

Cisco TelePresence for Intercompany Communications

Service Provider Overview

A breakthrough technology for remote meetings, Cisco® TelePresence integrates advanced audio, ultra-high-definition video, and interactive collaboration tools with the underlying network as the platform to deliver an immersive meeting experience. Through this powerful combination of technology and design, local and remote participants feel as if they are in the same room. Cisco TelePresence has the potential to transform the way organizations do business.

Organizations are already using Cisco TelePresence to make decisions faster, improve cross-cultural communications, scale scarce resources, and move products to market faster. *Many immediately understand the value of the ability to have "in-person" Cisco TelePresence meetings both internally and with customers, partners, suppliers, and other external groups; in other words, intercompany Cisco TelePresence.*

To support intercompany Cisco TelePresence, Cisco is introducing a solution that enables service providers to roll out a commercial offering with value-added services. Solution features include call processing, dial plan management, endpoint authentication and encryption, and, in the future, universal directory services and fully automated scheduling. Service providers will be able to offer differentiated Cisco TelePresence services to enterprise customers and develop their own commercial intercompany Cisco TelePresence services. The solution is the first of several from Cisco that will enable service providers to build Cisco TelePresence "dial tone." This will give enterprise customers the ability to connect directly to each other via Cisco TelePresence as easily as they can via a phone, with future additional services and features. This is a step towards enabling global public Cisco TelePresence networks.

The strategic value and ROI of intercompany capabilities for Cisco TelePresence is exponentially larger than that for internal deployments of Cisco TelePresence, so the revenue opportunity for the service provider is significant. Further, Cisco TelePresence services are a technology greenfield – an entirely new revenue stream that does not cannibalize existing services, provides net new minutes and has the potential to open up a new customer base – by creating global communities and extending supply chain opportunities, etc. As the demand for more Cisco TelePresence end points grows, service providers will not only be able to offer bandwidth services but also hosted, and other managed services as well. The revenue opportunity for network connectivity, services and end points is significant – it is expected to exceed \$5B by 2011. We anticipate that service providers will come to market quickly with a basic offering, and add additional capabilities for intercompany Cisco TelePresence communications over time.

The Cisco TelePresence solution for intercompany communications is a fully-validated reference architecture that enables an end-to-end solution for service provider and enterprise networks. It was engineered from the ground up with an understanding of both enterprise and service provider requirements, utilizing the integrated Cisco Unified Communications platform in the enterprise network in combination with the Cisco Service Exchange Framework infrastructure in the service provider network. The Cisco TelePresence solution set for intercompany capabilities proves out the value of a next-generation IP network to deliver scalable, secure inter-enterprise collaboration.

This new opportunity created for Cisco TelePresence services gives service providers the chance to exploit key assets: their standards-based Cisco IP Next Generation Network (NGN) – with scalable and secure QoS capabilities – while enabling a “pay as you grow” deployment model to meet the growing demand for Cisco TelePresence services. In other words, the network is ready.

The Cisco IP Next-Generation Network service provider architecture can be optimized for the delivery of ultra-high-definition video without compromising security and also provides the flexibility to introduce premium differentiated services. Once implemented, this allows service providers to offer network-aware services tuned for Cisco TelePresence that ensure service level agreements (SLAs) and scale services.

Cisco will enable service providers to offer an additional set of services for intercompany Cisco TelePresence including integrated scheduling, secure call processing, meet me (hosted multipoint), improved manageability, and concierge services. All of these will enable service providers to offer enhanced Cisco TelePresence “dial tone” services.

The rollout of intercompany capabilities for Cisco TelePresence is expected to happen very rapidly. Cisco is delivering on the vision of Cisco TelePresence for intercompany communications with successful trials involving several service providers today. Broader technologies and capabilities are expected to be available in the second half of 2008.

Cisco introduced the Certified Cisco TelePresence Connection for network connections to help SPs demonstrate delivery of the Cisco TelePresence experience. For intercompany Cisco TelePresence, Cisco will provide certification extensions in 2008.

The information below may assist further understanding of intercompany capabilities for Cisco TelePresence, the solution set Cisco is delivering to enable service providers, and assist in service deployment planning.

