



## **Installation and Upgrade Guide for Cisco Unified Customer Voice Portal, Release 12.5(1)**

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# Preface

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## Change History

This table lists changes made to this guide. Most recent changes appear at the top.

Change	See	Date
<b>Initial Release of Document for Release 12.5(1)</b>		
Added Informix upgrade	Unified CVP Installation Upgrade Unified CVP	February 2023
OpenJDK updates	Unified CVP Installation	March 2021
	Install Unified Call Studio	
	Upgrade Unified CVP	
	Upgrade Unified Call Studio	
Added <code>ivr.properties</code> and <code>sip.properties</code> configurations for Webex Experience Management.	Manual Configuration of Unified CVP Properties	May 2020

Change	See	Date
Upgrade to Windows Server 2016	Global change	January 2020
Removed instances of ESXi 5.5 update 2	Install Microsoft Windows Server Upgrade Windows Server Upgrade Virtual Machine Hardware Version	
Added notes about Windows Defender	Requirements Upgrade Unified CVP	

## About this Guide

This document explains how to install and upgrade Cisco Unified Customer Voice Portal (CVP). It is prepared for partners and service providers who will be implementing Unified CVP, who are familiar with Cisco contact center applications, and are experienced regarding the deployment and management of virtual machines.

## Audience

This guide is intended for network administrators to install or upgrade the Unified CVP software.

## Related Documents

*Documentation Guide for Cisco Unified Customer Voice Portal* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/products-documentation-roadmaps-list.html>.

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# CHAPTER 1

## Pre-Installation

This chapter provides the tasks that you must perform prior to installing the Unified CVP software.



**Important** You must stop any third-party services and applications running on the server prior to running the Unified CVP Installer. Some third party services and applications can lock files required by the installer, resulting in an install error.

- [Unified CVP Components, on page 1](#)
- [Requirements, on page 2](#)
- [Additional Components, on page 5](#)
- [Unified CVP Installation Modes, on page 5](#)
- [Pre-Installation Tasks, on page 6](#)

## Unified CVP Components

*Table 2: Unified CVP Components*

Unified CVP Component	Description
Unified CVP Server	This server consists of: <ul style="list-style-type: none"><li>• Unified CVP Call Server</li><li>• Unified CVP VXML Server</li><li>• Media Server</li><li>• SNMP Monitoring service</li></ul>
Operations Console	The Operations Console (OAMP and NOAMP) is a web-based interface that enables you to configure and manage individual components of Unified CVP.
Remote Operations	This component allows remote administration of Unified CVP solution components. It includes Operations and Resource Module (ORM).

Unified CVP Component	Description
Unified CVP Reporting Server	<p>This server provides a historical repository, which can be used for reporting, for a call center. It receives reporting data from one or more Unified CVP Call Servers and Unified CVP VXML Servers, and stores that data in a database.</p> <p><b>Note</b> The IBM Informix database is installed as a part of the Reporting Server. The license of IBM Informix comes bundled as a part of Reporting Server.</p>
Unified Call Studio	This component provides design and syntax for developing call flow for VXML-based execution. Unified Call Studio also supports debugger for application. This helps validate Unified Call Studio application.

## Requirements

This section describes the platform and software requirements for Cisco Unified Customer Voice Portal (CVP).

**Table 3: Unified CVP Platform and Software Requirements**

Unified CVP Component/Task	Platform Requirement
Unified CVP Server	<p><b>Note</b> Refer to the <i>Cisco Collaboration Virtualization</i> page at <a href="https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/cisco-collaboration-virtualization.html">https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/cisco-collaboration-virtualization.html</a>.</p>
Unified Operations Console	
Unified Reporting Server	
Unified Call Studio	<p>4GB+ RAM</p> <p>Microsoft Windows 10</p>
Virtualized Platform	<p>Cisco Unified Computing System (UCS) B-Series and C-Series</p> <p><b>Note</b> Access the open virtualization archive (OVA) template at: <a href="https://software.cisco.com/download/type.html?mdfid=270563413&amp;flowid=5229">https://software.cisco.com/download/type.html?mdfid=270563413&amp;flowid=5229</a>.</p>

For information about hardware requirements and compatibility, see the *Unified CCE Solution Compatibility Matrix* available at: <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.

## Unified CVP Server

Category	Requirements
Operating System	<p>See the Compatibility Matrix at <a href="https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html">https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html</a>.</p> <p><b>Note</b> To apply the latest Operating System Service Upgrade Release, go to Microsoft upgrade website.</p>
Additional Items	<p>A minimum of 10MB should be available for Unified CVP system media files. Cisco provides .wav files for numbers, days, months, currency types in American English and Latin American Spanish.</p> <p><b>Note</b> Any additional media files will require additional space.</p> <p>By default, the Call Server and the VXML Server are on the same physical machine. For more information, see <i>Solution Design Guide for Cisco Unified Contact Center Enterprise</i>, available at <a href="https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-implementation-design-guides-list.html">https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-implementation-design-guides-list.html</a>.</p> <p>On Windows platforms, Call Servers require Simple Network Management Protocol and WMI Windows Installer Provider to be installed.</p>
Restriction	<p>Although supported third-party virus scan software can be enabled on the Call Server, full fixed disk virus scans must take place either offline while calls have been diverted to a different system or during a period of low call volume. Do not run a full fixed disk scan while the Call Server is under load.</p>

## Unified CVP Operations Console

Category	Requirements
Operating System	<p>See the Compatibility Matrix at <a href="https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html">https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html</a>.</p> <p><b>Note</b> To apply the latest Operating System Service Upgrade Release, go to the Microsoft upgrade web site.</p>

## [Optional] Unified CVP Reporting Server

Category	Requirements
Operating System	See the Compatibility Matrix at <a href="https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html">https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html</a> .  <b>Note</b> To apply the latest Operating System Service Upgrade Release, go to Microsoft upgrade website.
Restriction	Although supported third-party virus scan software can be enabled on the Reporting Server, full fixed disk virus scans must take place either offline while calls have been diverted to a different system or during a period of low call volume. Do not run a full fixed disk scan while the Reporting Server is under load.

## [Optional] Unified Call Studio

Category	Requirements
Supported Hardware	4GB+ RAM required

## Configure Secure Passwords

To configure a secure password for Reporting Server users (cvp\_dbadmin, cvp\_dbuser) and the Operations Console Administrator user, your password must comply with the following rules:

- The password must contain characters only from the ASCII character set:
  - Uppercase and lowercase letters of the English alphabets
  - Numeric characters [0-9]
  - Special characters from this set: !#\$%()\*+./<?@[ ]^\_`{}~
- The password length must be 12 characters or more.
- The password must meet the following password complexity:
  - The password must use three of four of the following four types of characters:
    - At least one uppercase letter [A-Z]
    - At least one lowercase letter [a-z]
    - At least one numeric character [0-9]
    - At least one special character from this set: !#\$%()\*+./<?@[ ]^\_`{}~

- The characters in the password must not be repeated more than three times consecutively.
- The password must not be "cisco", "ocsic", or any variant obtained by changing the capitalization of letters therein.

## Additional Components

You can use the following components that are not part of the Unified CVP software but may be used with Unified CVP for a complete contact center solution.

- Automatic Speech Recognition (ASR) Server/ Text-to-speech (TTS) Server
- Cisco Unified Contact Center Enterprise
- Cisco Unified Communications Manager
- Cisco Unified SIP Proxy
- Ingress Gateway
- Egress Gateway
- Voice XML Gateway
- Cisco Unified Border Element (CUBE)
- Cisco Unified Intelligence Center (CUIC)
- Cisco Virtualized Voice Browser

## Unified CVP Installation Modes

*Table 4. Unified CVP Installation Modes*

Installation Mode	Description
Production	In production mode, you can install only one Unified CVP component on a virtual machine server at a time. If you need to install additional components, you must install these components on a different virtual machine server.
Lab only	<p>Use this mode to install Unified CVP for learning and testing.</p> <p>To use lab only mode, launch the installer from the command line, browse to the setup.exe folder, and enter <b>setup.exe labonly</b>.</p> <p><b>Note</b> In lab only mode, the Call Server, OAMP Server, and Reporting Server can be installed together but you cannot selectively uninstall one of them. For example, if you want to remove the Reporting Server you must reinstall Unified CVP.</p>

# Pre-Installation Tasks

## Install Microsoft Windows Server

Complete the following procedure to install Microsoft Windows Server 2016 on all virtual machines for server-based applications.

### Before you begin

- Ensure that VMware Tools software is installed. You cannot install VMXNET3 driver without VMware Tools.
- Ensure that ESXi version of the host is ESXi 6.5 with VMFS 5, ESXi 6.5 U2 and later updates with VMFS 6, or ESXi 6.7 with VMFS 6.
- Ensure that the length of the host name for CVP server is not more than 15 characters.
- Ensure that you have deployed the OVA template for the respective CVP components.

- 
- Step 1** Mount Microsoft Windows Server 2016 ISO image to the virtual machine.
- Step 2** Power on the virtual machine.
- Step 3** Enter the Language, Time and Currency Format, and Keyboard settings. Click **Next**.
- Step 4** Click **Install Now**.
- Step 5** Select the appropriate version of the windows server with Desktop Experience option that meets your organization's needs, and then click **Next**. Make sure that you have chosen an appropriate edition of Windows server with Desktop Experience.
- Step 6** Accept the license terms and click **Next**.
- Step 7** Select the **Custom: Install Windows only (advanced)** option for clean installation.
- Step 8** Select the hard drive that you want to install the windows server on, and then click on the **New** button to do the partitions.
- Step 9** Specify the amount of the drive based on **MB** and then click on the **Apply** button. A warning appears to give the permission to system to create a drive for system files.
- Click **Cancel**. It is recommended not to change the size of the drive.
- The installation begins. After the installation is complete, the system restarts without prompting.
- Step 10** Enter and confirm the password for the administrator account, and then click **Finish**.
- 

Microsoft Windows Server 2016 is installed. In addition, Internet Explorer 11 is installed automatically. For more information, see *VMware Deployment Checklist*.



