



# Oracle® Contact Center Anywhere Installation and Upgrade Guide

Version 8.1.2

June 2008

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# 1

## What's New in This Release

### What's New in Oracle's Contact Center Anywhere Installation and Upgrade Guide, Version 8.1.2

Table 1 lists changes in this version of the documentation to support Release 8.1.2 of the software.

Table 1. New Product Features in Oracle's Contact Center Anywhere Installation and Upgrade Guide, Version 8.1.2

Topic	Description
<a href="#">Requirements for Installing Contact Center Anywhere on page 12</a>	Contact Center Anywhere (CCA) now supports Red Hat Enterprise Linux AS4 and Oracle Unbreakable Linux.  In addition to Sun Java JRE 1.5.0 Update 10, JRE 1.6.x can also be installed on the client PC, where the Web browser launches CCA.
<a href="#">Required Software Reference Links on page 14</a>	Updated software reference links have been added.
<a href="#">Creating a New Oracle Database 10g on page 16</a>	This topic describes how to configure Oracle Database 10g for CCA. The same configuration instructions can be used to configure an Oracle9i Database.
<a href="#">Creating a New Database on Microsoft SQL Server on page 18</a>	This topic describes how to create a new database using Microsoft SQL Server 2005.
<a href="#">Process of Setting Up Contact Center Anywhere Web Applications on Oracle Application Server 10g on page 41</a>	This topic describes how to deploy CCA Web applications on an Oracle Application Server 10g.

This guide was previously published as the following separate guides on the Siebel Bookshelf:

- *Contact Center Anywhere Installation Guide*
- *Contact Center Anywhere Upgrade Guide*

**NOTE:** The Siebel Bookshelf is available on Oracle Technology Network (OTN) and Oracle E-Delivery. It might also be installed locally on your intranet or on a network location.





# 2

## Contact Center Anywhere Overview and Requirements

This chapter describes Oracle's Contact Center Anywhere (CCA) architecture, and the software that is required to run CCA. This chapter also provides a brief overview of the CCA installation procedures described in other chapters. It includes the following topics:

- [Overview of Contact Center Anywhere Architecture on page 9](#)
- [Requirements for Installing Contact Center Anywhere on page 12](#)

### Overview of Contact Center Anywhere Architecture

Contact Center Anywhere (CCA) is a multichannel e-contact center solution. It is built on a carrier-grade architecture that is designed to address the needs of telecommunications organizations and other service providers that want to deploy hosted, contact-center technology within their networks.

Architecturally, CCA is divided into four tiers, as shown in [Figure 1](#).

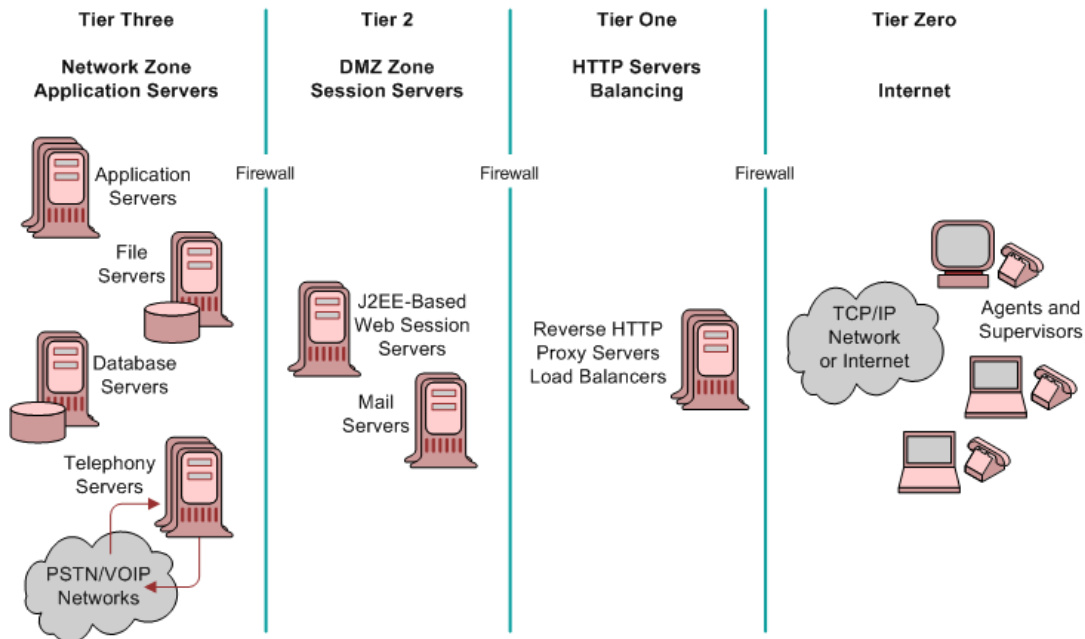


Figure 1. Overview of CCA Architecture

## Tier Zero of Contact Center Anywhere Architecture

Tier Zero is also referred to as the *Internet zone* or the *user zone*. Agents, supervisors, and administrators reside in Tier Zero with their respective interfaces. Several communication threads connect CCA to these users. For example, a session is established between their PCs, using their Web-based interface, and the Web servers in Tier One and Tier Two zones. This session is supported over HTTP, typically using port 80 (or a user-defined port), or the more secure, HTTPS, typically using port 443 on the firewall.

Likewise, chat communications flow over HTTP, and emails are sent and received on the native protocol of the corporate email server. In addition, call control messages and screen refreshes all use HTTP or HTTPS. Using these standard protocols and ports helps avoid unnecessary customizations of firewall rules, which makes CCA easy to implement, install, and maintain.

Agents and supervisors are also connected to CCA by the telephony network (either PSTN or Voice over IP). When a customer call flows from the network through the Telephony Servers in Tier Three, then a call is made from the telephony server to an available agent and the server then links the two calls together. Tier Zero of the architecture is where the CCA client applications reside and where connectivity to the outside world happens. Agents and supervisors can be located wherever a broadband Internet connection, or private network connection, is available. This connectivity means Tier Zero extends into the home of remote agents.

## Tier One of Contact Center Anywhere Architecture

Tier One is an optional tier, which can be collapsed into Tier Two (or DMZ zone). CCA can fit into an overall multitiered communications infrastructure, which many companies can use. For example, many companies with distributed users and multiple sites, use a set of HTTP servers as the user interface to their DMZ zone, where various Web-based session servers reside. You use HTTP servers for two reasons: load balancing and HTTP caching.

The interface handling and caching are typically managed by Reverse Proxy Servers and basic HTTP Servers. HTTP servers can cache static information (such as images), and provide segmentation for additional tiers of security. This layer of the HTTP servers is not part of the traditional CCA implementation, but usually exists in larger corporate environments.

Load balancers are an essential part of any architecture using multiple HTTP J2EE servers. Load balancers perform three functions:

- Balancing the HTTP traffic among multiple HTTP J2EE servers
- Off-loading of HTTPS-to-HTTP de-encryption Secure Sockets Layer (SSL) encryption
- Redirecting HTTPS sessions during failovers from one HTTP J2EE server to another

CCA works with the Cisco CSS11500 content switch, which offers these three load-balancing functions. Other switches might work as long as a persistent session from the Load Balancer can be maintained for each HTTP J2EE server. However, other switches are not certified by Oracle.

## Tier Two of Contact Center Anywhere Architecture

Tier Two is where the J2EE-based session servers of CCA reside. A traditional firewall implementation in most corporate networks includes a demilitarized zone (DMZ zone) to provide maximum security. DMZ access is based on the rules set up by a security administrator, who dictates what communications are allowed through the DMZ zone to the internal network zone. CCA is engineered to work properly within this structure.

Client applications access the J2EE Web Session Servers supporting CCA, using the standard port 80 for HTTP or port 443 for HTTPS. The J2EE Web Session Servers then request data and services from the application servers (in Tier Three, the network zone) using port 9001 on the company LAN. This traffic can be limited, using a firewall, to accept only traffic on that port from a specific Web server. Traffic is never given permission to access corporate data or application servers directly.

One of the most critical components of CCA is the J2EE Web Session Server. The J2EE Web Session Server, which is located in Tier Two (DMZ zone), handles all requests from all users and customers who are located in Tier Zero (Internet and user zone). These J2EE Web Session Servers handle dynamic information and act as the main point of entry.

J2EE Web Session Servers are hosted. The computers on which they are hosted run four types of software:

- Off-the-shelf Web Server software, such as Oracle Web Session Server or BEA Systems WebLogic.
- CCA JSP pages.
- Servlets and other connectivity software, such as FTP and Java Database Connectivity (JDBC) software.
- A Web services library and interpretive layer. The Web Services interpretive layer acts as a standard interface to the CCA native Web container.

In larger environments, such as overlay networks or service provider deployments, it is best to have separate physical servers set up as report servers. The Report Servers serve all customer reports and extract data from secondary databases.

Tier Two (DMZ zone) is also a typical zone to house corporate mail servers. These corporate mail servers are not part of the CCA architecture, but they communicate with CCA to facilitate unified messaging and identification of automatic call distributor (ACD) email projects.

In some cases, additional physical servers can be placed in Tier Three (network zone) to act as Email proxy servers. Use Email proxy servers when corporate Email servers use IMAP/4 protocols in Tier Two (DMZ zone). The Email proxy servers (POP3 and SMTP-to-IMAP) in Tier Three (network zone) perform the protocol conversion duties.

## Tier Three of Contact Center Anywhere Architecture

Tier Three, which is also called the *network zone*, is where the Application Servers, File Servers, Database Servers, and Telephony Servers reside. The CCA Servers can be classified into separate functional areas or resources. Each CCA resource is responsible for delivering specific functionality. CCA uses two types of resources in Tier Three:

- **Shared resources.** Are common system resources that are used throughout the CCA system. An example of a shared resource is the Call Center Server. It is responsible for managing voice and switching functions between the Telephony Servers and the Public Switched Telephone Network (PSTN). Even though the Call Center Server is used as a shared resource by default, it is possible to configure a Call Center Server to be used for only one company, and to have other Call Center Servers configured as shared in the same physical machine.
- **Dedicated resources.** Are company-specific resources. These dedicated resources use private data that can be accessed by only one company. This is part of CCA's partitioning and data security schema. For example, the ACD Server holds all of the routing rules for Company A. Therefore, the ACD Server cannot be used for Company B. So, Company B has its own, dedicated ACD Server. In an overlay network or service provider arrangement, it is typical to have multiple instantiations of the same type of dedicated resource running on the same physical server. For example, you might have 18 ACD Servers (each with its own dedicated use for a specific company) running on a single, physical-application server.

In the case of one company with many lines of business or departments, CCA can be configured to allow each department or line of business to be set up as individual companies.

## Requirements for Installing Contact Center Anywhere

Before installing CCA, verify that the software listed in [Table 2](#) is installed on your system. See [Required Software Reference Links on page 14](#) for more information.

Table 2. Software Requirements for CCA Installation

Item	Requirement
Operating system	One of the following operating system versions: <ul style="list-style-type: none"><li>■ Microsoft Windows 2000 Server</li><li>■ Microsoft Windows 2003 Server (32-bit)</li><li>■ Sun Solaris 9 (32-bit or 64-bit)</li><li>■ Sun Solaris 10 (5.10)</li><li>■ Red Hat Enterprise Linux AS4 for x86 or Oracle Unbreakable Linux</li></ul>

Table 2. Software Requirements for CCA Installation

Item	Requirement
Database server	One of the following database servers: <ul style="list-style-type: none"> <li>■ Microsoft SQL Server 2005 Service Pack 3</li> <li>■ Oracle9i Database</li> <li>■ Oracle Database 10g</li> </ul>
Web server	One of the following Web servers: <ul style="list-style-type: none"> <li>■ Sun One</li> <li>■ Oracle Application Server 10g Release 3</li> <li>■ BEA WebLogic 10, or 8.1 Service Pack 5</li> </ul>
Client Web browser	One of the following Web browsers: <ul style="list-style-type: none"> <li>■ Microsoft Internet Explorer 6</li> <li>■ Microsoft Internet Explorer 7</li> <li>■ Firefox</li> </ul>
Other	The following software must be installed: <ul style="list-style-type: none"> <li>■ Sun Java JDK 1.4.2_13 installed on a Web server.</li> <li>■ Sun Java JRE 1.5.0 Update 10 or JRE 1.6.x installed on client PC, where the Web browser launches CCA.</li> <li>■ FTP server: The FTP server hosts all voicemails, quality recordings, agent and supervisor recordings, faxes, and so on. Typically, this server is a separate physical file server with plenty of disk space. The exact amount of disk space you need depends on many factors, including your specific configuration, the FTP server program you are using, and contact center volume.</li> </ul>
Optional tools	The following tools are optional: <ul style="list-style-type: none"> <li>■ A media player on the client PC to listen to voice mails, recordings, and so on.</li> <li>■ A sound recorder to record prompts.</li> <li>■ Adobe Acrobat 7.0 to view advanced reports.</li> <li>■ SNMP client to receive asynchronous event reports (traps) generated by the CCA simple network management protocol (SNMP) agent.</li> <li>■ Converter for switching WAV files to MP3 format, which must be installed on the same host as the FTP server.</li> </ul>

## Required Software Reference Links

Table 3 provides links to Web sites associated with the software that must be installed before you begin installation of CCA software.

