communication between resources and browser-based client applications (such as Oracle Contact Center Anywhere Interaction Manager and Oracle Contact Center Anywhere Supervision Manager). The IM Server manages the real-time statistical view of all interaction and user activity in Oracle Contact Center Anywhere, pushing information out to users through the data center located on the Web server.

The IM Server resides in the Network Zone (Figure 1) and handles all communication between end-users and application resources. It interacts with the Web Server to pass end-user entries to back-end resources.

Figure 1 illustrates the IM Server and how communication is bridged between resources and browser-based client applications.
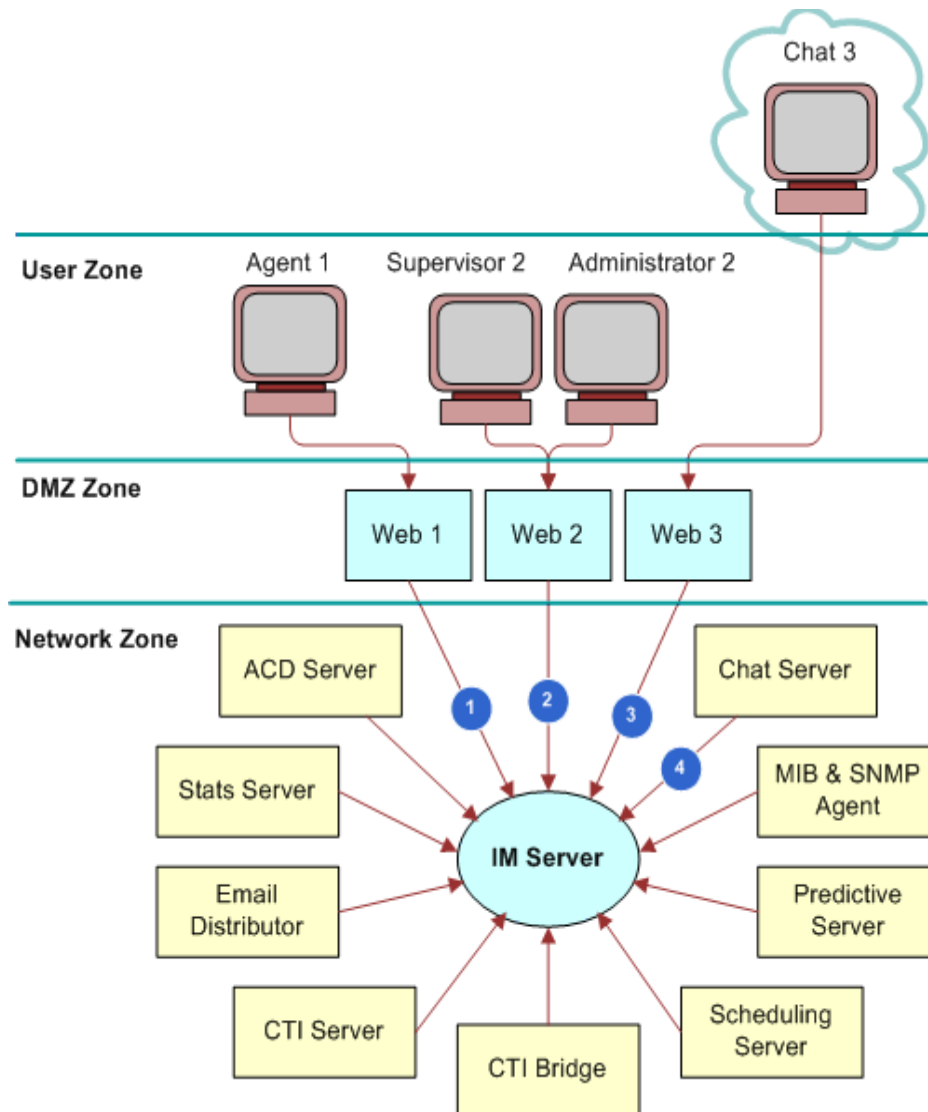
Figure 1.    IM Server Communication

## IVR Server

The IVR Server supports IVR functionality, for customer-written C++ IVR applications in a dialogic environment. Oracle Contact Center Anywhere Releases 7 and later do not commonly use this server.

## Predictive Server

The optional Predictive Server is required if the company uses Predictive or Preview Calling campaigns to place outbound calls. The Predictive server dials numbers from a predefined list, assigns successfully completed calls to available agents, takes actions based on unsuccessful call attempts, and provides statistics for all call attempts. In the case of Preview, numbers are provided to the agent to dial.

## Schedule Server

The Schedule Server provides a means of setting and managing a predetermined schedule of operating hours for call routing.

The Schedule Server updates the Statistics Server about changes to a phone project when a user sets the schedule. It is also responsible for triggering Callback and WebCallback requests. All project changes must be sent to the Statistics Server before the scheduler can process the change.

## Statistics Server

The Statistics Server saves statistics about agents, interactions, and workgroups to the historical tables in the Oracle Contact Center Anywhere database, such as workgroupStats, projectstats, userstats, and historyactions. This tables include:

■ Agent log in information in a login table

■ Agent status information in the agent status table

■ Interaction outcome information in the outcome table

The Statistics Server acts as a gateway to the database. As resources run, they must access the Oracle Contact Center Anywhere database to store small nuggets of information with interaction, agent, or queue vital statistics. The Statistics Server provides this service, minimizing the number of simultaneous connections that the database must keep with system resources. The centralization of database functionality in a single resource helps to prevent database failures by providing information to resources handling interactions that do not require database access at that point in time.

The Statistics Server has built in recovery mechanisms to make sure data is written successfully. If a write operation fails, the Statistics server attempts the write again. If the database is not responding, queries are queued until operation is restored, and the data can be written to the database.

## SMS Server

The SMS Server works with the Interaction Manager Server and ACD Server to manage SMS communications between agents and customers.

# Transaction Examples

The following figures show the processing flow for various types of transactions.

Figure 2 illustrates the processing flow when an ACD call arrives in the contact center. Oracle Contact Center Anywhere sends information to the License Server for verification and sends a request for an available agent to the ACD Server. The ACD Server locates the agent and sends the call to the IM Server, where the agent, using the Interaction Manager, accepts or refuses the call. Depending upon the agent's response, the IM Server may send the request to the CTI Server or disconnect the call.
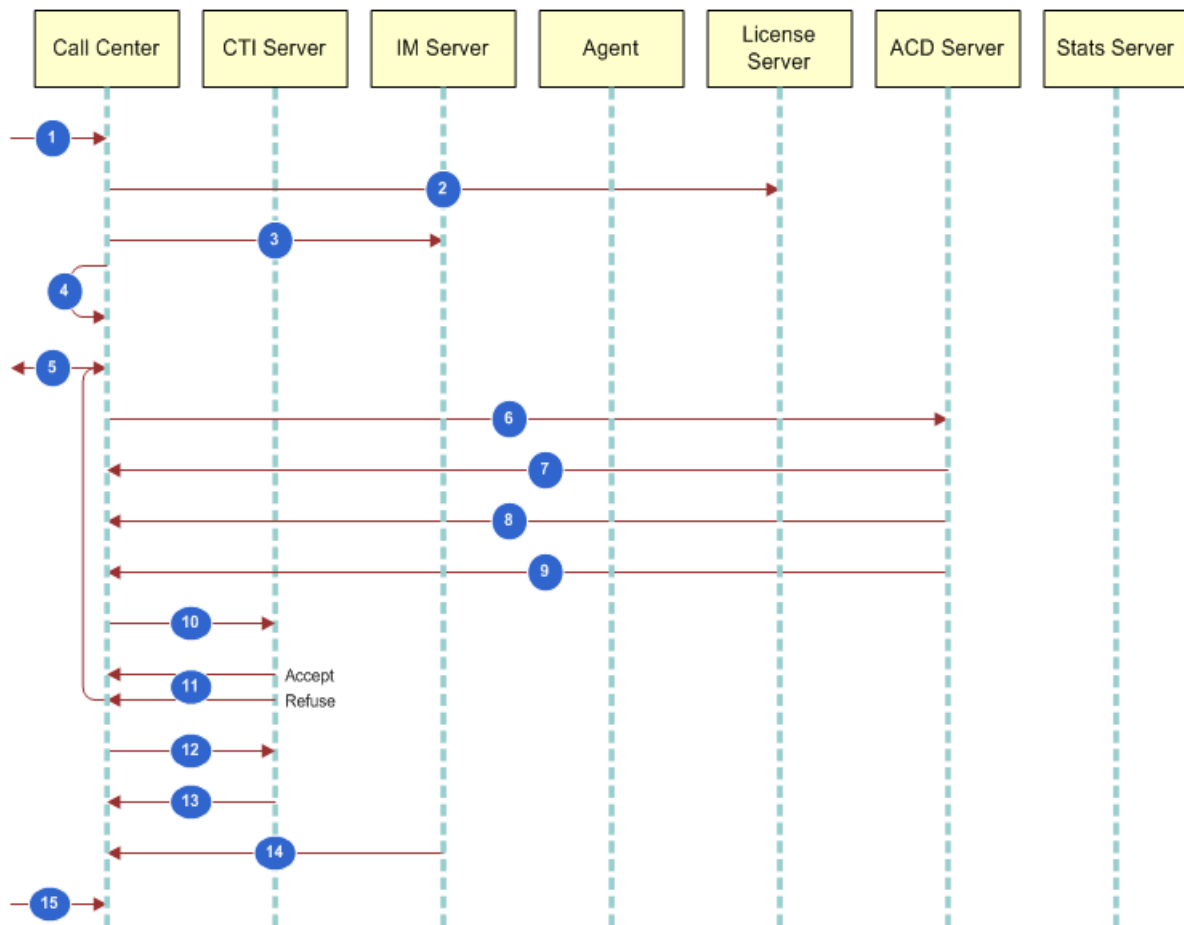


Figure 2.    ACD Call (Transaction Example)

