Cisco Expressway Series

Advanced Collaboration Gateways for Simple and Secure Unified Communications

Product Overview

Collaborating with someone should be as simple as a phone call and as secure as sending an email message. But often it's not. Moreover, video, content-sharing, and other tools that enrich the interaction aren't as widely used as they could - and should - be. That kind of rich-media collaboration is typically confined to enterprise locations or to users who are on the same network or are using the same kind of application and/or device. It breaks down when employees leave their offices. Or when they reach out to suppliers, customers, or partners who aren't using the same systems, networks, or devices. These barriers force people to use less-productive means such as phone calls or e mail messages. When you can't use the best forms of collaboration, you can lose out on stronger relationships - and faster decision making. You can also lose an edge over your competitors.

Cisco® Expressway Series is an advanced collaboration gateway that helps solve these problems. It works with Cisco Unified Communications Manager (Cisco Unified CM), Business Edition and Cisco Hosted Collaboration Solution (HCS) to help make collaboration more universal.

Cisco Expressway makes collaboration as easy outside the enterprise as it is inside by simplifying the end-user experience. Using secure mobile access based on Transport Layer Security (TLS), Jabber® mobile users can access all their collaboration workloads (video, voice, content, instant messaging, and presence) without requiring the extra step of a VPN. Cisco Expressway provides mobile experiences simply from anywhere on a range of devices with Cisco Jabber® clients, and complements common IT department BYOD security policies. In addition, teleworkers can use their Cisco TelePresence® devices (EX, MX, and C Series) without a VPN, making collaboration at home as easy as in the office.

Expressway is integral for enabling the Cisco Jabber Guest. Together, using mobile and browser-based collaboration, the two products enable new ways of securely and easily interacting with "guests" whether they are consumers, other businesses, or even temporary employees.

Cisco Expressway also simplifies B2B collaboration. Using URI dialing, organizations can collaborate with customers, partners, and suppliers as easily and securely as with email messages. No prearrangements needed. They can collaborate with partners or customers just as if they shared an office.

If your organization already has third-party video systems, Expressway can help you migrate to Cisco when you're ready. Expressway provides video interoperability with standards-based H.323, H.264 SVC, or SIP systems.

Figure 1 illustrates a deployment with Cisco Expressway-C and Cisco Expressway-E forming a secure traversal link enabling video, voice, content, and IM&P collaboration outside the firewall. Cisco Expressway works with most firewalls and complements existing security policy, requiring only minimal firewall configuration.

Figure 1.   Cisco Expressway Series Deployment
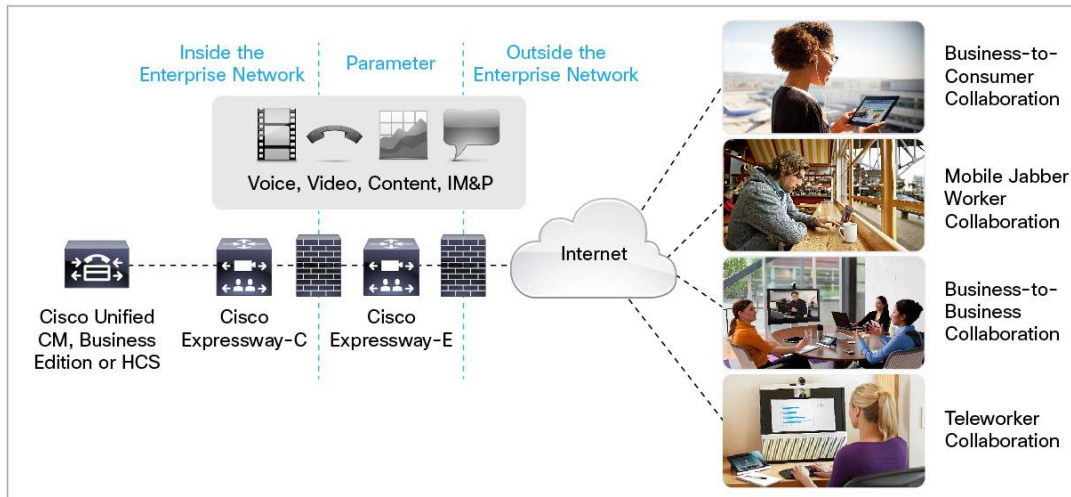
Cisco Expressway Series software supports flexible deployment options and is available as a virtualized application for VMware or similar virtual environments.