Table 3. Required Software Reference Links

Software	Reference Link
Microsoft SQL Server 2000 and 2005	See the following: <a href="http://support.microsoft.com/kb/303747">http://support.microsoft.com/kb/303747</a> <a href="http://support.microsoft.com/ph/2855">http://support.microsoft.com/ph/2855</a>
Oracle9i Database	<a href="http://www.oracle.com/technology/documentation/oracle9i.html">http://www.oracle.com/technology/documentation/oracle9i.html</a>
Oracle Database 10g	<a href="http://www.oracle.com/technology/pub/articles/smiley_10gdb_install.html">http://www.oracle.com/technology/pub/articles/smiley_10gdb_install.html</a>
Oracle Unbreakable Linux	<a href="https://linux.oracle.com/">https://linux.oracle.com/</a>
Red Hat Enterprise Linux	<a href="http://www.redhat.com/">http://www.redhat.com/</a>
WebLogic 8.1 or 10	<a href="http://e-docs.bea.com/platform/docs81/install/index.html">http://e-docs.bea.com/platform/docs81/install/index.html</a> <a href="http://e-docs.bea.com/wls/docs100/index.html">http://e-docs.bea.com/wls/docs100/index.html</a>
Oracle Application Server 10g	<a href="http://www.oracle.com/technology/pub/articles/smiley-as10gr3-install.html">http://www.oracle.com/technology/pub/articles/smiley-as10gr3-install.html</a>

# 3

## Configuring a Database for Contact Center Anywhere

This chapter describes how to create and configure a database for Contact Center Anywhere (CCA). It includes the following topics:

- [About Database Configuration on page 15](#)
- [Creating a New Oracle Database 10g on page 16](#)
- [Creating a New Database on Microsoft SQL Server on page 18](#)

### About Database Configuration

Before installing Contact Center Anywhere, you must decide whether to create a new database or upgrade an existing database used by previous versions of CCA.

#### Creation of a New Database

If you are installing CCA for the first time, create a new database. For more information, see [Creating a New Oracle Database 10g on page 16](#), or [Creating a New Database on Microsoft SQL Server on page 18](#).

**NOTE:** The only character set supported by CCA is Latin.

#### Database Upgrade

If a previous version of CCA is installed and you plan to upgrade CCA to the latest version, then choose the database upgrade option. For more information about upgrading your database, see [Upgrading a Database for Contact Center Anywhere on page 59](#).

#### Database Installation and Upgrade Directories

The CCA installation package includes a \Database directory that has two subdirectories: Oracle and SQL Server.

The Oracle directory contains scripts to configure a database on an Oracle database server. The SQL Server directory is reserved for a Microsoft SQL Server database. Each directory has two subdirectories:

- **Automated.** CCA uses this subdirectory when creating a new database.
- **Patch.** CCA uses this subdirectory when upgrading an existing database.

## Before Beginning Database Installation or Upgrade

Before you install or upgrade a database for CCA, make sure that Sun Java JDK 1.4.2\_13 is installed on the host used to run the database scripts.

# Creating a New Oracle Database 10g

Complete the steps in the following procedure to create a new Oracle Database 10g for use with CCA.

### To create a new Oracle Database 10g

- 1 Copy the following directory from the CCA installation package to the host that is running the database creation scripts:

database\oracl e\Automated

- 2 Use the following guidelines to edit the UseMe.sql file, so that it includes the correct information for creating the database:

**NOTE:** Retain the quotation marks surrounding parameter values.

- Replace parameter &1 with the password of the database user.
- Replace parameter &2 with the name of the connection to the database server saved in the tnsnames.ora file. Typically, the tnsnames.ora file resides in ORACLE\_HOME\network\admin.
- Replace parameter &3 with the name of the tablespace that contains all the database tables.
- Replace parameter &4 with the path to the location where the tablespace will be created. For example:

C:\oracl e\oradata\oracl e\twcc81. ora

- Replace parameter &5 with the size of the tablespace. The default size is 500 megabytes (MB).

**NOTE:** This value is not a limitation. The database can grow larger than 500 MB.

- Replace parameter &6 with the name of the temporary tablespace that contains the temporary data. Temporary data occurs, for example, when executing a complex SELECT statement.
  - Replace parameter &7 with the path to the location where the temporary tablespace will be created. For example:
- C:\oracl e\oradata\oracl e\twcc81tmp. ora
- Replace parameter &8 with the size of the temporary tablespace. The default size is 50 MB.
  - Replace parameter &9 with the growth size of the temporary tablespace. The default size is 10 MB.
  - Replace parameter &10 with the name of the database role that will be created.
  - Replace parameter &11 with the user name of the user who has administration privileges on the new database. For example, admncc811.



- Replace parameter &12 with the password of the user declared in parameter &11.
- Replace parameter &13 with the user name of the user who has access to the CCA database. For example, cc811.
- Replace parameter &14 with the password of the user declared in parameter &13.
- Replace parameter &15 with the database service name (SID).
- Replace parameter &16 with the host name or IP address of the database server.
- Replace parameter &17 with the port that Oracle Database 10g server uses to listen for a new connection. The default port is 1521. If your Oracle Database 10g server uses a different port, you must change this default value.
- Replace parameter &18 with the following build type:  
 TYPE\_GENERIC = 0; TYPE\_SIEBEL = 1; TYPE\_TELUS = 2; TYPE\_TELSTRA = 3; TYPE\_MCI = 4

After editing the script file, the following information is returned:

```
-- &1 - sys password          sys_password
-- &2 - Database TNS Name     my_db_connecti on
-- &3 - TWTabl eSpace        CCA db Tabl e Space
-- &4 - PathTabl eSpace      Path for the TAW Tabl e Space
-- &5 - Tabl eSpaceSi ze     500M Ini tial size of the Tabl e Space
-- &6 - TWTabl eSpaceTemp    TAW Temporary Tabl e Space
-- &7 - PathTabl eSpaceTemp  Path for the TAW Temporary Tabl e Space
-- &8 - Tabl eSpaceTempSi ze 50M Ini tial size of the Temporary Tabl e Space
-- &9 - Tabl eSpaceTempGrowt hSi ze 10M Temporary Tabl e Space Growtrh Si ze
-- &10 - TWRol e            TWRol e
-- &11 - ADMI NCC81 (Admi n Username) ADMI NCC81
-- &12 - ADMI NCC81 (Admi n Password) ADMI NCC81
-- &13 - CC81 (User Username) CC81
-- &14 - CC81 (User Password) CC81
-- &15 - Database Service Name Used by the JDBC Connecti on
-- &16 - Database Hostname   db Hostname --> Use by the JDBC Connecti on
-- &17 - Database Port Number db port number --> Use by the JDBC Connecti on
-- &18 - Bui ld type         Type of bui ld

@CreateDatabase.sql 'syspassword' 'oracl e' 'TWTabl eSpacecc81'
'c:\oracl e\oradata\oracl e\twcc81.ora' '500M' 'TWTabl eSpacecc81Tmp'
'c:\oracl e\oradata\oracl e\twcc81tmp.ora' '50M' '10M' 'TWRol ecc81' 'ADMI NCC81'
'admi ncc81' 'cc81' 'cc81' 'oracl e' 'support-db' 1521 0
```

- 3 Open a command-line window and type `cd` to change to the directory containing the `UseMe.sql` file.  
**NOTE:** To open a command-line window: click Start, Run, type `CMD`, and then click OK.
- 4 Open the SQL Plus console by typing the following: `sqlpl us /nol og`

- 5 From the SQL Plus command-line prompt, type the following to run the script file: @UseMe.sql
- 6 After the script file completes, check for errors in all of the newly created log files.

## Creating a New Database on Microsoft SQL Server

Complete the steps in the following procedure to create a new database on Microsoft SQL Server.

### *To create a new database on Microsoft SQL Server 2005*

- 1 From the installation package, copy the Automated directory of the SQL Server to the host that is running the database scripts. For example:

```
C:\CCA\database\Sql Server\Automated
```

- 2 Follow these guidelines to edit the useMe70LatinLanguage.bat file batch to include information for creating the database:

**NOTE:** When creating your SQL Server 2005 user name and password, you must create them in uppercase. Otherwise, you get an error when attempting to log in to Network Manager.

- Replace parameter %1 with the host name of the database server.
- Replace parameter %2 with the administrator user name. Typically, sa is the default.
- Replace parameter %3 with the password for the administrator user.
- Replace parameter %4 with the path to the location where the database files will be created.
- Replace parameter %5 with the database name for CCA. Typically, the default is CC81.
- Replace parameter %6 with the name of the user who will be created, and have access to the database. CCA uses this value to access the database. Typically, the default is CC81.
- Replace parameter %7 with the password that you will provide to the user defined in the previous parameter.
- Replace parameter %8 with the port used by Microsoft SQL Server to listen for new connections. By default, Microsoft SQL Server listens on port 1433.
- Keep the -remoteDatabase flag set to False.
- Replace parameter %10 with the language you want to use. Latin is the default.

After editing the batch file, it returns the following:

```
echo off
CHCP 437
rem %1 <The database server name>
rem %2 <The admin users - normally sa ->
rem %3 <The password for the admin user>
rem %4 <The database path where to create it, for example: c:\databases>
rem %5 <The database name>
```

```
rem %6 <CCA username>
rem %7 <CCA password>
rem %8 <database port number by default Sql server is using 1433>
rem %9 <remote database - "true" or "false">
rem %10 <database Encoding, default American English>

java -jar DatabasePopulation.jar -hostname=support-db -username=CC81 -
password=CC81 -databasePortNumber=1433 -databaseName=CC81 -saUsername=sa -
saPassword=sa -dbPath=C:\databases -remoteDatabase=false

echo on
```

- 3 Open a command-line prompt, and run the useMe70LatinLanguage.bat batch file.
- 4 After the batch file completes, check the newly created log files for errors.



# 4

## Installing Contact Center Anywhere Server Components

This chapter describes how to install the server components for Contact Center Anywhere (CCA), configure CCA resources, and create the database connection to your application server. It includes the following topics:

- [Creating Database Connections to the Application Server on page 21](#)
- [Installing Contact Center Anywhere Server Files and Network Manager on page 25](#)
- [Installing TCP/IP Bus on page 26](#)
- [Process of Configuring Contact Center Anywhere Resources on page 28](#)
- [Configuring Resources Using Network Manager on page 34](#)

### Creating Database Connections to the Application Server

You must create a database connection for CCA. Network Manager and all resources use this database connection to connect to the database, and load CCA configuration data.

The CCA Server has separate functional areas or resources. Each CCA resource is responsible for delivering specific functionality. For example, the Call Center resource manages all of the phone call functionality.

This topic describes how to create the database connection, using the following:

- Microsoft SQL Server  
For more information, see [Creating an ODBC Data Source for Microsoft SQL Server Database on page 22](#).
- Oracle Database 10g on Microsoft Windows 2003  
For more information, see [Creating an ODBC Data Source for Oracle Database 10g on page 23](#).
- Solaris 9  
For more information, see [Creating a TNS Name for Oracle Database 10g on Solaris 9 and Red Hat Enterprise Linux AS4 on page 24](#).
- Red Hat Enterprise Linux AS4  
For more information, see [Creating a TNS Name for Oracle Database 10g on Solaris 9 and Red Hat Enterprise Linux AS4 on page 24](#).