# Fresh Installation

## Fresh Install

- 
- Step 1** Obtain the Unified CVP ISO image to install Unified CVP.
  - Step 2** Obtain the supported virtualization hardware and software that are required for the virtualization of Unified CVP.
  - Step 3** Identify the components for the required deployment model. For information about hardware requirements compatibility, see the *Unified CCE Solution Compatibility Matrix* available at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.
  - Step 4** Ensure that the servers are listed as supported hardware and sized appropriately.
  - Step 5** Verify that the any new server hardware, such as hard drive, is working properly.
  - Step 6** Stop any third-party services and applications that are running on the server before you run the Unified CVP Installer. Some third-party services and applications can lock files that are required by the installer resulting in an installation error.
- 

## Verification of the Downloaded ISO

Perform the following procedure to validate the downloaded ISO signed by Cisco, to ensure that it is authorized.

- 
- Step 1** Install **OpenSSL** on Microsoft Windows.
  - Step 2** Add the OpenSSL installation path to **System variables** in the **Environment Variables** of the system.
  - Step 3** Add the downloaded ISO Image , ISO Image signature file and the Public key.der file in the same folder for the specific product component.
  - Step 4** Launch **Command Prompt** on the system.
  - Step 5** Run the following CLI (Command Line Interface) command to verify the files:

```
openssl dgst -sha512 -keyform der -verify <PUBLIC key.der> -signature <ISO Image.iso.signature <ISO Image
```

The system displays `Verified OK` on successful verification and `Verification failed` on verification failure.

**Note** If the verification fails do not proceed with the installation, contact Cisco Support for a valid ISO .

---

## Multiple Ethernet Interfaces

The machine that you are using for the Unified CVP Call Server must have only one Ethernet interface enabled. When installing Unified CVP on a machine with two or more Ethernet interfaces, the additional interface(s) must be disabled, even if they are not configured. Refer to Windows documentation for information on enabling/disabling an Ethernet interface.





## CHAPTER 2

# Unified CVP Installation

Cisco Unified Customer Voice Portal (CVP) ISO image contains the setup files for all the CVP components in the CVP folder.

Only a local administrator must install the Unified CVP software.



### Note

- Before you install Unified CVP, refer to the licensing information in the [Unified CVP Licensing, on page 15](#) chapter.
- Ensure that the server chosen for Reporting Server is part of a workgroup.



### Important

A new **12.5(1b)** base installer is available for customers, which has OpenJDK JRE as the supporting Java runtime for the Unified CVP application. It is the same as the preceding 12.5(1) installer, except that in the 12.5(1b) base installer, the Java runtime environment is installed on the Unified CVP virtual machines (VMs).

You can continue to use Oracle JRE if you have installed CVP 12.5(1). Further, you can download and install the Java security updates from the Oracle website.

For JRE update post installation of 12.5(1b), refer to the OpenLogic OpenJDK site to download the JREs.

Customers who are not installing 12.5(1b) and staying on 12.5(1) release can install the CVP ES to migrate from Oracle JRE to OpenJDK JRE. All subsequent ESs would be supported on top of this ES.



### Note

Upon installation of ES 33, the JRE in the CVP is updated with OpenLogic JRE. Any specific changes in configuration files of the JRE folder should be backed up and reconfigured after the JRE update.



### Important

In the new **12.5(1b)** release, CVP Reporting Server has support for IBM Informix version 14.10 FC8.

For migrating the Reporting Server from 12.5(1) to 12.5(1b), see [Migrate Unified CVP Reporting Server, on page 47](#).



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**Note** If you are testing with the self-signed TLS certificates that are generated as a part of the installation, ensure that you map the CN/SANs on the certificate to the corresponding IP through DNS or host file entries.

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- [Install Unified CVP on Virtual Machines, on page 10](#)
- [Install Unified CVP Server, on page 10](#)
- [Install Operations Console, on page 11](#)
- [Install Remote Operations, on page 12](#)
- [Install Second Drive on Reporting Server Virtual Machine, on page 12](#)
- [Install Unified CVP Reporting Server, on page 12](#)
- [Install Unified Call Studio, on page 14](#)

## Install Unified CVP on Virtual Machines

### Before you begin

- Disable large receive offload (LRO) for ESXi for virtualization platform for Unified CVP.
- Install and configure the Unified Computing System (UCS).
- Install and boot VMware ESXi.
- Ensure that ESXi is configured and reachable over the network.
- Download the OVA template.

- 
- Step 1** Create the Unified CVP virtual machines using the OVA template.
- Step 2** Select the CVP components, as required.
- Step 3** Install Windows Server.
- Step 4** Install the selected CVP components.
- 

## Install Unified CVP Server

Fresh installation of Unified CVP includes the following voice prompt encode format types—u-law, A-law, and G729 for media files. Default applications also get installed along with media files. Choose the format type as per requirement.

- 
- Step 1** Mount Unified CVP ISO, and run setup.exe.
- Step 2** Review and accept the license agreement, and click **Next**.
- Step 3** On the **Select Package** screen, choose the Unified CVP component to install on your computer, and click **Next**.

**Note** Internet Information Server (IIS) is the default Media Server supported by Unified CVP. For details on IIS configuration, see the Microsoft documentation.

- Step 4** At the **Voice Prompt Encode Format Type** screen, select one of the following options:
- **U-Law Encoded Wave Format**
  - **A-Law Encoded Wave Format**
  - **G729 Encoded Wave Format**
- Step 5** On the **Choose Destination Location** screen, select the folder where setup will install files. By default, it is C:\Cisco\CVP.
- Step 6** On the **X.509 Certificate** screen, enter the required information in the form, and click **Next**.
- Note** In **Common Name** field, enter FQDN.
- Step 7** Click **Install**.
- Note** You cannot cancel the installation when it is in progress.
- Step 8** Choose to restart the computer right after the upgrade or to restart it later, and click **Finish**.
- Note** After successful installation, the **CVP Call Server Service Startup Type** is set to **Automatic** by default.

---

#### What to do next

Install Operations Console

#### Related Topics

[Install Operations Console](#), on page 11

## Install Operations Console

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- Step 1** Perform Steps 1 to 6 of the Install CVP Server procedure.
- Step 2** From the **Ready to Install the Program** screen, review the component that you selected, and click **Install**.
- Step 3** On the **Ops Console Password** screen, in the **Password** and **Password (for verification)** fields, enter a password and re-enter it for confirmation, and click **Next**.
- Note** Adhere to the password formation criteria that are listed on the Operations Console Password screen section.
- Note** Operations Console Administrator and Web Services Administrator (wsmadmin) use the Operations Console password.
- Step 4** Select one of the options to either restart the computer right after installation or later, and click **Finish**.

---

#### What to do next

Install Remote Operations

**Related Topics**

[Install Remote Operations](#), on page 12

## Install Remote Operations

---

- Step 1** Perform Steps 1 to 4 of the Install Operations Console procedure.
- Step 2** Choose to restart the computer right after the upgrade or to restart it later, and click **Finish**.
- 

**What to do next**

Install Reporting Server

**Related Topics**

[Install Unified CVP Reporting Server](#), on page 12

## Install Second Drive on Reporting Server Virtual Machine

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- Step 1** Right-click **My Computer** > **Manage**.
- Step 2** In **Storage** section, click **Disk Management**.
- Step 3** Select the unformatted partition, which is usually **Disk 1**.
- Step 4** Right-click **Online**, and initialize the disk.
- Step 5** Click **Format**, and follow the formatting process with NTFS.
- 

## Install Unified CVP Reporting Server

IBM Informix database server 14.10 FC1 is installed as part of the Unified CVP Reporting Server.



**Note** The `ImagePath` for **CVP Reporting Informix IDS Service** in Windows registry is set to `c:\db\Informix\bin\onscpah cvp`. Because of this, when security scanners are run, the `ImagePath` changes to `"c:\db\Informix\bin\onscpah cvp"`. This results in the **CVP Reporting Informix IDS Service** not starting.

**Workaround:** Set `ImagePath` for **CVP Reporting Informix IDS Service** in Windows registry to `"c:\db\Informix\bin\onscpah" cvp`.

---

**Before you begin**

- Only the actual Local Administrator (should not be renamed) of this system can install CVP Reporting Server.
- Ensure that Unified CVP Reporting Server is not part of any domain and is part of a work group.
- Do not create Informix user in the Local Users and Group, this will impact the installation. Once installation is completed, Informix user can be created for the database operation.

---

**Step 1** Mount the Unified CVP ISO image, and run `setup.exe` file.

**Step 2** Review and accept the license agreement, and click **Next**.

**Step 3** On the **Select Package** screen, select **Reporting Server**, and click **Next**.

**Note** This step takes approximately 30 seconds before moving to the **Choose Destination Location** window.

**Step 4** Select the root drive on which you want the Reporting database data and backup data to reside, and click **Next**.

**Note** Choose the E drive or the second drive, whose size is more than 400GB, to store the Reporting database data and to keep the backup of data.

The **Database Size Selection** screen appears, providing the following options:

- **Standard:** Requires a minimum of 250GB of free disk space.
- **Premium:** Requires a minimum of 375GB of free disk space.

**Step 5** Choose the appropriate database size for the license that you purchased, and click **Next**.

**Step 6** From the **Ready to Install the Program** window, review the component that you have selected, and click **Install**.

**Step 7** On the **Reporting Password** window, enter a password and re-enter it for confirmation, and click **Next**.

- Note**
- Adhere to the password formation criteria that are listed on the Operations Console Password screen section.
  - The Reporting password requires that the **Minimum Password Age** parameter be set to 0 days for both the local and/or domain security policy and is subject to both the Unified CVP password policy and the password policy enforced by the operating system of the computer on which the Reporting Server resides. For each aspect of the password, the Reporting password must meet the requirement of the more restrictive policy. If you are installing CVP Reporting Server please ensure that your local and/or domain security policy for MINIMUM PASSWORD AGE are set to 0 days for the installation of the CVP Reporting Server component (In Windows, **Control Panel** > **Administrative Tools** > **Local Security Policy** > **Account Policy** > **Password Policy**). If the reporting password you enter is rejected, review the list of password requirements displayed by the installer and consider your operating system's password requirements. You can reconfigure this password repeatedly until an acceptable password is found.
  - After installation, add the Unified CVP Reporting Server to the domain, if necessary.

