



# **Cisco Customer Voice Portal (CVP) Software Release 3.1(0) Hardware and System Software Specification (Bill of Materials)**

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## Cisco CVP Software Release 3.1(0) Hardware and Software Specification (Bill of Materials)

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## Overview

This document is the recommended Bill of Materials for Cisco Customer Voice Portal version 3.1(0) (referenced herein as “CVP”). It provides platform hardware specifications and compatible third party software version requirements across the major components of the Cisco CVP platform.

Requirements for the CVP systems are listed by major component, both basic CVP nodes and corresponding options, including multi-media servers. Hardware specifications are supplied for these components.

The Cisco CVP product is, by design, highly scalable and is configured across multiple deployment and call routing scenarios. Optimal sizing and component configuration for a given deployment will vary based on a number of factors, including agent capacity, call rate and call flow model(s), and other factors. Cisco strongly recommends consultation with your Cisco Certified Partner or with Cisco World Wide Voice Practice / Advanced Services prior to specific deployment selection.

The hardware specifications supplied herein for CPU processor power, memory and disk storage requirements, and related parameters represent systems minimally configured for adequate performance in the given size category. As specified, such systems will afford a margin for reasonable incremental growth within the bounds of that category. While it is likely that lower capacity hardware would provide adequate performance in many scenarios, the specifications as stated are those on which the CVP product is qualified by Cisco prior to release.

**Note:** Using hardware with higher performance than recommended does not necessarily result in greater call handling capacity.

**NOTE:** Use of products not specified in this document may adversely impact system performance.

## About the CVP 3.1 BOM

The software versions referenced in this Bill of Materials represents the current supported versions for the CVP 3.1 solution. However, Cisco will continue to support customers who deployed ISN or CVP systems using earlier supported versions.

Information regarding previous supported versions can be found in the Bill of Materials for Cisco Enterprise Contact Routing--Release 5.0(0) at:<http://www.cisco.com/univercd/cc/td/doc/product/icm/ccubom/ccubom.pdf> or in the Cisco Customer Voice Portal Cisco Internet Service Node Version 2.1 Technical Reference, which can be found at [http://www.cisco.com/en/US/products/sw/custcosw/ps1006/products\\_data\\_sheet0900aec800fd924.html](http://www.cisco.com/en/US/products/sw/custcosw/ps1006/products_data_sheet0900aec800fd924.html).

## Newly Supported

Customer Voice Portal 3.1 adds compatibility with the following hardware and software:

- WebSphere® Application Server 5.1.1.3
- WebSphere® Voice Server 5.1.2 (Linux only)
- Cisco Catalyst 6500 Communication Media Module (CMM) as an H.323 Ingress and Egress gateway device
- Cisco PGW 2200 Softswitch

The CVP provides the following takeback and transfer methods that you can invoke from CVP VoiceXML, ICM, and survivability scripts:

- Two B-Channel Transfer (TBCT) - A call transfer standard for ISDN interfaces. This feature enables a Cisco voice gateway to request an NI-2 switch to directly connect two independent calls. The two calls can be served by the same PRI or by two different PRIs on the gateway. The PRI interface must be subscribed to TBCT service from an ISDN service provider.
- Hookflash Relay - A brief interruption in the loop current that the originating call entity (PBX or Public Switch Telephone Network switch) does not interpret as a call disconnect. Instead, once the PBX or Public Switch Telephone Network switch senses the hookflash, it puts the current call on hold and provides a secondary dial tone, which allows the CVP to transfer the caller to another destination.

## Cisco Media Convergence Servers

Supplied hardware options include the Cisco Media Convergence Servers (MCS) platform, a Cisco supplied and qualified server platform built using components from several leading server hardware vendors. The available MCS platforms for CVP 3.1 at this writing are the 7845-H1-3.0-CCI (Hewlett-Packard) and MCS-7845-I1-CC1 (IBM). If using MCS-7845-I1-CC1, you must execute the IBM-NicNameX.exe utility, which can be downloaded from <http://www.cisco.com/cgi-bin/tablebuild.pl/cmva-3des>. The Customer Voice Portal Hardware and Software Specification provides a mapping of CVP component server requirements to the appropriate MCS model across the configuration range.

The Cisco Media Convergence Server (MCS) Network Teaming Driver is not supported with CVP 3.1.