General

Q. What is Cisco TelePresence?

A. Cisco TelePresence is a breakthrough technology for remote meetings. It integrates advanced audio, ultra-high-definition video, and interactive collaboration tools with the underlying network as the platform to deliver an immersive meeting experience. Through this powerful combination of technology and design, local and remote participants feel as if they are in the same room. Cisco TelePresence has the potential to transform the way organizations do business.

Q. What are the primary benefits of Cisco TelePresence?

A. Cisco TelePresence enables organizations to make decisions faster, improve cross-cultural communications, scale scarce resources, and move products to market faster. Many organizations already understand the value of holding “in-person” Cisco TelePresence meetings both internally and with customers, partners, suppliers, and other external groups; in other words, intercompany Cisco TelePresence.

Q. How can my service provider organization offer intercompany Cisco TelePresence services?

A. Cisco is introducing a solution that enables service providers to roll out a commercial offering with value-added services based on their MPLS VPN network offerings. Solution features include call processing, dial-plan management, endpoint authentication and encryption, and, in the future, universal directory services and fully automated scheduling. Service providers

will be able to offer differentiated Cisco TelePresence services to enterprise customers and develop their own commercial intercompany Cisco TelePresence services.

The intercompany Cisco TelePresence solution was engineered with an understanding of both enterprise and service provider requirements, and the solution uses the integrated Cisco Unified Communications platform in the enterprise network in combination with the Cisco Service Exchange Framework infrastructure in the service provider network.

Q. How is the intercompany Cisco TelePresence solution different from other TelePresence offerings?

- A.** The solution is the first of several from Cisco that will enable service providers to build Cisco TelePresence “dial tone” for intercompany collaboration. This solution builds upon existing Cisco TelePresence solution architectures for intracompany communications and will give enterprise customers the ability to connect directly to each other using Cisco TelePresence as easily as they can using a phone, with future additional services and features.

Cisco will enable service providers to offer an additional set of services for intercompany Cisco TelePresence including integrated scheduling, secure call processing, Meet Me (hosted multipoint) functionality, improved manageability, and concierge services. All of these will enable you to offer enhanced Cisco TelePresence “dial tone” services.

Further, the Cisco Powered program has introduced the Cisco TelePresence Connection Certification. Service providers who achieve this certification have demonstrated that they will provide their customers with a high-quality experience when using Cisco TelePresence. For intercompany Cisco TelePresence, Cisco will provide certification extensions in 2008.

Market Opportunity

Q. What is the opportunity for intercompany Cisco TelePresence services?

- A.** Cisco TelePresence is a technology greenfield – generating entirely new revenue streams that do not cannibalize existing services. Instead, Cisco TelePresence provides net new minutes and has the potential to open up a new customer base by extending supply chain opportunities, etc. As the demand for more Cisco TelePresence endpoints grows, service providers will not only be able to offer bandwidth services but hosted and other value-added managed services.

The strategic value of intercompany Cisco TelePresence is exponentially larger than that for intra-enterprise Cisco TelePresence, so the revenue opportunity for the service provider is significant. Cisco is conducting successful trials involving several service providers today. Broader technologies and capabilities are expected to be available in the second half of 2008. Cisco anticipates that service providers will come to market quickly with a basic offering, and add additional capabilities for intercompany Cisco TelePresence communications over time.

Q. How can my service provider organization position intercompany Cisco TelePresence versus competitive video conferencing services?

- A.** By deploying the intercompany Cisco TelePresence architecture, your organization will benefit from the following differentiators versus video conferencing or specialized providers:
- Value of converged network with wide regional/global reach over purpose-built networks that may not reach all sites and partners for real-time collaboration
 - Greater flexibility, scale, and speed-to-provision for business-to-business collaboration

- Integration of intelligent services and capabilities – integrated contact center capabilities and other value-added solutions
- End-to-end solution capabilities that enable integrated session capabilities across enterprise and service provider networks

Also, purely from a services perspective, intercompany Cisco TelePresence solutions can be positioned to any organization that regularly needs to meet with third parties. So that service providers can build intercompany commercial services for Cisco TelePresence, Cisco is delivering a fully validated reference architecture. With this architecture implemented, Cisco TelePresence calls between multiple enterprise networks securely traverse the service provider network with no commingling of routes, addresses, or data.