Figure 3, shows the process flow when an ACD Chat arrives in the contact center from a customer's PC. The primary actors in the chat information flow include the Interaction Manager, the Web Server, the IM Server, and the Chat Server.
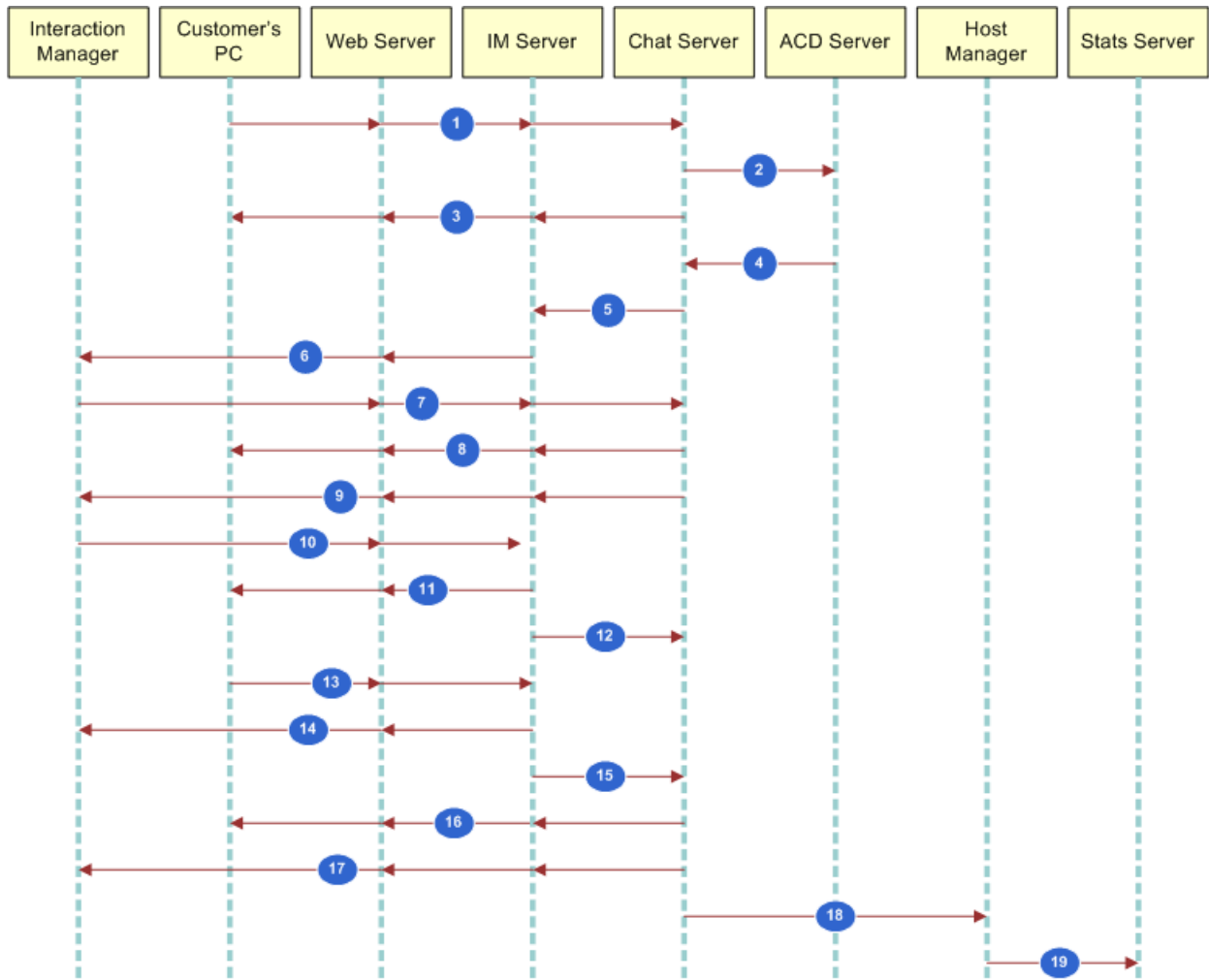
Figure 3.    ACD Chat (Transaction Example)

Figure 4, for example, show the process flow when an ACD Email arrives in the contact center from the Email Distributor.
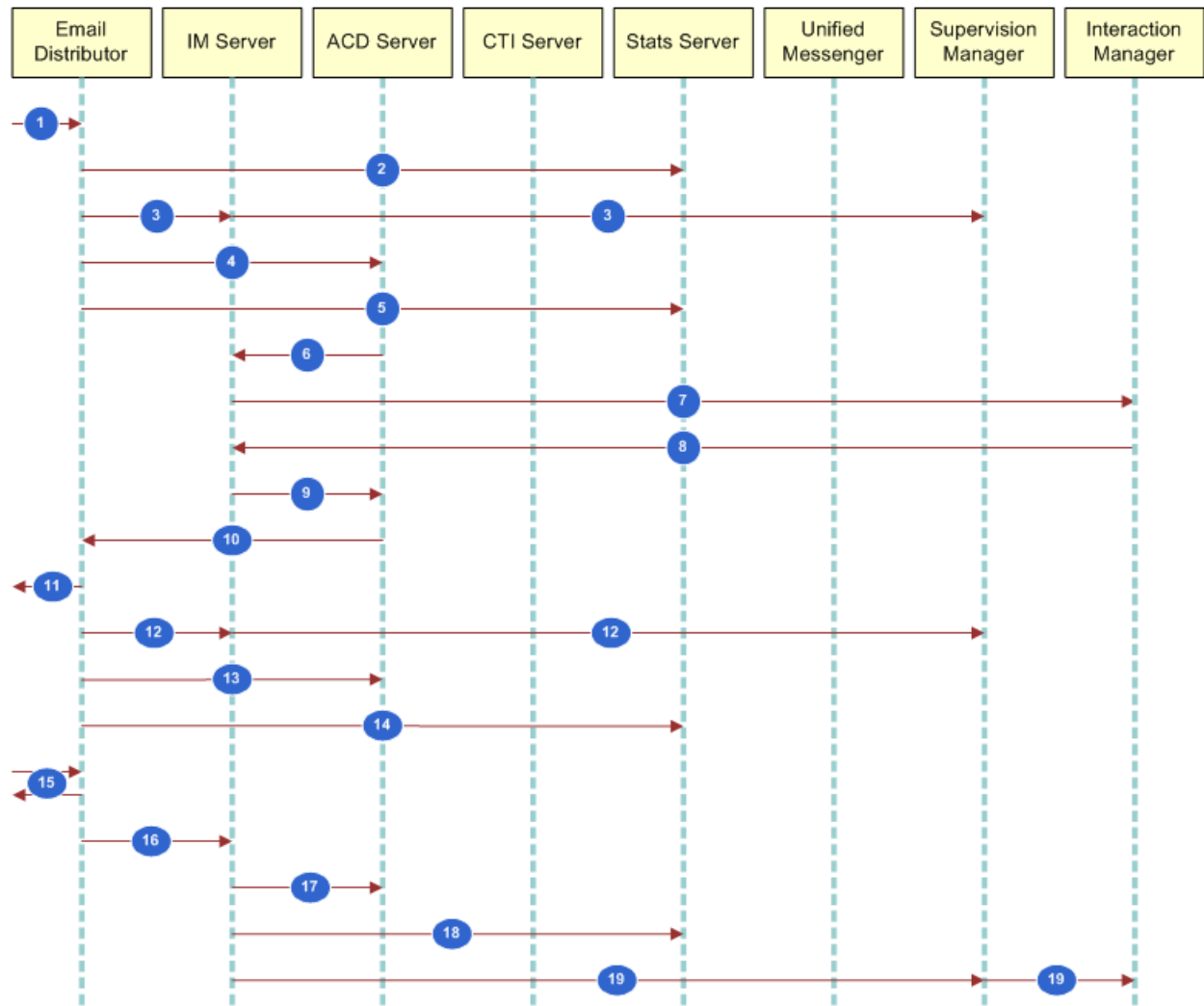
Figure 4.    ACD Email (Transaction Example)

# 3 Getting Started

This chapter explains how to start Oracle Contact Center Anywhere Network Manager, establish connections, and perform basic functions. It includes the following topics:

## Starting Oracle Contact Center Anywhere Network Manager

Before you start Oracle Contact Center Anywhere Network Manager, complete the following tasks:

- Install the executable file for Oracle Contact Center Anywhere Network Manager (NetworkManager8x.exe) on the users' computers.

- Ensure a TCP/IP Bus is running.

- Define an appropriate ODBC driver.

- Install Oracle Contact Center Anywhere and initialize the database.

After you are done, complete the steps in the following procedure to start Oracle Contact Center Anywhere Network Manager. For more information on setting up Network Manager, see *Oracle Contact Center Anywhere Installation and Upgrade Guide*.

### To start Oracle Contact Center Anywhere Network Manager

1 Find the executable file for Oracle Contact Center Anywhere Network Manager (NetworkManager8xx.exe) in the following folder:

    \ccanywhere\NetworkManager

2 Double-click the Network Manager icon.

The Login dialog box displays.

**3** In the Login dialog box, provide the following information:

| Field | Description |
|---|---|
| Alias | Type the name of the ODBC connection, that Oracle Contact Center Anywhere Network Manager uses to access the Oracle Contact Center Anywhere database. |
| User | Type a user name to sign on to the database. |
| Password | Type the password for the user name you typed in the User text box. |

**4** Click Login.

*To create a shortcut to Oracle Contact Center Anywhere Network Manager*

**1** Find the executable file for Oracle Contact Center Anywhere Network Manager (NetworkManager8xx.exe) in the following folder:

\ccanywhere\NetworkManager

**2** Right-click and select Send To.

**3** Select Desktop (Create Shortcut).

An icon appears on the desktop.

# Database and File System Definition

Oracle Contact Center Anywhere runs on either an MS-SQL Database or an Oracle Database platform. You must specify the database type that will support Oracle Contact Center Anywhere operations before you can use Oracle Contact Center Anywhere Network Manager to set up the contact center.

## Specifying the Database Type for Oracle Contact Center Anywhere

Oracle Contact Center Anywhere supports a primary and backup database configuration which allows for failover and database replication, if connectivity to the primary database is interrupted. In database replication environments, the seed value is the starting number of the sequence, which is used to set the ID field and is the primary key of the table. For example, if there are two databases in Oracle Contact Center Anywhere, one instance will be 'seed=1' and the other database instance will be 'seed=2'. All IDs for the first instances will start with 1 and for the other 2.

**NOTE:** For Oracle Database, the position is 20 for Seed and 19 for Increment.

Increment data replication works in tandem with the seed value as the offset of the primary key identifier. Set this value to the total number of databases in Oracle Contact Center Anywhere. For example, if set to 2, the IDs for the first database will start with 1 and increment by 2 … 3,5,7. For the second database, the ID will start with 2 and will increment by 2, starting with 2,4,6, and so on. Again, if replication of multiple databases is not used, this value is not required.

### *To specify the database type*

**1** From the Oracle Contact Center Anywhere Network Manager System menu, click Configuration.

The Database Definition dialog box opens.

**2** In the Database, select Master sub tab, and then enter information about the Master database:

| Field | Description |
| --- | --- |
| Driver | ■ If the SQL server is in use, click SQL. |
| | ■ If Oracle is in use, click Oracle. |
| Alias | Enter the name of the ODBC driver used to connect to the database. |
| User | Enter the user name used to sign in to the database. |
| Password | Enter the password associated with the user. |

**3** The Backup tab is used to configure a Dual Database system:

■ If the Oracle Contact Center Anywhere system is using a single database, use the default Backup tab values.

■ If the Oracle Contact Center Anywhere system is using a dual database, enter the information about the Backup database.

**4** Click OK to save your settings.

## Configuring a JDBC Connection for an SMSC Gateway Resource

The SMSC Gateway resource uses a JDBC Connection to access the Oracle Contact Center Anywhere database. For more information about configuring the SMSC Gateway resource, seeAdding an SMSC Gateway Server Resource on page 64.

### *To configure JDBC connection for SMSC Gateway resource*

**1** From the System Menu, click Configuration to open the Database Definition dialog box.

**2** In the Database, select Master tab, and then click the JDBC sub tab.

**3** Enter the following information:

a    Class name refers to the name of the class for the JDBC driver that will be used for database reads and writes.

b    URL refers the connection to the Database. It contains the host, port and SID of the schema.

