System Components

Call Control

Cisco Unified Communications Manager

Cisco Unified Communications Manager software is the call processing component of the Cisco Unified Communications system. Cisco Unified Communications Manager extends enterprise telephony features and capabilities to packet telephony network devices such as IP phones, media processing devices, voice over IP (VoIP) gateways, and multimedia applications. Additional services such as unified messaging, multimedia conferencing, collaborative contact centers, and interactive multimedia response systems are made possible through Cisco Unified Communications Manager open telephony APIs. Cisco Unified Communications Manager offers a suite of integrated voice applications and utilities, including the Cisco Unified Communications Manager Attendant Console, an ad-hoc conferencing application, the Cisco Unified Communications Manager Bulk Administration Tool, the Cisco Unified Communications Manager CDR (call detail record) Analysis and Reporting Tool, the Cisco Unified Communications Manager Real-Time Monitoring Tool, and the Cisco Unified Communications Manager Assistant application.

The dial plan feature in Unified Communications Manager enable you to:

- Route calls based on the physical location context of the caller.
- Represent calling and called party numbers in a global form such as that described by the International Telecommunications Union's E.164 recommendation.
- Present calls to users in a format based on local dialing habits.
- Present calls to external networks (for example, the PSTN) in a manner compatible with the local requirements for calling party number, called party number, and their respective numbering types.
- Derive the global form of the calling party number on incoming calls from gateways, based on the calling number digits and the numbering type.

For additional information, go to:

http://www.cisco.com/en/US/products/sw/voicesw/ps556/tsd_products_support_general_information.html

Cisco Business Edition

The Cisco Business Edition 3000, 5000, and 6000 are the call-processing, mobility, and messaging component of the Cisco Unified Communications system for medium-sized businesses. Business Edition includes the features and capabilities of Cisco Unified Communications Manager, Cisco Unified Mobility, and Cisco Unity Connection co-resident on a single, low-cost Media Convergence Server.

Cisco Business Edition is designed to support 150 to 500 users in one main and up to five remote locations. It also supports up to 575 Skinny Client Control Protocol (SCCP) or Session Initiation Protocol (SIP) IP phones or video endpoints per Business Edition autonomous system. Installation is simplified as the applications come pre-loaded onto the server. And management of all applications can be performed through a consolidated interface.

Cisco Business Edition supports corporate directory synchronization. This feature enables Business Edition to synchronize directly with an existing corporate directory using LDAP integration. This feature enables administrators to provision users automatically from the corporate directory into the Business Edition database, thus allowing administrators to maintain a single directory. This method avoids having to add, remove, or modify core user information manually in Business Edition each time a change occurs in the corporate directory. This feature also helps the end-users authenticate using single sign-on functionality, thus reducing the number of passwords across the network.

For additional information, go to:

http://www.cisco.com/en/US/products/ps7273/tsd_products_support_general_information.html

Cisco Unified Communications Manager Session Management Edition

Cisco Unified Communications Manager Session Management Edition integrates multivendor private branch exchanges into one network and centralizes applications, trunking, dial plan, and policy control. It reduces communication tolls, cuts administrative overhead, and supports easier migration to a full IP telephony environment.

Cisco Unified Communications Manager Session Management Edition extends collaboration applications such as unified messaging, mobility, TelePresence, social networking, and web applications (using Web 2.0 interfaces) to every user on the network. Unified applications are deployed at the network core, so users on multivendor PBXs can use centrally deployed applications.

Cisco Unified Communications Manager Session Management Edition supports the following features:

- H.323 Annex M1 intercluster trunks
- SIP intercluster trunks
- SIP trunks
- H.323 trunks
- MGCP trunks
- Encrypted calls
- Multi vendor SIP and Q.SIG interoperability with Nortel, Siemens, Avaya, and Microsoft
- SIP trunk with Cisco Unified Border Element
- Voice, video, and fax calls

For additional information, go to:

http://www.cisco.com/en/US/products/ps10661/index.html

Cisco Unified Communications Manager Express

Cisco Unified Communications Manager Express is an entry-level call processing system that provides a wide range of IP telephony features for small to medium-sized businesses and autonomous small enterprise branch offices with up to 450 phones.

All files and configurations for IP phones are stored internally on a single Cisco Integrated Services router or on the new Unified Communications 500 Series router for a cost-effective, highly reliable, IP communications solution. Cisco Unified Communications Manager Express helps ensure investment protection and offers scalability because all hardware and software is fully compatible with Cisco Unified Communications Manager and Cisco Unified Survivable Remote Site Telephony.

Cisco Unified Communications Manager Express provides key system and PBX modes of operation on a single network and several industry-unique features, including:

- Call processing for local IP and analog phones attached to a Cisco router
- Support for analog phones in SCCP mode, Session Initiation Protocol (SIP) line side support with supported Cisco Unified IP phones, and a robust set of PSTN interfaces
- Call routing over a WAN with calling party name and number information, and compressed voice for reduced WAN bandwidth utilization
- Support for peripheral services such as voice mail, automated attendant, and IP-based XML and Telephony Application Programming Interface (TAPI) applications
- Interoperability with Cisco Unified CallManager and the Cisco Unity Express
- Simple software configuration change on the Cisco router converts system to a highly available survivable telephony gateway with support for more features than SRST for a remote site in a centralized Cisco Unified Communications Manager deployment

System management features in the Cisco Unified Communications Manager Express environment enable you to:

- Accomplish initial installation of Cisco Unified Communications Manager Express easily using the Quick Configuration Tool (QCT) that prompts for answers to pertinent questions
- Perform everyday administration and remote troubleshooting using the Cisco IOS software command-line interface (CLI)
- Add users, phones, and extensions or make changes for system and integrated voice-mail using a single web-based GUI designed for nontechnical staff
- Monitor deployments with Cisco Monitor Manager and Cisco Monitor Director
- Use Cisco Configuration Agent (CCA) for configuration tasks

For additional information, go to:

http://www.cisco.com/en/US/products/sw/voicesw/ps4625/index.html

Cisco Unified Survivable Remote Site Telephony

Cisco Unified Communications Manager with Cisco Unified Survivable Remote Site Telephony (SRST) allows companies to extend high-availability IP telephony to their remote branch offices with a cost-effective solution that is easy to deploy, administer, and maintain. The SRST capability is embedded in the Cisco IOS Software that runs on the Cisco integrated services routers.