## Creating an ODBC Data Source for Microsoft SQL Server Database

Complete the steps in the following procedure to create an ODBC Data Source for Microsoft SQL Server.

### *To create an ODBC data source for Microsoft SQL Server database*

- 1 From the Windows Start menu, navigate to Programs, Administrative Tools, and then Data Sources (ODBC).
- 2 From the ODBC System Administrator System DSN tab, click Add.
- 3 Select SQL Server from the list, and click Finish.

**NOTE:** If this option is not present, install the SQL Server Client Tools.

- 4 In the Wizard dialog boxes, provide the following information, and click Next where appropriate. The following table describes the fields.

Field	Description	Comments
Name	The name of the data source.	The name must not include spaces and must be similar to your database name.
Description	The description of the data source.	For example, Contact Center Anywhere V8.1 Data Source Name.
Server	The SQL Server that you want to connect to.	For example, support-db.
Login	Select the option that specifies the method that the SQL Server uses to authenticate the login ID.	SQL Server Authentication.
Connect to SQL Server to obtain default settings	Select the check box.	Allows you to provide the user privilege used when creating the database.
Login ID	The SQL Server login ID.	For example, cc81.
Password	The SQL Server Password.	For example, cc81.
Default database	Select the CCA database.	For example, cc81.
Client Configuration	Confirm that the Client Configuration selection is set for TCP/IP and not for Named Pipes.	None.

- 5 Click Next until the last screen is displayed, and then click Finish.

- 6 To test the data source, click Test Data Source.

**NOTE:** The test must verify that the connection is correct before you can continue.

## Creating an ODBC Data Source for Oracle Database 10g

Complete the steps in the following procedure to create an ODBC DSN for Oracle Database 10g.

### To create an ODBC data source for Oracle Database 10g

- 1 From the Windows Start menu, navigate to Programs, Administrative Tools, and then Data Sources (ODBC).
- 2 From the ODBC System Administrator System DSN tab, click Add.
- 3 Select Oracle in OraDb10g\_Home1 from the list, and click Finish.

**NOTE:** If this option is not available, install Oracle 10g Client Tools.

- 4 In the Wizard dialog boxes, complete the following fields, clicking Next where appropriate.

The following table describes the fields.

Field	Description	Comments
Data Source Name	The name of the data source.	The name cannot include spaces and must be similar to your database name.
Description	A description of the data source.	For example, Contact Center Anywhere V8.1 Data Source Name.
TNS Service Name	The TNS name containing the connection to the database server.	For example, support-db.
UserID	The name of the user on Oracle Database 10g.  <b>TIP:</b> See parameter &13 in the database creation script file described in <a href="#">Creating a New Oracle Database 10g on page 16</a> .	For example, cc81.

- 5 To verify that the connection is working, click Test Connection.
- 6 Click OK.

## Creating a TNS Name for Oracle Database 10g on Solaris 9 and Red Hat Enterprise Linux AS4

Complete the steps in the following procedure to create a TNS name for Oracle Database 10g on Solaris 9, and Red Hat Enterprise Linux AS4.

**NOTE:** Install Oracle 10g Client Tool on the servers running CCA resources.

### *To create a TNS name for Oracle Database 10g on Solaris 9, or Red Hat Enterprise Linux AS4*

- On the server running CCA resources, edit the tnsnames.ora file to point to Oracle Database 10g server.

Typically, this file resides at the following location:

ORACLE\_HOME/network/admin

For example, if your database server is support-db, where SID is oracle, then add the following record to the tnsnames.ora file:

```
CC81 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = support-db)(PORT = 1521))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = ORACLE)
    )
  )
```



# Installing Contact Center Anywhere Server Files and Network Manager

Complete the steps in the following procedure to install the CCA Server files, including Network Manager.

## To install Contact Center Anywhere Server files

- 1 Create a directory for the CCA Server files, for example, as follows:
  - On Microsoft Windows: C:\ccanywhere (on MS Windows)
  - On Solaris and Linux: /usr/ccanywhere
- 2 From the CCA installation package, copy the CCA Server directory to the directory that is created in [Step 1](#), and then verify that the following subdirectories exist in the CCA directory:
  - bin
  - lib (only on Solaris and Linux)
  - prompt
  - log
  - tmp
  - Network Manager
- 3 Add the path to the location of the \bin directory in the CCA directory created in [Step 1](#) to your PATH environment variable:
  - a On the desktop, right-click My Computer, and select Properties.
  - b Select the Advanced tab, and then click Environment Variables.
  - c Select the variable PATH, click Edit, and then add the CCA directory (for example, c:\ccanywhere\bin) to the path.

**NOTE:** Type a semicolon (;) before making a new entry.

For Linux (and UNIX), you must put both the ccanywhere/bin and the ccanywhere/lib path in the CCA system environment PATH and LD\_LIBRARY\_PATH. You can put them in the startup script file, such as .profile. The following is an example of a .profile file:

```
CCA_INSTALL_PATH=/usr/ccanywhere; export CCA_INSTALL_PATH
LD_LIBRARY_PATH=${LD_LIBRARY_PATH}: $ORACLE_HOME/lib: $CCA_INSTALL_PATH/
lib; export LD_LIBRARY_PATH

PATH=${PATH}: /usr/bin: /usr/ccs/bin: /etc: /opt/sfw/bin: /space/oracle/oracle/bin: /
usr/local/bin: /usr/sbin: /sbin: /space/j2sdk1.4.2_13/bin: /space/j2sdk1.4.2_13/
jre/bin: $CCA_INSTALL_PATH/bin: $CCA_INSTALL_PATH/lib; export PATH

MANPATH=${MANPATH}: /usr/share/man: /usr/local/man: $CCA_INSTALL_PATH; export
MANPATH
ulimit -n 4048
```

**NOTE:** On Solaris and Linux, for security reasons, do not use a root account to run CCA resources. Instead, create another user account to run CCA resources. Change the owner of the CCA directory to the user running CCA resources. Assign write and execute permissions for this directory.

## Installing TCP/IP Bus

The CCA Server uses the TCP/IP Bus connection to communicate with its resources. This is a critical part of the application. You must install the TCP/IP Bus as a service on each host that runs the CCA Server.

The following topics provide platform-specific instructions for TCP/IP bus installation:

- [Installing the TCP/IP Bus on Microsoft Windows on page 26](#)
- [Installing the TCP/IP Bus on Solaris or Linux on page 27](#)
- [Starting and Stopping TCP/IP Bus on page 33](#) describes how to stop and start the TCP/IP Bus

## Installing the TCP/IP Bus on Microsoft Windows

Complete the steps in the following procedure to install the TCP/IP Bus on Microsoft Windows.

### *To install the TCP/IP Bus on Microsoft Windows*

- 1 Open a command-line window (click Start, Run, type CMD, and then click OK).
- 2 From the command-line prompt, change the current directory to the CCA bin directory.

By changing the current working directory to the CCA bin directory, you can execute the CCA server files without specifying the absolute path to those files. For example:

```
C:\ccanywhere\bin
```

- 3 Install the TCP/IP Bus service:

- a Run: "tcpipbus -?" to display its usage:

```
tcpipbus [-install | -remove | -debug] -au
```

where:

- *-install* installs TCP/IP Bus as a Windows service, saving the parameter to the registry
- *-remove* removes TCP/IP Bus from windows service manager
- *-debug* runs TCP/IP Bus on the console mode
- Use *-a<Database alias>* when creating the ODBC entry
- Use *-u<Database user>* when creating the ODBC entry

- b Type the following, making sure that there is no space after -a and -u:

```
"tcpipbus -install -a<database alias> -u<database user>"
```

**NOTE:** If using a database server for Oracle9i Database or Oracle Database 10g, then the database alias and database user must correspond to the same information used to create the database connection in [Creating an ODBC Data Source for Microsoft SQL Server Database on page 22](#).

A prompt appears requesting the ODBC connection password. The password is saved in an encrypted format in the Windows registry.

- 4 After installing the TCP/IP Bus, a registry entry named Telephony@Work is created in the Windows registry at HKEY\_LOCAL\_MACHINE\SOFTWARE\Telephony@Work.

**NOTE:** In a multi-machine environment, you must install the same TCP/IP Bus configuration on each machine running CCA resources. Do not install a TCP/IP Bus for a Web Server or Database Server.

## Installing the TCP/IP Bus on Solaris or Linux

Complete the steps in the following procedure to install the TCP/IP Bus on Solaris or Linux.

### To install the TCP/IP Bus on Solaris or Linux

- 1 Verify that the LD\_LIBRARY\_PATH variable includes the path to the location of the CCA library directory.
- 2 Open a terminal, type cd, and navigate to the CCA bin directory.
- 3 Run the following command:

```
tcpipbus -install -aTNSAlias -uDBUser
```

where:

- *TNSAlias* is the TNS name saved in tnsname.ora file. This must match the name you used to create the database connection in [Creating an ODBC Data Source for Microsoft SQL Server Database on page 22](#).
- *DBUser* is the database user for CCA. For more information, see parameter &13 in [Creating a New Oracle Database 10g on page 16](#).
- 4 Press Enter and, at the prompt, type the database user password.
- 5 Verify that the law\_tcpip\_bus.cfg file exists in the /etc directory.
- 6 Change the owner of the law\_tcpip\_bus.cfg file to the user name used to run CCA resources, and assign write permission.

**NOTE:** Do not start the TCP/IP Bus after it finishes installing. You must first add a Host Manager.

- 7 Add a Host Manager.

For more information about adding a Host Manager, see *Contact Center Anywhere Network Manager Guide* and [Process of Configuring Contact Center Anywhere Resources on page 28](#).

# Process of Configuring Contact Center Anywhere Resources

This topic describes how to add and run all resources required by CCA using Network Manager. It includes information about the following:

- [Managing Contact Center Anywhere Resources with Network Manager on page 28](#)
- [Adding Shared and Dedicated Server Resources on page 29](#)
- [Configuring Resources Using Network Manager on page 32](#)
- [Starting and Stopping Contact Center Anywhere Resources on page 32](#)
- [Starting and Stopping TCP/IP Bus on page 33](#)

## Managing Contact Center Anywhere Resources with Network Manager

Use Network Manager to configure, start, and stop CCA resources as described in the following procedure. This task is a step in [Process of Configuring Contact Center Anywhere Resources on page 28](#).

### *To use Network Manager to manage Contact Center Anywhere resources*

- 1 From Network Manager install directory (such as, C: \ccanywhere\NetworkManager), run the NetworkManager81.exe.
- 2 Log in using the information you specified during ODBC setup, where for example:
  - Alias is cc81
  - User is cc81
  - Password is cc81
- 3 From the Database tab, configure the Database Connections properties using the same information specified during ODBC setup, where for example:
  - Alias is cc81
  - User is cc81
  - Password is cc81
  - Driver is SQL

If you are using Oracle9i Database or Oracle Database 10g, select the Oracle option.

- 4 From the System tab, which specifies the values used for the FTP connection, complete the fields described in the following table, and then click OK.

Field	Description
Server Host	FTP server name or IP address.
Server Root Path	Path to the location on the FTP server where CCA places files. Use a slash mark (/) to access the root directory of the FTP server.
File size limit (KB)	The maximum size of a file that CCA can put in the FTP server in kilobytes (KB).
Ftp Username	The FTP user name.
Ftp Password	The FTP user's password.

## Adding Shared and Dedicated Server Resources

This task is a step in [Process of Configuring Contact Center Anywhere Resources on page 28](#). Before adding shared and dedicated resources, add the Host Manager.

Each server running CCA resources requires a running Host Manager. The Host Manager creates the directories that are specific to the server that it is running for storing and retrieving voice files, greetings, chat, email history, and so on. The Host Manager also assists in the FTP process by helping to upload and download the required files from the FTP server to the server that it is running.

Add the Host Manager resource using the Add Host Manager dialog box, which automatically appears after the CCA system settings are configured.