**Step 8** Choose to restart the computer right after installation or to restart it later, and click **Finish**.

---

# Install Unified Call Studio



---

**Important** A new **12.5(1b)** base installer is available for customers, which has OpenJDK JRE as the supporting Java runtime for the Unified CVP application. It is the same as the preceding 12.5(1) installer, except that in the 12.5(1b) base installer, the Java runtime environment is installed on the Unified CVP virtual machines (VMs).

---

---

**Step 1** Mount the Unified CVP software (including CVP Studio) installer ISO image, and run setup.exe.

**Step 2** On the **Welcome** screen, click **Next**.

**Note** If you click **Cancel** here or on the dialog screens that follow before the **Ready to Install the Program** screen, the installation is canceled. The **Exit Setup** dialog box appears.

**Step 3** Review **Copyrights to Products** used by Call Studio and click **Next**.

**Step 4** Review and accept the license agreement, and click **Next**.

**Step 5** On the Choose Destination Location screen, select the folder where setup will install files. By default, it is C:\Cisco\CallStudio.

**Step 6** On the **InstallShield Wizard Complete** screen, click **Install**.

**Step 7** Click **Finish** to exit the wizard.

---

The Call Studio software is installed on your computer.



---

**Note** The SolarWinds TFTP software and AnyConnect (while a VPN connection is enabled) are the known causes for the Call Studio debugger errors. To resolve the Call Studio debugger errors:

- If you are using SolarWinds, stop the SolarWinds TFTP software and run the debugger.
  - If you are using AnyConnect, disconnect the VPN connection and run the debugger.
-





## CHAPTER 3

# Unified CVP Licensing

- [License Plan, on page 15](#)
- [Unified CVP Redundant Port, on page 16](#)

## License Plan

Unified CVP now supports Smart Licensing which is a flexible software licensing model that streamlines the way you activate and manage Cisco software licenses across your organization. For detailed feature overview on Smart Licensing, see *Administration Guide for Cisco Unified Contact Center Enterprise* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-maintenance-guides-list.html>.

All Unified CVP servers, including Unified CVP server and VoiceXML server, need to register with Cisco SSM. Unified CVP OAMP and CVP Reporting server do not need any licensing registration.

### Upgrading from Classic License

After purchasing, the product licenses will be visible in your Smart Account. If you have a classic license, you will need to convert the PAKs to Smart Account. For more information on converting your classic license to Smart Account, see [https://software.cisco.com/web/fw/softwareworkspace/smartlicensing/ssmcompiledhelps/c\\_conversion\\_settings.html](https://software.cisco.com/web/fw/softwareworkspace/smartlicensing/ssmcompiledhelps/c_conversion_settings.html).

**Table 5: Unified CVP Components and the Required License**

Unified CVP Component	Required License
Unified CVP Call Server/VXML Server	<ul style="list-style-type: none"><li>• Self Service Ports</li><li>• Unified CVP Server license</li></ul> <p>The licenses for the ports on the Unified CVP Call Server and the Unified CVP VXML Server. A Unified CVP VXML Server license is for the number of self-service ports plus queued sessions.</p>
Unified CVP Reporting Server	No License is required for the Unified CVP Reporting Server.

Unified CVP Component	Required License
Unified CVP OAMP Server	No License is required for the Unified CVP OAMP Server.



**Note** Whenever Unified CVP is installed or upgraded, the Web Service Manager certificate from Unified CVP Call Server/Unified CVP VXML Server needs to be imported into the keystore of the Unified CVP OAMP/PCCE Server.

For information on the detailed steps, see the *Unified CVP Security > Secure Communication between CVP and OAMP Server* section of the *Cisco CVP Configuration Guide* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/products-installation-and-configuration-guides-list.html>.

## Unified CVP Redundant Port

The Redundant Port supports a redundancy model in which one or more failover servers are available to take calls when the primary servers are unavailable.

For example, if a customer has purchased 1500 Self-Service ports, these ports can be used across devices or locations or servers. The customer is entitled to run only 1500 ports simultaneously. The total number of calls that receive queuing or self-service treatment cannot exceed 1500.



## CHAPTER 4

# Unified CVP Postinstallation

---

After you install Unified CVP, perform postinstallation tasks to ensure that all the CVP components are installed successfully. In addition, disable port blocking and address security issues. To begin with, do the following:

1. Go to the `%CVP_HOME%\conf` directory and add the following entry in the `vxml.properties` file:

```
VXML.usagfactor = 1.0
```

2. Restart the **WebServicesManager** service.



---

**Note** Sometimes after installation, `clean.cvp` file may not be available at `%CVP_HOME%\bin\TAC`. This can happen sporadically but does not impact the functionality of CVP. You can always retrieve this file from the `CVP\Utilities` folder of the CVP iso.

---

**Note**

- After installation, go to `C:\Cisco\CVP\conf\orm.properties` file and check if the `orm.oamp.id` parameter has any oamp ID (for example, `495a891e-a64f-4e1b-b80d-26e0dce0e249-2098391835`) assigned to it. If so, then delete the ID and restart the **WebServicesManager** service.
- Postinstallation excludes CVP components configuration. For information about CVP component configuration, see the *Configuration Guide for Cisco Unified Customer Voice Portal* available at: <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/tsd-products-support-series-home.html>.

If CVP Server, Operation Console, and Reporting Server have not been installed to the default `C:\Cisco\CVP` path, then update the following files under `<install_path>/conf`:

- **cvpconfigdb.properties:** Update the connection URI so that it matches path of the DB directory  
`ConnectionUrl=jdbc:derby://localhost:1529/<install_path>/OPSConsoleServer/sql/db`

**Example:**

`ConnectionUrl=jdbc:derby://localhost:1529/C:/Cisco/CVP/OPSConsoleServer/sql/db`

- **cvpwsr.properties:** Update `CVP_HOME.default.dir` as `CVP_HOME.default.dir = <install_path>`

**Example:** `CVP_HOME.default.dir = C:\\Cisco\\CVP`

- **sip.properties:** Update `SIP.Secure.KeyStorePath` as `SIP.Secure.KeyStorePath= <install_path>\\security\\.keystore`

**Example:** `SIP.Secure.KeyStorePath=C:\\Cisco\\CVP\\conf\\security\\.keystore`

This chapter explains the following postinstallation tasks.

- [Disable Port Blocking, on page 18](#)
- [Security, on page 19](#)
- [Initiate Metadata Synchronization for Unified CVP Rest API, on page 19](#)

## Disable Port Blocking

If you have installed Unified CVP Server components on a computer that has antivirus software configured to block ports, exclude Unified CVP processes and Tomcat executable files.



---

**Note** Exclude the following folders from on-access scanning configuration of the AV program for all Antivirus scans:

```
c:\Cisco, c:\Temp, c:\tmp, c:\db, c:\IFMXDATA
```

It is the customer's responsibility to deploy the VXML applications after the Antivirus scans. This also applies to the custom `java/jar/class` files deployed in the shared path.

For more information on the Virus Scan guidelines, refer to the following sections of the UCCE documentation:

The Virus Protection section of UCCE Design Guide at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-implementation-design-guides-list.html>.

The General Antivirus Guidelines section of the Security Guide for Cisco Unified ICM/Contact Center Enterprise at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-and-configuration-guides-list.html>

---

## Security

Depending on your choice of Unified CVP deployment, you may need to address certain security considerations. For information about security, see the *Configuration Guide for Cisco Unified Customer Voice Portal* available at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/tsd-products-support-series-home.html>.



---

**Note** If you are concerned about any vulnerability in Microsoft Visual VC++ 2005 Redistributable, then uninstall it from Control Panel. This will not impact the normal operation of the CVP Reporting Sever.

---

## Initiate Metadata Synchronization for Unified CVP Rest API

In the Unified CVP REST API architecture, information of media files on Media Server and VXML applications on a VXML server is saved on a WSM Server as metadata in Derby database. This metadata information is created, updated, and deleted by the REST API calls. There may be situations where the metadata may go out of sync with files on VXML Servers and Media Servers. Examples are addition and deletion of Unified CVP Servers, deployment of apps and media files by a tool other than the REST API, and Unified CVP Media Server or the VXML server upgraded from a version where the REST API was not supported.

A command line tool “`metasynch.cmd`” is available at `C:\Cisco\CVP\wsm\CLI` to enable synchronization of metadata with the files on VXML Servers and Media Servers. The tool internally uses the Synch up API to perform the synchronization. It takes three arguments- WSM user name, WSM user password, and server type (MEDIA, VXML or VXML\_STANDALONE). Based on the server type information, all servers of the respective server type are synchronized. If the server type argument is not provided, metadata is synchronized with all media servers and VXML servers configured in OAMP.

In case of an upgrade, the media files and VXML applications are present in the Media Servers and VXML Servers but corresponding metadata information is not present in the WSM Server. The absence of metadata information limits a user from using the REST API to access, update, and delete existing media files and VXML applications on the Media Server and the VXML Server.

## Synchronize Metadata Files Using Sync-Up Tool

To invoke `metasynch.cmd`, complete the following steps.

---

**Step 1** On the Unified CVP OAMP Server, navigate to the `C:\Cisco\CVP\wsm\CLI` location.

**Step 2** Run the `metasynch.cmd` file with following arguments:

- `wsm username`
- `wsm password`

**Example:**

```
metasynch.cmd wsmusername wsmpassword MEDIA
```

Usage : metasynch [options] username password [servertype]

servertype : MEDIA/VXML/VXML\_STANDALONE

options : -help -? print this help message

**Note** The server type argument should be MEDIA, VXML, or VXML\_STANDALONE type. If the server type argument is not provided, the metadata is synched with all the VXML applications on VXML servers and all media files on Media servers. Logs for synch command tool can be found at the following location:

```
C:\Cisco\CVP\wsm\CLI\log\SyncTool.log
```

---



## CHAPTER 5

# Upgrade Unified CVP

If the existing software is to be replaced with a newer version with a change in platform, architecture, or applications, the process is called migration. For example, replacing Unified CVP 11.5(1) with Unified CVP 12.5(1) is a migration because the newer version works on a different platform than the older version. To learn whether replacing the existing version with a new version is an upgrade or a migration, see the [Upgrade Path](#) section.

Upgrade of Cisco voice solution components is a multistage process; solution components are grouped in several stages for upgrading. Users must follow the solution level upgrade order mentioned in the *Upgrade* section of the *Cisco Unified Contact Center Enterprise Installation and Upgrade Guide* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-guides-list.html> for smooth transitioning to higher grade versions.