Features and Benefits of Cisco Expressway

- Increased competitiveness: Cisco Expressway helps enterprises speed decision making and business processes with real-time video, voice, content, and IM&P collaboration beyond the firewall.

- Enhanced workforce mobility: Cisco Expressway embraces mobility and device proliferation trends. It provides simple and secure access for a range of Cisco Jabber Unified Communications clients, without the need for a separate VPN client, thus complementing common BYOD strategies.

- Improved productivity and agility: Cisco Expressway empowers people to collaborate with colleagues, customers, and partners in a more timely and effective manner while helping reduce travel costs.

- Interoperability: Cisco Expressway Series supports open standards, and provides interworking between disparate systems to help enhance return on your existing investments and increase the number of contacts with whom you can connect. Supported standards include IPv4 to IPv6, H.323 to Session Initiation Protocol (SIP), and Microsoft Lync 2013 H.264 SVC to AVC.

- Scalability: Cisco Expressway supports businesses of all sizes as part of a Business Edition 6000 solution or an enterprise Cisco Unified CM deployment, or its services can be enabled through the cloud using Cisco Hosted Collaboration Solution (HCS).

- Simplified licensing: Mobile and remote access using Cisco Expressway is included as part of Cisco Unified Workspace Licensing (Cisco UWL) Standard and Pro and Cisco User Connect Licensing (UCL) Enhanced and Enhanced Plus agreements. For Cisco HCS deployments, it is included in Cisco HCS Foundation and Standard license bundles.

Features and Benefits

Table 1 lists features and benefits of Cisco Expressway.

Table 1. Features and Benefits

Feature	Benefit
User Interface	
Web browsers supported	• The web interface supports Internet Explorer 8 or 9; Firefox 3 or later; and Chrome.
Management interfaces	• Support for industry standards such as HTTP and Secure HTTP (HTTPS), XML, Simple Network Management Protocol (SNMP v1, v2, and v3), Secure Copy Protocol (SCP), and Secure Shell (SSH) Protocol • Embedded setup wizard for initial configuration • Support for call logging and diagnostics • Local time-zone-aware
Language	• English, Chinese (Simplified), French, German, Japanese, Korean, Russian, and Spanish
Firewall Traversal	
Traversal services	• Cisco Expressway technology • STUN discovery and STUN relay services • Firewall traversal STUN-compliant • H.460.18/19-compliant • H.460.18 client-proxy support • Support for H.460.19 multiplexed media • SIP support
Remote collaboration services supported	• XMPP for IM • HTTPS for logon, provisioning and configuration, contact search, and visual voicemail services • SIP for session establishment, register, and invite using Cisco Unified CM Business Edition and Cisco HCS • Real-Time Transfer Protocol (RTP) and Secure RTP (SRTP) for audio and video • Binary Floor Control Protocol (BFCP) for content sharing
Network	• Support for Domain Name System (DNS) addressing • Support for IPv4 and IPv6 simultaneously • Support for IPv4 and IPv6 translation services
Scalability and Capacity	

Single Cisco Expressway virtual-machine capacity (Small and medium deployments)	• The capacity of one Cisco Expressway (small and medium virtual machine) follows:
	  ◦ Up to 2500 proxied registrations to Cisco Unified CM
	  ◦ Up to 100 video calls or 200 audio calls
	Note: The maximum number of calls interworked to Microsoft Lync is 100. It is highly recommended that a dedicated Cisco Expressway-C server be deployed for use as a dedicated Microsoft Lync gateway.

Single Cisco Expressway virtual-machine capacity (Large deployments)	• The capacity of one Cisco Expressway (large virtual machine) follows:
	  ◦ Up to 5000 proxied registrations to Cisco Unified CM
	  ◦ Up to 500 video calls or 1000 audio calls
	Note: The maximum number of calls interworked to Microsoft Lync 2013 is 100. It is highly recommended that a separate Expressway-C server be deployed for use as a dedicated Microsoft Lync gateway.

