

Cisco TelePresence Video Communication Server

Product Overview

The Cisco TelePresence® Video Communication Server (Cisco® VCS) is deployed in three versions: Control, Expressway, and Starter Pack Express.

Figure 1. Cisco TelePresence Video Communication Server



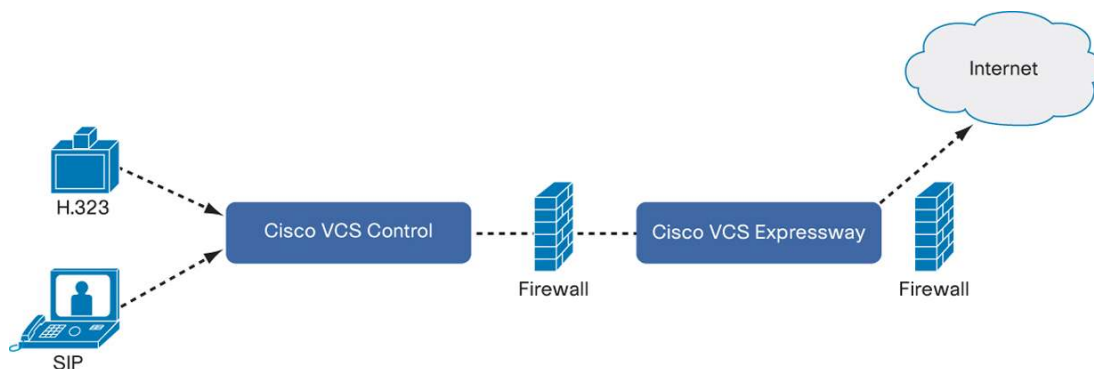
Cisco TelePresence Video Communication Server Control

Cisco TelePresence Video Communication Server Control (Cisco VCS Control) provides advanced telepresence applications and session management to all standards-compliant telepresence endpoints, infrastructure, and management solutions. Cisco VCS Control provides Session Initiation Protocol (SIP) proxy and H.323 gatekeeper services, enabling any-to-any interoperability between SIP and H.323 telepresence devices. Cisco VCS Control is a critical part of Cisco's unified call-control solution and is also critical for interoperability with third-party unified communications and IP telephony networks and voice-over-IP (VoIP) solutions (Figures 1 and 2).

Cisco TelePresence Video Communication Server Expressway

Cisco TelePresence Video Communication Server Expressway (Cisco VCS Expressway) opens the world outside the firewall to organizations using video communications (Figures 1 and 2). Cisco VCS Expressway enables business-to-business communications, empowers remote and home-based workers, and allows service providers to provide video communications to customers. Cisco VCS Expressway provides standards-based and secure firewall traversal for SIP and H.323 devices and enables communication with the outside world regardless of SIP or H.323 protocol.

Figure 2. Communication Outside the Firewall



Cisco TelePresence Video Communication Server Starter Pack Express

Cisco TelePresence Video Communication Server Starter Pack Express (Cisco VCS Starter Pack Express) is an all-in-one solution targeted to customers who are deploying a small to medium-sized Cisco TelePresence systems for the first time. The Cisco VCS Starter Pack Express provides immediate access to Cisco TelePresence Movilicenses, basic management and provisioning, as well as a scaled-down Cisco VCS Expressway solution for firewall traversal and business-to-business communications.

Features and Benefits

Table 1 summarizes the key features of the Cisco VCS Expressway and Cisco VCS Control.