### *To add shared and dedicated server resources*

- 1 Complete the CCA system configuration settings.  
For more information about completing the CCA system configuration settings, see *Contact Center Anywhere Network Manager Guide*.
- 2 From the Add Host Manager dialog box, enter the machine name that you want to add as a host of the services.

- 3 Complete the remaining fields in the Add Host Manager dialog box, and then click Save. The following table describes the fields.

Field	Description
Host	The host name of the server where Host Manager runs. <b>NOTE:</b> Do not use 'localhost'.
Port	Click Suggest.
Home Directory	The path to the CCA directory, such as C: \ccanywhere.
Location	This is the logical location.
Create Library Email checkbox (optional)	Select this check box if you are using email.
Create Lib Fax and Prompt checkbox	Select this check box, and then select Dialogic.
Log Size (kb)	12000
Number of Logs	1 - 10
Trace Level	This is the level of detail for log files generated by the Host Manager. Valid values are 1, 2, 3, 4, or 5 (where 1 is the lowest level of detail, and 5 is the highest level of detail).

The Default Resources dialog box appears, from where you can add all other resources, or you can add them individually later, as described in [Step 6](#).

- 4 From the Default Resources dialog box, Shared tab, select the shared resources that you want (according to your server), and then click Save. The following table describes the resources. For more information about adding shared resources, see *Contact Center Anywhere Network Manager Guide*.

Resource	Description
Call Center Server	This resource serves as the interface between the telephony server resources and the rest of the CCA system. The Call Center Server is also responsible for controlling all voice and fax communications as well as IVR routing functionality.
Unified Messenger	This resource sends and receives voicemail, fax, and email messages to and from mail servers and agents.
CTI Bridge (for ATM configurations only)	This resource allows the bridging of calls across hardware resources in the Dialogic environment.
MCU Server	This resource supports voice conferencing and call monitoring.

Resource	Description
SNMP Agent	This resource monitors and provides (to a connected SNMP Browser) data for all CCA objects defined in the TelephonyAtWork Management Information Base (taw.mib).
License Server	This resource performs real-time tracking of the number of active Interactions for each Company (and the entire system), and enforces the Interaction limits imposed by each Company's license.
Redirect Server	This resource redirects SIP INVITE messages to a Call Center Server with available RTP Streams. It is used for load balancing.
Music Server	This resource provides RTP music stream to callers on hold and callers in queue.
MP3 Converter	This resource converts WAV file quality assurance recordings to MP3 format. This service should be loaded on the File Server Host.

5 From the Default Resources dialog box, Dedicated tab, add the dedicated resources:

a From the drop-down list, select the company to which you want to add resources.

By default, a company named ASP Services already exists. This company is automatically created when creating the database.

b Select the check box for each dedicated resource to add.

**NOTE:** If you do not want to add the dedicated resources now, click **Save**, and add them later.

c Click **Save**.

If you do not add the resources using the Default Resources dialog box, you can use Network Manager to add them later. For more information about adding dedicated resources, see *Contact Center Anywhere Network Manager Guide*.

6 Click **View by Host** to open the Host View.

7 To add a dedicated resource, click **View by Company**.

8 From the Resources menu, select **Add Resource**.

9 In the Add New Server dialog box, complete the fields.

The following table describes the fields.

Field	Description
Host	Select the computer on which the resource is loaded.
Resource ID	This is a numeric, sequential identifier for the resource. It is automatically assigned when the resource is created.
Port	The IP port that the resource uses for TCP/IP Bus messaging.
Resource Type	The type of resource to configure.

Field	Description
Dedicated	If this check box is selected, then the resource is assigned to a single company. If this check box is not selected, then the resource is available to all companies.
Resource Mode	Set this to Master or Backup.
Company	Use only when the Dedicated check box is selected to identify the company.
Trace Level	The level of detail written to log files (where 1 is the lowest and 5 is the highest).

10 Click Save to add another resource.

## Configuring Resources Using Network Manager

This task is a step in [Process of Configuring Contact Center Anywhere Resources on page 28](#). You use Network Manager to configure the following resources, as required:

- Call Center
- Redirect Server
- MP3 Server
- MCU server
- CTI Server

For more information about configuring each of these resources, see [Configuring Resources Using Network Manager on page 34](#).

You can also use Network Manager to start and stop CCA resources as described in [Starting and Stopping Contact Center Anywhere Resources on page 32](#).

## Starting and Stopping Contact Center Anywhere Resources

Complete the following procedure to start or stop CCA resources. This task is a step in [Process of Configuring Contact Center Anywhere Resources on page 28](#).

**NOTE:** You must install and start the TCP/IP Bus before starting any CCA resource.

### *To start or stop Contact Center Anywhere resources*

- 1 From Network Manager, select the resource that you want to start.
- 2 Click Go.

If Go is not available, then the resource is already running and you must click Go to Stop it.



## Starting and Stopping TCP/IP Bus

TCP/IP Bus is a key element of the CCA Server. Using TCP/IP Bus, the Web server and all CCA resources can communicate with each other in real time.

Complete one of the following procedures to start or stop TCP/IP Bus. This task is a step in [Process of Configuring Contact Center Anywhere Resources on page 28](#).

**NOTE:** You must start the TCP/IP Bus before starting CCA resources.

### Microsoft Windows

Complete the steps in the following procedure to start or stop the TCP/IP Bus on Microsoft Windows.

#### *To start or stop TCP/IP Bus on Microsoft Windows*

- 1 Open the Services control panel from the Start menu by navigating to Start, Programs, Administrative tools, and then Services.
- 2 Navigate to the TAW TCP-IP Bus service.
- 3 Using the menu on the right side, do one of the following:
  - Click Start to start TCP/IP Bus.
  - Click Stop to stop TCP/IP Bus.

Complete the steps in the following procedure to start or stop TCP/IP Bus on Solaris or Linux.

#### *To start or stop TCP/IP Bus on Solaris or Linux*

- 1 Log in with a user account that is allowed to run CCA server resources.
- 2 To start TCP/IP Bus and run it as a service, use the following run command:

```
nohup tcpi pbus &
```
- 3 To stop TCP/IP Bus:
  - a Find the process ID of the running TCP/IP Bus by entering the following command:

```
ps -e | grep tcpi pbus
```
  - b Then stop the TCP/IP Bus process using the following command:

```
kill -9 PID
```

PID is the process ID of the running TCP/IP Bus.

# Configuring Resources Using Network Manager

You use Network Manager to configure the following resources. Some resources require additional configuration after you add them to Host Manager. The following topics describe how to configure these resources:

- [Configuring the Call Center Resource on page 34](#)
- [Configuring the Redirect Server Resource on page 37](#)
- [Configuring the MP3 Server Resource on page 37](#)
- [Configuring the MCU Server Resource on page 38](#)
- [Configuring the CTI Server Resource on page 38](#)

## Configuring the Call Center Resource

The Call Center resource serves as the interface between the telephony server resources and the rest of the contact center system. It is responsible for controlling all voice and fax communications as well as integrated voice response (IVR) routing capabilities. Complete the steps in the following procedure to configure a basic VoIP Call Center resource.

### *To configure the Call Center Resource*

- 1 From Network Manager, select the Call Center resource that you want to modify.
- 2 From the Resources menu, select Modify Resource.
- 3 From the Resource Information dialog box, click Advanced.
- 4 From the Call Center Advanced dialog box, complete the fields, and then click Save.
- 5 Click Configure to continue the configuration.

Complete the fields as described in the following table:

Field	Description
Hardware	Select TAW-VoIP.
Ext length	The length of the extension number depends upon the customer. Typically, this value is 4.
Dial Out	The number to dial outside the company. Typically, this value is 9.
Pbx Prefix	Use this field only if you require connections to an external private branch exchange (PBX).
ANI Validation Size	This value depends upon the country. Typically, for the United States, it is 10.  For more information about country codes, see <i>Contact Center Anywhere Network Manager Guide</i> .

Field	Description
Auto Answer Call	<p>If this check box is not selected, Call Center rejects calls for undefined projects.</p> <p>If this check box is selected, Call Center accepts calls for undefined projects and plays a prompt that the service is unavailable.</p>
Country Code	<p>In the United States, for example, this value is 1.</p> <p>For more information about country codes, see <i>Contact Center Anywhere Network Manager Guide</i>.</p>
Nation Prefix	In the United States, for example, this value is 1.1.
Int Prefix	In the United States, for example, this value is 011.
Private Prefix	Leave this field blank.
Strip Country Code (check box)	Select this check box to remove the country code.
Local Patterns	Set this field to route calls to a specific call center, which reduces long distance charges.
Dial Plan Group	Use this field to route calls through specific call centers.
Description	A description of the call center's configuration.

- 6 Click Save, and then Configure.
- 7 From the VoIP dialog box, complete the fields.

The following table describes the general VoIP Interface configuration fields.

Field	Description
Host	<p>The IP address of the call center host.</p> <p><b>NOTE:</b> If this value is incorrect, only one-way audio will be available.</p>
Start Port	Call Center uses a range of ports to pass calls. This is the starting port in that range. Typically, the value is 8000.
Payload	MuLaw is the typical choice. The G729 codec requires a special configuration.
Frame Per Second	This value is always 160.
Sip Port	5060

- 8 From the VoIP dialog box, double-click the area beneath Name to continue the configuration of the call center.

Complete the fields as described in the following table:

Field	Description
Name	Specify the component that you are installing, for example, gateway or agent channels.
Interface	Specify which interface you are installing and what information your gateway is passing to you. The following options are available: <ul style="list-style-type: none"> <li>■ SipGateway</li> <li>■ Sip</li> <li>■ H323Gateway</li> <li>■ H323</li> </ul>
Number of Channels	Set this value to the number of channels the call center plans to use. The number cannot exceed 120 channels for each server (including the agent channels).
Gateway IP Address	The address of the gateway that is sending the calls.
Gateway Type	Select a gateway type from one of the following: <ul style="list-style-type: none"> <li>■ Unknown</li> <li>■ Audio codes</li> <li>■ Quintum</li> <li>■ Cisco</li> </ul>
Default DNIS	Identify the default dialed number identification service (DNIS) to send if a DNIS is not received from a project.
Sip Port	5060
Enable Takeback	If this option is enabled, it prevents a call that is transferred out of the contact center system from using a line. <p><b>NOTE:</b> This service must be enabled with your carrier.</p>
Outbound	Select this field to allow outbound calling from the call center
Predictive	Select this field to allow predictive calling from the call center.
PBX	Select this field to allow the call center to act as a PBX.

For more information about adding a new call center server resource, see *Contact Center Anywhere Network Manager Guide*.

## Configuring the Redirect Server Resource

The Redirect Server routes calls to multiple call centers for load balancing. You can specify that all inbound calls be directed to a specific group of call centers.

### To configure the Redirect Server Resource

- 1 From Network Manager, select Redirect Server as the resource that you want to modify.
- 2 From the Resources menu, select Modify Resource.
- 3 From the Resource Information dialog box, click Advanced.
- 4 From the Redirect Server dialog box, select the call center from the Call Centers Unused list, and move it to the Call Centers Used list to specify the call center to which calls will be routed.
- 5 Enter the Server IP Address.

This is the IP address of the machine where the Redirect Server is installed.

- 6 Click Save.

For more information about adding a redirect server resource, see *Contact Center Anywhere Network Manager Guide*.

## Configuring the MP3 Server Resource

The MP3 Server automatically converts all WAV files listed in the QualityControl and History tables to MP3 format. This in turn facilitates the transfer of the WAV files from the File Server to remote users (such as, agents and supervisors), and reduces the amount of storage required for these files.

**NOTE:** Before configuring the MP3 Server, you must install an MP3 converter on the same host as the FTP server.

### To configure the MP3 Server Resource

- 1 From Network Manager, select MP3 Server as the resource to modify.
- 2 From the Resources menu, select Modify Resource.
- 3 From the Resource Information dialog box, click Advanced.
- 4 From the MP3 Server dialog box, complete the fields as described in the following table, and then click Save.

Field	Description
Enable MP3 Encoding	Select to enable the MP3 conversion option.
Command	Identify the location of the MP3 conversion executable file.
FTP Path	Identify the path to the FTP server share folder, for example, D: \Storage.

For more information about adding an MP3 Converter Resource, see *Contact Center Anywhere Network Manager Guide*.

