



Installation Guide for Cisco Unified Call Services, Universal Edition and Unified Call Studio

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Installation Guide for Cisco Unified Call Services, Universal Edition and Unified Call Studio
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About This Document

This document describes how to install, configure and run Cisco Unified Call Services, Universal Edition and Cisco Unified Call Studio. It contains system and software requirements, including but not limited to Java versions and Java application servers supported as well as detailed installation procedures for specific application servers.

Audience

This document is intended for system administrators and voice application developers installing Universal Edition.

Related Documentation

- **Cisco Unified Call Studio Online Help.** Information describing the functionality of Cisco Unified Call Studio including creating projects, using the Call Studio environment and deploying applications to Cisco Unified Call Services, Universal Edition is available in electronic form directly within Call Studio.
- **User Guide for Cisco Unified Call Services, Universal Edition and Unified Call Studio.** This document provides an introduction to Universal Edition software though it focuses on describing all aspects of Call Services.
- **Programming Guide for Cisco Unified Call Services, Universal Edition and Unified Call Studio.** This document provides information on how to build components that run on Call Services.
- **Element Specifications for Cisco Unified Call Services, Universal Edition and Unified Call Studio.** This document describes in detail the functionality and configuration options for all Universal Edition elements included with the software.
- **Say It Smart Specifications for Cisco Unified Call Services, Universal Edition and Unified Call Studio.** This document describes in detail the functionality and configuration options for all Universal Edition Say It Smart plug-ins included with the software.
- **Javadocs.** Javadocs are a group of HTML pages fully describing the Java application programming interfaces (APIs) to Universal Edition. Developers use Javadocs in conjunction with the Programming Guide for Cisco Unified Call Services, Universal Edition and Unified Call Studio to understand how to build custom components that run on Call Services and Call Studio.

System Requirements

This section lists 3rd party software that is required in order to install and run the various components that make up Universal Edition. This software must be obtained separately.

Cisco Unified Call Studio

The only requirement to run Call Studio is Microsoft Windows XP or Microsoft Windows Vista. Everything Call Studio requires is included in the installation.

Call Studio version: 6.0(1)

Cisco Unified Call Services, Universal Edition

Call Services is certified to run on various operating systems, application servers, and Java versions.

Call Services version: 6.0(1)

Operating System

Call Services is certified to run on the following operating systems:

- Microsoft Windows 2003 Server
- Red Hat Enterprise Linux 4
- Sun Solaris 10
- IBM AIX 5L V5.3

Note that each operating system has its own list of certified application servers.

Java

Sun's Java 2 Standard Edition (J2SE) **version 1.5.0_12 or higher** (within the 1.5.0_x family) is required to run Call Services.

- The latest Java J2SE version 5 release can be obtained from:

<http://java.sun.com/j2se/1.5.0/download.jsp>

Note: Custom components compiled under Java 1.4 are expected to run on Java 5 without the need for recompilation. However, it is the user's responsibility to review the list of Java 5 changes that may affect backwards-compatibility (<http://java.sun.com/j2se/1.5.0/compatibility.html>) and make any required updates.

Application Server

Call Services is certified to run on the following application server / operating system combinations:

- **Microsoft Windows 2003 Server**
 - Apache Jakarta Tomcat version 5.5
 - BEA WebLogic 9.2
 - IBM WebSphere 6.1
 - WebSphere Application Server Feature Pack for Web Services 6.1.0.9 (or higher) must be applied prior to installing Call Services.
- **Redhat Enterprise Linux 4**
 - Apache Jakarta Tomcat version 5.5
- **Solaris 10**
 - BEA WebLogic 9.2
- **IBM AIX 5L V5.3**
 - IBM WebSphere 6.1
 - WebSphere Application Server Feature Pack for Web Services 6.1.0.9 (or higher) must be applied prior to installing Call Services.

Apache Jakarta Tomcat can be obtained from the Apache Jakarta project website at:

<http://archive.apache.org/dist/tomcat/tomcat-5/archive/v5.5.15/bin/> – version 5.5.15

Information on IBM WebSphere is available at:

<http://www.ibm.com/websphere>

Information on BEA WebLogic is available at:

<http://www.bea.com/>

Database (optional)

A database is required only if one or more applications running on Call Services uses the User Management system. The two databases supported by the User Management system are:

- MySQL (<http://www.mysql.org/downloads/index.html>)
- Microsoft SQLServer (<http://www.microsoft.com/sql/evaluation/trial/>)

In order enable database access on your application server, a compatible JDBC driver must be installed. These drivers, typically packaged as JAR files, should be placed in a directory accessible to the application server classpath (on Tomcat, for example, in `common/lib`). Additionally, Call Services communicates with the database using JNDI naming and the application server must be configured to refer to this JNDI name accordingly. Please refer to the application server documentation on how to set up JNDI naming for use by web applications.