SRST software automatically detects a connectivity failure between Cisco Unified Communications Manager and IP phones at a branch office. SRST initiates a process to automatically configure the Cisco integrated services routers to provide call-processing backup redundancy for the IP phones and PSTN access in the affected office. The router provides essential call-processing services for the duration of the failure, helping ensure that critical phone capabilities are operational. Upon restoration of the connectivity to the Cisco Unified Communications Manager, the system automatically shifts call-processing functions back to the primary Cisco Unified Communications Manager cluster.

For additional information, go to:

http://www.cisco.com/en/US/products/sw/voicesw/ps2169/index.html

Cisco Intercompany Media Engine

The Cisco Intercompany Media Engine (Cisco IME) allows you to establish direct IP connectivity between enterprises by combining peer-to-peer technologies with existing PSTN infrastructure. It moves calls from the PSTN to Direct SIP trunks. The term boundary-less Unified Communications is used to describe this technology because it allows for the business-to-business extension of Unified Communications capabilities such as high-fidelity codecs, enhanced caller ID, and video telephony outside the corporate networks. The solution learns routes in a dynamic, secure manner and provides for secure communications between organizations across the internet. Organizations that work closely together and have high levels of intercompany communications will benefit most from the enhanced communications offered by Cisco IME.

Cisco IME provides the following:

- Allows any two enterprises in the world to connect over the public internet as well as support for closed user groups (CUGs) to allow cooperating enterprises to work with each other
- Requires minimal configuration; dial plan restructuring or entry of anyone else's dial plan is not required
- Requires no Service Provider support beyond public IP and basic PSTN

- Cisco IME monitors the QoS of the Real-Time Transport Protocol (RTP) traffic in real time and fallback to PSTN automatically if problems arise.

For additional information, go to:

http://www.aboutcisco.biz/en/US/products/ps10669/tsd_products_support_series_home.html

Contact Center

Cisco Unified Contact Center Express

Cisco Unified Contact Center Express meets the needs of midmarket and enterprise branch-office or departmental companies that need easy-to-deploy, easy-to-use, secure, virtual, highly available, and sophisticated customer interaction management for up to 400 agents. Cisco Unified Contact Center Express support for powerful, agent-based service as well as fully integrated self-service applications results in reduced business costs and improved customer response by providing sophisticated and distributed automatic call distributor (ACD), interactive voice response (IVR), computer telephony integration (CTI), and agent and desktop services in a single-server, contact-center-in-a-box deployment while offering the flexibility to scale to larger, more demanding environments. Cisco Unified Contact Center Express helps ensure your business rules for inbound and outbound voice and email; and customer interaction management helps ensure that each contact is delivered to the right agent the first time.

For additional information, go to:

http://www.cisco.com/en/US/products/sw/custcosw/ps1846/index.html

Cisco Agent Desktop

Cisco Agent Desktop is a computer telephony integration (CTI) solution for single- and multisite IP-based contact centers. It is easy to deploy, configure, and manage. Powerful tools help increase agent and supervisor productivity, improve customer satisfaction, and reduce costs. An intuitive GUI decreases IT dependency and simplifies customization, maintenance, and change management. Transparent integration with Cisco Unified Contact Center helps you easily deploy CTI capabilities at new locations as customer contact operations expand.

For additional information, go to:

http://www.cisco.com/en/US/products/sw/custcosw/ps427/index.html

Cisco Unified Contact Center Enterprise and Cisco Unified Intelligent Contact Management Enterprise Software

Cisco Unified Contact Center Enterprise (UCCE) provides a full-featured distributed contact center infrastructure, which segments customers, provides call treatment and network-to-desktop computer telephony integration (CTI), monitors resource availability, and delivers each contact to the most appropriate resource. It provides a VoIP contact center solution that integrates inbound and outbound voice applications with Internet applications, including real-time chat, web collaboration and email. UCCE is complimented by additional components and products which provide reporting, desktop, IVR, social media, and other functionality.

For more information about Unified Contact Center Enterprise, go to:

http://www.cisco.com/en/US/products/sw/custcosw/ps1844/index.html

and:

http://www.cisco.com/en/US/products/sw/custcosw/ps1001/tsd_products_support_general_information.html

Cisco Computer Telephony Integration

The Cisco Computer Telephony Integration (CTI) Option enables Cisco Unified Intelligent Contact Management (ICM) Enterprise and Cisco Unified Contact Center Enterprise to provide a complete network-to-desktop strategy, including comprehensive functionality at individual workstations.

For additional information, go to:

http://www.cisco.com/en/US/products/sw/custcosw/ps14/index.html

Cisco Unified Customer Voice Portal

The Cisco Unified Customer Voice Portal provides call-management and call-treatment solutions with self-service IVR capabilities, allowing callers to obtain personalized answers to complex questions and to conduct business without interacting with a live agent.

The Cisco Unified Customer Voice Portal includes support for agent queuing and for multisite call switching capabilities. It uses standard Internet technologies to provide a smooth customer experience even when transferring calls between several locations. With support for the Cisco Unified Intelligent Contact Management and Cisco Unified Contact Center products, the Cisco Unified Customer Voice Portal delivers self-service as part of a comprehensive customer contact strategy that provides unique, personalized interactions.

The Cisco Unified Customer Voice Portal supports speech-enabled and touch-tone applications, which can be quickly integrated with back-end data and business rules that are available on the web. Using the standard Java 2 Platform, Enterprise Edition (J2EE) and Voice Extensible Markup Language (VoiceXML) with the graphical development tools provided with the portal (which are compliant with the Eclipse standard for building web applications), you can develop complex voice applications quickly and cost-effectively.

For additional information, go to:

http://www.cisco.com/en/US/products/sw/custcosw/ps1006/index.html

Cisco Unified Intelligence Suite and Intelligence Center

Cisco Unified Intelligence Center extends the boundaries of traditional contact center reporting by creating a comprehensive information portal where data can be integrated from multiple sources and shared throughout an organization. With this intuitive advanced reporting platform, you can report on relevant business data and web components with ease. Unified Intelligence Center provides a dashboard-based canvas for grouping multiple reporting objects together, offering a comprehensive view of contact center statistics, linking multiple reports, and integrating third-party data including workforce management, quality management, and web content.

For additional information, go to:

http://www.cisco.com/en/US/products/ps9755/index.html

Cisco Finesse

Cisco Finesse is the next-generation agent and supervisor desktop for Cisco Unified Contact Center Enterprise, providing benefits across a variety of communities that interact with the customer service organization. It is designed to provide a collaborative experience that improves the customer experience by enhancing customer service representative experience.

For IT professionals, Cisco Finesse offers smooth integration with the Cisco Collaboration portfolio. It is standards-compliant, and offers low cost of customization of the agent and supervisor desktops.