## Configuring the MCU Server Resource

The MCU Server manages conference calls in CCA.

### To configure the MCU Server Resource

- 1 From Network Manager, select Redirect as the resource that you want to modify.
- 2 From the Resources menu, select Modify Resource.
- 3 From the Resource Information dialog box, click Advanced.
- 4 From the MCU Server dialog box, complete the fields as described in the following table, and then click Save.

Field	Description
IP Address	The IP address of the server hosting the MCU service.
Payload	Mulaw (payload type)
Frame per Second	Typically, this value is 160.
Description	Enter text to help identify the MCU service.

For more information about adding an MCU Converter Resource, see *Contact Center Anywhere Network Manager Guide*.

## Configuring the CTI Server Resource

The Computer Telephony Interface (CTI) Server serves as the interface between the telephone network resources (Call Center) and the software interface. In effect, this resource manages all of the available telephony resources. While the call center provides the interface that allows access to the resources, the CTI Server determines what to do with those resources.

Configuring the CTI Server resource is similar to configuring the Redirect resource. However, if you do not select any call centers in the Call Centers Unused and Call Centers Used dialog boxes, CCA uses all of the call centers in the list by default.

**NOTE:** If you select a call center, then the CTI server uses only that call center.

### To configure the CTI Server Resource

- 1 From Network Manager, select CTI Server as the resource to modify.
- 2 From the Resources menu, select Modify Resource.

- 3 From the Resource Information dialog box, click Advanced.
- 4 From the Call Centers (tab) dialog box, select the call center that will be dedicated to the CTI server from the Call Centers Unused list, and move it to the Call Centers Used list.

For more information about adding a CTI Bridge resource, see *Contact Center Anywhere Network Manager Guide*.





# 5

## Configuring and Deploying Contact Center Anywhere Web Applications

This chapter describes how to configure and deploy Contact Center Anywhere (CCA) Web applications on WebLogic 8.1 SP5 and Oracle Application Server 10g. It includes the following topics:

- [Process of Setting Up Contact Center Anywhere Web Applications on Oracle Application Server 10g on page 41](#)
- [Deploying Contact Center Anywhere Web Applications on Oracle Application Server 10g on page 44](#)
- [Process of Setting Up Contact Center Anywhere Web Applications on WebLogic on page 47](#)
- [Deploying Contact Center Anywhere Web Applications on WebLogic on page 51](#)

### Process of Setting Up Contact Center Anywhere Web Applications on Oracle Application Server 10g

This topic describes how to set up CCA Web applications on Oracle Application Server (OAS) 10g Release 3. The same process can be used for Oracle Database 10g and Oracle9i Database. Before you begin, make sure that Sun JDK 1.4.2\_13 is installed on the Web server.

This topic includes information about the following:

- [Creating a JDBC Connection Pool on Oracle Application Server 10g on page 42](#)
- [Creating a JDBC Data Source on Oracle Application Server 10g on page 43](#)

When finished setting up CCA Web applications on OAS 10g, you must deploy the following CCA Web applications on OAS 10g:

- TAW-general.war
- cca-axis2.war
- Integration.war

For more information about deploying each of these applications, see [Deploying Contact Center Anywhere Web Applications on Oracle Application Server 10g on page 44](#).

## Creating a JDBC Connection Pool on Oracle Application Server 10g

When you create a JDBC Connection Pool, you must identify the name, connection factory class, URL, database user name, and database user password as outlined in the following procedure. This task is a step in [Process of Setting Up Contact Center Anywhere Web Applications on Oracle Application Server 10g on page 41](#).

### To create a JDBC connection pool on Oracle Application Server 10g

- 1 Log in to the Administration console of OAS 10g.

The default administrator user name of OAS 10g is `oc4j admin`. When installing OAS server 10g, the typical URL is:

`http://server_name:port/em`

where:

- *server\_name* is the host name for the OAS 10g server.
  - *port* is the endpoint of a logical connection. The number specifies what type of port. For example, 80 is for HTTP traffic.
- 2 From the Administration console home page, click the Oracle Application Server 10g instance used to deploy the CCA Web applications.
  - 3 From the Oracle Application Server 10g Instance detail page, in the Administrations tab, click the Create JDBC Resources icon.
  - 4 On the JDBC Resources page, from under the Connection Pool label, click Create.
  - 5 From the Create Connection Pool - Application page, select New Connection Pool, and click Continue.
  - 6 From the JDBC Connection Pool detail page, complete the required fields.

The following table describes the fields.

Field Name	Value
Name	The name of the JDBC connection.
Connection Factory Class	<code>oracle.jdbc.pool.OracleDataSource</code>
JDBC URL	<code>jdbc:oracle:thin:@//dbservername:1521/SID</code> where: <ul style="list-style-type: none"><li>■ <i>dbservername</i> is the host name or IP address of the database server</li><li>■ <i>SID</i> is the database service name</li></ul>

Field Name	Value
Username	The database user name. For more information, see parameter &13 in <a href="#">Creating a New Oracle Database 10g on page 16</a> .
Password	The password of the database user declared in the Username parameter. Select the Use Cleartext Password option.

- 7 Click Test Connection to verify that the connection is set correctly.
- 8 Click Finish.

## Creating a JDBC Data Source on Oracle Application Server 10g

When you create a JDBC data source on OAS 10g, you must identify the name of the data source, the JNDI location, the transaction level, the connection pool, and a login timeout value. This task is a step in [Process of Setting Up Contact Center Anywhere Web Applications on Oracle Application Server 10g on page 41](#).

### *To create a JDBC data source on Oracle Application Server 10g*

- 1 Open the JDBC Resource page.  
See Step 1 through Step 3 of [Creating a JDBC Connection Pool on Oracle Application Server 10g on page 42](#).
- 2 From the JDBC Resources page, click Create, which is under the Data Sources label.
- 3 From Create Data Source - Application & Type page, select Managed Data Source for the data source type, and click Continue.
- 4 From the Create Data Source - Managed Data Source page, complete the following fields:

Field	Description
Name	The name of the data source.
JNDI Location	Use the same value as the data source name.
Transaction Level	Global & Local Transaction.
Connection Pool	Select the connection pool that you created previously.
Login Timeout	60

- 5 Click Finish.  
The JDBC Resources page reappears.
- 6 From the JDBC Resources page, click the Test Connection icon next to the Data Source that you just created to verify that the data source is working correctly.

# Deploying Contact Center Anywhere Web Applications on Oracle Application Server 10g

Deploying CCA Web Applications on Oracle Application Server (OAS) 10g is similar to deploying these applications on WebLogic. You must deploy the following CCA Web applications on OAS 10g when you have completed [Process of Setting Up Contact Center Anywhere Web Applications on Oracle Application Server 10g](#) on page 41:

- [Deploying TAW Application on Oracle Application Server 10g](#) on page 44
- [Deploying CCA Application on Oracle Application Server 10g](#) on page 46
- [Deploying Integration Application on Oracle Application Server 10g](#) on page 46

## Deploying TAW Application on Oracle Application Server 10g

When you deploy TAW application (TAW-general.war) on OAS 10g, you deploy the customer Web client pages and libraries. Complete the steps in the following procedure to deploy TAW-general.war on OAS 10g.

### *To deploy TAW applications on Oracle Application Server 10g*

- 1 From the CCA installation package, copy the TAW-general.war file to OAS 10g. For example:  
C: \CCA\TAW-general . war
- 2 Edit the web.xml file in the TAW-general . war\WEB-INF directory, and then change the values of the context parameters.

The following table describes the parameters.

Context Parameter Name	Parameter Value
applicationPath	The path to the location of TAW directory, for example: C: \bea\user_projects\domains\mydomain\applications\TAW
URLstoragePath	The URL from where clients download files for their session. Typically, it is the URL to the Storage directory under the TAW directory, for example: http://server_name/TAW/Storage
busConnection	Host name or IP address of the server that the TCP/IP Bus is running.

Context Parameter Name	Parameter Value
busConnectionBackup	The host name or IP address of the server that the secondary TCP/IP Bus is running. Leave this blank if you have only one TCP/IP Bus running.
databaseDatasource	The name of the data source you created in <a href="#">Creating a JDBC Data Source on Oracle Application Server 10g on page 43</a> .
databaseUser	The user name of the WebLogic domain user, for example, cc81.
databasePassword	The password of the WebLogic domain user, for example, cc81.
reportServerUrl	http://server_name/TAW
isReportServer	True
logPath	The location where log files are created, for example: C:\bea\user_projects\domains\mydomain\applications\TAW\WEB-INF\logs\ccanywhere.log

- 3 From the Oracle Application Server 10g Instance home page (Applications tab), click Deploy to deploy a new Web application.
- 4 From the Deploy: Select Archive page, select Archive Is Already Present on the server where Application Server Control Is Running, and enter the absolute path to TAW-general.war in the OAS 10g. For example:  
C:\CCA\TAW-general.war  
For the deployment plan, use the default selection.
- 5 From the Deploy: Application attributes page, complete the following fields, and then click Next:
  - Application name: TAW
  - Parent Application: default
  - Bind Web Module to Site: default Web site
  - Context Root: /TAW
- 6 From the Deploy: Deployment settings page, verify that all information is correct, and then click Deploy to deploy CCA TAW application.
- 7 Wait until OAS 10g finishes deploying the TAW Web application.

## Deploying CCA Application on Oracle Application Server 10g

Deploying CCA application (cca-axis2.war) is similar to deploying TAW application.

### To deploy CCA application

- 1 From the installation package, copy the cca-axis2.war file to OAS 10g. For example:

C:\CCA\cca-axis2.war

- 2 Edit the web.xml file in the cca-axis2.war\WEB-INF directory, and change the values of the context parameters to the correct information for your site.

The following table describes the parameters to modify in CCA web.xml.

Context Parameter Name	Parameter Value
applicationPath	The path to the location of CCA directory, for example: C:\bea\user_projects\domains\mydomain\applications\cca
URLstoragePath	The URL from where clients download the files for their session. Typically, it is the URL to the Storage directory under the TAW directory, for example: http://webserver/TAW/Storage
busConnection	The host name or IP address of the server that the TCP/IP Bus is running.
busConnectionBackup	The host name or IP address of the server that the secondary TCP/IP Bus is running. Leave this blank if you have only one TCP/IP Bus running.
databaseDatasource	The name of the data source created in the <a href="#">Creating a JDBC Data Source on Oracle Application Server 10g on page 43</a> .
databaseUser	The user name of the WebLogic domain user, for example, cc81.
databasePassword	The password of the WebLogic domain user, for example, cc81.

- 3 Complete the relevant steps in [Deploying TAW Application on Oracle Application Server 10g on page 44](#) to deploy the cca-axis2.war file.

## Deploying Integration Application on Oracle Application Server 10g

Deploying Integration application (Integration.war) is similar to deploying TAW application. The only difference is that you do not edit the web.xml file. Deploy the Integration.war file by completing the relevant steps in [Deploying TAW Application on Oracle Application Server 10g on page 44](#).

# Process of Setting Up Contact Center Anywhere Web Applications on WebLogic

This topic describes how to set up and deploy CCA Web applications on WebLogic 8.1. The same process can be used for WebLogic 10. It includes information about the following:

- [Creating a New WebLogic Server Domain on page 47](#)
- [Installing WebLogic as a Windows Service on page 48](#)
- [Configuring Contact Center Anywhere Web Applications on WebLogic on page 49](#)
- [Configuring the JDBC Connection Pool on page 50](#)
- [Configuring the JDBC Data Source on page 51](#)

When finished setting up CCA Web applications on WebLogic, you must deploy the following CCA Web applications on WebLogic:

- TAW-general.war
- cca-axis2.war
- Integration.war

For more information about deploying each of these applications, see [Deploying Contact Center Anywhere Web Applications on WebLogic on page 51](#).

## Creating a New WebLogic Server Domain

Before you can deploy Web applications on a WebLogic Web server, you must first create a WebLogic Server domain. Complete the steps in the following procedure to create a new server domain on WebLogic 8.1 SP5. This task is a step in [Process of Setting Up Contact Center Anywhere Web Applications on WebLogic on page 47](#).