Table 1. Cisco VCS Expressway, Cisco VCS Starter Pack Express, and Cisco VCS Control Feature Summary

Feature	Benefit
Design features	<ul style="list-style-type: none"> • Designed to work with any H.323 or SIP device • Appliance-based architecture that enables easy deployment and high reliability • Designed to work with any firewall • Full multivendor support • Secure and reliable • One-rack-unit (1RU) rack-mountable • Dual network interface option available
Features of Cisco VCS Control and Expressway	<ul style="list-style-type: none"> • H.323 gatekeeper • SIP Proxy and SIP Registrar • Flexible zone configuration with named zones and default zone • Support for inter- and intrazone bandwidth control • IPv4 and IPv6 translation services • Policy engine for processing calls • Uniform Resource Identifier (URI) and electronic number mapping (ENUM) dialing • Device authentication using H.235 and SIP digest authentication • NTLM Authentication • Embedded setup wizard for easy installation • SIP Presence Server and User Agent • Cisco TelePresence FindMe • Cisco TelePresence Multiway
Features of Cisco VCS Expressway and Cisco VCS Starter Pack Express	<ul style="list-style-type: none"> • Network Address Translation (NAT) traversal functions that enable secure traversal of any NAT firewall • Registration of traversal-enabled endpoints • Session Traversal Utilities for NAT (STUN) discovery and STUN relay services • Firewall traversal H.460.18/19 compliant, including support for multiplexed media • Firewall traversal STUN compliant • Ability to traverse any number of firewalls • Policy engine for processing calls • URI and ENUM dialing • Device authentication using H.235 • Embedded setup wizard for easy installation • SIP Presence Server and User Agent
Performance features of Cisco VCS Control	<ul style="list-style-type: none"> • Supports up to 2500 registered devices and 100 concurrent traversal calls • Supports up to 1000 neighboring zones (traversal zones included) • Supports Secure HTTP (HTTPS), Secure Shell (SSH) Protocol, and secure copy (SCP) for secure management • Uses Solid State Flash for critical storage and a hard drive for other functions • Supports clustering of up to six Cisco VCSs, increasing capacity and redundancy

Feature	Benefit
Performance features of Cisco VCS Expressway	<ul style="list-style-type: none"> • Supports up to 2500 registered devices and 100 concurrent traversal calls • Enables URI dialing for massive scalability • Supports HTTPS, SSH, and SCP for secure management • Uses Solid State Flash for critical storage and a hard drive for other functions • Supports clustering of up to six Cisco VCSs, increasing capacity and redundancy • Supports standards-based traversal using Relay NAT (TURN) server; support providing Interactive Connectivity Establishment (ICE)-enabled devices with firewall and NAT traversal
Performance features of Cisco VCS Starter Pack Express	<ul style="list-style-type: none"> • Supports up to 50 registered devices and 25 concurrent traversal calls • Offers basic provisioning and management capabilities for Cisco TelePresence Movi, Cisco TelePresence System EX Series, and Cisco IP Video Phone E20 • Enables URI dialing • Supports HTTPS, SSH, and SCP for secure management • Uses Solid State Flash for critical storage and hard drive for other functions • Supports standards-based TURN server, supporting ICE-enabled devices with firewall and NAT traversal

Product Specifications

Table 2 lists the physical specifications and Table 3 gives network, security, and management specifications for the Cisco VCS Control and Cisco VCS Expressway.