The values of these fields depend on which type of database is using:

- If the MS SQL Server is in use:
  - ❑ Class Name:

    com.inet.pool.PoolDriver

  - ❑ URL:

    jdbc:inetpool:inetdae7:<the hostname or IP of the server the database is located>:<database port>

    Example: jdbc:inetpool:inetdae7:your_server:1433

- If the Oracle Server is in use:
  - ❑ Class Name:

    oracle.jdbc.driver.OracleDriver

  - ❑ URL:

    jdbc:oracle:thin:@<the hostname or IP of the server the database is located>:<database port>:<SID>

    Example: jdbc:oracle:thin:@your_server:1521:your_sid

**NOTE:** If you are running a primary and backup database configuration, repeat Step 2 with the Backup database sub tab.

**4**    Click OK to save your settings.

## Specifying the Storage Path for Uploaded User Files

Oracle Contact Center Anywhere requires access to a hosted file system for storage of files uploaded by Oracle Contact Center Anywhere users. You must specify the computer and the path to the location where Oracle Contact Center Anywhere stores these files.

### To specify the computer path for storage of uploaded files

**1**    In the System Configuration dialog box, click the System tab.

The File System Definition dialog box appears.

**2** Enter the following information:

| Field | Description |
|-------|-------------|
| Server Host | Type the name of the computer where Oracle Contact Center Anywhere will store uploaded files. |
| Server Root Path | Type a valid, existing path on the computer specified in the Server Host text box. Oracle Contact Center Anywhere will create a directory structure for storing transferred files. |
| File Size Limit | Type the maximum file size (in kilobytes) allowed for Oracle Contact Center Anywhere prompt recordings. |
| FTP Username | Type a user name for the computer specified in the Server Host text box. **NOTE:** The user must have the necessary permissions for FTP. |
| FTP Password | Type a password for the user specified in the FTP Username text box. |

**3** Click OK.

The Database and File system are now configured.

# Setting Up the Alarm Mailbox Definition

Oracle Contact Center Anywhere can send an email each time a resource stops for any reason. This mailbox can be to an administrator, to a Network Operations Center, to an on-call pager, or to any other valid email address. The address specified will receive all notifications for all hosts and all companies defined on a system.

### *To set up the alarm mail definition*

**1** Navigate to the Options menu, then Alarm Mailbox item and click Alarm Mailbox

The Alarm Mailbox dialog box opens.

| Field | Description |
|-------|-------------|
| To Address | Oracle Contact Center Anywhere Network Manager sends a notification to this address, should a resource stop. |
| From Address | This address appears in the From field on the notification email. |
| Host | The name of the system hosting the SMTP mail server. (Usually, this is a corporate mail server.) |
| SMTP Timeout (sec) | The number of seconds Oracle Contact Center Anywhere Network Manager will try to send the message to the SMTP host. |
| User ID | The user name for the *sending* account on the SMTP server. |

| Field | Description |
| --- | --- |
| Enable Alarm check box | When checked, the Alarm Mailbox is active. |
| Save to Registry | When checked, Oracle Contact Center Anywhere Network Manager writes the settings to the Oracle Contact Center Anywhere Network Manager registry (not the registry of the host system) and uses the information to configure the Alarm Mailbox. |

**2**   Click OK.

# Setting Up an FTP Configuration

FTP setup is configured in Oracle Contact Center Anywhere Network Manager. You must configure both Web File Transfer and Server File Transfer options for Oracle Contact Center Anywhere to be fully operational.

The Web File Transfer option affects the transfer of all transcripts, recordings, and so on between the Web, the FTP Server, and the Remote Database options. The Server File Transfer option affects the transfer of all transcripts, recordings, and so on between the backend resources, the host manager, and the FTP Server.

**NOTE:** It is not feasible to migrate existing FTP configuration; migrated customers must re-edit their FTP configuration for correct system operation. It is recommended that you have these configurations ready to configure with Oracle Contact Center Anywhere Network Manager. The Server File Transfer configuration must be configured in Oracle Contact Center Anywhere Network Manager.

The FTP options available in Oracle Contact Center Anywhere Network Manager include:

■   FTP

■   FTPS (FTP - Using SSL)

■   SFTP (SSH - Secure Shell)

■   File Copy

A transfer is considered external if the target file server is located outside of Oracle Contact Center Anywhere, for example, at a third party location or another host. The external configuration is only used for the Recording Archive for the Data Retention feature. Otherwise, a transfer is considered internal which is used for everything else.

## Configuring a Standard FTP Configuration

Many configurations utilize standard FTP access and internal access. To configure standard FTP for your configuration requires the following steps. A basic example is provided. The complete set of settings and their definition is provided and the end of this section. Both the Web File Transfer and Server File Transfer needs to be configured.

### *To configure standard FTP*

**1**  Log in using the username and password provided.

If you are a migrated customer, it may be useful to review your existing FTP Settings before proceeding.

**2**  Navigate to System, then Web File Transfer - Web File Transfer Internal.

The Web File Transfer Configuration dialog box will appear. Select FTP from the drop down menu.

The default options will appear.

**3**  Complete the fields for your configuration. For a basic internal installation, you might enter:

| Field | Description |
|---|---|
| remoteHost | Enter the hostname or IP address of your File Server. |
| remotePort | Normally would default to port 21. |
| initialRemoteDirectory | Normally, you enter "/" or what you copied from the Oracle Contact Center Anywhere configuration. |
| username | Enter the FTP username. |
| password | Enter the password for the FTP username. |
| connectMode | The connect mode is either active or passive. |

**4**  Click OK to save your changes.

**5**  Navigate to System, then Server File Transfer - Server File Transfer Internal.

The Server File Transfer Configuration dialog box will appear.

**6**  Select FTP from the drop down menu and complete the fields for your configuration. In the example above, you would enter the same information as for the Web File Transfer.

**7**  Click OK to save your changes.

After changing the FTP parameters, All Host Managers and Web Servers must be restarted.

## FTP Configuration Types

The configuration of other FTP types (FTPS and SFTP/SSH) is the same as those steps as outlined in the procedure, Configuring a Standard FTP Configuration on page 28, however the options are different. You will need to configure the Web File Transfer and Server File Transfer as appropriate for your configuration.

**NOTE:** FTPS is not available for Server File transfer and SFTP will perform as a secure copy without the secure shell. Other key points include:

■  All authentication types must provide a *username* as set up on the server.

■ In public key authentication, SSH clients and servers authenticate each other using public/ private key pairs. Each must have access to their own private key, and they must have access to each other's public key (unless server validation is disabled). You should ensure that the server's public keys are loaded by specifying knownHostsFilePath or serverKeyfilePath. The client's public key must be registered with the SSH server, typically by copying it into the server's authorized_keys file.

■ A patch is required for both the SSH and File Copy operations.

### FTP Configuration Settings and Definitions

The following table describes the parameters, values and descriptions for each protocol.

| Parameter Name | Parameter Value | Description |
| --- | --- | --- |
| "protocol" | "ftp" | The protocol used to interact with the remote host. |
| "factoryClass" | "com.taw.util.filetransfer.enterpri<br><br>sedt.FTPClientFactory" | Class that is responsible for creating file transfer client instances. |
| "remoteHost" | | The IP address or name of the remote host. |
| "remotePort" | default = "21" | The port to connect to on the remote host. |
| "initialRemoteDirectory" | default = "/" | The initial remote directory that all connections change to immediately on connection. |
| "timeout" | default = "30000" | Set the timeout for socket connections. In milliseconds. |
| "username" | | The name of the user to log in with. |
| "password" | | The password of the user to log in with. |
| "connectMode" | default = "passive" | The data transfer mode where the client initiates the connection. |
| | "active" | The data transfer mode where the remote host initiates the connection. |

### FTPS Configuration Settings

The following table describes the FTPS Configuration Settings.

| Parameter Name | Parameter Value | Description |
| --- | --- | --- |
| "protocol" | "ftps" | The protocol used to interact with the remote host. |
| "factoryClass" | "com.taw.util.filetransfer.enterpri sedt.FTPSClientFactory | Class that is responsible for creating file transfer client instances. |
| "remoteHost" | | The IP address or name of the remote host. |
| "remotePort" | default = "21" | The port to connect to on the remote host. |
| "initialRemoteDirectory" | default = "/" | The initial remote directory that all connections change to immediately on connection. |
| "timeout" | default = "30000" | Set the timeout for socket connections. In milliseconds. |
| "username" | | The name of the user to log in with. |
| "password" | | The password of the user to log in with. |
| "connectMode" | default = "passive" | The data transfer mode where the client initiates the connection. |
| | "active" | The data transfer mode where the remote host initiates the connection. |
| "securityMechanism" | "auth_tls" | Used to ask for SSL negotiation without implicitly protecting the data connection. |
| "statWithClearDataChannels" | default = "false" | By default the client switches to private data channels immediately after connecting to the remote host. This flag stops this behavior if set to "true". |
| "allowBasicConstraintsNonCA" | default = "false" | Enabling this flag permits non-CA certificates to have basic constraints. |

| Parameter Name | Parameter Value | Description |
|---|---|---|
| "disableSessionResumption" | default = "false" | Session resumption is a feature of SSL/TLS, which speeds up the establishment of secure connections by caching certain cryptographic parameters during the first connection, such that they may be used in subsequent connections. This is particularly handy for FTPS which opens a new connection for each file transfer. |
| | | Occasionally, it can cause problems when establishing secure connections on data-channels, so this flag is provided for disabling the feature and thus forcing a full exchange of cryptographic data for every file. |
| "disableSSLClosure" | default = "false" | Disables standard SSL closure by forcing on both data and control channels SSL connections to close in a non-standard manner. This flag may be useful if it is found that the client or the server (or both) freezes after a data-transfer or when the FTP connection is closed. |
| "disableWaitOnClose" | default = "false" | If set, stops the client waiting for an SSL closure acknowledgement on both the control channel and the data channel. This flag may be useful if it is found that the client freezes after a data-transfer or when the FTP connection is closed. |
| "enableServerValidation" | | If server validation is on, the identity of the server as presented by its certificate (SSL) is verified by checking a certificate store. In production systems server validation should always be enabled. |
| "rootCertificatesPath" | | The full path of the root certificates that the remote host certificate will be validated against. |

| Parameter Name | Parameter Value | Description |
| --- | --- | --- |
| "cientCertificatePath" | | The full path of the PEM file containing the client certificate and private key. This is required if client authentication is to be used. |
| "cientCertificatePassphrase" | | The pass phrase for the client certificate. |

### SFTP Configuration Settings (SSH)

The following table describes the SFTP Configuration Settings (SSH).