Installation

Call Services Installation

This section describes the process of installing Call Services.

Prerequisites

- Make sure that all the requirements described in the section entitled System Requirements are met for Call Services.
- The software should be installed by the user that is expected to run Call Services. For example, if Call Services is expected to run under the user “root”, the installer must be run under “root” as well. This is especially important on Windows when the application server is installed as a service.

Installation

- Step 1 Run the Universal Edition installer appropriate for your operating system:
Windows: setup.exe
Linux: setup.bin
Solaris: setup.bin
AIX: setup.bin
- Step 2 At the Introduction screen, click **Next**.
- Step 3 On the next screen, choose the directory into which Call Services should be installed, or leave the default. The directory can be changed by manually editing the path or by clicking **Choose....** Then, click **Next**.
- Step 4 On the Select Application Server screen, choose your application server from the drop-down menu provided. Then, click **Next**.
- Step 5 On the Select Web Applications Directory screen, the installer will ask for the location of the web applications directory of your application server. The installer will try to obtain this path from the operating system or, failing that, set it to the default installation directory for the chosen application server. The directory can be changed by manually editing the path or by clicking **Choose....** If the target application server requires deployment of web application via a web administration tool, choose a temporary directory. The installer will copy a file named CallServices.war to this location. When done with this screen, click **Next**.
- Step 6 On the Pre-Installation Summary screen, an overview of your selections so far is displayed. Ensure that all listed options are correct, and then click **Install** to initiate the installation.
- Step 7 Once installation is complete, click **Done** to exit the installer.

Step 8 Please refer to the Post Installation section for instructions on what to do next.

NOTE: Call Services requires the use of an environment variable that is created by the installer. On Linux/Solaris/AIX, it is recommended to log off then log back on again to allow the environment variable to take effect.

Call Studio Installation (Windows Only)

This section describes the process of installing Call Studio.

Prerequisites

- Call Studio must be installed on a supported Windows operating system.

Installation

- Step 1 Launch the Cisco Unified Call Studio installer with the filename `setup.exe`.
- Step 2 At the welcome screen, click **Next**.
- Step 3 At the copyright screen, review the copyrights and then click **Next**.
- Step 4 At the license agreement screen, review the license terms and select “**I accept the terms of the license agreement.**” to accept them. Then, click **Next**.
- Step 5 After agreeing to the license terms, the installer asks for the desired installation type. Select “**Cisco Unified Call Studio for Call Services Universal Edition**”.
- Step 6 You are next asked to provide the installation folder into which Call Studio should be installed. The default location is `C:\Cisco\CallStudio`. The installation folder can be changed by manually editing the path or clicking on the **Change...** button. This directory will be referred to in this guide as the `INSTALLATION_PATH`. Once chosen, click **Next**.
- Step 7 The next screen confirms the version of Cisco Unified Call Studio to install. Review your selection carefully before selecting **Install**. The installation of Cisco Unified Call Studio will begin.
- Step 8 Click **Finish** to complete the installation.
- Step 9 Please refer to the Post Installation section for instructions on what to do next.

Post Installation

Congratulations on installing Universal Edition software! There are still some steps that need to be followed to finish off the installation and prepare the software for use. This section describes those final steps.

If you have upgraded from a previous Universal Edition software version, please refer to the "Upgrading from a Previous Universal Edition Software Install" section for important voice application upgrade steps and backwards-compatibility information.

