



# CHAPTER 1

## Introducing This Release

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This installation information is for use with CiscoWorks Voice Manager (CWVM) 3.1 running on Windows and Solaris systems.

CWVM is a client-server, web-based voice management solution used by network administrators to configure and manage voice ports and create and modify dial plans on voice-enabled Cisco routers. Using CWVM, network administrators can:

- Manage the configuration of FXO, FXS, E&M, and ISDN voice interfaces on voice-enabled routers
- Create and manage local (POTS) dial plans on voice-enabled routers
- Create and manage VoIP, VoFR, and VoATM network dial plans on voice-enabled routers
- Generate detailed call history and resource utilization reports using Microsoft Excel or another third party reporting tool.

## Features

The following is a list of new features available in this release:

- CiscoWorks Common Services 3.0 Service Pack 2 (referred to hereafter as Common Services 3.0.2) support.
- A single CD-ROM that contains both Common Services 3.0.2 and CWVM 3.1 products and documentation.
- Upgrade (standard and remote) from CiscoWorks Voice Manager 2.3 (CVM 2.3) and CWVM 3.0.
- Support for the following devices:
  - Cisco AS5400XM Universal Gateway
  - Cisco AS5350XM Universal Gateway
- Support for the latest Cisco IOS software version for devices supported.

This section summarizes CWVM features:

- Database password encryption, as implemented in Common Services 3.0.
- Distributed CWVM—CWVM allows you to view multiple CWVM servers and manage them from a single client. A CWVM master acts as the control point for CWVM servers, managing networks, user accounts, and user access privileges.

- Network partitioning—CWVM supports the ability to partition groups of devices into different networks and manage them separately. The CWVM Master Administrator can create multiple networks and assign user access privileges for each network. One network can be partitioned among multiple CWVM servers, and one CWVM server can manage multiple networks.
- Resource, DSP, CPU, and memory utilization monitoring—The CWVM Poller data file includes this network information; third party reporting tools can report against the file.
- Cisco Unified Border Element (UBE) directory gatekeeper support—CWVM supports a hierarchy of Cisco UBE gatekeepers, in which those at a hierarchy node are called Cisco UBE *directory* gatekeepers. A Cisco UBE directory gatekeeper is a Cisco UBE gatekeeper for other Cisco UBE gatekeepers, doing address resolution and zone management for its child Cisco UBE gatekeepers or Cisco UBE directory gatekeepers.
- Syslog and trap processing.
- Optimal TFTP upload and download of device configuration.

## Distributed CWVM

Distributed CWVM allows a CWVM master to be a point of control for other CWVM servers that register with the CWVM master when they are installed. The CWVM master performs the following tasks:

- User login authentication
- CWVM server status monitoring
- Synchronization between the CWVM master and CWVM servers

The CWVM Master Administrator (the superadmin user) creates networks, assigns user access, and maintains user profiles. Each CWVM server has its own database and its own poller.

## Network Partitioning

The CWVM Master Administrator can create multiple networks and assign user access privileges for each network. One network can be partitioned among multiple CWVM servers, and one CWVM server can manage multiple networks. [Table 1-1](#) through [Table 1-4](#) provide a simple example of network partitioning, demonstrating that:

- Each network can have one or more CWVM servers assigned to it.
- Each CWVM server can have one or more networks assigned to it.
- Groups or Cisco UBE gatekeepers must be added under a network for a CWVM.
- Gateways must be added under a group or Cisco UBE gatekeeper.
- Groups and Cisco UBE gatekeepers must be in a network.

## Network Partitioning Example

Network names and the CWVM servers in each network are stored by the CWVM master.

[Table 1-1](#) shows that CWVM server CWVM1 manages voice ports in both Network1 and Network2.

**Table 1-1** *Networks and CWVM Servers Known to CWVM Master*

Network Name	CWVM List
Network1	CWVM1, CWVM2
Network2	CWVM1, CWVM3

Table 1-2 shows the groups that CWVM1 can configure in each of the two networks.

**Table 1-2** *Networks in CWVM1*

Network Name	Group/Cisco UBE Gatekeeper List
Network1	Group1
Network2	Group3

Table 1-3 and Table 1-4 show that CWVM2 and CWVM3 are each in a single network.