Table 2. Product Specifications

Feature	Specification						
Product compatibility	<ul style="list-style-type: none"> • Compatible with any standards-compliant H.323 or SIP video conferencing or telepresence device 						
Capacity	<table border="1"> <thead> <tr> <th>Cisco VCS Control and Cisco VCS Expressway</th> <th>Cisco VCS Cluster of 6</th> <th>Cisco VCS Starter Pack Express</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> • Up to 2500 registrations • Up to 500 nontraversal calls • Up to 100 traversal calls • Up to 1000 sub-zones • Up to 1000 neighbor zones </td> <td> <ul style="list-style-type: none"> • Up to 10,000 registrations • Up to 2,000 nontraversal calls • Up to 400 traversal calls </td> <td> <ul style="list-style-type: none"> • Up to 50 registrations • Up to 25 traversal calls </td> </tr> </tbody> </table>	Cisco VCS Control and Cisco VCS Expressway	Cisco VCS Cluster of 6	Cisco VCS Starter Pack Express	<ul style="list-style-type: none"> • Up to 2500 registrations • Up to 500 nontraversal calls • Up to 100 traversal calls • Up to 1000 sub-zones • Up to 1000 neighbor zones 	<ul style="list-style-type: none"> • Up to 10,000 registrations • Up to 2,000 nontraversal calls • Up to 400 traversal calls 	<ul style="list-style-type: none"> • Up to 50 registrations • Up to 25 traversal calls
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Cisco VCS main features (Control and Expressway)	<ul style="list-style-type: none"> • SIP and H.323 support, including SIP/H.323 gateway for locally registered endpoints • IPv4 and IPv6 support, including IPv4 and IPv6 Interworking • SIP and H.323 interworking for nonregistered endpoints • Bandwidth management on both a per-call and a total-usage basis, configurable separately for calls within the local subzones and to neighboring systems and zones • URI and ENUM dialing through Domain Name System (DNS), enabling global connectivity • Automatic down-speeding option for calls that exceed the available bandwidth • Flexible zone configuration with prefix, suffix, and regular expression support • Ability to function as a standalone Cisco VCS or be neighbored with other systems such as Cisco VCSs, border controllers, gatekeepers, and SIP proxies • Ability to be clustered with up to five other Cisco VCS peers for capacity and redundancy purposes • Name clusters for ease of management and deployment • Optional endpoint authentication • Control over which endpoints are allowed to register • Administrator policy including support for Call Processing Language (CPL) • Embedded setup wizard through a serial port for initial configuration • System administration through a web interface or RS-232, Telnet, SSH, and HTTPS • Static NAT support (requires dual network interface option) 						

Feature	Specification		
Optional features	<ul style="list-style-type: none"> • Cisco TelePresence FindMe (user policy) • SIP/H.323 interworking for nonregistered endpoints • Dual network interface • Cisco TelePresence Multiway • Cisco TelePresence Management Suite agent • Microsoft Office Communications Server 2007 Enhanced Interoperability option • Advanced Account Security Joint Interoperability Test Command (JITC) 		
Architecture	<ul style="list-style-type: none"> • Secure appliance-based architecture • Flash memory and hard drive • ITU-T H.323v6 compliant • ITU-T H.225v6 compliant • Cisco TelePresence Expressway technology • H.460.18/.19 compliant • H.460.18-client proxy support • Support for H.460.19 multiplexed media 		
Reliability	<ul style="list-style-type: none"> • Registrations can survive system restart. • Start-up time is fast. • The solution offers configuration replication for clusters. • The Cisco VCS Expressway process recycles within seconds. • Cisco VCS Expressway supports H.225 Alternate Gatekeeper. 		
Call control and registrations	<table border="0"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> • Supports manual registration of H.323 and SIP endpoints and application-programming-interface (API) call control • Supports H.225/Q.931, H.245 call control routed mode, and non-call routed mode • Supports H.323-SIP Interworking Encryption • Supports H.323-SIP Interworking DuoVideo • Supports registration of H.323 ID and E.164 aliases and services • Supports Unicode (UTF-8) registration for global implementation • Supports disconnect H.323 calls from the API interface • Supports URI dialing • Supports direct call signaling among neighbored Cisco VCSs, border controllers, and gatekeepers • Supports Call Policy Management (RFC 3880), including Call Policy and User Policy (Cisco TelePresence FindMe) • Supports conference hunting for multipoint-control-unit (MCU) cluster support • Supports call routed mode • Supports call loop detection mode </td> <td style="vertical-align: top;"> <p>Cisco VCS Control and Cisco VCS Expressway:</p> <ul style="list-style-type: none"> • Supports up to 100 traversal calls • Supports up to 500 Non traversal calls • Supports up to 2500 registered devices <p>Cisco VCS Starter Pack Express:</p> <ul style="list-style-type: none"> • Supports up to 25 traversal calls • Supports up to 50 registered Cisco VCS Expressway devices </td> </tr> </table>	<ul style="list-style-type: none"> • Supports manual registration of H.323 and SIP endpoints and application-programming-interface (API) call control • Supports H.225/Q.931, H.245 call control routed mode, and non-call routed mode • Supports H.323-SIP Interworking Encryption • Supports H.323-SIP Interworking DuoVideo • Supports registration of H.323 ID and E.164 aliases and services • Supports Unicode (UTF-8) registration for global implementation • Supports disconnect H.323 calls from the API interface • Supports URI dialing • Supports direct call signaling among neighbored Cisco VCSs, border controllers, and gatekeepers • Supports Call Policy Management (RFC 3880), including Call Policy and User Policy (Cisco TelePresence FindMe) • Supports conference hunting for multipoint-control-unit (MCU) cluster support • Supports call routed mode • Supports call loop detection mode 	<p>Cisco VCS Control and Cisco VCS Expressway:</p> <ul style="list-style-type: none"> • Supports up to 100 traversal calls • Supports up to 500 Non traversal calls • Supports up to 2500 registered devices <p>Cisco VCS Starter Pack Express:</p> <ul style="list-style-type: none"> • Supports up to 25 traversal calls • Supports up to 50 registered Cisco VCS Expressway devices
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Zone control for Cisco VCS	<ul style="list-style-type: none"> • Supports remote zone monitoring • Supports remote zone redundancy • Supports up to 200 neighbor zones (including Cisco VCSs, border controllers, gatekeepers, and SIP proxies) • Supports sub-zone area definition for bandwidth management • Supports flexible zone configuration with named zones and default zone • Supports forwarding of requests to neighbor zones (including VCSs, border controllers, gatekeepers, and SIP proxies) • Supports registration control (open, specifically allow, and specifically deny) 		