**NOTE:** Make sure that Sun JDK 1.4.2\_13 is installed on the Web server.

### *To create a new WebLogic server domain*

- 1 From the Windows Start menu, click Start, BEA WebLogic Platform 8.1, Configuration Wizard.
- 2 From the WebLogic QuickStart page, click Create a new domain configuration.
- 3 From the Create or Extend a Configuration page, select Create a new WebLogic configuration, and then click Next.
- 4 From the Select a Configuration Template page, accept the default templates.
- 5 From the Choose Express or Custom Configuration page, make sure that the Basic WebLogic Server Domain is selected, and then click Next.
- 6 From the Choose Express or Custom Configuration page, make sure that Express is selected, and then click Next.

- 7 From the Configure Administration Username and Password page, set the user name and password for the domain administrator, and then click Next.  
**NOTE:** You can change the user name and password at a later time.
- 8 From the Configure Server Start Mode and Java SDK page, select Production mode as the WebLogic configuration startup mode:
  - a In the Java SDK section, select Other Java SDK, and then click Browse.
  - b From the browser window, choose the location where the JDK 1.4.2\_13 is installed, and then click Next.
- 9 From the Create WebLogic Configuration page, click Create.  
The Creating Configuration dialog box opens.
- 10 After the configuration creation is completed, click Done.
- 11 Start the application by clicking Start, Programs, BEA WebLogic Platform 8.1, User Projects, mydomain, and then Start Server.  
The application prompts you for a user name and password in the command window.

## Installing WebLogic as a Windows Service

This task is a step in [Process of Setting Up Contact Center Anywhere Web Applications on WebLogic on page 47](#).

When installing WebLogic 8.1 on a Windows platform, you can optionally install the WebLogic Server Node Manager as a Windows service. The WebLogic Server Node Manager starts and stops the managed servers in a domain.

After installing the Node Manager as a Windows service, the service automatically starts the next time you reboot. You can also manually start the service from the Windows Services control panel. Follow these steps to install WebLogic as a Windows service.

### *To install WebLogic as a Windows service*

- 1 Edit the InstallService.cmd file.  
Find this file in the BEA home directory \user\_projects\domains\your\_domain\_name, for example:  

```
C:\bea\user_projects\domains\mydomain
```

  - a Delete @rem from the line @rem set MEM\_ARGS=-Xms32m -Xmx200m.
  - b Change the settings similar to the following example for a Web server with 1 gigabyte (GB) of RAM:  

```
-Xms768m -Xmx768m
```

**NOTE:** If you have additional RAM, then you can reserve additional memory for the service.
  - c Set the jdk path before installing the service.



- 2 Open a command-line window (click Start, Run, type CMD, and then click OK).
- 3 From the command-line prompt, use the cd command to navigate to the domain directory, for example:

```
cd c:\bea\user_projects\domains\mydomain
```

- 4 Run the InstallService.cmd followed by the user name and password used when creating the domain in the relevant step in [Creating a New WebLogic Server Domain on page 47](#). For example:

```
InstallService.cmd weblogic 123456
```

where:

- weblogic is the user name
  - 123456 is the password
- 5 Start WebLogic using the Windows Services control panel.  
The name of the service installed is *beasvc\_yourdomainname\_myserver*.

## Configuring Contact Center Anywhere Web Applications on WebLogic

To configure CCA Web applications on WebLogic you must:

- Configure the listening port of WebLogic domain server and create a domain login user.
- Change the listening port of the domain server after creating a WebLogic domain, if needed. By default, use port 7001 when creating a domain.
- Create a domain user. CCA uses the domain user to access all domain resources, such as the connection pool, data source, and so on.

This task is a step in [Process of Setting Up Contact Center Anywhere Web Applications on WebLogic on page 47](#).

### *To configure Contact Center Anywhere Web applications on WebLogic*

- 1 Open the BEA WebLogic Server Administration Console using a Web browser, and log in.

The WebLogic Console URL is: `http://server_name:7001/console`.

**NOTE:** When creating a new domain, 7001 is the default port. If you are using a different port, replace that port in the URL address.

- 2 You can change the HTTP listening port of the domain server:
  - a Go to Servers, myserver, General, and then change Listen Port from 7001 to 80.
  - b Click Apply.
- 3 To deploy CCA Web applications, create a WebLogic user on the domain.

**NOTE:** If you do not want to use a long password for the user, change the password length.

- a** Go to Page Security, Realms, myrealm, Providers, Authentication, Default Authenticator, and then Details.
  - b** Change the minimum password length, for example, change it from 8 to 4.
  - c** Click Apply.
- 4** Create a WebLogic domain user:
  - a** Go to Page Security, Realms, myrealm, and then Users.
  - b** Create a new login user.
  - c** Complete the required information, and then click Apply to save the information.

## Configuring the JDBC Connection Pool

Before deploying CCA Web applications on WebLogic, create a JDBC connection pool for the CCA database as described in the following procedure. This task is a step in [Process of Setting Up Contact Center Anywhere Web Applications on WebLogic on page 47](#).

### *To configure the JDBC connection pool*

- 1** In Services, JDBC, Connection Pools, click the Configure New JDBC Connection Pool link.
- 2** From the Database Type drop-down list, select MS SQL Server.
- 3** From the Database Server drop-down list, select BEA MS SQL Server Driver (Type 4).
- 4** Click Continue.
- 5** From the Define Connection Properties page, enter your database configuration information:
  - a** Name: Remove MyJDBC Connection Pool, and enter the database name.
  - b** Connection Properties:
    - Database Name: The name of the CCA database, for example, cc81.
    - Hostname: The database server name or IP address, for example, support-db.
    - Port: The listening port for the database server. By default, Microsoft SQL Server uses 1433.
    - Database User Name: The name of the user who has access to the database, for example, cc81 (for more information, see parameter %6 in [Creating a New Database on Microsoft SQL Server on page 18](#).)
    - Password: The password of the database user, for example, cc81.
- 6** Click Next.
- 7** From the Test Database Connection page, click Test Driver Configuration.
- 8** Wait for the Connection Successful message to appear, and then click Create and Deploy.
- 9** After creating the Connection Pool, define the connection configuration of the JDBC connection pool:
  - a** Click the Connection Pool that you just created, and then click the Connections tab.

- b** Change the initial Capacity to 25 and the Maximum Capacity to 50.
  - c** Click Show to display the Advanced Options to edit.  
**NOTE:** Scroll down the screen to see the options.
  - d** Set the Test Frequency to 300.
  - e** Select the check box for Test Reserved Connections.
  - f** Set the Connection Creation Retry Frequency to 300.
  - g** Leave the other fields to show the default values.
- 10** Click Apply.

## Configuring the JDBC Data Source

After configuring the JDBC data source, you must restart the WebLogic Service as described in the following procedure. This task is a step in [Process of Setting Up Contact Center Anywhere Web Applications on WebLogic on page 47](#).

### *To configure the JDBC data source*

- 1** In Services, JDBC, Data Sources, click the link for Configure a new JDBC Data Source.
- 2** From the Configure a JDBC Data Source page, enter your database name in both the Name and JNDI Name text boxes.
- 3** From the Connect to Connection Pool page and the Pool Name drop-down list, select the pool name that you created previously.
- 4** Click Continue.
- 5** From the Target the Data Source page, select the data source that you want under Independent Servers, and then click Create.
- 6** Restart the WebLogic Service.

## Deploying Contact Center Anywhere Web Applications on WebLogic

Deploying CCA Web Applications on WebLogic is similar to deploying these applications on OAS 10g. You must deploy the following CCA Web applications on WebLogic when you have completed [Process of Setting Up Contact Center Anywhere Web Applications on WebLogic on page 47](#):

- [Deploying TAW Application on WebLogic on page 52](#)
- [Deploying CCA Application on WebLogic on page 52](#)
- [Deploying the Integration Application on WebLogic on page 53](#)

## Deploying TAW Application on WebLogic

When you deploy TAW application (TAW-general.war) on WebLogic, you deploy the customer Web client pages and libraries. To deploy TAW application on WebLogic, you must copy and extract the TAW-general.war file from the CCA installation package.

### *To deploy TAW application on WebLogic*

- 1 From the CCA installation package, copy the TAW-general.war file to the WebLogic domain applications directory. For example:  

```
C:\bea\user_projects\domains\mydomain\applications
```
- 2 In the applications directory, create a directory called TAW, and extract the TAW-general.war file into this directory.
- 3 Delete the TAW-general.war file.
- 4 Edit the web.xml file to include your specific system information.  
See [Deploying TAW Application on Oracle Application Server 10g on page 44](#) for a list of which parameters to modify.
- 5 Connect to the Web-based WebLogic console ([http://server\\_name/console](http://server_name/console)).
- 6 Click the Deploy a New Web Application Module link in Deployments, Web Application Modules.
- 7 In the Deploy a Web Application Module page, click the Applications directory link.
- 8 From the Select an archive for this Web application module page, select TAW, and then click Target Module.
- 9 From the Review Your Choices and Deploy page, click Deploy.
- 10 Check the log files created to verify that no errors were reported during the deployment.

## Deploying CCA Application on WebLogic

Deploying CCA application (cca-axis2.war) on WebLogic is similar to deploying TAW application.

### *To deploy CCA application on WebLogic*

- 1 From the CCA installation package, copy the cca-axis2.war file to the WebLogic domain applications directory. For example:  

```
C:\bea\user_projects\domains\mydomain\applications
```
- 2 In the applications directory, create a directory called CCA and extract the cca-axis2.war file into this directory.
- 3 Delete the cca-axis2.war file.

- 4 Edit the web.xml file to include your system information.  
See [Deploying CCA Application on Oracle Application Server 10g on page 46](#) for a list of which parameters to modify.
- 5 Connect to the Web-based WebLogic console ([http://server\\_name/console](http://server_name/console)).
- 6 Click the Deploy a new Web Application Module link in Deployments, Web Application Modules.
- 7 In the Deploy a Web Application Module page, select the Applications directory link.
- 8 From the Select an archive for this Web application module page, select cca, and then click Target Module.
- 9 From the Review Your Choices and Deploy page, click Deploy.
- 10 Check the log files created to verify that no errors were reported during the application deployment.

## Deploying the Integration Application on WebLogic

The steps for deploying the Integration application (Integration.war) on WebLogic are similar to those in [Deploying TAW Application on WebLogic on page 52](#).

### *To deploy the integration application on WebLogic*

- 1 From the CCA installation package, copy the integration.war file to the WebLogic domain applications directory. For example:  

```
C:\bea\user_projects\domains\mydomain\applications
```
- 2 In the applications directory, create a directory named Integration, and extract the integration.war file into this directory.
- 3 Delete the integration.war file.
- 4 Set the cca path in the jnlp file.
- 5 Deploy the application by completing the relevant steps in [Deploying TAW Application on WebLogic on page 52](#).



# 6

## Preparing to Upgrade Contact Center Anywhere

This chapter describes the tasks that must be completed before you upgrade your existing Contact Center Anywhere (CCA) application to Version 8.1.2 of the application. It includes the following topics:

- [Required System Information for Contact Center Anywhere 8.1.2 Upgrade on page 55](#)
- [Verifying Available System Space on page 56](#)
- [Backing Up Existing Contact Center Anywhere Components on page 57](#)

### Required System Information for Contact Center Anywhere 8.1.2 Upgrade

Before upgrading from your existing CCA application to CCA Version 8.1.2, identify and record your existing CCA system information and access points. [Table 4](#) describes the information you must record:

Table 4. Required System Information

Task	Instruction
Database Information	<p>If you are running a database upgrade script and configuring the web.xml file during the upgrade procedure, record the following information:</p> <ul style="list-style-type: none"><li>■ Database type. For example, Oracle9i Database, Oracle Database 10g, or Microsoft SQL Server.</li><li>■ Database server hostname.</li><li>■ Username and password of the schema administrator (SA) account. This is required for SQL Server.</li><li>■ Database service name and TNS name. This is required for an Oracle database server.</li><li>■ Database schema name. This is required for an Oracle database server.</li><li>■ Database schema administrator username and password (for an Oracle database server).</li><li>■ CCA database username and password.</li><li>■ Database port number. The default port number for an Oracle database server is 1521. The default port number for Microsoft SQL Server is 1433.</li></ul> <p>If you are only running a database upgrade script during the upgrade procedure, record the schema administrator account name (or SA account for MS SQL Server), the TNS name, and the database port.</p>

Table 4. Required System Information

Task	Instruction
Web Server Information	<p>Record the following information before you begin upgrading the CCA Web application:</p> <ul style="list-style-type: none"> <li>■ Web server hostname.</li> <li>■ Administrator username and password.</li> </ul> <p>For a WebLogic Web server, the default administrator user name is weblogic. The user name for a SunOne server is admin. For Oracle Application Server 10g, it is oc4jadmin.</p> <ul style="list-style-type: none"> <li>■ Path to the location of CCA Web applications. For example, the typical path for the WebLogic Web server is: C: \bea\user_projects\domains\mydomain\applications\</li> </ul>
Application Server Information	<p>Record the following application server information:</p> <ul style="list-style-type: none"> <li>■ Server(s) hostname(s). CCA application servers can be installed and run on one or many hosts.</li> <li>■ CCA database alias, username and password. This information is required to log in to Network Manager and to start or stop CCA application servers.</li> </ul>

## Verifying Available System Space

Before backing up your CCA components and upgrading your CCA application to Version 8.1.2, verify that there is sufficient system space for the backups and for the new CCA installation package on each host server (database server, web server, application server).