---

**Important** A new **12.5(1b)** base installer is available for customers, which has OpenJDK JRE as the supporting Java runtime for the Unified CVP application. It is the same as the preceding 12.5(1) installer, except that in the 12.5(1b) base installer, the Java runtime environment is installed on the Unified CVP virtual machines (VMs). You can continue to use Oracle JRE if you installed CVP 12.5(1) before the release of 12.5(1b). Further, you can download and install the Java security updates from the Oracle website.

For JRE update post installation of 12.5(1b), refer to the OpenLogic OpenJDK site to download the JREs.

Customers who are not installing 12.5(1b) and staying on 12.5(1) release can install the CVP ES to migrate from Oracle JRE to OpenJDK JRE. All subsequent ESs would be supported on top of this ES.



---

**Note** Upon installation of ES 33, the JRE in the CVP is updated with OpenLogic JRE. Any specific changes in configuration files of the JRE folder should be backed up and reconfigured after the JRE update.



---

**Important** In the new **12.5(1b)** release, CVP Reporting Server has support for IBM Informix version 14.10 FC8. For migrating the Reporting Server from 12.5(1) to 12.5(1b), see [Migrate Unified CVP Reporting Server, on page 47](#).

---




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**Note** Push the TCL and VXML files to their respective ingress and VXML gateways after the CVP Operations Console is upgraded, but before any other CVP components are upgraded.

---




---

**Note** After the successful upgrade, the Certificate Authorities (CAs) that are unapproved by Cisco are removed from the platform trust store. However, you can add them back, if necessary.

- For information about the list of CAs that Cisco supports, see the Cisco Trusted External Root Bundle [here](#).
- For information about adding a certificate, see [here](#).

---




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**Note** By default, Windows Defender is enabled on Windows Server 2016. Windows Server 2016 upgrade will prompt to uninstall the antivirus due to compatibility issue with Windows Defender. To proceed with the upgrade, uninstall the antivirus. For more information on Windows Defender antivirus compatibility, see <https://docs.microsoft.com/en-us/windows/security/threat-protection/windows-defender-antivirus/windows-defender-antivirus-compatibility>.

---

- [Upgrade Path](#), on page 22
- [Unified CVP Upgrade Strategies](#), on page 23
- [Important Considerations for Upgrade](#), on page 24
- [Pre-Upgrade Tasks](#), on page 24
- [Upgrade Existing Unified CVP Virtual Machine](#), on page 25
- [Upgrade Windows Server](#), on page 28
- [Upgrade Operations Console](#), on page 30
- [Upgrade Unified CVP Reporting Server](#), on page 32
- [Upgrade Unified CVP Server](#), on page 32
- [Upgrade Remote Operations](#), on page 33
- [Upgrade Unified Call Studio](#), on page 33
- [Postupgrade Tasks](#), on page 34

## Upgrade Path

The following table lists the upgrade paths to replace an existing Unified CVP version with a new one.



Table 6: Unified CVP Upgrade Path

Upgrade Path from Older Release to New Release	Platform Change	Conversion Process	Description
Unified CVP 12.0(1) to 12.5(1b)	No	Direct upgrade to Unified CVP 12.5(1b). For more information, see <a href="#">Upgrade Unified CVP Reporting Server</a> , on page 32.	Platform change is not required because CVP 12.5(1b) is supported on Windows Server 2016 and Windows Server 2019. <b>Note</b> For more information, see <a href="#">Upgrade Windows Server</a> , on page 28.
Unified CVP 12.5(1) to 12.5(1b)	No	Fresh installation of Unified CVP 12.5(1b) ISO with data migration. For more information, see <a href="#">Migrate Unified CVP Reporting Server</a> , on page 47.	Platform change is not required.

## Unified CVP Upgrade Strategies

You can upgrade Unified CVP in a maintenance window. However, when there are a large number of Unified CVP servers to upgrade, it may not be possible to upgrade all of them in one maintenance window. Using the upgrade strategies, you can help large Unified CVP deployments distribute the upgrade process. In addition, you can divide the server upgrades into multiple steps that can be completed over several maintenance windows.

Unified CVP upgrade strategies are described in the following sections.

### Unified CVP Units

A Unified CVP unit is a single virtual machine and may comprise VXML Servers and Call Servers. For Unified CVP deployments that have multiple Unified CVP units, ensure that you upgrade one unit at a time. For example, you can upgrade a Unified CVP unit of related servers in a maintenance window. This deployment may be useful for call centers. There may be a need to migrate to Session Initiation Protocol (SIP) to continue call processing and minimize the risks.

### Multiphased Approach

Multiphased approach is a strategy to upgrade a subset of Unified CVP Servers and resume call processing. Using the multiphased upgrade approach, you can divide the upgrades in phases over time. If a Unified CVP deployment has multiple Unified CVP units, you can upgrade each unit using the multiphased approach.

Depending on the deployment, choose one of the following multiphased approaches:

- Upgrade all servers of a certain type in a maintenance window.
- Upgrade a subset of a server type in a maintenance window.
- Upgrade a subset of a server type from a Unified CVP unit in a maintenance window.

Use multiphased approach to upgrade the components in the following sequence:

1. Operations Console
2. Unified CVP Reporting Server
3. Unified CVP Server



---

**Note** It is not necessary to upgrade all servers in a category in a single maintenance window; however, you must upgrade all Unified CVP components of one type before moving to the next set of components in the Unified CVP deployment or the Unified CVP unit.

---

#### Related Topics

[Upgrade Unified CVP](#)

## Important Considerations for Upgrade

- Upgrade Unified CVP during off-peak hours or during a maintenance window to avoid service interruptions.
- Do not make any configuration changes during the upgrade, because the changes are lost after the upgrade.
- Ensure that a Unified CVP unit remains offline until you upgrade all the components in that unit.
- Upgrade Unified CVP components in a sequence for a successful deployment. A change in upgrade sequence results in loss of call data and error or inability to configure properties that are introduced in the new version.
- Push the TCL and VXML files (from the location `C:\Cisco\CVP\GWDownloads\`) to their respective ingress and VXML gateways after the Unified CVP Operations Console is upgraded, but before any other Unified CVP components are upgraded.

## Pre-Upgrade Tasks

- Close all programs.
- Stop any third-party services and applications that are running on the server.
- Back up `C:\Cisco\CVP` for all Unified CVP components except Operations Console.



---

**Note** Unified CVP Server log files are saved in <CVP\_HOME>\logs; VXML Server log files are saved in <CVP\_HOME>\VXMLServer\logs and <CVP\_HOME>\VXMLServer\applications\<app\_name>\logs.

---

- Ensure that the servers are listed as supported hardware and sized appropriately. For information on platform hardware specifications and compatible third party software version requirements, see <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/products-technical-reference-list.html>.
- Back up the existing Unified CVP installation files onto a different computer for redundancy in case the automatic backup fails.
- Back up the property files of Unified CVP Server, OAMP, and Reporting Server that need modification. Restore them after upgrade is complete.

#### Related Topics

[Configure Virtual CPU Settings](#) , on page 25

[Upgrade Virtual Memory](#) , on page 26

[Upgrade Virtual Machine Hardware Version](#) , on page 26

[Expand Disk Space of Virtual Machines](#) , on page 27

## Upgrade Existing Unified CVP Virtual Machine

The following sections discuss the steps to upgrade the virtual machine hardware by using VMware vSphere Web Client (Thin Client).



---

**Note** You must not use VMware vSphere Client (Thick Client) to upgrade the virtual machine hardware.

---

### Configure Virtual CPU Settings

Complete the following procedure to change the virtual hardware resource setting for CPU on Unified CVP virtual machines.

- 
- Step 1** Power off the virtual machine.
  - Step 2** Right-click the virtual machine, choose **Edit Settings**.
  - Step 3** Click the **Virtual Hardware** tab.
  - Step 4** Click **CPU**.
  - Step 5** From the **Cores per Socket** drop-down list, select **1**.
  - Step 6** In the **Reservation** field, enter the CPU reservation speed (defined in MHz) for Unified CVP virtual machines.

For more information about virtual hardware resource setting for CPU and memory, see *Unified CVP Virtualization Wiki* available at [http://www.cisco.com/c/dam/en/us/td/docs/voice\\_ip\\_comm/uc\\_system/virtualization/virtualization-cisco-unified-customer-voice-portal.html](http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unified-customer-voice-portal.html).

**Step 7** Click **OK** to save the settings.

---

#### What to do next

Upgrade Virtual Memory

#### Related Topics

[Upgrade Virtual Memory](#), on page 26

## Upgrade Virtual Memory

Complete the following procedure to upgrade the system memory on Unified CVP virtual machines.

---

- Step 1** Ensure that the virtual machine is switched off.
- Step 2** Right-click the **Virtual Machine** and select **Edit Settings**.
- Step 3** Click the **Virtual Hardware** tab.
- Step 4** Click **Memory**.
- Step 5** In the **RAM** field, change the RAM value (in MB) of Unified CVP virtual machines as defined in the *Virtualization for Cisco Unified Customer Voice Portal* available at [https://www.cisco.com/c/dam/en/us/td/docs/voice\\_ip\\_comm/uc\\_system/virtualization/virtualization-cisco-unified-customer-voice-portal.html](https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unified-customer-voice-portal.html).
- Step 6** In the **Reservation** field, enter the RAM value (in MB) corresponding to Unified CVP VMs, as defined in the *Virtualization for Cisco Unified Customer Voice Portal*.
- Step 7** Click **OK** to save the settings.
- 

#### What to do next

Upgrade the Virtual Machine Hardware Version.

#### Related Topics

[Upgrade Virtual Machine Hardware Version](#), on page 26

## Upgrade Virtual Machine Hardware Version

Complete the following procedure to upgrade the virtual machine hardware version on Unified CVP virtual machines.