For more information about Cisco Finesse, go to:

http://www.cisco.com/en/US/products/ps11324/prod_literature.html

Cisco MediaSense

Cisco MediaSense is an open-standards, network-based, scalable platform that supports recording, playback, live streaming, and storage of media, including audio and video, with rich recording metadata. It provides an efficient, cost-effective platform for capturing conversations between businesses and their customers. The conversations then can be examined by third-party analytics applications from Cisco technology partners to provide a variety of valuable business functions, including regulatory compliance review, quality management, service optimization, legal discovery, business intelligence gathering, agent training, and real-time guidance that can dramatically improve customer care.

For additional information about Cisco MediaSense, go to:

http://www.cisco.com/en/US/products/ps11389/index.html

Cisco SocialMiner

Cisco SocialMiner is a social media customer care solution that enables your company to proactively respond to customers and prospects communicating through public social media networks such as Twitter and Facebook or other public forum or blogging sites. By providing social media monitoring, queuing, and workflow to organize customer posts on social media networks and deliver them to your customer care team, your company can respond to customers in real time through the same social network they are using to communicate.

For more information about Cisco SocialMiner, go to:

http://www.cisco.com/en/US/products/ps11349/index.html

Applications

Cisco Unified Communications Manager IM and Presence Service

Cisco Unified Communications Manager IM and Presence Service enables the deployment of Session Initiation Protocol (SIP) or eXtensible Messaging and Presence Protocol (XMPP) technology to support unified communication in an enterprise environment. SIP enhances the voice network by providing a core set of behaviors for session establishment and control that can be applied in a wide array of features and services. In addition to core SIP support, Cisco Unified Communications Manager IM and Presence Service uses SIMPLE (SIP for Instant Messaging and Presence Leveraging Extensions) technology to support instant

messaging (IM) and presence. XMPP provides real-time communication of applications including instant messaging, presence, multi-party chat, voice and video calls, and collaboration.

The presence engine collects user presence information (such as busy, idle, away, or available status) and user capabilities (such as the ability to support voice, video, instant messaging, and web collaboration), and compiles the data in a repository that can facilitate aggregate presence information from multiple resources for each user. This repository is accessed by the applications and features that each user employs. A user can apply unique user rules and privacy to ensure that only authorized applications and users have access to presence information.

Cisco Unified Communications Manager IM and Presence Service integrates with various desktop clients and applications. It enables Cisco Unified Personal Communicator to perform functions such as click-to-dial and phone control as well as voice, video, and web collaboration. In addition, Cisco Unified Communications Manager IM and Presence Service provides a core IM service for Cisco Unified IP Phones that are connected to Cisco Unified Communications Manager. Cisco Unified Communications Manager IM and Presence Service also supports interoperability with Microsoft and IBM Lotus, enabling specific functions to work with Cisco Unified IP Phones supported on Cisco Unified Communications Manager.

The SIP/SIMPLE and XMPP interfaces on Cisco Unified Communications Manager IM and Presence Service make it one of the most open platforms available and can provide value add presence and call control capabilities to any standards based application or service. This native dual protocol support allows for borderless business-to-business communication through the use of federation, which facilitates the exchange of presence and IM with any business that uses one of the major enterprise IM solutions such as Webex Connect, Microsoft or IBM Lotus Sametime, as well as public IM solutions such as GoogleTalk or AOL.

For additional information, go to:

http://www.cisco.com/en/US/products/ps6837/index.html

Cisco Unified SIP Proxy

Cisco Unified SIP Proxy is a high-performance, highly available Session Initiation Protocol (SIP) proxy server for centralized routing and SIP signaling normalization. By forwarding requests between call-control domains, Cisco Unified SIP Proxy provides the means for routing sessions within enterprise. The Cisco Unified SIP Proxy application is delivered in Network Module and Service Module form factors on Cisco 2900, 3800, 3900, and 3900E Series Integrated Services Routers

The Cisco Unified SIP Proxy brings the following benefits to a network using Unified communications Manager SIP trunks:

- Aggregation and routing—The Unified SIP Proxy is capable of connecting several SIP servers to each other without each of the servers connecting to every other one in a full-mesh configuration
- Scalability—The Unified SIP Proxy can be used to terminate calls to and from the enterprise and IP-PSTN service providers. The proxy, in turn, distributes the calls across a pool of Unified Border Elements. More Unified Border Elements may be added to increase capacity.
- Availability and load balancing—The Unified SIP Proxy distributes calls over the pool of available Unified Border Elements and monitors the status of each Unified Border Element to ensure reliable call completion.
- Message normalization—The Unified SIP Proxy serves to hide differences in SIP protocol messaging by providing the means to manipulate headers and contents of the messages as they pass through the Unified SIP Proxy.

For additional information, go to:

http://www.cisco.com/en/US/products/ps10140/index.html

Cisco Emergency Responder

Cisco Emergency Responder enhances emergency calling from Cisco Unified Communications Manager. It helps assure that Cisco Unified Communications Manager sends emergency calls to the appropriate Public Safety Answering Point (PSAP) for the caller's location, and that the PSAP can identify the caller's location and, if necessary, return the call. Cisco Emergency Responder can also notify customer security personnel of an emergency call in progress and of a caller's location.

Cisco Emergency Responder helps Cisco Unified Communications Manager customers comply more effectively with their legal or regulatory obligations and reduce their risk of liability related to emergency calls. It includes these key features:

- Automatically tracks IP phone location
- Provides emergency call routing instructions to Cisco Unified Communications Manager
- Identifies caller location to local exchange carriers and PSAPs
- Alerts customer security personnel to emergency calls in progress
- Supports emergency callback
- Logs emergency calls and location record changes

For additional information, go to:

http://www.cisco.com/en/US/products/sw/voicesw/ps842/index.html

Cisco Unified Attendant Consoles

The three attendant console products supported by Cisco Unified Communications Manager are as follows:

- Cisco Unified Business Attendant Console
- Cisco Unified Department Attendant Console
- Cisco Unified Enterprise Attendant Console

Associated with a Cisco Unified IP Phone, the Cisco Unified Attendant Consoles provide the human attendant console operator with the tools to quickly accept and effectively dispatch incoming calls to individuals across the organization. The applications offer a rich set of features, including a call-queuing engine, endpoint busy status, presence integration, and full Cisco Unified Communications Manager directory search.