The amount of system space needed to perform an upgrade depends on the size of your current system.

### *To calculate the space required to perform an upgrade*

- Add the total size of the backup folders to the size of the new CCA package.

For more information about back up, see [Backing Up Existing Contact Center Anywhere Components on page 57](#).



# Backing Up Existing Contact Center Anywhere Components

Before you perform upgrade tasks, back up all the components of your current CCA system. If you experience a problem when you run your upgraded version of the CCA application, you can revert to your backup files.

Table 5 describes the components that must be backed up before an upgrade.

Table 5. CCA Components That You Must Back Up

CCA Component	Description
Database	For more information, contact your database administrator.
Application Servers	<p>Before backing up application server folders, stop all services running on TCP/IP Bus.</p> <p>Back up the folders that contain CCA server files. These folders are typically found in a folder named ccanywhere. Back up the following folders:</p> <ul style="list-style-type: none"> <li>■ bin</li> <li>■ lib (only on Solaris/Linux)</li> <li>■ prompt</li> <li>■ tmp</li> <li>■ Network Manager</li> </ul> <p><b>NOTE:</b> It is unnecessary to back up the log subfolder.</p>
Web Server	<p>Back up only the folders that contain CCA Web applications. These folders include TAW, CCA, and integration.</p> <p>For example, if using a WebLogic Web server and the application path is as follows:</p> <pre>c:\bea\user_projects\domains\mydomain\applications\</pre> <p>then back up the following folders:</p> <pre>c:\bea\user_projects\domains\mydomain\applications\TAW c:\bea\user_projects\domains\mydomain\applications\CCA c:\bea\user_projects\domains\mydomain\applications\integration</pre> <p><b>NOTE:</b> Stop your Web server before backing up these folders.</p>



# 7

## Upgrading Contact Center Anywhere Server Components

This chapter describes how to upgrade Network Manager and application server files for Contact Center Anywhere (CCA). It includes the following topics:

- [Upgrading a Database for Contact Center Anywhere on page 59](#)
- [Upgrading Network Manager for Contact Center Anywhere on page 62](#)
- [Upgrading Application Server Files for Contact Center Anywhere on page 63](#)
- [Upgrading Contact Center Anywhere Web Applications on page 64](#)

### Upgrading a Database for Contact Center Anywhere

This topic describes how to upgrade and test your database when upgrading Contact Center Anywhere. The Database directory in the CCA installer contains two subdirectories:

- Oracle, for Oracle database server
- SQL Server, for Microsoft SQL Server

These subdirectories contain the directories Automated and Patch. Use the Patch folder to upgrade the existing database. The Automated folder is only used when creating a new database.

This topic describes how to upgrade the following databases:

- Oracle, as described in [Upgrading an Oracle Database for Contact Center Anywhere on page 59](#).
- Microsoft SQL Server as described in [Upgrading a Microsoft SQL Server Database for Contact Center Anywhere on page 61](#).

**NOTE:** Before you start upgrading your database, verify that at least Sun Java JDK 1.4.2\_13 is installed on the host used to run the database scripts.

### Upgrading an Oracle Database for Contact Center Anywhere

Complete the steps in the following procedures to upgrade and test an Oracle database for CCA.

**NOTE:** You can use this procedure to upgrade any Oracle database, for example, Oracle9i Database and Oracle Database 10g.

#### *To upgrade an Oracle database for Contact Center Anywhere*

- 1 Navigate to the following location of your CCA upgrade installer:

```
<CCA_upgrade_installer>\Database\Oracle
```

- 2 Copy the Patch folder to the host used to run database upgrade scripts. For example:

```
C:\<new_CC_application>\database\Oracle\Patch
```

**NOTE:** Do not use spaces in the directory path or the script might fail.

- 3 Edit the UseMe\_upgrade.sql file in the Patch folder using the following guidelines:

**NOTE:** Do not remove the quotation marks (") surrounding parameter values.

- a Replace &1 with the username of the administrator.

This administrator is the owner of all objects in the current database.

- b Replace &2 with the password of the administrator described in [Step a](#).

- c Replace &3 with the name of the database user that the current CCA system uses to access the database.

- d Replace &4 with the password of the user described in [Step c](#).

- e Replace &5 with the database TNS name of the database server.

- f Replace &6 with the host name of the database server.

- g Replace &7 with the database service name (SID).

- h Replace &8 with the listening port of the database server.

By default, Oracle Database 10g server listens on port 1521.

The following example illustrates the content of a script file after editing:

```
-- &1 - Admin User Username
-- &2 - Admin User Password
-- &3 - CCA db User Username
-- &4 - CCA db User Password
-- &5 - database TNS Name
-- &6 - database hostname
-- &7 - Database Service Name
-- &8 - Database Port Number
-- &9 - Build Type
@upgrade.sql 'admincc81' 'admincc81' 'cc81' 'cc81' 'oracle' 'support-db' 'cc81'
1521 0
```

- 4 Open a command-line window.

**NOTE:** To open a command-line window: click Start, Run, type CMD, and then click OK.

- 5 Navigate to the Patch folder using the cd command.

- 6 At the command-line prompt, type the following to open the SQL Plus console:

```
sqlplus /nolog
```

- 7 Run the @UseMe\_upgrade.sql ; script in the SQL Plus console.

- 8 Monitor the SQL Plus console for any errors while the script is running.

- 9 Review the new log files when the script has completed.  
The log files indicate if errors occurred during the database upgrade process.

## Upgrading a Microsoft SQL Server Database for Contact Center Anywhere

Complete the steps in the following procedures to upgrade and test a Microsoft SQL Server database for CCA.

**NOTE:** You can also upgrade any Microsoft SQL Server database using this procedure, including Microsoft SQL Server 2000 and 2005.

### *To upgrade a Microsoft SQL Server database for Contact Center Anywhere*

- 1 Navigate to the following location of your CCA upgrade installer:  
`<CCA_upgrade_installer>\Database\SQLServer`
- 2 Copy the Patch folder to the host running database upgrade scripts. For example:  
`C:\<new_CC_application>\database\SQLServer\Patch`  
**NOTE:** You cannot use spaces in the directory path or the script might fail.
- 3 Edit the runmePatch.bat batch file using the following guidelines:
  - a Replace %1 with the host name of the database server.
  - b Replace %2 with the sa username. By default, it is sa.
  - c Replace %3 with the password for the sa user. For example, see [Step b](#).
  - d Replace %4 with the name of the CCA database that you are upgrading.
  - e Replace %5 with the name of the user who has access to the CCA database that you are upgrading.
  - f Replace %6 with the password of the user described in [Step e](#).
  - g Replace %7 with the port number used by Microsoft SQL Server to listen for new connections.  
By default, Microsoft SQL Server listens in on the port 1433.

The following example illustrates the content of a batch file after editing:

```
rem %1 <The database server name>
rem %2 <The admin users - Normally sa>
rem %3 <The password for the admin user>
rem %4 <The database name>
rem %5 <CCA db username>
rem %6 <CCA dbpassword>
rem %7 <Database Port Number>
rem %8 <flag i sUpgrade>
```

```
echo off
CHCP 437
java -jar DatabasePopulation.jar -hostname=dbserver -username=cc81 -
password=cc81 -languageOption=1 -databasePortNumber=1433 -databaseName=cc81 -
saUsername=sa -saPassword=sapassword -isUpgrade=true 0
echo on
```

- 4 Save your changes.
- 5 Navigate to the Patch folder using the cd command.
- 6 Open a command-line window.
- 7 Run the runmePatch.bat batch file.
- 8 Monitor the console for any error while the batch file is running.
- 9 Review the created log files when the batch file has completed.

The log files indicate if errors occurred during the database upgrading process.

**NOTE:** If the CCA system was or will be partitioned, enable the partition flag in the database. For more information about partitions, see [Enabling the Partition Feature on page 72](#).

Complete the steps in the following procedure to determine if the database upgraded successfully.

#### *To test the database upgrade*

- 1 Log in as an administrator to the upgraded database.
- 2 Select the Versions table in your database.
- 3 Verify if a row exists in your database that corresponds to the new upgrade version. If a row exists, the upgrade patches were installed correctly.

## Upgrading Network Manager for Contact Center Anywhere

This topic describes the tasks required to successfully upgrade and test Network Manager. Since you use Network Manager to configure, start, and stop CCA resources, you must also upgrade it to successfully function with the 8.1.2 binaries of CCA.

#### *To upgrade Network Manager for Contact Center Anywhere*

- 1 Navigate to the location of your CCA upgrade installer:

```
<CCA_upgrade_installer>
```

- 2 Copy the Network Manager folder to the host used to run Network Manager. For example:

```
C: \<new_CC_application>\Network Manager
```

- 3 Run the NetworkManager.exe file.

- 4 Log in using the ODBC alias, database username, and the database password.

You must be able to log in successfully.

Complete the steps in the following procedure to determine if Network Manager upgraded successfully.

#### *To test Network Manager upgrade*

- 1 Make sure your TCP/IP Bus is running.
- 2 Start and stop the installed application servers on your system to determine if the upgraded Network Manager is running correctly.

## Upgrading Application Server Files for Contact Center Anywhere

This topic describes how to upgrade and test the application server files when upgrading to Version 8.1.2 of CCA.

#### *To upgrade Application Server files for Contact Center Anywhere*

- 1 Stop all server resources using Network Manager.  
If resources are running on Windows, open the Task Manager and verify that *all* server resources have stopped.  
If resources are running on Solaris or Linux, check using the `ps -eaf` command. If necessary, stop any remaining server resources manually, using the `kill -9 <pid>` command.
- 2 Stop the SNMP service, if necessary.
- 3 Stop the TCP/IP Bus service.
- 4 Navigate to the location of your CCA upgrade installer:  
`<CCA_upgrade_installer>`
- 5 Copy and paste the following folders to all hosts with CCA application server installations:
  - bin
  - prompt**NOTE:** If you are running your system on Solaris or Linux, copy the lib folder.
- 6 Delete the contents of the log directory.  
**NOTE:** Do not modify or delete any file in the tmp directory.
- 7 Restart the SNMP service (if any).
- 8 Restart the TCP/IP Bus service.
- 9 Restart all application servers using Network Manager.

Complete the steps in the following procedure to determine if the new application server files upgraded successfully.

### *To test application server files upgrade*

- 1 Verify that you can successfully start all application servers.
- 2 Call a valid project number.  
If this project correctly routes to a workgroup, the ACD introductory recording is played.

## Upgrading Contact Center Anywhere Web Applications

This topic describes the following tasks that must be performed to upgrade the CCA Web applications on WebLogic 8.1 SP5, and Oracle Application Server 10g.

**NOTE:** The process is similar if upgrading CCA Web applications on WebLogic 10.

- [Upgrading TAW Application on page 64](#)
- [Upgrading CCA Application on page 66](#)
- [Upgrading Integration Application on page 68](#)

**NOTE:** Make sure that SUN JDK 1.4.2\_13 is installed on all of your Web servers and that SUN JRE 1.5.0\_10, JRE 5.0 update 10, or JRE 1.6.x is installed on the client PC. Check your current version of the JDK/JRE installation by navigating to Control Panel, Add or Remove Programs. For further information, see the Sun Web site.