| Parameter Name | Parameter Value | Description |
| --- | --- | --- |
| "protocol" | "sftp" | The protocol used to interact with the remote host. |
| "factoryClass" | "com.taw.util.filetransfer.enterprisedt.SFTPClientFactory" | Class that is responsible for creating file transfer client instances. |
| "remoteHost" | | The IP address or name of the remote host. |
| "remotePort" | default = "22" | The port to connect to on the remote host. |
| "initialRemoteDirectory" | default = "/" | The initial remote directory that all connections change to immediately on connection. |
| "timeout" | default = "30000" | Set the timeout for socket connections. In milliseconds. |
| "username" | | The name of the user to log in with. |
| "password" | | The password of the user to log in with. |
| "enableServerValidation" | | If server validation is on, the identity of the server as presented by its public key (SSH) is verified by checking a known hosts file or a server key file. In production systems server validation should always be enabled. |
| "knownHostsFilePath" | | The full path to the file containing public keys that the server public key will be validated against. They are typically stored in a file called known_hosts. This parameter is mutually exclusive with serverKeyfilePath. |

| Parameter Name | Parameter Value | Description |
|---|---|---|
| "serverKeyfilePath" | | Server public keys can also be maintained in their own individual key files and be used for server validation without adding them to the known_hosts file. Both OpenSSH and SECSH standard formats are supported. This parameter is mutually exclusive with knownHostsFilePath. |
| "authenticationType" | "password" | This type sets up client validation using a username and password. |
| | "publickey" | This type sets up client validation using a private/public key-pair. |
| | "publickeyandpassword" | This type sets up client validation using a private/public key-pair. |
| "clientKeyfilePath" | | The full path of the private key file. |
| "cientKeyfilePassphrase" | | This optional pass phrase of the private key file. |
| "disableWaitForChannelClose" | default = "false" | Disables waiting for an acknowledgement from the server when the client has requested that a channel be closed. Set to "true" to disable the wait. |
| "maxPacketSize" | | Set the maximum packet size. This should be used if errors are being received such as "packet too long: xxxx". Set the size smaller than the size listed in the error message. |

# Reloading Oracle Contact Center Anywhere Network Manager

Occasionally, you might need to re-establish connectivity to Oracle Contact Center Anywhere Network Manager or make sure that the connection is active.

### To re-establish connectivity or verify the connection is active

**1** Navigate to the File menu Reload item and click Reload.

The Login dialog box opens.

**2** Complete the steps in .

# Disconnecting from and Reconnecting to the TCP/IP Bus

When working with a Oracle Contact Center Anywhere system that has multiple hosts it is possible to connect to the TCP/IP Bus from any of the host systems. Do this when a single system is scheduled for maintenance.

## Connecting to the TCP/IP Bus

Complete the steps in the following procedure to connect to the TCP/IP bus.

### *To connect to the TCP/IP bus*

**1**  Navigate to the Bus menu Disconnect Bus item and click Disconnect Bus.

As Oracle Contact Center Anywhere Network Manager disconnects from the TCP/IP Bus, the status line will show the status.

**2**  Take note of the status line for action confirmation.

## Reconnecting Oracle Contact Center Anywhere Network Manager to Oracle Contact Center Anywhere

After disconnecting, Oracle Contact Center Anywhere Network Manager cannot affect change in the Oracle Contact Center Anywhere system. To continue, you must reconnect Oracle Contact Center Anywhere Network Manager to Oracle Contact Center Anywhere.

### *To reconnect Oracle Contact Center Anywhere Network Manager to Oracle Contact Center Anywhere*

**1**  Navigate to the Bus menu Reconnect Bus item and click Reconnect Bus.

**2**  Take note of the status line.

The Connect to Bus dialog box opens.

**3**  Select the desired host from the list, and click Connect.

Oracle Contact Center Anywhere Network Manager connects to the TCP/IP Bus.

**4**  Take note of the status line for action confirmation.

# Changing the Trace Log Level for the TCP/IP Bus

The trace log level determines the amount of detail that is written to a log. The log level is set for the host and is applied to all resources running on the host. Oracle Contact Center Anywhere Network Manager allows you to modify the run-time log level for a TCP/IP bus resource.

### To change the trace log level for the TCP/IP bus resource

**1**   Navigate to the Bus menu, and then click Change Log Level.

**2**   Select a number between 0 and 5 to dynamically change the run-time log level for the TCP/IP bus. The normal production level is 0, where 0 is the least amount of detail to write to the logs and 5 is the greatest amount of detail.

   **NOTE:** If the TCP/IP bus is stopped, the log level reverts to the trace log level set for the host manager. For more information on host manager settings and operation, see Installing Host Manager on page 43.

# Basic Oracle Contact Center Anywhere Network Manager Commands

Oracle Contact Center Anywhere Network Manager uses the following options to identify commands:

■   Reload network

■   Add a Oracle Contact Center Anywhere resource to the current company or host

■   Delete the selected Oracle Contact Center Anywhere resource from the current company or host

■   Start the selected Oracle Contact Center Anywhere resource

■   Stop the selected Oracle Contact Center Anywhere resource

## Reload Network View

The Reload Network button allows the Oracle Contact Center Anywhere Network Manager user to log in to a different system, or to refresh their login on the current system. It brings up the login dialog box.

**TIP:**  Use the same log in procedure described in Starting Oracle Contact Center Anywhere Network Manager on page 23.

## Adding a Resource

The Add Resource button starts the Add New Server dialog box. Use this dialog box to add servers to the Oracle Contact Center Anywhere environment. This topic is discussed in detail later in this guide. For more information adding servers, see Adding All Shared and Dedicated Resources to a Company on page 77.

## Deleting a Resource

The Delete Resource button is used to remove resources. The button starts a message confirming the delete. When you click OK, the resource is removed.

## Starting a Resource

The Start Resource button starts the selected Oracle Contact Center Anywhere resource. It shows a status box indicating progress.

## Stop Resource

The Stop Resource button stops the selected Oracle Contact Center Anywhere resource. It shows a status box indicating progress.

# 4 Viewing Oracle Contact Center Anywhere Resources

This chapter provides a Host View and a Company View of Oracle Contact Center Anywhere resources. It includes the following topics:

## Host and Company Perspective

There are two ways to view Oracle Contact Center Anywhere resources; by Host and by Company. A Oracle Contact Center Anywhere installation may include a large number of host systems, and in an Application Service Provider setting, multiple company definitions. Using Oracle Contact Center Anywhere Network Manager, you can view these resources from a Host Perspective or from a Company Perspective.

The Host Perspective shows resources that are associated with a physical server. The Company View shows resources that are associated with a company.

## Selecting a Host

Complete the steps in the following procedure to select a physical server from the Host Perspective.

### To select a host

**1** From the Host View, click View by Host.

The raised alphabetic selectors identify an existing host.

**2** Click a raised alphabet character (such as P).

A list of hosts appears in the adjacent box.

**3** Select a host and double-click.

Oracle Contact Center Anywhere Network Manager displays the Host Tree for the host you selected.

## Changes to Host View Menu Items

It is important to note that after you select a host, the available commands from within the Resources and Options Menus change. For example, in the Resources Menu, using the Host View provided in Selecting a Host on page 39, if you select *doc1* from the Host Tree, then the Start Resource and Delete Resource items are no longer available. Whereas, if you select *MCU Server* from the Host Tree, these two items become available but the Stop Resource and Telnet items are not.

In the Options Menu, using the Host View provided in Selecting a Host on page 39, if you select *doc1* from the Host Tree, then the Stop All for Company and Start All for Company items are not available. Whereas, if you select *MCU Server*, then the Stop All for Company, Start All for Company, Stop All for Host, and Start All for Host are not available.

If you do not select a host from the Host Tree, then only a few options remain available. In this case, the available items within the Resources Menu include only the Add Host Manager, Contact Center, and Advanced Options. The available items within the Options menu are limited to Alarm Mailbox, Verify Status, Force Shutdown, Start Companies, and Start All Shared.

# Selecting a Company

Complete the steps in the following procedure to select a company from the Company Perspective.

### To select a company

**1**  From the Host View, select View by Company.

   The raised alphabetic selectors identify an existing company.

**2**  Select a raised alphabet selector (such as A).

   A list of companies appears in the adjacent box.

**3**  Double-click a company from the list.

   Oracle Contact Center Anywhere Network Manager displays the Company tree.

## Changes to Company View Menu Items

After you select a company, the available commands from within the Resources and Options Menus change. For example, in the Resources Menu, using the Company View provided in Selecting a Company on page 40, if you select *CCA Network* from the Company Tree, then only the Contact Center and Advanced Options items are available. Whereas, if you select *ASP Services* from the Company Tree, two additional items (Add Resource and Delete Resource) are also available.

In the Options Menu, using the Company View provided in Selecting a Company on page 40, if you select *CCA Network* from the Company Tree, then only the Alarm Mailbox, Force Shutdown, Start Companies, and Start All Shared items are available. Whereas, if you select *ASP Services*, then the two additional items (Stop All for Company and Start All for Company) become available.

If you do not select a company from the Company Tree, then only a few options remain available. In this case, the available items within the Resources Menu include only the Add Host Manager, Contact Center, and Advanced Options. The available items within the Options menu are limited to Alarm Mailbox, Force Shutdown, Start Companies, and Start All Shared.

# 5 Installing a Host Manager

This chapter introduces Host Manager and describes how to install a Host Manager on each physical host in Oracle Contact Center Anywhere. It includes the following topics:

- About Host Manager on page 43
- Installing Host Manager on page 43
- About the Default Resources Dialog Box on page 45

**NOTE:** Adding required Oracle Contact Center Anywhere resources is the first step in building a contact center for a company, or for Service Providers, for client companies. Installing resources must be performed in order. Host Manager is the first resource that you install.

## About Host Manager

Host Manager is the first resource you must install on each physical host in Oracle Contact Center Anywhere.

Host Manager performs the following functions:

- The Host Manager creates directory structures for each company in Oracle Contact Center Anywhere. These directories manage quality control recordings, email and chat histories, prompts, and so on. The Host Manager transfers files to and from the FTP server to the application server.
- Host Manager manages all the resources on a given host, and handles all starting and stopping of resources.

## Installing Host Manager

Complete the steps in the following procedure to install Host Manager.

### To install Host Manager

1   Make sure that Oracle Contact Center Anywhere Network Manager is connected to the TCP-IP Bus.

2   Change to the Host Perspective.

For more information on host managers, see Selecting a Host on page 39.

3   From the Resources Menu, choose Add Host Manager.

**4** In the Host Manager dialog box, complete the fields.

| Field | Description |
|-------|-------------|
| Host | Type the name of the Host computer in the Oracle Contact Center Anywhere network. |
| Port | Type the Port Number for the Host Manager.<br><br>**NOTE:** If you are unsure of the value, click the Suggest Port button. |
| Home Directory | Type the directory location where Oracle Contact Center Anywhere is installed. Oracle Contact Center Anywhere creates a \log folder in the specified directory |
| Location | Type a logical location. |
| Create Library Email | You must check this box.<br><br>**NOTE:** Network Manger uses this flag to create the directory structure for Oracle Contact Center Anywhere. |
| Create Lib fax and Prompt | You must check this option.<br><br>**NOTE:** Oracle Contact Center Anywhere Network Manager uses this flag to create the directory structure for Oracle Contact Center Anywhere. |
| Log Size | Type the size (in kilobytes) of the log files if the Number of Logs option is selected in Clean Log Files. |
| Number of logs | If you select *Number of logs*, Oracle Contact Center Anywhere continues to open new logs until the log file size you identify in this field is reached. For example, 10 is a standard value for the number of logs. When the value in Number of logs is reached, Oracle Contact Center Anywhere begins to overwrite existing log files. |
| Trace Level: | Select a number to define the amount of detail to write to the logs (where 0 is least amount of detail and 5 is the greatest amount of detail). The normal production level is 0. |

**5** Click Save.

Oracle Contact Center Anywhere Network Manager opens the Default Resources dialog box.