For more information about the Cisco Unified Attendant Consoles, go to:

http://www.cisco.com/en/US/products/ps7282/prod_software_versions_home.html

Conferencing

Cisco Unified MeetingPlace

Cisco Unified MeetingPlace is a complete rich-media conferencing solution that integrates voice, video, and web collaboration capabilities. It allows users from any location to meet at any time and to easily integrating web, voice, and video conferencing into everyday communications.

Cisco Unified MeetingPlace provides intuitive interfaces for setting up, attending, and managing meetings. It allows immediate or future voice, video, and web conferences to be set up and attended in a single step—from Cisco Unified IP Phones, instant messaging clients, web browsers, and Microsoft Outlook and Lotus Notes calendars. Meeting participants have complete control over voice, video, and web conferences from a single browser interface.

Cisco Unified MeetingPlace can be deployed "on network," behind a firewall, and integrated directly into an organization's private voice and data networks and collaborative applications. This deployment enables cost savings because organizations can use their IP network infrastructures to reduce transport costs paid to service providers. In addition, on-network deployment results in a secure meeting environment by allowing organizations to isolate confidential meetings and content behind the firewall while providing the flexibility to meet with external parties. To prevent unauthorized access and toll fraud, Cisco Unified MeetingPlace integrates with the corporate directory to provide synchronized updates as an employee's status changes.

Cisco MeetingPlace can be located in on-premises or hosted in off-site facilities. It can be managed in-house or management can be outsourced.

For additional information, go to:

http://www.cisco.com/en/US/products/sw/ps5664/ps5669/index.html

Cisco WebEx

Cisco WebEx combines desktop sharing through a web browser with phone conferencing and video. WebEx is a web-based service, so it works with any computer (Windows, Mac, Linux, or Solaris), as well as iPhone, BlackBerry, or any other Wi-Fi or 3G-enabled mobile device.

For additional information, go to:

http://www.webex.com/overview/index.html

Cisco TelePresence

The Cisco TelePresence EX90 for the desktop lets colleagues instantly collaborate face-to-face, whether separated by a hallway, a street, or several time zones. It enables faster decision making, enhances relationships, and improves efficiency. The Cisco TelePresence EX90 includes the following features:

- Full high-definition 24-inch screen with vivid, life-like 1080p30 video
- Simple touch-screen control
- One-touch sharing of high-definition (HD) content
- A built-in document camera feature

- An included wideband handset, with an option to add a headset

For more information about the Cisco TelePresence System EX Series, go to:

http://www.cisco.com/en/US/prod/collateral/ps7060/ps11303/ps11308/ps11327/data_sheet_c78-627494.html

VoiceMail and Unified Messaging

Cisco Unity Connection

Cisco Unity Connection provides messaging capabilities for enterprises of all sizes. With Cisco Unity Connection, you can access and manage voice messages in a variety of ways, using your email inbox, web browser, Cisco Jabber®, Cisco Unified IP Phone, Cisco Cius™ business tablet, smartphone, Cisco Unified Personal Communicator, and more. Cisco Unity Connection also provides robust speech-recognition features for when you are mobile, so you can manage your voice messages hands- and eyes free. Cisco Unity Connection integrates with Cisco Unified Communication Manager, Cisco Unified Communication Manager Session Manager Edition, Cisco Unified Communication Manager Express, and various legacy PBX models to support a variety of deployment models and configurations.

Key features of Cisco Unity Connection include:

- Voice-enabled dialing to other system users
- Unified messaging or single inbox access to messages
- Desktop messaging with the Unity Inbox web client
- Desktop messaging with IMAP-based e-mail clients
- Visual voicemail from various clients including Cisco Jabber, Cisco Cius, and other Cisco IP phones
- Speech-to-Text (Cisco SpeechView) voicemail transcriptions
- Personal call transfer rules, which allow call routing based on caller, time of day, Outlook calendar status, and other parameters
- Text-to-speech (TTS), which allows access to Exchange emails from a telephone
- Speech or telephone access to Exchange calendars
- Speech-enabled directory handlers and access to messages
- Message notifications to pagers, SMS phones, and other SMTP-enabled clients
- Customizable HTML-based intelligent notifications
- Rich, customizable automated attendant capabilities
- Secure messaging
- Localization support for 29 languages
- Support for up to 250 ports, 20,000 users per server
- Active/active clustering for high availability
- Digital networking for up to 20 locations and 100,000 users
- VPIM networking support for interoperability with 3rd-party voicemail systems

- LDAP directory synchronization and authentication
- Virtualization support on Cisco's UCS platform and other 3rd-party hardware vendors
- Search space and partition support for segmentation of the directory
- IPv6 support
- E.164 support
- 3rd-party fax server support
- SNMP support
- Message aging
- Broadcast messages
- Dispatch messages
- REST-based API support
- Reporting
- Audit Logging

For additional information about Cisco Unity Connection, go to:

http://www.cisco.com/en/US/products/ps6509/index.html

Cisco Unity Express

Cisco Unity Express provides integrated, entry-level, voice mail and automated attendant services for small and medium offices or branches in Cisco Unified Communications Manager or Cisco Unified Communications Manager Express environments. In Cisco Unified Communications Manager environments, Cisco Unity Express provides local storage and processing of voice mail and automated attendant services, alleviating WAN bandwidth and QOS concerns for the branch office. Combining Cisco Unified Communications Manager Express with Cisco Unity Express provides a centralized voicemail solution for up to 10 Cisco Unified Communications Manager Express sites and a core set of phone features for everyday business needs while offering a variety of telephony feature sets that have been provided by traditional key systems and hybrid PBXs.

Cisco Unity Express voice messaging and auto-attendant includes the following key features:

- Interactive Voice Response (IVR) – integrates your automated attendant into the company database.
- Paging and Announcement system – provides live and scheduled paging to Cisco IP Phones and overhead speakers. Integrates with legacy paging systems.
- TimeCardView – integrated time and attendance management system for the branch office. Syncronize your payroll data to Intuit QuickBooks
- Networking across several sites—Voice Profile for Internet Mail version 2 (VPIMv2) provides support for voice mail messaging interoperability between Cisco Unity Express sites, with Non-Delivery Record (NDR) for networked messages and blind addressing
- Distribution lists—public and private distribution lists of local and remote users can be created for sending messages to more than one subscriber
- Broadcast messages—Privileged subscribers can send messages to all users on the network

- Password and PIN length flexibility—Network administrators can set minimum lengths and expiry times for passwords and personal identification numbers (PINs) for greater network security
- SNMP MIB support—Network administrators can remotely monitor the health and performance of the Cisco Unity Express system.
- Support for caller ID information in incoming messages—Permits playing of caller identification information as part of the message envelope for new incoming voice mail messages
- Addition of remote users to the local directory—The voice-mail administrator can add frequently called remote users to the local directory, which permits local users to address voice mail messages to remote users using dial-by-name and to receive spoken name verification of the remote user address
- Undelete voice messages—Voice-mail users can restore a voice-mail message that was deleted during the current voice message retrieval session.
- Audio prompts in a variety of languages.