---

- Step 1** Ensure that the virtual machine is switched off.
- Step 2** Right-click the virtual machine and select **Edit Settings**.
- Step 3** Click the **Virtual Hardware** tab.
- Step 4** Click **Upgrade**.
- Step 5** Check the **Schedule VM Compatibility Upgrade** check box.
- Step 6** From the **Compatible with (\*)** drop-down list, choose one of the following options:
- **ESXi 6.5 with VMFS 5**

- ESXi 6.5 U2 and later updates with VMFS 6
- ESXi 6.7 with VMFS 6

**Step 7** Click **OK** to save the settings.

**Step 8** Power on the virtual machine.

---

### What to do next

Expand the Virtual Machines Disk Space

### Related Topics

[Expand Disk Space of Virtual Machines](#) , on page 27

## Expand Disk Space of Virtual Machines

Complete the following procedure to expand the virtual machines disk space on Unified CVP virtual machines.

---

**Step 1** Ensure that the virtual machine is switched off.

**Step 2** Right-click the virtual machine and choose **Edit Settings**.

**Step 3** Click the **Virtual Hardware** tab.

**Step 4** In the **Hard disk 1** field, change the disk size value (in GB) of the Unified CVP virtual machines, as defined in the *Virtualization for Cisco Unified Customer Voice Portal* available at [https://www.cisco.com/c/dam/en/us/td/docs/voice\\_ip\\_comm/uc\\_system/virtualization/virtualization-cisco-unified-customer-voice-portal.html](https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unified-customer-voice-portal.html).

**Step 5** Click **OK**.

**Step 6** Power on the virtual machine.

**Step 7** Log into your operating system.

**Step 8** Right-click **My PC** and select **Manage**.

**Step 9** Select **File and Storage Services > Disks**.

**Step 10** In the Volumes area, right-click **C drive** and select **Extend Volume...**

**Step 11** Change the disk size value (in GB) of the Unified CVP virtual machines as defined in the *Unified CVP Virtualization Wiki*.

**Step 12** Click **OK**.

**Step 13** Restart the server.

---

## Enable Resource Reservation on Upgraded Virtual Machine

After the virtual machine hardware version is upgraded based on the information provided in the *Virtualization for Cisco Unified Customer Voice Portal*, perform the following steps to enable resource reservation on the respective Unified CVP virtual machines.

For more information on supported virtual machine hardware versions, see available at [https://www.cisco.com/c/dam/en/us/td/docs/voice\\_ip\\_comm/uc\\_system/virtualization/virtualization-cisco-unified-customer-voice-portal.html](https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unified-customer-voice-portal.html).

- 
- Step 1** Login to vSphere Client and select the Unified CVP virtual machine.
- Step 2** Right-click the virtual machine and select the option **Edit Settings** from the popup menu. The **Virtual Machine Properties** window pops up.
- Step 3** Select the **Resources** tab. The Virtual Hardware Resource Setting that can be customized is shown in the left dialog box. The Resource Allocation for respective virtual hardware is shown in the right.
- Step 4** Enable resource reservation for Unified CVP virtual machines.
- Note** To enable the Virtual Hardware Resource reservation for Unified CVP virtual machines, the setting for CPU and memory must be modified. For information about virtual hardware resource setting for CPU and memory, see *Virtualization for Cisco Unified Customer Voice Portal* available at [https://www.cisco.com/c/dam/en/us/td/docs/voice\\_ip\\_comm/uc\\_system/virtualization/virtualization-cisco-unified-customer-voice-portal.html](https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unified-customer-voice-portal.html).
- Step 5** After the virtual hardware resource setting for CPU and memory for CVP virtual machines are set, click **OK** to close the VM Properties dialog box. The CVP virtual machine is reconfigured and the **Resource Reservation** is enabled.
- 

## Upgrade Windows Server

Microsoft supports an in-place upgrade of operating system.



- Note** By default, Windows Defender is enabled on Windows Server 2016. Windows Server 2016 upgrade will prompt to uninstall the antivirus due to compatibility issue with Windows Defender. To proceed with the upgrade, uninstall the antivirus. For more information on Windows Defender antivirus compatibility, see <https://docs.microsoft.com/en-us/windows/security/threat-protection/windows-defender-antivirus/windows-defender-antivirus-compatibility>.
- 

Complete the following procedure to upgrade your operating system on all virtual machines for server-based applications.

### Before you begin

- The same procedure can be followed to upgrade to Windows Server 2016 / Windows Server 2019.
- As a precautionary measure, follow the steps listed under the [Pre-Upgrade Tasks](#) section to preserve the existing version of CVP.
- Upgrading to Windows Server may delete static network configuration (for private and public interfaces) for all Windows virtual machines. Record your static network configurations, including TCP/IP IPv4 information before upgrading. Reconfigure these settings after the upgrade completes.
- Ensure that latest version of VMware Tools software is installed.
- Ensure that ESXi version of the host is ESXi 6.5 with VMFS 5, ESXi 6.5 U2 and later updates with VMFS 6, or ESXi 6.7 with VMFS 6.

- For operating system requirement, see the Compatibility Matrix at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.
- Change the guest operating system to **Microsoft Windows Server 2016**. To do so, right-click the virtual machine, and select **Edit settings > Options > General Options**. Select the guest operating system as **Microsoft Windows Server 2016**.
- During Windows Server 2016 upgrade, you might be prompted to uninstall anti virus owing to a change in behavior of Windows Server. Re-install the anti-virus after the upgrade.
- Server for NIS Tools is not supported when you upgrade the system to Microsoft Windows Server 2016. Therefore, remove the **Server for NIS Tools** feature from Server Manager before upgrading the system. To do that:
  1. Go to Server Manager and open **Remove Roles and Features Wizard**.
  2. On the **Remove Features** page, expand **Remote Server Administration Tools > Role Administration Tools > AD DS and AD LDS Tools > AD DS Tools**.
  3. Uncheck **Server for NIS Tools [DEPRECATED]** and continue with the wizard.

- 
- Step 1** Mount Windows Server ISO image to the virtual machine. Open the file explorer and double-click on the **DVD Drive** to run the Windows Server setup.
- Step 2** Select **Download & install updates** to let the installation go on smoothly. Click **Next**.
- Step 3** Select **Windows Server Desktop Experience**. Click **Next**.
- Step 4** Read the notes and license terms and then click **Accept**.
- Step 5** To retain existing Unified CVP configurations, files, services, and all associated settings intact after the in-place upgrade to Windows Server 2016, select **Keep personal files and apps**. Then click **Next**.
- Note** If you select **Nothing**, everything (including Unified CVP) in the existing Windows Server 2012 VM will be erased, and the system will be set up as a new Windows Server 2016 VM.
- Step 6** In case a Window is displayed with the title **What needs your attention**, click **Confirm** to proceed because existing Unified CVP on Windows Server 2012 has been successfully validated to be working on Windows Server 2016 when such an upgrade process is followed.
- Note** Once the upgrade begins, the system will restart multiple times without prompting until the upgrade is completed.
- Step 7** Use your existing credentials to log in to the system and ensure that Unified CVP-related services are up and running after the completion of Windows Server 2012 platform upgrade to Windows Server 2016.

---

### Related Topics

- [Configure Virtual CPU Settings](#), on page 25
- [Unload Data from Reporting Server Database](#), on page 48
- [Load Data to Reporting Server Database](#), on page 49
- [Configure Reporting Server in Operations Console](#), on page 49

# Upgrade Operations Console

The installed default media files are overwritten with the media format you choose for the Unified CVP upgrade; however, the customized media files are not overwritten during the upgrade. Customized media files, such as custom applications and Whisper Agent-Agent Greeting (WAAG), are retained in the format as they were prior to upgrade.



---

**Note** For Unified CVP upgrade, u-law is the default media file format type.

---

Following sections describe the various scenarios of Operations Console upgrade.

## Upgrade Operations Console 12.0(1) in U-law to Operations Console 12.5(1) in U-law

- 
- Step 1** Mount the Unified CVP ISO image.
  - Step 2** Navigate to `C:\CVP\installer_windows` and run `setup.exe`.  
The installer automatically detects the previous installation and guides you through the upgrade process.
  - Step 3** Restart the server.
  - Step 4** Navigate to the `C:\Cisco\CVP\conf` location and manually configure the Unified CVP properties file. For more information, see the Manual Configuration of Unified CVP Properties section.
  - Step 5** Restart the server.
- 

## Upgrade Operations Console 12.0(1) in U-law to Operations Console 12.5(1) in A-law

- 
- Step 1** Navigate to the `C:\Cisco\CVP\conf` location.
  - Step 2** Convert the custom media files, such as custom applications and Whisper Agent-Agent Greeting (WAAG), and applications that are in u-law to A-law.
  - Step 3** In the `cvp_pkgs.properties` file, add the `cvp-pkgs.PromptEncodeFormatALaw = 1` property at line 7 to enable the A-law flag.  
**Note** Ensure that you leave a space before and after the "=" sign.
  - Step 4** Mount the Unified CVP ISO image, and run `setup.exe`.
  - Step 5** Follow the instructions on the screen.
  - Step 6** Restart the server.



- Note**
- All the standard packaged media files and applications are installed in A-law format.
  - Custom media files, such as custom applications and Whisper Agent-Agent Greeting (WAAG) are retained in the format as they were prior to upgrade.

**Step 7** Navigate to the `C:\Cisco\CVP\conf` location and manually configure the Unified CVP properties file. For more information, see the Manual Configuration of Unified CVP Properties section.

**Step 8** Restart the server.

---

## Upgrade Operations Console 12.0(1) in A-law to Operations Console 12.5(1) in A-law

---

**Step 1** Navigate to the `C:\Cisco\CVP\conf` location.

**Step 2** In the `cvp_pkgs.properties` file, add the `cvp-pkgs.PromptEncodeFormatALaw = 1` property at line 7 to enable the A-law flag.

**Note** Ensure that you leave a space before and after the "=" sign.

**Step 3** Mount the Unified CVP ISO image and run `setup.exe`.

The installer automatically detects the previous installation, and guides you through the upgrade process.

**Step 4** Follow the instructions on the screen.

**Step 5** Restart the server.

- Note**
- All the standard packaged media files and applications are installed in the A-law format.
  - Custom media files, such as custom applications and WAAG, are retained in the format as they were prior to upgrade.

**Step 6** Navigate to the `C:\Cisco\CVP\conf` location and manually configure the Unified CVP properties file. For more information, see the Manual Configuration of Unified CVP Properties section.

**Step 7** Restart the server.

---

### What to do next

Load the IOS scripts into the Cisco IOS memory.