**6** Click the Dedicated tab.

**7** Choose one of two courses of action:

■ Click Finish and add resources later.

■ Add shared or dedicated resources to the Oracle Contact Center Anywhere network, using the Default Resource dialog box.

# About the Default Resources Dialog Box

Adding multiple resources is a method used to quickly set up a host. The resources you set up using the Default Resources dialog box adopt the parameters you set for the Host Manager you just added.

You may, for example, add shared resources using the Default Resources dialog box. Many of the shared resources, however, require separate systems in a moderately large installation. For more information on shared resources, see Adding Shared Resources on page 47.

For example, a 200-interaction voice contact center would require three hosts dedicated to contact center servers and one host dedicated to the MCU Server. In this case, it is necessary to define four host managers, one for each host, and then it is a single click to create the resource on the host.

You should note, however that:

■ Many of the resources require additional configuration beyond those used by the Host Manager. Refer to the appropriate section for configuration information.

■ Dedicated resources default to *Master* resources. For more information on dedicated resources, see Adding Dedicated Resources on page 67.

■ It is not possible to generate backup dedicated resources with this dialog box. You must add backup resources individually.

# 6 Adding Shared Resources

This chapter describes how to add shared resources, after first installing a Host Manager. It includes the following topics:

## Adding a New Contact Center Server Resource

Contact Center resources are responsible for handling voice path connections. Voice path connections in the Oracle Contact Center Anywhere environment are IP Gateways that are connected to the PSTN or PBX or other devices through PRI ISDN, Euro ISDN, or T1 or E1 tie trunks; or contact center resources are used to establish connectivity to SIP or H323 phones, or to soft phones in the agent environment.

For example, in a VoIP implementation, a standard 1U server running a single contact center resource can support 250 RTP streams. It takes two RTP streams to connect a single conversation.

**NOTE:** The availability of menu items varies, depending upon your configuration.

### To add a new server resource

**1** In the Add New Server dialog box, complete the fields for the new server resource. For more information on adding a resource, see Adding a Resource on page 37.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | (Display only) A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | The IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select Contact Center as the type of resource to configure. |
| Dedicated | If this box is checked, then system assigns the resource for use by a single company, otherwise the resource is available to all companies. |
| Resource Mode | Select Master. |
| Company | Used only if Dedicated is checked, to identify the company. |
| Trace Level | Select a number that defines the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the greatest amount of detail). The normal recommended production level is 4. |

**2** Save the contact center resource.

This activates the Advanced button, from which you can access the Contact Center Advanced dialog box fields.

**3** Complete the Contact Center Advanced dialog box fields.

| Field | Description |
|---|---|
| Hardware | Select the type of hardware the contact center is to support. Choose from Dialogic, Nortel, and TAW-VoIP. |
| Ext Length | The length of the extension. Project menus use this information for extension dialing.<br><br>**NOTE:** The length set here must equal or exceed the number of digits planned for agent extensions in Oracle Contact Center Anywhere Administration Manager. |
| Dial Out | Type the number Oracle Contact Center Anywhere needs to access an external (outside) line. |
| PBX Prefix | Type the prefix number Oracle Contact Center Anywhere needs to access an outside line when making telephone calls external to the PBX (Private Branch Exchange). |

| Field | Description |
|---|---|
| Ani Variation Size | Type the number of digits for incoming calls. This number is based on the ANI (automatic number identification) service providing the telephone numbers of incoming calls. |
| Auto-Answer Call | If this box is checked, then Oracle Contact Center Anywhere answers calls automatically. |
| Country Code | Enter the country code for the country where Oracle Contact Center Anywhere is located. |
| National Prefix | Type the Dial Code prefix used to access National lines. For example, the national prefix for the U.S. is 1. |
| International Prefix | Type the Dial Code prefix used to access International lines. For example, the International Prefix for Europe is 011. |
| Private Prefix | Type the Dial Code prefix a company uses when calling from one company to another, within the same organization. For example, a large company may have several locations in the U.S. and in Europe. The Private Prefix is the number company employees in the U.S. dial to reach other company employees in Europe. |
| Strip Country Code | If this box is checked, Oracle Contact Center Anywhere dials the number without using the country code. |
| Dial Plan Group | Select a Dial Plan Group from the list. A Dial Plan Group defines the contact center routing rules and call types when dialing a number. |
| Description | A logical identifier. |

**4** Click Save.

Depending upon the choice of hardware, one of the following screens appears:

■ If you select Dialogic (hardware), then the Configure option opens the Contact Center Hardware dialog box.

■ If you select Nortel (hardware), then the Configure option opens the Nortel dialog boxes.

■ If you select TAW-VoIP (hardware), then the Configure option opens the VoIP Forms.

**5** In VoIP Form, complete the fields.

| Field | Description |
|---|---|
| Host | The IP address of the server on which the contact center resource is loaded. |
| Start Port | The beginning port number for the resource.<br><br>**NOTE:** This must be an even number (such as 8000, not 8001). |

| Field | Description |
|---|---|
| End Port | The system automatically completes this field when the Start Port populates.<br><br>**NOTE:** No other resources loaded on a single host can use this port number. |
| Start Reserved | These ports are reserved for RTP communications. The system automatically completes this field, based on the number of channels defined. |
| End Reserved | The system automatically completes this field, based on the number of channels defined. |
| Payload | Select MuLaw, ALaw, or g729.<br><br>**NOTE:** This entry must match the payload sent by the contact center server. |
| Frames Per Second | Choose 160 or 240 bytes per frame. For example, 160 sends 160 bytes every 20 milliseconds; 240 sends 240 bytes every 30 ms.<br><br>**NOTE:** This value must match all resources defined in a Oracle Contact Center Anywhere network. |
| SIP Port | Enter the value for the port that Oracle Contact Center Anywhere uses to pass SIP messages. The default value is 5060. |

**6** Click Accept.

**7** Double-click Channels to open the VoIP Interface dialog box.

**8** In the first part of the VoIP Interface dialog box, complete the fields.

| Field | Description |
|---|---|
| Name | Enter a descriptive name that will have meaning later. For example, Quintum CMS. |
| Interface | Select one of four possible interface types:<br><br>■ SIP. Agent-side VoIP<br><br>■ SIPGateway. SIP-based PSTN Gateway devices<br><br>■ H323. Agent-side VoIP<br><br>■ H323PSTNGateway. H323-based PSTN Gateway devices |
| Number Of Channels | Enter the number of PSTN channels (or the number of VoIP phones) that are connected to the contact center resource. |
| Gateway IP Address | Enter the IP address of the physical gateway. This is only required if SIPGateway or H323PSTNGateway is selected in the Interface field. |

| Field | Description |
|-------|-------------|
| Gateway Type | Identify the type of the gateway. This is only required if SIPGateway or H323PSTNGateway is selected in the Interface field. The selections include Unknown, Quintum, Cisco, and Audiocodes. |
| Default DNIS | Identify a default DNIS value that Oracle Contact Center Anywhere will assign to all calls entering Oracle Contact Center Anywhere without a DNIS. |
| SIP Port | Enter the port value that Oracle Contact Center Anywhere uses to pass SIP messages. The default value is 5060. |
| ANI/DNIS Format | Click to specify the ANI (automatic number ID) and DNIS (direct number ID service) formatting: |
| | ■ ANI Size. The size of the ANI. (For North America, 10 is common [Area code + number].) |
| | ■ ANI Prefix. This part of the VoIP identification is usually * (an asterisk). |
| | ■ ANI Suffix. This part of the VoIP identification is usually # (a pound sign). |
| | ■ DNIS Size. This part of the VoIP identification is usually 4 characters long. |
| | ■ DNIS Prefix. This part of the VoIP identification is usually * (an asterisk). |
| | ■ DNIS Suffix. This part of the VoIP identification is usually # (a pound sign). |
| Outbound | If checked, users can make outbound calls from the contact center. |
| PBX | If checked, the contact center is designated to handle calls to and from a PBX. |
| Predictive | If checked, the contact center is designated to handle Predictive Dialing. |

**9** Click Accept.

# Adding a CTI Bridge Resource

The CTI Bridge Resource is used only in Dialogic configurations. These configurations can use an ATM switch or Kallastra cards. The CTI Bridge communicates between the various Dialogic cards in Oracle Contact Center Anywhere.

The setup of a CTI Bridge Resource includes two dialog boxes. The first of these is the Resource Information dialog box, which is similar to the Add New Resource dialog box, except that the Resource Information dialog box has different control fields.

### *To add a CTI bridge resource*

**1**    In the Resource Information dialog box, complete the fields.

| Field | Description |
|-------|-------------|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port: | Enter the value for the IP port that the resource will use for TCP/IP bus messaging. |
| Resource Type: | Select CTI Bridge as the type of resource to configure. |
| Resource Mode: | Select Master. |
| Trace Level: | Select a number that defines the amount of detail that will be written to the logs (where 1 is least amount of detail and 5 is the most amount of detail). |

**2**    Save the CTI Bridge Resource.

This activates the Advanced button, where you can access the second of the CTI Bridge dialog boxes.

**3**    Complete the CTI Bridge Resource Advanced fields.

| Field | Description |
|-------|-------------|
| Type | This control is set to ATM and is not accessible |
| First Timeslot | Type the initial timeslot on a Dialogic Card.<br><br>■    If the card is PRI only, then this value must be 2048.<br><br>■    If the card is ISA or PRI, then this value must be 751. |
| Second Timeslot | Type the end timeslot on a Dialogic Card.<br><br>■    If the card is PRI only, then this value must be 4095.<br><br>■    If the card is ISA or PRI then this value must be 1023. |

**4**    Click Save.

# About Dial Plans

You must provide Dial Plan information relevant to the location of the contact center so that Oracle Contact Center Anywhere can determine how an outbound call should be placed.

Dial Plan information is divided into three organizational groups; Patterns, Local Patterns, and Dial Plans.

# Adding a Dialing Pattern

Patterns are left-edge based dial strings. For example, an international number when dialed from North America must be preceded by 011, or a call for emergency help will have the string 911. In each case, the first three digits indicate what type of call is being placed, International and 911 emergency respectively, and each call will have a count of digits associated with it.

Add a pattern when:

■ There are additional area codes for local dialing

■ Dialing changes from 7-digits to 10-digits

■ There are additional x11 services

### To add a dialing pattern

**1** From the Resources menu, click Contact Center, and then Patterns to open the Contact Center dialog box.

    **NOTE:** Each pattern shows the associated size (or number of digits) expected in the full dial string.

**2** To add a dial pattern, click in the last populated entry in the Size column and press the tab key.

    The Contact Center Patterns dialog box opens a blank row.