For additional information, go to:

http://www.cisco.com/en/US/products/sw/voicesw/ps5520/index.html

Endpoints and Clients

Cisco Cius

Cisco Cius is a business tablet that supports mobile, cloud computing, HD video , business process and collaborative applications.

With an ultra-portable form factor, powerful collaborative capabilities and flexible connectivity, Cisco Cius uniquely addresses the needs of today's workforce. Because it delivers the same rich computing, communications and collaboration experience in the office, around campus and off campus, companies can consolidate the number of devices employees need with a single device.

Support for wired, wireless, and 3G/4G data service means that there are no connectivity restrictions with Cisco Cius. And when it comes to collaboration, there are no compromises. The tablet's 7-inch, high-resolution, touch-target color display offers the perfect balance between the pocket portability of smartphones and the larger display and functionality of a laptop.

For more information about Cisco Cius, go to: http://www.cisco.com/en/US/prod/collateral/voicesw/ps6789/ps7290/ps11156/solution_overview_c22-608594.html

Cisco Unified IP Phones

Cisco Unified IP Phones are full-featured telephones that provide voice communication over an IP network. They function much like digital business phones, allowing you to place and receive phone calls and to access features such as mute, hold, transfer, speed dial, call forward, and more. In addition, because Cisco IP Phones are connected to your data network, they offer enhanced IP telephony features, including access to network information and services, and customizeable features and services. Many phone models also support security features that include file authentication, device authentication, signaling encryption, and media encryption.

The Cisco Unified Communications system supports these Cisco Unified IP Phone series:

- Business Communications Endpoints: Cisco Unified IP Phones 6900 Series

The Cisco Unified IP Phones 6900 Series is a innovative portfolio of endpoints, delivering cost-effective business-grade voice communication services to customers worldwide. The Cisco Unified IP Phone 6900 Series offers personalization options, including the choice of two colors and two handset weights. These devices are also energy efficient, consuming less power in support of customer green initiatives. Different Cisco Unified IP Phone 6900 Series models are available with and without displays.

For more information about the Cisco Unified IP Phones 6900 Series, go to:

http://www.cisco.com/en/US/products/ps10326/tsd_products_support_series_home.html

- Advanced Business Endpoints: Cisco Unified IP Phones 7900 Series

  The Cisco Unified IP Phones 7900 Series provides IP phones with color liquid crystal display (LCD), including dynamic soft keys for call features and functions. This series also offers support for information services, including Extensible Markup Language (XML) capabilities to extend IP phone systems. The capability to customize XML-based services allows users access a variety of information, such as stock quotes, employee directories, and web content.

  For more information about the Cisco Unified IP Phones 7900 Series, go to:

  http://www.cisco.com/en/US/products/hw/phones/ps379/index.html

- Advanced Professional Media Endpoints: Cisco Unified IP Phones 8900 Series

  The Cisco Unified IP Phones 8900 Series phones accelerate business success by delivering a high-performance, rich multimedia communications experience. This series offers a broad portfolio of XML and MIDlet applications that can help a company transform its business processes, reduce operating and administration costs, and boost productivity.

  For more information about the Cisco Unified IP Phones 8900 Series, go to:

  http://www.cisco.com/en/US/products/ps10451/tsd_products_support_series_home.html

- Advanced Collaborative Media Endpoints: Cisco Unified IP Phones 9900 Series

  The Cisco Unified IP Phones 9900 Series supports interactive, high-performance business video, enabled directly from the endpoint, with an optional Cisco Unified Video Camera that supports full-screen, two- and multiparty H.264 standard video.

  For more information about the Cisco Unified IP Phone 9900 Series, go to:

  http://www.cisco.com/en/US/products/ps10453/tsd_products_support_series_home.html

Cisco Unified IP Phone Expansion Modules

The Cisco Unified IP Phone Expansion Modules 7914, 7915, and 7916 are used by administrative assistants and others who need to determine the status of a number of lines beyond the current line capability of the phone.

The Cisco Unified IP Phone Expansion Modules 7914, 7915, and 7916 extend the capability of the Cisco Unified IP Phones 7960G, 7961G, 7961G-GE, 7962G, 7965G, 7970G, 7971G-GE, or 7975G with additional buttons and an LCD. The Cisco Unified IP Phone Expansion Module 7914 provides 14 buttons per module, and the Cisco Unified IP Phone Expansion Modules 7915 and 7916 provide up to 24 buttons per module. Cisco Unified IP Phones 796xG and 797xG can support up to two Cisco Unified IP Phone Expansion Modules. If the IP phone uses Cisco inline power or IEEE802.3af PoE, then the Cisco Unified IP Phone Expansion Modules 7914, 7915, and 7916 require the use of an external power adaptor (CP-PWR-CUBE-3).

Note When two Expansion Modules are used with a single phone, the second module must be the same model as the first one.

Cisco Virtualization Experience Clients

Cisco Virtualization Experience Client (VXC) endpoints allow you to move to desktop virtualization without compromising a rich collaborative user experience.

The Cisco VXC 2100 is a compact device that is physically integrated with Cisco Unified IP Phone 8900 or 9900 Series, optimizing desk real-estate. It supports Power-over-Ethernet and is equipped with two video ports and four USB ports to support a mouse and keyboard or other peripherals in a virtual desktop environment.

The Cisco VXC 2200 is a sleek, stand-alone, small footprint zero client device which also provides users with access to a virtual desktop and business applications running in a virtualized desktop environment. Designed with the green workspace in mind, the VXC 2200 can be powered via Power over Ethernet or an optional power supply, and is equipped with two video ports and four USB ports to support a mouse and keyboard or other peripherals in a virtual desktop environment.

Cisco Virtualization Experience Client endpoints help you to:

- Choose from industry-leading desktop virtualization clients
- Deliver a better user experience with virtualized desktops
- Extend your investment in Power over Ethernet
- Conserve desktop real estate

For additional information, go to:

http://www.cisco.com/en/US/products/ps11295/Products_Sub_Category_Home.html

Cisco IP Communicator

Cisco IP Communicator provides personal computers with the functionality of IP phones. This Microsoft Windows-based application provides high-quality voice calls to users from wherever they have access to the corporate network. It can serve as a supplemental telephone, a telecommuting device, or a primary desktop telephone.