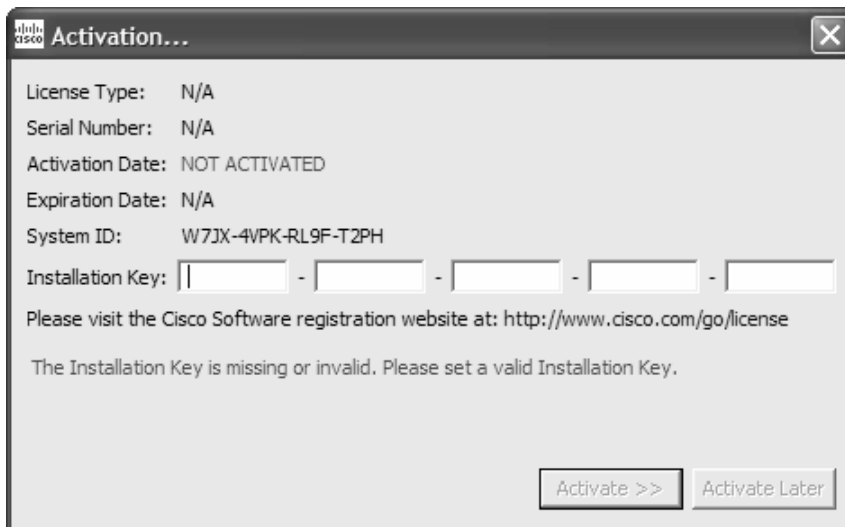
Licensing

The steps below describe how to license Universal Edition software.

NOTE: If you have an evaluation or Not-For-Resale (NFR) license, skip to the Not-For-Resale and Evaluation Licenses section later in this document. The steps to apply those license types differ from those listed below.

Call Studio Software Activation

Step 1 When Call Studio is started for the first time, it displays an "Activation..." dialog:



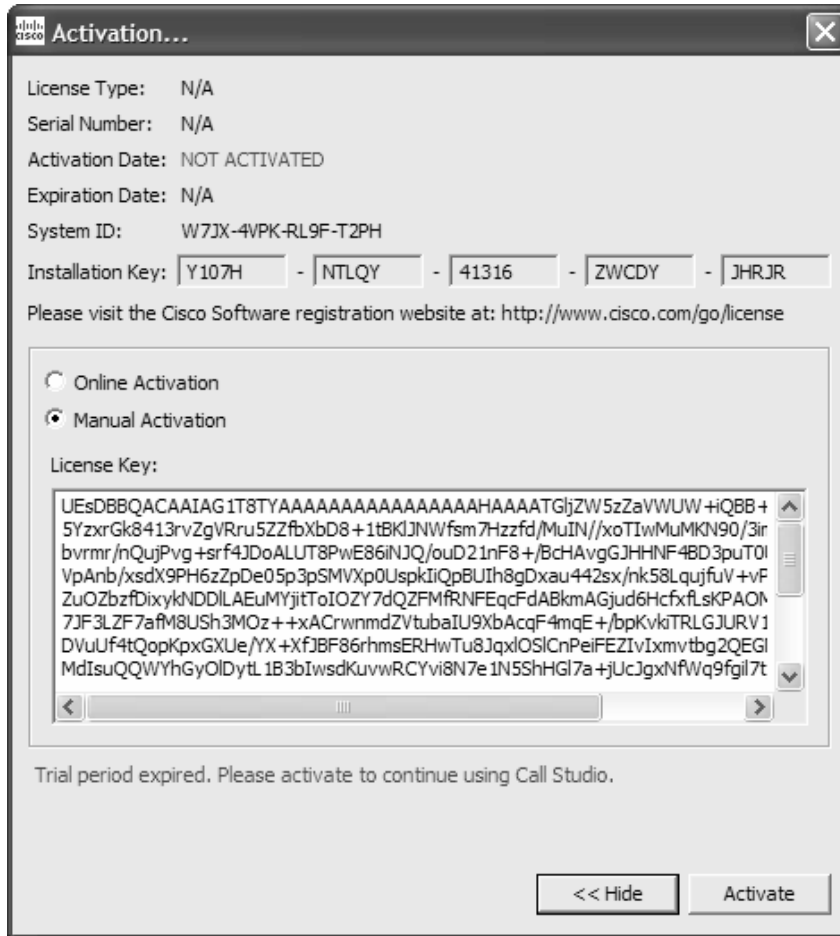
Step 2 Open the license text file that should be applied to this installation; if needed, first visit <http://www.cisco.com/go/license> to obtain one. The installation key is the first piece of information found in this file, after the label "InstallationKey:" (see highlighted section of image below). Ensure that the installation key is in the format XXXXX-XXXXX-XXXXX-XXXXX-XXXXX (5 groups of 5 characters). Other formats are for other products.