**Table 1-3** *Networks in CWVM2*

Network Name	Group/Cisco UBE Gatekeeper List
Network1	Group2, Gatekeeper1

**Table 1-4** *Networks in CWVM3*

Network Name	Group/Cisco UBE Gatekeeper List
Network2	Group4, Group5

## CWVM Security

You can start the CWVM client from the CiscoWorks desktop when you are logged in in any role. However, you must log in to the CWVM client with a username and password that are independent of CiscoWorks security.

CWVM defines three levels of user roles: Master Administrator, Server Administrator, and Network Operator. It defines two levels of network access: read/write and read-only. For Master Administrator, new networks are given read/write access but can be overridden. Table 1-5 summarizes these user roles and access levels.

**Table 1-5 CWVM User Roles and Network Access Levels**

<b>A User in This CWVM Role...</b>	<b>Can Perform These Tasks...</b>	<b>and Tasks Designated for Users in This CWVM Role...</b>
Master Administrator	Configure all of the following: <ul style="list-style-type: none"> <li>• Users</li> <li>• CWVM servers</li> <li>• Networks</li> <li>• Traps</li> </ul> The master administrator can perform these configuration tasks for all CWVM servers in the distributed system.	<ul style="list-style-type: none"> <li>• Server Administrator</li> <li>• Network Operator</li> </ul>
Server Administrator	Configure individual CWVM server parameters	Network Operator
Network Operator	<ul style="list-style-type: none"> <li>• Operator tasks (when given read/write access)</li> <li>• Observer tasks (when given read-only access)</li> </ul>	Not applicable

## Common Services 3.0 Support



### Note

You must install Common Services 3.0 before you can install CWVM 3.1; otherwise, the CWVM installation process will fail. Common Services 3.0 Service Pack 2 (SP2), which fixes many bugs, is also recommended.

CiscoWorks Common Services (Common Services) represents a common set of management services that are shared by CiscoWorks applications. CiscoWorks is a family of products based on Internet standards for managing networks and devices. All CiscoWorks products use and depend on Common Services.

Common Services provides a foundation for CiscoWorks applications to share a common model for data storage, login, user role definitions, access privileges, security protocols, and navigation. It creates a standard user experience for all management functions. It also provides the common framework for all basic system-level operations such as installation, data management (including backup-restore and import-export), event and message handling, and job and process management.

Common Services 3.0 provides a set of new features required to drive the CiscoWorks applications toward a common look and feel. The new CiscoWorks homepage replaces the existing desktop.

Common Services 3.0 enables sharing of critical information among the various products. It provides a new framework for delivering timely support of new devices. It also supports new platforms, and provides enhanced security mechanisms.

## CWVM 3.1 CD-ROM Contents

The CWVM 3.1 CD-ROM contains the following folders:

- cs3\_0—Contains setup.exe and all other files needed to install Common Services 3.0.2. This is the complete Common Services 3.0 product, including Service Pack 2.
- cwvm3\_1—Contains setup.exe and all other files needed to install CWVM 3.1.
- Documentation—Contains two folders:
  - CommonServices—Documentation for Common Services 3.0 and Common Services 3.0 Service Pack 2.
  - CiscoWorksVoiceManager—Documentation for CWVM 3.1.

## Cisco UBE Directory Gatekeepers

Ordinary Cisco UBE gatekeepers manage local zones and prefixes for their associated gateways. A Cisco UBE directory gatekeeper manages zone prefixes for child Cisco UBE gatekeepers. CWVM propagates local zone information between top-level Cisco UBE gatekeepers or Cisco UBE directory gatekeepers in the same network on the same CWVM server. Cisco UBE directory gatekeepers forward location requests (LRQs) to the Cisco UBE gatekeeper that handles the prefix.

## Planning a Distributed CWVM Installation

Planning a distributed CWVM installation involves the following decisions:

1. Where to install the CWVM master?

You can install the CWVM master on any machine that meets the requirements for a CWVM server. These requirements are listed in the [System Requirements, page 1-6](#).

2. How many CWVM servers to install?

There is a per-server limit on the number of devices that the CWVM server will be responsible for. The number of CWVM servers you install will depend on both the number of devices you want to add to CWVM and how you have decided to partition your network.