When registered to Cisco Unified Communications Manager, Cisco IP Communicator has the functionality of a full-featured Cisco Unified IP Phone, including the ability to transfer calls, forward calls, and conference additional participants to an existing call. In addition, a Cisco IP Communicator that is registered to Cisco Unified Communications Manager can be provisioned like any other Cisco Unified IP Phone, which greatly simplifies phone management.

For additional information, go to:

http://www.cisco.com/en/US/products/sw/voicesw/ps5475/index.html

Cisco Unified Personal Communicator

Cisco Unified Personal Communicator integrates a wide array of communications applications and services into a single desktop computer application. It provides access to a variety of communications tools, including

voice (Unity Connection), video (Cisco TelePresence), web conferencing (Cisco Unified MeetingPlace), call management (Unified CM), directories (LDAP), and presence and instant messaging (Unified Presence) information. Cisco Unified Personal Communicator offers an easy-to-use interface that streamlines the communications experience and facilitates collaboration. With Cisco Unified Personal Communicator, users can communicate virtually anytime, from anywhere, and can easily escalate communication methods as required.

Cisco Unified Personal Communicator operates in Desk Phone (CTI control of the user's desk phone for Click to Call) and Soft Phone (software client operation) modes, and is supported on Microsoft Windows platforms.

For additional information, go to:

http://www.cisco.com/en/US/products/ps6844/tsd_products_support_series_home.html

Cisco Unified Video Advantage

Cisco Unified Video Advantage brings video telephony functionality to select Cisco Unified IP Phones and to the Cisco IP Communicator softphone application. Users make and receive calls using the familiar phone interface, with the video component displayed on user PCs without additional user action required. Enterprises can leverage their existing IP networks and desktop phones to extend video calling to everyone in the organization.

For additional information, go to:

http://www.cisco.com/en/US/products/sw/voicesw/ps5662/index.html

Cisco Unified Communications Integration for Microsoft Lync

Cisco Unified Communications Integration™ for Microsoft Lync provides seamless collaboration with Cisco Unified Communications and Microsoft instant messaging (IM) and Presence capabilities.

It extends proven Cisco Unified Communications services to Microsoft Lync with a single easy-to-manage communications platform. This provides interoperability with Microsoft Lync Server 2010 and Microsoft Lync. Cisco UC Integration™ for Microsoft Lync uses the Client Services Framework (CSF) and incorporates it into Microsoft Lync. This integration allows for the use of audio telephony of existing Cisco Unified Communications Manager endpoints, acting both as a softphone (softphone mode) and controlling a Cisco Unified IP Phone (desk phone mode).

This integration for Microsoft Lync leverages a common unified client services framework to:

- Increase productivity—Instantly connect with colleagues, partners, and customers from anywhere and have a business-class communication experience with an integrated Cisco IP softphone.
- Streamline communications—View telephony presence status, access corporate voicemail and communications history, or simply click to call through Cisco Unified IP Phone directly from your desktop.
- Enhance collaboration—Initiate multiparty conference calls and quickly add more participants as needed.
- Reduced complexity—Extend proven attributes of Cisco Unified Communications Manager directly to your desktop with an easy-to-deploy integration and benefit from reduced management complexity of a single call control architecture.
- Protect investments—Make an immediate business impact with interoperable Cisco Unified Communications while protecting your investments in existing desktop applications.

For additional information, go to:

http://www.cisco.com/en/US/products/ps10317/index.html

Cisco Unified Communications Widgets

Cisco Unified Communications Widgets applications deliver a productive and personalized user experience with Cisco Unified Communications applications and Cisco Unified IP Phones. These free-to-download and easy-to-add widgets streamline business communications and provide a tailored and familiar communications experience.

Cisco Unified Communications Widgets include the following:

- The Click to Call Widget is a Cisco Unified Communications application for PCs that lets users quickly place calls from desktop productivity applications or web browsers. Users can simply highlight and click on a phone number to make a call.
- The Visual Voicemail Widget for Cisco Unified IP Phones displays all Cisco Unity Connection voice messages on the phone display. Caller name, time of message, message length, and urgency are prominently displayed. Users can view, play, save, respond to, and delete messages without having to dial in to enterprise voicemail.

For additional information, go to:

http://www.cisco.com/en/US/products/ps9829/index.html

Wireless and Mobility

Cisco Mobile

Cisco Mobile gives users the ability to redirect incoming IP calls from Cisco Unified Communications Manager to different designated phones, such as cellular phones. Users can also transition active calls between their Cisco desktop and phone without interruption.

Cisco Mobile includes these features:

- Streamlined communications, giving callers one number to dial, and by redirecting incoming calls to multiple phones
- Active calls can move between the Cisco desktop and mobile phone to take advantage of the best available resource
- Simplified message management, by directing unanswered calls to a Cisco Unity Connection account
- Personalized access lists that determine which business calls get extended to alternate phone numbers, and at what point that occurs

For more information about Cisco Mobile, go to:

http://www.cisco.com/en/US/products/ps6567/index.html

Cisco Jabber

Cisco Jabber helps enterprise users consolidate presence, instant messaging, voice and video, voice messaging, desktop sharing, and conferencing. Cisco Jabber provides integration across devices, including PCs, Macs, tablets, and smart phones.

Cisco Jabber client software works in conjunction with Cisco Unified Communications Manager to provide users with a unified client they can deploy across on-premise and cloud-based options.

Cisco Jabber clients include the following:

- Cisco Jabber for Android

  Cisco Jabber for Android provides voice over IP (VoIP) capabilities and can be deployed with on-premises or cloud-based unified communications services. Whether you are in the office on a Wi-Fi network, or roaming using a public Wi-Fi network or a mobile data network, the Cisco Jabber platform connects you securely to your corporate network so your Android device becomes your portable IP phone and company directory.

- Cisco Jabber IM for BlackBerry

  Cisco Jabber IM for BlackBerry lets you reduce communication delays by knowing a person's availability with a presence status generated from multiple sources. When you are mobile and using your BlackBerry device, viewing a person's presence status lets you immediately know if that person is available or busy, so you can determine the best way to reach that person. You can use the application to connect quickly over IM and, if necessary, escalate to a phone call, send an email, text message, start an instant Web conference, or use Short Message Service (SMS).