More information on Cisco 7800 Series Media Convergence Servers may be found at the following Cisco.com link:  
<http://www.cisco.com/en/US/products/hw/voiceapp/ps378/index.html>

## Supported Third Party Software

Node	All Nodes
Software	<p>Remote Administration:</p> <p>Symantec pcANYWHERE 11.0                      RealVNC 4.0                      Windows Terminal Services (server administration only – no Application GUI access)</p> <p>Virus protection:                      McAfee VirusScan Enterprise 8.0i                      Symantec AntiVirus Corporate Edition 9.0                      Trend 5.5.8</p> <p>Microsoft Internet Explorer 6.0 Service Pack 1 (minimum)</p> <p>Optional:</p> <p>Intrusion Prevention System: Cisco Security Agent for Cisco Customer Voice Portal:  <a href="http://www.cisco.com/kobayashi/sw-center/contact_center/csa/">http://www.cisco.com/kobayashi/sw-center/contact_center/csa/</a> (Note: CSA is not supported for Terminal Services)</p> <p>WinZIP                      Adobe Acrobat Reader</p>

# Hardware/Software Requirements

## CVP Application Server/CVP Voice Browsers

Node	CVP Application Server/CVP Voice Browser
Cisco Media Convergence Servers (MCS)	<p>MCS-7845-H1-3.0-CC1, MCS-7845-I1-CC1</p> <p><b>Note:</b> The MCS hardware is an option. Equivalent or faster servers from HP and IBM are also supported.</p> <p><b>Note:</b> If using MCS-7845-I1-CC1, you must execute the IBM-NicNameX.exe utility, which can be downloaded from <a href="http://www.cisco.com/cgi-bin/tablebuild.pl/cmva-3des">http://www.cisco.com/cgi-bin/tablebuild.pl/cmva-3des</a>.</p>
Minimum Recommended Hardware	<p>2 x 2.6GHz or greater Intel "Xeon" class processors</p> <p>2048+ MB RAM</p> <p>18.2+ GB usable disk space</p> <p>Internal CD-ROM or DVD-ROM drive</p> <p>1 x 10/100/1000 Ethernet ports</p>
Operating System	<p>Microsoft Windows 2000 Server with Service Pack 4</p> <p><b>Note:</b> Microsoft provides as an option the Integrated Service pack that simultaneously installs the operating system and Service Pack 4. Cisco <i>does not</i> support the Integrated Service Pack method. Apply Service Pack 4 only after Windows 2000 Server has been installed.</p> <p>Cisco IP Telephony (IPT) Operating System 2000.2.7 with the most up-to-date SR applied (supported only on the MCS and the HP equivalent machines).</p> <p><b>Note:</b> To apply the latest Operating System Service Upgrade Release, go to <a href="http://www.cisco.com/cgi-bin/tablebuild.pl/cmva-3des">http://www.cisco.com/cgi-bin/tablebuild.pl/cmva-3des</a></p>
Additional Items	<p>Application Server machines require the Windows 2000 Internet Information Admin Service (IIS), World Wide Web Publishing Services and SNMP (Simple Network Management Protocol).</p>

## CVP VoiceXML Server (optional)

Node	CVP VoiceXML Server
Minimum Recommended Hardware	<p>2 x 2.6GHz or greater Intel "Xeon" class processors</p> <p>2048+ MB RAM</p> <p>18.2+ GB usable disk space</p> <p>Internal CD-ROM or DVD-ROM drive</p> <p>1 x 10/100/1000 Ethernet ports</p>
Operating System	<p>Microsoft Windows 2000 Server with Service Pack 4</p> <p><b>Note:</b> To apply the latest Operating System Service Upgrade Release, go to <a href="http://www.cisco.com/cgi-bin/tablebuild.pl/cmva-3des">http://www.cisco.com/cgi-bin/tablebuild.pl/cmva-3des</a></p>
Additional Items	<p>Cisco supports the Apache Tomcat Java Application Server version 4.1.24 and WebSphere Application Server version 5.1.1.3 for CVP VoiceXML Server. SNMP is optional for logging and reporting.</p>

## CVP VoiceXML Studio (optional)

Node	CVP VoiceXML Studio
Minimum Recommended Hardware	800 MHz Intel Pentium III (or equivalent) 256 MB minimum memory, 512 MB recommended 100 MB minimum free hard disk space, 2 GB recommended 1024 x 768 minimum display
Operating System	Microsoft Windows 2000 Server with Service Pack 4 Microsoft Windows XP with Service Pack 2

## Media Server (optional)

Node	Media Server
Minimum Recommended Hardware	Use vendor recommended hardware.
Additional information	<p>A minimum of 10MB should be available for CVP system media files (Cisco-provided .wav files of numbers, days, months, currency types, etc. in English, and Latin American Spanish).</p> <p><b>Note:</b> Any additional media files will require additional space.</p> <p>To maximize Voice Browser and Application Server performance, <i>do not</i> install the Media Server on the same machine as the Voice Browser and/or Application Server.</p> <p><b>Note:</b> This restriction applies to the Comprehensive and Advanced Speech deployment models. If you are using the Queue and Transfer deployment model, you may install the Media Server on the same machine as the Voice Browser and/or Application Server. For more information about the CVP deployment models, refer to the <i>Cisco Customer Voice Portal (CVP) Release 3.1 Product Description</i>.</p>