3. How to partition the networks?

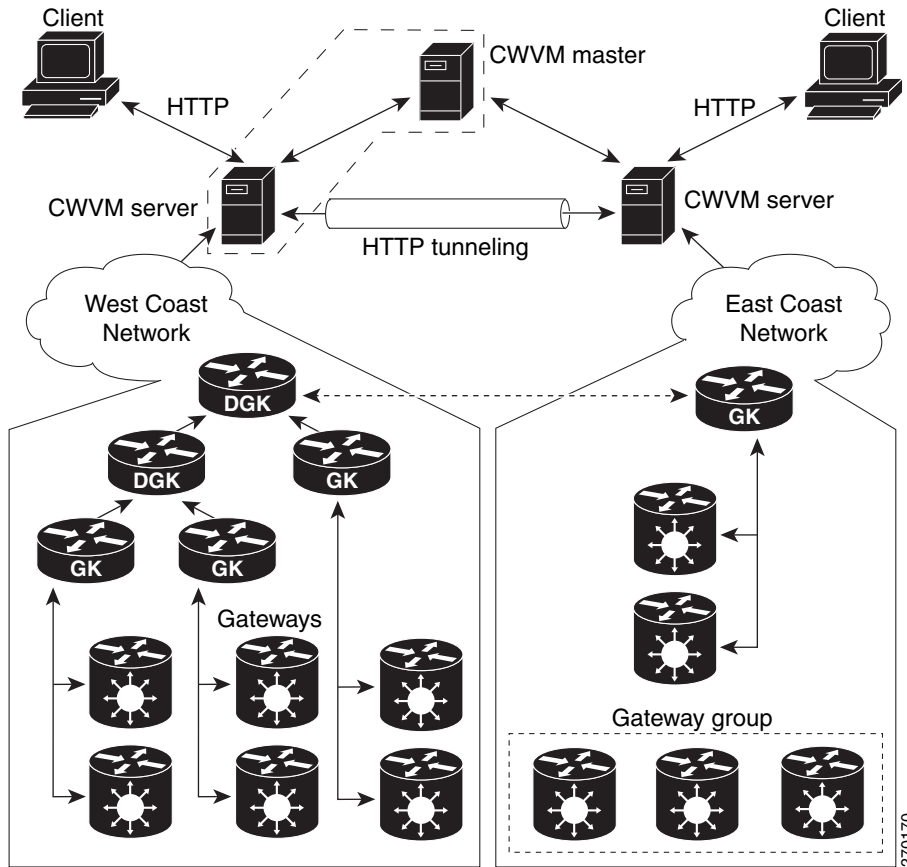
To make this decision, you have to answer several questions:

- How many networks do you want to create?
- Which groups and Cisco UBE gatekeepers will you put in each network?
- Which CWVM server do you want to assign to groups and Cisco UBE gatekeepers within the networks?

One network can be partitioned among multiple CWVM servers, and one CWVM server can manage multiple networks. For an example of how to partition a network for CWVM, see [Network Partitioning Example, page 1-2](#).

See [Figure 1-1](#) for an example of a distributed CWVM.

Figure 1-1 Distributed CWVM Example



GK = Cisco UBE Gatekeeper  
 DGK = Cisco UBE Directory Gatekeeper

## System Requirements

This section defines the minimum system requirements for a CWVM master or server and for a CWVM client.



### Note

- Before upgrading Common Services or your operating system to meet system requirements, to ensure that you perform tasks in the correct order, review the appropriate instructions:
  - [Upgrading Common Services and the Windows Operating System, page 2-3](#)
  - [Upgrading Common Services and the Solaris Operating System, page 3-3](#).
- Keep in mind that you must install Common Services 3.0 before you can install CWVM 3.1. Otherwise, the CWVM installation process will fail. Common Services 3.0 Service Pack 2 (SP2), which fixes many bugs, is also recommended.

## Master and Server System Requirements

The CWVM master comprises a CWVM server and the CWVM master service, which includes master administration and synchronization of CWVM servers. The requirements for installing either a CWVM master or a CWVM server are the same. [Table 1-6](#) lists the master and server system requirements for Solaris and Windows.



### Note

System requirements for the server are based on software requirements and a call volume of 96,000 calls per hour (for Windows) or 120,000 calls per hour (for Solaris). The call volume is based on an estimated 20 calls per DS0 channel, 3 minutes holding time, and 60 busy minutes.