Feature	Specification
Bandwidth management	<ul style="list-style-type: none"> • Interzone: Definable call-by-call <ul style="list-style-type: none"> ◦ Maximum bandwidth per call ◦ Maximum aggregate bandwidth for all neighboring zones • Intrazone: Definable call-by-call <ul style="list-style-type: none"> ◦ Maximum bandwidth per call ◦ Maximum aggregate bandwidth • Auto-down-speeding if call exceeds per-call maximum • Gateway load balancing • Automatic network failover • Capacity warnings for users and administrators
Language	<ul style="list-style-type: none"> • English • Multiple language support on the Cisco VCS web interface; language packs will be available for download in the future
Physical dimensions (H x W x D)	<ul style="list-style-type: none"> • 1.72 x 16.8 x 9 in. (43.5 x 426 x 457.2 mm) • 1RU rack-mount chassis
Weight	<ul style="list-style-type: none"> • 17.6 (8 kg) (unpacked)
Power	<ul style="list-style-type: none"> • Auto-sensing 250W (maximum) 580 BTU/hr power supply • 90-264 VAC full range @ 47-63 Hz
Cooling system	<ul style="list-style-type: none"> • Six 40-mm 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 (0 to 80°C) • Relative humidity: 10 to 90% (noncondensing)
Certification	<ul style="list-style-type: none"> • LVD 73/23/EC • EMC 89/366/ECC  <ul style="list-style-type: none"> • VCS Version X5 is ICSA Labs Certified
Awards	 
Approvals and compliance	<ul style="list-style-type: none"> • Directive 73/23/EEC (Low Voltage Directive) <ul style="list-style-type: none"> ◦ Standard EN 60950 • Directive 89/336/EEC (EMC Directive) <ul style="list-style-type: none"> ◦ 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 3. Network, Security, and Management Specifications