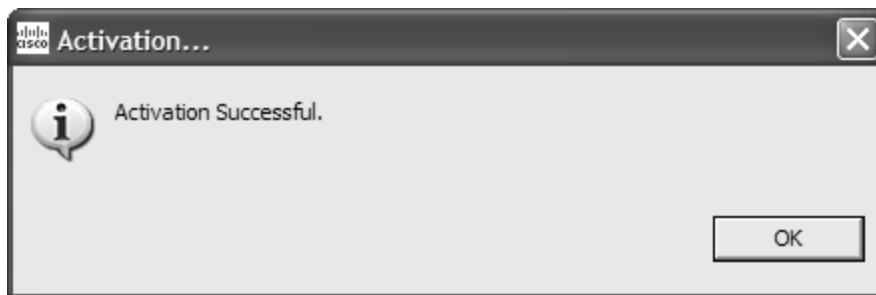
Step 3 The remaining information in the license text file is the license key text. The license key text is composed of all characters after the label “LicenseKey:” (see highlighted section of image below).



- Step 4 Enter the installation key (from step 2) into the matching fields in the “Activation...” dialog.
- Step 5 Click **Activate >>**.
- Step 6 Choose the **Manual Activation** radio button.
- Step 7 Paste the license key text (from step 3) into the “License Key:” text area. The dialog should now resemble the image below.



Step 8 Click the “Activate” button, and the “Activation Successful” notification should be displayed. Click “OK” and Call Studio will continue loading. It is now licensed.



Call Services Software Activation

Each time Call Services is started without an active license (i.e., license is missing, invalid, or expired) it will log a message to the application server console and startup log that indicates that it needs to be activated. However, an unlicensed installation of Call Services can still be used

with up to two simultaneous sessions for evaluation purposes. To utilize more simultaneous sessions, it must be activated with a valid license.

The Cisco Unified Call Services, Universal Edition Software Activation Console can be accessed by visiting the following URL in a web browser while Call Services is running:

`http://IP:PORT/CallServices/Licensing`

When the console appears, you will either be asked to login with existing credentials or setup a username and password if it is your first visit. The next screen is an introduction to how the Software Activation Console works; click **Next** when you are done reading this.

You will then be prompted to enter your installation key and be given the option of either automatic or manual activation. For all production licenses, choose manual activation. Automatic activation is used for certain non-production licenses; refer to the Not-For-Resale and Evaluation Licenses section for information about this option.

For manual activation, you are asked on the next screen to provide a license key. A license key can be requested from the licensing website <http://www.cisco.com/go/license>.

For an example of what a license key looks like, please refer to steps 2 and 3 of Call Studio Software Activation; the Call Services license is very similar to the Call Studio license shown there. The main difference is that the Call Services installation key is divided into the format `XXXXXXXX-XXXXX-XXXXX-XXXXXXXX`.

Once you have entered the license key into the Software Activation Console, click **Activate**. Your software will be activated. Restart Call Services when prompted to do so to complete the activation process.

Not-For-Resale and Evaluation Licenses

Similar to production licenses, Not-For-Resale (NFR) and evaluation licenses are delivered in a text file. However, instead of containing an installation key and its matching license key, the file contains two installation keys: one for Call Studio and one for Call Services. It contains no license key; activation is performed online.

To apply an NFR or evaluation license, follow the steps in the preceding two sections, *with the following differences*:

- An active internet connection is required to license the software. If you are behind a proxy, you must configure Call Studio and Call Services to access the internet via the proxy.
 - To set a proxy for Call Studio:
 - 1) Exit Call Studio if it is running.

- 2) Edit startStudio.cmd in Call Studio's installation directory, and specify the following JVM options at the *end* of the existing command (replacing <host> and <port> with the desired values):

```
-vmargs -Dhttp.proxyHost=<host> -Dhttp.proxyPort=<port>
```

- 3) Start Call Studio.

- To set a proxy for Call Services, configure your application server to use a proxy for outgoing communication (refer to your application server documentation, as this process varies). Depending on your application server, you may be able to use the `http.proxyHost` and `http.proxyPort` JVM properties, much like the Call Studio steps above.
- Only enter installation keys, not license keys (since none are available).
- Instead of **Manual Activation**, choose **Online Activation** (Call Studio) or **Automatic Activation** (Call Services).
 - The software will contact a licensing server and automatically activate your software, using the provided installation key.
 - For Call Services, you will be prompted to specify how many max simultaneous sessions (i.e., ports) you would like the server to use. Choose any value up to what your installation key was issued to support. A single installation key's sessions may be spread across multiple servers (e.g., a 100 session key may be used for 40 sessions on one server, and 60 on another).