## Upgrade Operations Console 12.0(1) in A-law or U-law to Operations Console 12.5(1) in G729

---

**Step 1** Navigate to the `C:\Cisco\CVP\conf` location.

**Step 2** In the `cvp_pkgs.properties` file, add the `cvp-pkgs.PromptEncodeFormatG729 = 1` property at line 7 to enable the G729 flag.

**Note** Ensure that you leave a space before and after the "=" sign.

**Step 3** Mount the Unified CVP ISO image and run setup.exe.

**Step 4** Follow the instructions on the screen.

**Step 5** Restart the server.

**Note**

- All the standard packaged media files and applications are installed in G729 format.
- Custom media files, such as custom applications and Whisper Agent-Agent Greeting (WAAG) are retained in the format as they were prior to upgrade.

**Step 6** Navigate to the `C:\Cisco\CVP\conf` location and manually configure the Unified CVP properties file. For more information, see the Manual Configuration of Unified CVP Properties section.

**Step 7** Restart the server.

## Upgrade Unified CVP Reporting Server

You cannot upgrade CVP Reporting Server from 12.0 to 12.5 because the version of IBM Informix database server has changed. You need to uninstall CVP Reporting Server 12.0 and install CVP Reporting Server 12.5.

For more information, see [Migrate Unified CVP Reporting Server, on page 47](#).

## Upgrade Unified CVP Server

### Before you begin

For A-law implementation in Unified CVP Server, install the latest Unified CVP FCS build.



**Note** After successful upgrade of Unified CVP server, the **CVP Call Server Service Startup Type** is set to **Automatic** by default.

## Upgrade CVP Server 12.0(1) in U-law to CVP Server 12.5(1) in U-law

Perform Steps 1 to 4 of the Upgrade Operations Console 12.0(1) in U-law to Operations Console 12.5(1) in U-law procedure.

1. Log into Operations Console of the current version of Unified CVP and click **Bulk Administration > File Transfer > Scripts and Media**.
2. Load the gateway download transferred files into the Cisco IOS memory for each CVP service using the Cisco IOS **call application voice load <service\_name>** CLI command.
3. Restore any backed-up third-party libraries.

## Upgrade CVP Server 12.0(1) in U-law to CVP Server 12.5(1) in A-law

Perform Steps 1 to 8 of the Upgrade Operations Console 12.0(1) in U-law to Operations Console 12.5(1) in A-law.

## Upgrade CVP Server 12.0(1) in A-law to CVP Server 12.5(1) in A-law

Perform Steps 1 to 7 of the Upgrade Operations Console 12.0(1) in A-law to Operations Console 12.5(1) in A-law procedure.

## Upgrade CVP Server 12.0(1) in A-law or U-law to CVP Server 12.5(1) in G729

Perform Steps 1 to 7 of the Upgrade Operations Console 12.0(1) in A-law or U-law to Operations Console 12.5(1) in G729 procedure.

## Upgrade Remote Operations

---

- Step 1** Mount the Unified CVP ISO image, and run setup.exe.  
The installer automatically detects the installation and upgrade of Remote Operations and guides you through the upgrade process.
- Step 2** Follow the instructions on the Upgrade screens and click **Upgrade**.
- Step 3** Restart the Server.
- 

## Upgrade Unified Call Studio

---

- Step 1** Open Call Studio, right-click any existing project in the Navigator view, choose **Export**.  
The **Export** wizard opens.
- Step 2** Navigate to **General > File System**, and click **Next**.  
**Note** From the list displayed by the Export wizard, select multiple projects to export them simultaneously.
- Step 3** Browse to the directory where the projects will be exported and click **OK** and then click **Finish**.
- Step 4** Uninstall the Call Studio software.  
For more information, see the Unified CVP/Call Studio Uninstallation section.
- Step 5** Install the Call Studio software.  
For more information, see the Install Unified Call Studio section.
-

# Postupgrade Tasks

After you upgrade the Unified CVP components, synchronize the metadata files using the Sync-up tool. For more information, see [Initiate Metadata Synchronization for Unified CVP Rest API, on page 19](#).



---

**Note** After upgrade, restart the **WebServicesManager** service to use system CLI.

---



---

**Note**

- If you are using a VRU connection port other than the default port (5000), then click **Save and Deploy** of Unified CVP Call Server from OAMP.
- If you have added the certificates in .ormkeystore, then add them again in .keystore.

---



---

**Note** Execute the following command to retrieve the password for keytool.

```
more %CVP_HOME%\conf\security.properties.
```

The output of the command is `Security.keystorePW = <Returns the keystore password>`.

---



---

**Note** Execute the following steps for Smart Licensing to work after upgrading to CVP 12.5(1).

1. Redeploy all Call Servers and VXML Servers from OAMP.
  2. Restart the services.
- 



---

**Note** VMWare Tools do not get updated automatically after upgrading to CVP 12.5 on Windows Server 2016 and rebooting the machine.

**Workaround:** Execute the following steps to update the VMWare Tools manually.

1. Right-click on the VM.
  2. Go to **Guest OS** and select **Upgrade VMWare Tools**.
- 

## Related Topics

[Initiate Metadata Synchronization for Unified CVP Rest API, on page 19](#)

[Unified CVP Redeployment, on page 51](#)

## Manual Configuration of Unified CVP Properties

The following table lists the procedure to manually configure the Unified CVP properties files based on the upgrade path.

*Table 7: Manual Configuration of Unified CVP Properties*

<b>Component</b>	<b>Upgrade Path</b>	<b>Procedure</b>
CVP Server	12.0(1) to 12.5(1)	

Component	Upgrade Path	Procedure
		<ol style="list-style-type: none"> <li>1. Open the <code>vxml.properties</code> file and add the following entry:           <pre>VXML.usagefactor = 1.0</pre> </li> <li>2. Open the <code>sip.properties</code> file and add the following entry:           <pre>SIP.CloudConnect.RequestTimeout = 6000 SIP.CloudConnect.publisherAddress = SIP.CloudConnect.subscriberAddress = SIP.CloudConnect.CreateMeetingApi = /evapoint/meeting/create SIP.CloudConnect.username = SIP.CloudConnect.DeleteMeetingApi = /evapoint/meeting/end SIP.CloudConnect.password = SIP.CloudConnect.StatusApi = /evapoint/status #Cloud connect Survey Endpoint API SIP.CloudConnect.SurveyEndPointApi = /cherrypoint/surveyendpoint  SIP.CloudConnect.AuthTokenApi = /cherrypoint/authtoken  #CloudCherry Customer ID SIP.CloudCherry.CustomerID = icm #CloudCherry Email ID SIP.CloudCherry.CustomerEmailID = abc@cc.demo.com  SIP.CloudCherry.SurveyValidityTime = 300000</pre> </li> <li>3. Open the <code>ivr.properties</code> file and add the following entry:           <pre>IVR.AuthTokenRefreshTimeOut = 1800 IVR.SurveyTokenRefreshTimeOut = 43200 IVR.SurveyQuestionRefreshTimeOut = 43200 IVR.WxmSurveyTokenApiUrl = https://api.getcloudcherry.com/api/SurveyToken IVR.WxmSurveyQuestionsApiUrl = https://api.getcloudcherry.com/api/Questions/Questionnaire IVR.WxmSurveyAnswersSubmitApiUrl = https://api.getcloudcherry.com/api/SurveyByToken/ IVR.WxmSurveySettingsApiUrl = https://api.getcloudcherry.com/api/Settings/ IVR.WxmAudioUrl=https://api.getcloudcherry.com/api/StreamUserAsset/ IVR.WxmSurveyQuestionnaireUrl = https://api.getcloudcherry.com/api/surveyquestionnaire/  #Cloud Cherry batch properties (thresholds to trigger the SMS/Email Cloud Connect API) IVR.CloudCherryBatchSize = 100 #Or optimized value IVR.CloudCherryBatchTimeout = 60 #Or optimized value</pre> </li> <li>4. Add the following entries in the respective files:           <pre><b>jmx_callserver.conf</b> com.sun.management.jmxremote.rmi.port = 2097 com.sun.management.jmxremote.ssl.enabled.protocols=TLSv1.2</pre> </li> </ol>

Component	Upgrade Path	Procedure
		<pre> <b>jmx_oamp.conf</b> com.sun.management.jmxremote.rmi.port = 10000 com.sun.management.jmxremote.ssl.enabled.protocols=TLSv1.2  <b>jmx_vxml.conf</b> com.sun.management.jmxremote.rmi.port = 9697 com.sun.management.jmxremote.ssl.enabled.protocols=TLSv1.2  <b>jmx_wsm.conf</b> com.sun.management.jmxremote.rmi.port = 10003 com.sun.management.jmxremote.ssl.enabled.protocols=TLSv1.2  <b>orm_jmx.properties</b> com.sun.management.jmxremote.rmi.port=3000 com.sun.management.jmxremote.ssl.enabled.protocols=TLSv1.2 </pre> <p>5. Restart the CVP and VXML services.</p>
WebServices Manager	12.0(1) to 12.5(1)	No configuration required.
Operations Console	12.0(1) to 12.5(1)	No configuration required.
Reporting Server	12.0(1) to 12.5(1)	No configuration required.





## CHAPTER 6

# Unified CVP/Call Studio Uninstallation

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- [Uninstall Unified CVP/Call Studio From Windows Control Panel, on page 39](#)
- [Uninstall Unified CVP/Call Studio Using Installation Media, on page 39](#)

## Uninstall Unified CVP/Call Studio From Windows Control Panel

### Before you begin

- Shut down all applications and close all open files.
- Close the Unified CVP component and related files.

---

**Step 1** Click **Start** > **Control Panel** > **Programs and Features**.

**Step 2** Click **Cisco Unified Customer Voice Portal / Cisco Unified Call Studio**, and then click **Remove**.

**Step 3** Click **Next**.

After uninstallation, the **Uninstall Complete** screen appears. Depending on the components you uninstalled, you may need to reboot your computer.

**Note** The Unified CVP uninstallation procedure does not clean up all the files and folders, such as log files, media files and folders that are generated postinstallation. Media folders with same names are replaced during the Unified CVP installation process. User-created media files and folders remain unchanged during Unified CVP upgrade. Create all the media folders in `wwwroot` and use the relative paths to simplify the migration process for the future releases of Unified CVP that support A-law, u-law, and G729 files.