- Cisco Jabber for iPad

  Cisco Jabber for iPad is a unified communications client application that provides presence, instant messaging (IM), voice, voice messaging, and video calling capabilities on the Apple iPad. Conferencing and screen-sharing capabilities are delivered with an escalation to the Cisco WebEx for iPad application. This integrated collaboration experience is designed to take advantage of the form factor of the iPad; it works with both premises-based and cloud-based collaboration architectures.

- Cisco Mobile for iPhone

  Cisco Jabber for iPhone lets you place, receive, and manage calls over your corporate Wi-Fi network. Cisco Jabber for iPhone also supports calls over any Wi-Fi hotspot using a VPN, allowing you to take further advantage of your corporate telephony infrastructure whenever you have access to a high-quality wireless network connection. You will benefit from the cost savings from not using your wireless minutes, the capability to use your work phone number when placing calls from your Apple iPhone, and the stronger in-building network coverage from a wireless network.

- Cisco Jabber for Mac

  Cisco Jabber for Mac streamlines communications and enhances productivity by unifying presence, instant messaging, voice, voice messaging, desktop sharing, and conferencing capabilities more securely into one client on your desktop. Cisco Jabber for Mac delivers highly secure, clear, and reliable communications. It offers flexible deployment models, is built on open standards, and integrates with commonly used desktop applications. Communicate and collaborate effectively from anywhere you have an Internet connection.

- Cisco Jabber for Nokia

Cisco Mobile for Nokia enables your Symbian Version 3.1 or 3.2 powered device to connect to your corporate communications network, whether over third-generation (3G) networks or wireless LANs. Taking advantage of the security of enterprise VPN, Cisco Mobile for Nokia can provide access to your corporate contacts with real-time presence information, and you can benefit from the cost savings and security of routing your calls through the corporate telephony network.

- Cisco Jabber for Windows

  Cisco Jabber for Windows streamlines communications and enhances productivity by unifying presence, instant messaging, video, voice, voice messaging, desktop sharing, and conferencing capabilities securely into one client on your desktop. Cisco Jabber for Windows delivers highly secure, clear, and reliable communications. It offers flexible deployment models, is built on open standards, and integrates with commonly used desktop applications. You can communicate and collaborate effectively from anywhere you have an Internet connection.

For additional information about Cisco Jabber, go to:

http://www.cisco.com/en/US/prod/voicesw/ps6789/jabber_uc_apps.html

Network Management

Cisco Prime Collaboration Manager

Cisco Prime Collaboration Manager is a comprehensive video service assurance and management system with a set of powerful monitoring, troubleshooting, and reporting capabilities that provides end users with a consistent, high-quality video collaboration experience. Providing superior levels of video quality and availability to users can be an extremely challenging task for service and network operators. Collaboration Manager aids operators in delivering a first-rate end-user experience in the following ways:

- Visualizing and monitoring video collaboration sessions in real time, helping provide timely support to end users when issues arise
- Significantly reducing operational costs by dramatically speeding the time required to pinpoint issues that affect service
- Providing detailed video flow path analysis to rapidly isolate areas of service degradation in the session path, including an increased level of visibility if accessing Cisco medianet-enabled networks
- Helping to enable effective management of key assets through simplified diagnostic and utilization reports and at-a-glance executive summaries

For more information about these components, go to:

http://www.cisco.com/en/US/products/ps11480/index.html

Licensing

Cisco Enterprise License Manager

Cisco Unified Communications Manager and Cisco Unity Connection operate with the Enterprise License Manager (ELM). ELM tracks the feature usage of each product in the UC solution and evaluates the overall license status of the features under use.

For more information about ELM, go to:

http://www.cisco.com/en/US/prod/collateral/voicesw/ps6788/vcallcon/ps556/license.html

Communications Infrastructure

Cisco Unified Computing System

Cisco Unified Computing System (Cisco UCS) is an architecture that integrates computing resources (CPU, memory, and I/O), IP networking, network-based storage, and virtualization, into a single highly available system. This level of integration provides economies of power and cooling, simplified server connectivity into the network, dynamic application instance repositioning between physical hosts, and pooled disk storage capacity. The architecture uses Unified fabric that provides transport for LAN, storage, and high-performance computing traffic over a single infrastructure with the help of technologies such as Fiber Channel over Ethernet. Cisco's unified fabric technology is built on a 10-Gbps Ethernet foundation that eliminates the need for multiple sets of adapters, cables, and switches for LANs, SANs, and high-performance computing networks.

The Cisco Unified Computing System:

- Streamlines data center resources to reduce total cost of ownership
- Scales service delivery to increase business agility
- Radically reduces the number of devices requiring setup, management, power, cooling, and cabling

For more details on the Cisco Unified Computing System architecture, go to:

http://www.cisco.com/go/ucs

Two types of Cisco Unified Computing System servers are available for a Unified Communications solution:

- **B-Series Blade Servers—**The Cisco UCS B200 M2 Blade Server support production-level virtualization and other mainstream data center workloads. The server is a half-width, 2-socket blade server with substantial throughput and scalability. Up to eight Cisco UCS B200 M2 Blade Servers can be housed in a Cisco UCS 5108 Blade Server Chassis, with a maximum of 320 blade servers per Unified Computing System.
- **C-Series Rack-Mount Servers—**Two models of low-profile, rack-mount C-series servers are available:
  - The Cisco UCS C200 M2 server is a high-density, 2-socket, 1 rack unit (RU) rack-mount server built for production-level network infrastructure, web services, and mainstream data center, branch, and remote-office applications.

- The Cisco UCS C210 M2 server is a general purpose, 2-socket, 2 rack unit (RU) rack-mount server that balances performance, density, and efficiency for storage-intensive workloads. The system is built for applications such as network file servers and appliances, storage servers, database servers, and content-delivery servers.

Cisco Unified Communications can run virtualized on UCS. For more information go to:

http://www.cisco.com/go/uc-virtualized

Cisco 7800 Series Media Convergence Servers

Cisco Media Convergence Servers (MCS) provide highly available server platforms to host applications within the Cisco Unified Communications system. These platforms address enterprise customer requirements for Cisco Unified Communications Manager installations from two to 30,000 IP phones within a single Cisco Unified Communications Manager cluster.

Cisco Unified Communications Manager is supported on specific Cisco MCS 7800 series servers or on customer-provided servers that have been verified by Cisco to meet the following minimum requirements:

- Processor speed must be 2.0 GHz or greater
- Physical memory size must be 2 GB or greater
- Physical hard disk size must be 72 GB or larger

For a complete list of currently supported hardware configurations, refer to the documentation available at:

www.cisco.com/go/swonly

Note The Cisco MCS 7828 servers support only Unified Communications Manager Business Edition.