Clustered Cisco Expressway capacity	• Up to 6 Cisco Expressway appliances and virtual machines can be clustered to increase capacity and provide redundancy • Clustering increases the maximum call capacity by up to 4 times

Feature	Benefit
System Security and Resilience	
Security features	• Secure management with HTTPS, SSH, and SCP • Secure file transfer • Inactivity timeout • Capability to lock down IP services • Authentication required on HTTP(S), SSH, and SCP • H.235 authentication support • Transport Layer Security (TLS) for SIP signaling • Roles-based password-protected GUI user access • Capability to enforce strict passwords • Capability to disable root access over SSH • Automated intrusion protection
Resilience and reliability	• Capability to deploy Cisco Expressway in a redundant (6) cluster • Capability to share licenses across a cluster • Capability to replicate configuration for clusters
Supported RFCs	
RFC	• 2543, 3261, 3264, 1889, 3265, 3325, 3515, 3891, 3892, 2327, 4566, 5626, 5627, 5389, and 5766

Product Specifications

Table 2 lists the Cisco Expressway virtualized application specifications.

Table 2. Cisco Expressway Virtualized Application Specifications

Product Feature	Product Specification		
Virtualized Application Specifications			
Servers for virtual environment	• Cisco Unified Computing System™ (Cisco UCS®) B- or C-Series servers or third-party servers that meet the minimum requirements • VMware vSphere or vCenter server running ESXi which includes Cisco UCS E-Series Servers on the Cisco Integrated Services Routers (ISRs) For full details of host requirements, refer to the Cisco Expressway Series Virtual Machine Deployment Guide		
Virtual-Machine Host Requirements	**Small Deployment (for Cisco BE 6000 Platform)**	**Medium Deployment (Typical Installation)**	**Large Deployment (Performance and Scalability)**
vCPU	2 core	2 core	8 core
Reserved CPU resource	3600 MHz (2 x 1.8 GHz)	4800 MHz (2 x 2.4 GHz)	26400 MHz (8 x 3.3 GHz)
Reserved RAM	4 GB	6 GB	8 GB
Disk space	132 GB	132 GB	132 GB
Network interface card	1 Gb	1 Gb	10 Gb

Licensing Information

Cisco Expressway Series virtual application software is available at no additional charge to customers who have a license and valid support contract for Cisco Unified Communications Manager or Business Edition 9.1.2 or later or for Cisco HCS 9.2.1 or later. Standard and Professional Edition Cisco UWL or Enhanced and Enhanced Plus Cisco UCL agreements support remote and mobile access Jabber Unified Communications clients and MX, EX, and C Series Cisco TelePresence endpoints using Cisco Expressway. Cisco HCS Foundation and Standard license bundles offer similar support for Cisco HCS deployments.

Each concurrent call session terminating on a system not using Cisco Unified Communications Manager, Business Edition or Cisco HCS (for example, B2B calls and Jabber Guest) requires a Cisco Expressway Rich Media Session license. Also, each concurrent call requiring interworking also requires a Cisco Expressway Rich Media Session license. Examples of such calls include H.323-to-SIP interworked calls or H.264 SVC-to-H.264 AVC calls.

Ordering Information

To order Cisco Expressway, visit the [Cisco Ordering Home Page](#) and refer to Table 3.

Table 3.   Ordering Information for Cisco Expressway

Product Name	Part Number
Cisco Expressway Series Virtualized Applications	
Cisco Expressway-C Virtual Edition	EXPWY-VE-C-K9
Cisco Expressway-E Virtual Edition	EXPWY-VE-E-K9
Ordering options for Cisco Expressway Series	
Cisco Expressway Rich Media Session License (Required for concurrent calls to/from any endpoint or application not registered to Cisco Unified Communications Manager. For example, Business to Business Calls, Jabber Guest and for interworked calls e.g. H.323 to SIP, H.264 AVC to H.264 SVC)	LIC-EXP-RMS
Enhanced Microsoft Collaboration key for Cisco Expressway (Required to enable Microsoft Lync Gateway functionality)	LIC-EXP-MSFT

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 can help you 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](#) online.

For More Information

For more information about the Cisco Expressway Series, please visit http://www.cisco.com/go/expressway 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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