**3** Enter the desired Pattern and associated Size.

**4** Click Save.

# Adding a Local Dial Pattern

Local Patterns are left-edge based dial strings like patterns that are used exclusively for local dialing.

Local Patterns are assigned in the Contact Center, Advanced dialog box through the Local Patterns button. For example, in the San Diego, CA area, both 619 and 858 are valid area codes. Since a call from 858 to 619 needs to be 10 digits, but is not a long distance call, the Local Pattern must account for this. It must also account for a call from 858 to 858 and deal with 7-digit dial strings as being within the same area code.

### To add a local dial pattern

**1** Navigate to the Resources menu, then the Contact Center item Local Patterns sub-item, and then click Local Patterns.

    The Local Number Patterns dialog box opens.

    **NOTE:** Each pattern has an associated length, name, and description.

**2** Double-click in the unpopulated entry to open the Local Pattern dialog box.

**3** Enter the desired Pattern, Length, Name, and Description. The following is an example of a completed Local Pattern for the area code, 909:

- **Pattern.** The pattern defined is 909.

- **Length.** The length defined is 10.

- **Name.** The name defined is North County.

- **Description.** The description defined is Southern Riverside City.

**4** Click Save.

The Local Number Patterns dialog box appears.

**5** Click Save again.

# Deleting a Local Number Pattern

You may need to change or delete a local pattern when the following events occur:

- Additional area codes are required for local dialing

- Dialing changes from 7 digits to 10 digits

- An area code is removed

*To delete a local number pattern*

**1** Click once on the pattern and then click Delete.

**2** Click Yes to confirm the deletion.

# About Dial Plan Groups

A Dial Plan Group defines the Contact Center routing rules when dialing a number (including preferred, no preference, and unable to dial) and the dial types (dedicated or non-dedicated).

Each Dial Plan Group can have a list of Dial Plan Patterns. A Dial Plan Pattern represents a matching number for a specific country or a PBX extension. Oracle Contact Center Anywhere Network Manager uses Dial Plan Patterns three ways, following the Dial Plan Routing Rules.

## Dial Plan Routing Rules

The Dial Plan routing defines the rules for a specific contact center to dial a phone number. A routing can be:

- **Preferred.** Dials a specific number

- **Normal.** Dials a specific number without any preference

■ **Excluded.** Unable to dial a phone number

## Dial Plan Types

There are two types of Dial Plans:

■ **Dedicated Dial Plan.** A Dial Plan that prevents dialing any number that is not defined in the Pattern List as preferred or normal.

■ **Non-dedicated Dial Plan.** A Dial Plan that allows dialing any number without any preference, as long as this number is not defined in the Pattern List as excluded. (Therefore, if a number is defined for this Dial Plan as preferred, the Dial Plan dials this number first.)

# Adding a Dial Plan Group

Complete the steps in the following procedure to add a group to a dial plan.

### To add a dial plan group

**1** Click an empty row in the Dial Plan Groups dialog box.

The New Dial Plan Group dialog box opens.

**2** Complete the fields for the new dial plan group.

| Field | Description |
| --- | --- |
| Name | Type a name for this new Dial Plan Group. |
| Description | Type a description for this new Dial Plan Group. |
| Dedicated | If checked, then this becomes a dedicated plan. |

**3** Click Save.

The Dial Plan dialog box opens.

**4** Complete the Dial Plan fields.

| Field | Description |
| --- | --- |
| Pattern | Type a pattern that represents a matching number for a specific country or a PBX extension.<br><br>**NOTE:** You can type a question mark (?) as a substitute for any one digit or an asterisk (*) as a substitute for many digits. |
| Country Code | Select a country code or PBX (for PBX extension). |

| Field | Description |
|---|---|
| Length | Enter the exact length of the phone number to match. |
| | **NOTE:** If the length is zero, Oracle Contact Center Anywhere ignores length. |
| Plan Type | Select one of the following plan types: |
| | ■ Normal. Able to dial a specific number without any preference. |
| | ■ Preferred. Provide a specific number preference. |
| | ■ Excluded. Disable a specific number. |
| Name | Displays the name of this plan, which you entered previously. |
| Description | Displays the description for this plan, which you entered previously. |

**5** Click Accept.

# Adding a License Server Resource

License server resources are responsible for checking available interactions when a new interaction arrives through one of Oracle Contact Center Anywhere's media types.

License server controls the flow of messages to master and backup dedicated resources in Oracle Contact Center Anywhere. If a master dedicated resource fails, the license server redirects the current state information to the backup dedicated resource, which then becomes the master.

License server is also responsible for email notification of license usage, based on parameters and thresholds set at implementation.

The setup of a license server resource is managed using two dialog boxes. The first is the Resource Information dialog box, which is similar to the Add New Resource dialog box, except that the Resource Information dialog box has different control options.

### *To add a license server resource*

**1** In the Resource Information box, complete the license server resource information fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource. |
| | **NOTE:** The system automatically assigns this number when creating the resource. |
| Port | The IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select License Server as the type of resource to configure. |

| Field | Description |
|-------|-------------|
| Resource Mode | Select Master. |
| Company | Used only if Dedicated is checked. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the most amount of detail). The normal recommended production level is 4. |

**2**   Save the license server resource.

The Save action activates the Advanced button, from which you can access the second of the license server dialog boxes.

**3**   Complete the license server, Advanced fields.

| Field | Description |
|-------|-------------|
| Notification Interval Time | Select a range for a frequency interaction level (which range from Once a Day to Once a Year). The system performs a check against licenses at the time interval selected. If Oracle Contact Center Anywhere detects a potential licensing shortage, it sends a notification to the customer. |
| Notification Threshold | Select the percentage of licenses that must be in simultaneous use to trigger a notification event. |
| From Email Address | Enter the email address that the notification will show in the From header section of the notification. |
| To Email Address | Enter the email address where Oracle Contact Center Anywhere will send notifications.<br>**NOTE:** Use an address that is frequently monitored. |
| SMTP Host | Enter the Host system ID using the Send Mail Transfer Protocol.<br>**NOTE:** This is usually a corporate email server. |
| SMTP Domain | Enter the Domain ID where the SMTP Host is located. |
| Enable | If this box is checked, the license server sends a notification for the selected interval and threshold to the specified email address. |

**4**   Click OK.

# Adding an MCU Server Resource

MCU server resources are responsible for creating and managing conference resources used by outside callers and Oracle Contact Center Anywhere agents. Conference resources establish conference calls and enable Oracle Contact Center Anywhere Supervision Manager functions (such as listen, whisper coaching, and join).

**NOTE:** The settings required to create an MCU service must match those used in the contact center resource.

For example, in a VoIP implementation, a standard 1U server running a single MCU server resource can support 100 parties in a conference.

The setup of a MCU server resource involves two dialog boxes. The first of these is the Resource Information dialog box, which is similar to the Add New Resource dialog box, with different control options.

### *To add an MCU server resource*

**1** In the MCU Server Resource Information dialog box, complete the fields.

| Field | Description |
| --- | --- |
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select MCU Server as the type of resource to configure. |
| Resource Mode | Select Master. |
| Company | Select a company only if Dedicated is checked. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the most amount of detail). The normal recommended production level is 4. |

**2** Save the MCU server resource.

This activates the Advanced button, from which you can access the second of the MCU Server dialog boxes.

**3** Complete the MCU server fields.

| Field | Description |
|---|---|
| IP Address | Enter the IP address of the server on which the contact center resource is loaded. |
| Payload | Select MuLaw, ALaw, or 9729.<br>**NOTE:** This value must match the payload sent by the contact center server. |
| Frames Per Second | Select either 160 or 240 bytes per frame. For example, 160 sends 160 bytes every 20 milliseconds, and 240 sends 240 bytes every 30 ms.<br>**NOTE:** This value must match on all resources defined in a Oracle Contact Center Anywhere network. |
| Sip Port | Enter the port value that Oracle Contact Center Anywhere uses to pass SIP messages. The default value is 5060. |
| Start RTP Port | Enter the port number Oracle Contact Center Anywhere uses to begin RTP streaming. |
| End RTP Port | Enter the port number Oracle Contact Center Anywhere uses to end RTP streaming. |
| Description | Enter a descriptive name. For example, MCU Server for Quintum CMS. |

**CAUTION:** The value entered in the Frames Per Second field in both the MCU Server dialog box and the VoIP Interface dialog box, must match exactly.

# Adding a Redirect Server Resource

Redirect server resources are responsible for matching calls coming into VoIP Gateways to contact center resource. The redirect server only considers contact center resources used by the redirect server. If the redirect server does not specifically use any contact center resources, then no calls handled by the redirect server will reach a contact center resource.

The setup of a redirect server resource spans two dialog boxes. The first of these is the Resource Information dialog box, which is essentially the same as the Add New Resource dialog box, with different control fields.

*To add a redirect server resource*

**1** In the Redirect Resource Server Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | Displays a numeric, sequential identifier for the resource. <br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Type the IP port the resource will use for TCP/IP bus messaging. |
| Resource Type | Select Redirect Server as the type of resource to configure. |
| Resource Mode | Select Master. |
| Company | Select a company only if Dedicated is checked. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the most amount of detail). The normal recommended production level is 4. |

**2** Save the redirect server resource.

This activates the Advanced button, from which you can access additional fields.

**3** Complete the Advanced Redirect Server fields.

| Field | Description |
|---|---|
| Callcenter's Unused | Displays a list of call centers, on the Oracle Contact Center Anywhere system, that currently are not affected by a redirect server resource. |
| Callcenter's Used | Displays a list of are the call centers, on the Oracle Contact Center Anywhere system, that are currently affected by a redirect server resource. <br><br>**NOTE:** If nothing appears in this list, then the redirect server will not consider any contact center resources. |
| Server IP Address | Enter the IP address of the physical server on which the redirect server resource is loaded. |

**4** Click Save.

# Adding a Music Server Resource

Music Server resources are responsible for playing music to callers who are on hold or are waiting in a queue.

### *To add a music server resource*

**1**   In the Add New Server dialog box, complete the Add New Server fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select Music Server as the type of resource to configure. |
| Resource Mode | Select Master. |
| Company | Select a company only if Dedicated is checked. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the most amount of detail). The normal recommended production level is 4. |

**2**   Save the music server resource.

This activates the Advanced button, from which you can open the Music Server - Advanced dialog box.

**3**   Complete the Music Server Resource - Advanced fields.

| Field | Description |
|---|---|
| IP Address | Enter the IP address of the physical server on which the music server resource is loaded. |
| Payload | Select MuLaw, ALaw, or 9729.<br>**NOTE:** This value must match the payload sent by the contact center server. |
| Frames Per Second | Select either 160 or 240 bytes per frame. For example, 160 sends 160 bytes every 20 milliseconds; 240 sends 240 bytes every 30 ms.<br>**NOTE:** This value must match on all resources defined in a Oracle Contact Center Anywhere network. |
| Starting RTP Port | Enter the port number Oracle Contact Center Anywhere uses to begin RTP streaming. |
| SIP Port | Enter the port value that Oracle Contact Center Anywhere uses to pass SIP messages. The default value is 5060. |
| Max Music Channel | The maximum number of Music Channels to establish. |

| Field | Description |
|---|---|
| Max Listener Channel | The maximum number of simultaneous listeners. |
| Description | Enter a Logical ID for the resource. |

**4**  Click Save.

# Adding an SNMP Agent Resource

SNMP Agent resources facilitate Simple Network Management Protocol (SNMP). This allows Oracle Contact Center Anywhere to use SNMP-capable applications to monitor Oracle Contact Center Anywhere.