## ASR/TTS Server (optional)

**Note:** This section provides information on vendors and software versions that have had extensive interoperability testing between CVP and ASR/TTS products. These tests exercised system functionality but not ASR/TTS product availability or sizing. For availability and sizing data on ASR/TTS servers, contact the vendor or their recommended partners.

	ASR/TTS Server
Recommended Hardware	Use vendor recommended hardware.
Recommended Software	<p>Nuance:            Nuance 8.5 MRCP 1.0.0 SP8B or later SP (ASR),            Nuance Vocalizer 3.0.8 (MRCP variant) SP031031 or later SP (TTS)</p> <p>Nuance OSMS 2.0.4, OSR 2.0.9, Speechify 3.0.1 *            Nuance SWMS 3.1.9, OSR 3.0.4, RS 4.0.2 *</p> <p>* Only these combinations of versions are supported.</p> <p>IBM:            WebSphere Voice Server 5.1.2 (Linux only)</p> <p>Loquendo:            Loquendo Speech Suite 7.0.7</p> <p><b>Note:</b> Support of the IBM Websphere Voice Server speech recognition product (version 5.1.2) was discontinued in May 2007, and support for this third-party product is not included as of Release 4.1 of Unified CVP.</p>
Operating System	Use vendor recommended operating system software.

## SDDSN (optional)

Node	SDDSN Machine
Cisco Media Convergence Servers (MCS)	MCS-7825H-3.0-CC1 <b>Note:</b> MCS class machines are not required to host SDDSN. However, using a MCS machine allows approximately 50 connections to SDDSN clients, such as the CVP Application Server and the CVP Voice Browser.
Recommended Hardware	2.6GHz or greater Intel "Xeon" class processors 2048+ MB RAM 18.2+ GB usable disk space Internal CD-ROM or DVD-ROM drive 1 x 10/100/1000 Ethernet ports  <b>Note:</b> This level of hardware is not required to host SDDSN. However, using this hardware allows approximately 50 connections to SDDSN clients, such as the CVP Application Server and the CVP Voice Browser.
Operating System	SDDSN machines should have Microsoft Windows 2000 Service Pack 4 pre-installed. These machines also must have the SNMP services, which is no longer loaded by default with SP3.

## Cisco Content Services Switch (CSS) (optional)

Node	CSS Machine
Minimum Recommended Hardware	Cisco CSS 11500 series
Recommended Software	WebNS 7.30

## Cisco Gateways

Gateways		
Hardware options	17xx, 28xx, 36xx, 37xx, 38xx, AS5350, AS5400 HPX, AS5850eRSC, AS5350XM, AS5400XM	
Software options	<b>Hardware Model</b>	<b>Version</b> <sup>1</sup>
	AS5350	IOS 12.4(3b) or later rebuilds <sup>2</sup> IOS 12.4(3d) or later rebuilds <sup>7</sup> IOS 12.4(7b) or later rebuilds <sup>2</sup> IOS 12.4(6)T1 or later T IOS 12.4(6)XT or later T IOS 12.4(9)T1 or later T IOS 12.4(11)T or later T <sup>3 6</sup> IOS 12.4(13)T or later T <sup>6 7</sup> IOS 12.4(13) <sup>6</sup> IOS 12.4(15)T1 <sup>3 4 5 6</sup> IOS 12.4(15)T4 or later T <sup>3 4 5 6</sup>
	AS5400 HPX	IOS 12.4(3b) or later rebuilds <sup>2</sup> IOS 12.4(3d) or later rebuilds <sup>7</sup> IOS 12.4(7b) or later rebuilds <sup>2</sup> IOS 12.4(6)T1 or later T IOS 12.4(6)XT or later T IOS 12.4(9)T1 or later T IOS 12.4(11)T or later T <sup>3 6</sup> IOS 12.4(13)T or later T <sup>6 7</sup> IOS 12.4(13) <sup>6</sup> IOS 12.4(15)T1 <sup>3 4 5 6</sup> IOS 12.4(15)T4 or later T <sup>3 4 5 6</sup>
	AS5850eRSC	IOS 12.4(3b) or later rebuilds <sup>2</sup> IOS 12.4(3d) or later rebuilds <sup>7</sup> IOS 12.4(7b) or later rebuilds <sup>2</sup> IOS 12.4(6)T1 or later T IOS 12.4(6)XT or later T IOS 12.4(9)T1 or later T IOS 12.4(11)T or later T <sup>3 6</sup> IOS 12.4(13)T or later T <sup>6 7</sup> IOS 12.4(13) <sup>6</sup> IOS 12.4(15)T1 <sup>3 4 5 6</sup> IOS 12.4(15)T4 or later T <sup>3 4 5 6</sup>
	17xx, 28xx, 36xx, 37xx, 38xx	IOS 12.4(3b) or later rebuilds <sup>2</sup> IOS 12.4(3d) or later rebuilds <sup>7</sup> IOS 12.4(7b) or later rebuilds <sup>2</sup> IOS 12.4(6)T1 or later T IOS 12.4(6)XT or later T IOS 12.4(9)T1 or later T IOS 12.4(11)T or later T <sup>3 6</sup> IOS 12.4(13)T or later T <sup>6 7</sup> IOS 12.4(13) <sup>6</sup> IOS 12.4(15)T1 <sup>3 4 5 6</sup> IOS 12.4(15)T4 or later T <sup>3 4 5 6</sup>
		<b>Software Feature Set</b>
		IPPLUS
		IPPLUS
		ERSC Service Provider Plus
		IPVOICE

