

Cisco TelePresence Video Communication Server

Cisco TelePresence Video Communication Server: Advanced Applications and Session Management

Product Overview

Figure 1. Cisco TelePresence Video Communication Server



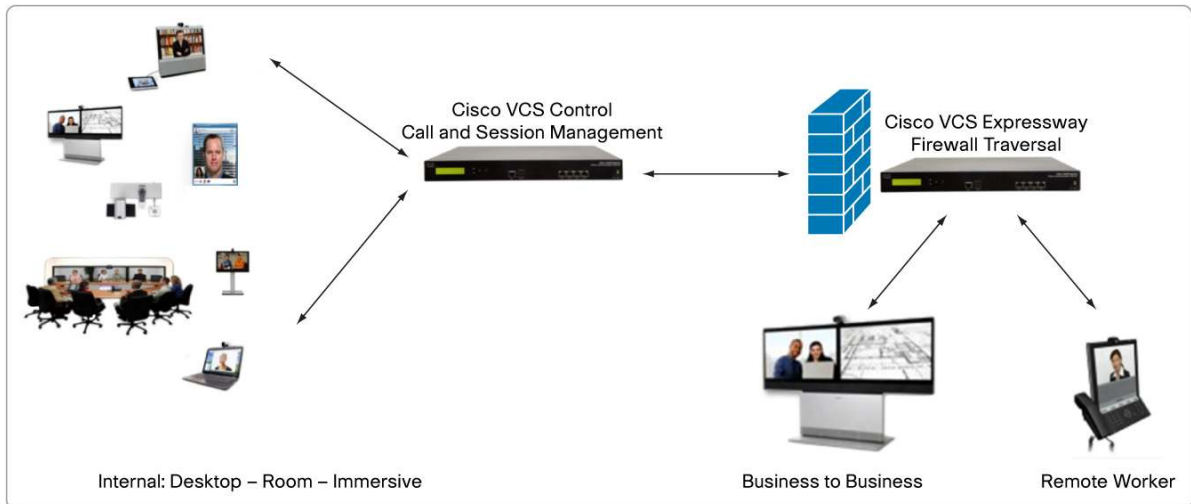
The Cisco TelePresence[®] Video Communication Server (Cisco VCS) simplifies session management and control of telepresence conferences. It provides flexible and extensible conferencing applications, enabling organizations to benefit from increased employee productivity and enhanced communication with partners and customers. (Figure 1).

The Cisco VCS delivers exceptional scalability and redundancy. It brings additional value to unified communications solutions, and is essential for interoperability with third-party systems, IP telephony networks, and voice over IP (VoIP) systems.

Helping ensure secure communications and simplifying provisioning and network administration, the Cisco VCS is an integral component of telepresence solutions.

The Cisco VCS can be deployed as the Cisco TelePresence Video Communication Server Control (Cisco VCS Control) for use within an enterprise, and as the Cisco TelePresence Video Communication Server Expressway (Cisco VCS Expressway) for external communication (Figure 2). The Cisco VCS Expressway includes the features of the Cisco VCS Control, augmented with highly secure firewall-traversal capability. An alternative solution, suited to small to medium-sized businesses (SMBs), is the Cisco VCS Starter Pack Express. Optional packages that you can deploy include FindMe[™], Device Provisioning and Dual Network Interfaces (Expressway only).

Figure 2. Cisco VCS Control and Cisco VCS Expressway



Cisco VCS Control

Cisco VCS Control delivers any-to-any enterprise wide conference and session management and interworking capabilities. It extends the reach of telepresence conferences by enabling interworking between Session Initiation Protocol (SIP)- and H.323-compliant endpoints, interworking with third-party endpoints; it integrates with the Cisco® Unified Communications Manager and supports third-party IP PBX solutions. Cisco VCS Control implements the tools required for creative session management, including definition of aspects such as routing, dial plans, and bandwidth usage, and allows organizations to define call-management applications, customized to their requirements (Figure 3).