### To add an SNMP agent resource
■  In the Resource Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select SNMP Agent as the type of resource to configure. |
| Resource Mode | Select Master. |
| Company | Select a company only if Dedicated is checked. |
| Trace Level | Select a number to define the amount of detail that is written to the logs (where 1 is least amount of detail and 5 is the most amount of detail). The normal recommended production level is 4. |

# Adding a Unified Messenger Resource

Unified Messenger resources facilitate the delivery of Voice-mail, Fax, and ACD Email to the agent.

### To add a unified messenger resource

■ In the Unified Messenger Resource Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port value that the resource uses for TCP/IP bus messaging. |
| Resource Type | Select Unified Messenger as the type of resource to configure. |
| Resource Mode | Select Master. |
| Country | Select a country only if Dedicated is checked. |
| Trace Level | Select a number to define the amount of detail that is written to the logs (where 1 is the least amount of detail and 5 is the most detail). The normal recommended production level is 4. |

## Adding an MP3 Converter Resource

MP3 Converter resources are responsible for converting Voice Recordings from WAV format to MP3 format. This conversion increases the capacity for storing voice recordings on the Oracle Contact Center Anywhere file server by a factor of 10.

The setup of an MP3 Converter Resource is managed by two dialog boxes. The first is the Resource Information dialog box. It is similar to the Add New Resource dialog box, except that the Resource Information dialog box has different control options.

### To add an MP3 converter resource

1 Place the MP3 Converter Resource on the file server system in Oracle Contact Center Anywhere.

   **NOTE:** Oracle Contact Center Anywhere issues a strong reminder about this placement when you make the selection from the Resource Mode list.

2 Click OK to continue, and complete the MP3 Converter Resource Information fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port value that the resource uses for TCP/IP Bus messaging. |

| Field | Description |
|---|---|
| Resource Type | Select MP3 Converter as the type of resource to configure. |
| Resource Mode | Select Master. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the most detail). The normal recommended production level is 4. |

**3** Save the MP3 Converter Resource.

This activates the Advanced button, from which you can access the second of the MP3 Converter Server dialog boxes.

**4** Complete the MP3 Converter Resource - Advanced fields.

| Field | Description |
|---|---|
| | |
| Enable MP3 Encoding | If checked, MP3 Encoding is performed using the conversion program defined in the Command field. |
| Command | Enter the full path to the MP3 Conversion program. |
| FTP Path | Enter the directory use to store MP3 files. |
| | **NOTE:** Oracle does not provide MP3 Conversion Software. For more information on compatible vendors, see *Oracle Contact Center Anywhere Release Notes*. |

**5** Click Save.

# Adding an SMSC Gateway Server Resource

SMSC Gateway server resources are responsible for sending and receiving SMS message from SMS server resources by Short Message Peer-Peer Protocol.

### To add an SMSC Gateway server resource

**1** In the SMSC Gateway Resource Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | Displays a numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port that the resource will use for TCP/IP bus messaging. |
| Resource Type | Select SMSC Gateway Server as the type of resource to configure. |
| Resource Mode | Select Master. |
| Company | Select a company only if Dedicated is checked. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the most amount of detail). The normal recommended production level is 4. |

**2** Save the SMSC Gateway server resource.

This activates the Advanced button, from which you can access additional fields.

**3** Complete the Advanced SMSC Server fields.

**NOTE:** These are required fields.

| Field | Description |
|---|---|
| Address | Enter the IP address or hostname of the SMSC, or where simulator is running. |
| Port | Enter the port on which the SMPP protocol is running. |
| Username | Enter the username provided by the SMSC service provider (for example, *smppclient*). |
| Password | Enter the password provided by the SMSC service provider (for example, *password*). |

**4** Click OK and then click Save.

**5** Select the SMSC Gateway Server Resource and start (right mouse Click and select Start Resource).

**CAUTION:** This resource requires extra steps in the configuration process. For more information on setting up database access, see Configuring a JDBC Connection for an SMSC Gateway Resource on page 25.

# 7  Adding Dedicated Resources

This chapter describes dedicated resources and how to add them. It includes the following topics:

- Adding an ACD Server Resource on page 67
- Adding a CTI Server Resource on page 68
- Adding a Chat Server Resource on page 69
- Adding an Email Server Resource on page 70
- Adding an Internet Manager Server Resource on page 71
- Adding an IVR Server Resource on page 71
- Adding a Schedule Server Resource on page 72
- Adding a Predictive Server Resource on page 73
- Adding a Stats Server Resource on page 74
- Adding an SMS Server Resource on page 74

## Adding an ACD Server Resource

ACD Server resources are responsible for tracking agent state and for making routing decisions for interactions. The ACD Server decides which interaction is delivered to which agent for handling.

### To add an ACD server resource

- In the ASP Services Resource Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>NOTE: The system automatically assigns this number when creating the resource. |
| Port | Type the IP port the resource will use for TCP/IP bus messaging. |
| Resource Type | Select ACD Server as the type of resource to configure. |
| Resource Mode | Select Master or Backup (depending upon the desired configuration). |

| Field | Description |
|---|---|
| Company | Select the company for which the ACD Server is being defined.<br><br>**NOTE:** The network administrator must create the company before it can be available for use. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the most detail). The normal recommended production level is 4. |

# Adding a CTI Server Resource

CTI server resources are responsible for finding open contact center server and MCU server resources. Each CTI server resource can be associated only with certain contact center servers and MCU servers. If no such association is in place then the CTI Server considers all contact center servers and all MCU servers.

### *To add a CTI server resource*

**1**  In the ASP Services Resource Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select CTI Server as the type of resource to configure. |
| Resource Mode | Select Master or Backup (depending upon the desired configuration). |
| Company | Select the company for which the CTI Server is being defined.<br><br>**NOTE:** The network administrator must create the company before it can be available for use. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is most). The normal recommended production level is 0. |

**2**  Save the CTI Server Resource.

This activates the Advanced button, from which you can access the second of the CTI Server dialog boxes.

**3** Complete the columns of information in the CallCenter's tab.

| Field | Description |
|---|---|
| Callcenter's Unused | These are the contact centers in Oracle Contact Center Anywhere that currently are not affected by a Redirect Server Resource.<br><br>Use the arrow buttons to move items from one column to another. |
| Callcenter's Used | These are the contact centers in Oracle Contact Center Anywhere that are currently affected by a Redirect Server Resource.<br><br>Use the arrow buttons to move items from one column to another. |

**4** Click the MCU Server's tab and change the information in the columns as needed.

| Field | Description |
|---|---|
| | |
| MCU Server's Unused | These are the MCU Servers in Oracle Contact Center Anywhere that currently are not affected by a Redirect Server Resource.<br><br>Use the arrow buttons to move items from one column to another. |
| MCU Server's Used | These are the MCU Servers in Oracle Contact Center Anywhere that are currently affected by a Redirect Server Resource.<br><br>Use the arrow buttons to move items from one column to another. |

# Adding a Chat Server Resource

Chat Server resources are responsible for connecting data streams for chat sessions between agents and customers, or supervisors and agents.

### To add a Chat server resource

**1** In the ASP Services Resource Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port the resource uses for TCP/IP bus messaging. |

| Field | Description |
|---|---|
| Resource Type | Select Chat Server as the type of resource to configure. |
| Resource Mode | Select Master or Backup (depending upon the desired configuration). |
| Company | Select the company for which the Chat Server is being defined.<br><br>**NOTE:** The network administrator must create the company before it can be available for use. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is most detail). The normal recommended production level is 0. |

**2**   Click Save

# Adding an Email Server Resource

Email Server resources are responsible for pulling inbound email media (email, voicemail, fax) from the POP3 servers defined using Administration Manager, and for routing those emails to the correct agent.

### To add an Email server resource

**1**   In the ASP Services Resource Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select Email Server as the type of resource to configure. |
| Resource Mode | Select Master or Backup (depending upon the desired configuration). |
| Company | Select the company for which the Email Server is being defined.<br><br>**NOTE:** The network administrator must create the company before it can be available for use. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is most detail). The normal recommended production level is 0. |

**2**   Click Save

# Adding an Internet Manager Server Resource

Internet Manager server resources manage the communication with the Web servers and for tracking agent and customer session state.

### To add an Internet Manager server resource

**1** In the ASP Services Resource Information dialog box, complete the fields.

| Field | Description |
|-------|-------------|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select IM Server as the type of resource to configure. |
| Resource Mode | Select Master or Backup (depending upon the desired configuration). |
| Company | Select the company for which the IM Server is being defined.<br>**NOTE:** The network administrator must create the company before it can be available for use. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is most detail). The normal recommended production level is 0. |

**2** Click Save.

# Adding an IVR Server Resource

IVR Server resources are for customer-written C++ IVR applications in a Dialogic environment.

**NOTE:** Release 7 and later of Oracle Contact Center Anywhere does not typically use this server.

### To add an IVR server resource

**1**   In the ASP Services Resource Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select IVR Server as the type of resource to configure. |
| Resource Mode | Select Master or Backup (depending upon the desired configuration). |
| Company | Select the company for which the IVR Server is being defined.<br><br>**NOTE:** The network administrator must create the company before it can be available for use. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the most detail). The normal recommended production level is 0. |

**2**   Click Save.

# Adding a Schedule Server Resource

Schedule Server resources manage call routing strategies that are based on the time of day or the day of the week, or both.

### To add a schedule server resource

**1**   In the ASP Services Resource Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select Schedule Server as the type of resource to configure. |
| Resource Mode | Select Master or Backup (depending upon the desired configuration). |

| Field | Description |
|---|---|
| Company | Select the company for which the Scheduler Server is being defined.<br><br>**NOTE:** The network administrator must create the company before it can be available for use. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is most). The normal recommended production level is 0. |

**2** Click Save.

# Adding a Predictive Server Resource

Predictive Server resources control Predictive dialing campaigns.

### To add a predictive server resource

**1** In the ASP Services Resource Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select Predictive Server as the type of resource to configure. |
| Resource Mode | Select Master or Backup (depending upon the desired configuration). |
| Company | Select the company for which the Predictive Server is being defined.<br><br>**NOTE:** The network administrator must create the company before it can be available for use. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the most detail). The normal recommended production level is 0. |

**2** Save the Predictive Server Resource. This activates the Advanced button, from which you can access the second of the Predictive Server dialog boxes.

**3** Complete the following Predictive Server fields.

| Field | Description |
|---|---|
| Min Cache Size | Type the minimum Cache size the Predictive Server should use in the operation. |
| Max Cache Size | Type the maximum Cache size the Predictive Server should use in the operation. |

# Adding a Stats Server Resource

Stats Server resources are responsible for collecting and saving statistics about agents, workgroups, and interactions. This server provides data for historical and real-time reporting.