Gateways		
AS5350XM, AS5400XM	IOS 12.4(3b) or later rebuilds <sup>2</sup> IOS 12.4(3d) or later rebuilds <sup>7</sup> IOS 12.4(7b) or later rebuilds <sup>2</sup> IOS 12.4(6)T1 or later T IOS 12.4(6)XT or later T IOS 12.4(9)T1 or later T IOS 12.4(11)T or later T <sup>3 6</sup> IOS 12.4(13)T or later T <sup>6 7</sup> IOS 12.4(13) <sup>6</sup> IOS 12.4(15)T1 <sup>3 4 5 6</sup> IOS 12.4(15)T4 or later T <sup>3 4 5 6</sup>	IPPLUS
<p><b>Note:</b> This table identifies supported versions of release trains. A rebuild is constructed from the previous maintenance or major release in the same train; it contains the fix for a specific defect. The naming convention for later trains and rebuilds is sequential. For example, a later rebuild of IOS 12.4(3b) is IOS 12.4(3d); a later version of IOS 12.4(6)T1 is IOS 12.4(6)T3.</p>		

1. An upgrade or downgrade to an IOS version that is not explicitly stated in this Hardware and System Software Specification requires approval from CVP engineering.
2. Refers only to an IOS rebuild, which is the numbered version identifier. For example, IOS 12.4(3d) is major release 12.4, maintenance release 3, rebuild. The rebuild value starts with a lowercase "a" for the first rebuild, then "b", and so forth.
3. VXML 2.0/2.1 feature sets in IOS 12.4(11)T or later T are not supported and should be disabled.
4. IOS 12.4(15) T1, IOS 12.4(15)T4 or later T with CVP 3.1 SR2 ES11. Engineering special is required.
5. HTTPS is not supported in CVP 3.1.
6. VXML Server recording functionality requires CVP 3.1 SR2 ES14.
7. IOS 12.4(3d) or later builds, IOS 12.4(13)T or later T supported as of CVP 3.1 SR2.