Continuing Install - Application Server Administration Consoles

For some supported application servers, the installation of Call Services must be completed by deploying the Call Services web application and setting up a reference to the Audium Home directory, either as an environment variable or other means via the vendor-specific administration console. In these cases, refer to the target application server documentation for details on web application deployment through the provided administration tools.

Note that any supplemental installation instructions should be followed after executing the installation procedures described in this document.

Ensuring Proper Audium Home Setup for Call Services

Note that installations involving Call Studio only (e.g., developer machines) do not require any additional work for proper configuration.

Call Services requires the use of a directory on the local machine's file system referred to as "Audium Home" in which it will look for license files, access application files and store logs. The installer will have created this directory in a user-controlled location. Call Services needs to know the location of this directory in order to function. There are multiple mechanisms by which this information can be conveyed, and the administrator can choose the preferred method. These

mechanisms are listed below in order of precedence. If one is not defined, Call Services will look for the next method in the list. If none are defined, an error will appear in the application server console on startup.

Call Services Web Application Initial Parameter

The location of Audium Home can be defined as an initial parameter in the Call Services web application archive `CallServices.war` added to the application server by the installer. This is done by editing the `web.xml` file found in the `WEB-INF` directory of the web application and adding an initial parameter named “AUDIUM_HOME” with its value pointing to the Audium Home directory. The following excerpt shows how this would look in the `web.xml` file (the added lines are shown in bold):

```
<servlet>
  <servlet-name>Server</servlet-name>
  <servlet-class>com.audium.server.controller.Controller</servlet-class>
  <init-param>
    <param-name>AUDIUM_HOME</param-name>
    <param-value>INSTALLATION_PATH\CallServices</param-value>
  </init-param>
  <load-on-startup>0</load-on-startup>
</servlet>
```

JVM System Property

The location of Audium Home can be defined as a Java Virtual Machine system property named “Audium.Home” with its value pointing to the Audium Home directory. Some application servers provide a mechanism to set a system property on startup. It must be set *before* the Call Services web application is launched.

Environment Variable

Call Services will look for an environment variable with the name “AUDIUM_HOME” to determine the location of the Audium Home directory. This method is the preferred method for conveying the location of the Audium Home directory. When installing Call Services with the installer, it will automatically create the AUDIUM_HOME environment variable.

On Linux/Solaris/AIX operating systems, make sure that the AUDIUM_HOME environment variable was set up correctly in the profile of the user that will be running Call Services. It is also suggested that the user who will run Call Services log off and log in for these changes to take effect on those systems.

Voice Browser Setup

The voice browser being used must be configured to access Call Services when a phone call is received. This usually involves configuring the voice browser with a URL pointing to Call Services to access once a call is received on a specific number. The format for the URL is:

`http://[HOST][:PORT]/CallServices/Server?application=[APPLICATION]`

where:

- **HOST** is the host name of the machine on which Call Services is installed.
- **PORT** is the port the application server is configured to listen on.
- **APPLICATION** is the name of the application to call into, as it appears in the Navigator view in Call Studio.

Updating

Refreshing an Existing Install

If the system already contains an installation of Cisco Unified Call Services, Universal Edition or Cisco Unified Call Studio, the respective installer can be used to re-install the same component. To do this, choose **Repair** from the installer's welcome screen.

Custom files added after installation such as license files, applications, logs and custom Java code will not be deleted. However it is strongly suggested that you back up all related data before proceeding with the update process.

On Linux/Solaris/AIX, the user must take an extra step and enter the original installation path.

Upgrading from a Previous Universal Edition Software Install

It is strongly suggested that you do not run the Cisco Unified Call Services, Universal Edition or Cisco Unified Call Studio installer on top of a prior version of the software. Instead, choose a different installation path or make a backup of the prior version, move it to a separate directory, then run the installer.

Migrating From Previous Versions of Universal Edition

Call Services can host deployed voice applications from versions as far back as 3.4.x without modification. Applications deployed from versions prior to 3.4.x must first be updated to at least 3.4.x using the tools available in that version before migrating to the current version.

Similarly, Call Studio can import Universal Edition projects from versions as far back as Call Studio 3.4.x. Projects from earlier versions should first be updated to 3.4.x (or higher) before being imported to the current version of Call Studio.