### To add a stats server resource

**1** In the ASP Services Resource Information dialog box, complete the fields.

| Field | Description |
|---|---|
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the value for the IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select Stats Server as the type of resource to configure. |
| Resource Mode | Select Master or Backup (depending upon the desired configuration). |
| Company | Select the company for which the Stat Server is being defined.<br><br>**NOTE:** The network administrator must create the company before it can be available for use. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the most detail). The normal recommended production level is 0. |

**2** Click Save or Cancel.

# Adding an SMS Server Resource

SMS Server resources are responsible for transferring SMS messages between agents and customers.

### To add an SMS server resource

**1** In the SMS Server Resource Information dialog box, complete the fields.

| Field | Description |
| --- | --- |
| Host | Select the computer on which the resource is to be loaded. |
| Resource ID | A numeric, sequential identifier for the resource.<br><br>**NOTE:** The system automatically assigns this number when creating the resource. |
| Port | Enter the value for the IP port the resource uses for TCP/IP bus messaging. |
| Resource Type | Select SMS Server as the type of resource to configure. |
| Resource Mode | Select Master or Backup (depending upon the desired configuration). |
| Company | Select the company for which the SMS Server is being defined.<br><br>**NOTE:** The network administrator must create the company before it can be available for use. |
| Trace Level | Select a number to define the amount of detail to write to the logs (where 1 is least amount of detail and 5 is the most detail). The normal recommended production level is 0. |

**2** Click Save or Cancel.

# 8 Adding All Shared and Dedicated Resources

his chapter describes how to add all shared and dedicated resources, after first installing a host manager. It includes the following topic:

■

## Adding All Shared and Dedicated Resources to a Company

Complete the steps in the following procedure to add all Shared and Dedicated resources at the same time.

### To add all resources to a company

1 From Resource menu, click the Advanced Options.

   Oracle Contact Center Anywhere Network Manager displays the Resource Options dialog.

2 Select a company to add resources.

3 Select a corresponding company.

4 Check to select one or more resources you want.

   You can add both Master and Backup resources at once.

   ■ Select All. to check all resources

   ■ UnSelect All. to deselect all selected resources

5 Click Save.

# 9 Starting Resources

This chapter describes how to start Oracle Contact Center Anywhere Network Manager dedicated and shared resources. It includes the following topics:

## Starting All Dedicated Resources for One Company

You can start all dedicated resources for the following:

- A single company
- All companies

Complete the steps in the following procedure to start dedicated resources for a single company.

### To start all dedicated resources for one company

1 From the Network Manager, select the View by Company option and then select the company for which you want to start resources.

2 Select the alphabetical button that represents the first letter of the company and then click on the company name.

The resources for the company will appear in the resource tree view.

3 In the resource tree view, select the company for which you want to start a resource.

NOTE: In the resource tree view, a status icon appears next to each resource to indicate whether it is active or inactive. The status icon for active resources appears as a green icon with the letter *M* (master) or *B* (backup). If a master resource is stopped, the backup resource becomes the master.

4 Select Options and then select Start All for Company.

5 Select Master to start master resources or Backup to start backup resources.

The message, *Are you sure you want to start all resources for: XXX company* displays.

6 Click OK.

The messages, *Attempting to start: XXX company* and *Started: XXX company* display.

7 Click OK.

# Starting All Dedicated Resources for All Companies

Complete the steps in the following procedure to start dedicated resources for all companies.

### To start all dedicated resources for all companies

**1**    From the Network Manager, select the Options and then Start Companies.

**2**    Select Master to start master resources or Backup to start backup resources.

   **NOTE:** In the resource tree view, a status icon appears next to each resource to indicate whether it is active or inactive. The status icon for active resources appears as a green icon with the letter *M* (master) or *B* (backup). If a master resource is stopped, the backup resource becomes the master.

# Starting All Shared Resources

Complete the steps in the following procedure to start all shared resources.

### To start all shared resources

**1**    From the Options menu, select Start All Shared.

   The Start/Stop Resources progress box appears.

**2**    Click Close.

# 10 Stopping Resources

This chapter describes how to stop resources, both dedicated and shared. It includes the following topics:

- Stopping a Resource for a Company on page 81
- Stopping a Resource for a Host Manager on page 81
- Stopping All Dedicated Resources for a Company on page 82
- Stopping All Dedicated Resources for a Host Manager on page 83
- Stopping All Resources Using Advanced Options on page 83

## Stopping a Resource for a Company

Complete the steps in the following procedure to stop a resource for a company.

### To stop a resource for a company

**1** From the Network Manager, select the View by Company option.

**2** Select the alphabetical button that represents the first letter of the company and then click on the company name.

The resources for the company will appear in the resource tree view.

**3** In the resource tree view, select the company for which you want to stop a resource.

**NOTE:** In the resource tree view, a status icon appears next to each resource to indicate whether it is active or inactive. The status icon for active resources appears as a green icon with the letter *M* (master) or *B* (backup). If a master resource is stopped, the backup resource becomes the master.

**4** Select the resource. For example, Chat Server.

**5** Select Resources and then Stop Resource.

The message, *Stopped: Chat Server* displays.

**6** Click OK.

## Stopping a Resource for a Host Manager

Complete the steps in the following procedure to stop a resource for a host manager.

### To stop a resource for a host manager

**1** From the Network Manager, select the View by Host option.

**2** Select the alphabetical button that represents the first letter of the host manager and then click on the host manager name.

The shared resources for the host manager will appear in the resource tree view.

**3** In the resource tree view, select the host manager for which you want to stop a resource.

**NOTE:** In the resource tree view, a status icon appears next to each resource to indicate whether it is active or inactive. The status icon for active resources appears as a green icon with the letter *M* (master) or *B* (backup). If a master resource is stopped, the backup resource becomes the master.

**4** Select the resource. For example, Music Server.

**5** Select Resources and then Stop Resource.

The message, *Stopped: Music Server* displays.

**6** Click OK.

# Stopping All Dedicated Resources for a Company

Complete the steps in the following procedure to stop all dedicated resources for a company.

### To stop dedicated resources for one company

**1** From the Network Manager, select the View by Company option and then select the alphabetical button that represents the first letter of the company name.

The resources for the company will appear in the resource tree view.

**2** In the resource tree view, select the company for which you want to stop all dedicated resources.

**NOTE:** In the resource tree view, a status icon appears next to each resource to indicate whether it is active or inactive. The status icon for active resources appears as a green icon with the letter *M* (master) or *B* (backup). If a master resource is stopped, the backup resource becomes the master.

**3** Select Options and then select Stop All for Company.

The message, *Are you sure you want to stop all resources for: XXX company* displays.

**4** Click OK.

The messages, *Attempting to stop: XXX company* and *Stopped: XXX company* display.

**5** Click OK.

# Stopping All Dedicated Resources for a Host Manager

Complete the steps in the following procedure to stop dedicated resources for all companies.

### To stop a resource for a host manager

**1**   From the Network Manager, select the View by Host option.

**2**   Select the alphabetical button that represents the first letter of the host manager and then click on the host manager name.

The shared resources for the host manager will appear in the resource tree view.

**3**   In the resource tree view, select the host manager for which you want to stop all resources.

NOTE: In the resource tree view, a status icon appears next to each resource to indicate whether it is active or inactive. The status icon for active resources appears as a green icon with the letter *M* (master) or *B* (backup). If a master resource is stopped, the backup resource becomes the master.

**4**   Select Options and then Stop All for Host.

The message, *Are you sure you want to stop all resources for: XXX host manager* displays.

**5**   Click OK.

# Stopping All Resources Using Advanced Options

Complete the steps in the following procedure to use the Advanced Options to stop all resources.

### To stop all resources using Advanced Options

**1**   From the Network Manager, select Resources.

**2**   Select Advanced Resources and then Options.

**3**   Select Stop All Resources.

NOTE: All resources (shared and dedicated) will be stopped for all hosts, with the exception of the TC/IP Bus. For more information on the starting and stopping of the TC/IP Bus, see *Oracle Contact Center Anywhere Installation and Upgrade Guide*.

# 11 Using Diagnostic Tools

This chapter describes a number of diagnostic tools, which allow you to view activity on a Resource through Telnet, Busying Out trunks, Viewing Channels, and change log files to allow logs to be pulled from a host without taking the host offline. This chapter includes the following topics:

## Using Telnet to View Resource Activity

Telnet is for viewing activity on a resource. The information that appears in the Telnet window is specific to the Resource for which you started the Telnet session. Each Resource other than the SMSCG Resource may have a simultaneous Telnet session for viewing activity.

Complete the steps in the following procedure to view resource activity using Telnet.

### To view resource activity

1   From the target Resource, right-click to open the context menu.

2   Find the Telnet item, and then click Telnet.

A Telnet session that is attached to the resource opens. When activity occurs on the Resource, it shows in the Telnet window.

For best practice, use only those sessions relevant to the activity you are viewing. For example, in a system with a Redirect Server and several contact center server resource, it is appropriate to open Telnet sessions on the redirect server resource and all contact center servers that the Redirect Server is configured to use.

3   Make sure to close the sessions when they are no longer needed.

**NOTE:** SMS and SMSCG are Java applications. Telnet is not supported for these servers.

## Forcing Resources to Open New Log Files

Use the Resources menu Change Log File item to force resources to open new log files. This is useful, if it is necessary to examine an open log file.

Complete the steps in the following procedure to force open a new log file.

### *To force resources to open a new log file*

**1**  From the Resources menu, navigate to the Change Log File item.

**2**  Click Change Log File.

Alternately, you can right-click on a Resource, and then click Change Log File.

# Verifying the State of Channels Associated with a Call Center Resource

The View Channels sub-item, accessed from the Resources menu call center item, is available when perspective is set to a call center resource. View Channels shows the state of each channel associated with the call center resource.

Complete the steps in the following procedure to view the state of each channel associated with a call center resource.

### *To verify the state of a channel*

**1**  From the Resources menu, navigate to the call center item View Channels sub-item, and then click View Channels.

The CallCenter. X ChannelInfo dialog box opens.

**2**  Click the Refresh button to update the dialog box.

# Placing All Channels in a Busy State

Use the Resources menu call center item Busy Out sub-item to place all channels associated with a call center resource into a Busy state. This action makes the call center unavailable for use.

Complete the steps in the following procedure to place all channels into a Busy state.

### *To place channels in a busy state*

**1**  From the Resources menu, navigate to the call center item's Busy Out sub-item.

**2**  Click Busy Out.

# Verifying Status

Use the Option menu Verify Status item to verify statuses of selected resources (whether they are stopped or still running), in case Oracle Contact Center Anywhere Network Manager does not reflect the right statuses of resources. This action sends a message from Oracle Contact Center Anywhere Network Manager to the License Server to obtain the current statuses of resources. License Server verifies all resources, and then responds to Oracle Contact Center Anywhere Network Manager. The icon of each resource then changes accordingly.

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