---

## Uninstall Unified CVP/Call Studio Using Installation Media

### Before you begin

- Shut down all applications and close all open files.
- Close Unified CVP component and related files.

---

**Step 1** Run the *setup.exe* file of the Unified CVP software.

**Step 2** Select the **Remove** option, and click **Next**.

The **Uninstall Complete** screen appears. Depending on the components you uninstalled, you may need to reboot your computer.

**Note** The Unified CVP uninstallation procedure does not clean up all the files and folders, such as log files, media files and folders that are generated postinstallation. The media folders with same names get replaced during the Unified CVP installation process. The user created media files and folders remains unchanged during Unified CVP upgrade. It is required to create all the media folders in the `wwwroot` and use the relative paths, as it simplifies the migration process for the future releases of Unified CVP that supports A-law, u-law, and G729 files.

---



## CHAPTER 7

# Unified CVP Migration

If there is a change in platform of a later release of Unified CVP, migration from the existing release to the later release is required. For example, moving from Unified CVP 12.0(1) on Windows Server 2012 to Unified CVP 12.5(1) is considered a migration because it involves a change in operating system (Windows Server 2012 to Windows Server 2016), platform, or architecture of the later release.

Migration can also involve moving to a new hardware or a software and moving from one database to another database. Migration of database requires converting the data into a common format that can be used as output from the old database and saved into the new database.



---

**Note** If you have enabled secure communication, see the *Unified CVP Security* chapter in *Configuration Guide for Cisco Unified Customer Voice Portal* for instructions on uploading certificate for the secure communication.

---

- [Premigration Tasks](#), on page 41
- [Migrate Operations Console](#), on page 42
- [Migrate Unified CVP Call Server](#), on page 44
- [Migrate Unified CVP VXML Server](#), on page 45
- [Migrate Unified Call Studio](#), on page 46
- [Migrate Unified CVP Reporting Server](#), on page 47
- [Upgrade Windows Server](#), on page 49
- [Unified CVP Redeployment](#), on page 51

## Premigration Tasks

### Before you begin

- Back up the Unified CVP installation files and data onto a different computer for redundancy.



---

**Important** You cannot roll back to an earlier version of Unified CVP after you initiate migration. Back up the installation files and data before you begin the migration process.

---

- Uninstall Cisco Security Agent.

- (Optional) Deploy additional servers if you choose to deploy Reporting Server.
- (Optional) Standalone distributed diagnostics and service network (SDDSN) is no longer required. If you have SDDSN servers, decommission these servers or use them for another purpose.
- Deploy Operations Console. For deployment of Operations Console, see *Configuration Guide for Cisco Unified Customer Voice Portal* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/tsd-products-support-series-home.html>.
- (Optional) Gatekeepers are not required in SIP implementations. Decommission gatekeepers or in some cases convert them to use as ingress or VXML gateways (or both) if you choose to use SIP for the implementation.
- (Optional) SIP Proxy servers and DNS servers for SIP message routing are optional components for SIP implementation. Add these components to the network if you intend to use them.




---

**Note** SIP Proxy servers and DNS servers cannot co-reside with other Unified CVP product components.

---

- Ensure that the version of Cisco IOS supports the required hardware.




---

**Note** If you are using an older gateway or gatekeeper hardware, the version of Cisco IOS that is required in this release may no longer support the required hardware. Hence, you need to purchase new hardware.

---

- Migrate the operating system. For more information, see the Compatibility Matrix available at <https://cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.

## Migrate Operations Console

To migrate Operations Console, back up and restore the CVP Operations Console configuration. To know whether a change in platform is required, see the *Upgrade Path* section.

### Related Topics

[Upgrade Path](#), on page 22

## Back Up Operations Console Configuration

- 
- Step 1** Log in to Operations Console.
- Step 2** On the Operations Console page, click **System > Export System Configuration > Export**.
- Step 3** Manually copy the sip.properties file.  
CVP Operations Console cannot export the sip.properties file.

For more information on Unified CVP Console Configuration, see *Administration Guide for Cisco Unified Customer Voice Portal* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/tsd-products-support-series-home.html>.

**Step 4** Save the `CVP-OpsConsole-Backup.zip` file.

**Note** This file is password protected and can be opened only by the target OAMP server if the administrator password (at least 12 characters long) matches that of the server from where it is exported.

---

#### What to do next

- Save the exported configuration and custom files on network storage media or a portable storage media.
- Ensure that you are able to access the shared storage media from the Windows Server Machine.

## Restore Operations Console Configuration

#### Before you begin

- For latest operating system, see the Compatibility Matrix at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.
- Export the Operations Console configuration from the older version to migrate it to the new version.

---

**Step 1** Stop Cisco CVP WebServicesManager service.

- a) Click **Start > All Programs > Administrative Tools > Services**.
- b) In the list of services names, select Cisco CVP WebServicesManager and click **Stop**.

**Step 2** Import the saved Operations Console configuration.

**Note** Ensure that the administrator's password (at least 12 characters long) for the new OAMP server matches the password of the source OAMP server.

- a) On the Operations Console page, click **System > Import System Configuration**.
- b) Click **Browse** and select the filename from the location where you saved the Operations Console configuration files of the previous version.
- c) Click **Import**.
- d) Copy the custom files and sip.properties files from the location where you saved the Operations Console configuration to their corresponding Unified CVP directories to complete the restore operation.

**Note** If you have not restored the backup containing the user-related information from the earlier version of Unified CVP, then skip to Step 5.

**Step 3** In the Operations Console page, click **Device management > Reporting Server > Database Administration**.

**Step 4** Delete the Reporting Users that are created in the earlier version of Unified CVP.

**Note** Creating the new users that are the same as the existing users does not work.

- Step 5** Set the same password for the existing user that you imported from the earlier versions of CVP Operations Console.
- Click **Server Manager > Configuration > Local Users and Groups > Users**.
  - Right-click the existing username and click **Set Password**.
  - On the **Set Password** screen, click **Proceed**.
  - Type the old password and confirm the new password.
  - Click **OK**.

- Step 6** Restart Cisco Unified CVP Operations Console and Cisco CVP WebServicesManager.
- Click **Start > All Programs > Administrative Tools > Services**.
  - Select Cisco CVP Operations Console Server.
  - Click **Restart**.

The CVP Operations Console Server service starts in the Services window.

- Select Cisco CVP WebServicesManager.
- Click **Restart**.

The Cisco CVP WebServicesManager starts in the Services window.

---

All the existing CVP Operations Console data including the CVP Operations Console login credentials get overwritten by the new data that is imported from the saved CVP Operations Console configuration.

## Secure Communication with Operations Console

---

To secure communication between Operations Console and CVP components, on the Operations Console page, click **Enable Secured Communication with the Operations Console**.

For configuring the security certificate exchange between Operations Console and CVP components, see the *Configuration Guide for Cisco Unified Customer Voice Portal* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-customer-voice-portal/tsd-products-support-series-home.html>.

---

## Migrate Unified CVP Call Server

### Before you begin

- Back up existing Unified CVP installation onto a different computer for redundancy.
- If you are migrating from Windows Server 2012 R2 Standard Edition to Windows Server 2016, assign the IP address and hostname of the previous Unified CVP to the later release.
- Install the latest Unified CVP server component.

**Step 1** Log in to Operations Console and select **Device Management > Unified CVP Call Server**.

**Step 2** Select the Unified CVP Call server with the chosen IP address and the hostname.

- Step 3** Click **Edit**.
- Step 4** Click **Save and Deploy** to deploy the configuration to Unified CVP Call Server.
- Step 5** Click **System > SIP Server Groups**.
- On the SIP Server Groups screen, verify that the data is populated from the previous OAMP configuration importing step.
- Step 6** Click **Save and Deploy** and confirm that the operation has completed successfully.
- Step 7** Select **System > Dialed Number Pattern**.
- In the **Dialed Number Pattern** screen, verify that the data is populated from the previous OAMP configuration importing step.
- Step 8** Click **Deploy**.
- Step 9** Select **Device Management > Media Server**.
- Step 10** From the **Default Media Server** drop-down list, choose the appropriate media server.
- Step 11** Click **Set**.
- Step 12** Click **Deploy**.
- Step 13** From the Media Server that is installed on the computer, select **Internet Information Services > Sites**.
- To add a new group to the list, click **Add** and select **Everyone**.
  - To give full control to group **Everyone**, check the **Full Control** check box.
- Step 14** From the FTP site, click **Restart** to restart the FTP server.
- Note** If you want to configure Unified CVP Call Server as Media Server and use the agent greeting recording, then you must enable FTP on the Media Server. If Microsoft FTP Service is not enabled in Windows Services Control Panel, then set it to Automatic and start the service.

## Migrate Unified CVP VXML Server

### Before you begin

- Ensure that the Unified CVP VXML Server and Unified Call Studio are of the same version so that Unified Call Studio can work with the Unified CVP VXML Server.
- Ensure that you have licenses for all Unified CVP components.



**Note** If you do not apply licenses to the migrated components, the software runs in evaluation mode.

- Back up any custom audio files from `%CATALINA_HOME%/webapps/CVP/audio`.
- Back up third-party libraries, such as .class or .jar files, at:

```
%CVP_HOME%\VXMLServer\common\classes
```

```
%CVP_HOME%\VXMLServer\common\lib
%CVP_HOME%\VXMLServer\applications\APP_NAME\java\application\classes
%CVP_HOME%\VXMLServer\applications\APP_NAME\java\application\lib
%CVP_HOME%\VXMLServer\applications\APP_NAME\java\util
```

where APP\_NAME is the name of deployed voice application.

- Install Unified CVP Server. See [Install Unified CVP Server, on page 10](#).

- 
- Step 1** Log in to Operations Console and select **Device Management > Unified CVP VXML Server**.
- Step 2** Select the Unified CVP VXML Server with the chosen IP address and the hostname.
- Step 3** Click **Edit** and select the Unified CVP VXML Server configuration for editing.
- Step 4** Click **Save and Deploy** to deploy the configuration to the new Unified CVP VXML Server.
- Step 5** (Optional) If you need a secure connection between the Operations Console and Unified CVP VXML Server, configure SSL certificates.
- Step 6** Restore the audio files to the %CATALINA\_HOME%\webapps\CVP\audio folder.
- Step 7** Restart Cisco CVP VXML Server and VXMLServer service.
- 

### What to do next

To configure the Unified CVP VXML Server using Operations Console, see *Configuration Guide for Cisco Unified Customer Voice Portal*.