NOTE: The Subdialog Start and Subdialog End elements no longer have General, Audio, or Data tabs, which were present in some previous releases. For voice applications with configured values on those tabs (e.g., Element data creation via the Data tab), the values will need to be moved to another element, such as the following Action, Decision, or Voice element. **This update should be made prior to importing**, because the setting values will be unavailable once the import is complete.

NOTE: The WAR file used by Cisco Unified Call Services, Universal Edition is named "CallServices.war", which is a different name than previous releases. Due to this change, voice applications which use audio files hosted from within the "audio" directory of the web application **must be manually updated** via Cisco Unified Call Studio. Only the default audio path must be manually updated; all other audio settings will be

automatically updated during the import process. If all audio files will still be kept in this location, the new default audio path should be of the form:

<http://IP:PORT/CallServices/audio>

Changing Software Licenses

To change the license that is in effect for either Call Services or Call Studio, follow the steps in this section. Some common Call Services scenarios include moving from a test license to a production license, or upgrading to a new production license that supports additional simultaneous sessions (e.g., ports). On the other hand, Call Studio users may move to a different physical machine (with a new system ID), which requires a new license.

Cisco Unified Call Services, Universal Edition

To change the license of a Call Services installation:

Step 1 Open the following folder:

```
AUDIUM_HOME\license
```

Step 2 Backup and then delete the files named `InstallationKey` and `LicenseKey`.

Step 3 Start or restart Call Services.

Step 4 Apply the new license via the steps described in the Licensing section of the Post Installation chapter.

Cisco Unified Call Studio

To change the license of a Call Studio installation:

Step 1 Open the following folder:

```
CALL_STUDIO_DIR\eclipse\plugins\com.audiumcorp.studio.license_6.0.1\license
```

Step 2 Backup and then delete the files named `InstallationKey` and `LicenseKey`.

Step 3 Start or restart Call Studio.

Step 4 Apply the new license via the steps described in the Licensing section of the Post Installation chapter.

Running

To verify a successful installation of Call Studio, it should open without any errors. To verify a successful installation of Call Services, an application deployed on it should be called by simulating a voice browser using a web browser. Each process is described in the following sections.

Verifying Call Studio (Windows Only)

If the user chose to install a desktop shortcut to Call Studio, double-click on that shortcut. If a shortcut was not installed, the user must launch Call Studio by double-clicking on the startup script found at:

INSTALLATION_PATH/CallStudio/startStudio.cmd

Call Studio should launch without errors and display a blank workspace. If an error is displayed, refer to the Troubleshooting section in this document.

Verifying Call Services

- Step 1 Start the application server with Call Services installed. Most application servers open a console window with information about the application server and web applications installed on it. For those that do not open a display or are installed as a Windows service, the content normally sent to the console may be stored in a log file located in the application server directory. The console window or content should show Call Services and the one included application, “HelloWorld”, loading without any errors. Should errors appear, please refer to the Troubleshooting section in this document.
- Step 2 To test that the application server itself is running properly, open a web browser on the local machine and enter the URL: “`http://localhost:PORT/`” where PORT is the port the application server is configured to listen on (on Tomcat, for example, this is set to port 8080 by default). If the default application server web page appears, the server is working as expected.
- Step 3 To test that Call Services was installed correctly, type this URL in the web browser:
`http://localhost:PORT/CallServices/Server?application=HelloWorld`
where PORT is the port the application server is configured to listen on (on Tomcat, for example, this is set to port 8080 by default).
- Step 4 The web browser should display VoiceXML that contains the text “Welcome to our HelloWorld sample application...” If the display shows VoiceXML referring to an error, please refer to the Troubleshooting section in this document.
- Step 5 Congratulations! Call Services has been properly installed and is now running.

Uninstalling

Uninstalling Call Studio

Call Studio can be uninstalled via the “Add or Remove Programs” facility provided by Windows. This can be accessed from within the Control Panel, which is most often available from **Start -> Control Panel** (this location may vary depending on your Windows configuration).

While the uninstaller will not delete licenses or projects, it is highly recommended that the user fully backup any applications, settings, and license information they would like to save before uninstalling. For projects, one option is to export them to a different location.

Uninstalling Call Services

On Windows, Call Services can be uninstalled via the “Add or Remove Programs” facility provided by Windows. This can be accessed from within the Control Panel, which is most often available from **Start -> Control Panel** (this location may vary depending on your Windows configuration).