Q. What additional value-added services can I add to my portfolio?

A. The initial service opportunity for the Cisco TelePresence application is in network services that are optimized to deliver Cisco TelePresence traffic over a converged enterprise network. Intercompany Cisco TelePresence adds the capability to offer secure inter-VPN collaboration. Beyond the initial service opportunity, you can plan for a roadmap of advanced and value-added Cisco TelePresence services to complement your portfolio of Cisco Unified Communications, security, and network services. There are a number of incremental offerings that you can add to your portfolio, such as encryption services, directory and scheduling services, or hosting, depending on your business strategy. A service roadmap may also include:

- Multipoint Cisco TelePresence connections: Service provider facilitates secure Cisco TelePresence meeting sessions between multiple locations (three or more) for unscheduled or scheduled calls.
- Hosted Cisco TelePresence Service: The service provider hosts and manages the entire Cisco TelePresence solution at a public location.
- Managed Cisco TelePresence endpoint and scheduling: The service provider offers managed endpoint and reporting services. Scheduling proxy/dial-plan management enables easy meeting schedule planning.
- Cisco TelePresence Virtual Concierge: Virtual concierge services include moderated meetings, bridging meeting participants who are using other conferencing technology, and additional meeting resources.

Your service provider organization can also use Cisco TelePresence to accelerate adoption of additional services such as managed IP communications, managed security, and other network-based solutions to targeted enterprise customers.

Q. Are enterprises interested in deploying value-added services?

A. Enterprises overwhelmingly find value in a collaboration solution to extend to customers, partners, and suppliers. A 2007 Sage survey indicates that there is strong enterprise interest for a roadmap of managed network and value-added services for Cisco TelePresence. In the survey, 73.6 percent of respondents anticipated Cisco TelePresence use in an inter-enterprise scenario, 42 percent were very interested in managed network services, 46 percent in managed multipoint services, 38 percent in hosted conference rooms/managed endpoints, 31 percent in concierge services, and 27 percent in hosted services.

Deployment

Q. What additional Cisco components are required to deploy inter-company Cisco TelePresence? Will this require an investment in new equipment, training, etc?

- A.** Service providers can use their existing next-generation network architecture, and specifically Multiprotocol Label Switching (MPLS) VPN services as the foundation for intercompany Cisco TelePresence. With the integration of a Virtual Route Forwarding (VRF)-aware Cisco Session Border Controller (SBC), the network is capable of providing the security and call admission control, along with topology and IP address hiding, Network Address Translation (NAT) and firewall traversal, bandwidth policing, and quality-of-service (QoS) management required for intercompany communications. The VRF-aware capabilities of the Cisco SBC use Layer 3 security and the overall network-aware features integrated into the MPLS VPN provide for enhanced knowledge of network conditions, security, and operational efficiency. The Cisco SBC IOS XR functionality is provided in the Multiservice Blade in the GSR 12000 and 7600 series routing platforms and supports a scalable “pay as you grow” deployment business model that aligns with IMS/TiSpan strategies.

Additional training, network design, and go-to-market materials will be made available to assist service providers in better architecting and implementing Cisco TelePresence network connections and value-added services. As demand grows and applications and features are added to the Cisco TelePresence solution suite, there will be opportunities to upgrade and invest in the network to further capitalize on this growing opportunity.

Q. What is required of the enterprise to roll out intercompany Cisco TelePresence?

- A.** In addition to working with a service provider who offers inter-enterprise Cisco TelePresence network services with appropriate bandwidth and QoS capabilities, enterprise customers should upgrade their endpoints to support inter-enterprise functionality for Cisco TelePresence session encryption and firewall/NAT traversal. Additional changes might include deployment of a local session border controller (SBC) in the enterprise network edge to provide additional IP address privacy and topology hiding, enterprise-based call admission control, and additional security options to protect the enterprise network perimeter. Service providers and Cisco TelePresence Advanced Technology Partners (ATPs) may be able to provide additional support in the planning, design, and implementation of upgrades to the enterprise to support secure intercompany Cisco TelePresence collaboration.

Supporting Network Architecture

Q. How does the Cisco IP Next-Generation Network (NGN) and Service Exchange Framework (SEF) architecture enable differentiated network services to support intercompany Cisco TelePresence?

- A.** The optimal Cisco TelePresence experience is best delivered by a certified Cisco TelePresence connection from service providers using the Cisco IP NGN architecture. With an IP NGN, adding new services, intelligence, and applications does not require an overlay network and allows you to align bandwidth and application performance with business requirements.