Figure 3. Cisco VCS Control in the Network



Benefits and Features

Benefits:

- Greater reach: Any-to-any interoperability facilitates smooth video communications between standards-based and third-party client users.
- Efficient conference management: Administrators can proactively monitor and configure conferences through intuitive web user interfaces, to optimize bandwidth usage in real-time, helping to deliver a flawless video experience.
- Highly scalable: With features such as clustering and policy services integration, the Cisco VCS is architected to support enterprise growth, with smooth expansion as usage increases, protecting investment in video infrastructure.
- Contact location: Use FindMe™ to ensure that people can always be contacted.
- Extended telepresence capability: Integration with Cisco Unified Communications Manager and third party solution support helps to reduce complexity for users. The Cisco VCS provides powerful, centralized conferencing resources to all users within an enterprise, regardless of individual endpoint capabilities.
- Reduced footprint: This solution incorporates presence server, H.323 gatekeeper, SIP proxy and SIP registrar capabilities.
- Secure: The Cisco VCS' industrially recognized secure performance provides administrators with complete confidence in their network security.
- Differentiation: Create flexible telepresence solutions, through policy services integration and dial plan configuration, which can be customized to deliver value and meet ever-increasing customer requirements.

Features:

- SIP registrar, SIP proxy server, presence server, presence user agent
 - The Cisco VCS supports the SIP protocol, acting as a SIP registrar, storing registered endpoints' Address of Record, and forwarding SIP requests as a SIP proxy server. The Cisco VCS supports the SIP-based SIMPLE protocol, and can act as a presence server and presence user agent.
- H.323 Gatekeeper
 - The Cisco VCS provides H.323 Gatekeeper functionality. It accepts registrations from H.323 endpoints and provides call control functions such as address translation and admission control.
- Interoperability and Interworking
 - The Cisco VCS provides interoperability between SIP and H.323 standards-compliant endpoints, and also supports communication with IBM Lotus Same time and Microsoft Office Communicator Server (OCS)/Lync endpoints.
- IPv4 and IPv6
 - The Cisco VCS provides: IPv4 and IPv6 support, with IPv4 and IPv6 Interworking.
- Zone and Bandwidth Management
 - The Cisco VCS supports management of the allocation of bandwidth between sites, endpoints and groups of endpoints. The amount of bandwidth available for intra and inter-zone calls can be specified, allowing customers to control the way in which bandwidth is used and calls prioritized. Features of the Cisco VCS' bandwidth management capability are:
 - Flexible, customizable zone configuration with named zone and default zone
 - Bandwidth management on both a per-call and a total-usage basis, configurable separately for calls within local subzones and to neighboring systems and zones.
 - Automatic down-speeding option for calls that exceed the available bandwidth
 - Pre-configured defaults for:
 - Cisco Unified Communications Manager neighbor zones
 - Cisco TelePresence Advanced Media Gateway
 - Microsoft OCS 2007/Lync neighbor zones
 - Nortel Communication Server neighbor zones
- Dial Plan and Call Routing Control
 - The Cisco VCS allows administrators to create dial plans to define the way in which calls are handled within the network. Transforms can be applied to source and destination address information to define general routing rules. Dial plans can be based on call aspects such as:
 - Source or destination address, zone, or subzone configuration
 - Call policy for authenticated or non-authenticated endpoints
 - FindMe™ configuration

- Authentication
 - The Cisco VCS can be configured to allow both authenticated and unauthenticated endpoints to register to the same VCS, and to subsequently control the operation of those endpoints based upon their authentication status. The Cisco VCS supports:
 - H.325 Authentication
 - SIP Digest authentication
 - NTLM Authentication
 - Control over which endpoints are allowed to register through allow/deny lists
 - Active Directory (AD) integration for Cisco TelePresence Movi
 - Administrator authentication through AD
 - Integration with LDAP-accessible H.350 Directories
- Policy Services
 - A Policy Services interface is available to allow users to define call policies to be applied within their organization. For example, calls may be handled differently according to time of day, source or destination address, or more complex algorithms. The policy services interface provides support for Call Processing Language (CPL).
- Clustering
 - The Cisco VCS is able to function as a standalone system, or in a cluster configuration for increased capacity and redundancy. Cisco VCS clustering supports:
 - Clustering of up to six Cisco VCS peers.
 - Sharing of call licenses within a cluster.
- Administration
 - The Cisco VCS provides administrative interfaces to allow setup, administration and monitoring of the configuration of the network. Administrative features of the Cisco VCS are:
 - Embedded setup wizard via a serial port for initial configuration
 - System and Status Overview
 - Advanced diagnostics support
 - System administration through a web interface or RS-232, Telnet, SSH, and HTTPS
 - Integration with the Cisco TelePresence Management Suite (TMS) for integrated and scalable provisioning and configuration