On Linux/Solaris/AIX, the uninstaller can be run by navigating to the UninstallerData folder found in the installation directory and running the executable file `Uninstall_Cisco_Unified_Call_Services_Universal_Edition`.

The uninstaller deletes only those files that were *installed* in the original Call Services installation. Custom applications, license files, log files, custom Java code in the `common` folder, etc. will not be deleted by the uninstaller. Entire directories will be deleted only if all files within the directory were previously installed by the Universal Edition installer. Even though the uninstaller will leave some content alone, it is strongly suggested to back up all data to be retained before proceeding with the uninstallation process.

Note that every application server extracts the Call Services web application archive (WAR) file into a separate folder and then uses this folder from then on. Since the uninstaller does not delete this folder, the user is responsible for deleting this. Refer to the application server documentation on how to do this. Some application servers (such as Apache Tomcat), allow this folder to be deleted manually, others (such as IBM WebSphere) require the use of a web-based console to remove a deployed web application.

Manual Uninstall

It is *strongly suggested* that the built-in uninstaller be used to uninstall, whenever possible. However, if manual uninstallation is required, the following sections describe how it can be accomplished.

Manually Uninstalling Call Studio

Deleting Call Studio involves two steps:

Step 1 Delete the folder in which Call Studio resides:

INSTALLATION_PATH/CallStudio

Step 2 Remove the Windows shortcuts and the Cisco folder within the Start menu.

Manually Uninstalling Call Services

Deleting Call Services involves two steps:

Step 1 Delete the folder in which Call Services resides:

INSTALLATION_PATH/CallServices

Step 2 Delete the Call Services web application archive (WAR) file named CallServices.war and the expanded archive folder. Refer to the application server documentation on how to do this. For some application servers (such as Apache Tomcat), the WAR file and expanded folder are located in the same place and can be manually deleted. Others (such as IBM WebSphere) require the use of a web-based console to remove a deployed web application.

Manually Uninstalling Gateway Adapters

Deleting Gateway Adapters involves simply deleting the appropriate folder(s) found in the Call Services folder:

INSTALLATION_PATH/CallServices/gateways

Note that Call Services must be shut down before this can be done. Also note that any applications that refer to the deleted gateway adapters will not load when Call Services starts up.

Troubleshooting

This section describes issues that may arise during installation, possible causes, and their resolutions.

Issue	Cause and Resolution
When starting the application server, Call Services displays information on an old version.	If a prior version of Universal Edition software was installed on the same application server, it is likely that the old expanded web application still resides in the application server. Either delete the old expanded directory or use the application server's console to decommission the old web application and load the new web application archive (WAR) file.
When starting the application server, the console displays no information on Call Services at all.	This is most likely caused by not having the Call Services web application archive file, CallServices.war, in the correct directory. This could have been due to not installing Call Services or choosing the wrong directory in the installer for the application server's web application archive directory.
Call Services shows an error on startup containing "AUDIUM_HOME is not defined".	Call Services needs to know where the installation directory resides. The installer created an environment variable named AUDIUM_HOME to do this. On Linux and Solaris, the application server must be started from a shell opened after the installation.
	If the error persists, the application server may have been installed as a Windows service using a different user than the user under which the application server is running. Make sure the profile for the user running the application server has the environment variable set.
When running the HelloWorld sample application to test if Call Services is running, the page could not be found.	If the error message persists, manually set the Audium Home directory location using one of the methods described in the section "Ensuring Proper Audium Home Setup for Call Services".
	<p>The URL to be entered to obtain the HelloWorld application is:</p> <p><i>http://localhost:PORT/CallServices/Server?application=HelloWorld</i></p> <p>This URL would be valid only if the web browser were running on the same machine as Call Services. If it is a different machine, the appropriate IP address should be used instead of "localhost". Additionally, the port on which the application server is listening must be used.</p>

Issue	Cause and Resolution
<p>When running the HelloWorld sample application to test if Call Services is running, a VoiceXML page appears indicating that there are technical difficulties.</p>	<p>Several possibilities exist for this error:</p> <ul style="list-style-type: none">• The application name was not typed in exactly as it appears in the URL shown in the previous option. Additionally note that application names do not have spaces.• There is no HelloWorld application deployed on Call Services. Check the <i>INSTALLATION_PATH/CallServices/applications</i> folder. If it does not contain a folder named HelloWorld, this application will have to be newly deployed from Call Studio.• When the application server was launched, Call Services encountered an error. See the troubleshooting options in this section for resolutions.

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>