Network	<ul style="list-style-type: none"> • Supports DNS addressing • Supports 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
Firewall traversal	<ul style="list-style-type: none"> • STUN discovery and STUN relay services • Firewall traversal H.460.18/19 compliant, including support for multiplexed media • Firewall traversal STUN compliant • Interactive Connectivity Establishment (ICE)
Security	<ul style="list-style-type: none"> • Secure management with HTTPS, SSH, and SCP <ul style="list-style-type: none"> ◦ Secure file transfer ◦ Inactivity timeout • Ability to lock down IP services • Authentication required on HTTP(S), Telnet, SSH, SCP, and serial port • Cisco VCS Expressway compatible with H.235v2- and v3-enabled H.323 devices • 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 or SSH
Management	<ul style="list-style-type: none"> • Support for industry standards such as RS-232, Telnet, HTTP(S), XML, Simple Network Management Protocol (SNMP), SCP, and SSH • Embedded setup wizard on serial port for initial configuration • Advanced management support and configuration with Cisco TelePresence Management Suite 12.0 or later • Call logging and diagnostics • Support for logging to a syslog server • Local time zone-aware • Port usage tool

Warranty Information

Warranty information about the Cisco TelePresence Video Communication Server is available on Cisco.com at the [Product Warranties](#) page.

Ordering Information

To place an order, visit the [Cisco Ordering Home Page](#) and refer to Table 4 or contact your local Cisco representative. To download software, visit the [Cisco Software Center](#).

Table 4. Ordering Information

Product Name	Part Number
Cisco TelePresence Video Communication Server Control	CTI-VCS-CONTRL-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

Product Name	Part Number
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
Cisco TelePresence Video Communication Server Expressway	CTI-VCS-EXPRESS-K9
Includes: Cisco TelePresence Video Communications Server, Expressway feature, 5 traversal calls, Gateway feature, 1800 TURN Relay option Device Provisioning feature, cables	
Ordering Options for the Cisco VCS Expressway	
5 Traversal Calls for Cisco VCS Expressway	LIC-VCSE-5
10 Traversal Calls for Cisco VCS Expressway	LIC-VCSE-10
20 Traversal Calls for Cisco VCS Expressway	LIC-VCSE-20
50 Traversal Calls for Cisco VCS Expressway	LIC-VCSE-50
Additional 20 Non-traversal calls for Cisco VCS Expressway	LIC-VCS-20
Additional 50 Non-traversal calls for Cisco VCS Expressway	LIC-VCS-50
Additional 200 Non-traversal calls for Cisco VCS Expressway	LIC-VCS-200
Additional 300 Non-traversal calls for Cisco VCS Expressway	LIC-VCS-300
VCS-Dual Network Interface for Cisco VCS Expressway	LIC-VCS-DI
VCS FindMe Application for Cisco VCS Expressway	LIC-VCS-FINDME
Cisco TelePresence Video Communication Server Starter Pack Express	CTI-VCS-STPAK-K9
Includes: Video Communication Server, 5 traversal calls, up to 50 Cisco TelePresence Movi licenses, Cisco TelePresence PrecisionHD USB Camera, 1 microphone, cables	
Ordering Options for the Cisco VCS Starter Pack	
Video Communication Server - 5 Traversal Calls for Cisco VCS Starter Pack	LIC-VCSE-5
Video Communication Server - 10 Traversal Calls for Cisco VCS Starter Pack	LIC-VCSE-10
Video Communication Server - 20 Traversal Calls for Cisco VCS Starter Pack	LIC-VCSE-20
Video Communication Server - Dual Network Interface feature	LIC-VCS-DI
Ordering Options for Cisco TelePresence Communication Server - all Versions	
Mounting Bracket for Cisco VCS	CTI-VCS-BRAGEEARS=

Cisco Services

Cisco and our partners provide a broad portfolio of intelligent, personalized services and support that can help you realize the full value of your Cisco TelePresence investment by increasing business agility and network availability. This portfolio of services accelerates business innovation through a network-based collaboration platform that enables businesses to collaborate anywhere, anytime. For more information about these services, please visit: <http://www.cisco.com/go/telepresenceservices>.

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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Page 8 of 8