## Cisco Gatekeepers

		Gatekeepers		
Hardware options	2xxx, 3xxx			
Software options	<b>Hardware Model</b>	<b>Version</b>	<b>Software Feature Set</b>	<b>Software Feature License</b>
	28xx	IOS 12.4(3b) or later rebuilds <sup>1</sup> IOS 12.4(3d) or later rebuilds <sup>5</sup> IOS 12.4(7b) or later rebuilds <sup>1</sup> IOS 12.4(6)T1 or later T IOS 12.4(6)XT or later T IOS 12.4(9)T1 or later T IOS 12.4(11)T or later T <sup>4</sup> IOS 12.4(13) <sup>4</sup> IOS 12.4(13)T or later T <sup>4,5</sup> IOS 12.4(15)T1 <sup>2,3,4</sup> IOS 12.4(15)T4 or later T <sup>2,3,4</sup>	Cisco 28xx IOS INT VOICE/VIDEO: GK, IPIP GW, TDMIP GW OR Cisco 28xx IOS INT VOICE/VIDEO: GK, IPIP GW, TDMIP GW AES	Cisco 28xx Integrated VoiceVideo License: Gatekeeper IPIP GW
	38xx	IOS 12.4(3b) or later rebuilds <sup>1</sup> IOS 12.4(3d) or later rebuilds <sup>5</sup> IOS 12.4(7b) or later rebuilds <sup>1</sup> IOS 12.4(6)T1 or later T IOS 12.4(6)XT or later T IOS 12.4(9)T1 or later T IOS 12.4(11)T or later T <sup>4</sup> IOS 12.4(13) <sup>4</sup> IOS 12.4(13)T or later T <sup>4,5</sup> IOS 12.4(15)T1 <sup>2,3,4</sup> IOS 12.4(15)T4 or later T <sup>2,3,4</sup>	Cisco 38xx IOS INT VOICE/VIDEO: GK, IPIP GW, TDMIP GW OR Cisco 38xx IOS INT VOICE/VIDEO: GK, IPIP GW, TDMIP GW AES	Cisco 38xx Integrated VoiceVideo License: Gatekeeper IPIP GW
	2xxx 3xxx	IOS 12.4(3b) or later rebuilds <sup>1</sup> IOS 12.4(3d) or later rebuilds <sup>5</sup> IOS 12.4(7b) or later rebuilds <sup>1</sup> IOS 12.4(6)T1 or later T IOS 12.4(6)XT or later T IOS 12.4(9)T1 or later T IOS 12.4(11)T or later T <sup>4</sup> IOS 12.4(13) <sup>4</sup> IOS 12.4(13)T or later T <sup>4,5</sup> IOS 12.4(15)T1 <sup>2,3,4</sup> IOS 12.4(15)T4 or later T <sup>2,3,4</sup>	Cisco 2xxx / 3xxx INT VOICE/VIDEO GK, IPIP GW, TDMIP GW OR Cisco 2xxx / 3xxx INT VOICE/VIDEO GK, IPIP GW, TDMIP GW AES	

1. Refers only to an IOS rebuild, which is the numbered version identifier. For example, IOS 12.4(3d) is major release 12.4, maintenance release 3, rebuild. The rebuild value starts with a lowercase "a" for the first rebuild, then "b", and so forth. For an explanation of Cisco's IOS naming convention, see *White Paper: Cisco IOS Reference Guide* at [http://cisco.com/en/US/products/sw/iosswrel/ps1828/products\\_white\\_paper09186a008018305e.shtml](http://cisco.com/en/US/products/sw/iosswrel/ps1828/products_white_paper09186a008018305e.shtml).
2. VXML 2.0/2.1 feature sets in IOS 12.4(11)T or later T are not supported and should be disabled.
3. IOS 12.4(15) T1, IOS 12.4(15) T4 or later T with CVP 3.1 SR2 ES11. Engineering special is required.

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4. VXML Server recording functionality requires CVP 3.1 SR2 ES14.
5. IOS 12.4(3d) or later builds, IOS 12.4(13)T or later T supported as of CVP 3.1 SR2.

## Cisco IPCC

Cisco IPCC	Cisco CallManager
Version 7.2 or later service releases [as of CVP 3.1(0) SR2]	CCM 4.2(3) or later service releases
Version 7.1(2) or later service releases [as of CVP 3.1(0) SR2]	CCM 5.1(1a), 5.0(2), 4.3(1), 4.2(3), 4.2(1), 4.1(3), 4.0(2) or later service releases [as of CVP 3.1(0) SR2]
Version 7.0	CCM 4.2(3), 4.2(1), 4.1(3), 4.0(2) or later service releases
Version 7.0(0) SR3 or later service releases	CCM 5.0(2) 4.2(3), 4.2(1), 4.1(3), 4.0(2) or later service releases CCM 5.1(1a) [as of CVP 3.1(0) SR2]
Version 6.0 SR1 or later service releases	CCM 4.0 (2a)es15 or later service releases
Version 5.0 SR8 or later service releases	CCM 3.3(5) or later service releases  Note: These are the minimum supported service releases, but all versions should be installed with the latest service release.

## Cisco ICM

	Cisco ICM
	ICM 7.2, 7.1.2, 7.0(0)SR3, 6.0SR1, 5.0SR8  Note: These are the minimum supported service releases, but all versions should be installed with the latest service release.

## Cisco IP Phone

	Cisco IP Phone
Hardware options	Cisco 7960 Cisco 7940
Software options	Skippy image

## Cisco PGW 2200 Softswitch

	Cisco PGW 2200 Softswitch
	Cisco PGW 2200 Softswitch version 9.5(2)/HSI version 4.2 and later versions

## Cisco Catalyst 6500 Communication Media Module (CMM)

	Cisco CMM
	Cisco CMM version 124-3.9 wscmm-ipvoice-mz and later versions used as an H.323 gateway