Optional Features:

- Cisco TelePresence FindMe™
- Cisco TelePresence Multiway
- Device Provisioning
- Microsoft Office Communications Server 2007 Enhanced Interoperability option
- Advanced Account Security Joint Interoperability Test Command (JITC)

Capacity:

<p>One Cisco VCS:</p> <ul style="list-style-type: none"> • Up to 2500 registrations • Up to 500 non traversal calls • Up to 100 traversal calls • Up to 1000 sub zones 	<p>Cluster of six Cisco VCSs</p> <ul style="list-style-type: none"> • Up to 10,000 registrations • Up to 2,000 non-traversal calls • Up to 400 traversal calls
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Table 1. Product Specifications

Product Feature	Product Specification
User Interface	<ul style="list-style-type: none"> • Web interface-supports Internet Explorer 7,8 and 9, Firefox 3 and later, and Chrome
Supported TelePresence Endpoints	<ul style="list-style-type: none"> • Compatible with any standards-compliant H.323 or SIP video conferencing or telepresence device. Provisioning and Configuration supported only for Cisco TelePresence endpoints
Management Interfaces	<ul style="list-style-type: none"> • Support for industry standards such as RS-232, HTTP(S), XML, Simple Network Management Protocol (SNMP v1, v2 and v3), secure copy (SCP), and Secure Shell Protocol (SSH) • Embedded set-up wizard on serial port for initial configuration • Integration with Cisco TMS version 12.5 or later • Call logging and diagnostics
Architecture	<ul style="list-style-type: none"> • Secure appliance-based architecture • Flash memory and hard drive
Resilience and Reliability	<ul style="list-style-type: none"> • Can be deployed in six-redundant cluster • Licenses can be shared across a cluster • Registrations can survive system restart • Configuration can be replicated for clusters
Session Control and Registrations	<ul style="list-style-type: none"> • Support for manual registration of H.323 and SIP endpoints • Support for H.225/Q.931, H.245 call control routed mode, and non-call routed mode • Support for H.323-SIP Interworking Encryption • Support for H.323-SIP Interworking DuoVideo • Support for registration of H.323 ID and E.164 aliases and services • Support for Unicode (UTF-8) registration for global implementation • Support for Uniform Resource Identifier (URI) dialing • Support for direct call signaling among neighbored Cisco VCSs, border controllers, and gatekeepers • Support for call policy management (RFC 3880),including call policy and user policy (Cisco TelePresence FindMe™) • Support for conference hunting for multipoint-control-unit (MCU) cluster support • Support for call routed mode • Support for call loop detection
Zone Control and Bandwidth Management	<ul style="list-style-type: none"> • Support for remote zone monitoring • Support for remote zone redundancy • Support for up to 200 neighbor zones (including Cisco VCSs, border controllers, gatekeepers, and SIP proxies) • Support for sub-zone area definition for bandwidth management • Support for flexible zone configuration with named zones and default zone • Support for forwarding of requests to neighbor zones • Support for registration control (open, specifically allow, and specifically deny) • Support for interzone bandwidth management: definable call-by-call <ul style="list-style-type: none"> ◦ Maximum bandwidth per call ◦ Maximum aggregate bandwidth for all neighboring zones • Support for intrazone bandwidth management: definable call-by-call <ul style="list-style-type: none"> ◦ Maximum bandwidth per call ◦ Maximum aggregate bandwidth • Support for auto-down-speeding if call exceeds per-call maximum • Support for gateway load balancing • Support for automatic network failover • Support for capacity warnings for users and administrators