## Migrate Unified Call Studio

### Before you begin

- Back up all audio files.




---

**Note** Audio files are deployed to %CATALINA\_HOME%\webapps\CVP\audio are deleted. %CATALINA\_HOME% implies the Tomcat installation directory.

---

- Launch the Call Studio application.
- Ensure that you have licenses for all Unified CVP components.




---

**Note** If you do not apply licenses to migrated components, then the software runs in the evaluation mode.

---

- In the **Navigator** view, right-click the project, and click **Export**.





---

**Note** Export Unified Call Studio projects to offline media, if they are not stored in version-control systems. You can export multiple projects simultaneously by unchecking them from the list that Export wizard displays.

---

---

**Step 1** Select the **Existing Cisco Unified CVP Project into Workspace** option to import the projects.

The import process upgrades the projects to the format of the new release, if necessary.

**Note** If you check out applications from a source repository rather than importing from the file system, you can still import the applications to Call Studio project to start the conversion process. In addition, for the first check-in after importing, all files in each project are considered modified and you need to update them in the repository.

**Step 2** Recompile any custom components that were compiled in the earlier versions of Java.

Review the list of Java changes that may affect backward compatibility and make any required updates. You can locate the compatibility page at <http://www.oracle.com/technetwork/java/javase/downloads/index.html>.

**Step 3** Deploy all projects, including the newly recompiled components from the previous step, to the appropriate Cisco Unified CVP VXML Servers.

Use Operations Console for bulk transfer of the project to multiple Unified CVP VXML Servers in one step.

---

## Migrate Unified CVP Reporting Server

### Before you begin

Retain the call data during migration by unloading the existing databases of Unified CVP.

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**Step 1** Unload data from Reporting Server Database.

**Step 2** Uninstall Reporting Server.

**Step 3** Upgrade Microsoft Windows Server.

**Step 4** Install Reporting Server.

**Step 5** Load data to Reporting Server Database.

**Step 6** Configure Unified CVP Reporting Server in Operations Console.

---

### Related Topics

[Unload Data from Reporting Server Database](#), on page 48

[Load Data to Reporting Server Database](#), on page 49

[Configure Reporting Server in Operations Console](#), on page 49

## Prepare Unified CVP Reporting Server

---

- Step 1** Install Unified CVP Reporting Server on Windows Server.
- Note** Ensure that the Unified CVP Reporting database is active.  
Start the Informix IDS - CVP service in Windows Service Manager.

**Step 2** From the command prompt, run **dbaccess**, and then select a database.

**Step 3** Select the following databases and press **Return**.

- callback
  - ciscoadmin
  - cvp\_data
- 

## Unload Data from Reporting Server Database

---

**Step 1** Log in as `cvp_dbadmin` user to Unified CVP.

**Step 2** Stop **Cisco CVP Call Server** service from Windows Service Manager.

- Note** Ensure that enough disk space is available to unload data. To check the disk space (in MB), run the query:
- ```
select sum(tabsize(tabname)) from systables where tabid>99
```
- OR- go to **OAMP > Unified CVP Reporting Server > Database Administration > Database details**.

**Step 3** Access the Unified CVP installation file.

**Step 4** From the command prompt, change the directory to the migration folder.

- Note** You can also copy the migration folder to the local disk and run the unload script directly.

**Step 5** Locate the `migrate_unload.bat` file.

**Step 6** By default, the data is exported to `c:\migration`. Ensure that this path exists. If you want to change the default path, then update the path in `unl.sql`:

```
create procedure unld(path char(128) default "c:\migration\") RETURNING char(128)
```

**Step 7** Run the following command to unload the Reporting Server database:

```
migrate_unload.bat
```

After running the script, a set of `.unl` files is created under the path provided. The `.unl` files are exported to `c:\migration`. This folder must have full access permission for `cvp_dbadmin` user.

**Step 8** Copy the exported migration folder to the Unified CVP database Reporting Server.

- Note** Reduce the retention period for data and execute a purge to reduce the data to migrate.

**Step 9** Start **Cisco CVP Call Server** service from Windows Service Manager.

---

## Load Data to Reporting Server Database

### Before you begin

Stop all Purge Procedures from the Task Scheduler before loading the database. If this is not followed, there is a risk of losing important data rows.

---

**Step 1** Open the Unified CVP installation file.

**Step 2** Stop **Cisco CVP Call Server** service from Windows Service Manager.

**Step 3** Go to **CVP > Migration**.

**Step 4** Copy the migration folder to the local disk and run the load script directly. From the command prompt, change the directory to the migration folder.

**Step 5** On the local disk, locate the .unl files that you want to load into the Unified CVP database and copy them into the migration folder.

**Step 6** Run the following command as an administrator to load the Unified CVP database: `migrate_load.bat`

**Note** If the .unl files are located in `c:\migration`, you must run the script load as `migrate_load.bat`.

This script loads all the three Unified CVP Reporting databases with the previous call data to the Unified CVP Reporting database.

**Note** The load runs at a rate of about 1GB/10 minutes approximately.

**Step 7** Start **Cisco CVP Call Server** service from Windows Service Manager.

---

## Configure Reporting Server in Operations Console

**Step 1** Import the Operations Console configuration and redeploy the Unified CVP Reporting Server to retain the same IP address as that of Unified CVP.

**Step 2** If the IP address of the server is changed, then delete the previous instance of the server and add the new Unified CVP Reporting Server to Operations Console, and then deploy the server.

---

## Upgrade Windows Server

Microsoft supports an in-place upgrade of operating system.



**Note** By default, Windows Defender is enabled on Windows Server 2016. Windows Server 2016 upgrade will prompt to uninstall the antivirus due to compatibility issue with Windows Defender. To proceed with the upgrade, uninstall the antivirus. For more information on Windows Defender antivirus compatibility, see <https://docs.microsoft.com/en-us/windows/security/threat-protection/windows-defender-antivirus/windows-defender-antivirus-compatibility>.

Complete the following procedure to upgrade your operating system on all virtual machines for server-based applications.

### Before you begin

- The same procedure can be followed to upgrade to Windows Server 2016 / Windows Server 2019.
- As a precautionary measure, follow the steps listed under the [Pre-Upgrade Tasks](#) section to preserve the existing version of CVP.
- Upgrading to Windows Server may delete static network configuration (for private and public interfaces) for all Windows virtual machines. Record your static network configurations, including TCP/IP IPv4 information before upgrading. Reconfigure these settings after the upgrade completes.
- Ensure that latest version of VMware Tools software is installed.
- Ensure that ESXi version of the host is ESXi 6.5 with VMFS 5, ESXi 6.5 U2 and later updates with VMFS 6, or ESXi 6.7 with VMFS 6.
- For operating system requirement, see the Compatibility Matrix at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.
- Change the guest operating system to **Microsoft Windows Server 2016**. To do so, right-click the virtual machine, and select **Edit settings > Options > General Options**. Select the guest operating system as **Microsoft Windows Server 2016**.
- During Windows Server 2016 upgrade, you might be prompted to uninstall anti virus owing to a change in behavior of Windows Server. Re-install the anti-virus after the upgrade.
- Server for NIS Tools is not supported when you upgrade the system to Microsoft Windows Server 2016. Therefore, remove the **Server for NIS Tools** feature from Server Manager before upgrading the system. To do that:
  1. Go to Server Manager and open **Remove Roles and Features Wizard**.
  2. On the **Remove Features** page, expand **Remote Server Administration Tools > Role Administration Tools > AD DS and AD LDS Tools > AD DS Tools**.
  3. Uncheck **Server for NIS Tools [DEPRECATED]** and continue with the wizard.

- 
- Step 1** Mount Windows Server ISO image to the virtual machine. Open the file explorer and double-click on the **DVD Drive** to run the Windows Server setup.
- Step 2** Select **Download & install updates** to let the installation go on smoothly. Click **Next**.
- Step 3** Select **Windows Server Desktop Experience**. Click **Next**.
- Step 4** Read the notes and license terms and then click **Accept**.

**Step 5** To retain existing Unified CVP configurations, files, services, and all associated settings intact after the in-place upgrade to Windows Server 2016, select **Keep personal files and apps**. Then click **Next**.

**Note** If you select **Nothing**, everything (including Unified CVP) in the existing Windows Server 2012 VM will be erased, and the system will be set up as a new Windows Server 2016 VM.

**Step 6** In case a window is displayed with the title **What needs your attention**, click **Confirm** to proceed because existing Unified CVP on Windows Server 2012 has been successfully validated to be working on Windows Server 2016 when such an upgrade process is followed.

**Note** Once the upgrade begins, the system will restart multiple times without prompting until the upgrade is completed.

**Step 7** Use your existing credentials to log in to the system and ensure that Unified CVP-related services are up and running after the completion of Windows Server 2012 platform upgrade to Windows Server 2016.

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#### Related Topics

[Configure Virtual CPU Settings](#), on page 25

[Unload Data from Reporting Server Database](#), on page 48

[Load Data to Reporting Server Database](#), on page 49

[Configure Reporting Server in Operations Console](#), on page 49

## Unified CVP Redeployment

You can redeploy an existing Unified CVP component from Operations Console.

### Redeploy Operations Console

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See [Migrate Operations Console](#), on page 42.

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#### Related Topics

[Migrate Operations Console](#), on page 42

### Redeploy Unified CVP Server

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See [Migrate Unified CVP Call Server](#), on page 44 and [Migrate Unified CVP VXML Server](#), on page 45.

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#### Related Topics

[Migrate Unified CVP Call Server](#), on page 44

[Migrate Unified CVP VXML Server](#), on page 45

## Redeploy Unified CVP Reporting Server

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- Step 1** Reinstall the Unified CVP Reporting Server.
  - Step 2** Save and deploy the Unified CVP Reporting Server in Operations Console.
  - Step 3** Restart the Unified CVP Reporting Server.
  - Step 4** Redeploy courtesy callback system-level configuration, if applicable.
  - Step 5** Redeploy SNMP configuration, if applicable.
- 

## Redeploy Unified Call Studio

See the Migrate Unified Call Studio section.

### Related Topics

[Migrate Unified Call Studio](#), on page 46



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