**Table 1-6** Master and Server System Requirements

Requirement Type	Windows	Solaris
System hardware	<ul style="list-style-type: none"> <li>IBM PC-compatible system with 1 GHz or faster Intel Pentium processor</li> <li>Color monitor</li> <li>CD-ROM drive</li> </ul>	<ul style="list-style-type: none"> <li>Sun UltraSPARC10</li> <li>Color monitor</li> <li>CD-ROM drive</li> </ul>
Memory (RAM)	<ul style="list-style-type: none"> <li>512 MB</li> <li>10 MB in Windows temporary directory</li> </ul>	512 MB
Available drive space	<ul style="list-style-type: none"> <li>8 GB</li> <li>Paging file space equal to double the amount of memory (RAM). For example, if your system has 256 MB of RAM, you need 512 MB of page file.</li> <li>NTFS file system required for secure operation.</li> <li>At least 16 MB in Windows temporary directory (%TEMP%).</li> <li>Minimum 1024 MB swap space.</li> </ul>	<ul style="list-style-type: none"> <li>8 GB</li> <li>Minimum 1024 MB swap space</li> </ul>
System software	One of the following: <ul style="list-style-type: none"> <li>Windows 2003 Server Standard Edition Service Pack 2 (SP2)</li> <li>Windows 2003 Server Enterprise Edition SP2</li> </ul> In addition to the existing platform support, CWVM 3.1 can be installed and run on systems with VMware ESX Server 3.0, a virtualization software.	Solaris 2.9
Additional software	<ul style="list-style-type: none"> <li>NTFS file system (required for security option)</li> <li>Common Services 3.0</li> </ul>	Common Services 3.0
	<b>Note</b> Common Services 3.0.2—also known as Common Services 3.0 SP2—is recommended. Common Services 3.0.2 is included on the CWVM 3.1 product CD-ROM.	

## Client System Requirements

[Table 1-7](#) lists the client system requirements for Solaris and Windows.

Table 1-7 Client System Requirements

Requirement Type	Windows	Solaris
System hardware and software	<ul style="list-style-type: none"> <li>• IBM PC-compatible system with at least a 300-MHz Pentium processor</li> <li>• One of the following: <ul style="list-style-type: none"> <li>– Windows 2000 Advanced Server with Service Pack 4</li> <li>– Windows XP with Service Pack 2</li> <li>– Windows Server 2003 Standard and Enterprise Edition with Service Pack 1</li> <li>– Windows 2003 R2 Server Standard and Enterprise Editions</li> </ul> </li> </ul> <p><b>Note</b> To run applications over VMware, you must use Windows 2003 Server R2.</p> <ul style="list-style-type: none"> <li>• Color monitor with video card set to 256 colors</li> </ul>	<ul style="list-style-type: none"> <li>• SPARC Ultra 10 running Solaris 2.8 or 2.9</li> <li>• Color monitor with video card set to 256 colors</li> </ul>
Memory (RAM)	256 MB	256 MB
Browser	<p>One of the following:</p> <ul style="list-style-type: none"> <li>• Internet Explorer 6.0. Service Pack 2 for Windows 2000 and Windows Server 2003</li> <li>• Internet Explorer 7.0</li> </ul> <p>Java Virtual Machine (JVM) 5.0.0.3802 and later, and Java Plug-in.</p> <p>To verify the JVM:</p> <ul style="list-style-type: none"> <li>• From Internet Explorer, select <b>View &gt; Java Console</b>.</li> <li>• From Netscape Navigator, select <b>Tools &gt; Server &gt; Java Console</b>.</li> </ul>	Mozilla 1.7

## Devices Supported by CWVM

For a list of supported devices for CWVM, refer to *Supported Devices Table for CiscoWorks Voice Manager 3.1*. You can access this document on Cisco.com at this URL:

[http://www.cisco.com/en/US/docs/net\\_mgmt/ciscoworks\\_voice\\_manager/3.1/device\\_support/table/CWVM\\_dst.html](http://www.cisco.com/en/US/docs/net_mgmt/ciscoworks_voice_manager/3.1/device_support/table/CWVM_dst.html)



### Note

CWVM is not a device configuration tool. Devices supported by CWVM must first be configured through the command-line interface (CLI) and have SNMP enabled before they can be managed by CWVM. You can then use CWVM to modify the configuration of voice ports and create and manage local and network dial plans.