## Upgrading TAW Application

TAW is the legacy client of the Administration Manager application. This topic describes how to upgrade TAW application and how to test the upgrade.

### *To upgrade TAW application*

- 1 Navigate to the location of your CCA upgrade installer:  
`<CCA_upgrade_installer>`
- 2 Unzip the TAW-General.war file.
- 3 Open the TAW-General .war\WEB-INF\web.xml file with a text editor.



4 Change the default parameter names as described in the following table:

Context Parameter Name	Instructions
applicationPath	<p>Enter the path to the location of the TAW directory. For example:</p> <ul style="list-style-type: none"> <li>■ On a WebLogic Web server: C:\bea\user_projects\domains\mydomain\applications\TAW</li> <li>■ On an Oracle Application Server: /home/oracle/product/10.1.3.1/Oracl eAS_1/j 2ee/home/appl i cati ons/TAW/TAW</li> </ul>
URLstoragePath	<p>Enter the URL that clients use to download files from their session. This is usually the URL to the Storage directory under the TAW directory. For example:</p> <p>http://&lt;server_name&gt;/TAW/Storage</p>
busConnection	Enter the host name or IP address of the server run by the TCP/IP Bus.
busConnectionBackup	Enter the host name or IP address of the server run by the secondary TCP/IP Bus. This is optional if only one TCP/IP Bus is running.
databasePlatform	Enter 'sqlserver' for a Microsoft SQL database. Enter 'oracle' for an Oracle database.
databaseDatasource	Enter the name of the data source you created in <a href="#">Upgrading a Database for Contact Center Anywhere on page 59</a> .
databaseUser	Enter the user name of the CCA database user. For example, cc812.
databasePassword	Enter the password of the CCA database user. For example, cc81.
debugLogFile	<p>Enter the path to the log file. For example:</p> <p>\WEB-INF\logs\Call CenterAnywhere.log</p>
debugTracelevel	<p>Supply the level of detail to write to the log file. Valid values are:</p> <ul style="list-style-type: none"> <li>■ DEBUG (provides most detailed and lengthiest log files)</li> <li>■ INFO</li> <li>■ WARN</li> <li>■ ERROR</li> <li>■ FATAL (provides the least detailed log files)</li> </ul>

Context Parameter Name	Instructions
reportServerUrl	Enter the URL for the TAW directory. For example:  http://<server_name>:<port>/TAW
isReportServer	Change this parameter to 'true' if the Web server is to handle reports. Change this parameter to 'false' if the Web server is not designated to handle reports.
logPath	Enter the location where log files are created on the WebLogic Web server. For example:  C:\bea\user_projects\domains\mydomain\applications\TAW\WEB-INF\logs\ccanywhere.log
myResourceid	Leave the default value of the parameter.
ProxyContactHandler	Change this parameter to the following:  com.taw.web.contact.was.ProxyContactHandler

- 5 Save your changes to the TAW-General.war\WEB-INF\web.xml file.
- 6 Compress the TAW-General.war file again.
- 7 Log in to your Web server administration console.  
**NOTE:** The default administrator user name of OAS 10g is oc4jadmin. For WebLogic, the default administrator user name is weblogic.
- 8 In the administration console, delete the previous installation of TAW application.
- 9 Delete the directory for TAW application, if it still exists.  
**NOTE:** This is usually located in C:\bea\user\_projects\domains\mydomain\applications\TAW.
- 10 Deploy the new TAW application using the new TAW-General.war file.  
**NOTE:** The name is case sensitive.

Complete the steps in the following procedure to determine if TAW application upgraded successfully.

### To test TAW application upgrade

- 1 Launch TAW application.  
The login page appears.
- 2 Log in to the NetAdmin account.

## Upgrading CCA Application

CCA application is the Web services and the new Java-based client. This topic describes how to upgrade and test CCA application.

**To upgrade CCA application**

- 1 Navigate to the location of your CCA upgrade installer:

`<CCA_upgrade_installer>`

- 2 Unzip the cca-axis2.war file.
- 3 Open the cca-axis2.war\WEB-INF\web.xml file with a text editor.
- 4 Change the default parameter names.

The following table describes the parameters.

Context Parameter Name	Parameter Value
applicationPath	Enter the path to the location of the CCA directory. For example: <ul style="list-style-type: none"> <li>■ On a WebLogic web server: C: \bea\user_projects\domains\mydomain\applications\cca</li> <li>■ On an Oracle Application Server: /home/oracle/product/10.1.3.1/Oracl eAS_1/j 2ee/home\ppl i cati ons/cca/cca</li> </ul>
URLstoragePath	Enter the URL that clients use to download files from a session. This is usually the URL to the Storage directory under the TAW directory. For example:  http://server_name/cca/Storage
busConnection	Enter the host name or IP address of the server run by the TCP/IP Bus.
busConnectionBackup	Enter the host name or IP address of the server run by the secondary TCP/IP Bus. This is optional if only one TCP/IP Bus is running.
databaseDatasource	Enter the name of the data source you created in <a href="#">Upgrading a Database for Contact Center Anywhere on page 59</a> .
databaseSchema	Enter the schema name of CCA database. This is only required for an Oracle database servers.
databaseUser	Enter the user name of the CCA database user. For example, cc81.
databasePassword	Enter the password of the CCA database user. For example, cc81.
logPath	Enter the location where log files are created on the WebLogic Web server. For example:  C: \bea\user_projects\domains\mydomain\appl i cati ons\cca\WEB-I NF\l ogs\ccanywhere. l og

- 5 Save your changes to the `cca-axis2.war\WEB-INF\web.xml` file.
  - 6 Compress the `cca-axis2.war` file again.
  - 7 Log in to your Web server administration console.
  - 8 In the administration console, remove the previous installation of CCA application.
  - 9 Remove the previous deployment of CCA application, and then delete the directory for CCA application if it still exists.  
**NOTE:** This is usually located in `C:\bea\user_projects\domains\mydomain\applications\CCA`.
  - 10 Deploy the new CCA application using the new `cca-axis2.war` file.
- Complete the steps in the following procedure to determine if CCA application upgraded successfully.

### **To test CCA application upgrade**

- 1 Launch CCA application.
- 2 Log in as an agent or as a supervisor using the upgraded client.  
**TIP:** If you cannot log in, delete the CCA cache and Java Webstart. The CCA cache is located in *<User Document directory>\CCA8.0*, for example, *C:\Documents and Settings\<user>\CCA8.0*. The cache contains system and user data used by the application. You can delete the CCA cache directory directly. Deleting the cache causes the data to download again on access or log in. Delete Java Webstart by navigating to the Java control panel, opening Java, and deleting all files. Deleting the `javaws` file results in the latest version of `javaws` downloading again when CCA is launched again.
- 3 Make an outbound call.

## Upgrading Integration Application

This topic describes how to upgrade and test Integration application. It includes how to backup and remove Supervision Manager application, and then delete it.

### **To upgrade Integration application**

- 1 Navigate to the location of your CCA upgrade installer:  
`<CCA_upgrade_installer>`
- 2 Launch `connector.jnlp`.
- 3 Change the `jnlp` file to point to the CCA installation:  
`<property name="taw.cca.server.url"  
value="http://<hostname>:7777/cca" />`
- 4 In the administration console, remove the previous installation of Integration application.

- 5 Remove the previous deployment of Integration application, and then delete the directory for Integration application if it still exists.

**NOTE:** This is usually located in  
C:\bea\user\_projects\domains\mydomain\applications\integration.

- 6 Deploy the CCA Integration application using the new integration.war file.

**NOTE:** In the Web server file path location, integration must be spelled in lowercase.

Complete the steps in the following procedure to determine if Integration application upgraded successfully.

### *To test Integration application upgrade*

- 1 Launch Integration application.
- 2 Attempt to log in to CCA Integration application as a supervisor.



# 8

## Getting Started with Contact Center Anywhere

After you have configured your database, installed Contact Center Anywhere (CCA) server components, and configured and deployed CCA Web applications, launch Contact Center Anywhere to verify that it is working correctly. This chapter describes how to launch CCA and verify the CCA installation. It includes the following topics:

- [Logging In to Administration Manager on page 71](#)
- [Logging In to the Integrated Client on page 72](#)
- [Enabling the Partition Feature on page 72](#)
- [Testing Types of Interactions on page 73](#)

### Logging In to Administration Manager

Administration Manager is a browser-based software program that allows users to set up, configure, and maintain a CCA multimedia call center. To log in to Administration Manager, complete the steps in the following procedure.

#### *To log in to Administration Manager*

- 1 Open the following URL in a Web browser:

`http://server_name/TAW`

where *server\_name* is the host name of the Web server.

- 2 Log in as a network administrator, using the default administrator account.

This account is created when installing CCA. The default user name and password for this user (default administrator account) is `netadmin` and `1234`.

- 3 Make sure that you can log in without any error messages.

If you cannot log in, review the log files in `TAW/WEB-INF/logs/ccanywhere.log`, and locate any errors that might have occurred during the CCA Web applications deployment.

- 4 Create an agent.

For more information about configuring an agent, see *Contact Center Anywhere Administration Manager Guide*.

## Logging In to the Integrated Client

The Integrated Client is an application for contact center agents. With the Integrated Client, agents can communicate with customers in different ways, including by phone, email, and the Web. Agents can work from any computer that has access to the Internet. To log in to the Integrated Client, complete the steps in the following procedure.

### *To log in to the Integrated Client*

- 1 Enter the following URL in a Web browser:  
`http://server_name/cca`  
 where *server\_name* is the name of your server.
- 2 Click the link that appears in the launch page.
- 3 On the login page, complete the following fields, and then click Login.
  - Company Alias: Type the alias of the company.
  - Username: Type the agent's user name.
  - Password: Type the agent's password.
  - Language: Verify or specify the language.
- 4 If you receive an error message during the log in, check the log files in CCA/WEB-INFO/ccanywhere. Log to find information about the error during the deployment.

## Enabling the Partition Feature

Your administrator can enable *partitions* to segment your call center operations into smaller, more manageable units. A *unit* is typically a set of projects and workgroups, and other information related to them. Partitioning has two purposes:

- Functionality
- Security

For example, when users are assigned to a specific partition, those users can only log in and work in the partition to which they are assigned. Supervisors can only monitor and supervise the partitions to which they belong. Because the partition feature is disabled by default, enable it by completing the steps in the following procedure.

### *To enable the partition feature*

- 1 Run the following SQL query:  

```
Update systempackage set packageconfigurable = 1 where
resourcebundlekey='partitions';
```

 Then enter the following:  

```
commit;
```



- 2 After running the query, enable the partition in Administration Manager as follows:
  - a Log in to Administration Manager using a network administrator account.
  - b Click Go to, and select Package Creator from the drop-down list.
  - c Edit the package that your company is using.  
**NOTE:** The default is System Package.
  - d When the Partitions option appears on the Package Configuration page, select the check box for this option, and then click OK.
- 3 Log out of Administration Manager, and then log in again to enable the partition feature.

## Testing Types of Interactions

Agents can communicate with customers using many channels such as telephone calls, email, chat, and so on. After installing Oracle's Contact Center Anywhere, make sure that these different channels work correctly by testing interaction types as described in the following procedure.

**NOTE:** For information about how these channels work, see *Contact Center Anywhere Administration Manager Guide* and *Contact Center Anywhere Interaction Manager Guide*.

### *To test interaction types*

- 1 Log in to Administration Manager.  
For more information about Administration Manager log in, see [Logging In to Administration Manager on page 71](#).
- 2 Create a call, chat, and email project.  
For more information about creating each of these tasks, see *Contact Center Anywhere Administration Manager Guide*.
- 3 Log in to the Integrated Client as an agent.  
For more information about Integration Client log in, see [Logging In to the Integrated Client on page 72](#).
- 4 Make sure the agent's status is Available, make an inbound call to CCA, and verify that the agent can accept the call.
- 5 Verify that the agent can connect to an outbound number.
- 6 Send an email interaction, and verify that the agent can receive the email.
- 7 Send a chat request to CCA, and verify that the agent can chat with the customer.



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