Product Feature	Product Specification
Language	<ul style="list-style-type: none"> English
Physical Dimensions (height x width x depth)	<ul style="list-style-type: none"> 1.72 x 16.8 x 18 in (43.5 x 426 x 457.2 mm) 1 RU rack-mount chassis
Interfaces	<ul style="list-style-type: none"> Four 10/100/1000 Base TX Ethernet ports (RJ-45) (front) One RS-232 console port (RJ-45)2 (front)
Weight	<ul style="list-style-type: none"> 17.6 lbs (8 kg) (unpacked)
Power	<ul style="list-style-type: none"> Auto-sensing 250 W (maximum) 580 BTU per hour power supply 90-264 VAC full range at 47-63 Hz
Cooling System	<ul style="list-style-type: none"> Five 40-millimeter fans for system cooling
System Control and Indications	<ul style="list-style-type: none"> One power LED One alarm LED One power on/off switch (rear) Four act/link/10/100/1000 LEDs on Ethernet ports
Environmental Data	<ul style="list-style-type: none"> Operating temperatures: 32 to 104°F (0 to 40°C) Storage temperatures: -4 to 140°F (-20 to 60°C) Relative humidity: 10 to 90% (non-condensing)
Certification	<ul style="list-style-type: none"> LVD 73/23/EC EMC 89/366/ECC  <ul style="list-style-type: none"> Cisco VCS Version X7 is ICSA Labs Certified
Awards	 
Approvals and Compliance	<ul style="list-style-type: none"> Directive 73/23/EEC (Low Voltage Directive) Standard EN 60950 Directive 89/336/EEC (EMC Directive) Standard EN 55022, Class A Standard EN 55024 Standard EN 61000-3-2/-3-3 Approved according to UL 60950 and CAN/CSA C22.2 No. 60950 Compliance with FCC15B Class A Joint Interoperability Test Command (JITC)

Table 2. Network, Management and Security Specifications

Network	<ul style="list-style-type: none"> Support for DNS addressing Support for IPv4 and IPv6 simultaneously Provides IPv4 and IPv6 translation services
Interfaces	<ul style="list-style-type: none"> Four 10/100/1000 BASE-TX Ethernet ports (RJ-45) (front) One RS-232 console port (RJ-45)2 (front)
Supported RFCs	<ul style="list-style-type: none"> RFCs 2543, 3261, 3264, 1889, 3265, 3325, 3515, 3891, 3892, 2327, 4566, 5626, 5627, 5389, and 5766

Security	<ul style="list-style-type: none"> • Secure management with HTTPS, SSH, and SCP • Secure file transfer • Inactivity timeout • Ability to lock down IP services • Authentication required on HTTP(S), Telnet, SSH, SCP, and serial port • H.235 authentication support • Transport Layer Security (TLS) for SIP signaling • Roles-based password-protected GUI user access • Ability to enforce strict passwords • Ability to disable root access over Telnet of SSH
Management	<ul style="list-style-type: none"> • Support for industry standards such as RS-232, Telnet, HTTP(S), XML, SNMP, SCP, and SSH • Embedded setup wizard on serial port for initial configuration • Advanced management support and configuration with Cisco TMS 12.6 or later • Call logging and diagnostics • Local time-zone aware • Port usage tool

Ordering Information

[Cisco Ordering Home Page](#) and refer to Table 3.

Table 3. Ordering Information

Product Name	Part Number
Cisco Video Communication Server Control	CTI-VCS-CONTROL-K9
Comes with: Video Communication Server, 100 traversal calls, 10 non-traversal calls, Gateway feature, Device Provisioning feature, cables	
Ordering Options for the Cisco VCS Control	
10 Non-Traversal Calls for Cisco VCS Control	LIC-VCS-10
VCS Advanced Account Security (JITC) for Cisco VCS Control	LIC-VCS-JITC
VCS Enhanced OCS Collaboration for Cisco VCS Control	LIC-VCS-OCS
Additional 20 Non-traversal calls for Cisco VCS Control	LIC-VCS-20
Additional 50 Non-traversal calls for Cisco VCS Control	LIC-VCS-50
Additional 200 Non-traversal calls for Cisco VCS Control	LIC-VCS-200
Additional 300 Non-traversal calls for Cisco VCS Control	LIC-VCS-300
VCS FindMe™ Application for Cisco VCS Control	LIC-VCS-FINDME

Service and Support

Cisco offers a wide range of services programs to accelerate customer success. These innovative services programs are delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco services help you to protect your network investment, optimize network operations, and prepare your network for new applications to extend network intelligence and the power of your business. For more information about Cisco Services, visit [Cisco Technical Support Services](#) or [Cisco Advanced Services](#) online.

For More Information

For more information about the Cisco TelePresence Video Communication Server, please visit <http://www.cisco.com/go/telepresence> or contact your local Cisco account representative or authorized Cisco partner. Product specifications are estimates and subject to change without notice.




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