The Cisco IP NGN architecture can be optimized for the delivery of ultra-high-definition video without compromising security, and also provides the flexibility to introduce premium differentiated services. Once implemented, this architecture allows you to offer network-aware services tuned for Cisco TelePresence that help ensure service-level agreements (SLAs) and maximum scalability.

The Service Exchange Framework of the Cisco IP NGN architecture enables you to optimize application performance, availability, and flexibility – and provides a basis for enabling differentiated services based on subscriber, session/usage, and service-level options. Specifically, the VRF-aware Cisco Session Border Controller aids in inter-VPN connectivity and firewall/NAT traversal, provides topology hiding for customer privacy to better secure inter-enterprise Cisco TelePresence sessions, and supports network-based call admission control as well as detailed session records for billing and reporting purposes.

Q. What network features or elements are required in order to offer a certified Cisco TelePresence connection?

- A.** The Cisco TelePresence Connection Certification program requires that network service providers support: guaranteed QoS between endpoints; prioritization for differentiated classes of service including real-time voice, video, and signaling; guaranteed SLAs (packet loss, latency [delay], jitter); service availability; and security for end-to-end calls. The certification program sets parameters for operational excellence and is validated by a third-party auditor.

The Cisco Powered certification program for Cisco TelePresence network services offered by service providers will be expanded to include best practices for intercompany Cisco TelePresence network services in 2008. These additional best practices enhance the end-user experience through the deployment of validated design architecture recommendations in connection security, intercompany connectivity, augmented QoS functionality, path optimization for Cisco TelePresence connections, and policy management.

Q. What is the value in offering a certified Cisco TelePresence network connection?

- A.** According to a 2007 Sage survey, 63 percent of enterprises consider the Cisco TelePresence Connection Certification an important criterion for evaluating potential service providers; this is especially important among those who are highly interested in Cisco TelePresence.

Cisco TelePresence service should not be delivered over the open Internet, thus making a service provider's MPLS network relevant in a new way as the foundation of business applications. Cisco TelePresence network connections will generate new revenue sources and differentiation opportunities – you can offer new services, premium service options, and business-to-business collaboration services. Further, you can take advantage of your VPN, IP Communications, IP contact center, and security portfolios to deliver integrated business solutions. When deploying a new application, enterprises seek assurance and a certified provider who has partnered with Cisco to optimize delivery of Cisco TelePresence. Your Cisco TelePresence Connection Certification provides a strong value proposition for supporting enterprise customers and delivering an added level of service assurance.

To summarize, the benefits offering a certified Cisco TelePresence network connection are:

- Creates greater Cisco TelePresence solution relevancy for your MPLS-based network services
- Provides new revenue sources and differentiation opportunities
- Optimizes delivery of Cisco TelePresence applications

For More Information

For more information regarding Cisco TelePresence product information, please visit <http://www.cisco.com/en/US/products/ps7060/index>.



Americas Headquarters
 Cisco Systems, Inc.
 170 West Tasman Drive
 San Jose, CA 95134-1706
 USA
www.cisco.com
 Tel: 408 526-4000
 800 553-NETS (6387)
 Fax: 408 527-0883

Asia Pacific Headquarters
 Cisco Systems, Inc.
 168 Robinson Road
 #28-01 Capital Tower
 Singapore 068912
www.cisco.com
 Tel: +65 6317 7777
 Fax: +65 6317 7799

Europe Headquarters
 Cisco Systems International BV
 Haarlerbergpark
 Haarlerbergweg 13-19
 1101 CH Amsterdam
 The Netherlands
www-europe.cisco.com
 Tel: +31 0 800 020 0791
 Fax: +31 0 20 357 1100

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

©2007 Cisco Systems, Inc. All rights reserved. CCVP, the Cisco logo, and Welcome to the Human Network are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn is a service mark of Cisco Systems, Inc.; and Access Registrar, Aironet, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Enterprise/Solver, EtherChannel, EtherFast, EtherSwitch, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, IP/TV, iQ Expertise, the iQ logo, iQ Net Readiness Scorecard, iQuick Study, LightStream, Linksys, MeetingPlace, MGX, Networkers, Networking Academy, Network Registrar, PIX, ProConnect, ScriptShare, SMARTnet, StackWise, The Fastest Way to Increase Your Internet Quotient, and TransPath are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0711R)