For more information about these components, go to:

http://www.cisco.com/en/US/products/hw/voiceapp/ps378/index.html

Cisco Unified Border Element

The Cisco Unified Border Element (Enterprise Edition) is Cisco's enterprise optimized Session Border Controller, supported on the Cisco 2900 and 3900 Series Integrated Services Routers (ISR) and the Cisco 1000 Series Aggregation Services Routers (ASR). The Cisco Unified Border Element (CUBE) interconnects Unified Communications networks securely, flexibly and reliably. CUBE enables end-to-end voice, video, and data between independent unified communications networks. Deploying CUBE is essential for routing voice calls beyond the enterprise boundary to Service Providers. With SIP Trunking, CUBE cuts PSTN costs and provides substantial customer savings.

The Cisco Unified Border Element with SIP trunking lowers total communications costs, optimizes network interconnections and enables rich collaboration applications. This session border controller ensures interoperability, security, and service assurance by providing the capabilities that today's IP networks require, including the following:

- Session management
- Security

- Interworking
- Demarcation

The Cisco Unified Border Element Enterprise Edition with SIP trunking also offers the following:

- Exceptional scalability, with each chassis able to scale up to 16,000 sessions
- Extensive support for digital signal processors (DSPs) in the platform to promote complex media manipulation
- Box-to-box and in-box redundancy so that calls can continue during unscheduled outages

For additional information, go to:

www.cisco.com/go.cube

Cisco Integrated Services Routers

The Cisco 1800, 2800, 3800, 2900, 3900, 3900E series integrated services routers, and the Cisco 4451-X Integrated Services Router (Cisco ISR 4451-X) can be deployed as voice gateway routers as part of the Cisco IP Communications solution. Deployments can use these routers as voice gateways with call component process for Cisco Unified Communications Manager.

The Cisco 1800 Series integrated services routers are ideal for small to medium-sized businesses and small enterprise branch offices. The 1800 series routers help businesses to reduce costs by deploying a single, resilient system for fast, secure delivery of multiple mission-critical business services. The Cisco 1861 integrated services router is a modular platform that provides voice, data, voice-mail, automated attendant, video, and security capabilities. It includes:

- Cisco Unified Communications Manager Express or Survivable Remote Site Telephony for call processing for up to 8 users
- Optional Cisco Unity Express, for voice messaging and automated attendant
- LAN switching with Power over Ethernet (PoE) expandable through Cisco Catalyst Switches
- Onboard voice ports for PSTN, PBX, and key system connections

Cisco 2800 and 3800 series integrated services routers communicate directly with Cisco Unified Communications Manager, allowing for the deployment of IP telephony solutions for large enterprises and service providers that offer managed network services. These routers provide a highly flexible and scalable solution for small and medium-sized branches and regional offices.

The Cisco 2800 and 3800 series voice gateway routers support a wide range of packet telephony-based voice interfaces and signaling protocols, providing connectivity support for more than 90 percent of PBX and PSTN connection points. Signaling support includes T1/E1 Primary Rate Interface (PRI), T1 channel associated signaling (CAS), E1-R2, T1/E1 QSIG protocol, T1 Feature Group D (FGD), Basic Rate Interface (BRI), foreign exchange office (FXO), ear and mouth (E&M), and foreign exchange station (FXS). These voice gateway routers can be configured to support from 2 to 540 voice channels.

The Cisco 2900 and 3900 series integrated services routers (ISRs) offer secure, wire-speed delivery of concurrent data, voice, and video services. The modular design of these routers provides maximum flexibility and allows you to configure the router to meet evolving needs.

The routers support virtual private network (VPN) encryption acceleration, intrusion-protection and firewall functions, and optional integrated call processing and voice mail. A wide variety of legacy network modules

and interfaces, service modules (SMs), internal services modules (ISMs), next-generation packet voice/data modules (PVDM3), Services Performance Engines (SPEs), high-density interfaces for a wide range of connectivity requirements, and sufficient performance and slot density for future network expansion requirements and advanced applications are available.

Cisco 2900 and 3900 series integrated services routers with Cisco IOS Release 15.x supports FXS ports, Conferencing and transcoding DSP resources with the following gateways—MGCP 0.1, H.323, SCCP, and SIP. The Cisco 2900 and 3900 Series gateways with the PVDM3 DSPs do not support Cisco fax relay.

For additional information about Cisco integrated services routers, go to:

http://www.cisco.com/en/US/products/hw/routers/index.html

The Cisco ISR 4451-X is a modular router with LAN and WAN connectivity and supports several interface modules, including Cisco Service Modules (SMs), or Enhanced Service Modules (SM-X), and Network Interface Modules (NIMs). The router has slots that support the interface modules and modular Hard Disk Drives (HDD).

The Cisco ISR 4451-X runs on Cisco IOS XE 3.9S or later, and extends the support for data, voice, and other applications. This modular architecture increases network resiliency, compared to using fewer modules in standard Cisco IOS

The Cisco ISR 4451-X targets the following applications:

- Enterprise applications—Intended as the mid-size aggregation and gateway router typically residing in a regional or large branch office.
- Service provider applications—Intended for high-end Enterprise Branch environments.

For additional information about Cisco ISR 4451-X, go to:

http://www.cisco.com/en/US/products/ps12522/tsd_products_support_series_home.html

Cisco VG200 Series Gateways

The Cisco Unified Communications System supports the following VG200 Series Gateways:

- Cisco VG224 Analog Voice Gateway
- Cisco VG204 Analog Voice Gateway
- Cisco VG202 Analog Voice Gateway

The Cisco VG224 Analog Phone Gateway combines a high-density RJ21 analog interface with Cisco IOS Software manageability to provide a cost-effective platform for maximum functionality of existing analog phone equipment. It offers the following key benefits:

- High-density 24-port gateway for analog phones, fax machines, modems, and speakerphones
- DSP technology for fax and modem support
- Enhances an enterprise voice system architecture that is based on Cisco Unified Communications Manager or Cisco Unified Communications Manager Express

The Cisco VG204 Analog Voice Gateway combines granular RJ11 analog interfaces with Cisco IOS Software manageability to deliver a platform designed to maximize the functionality of existing distributed analog equipment in a Cisco Unified Communications system deployment. It offers the following key benefits:

- Low-density four-port gateway for analog phones, fax machines, modems, and speakerphones
- Enhances an enterprise voice system architecture that is based on a Cisco Integrated Services Router, Cisco modular access router or a Cisco VG224 in a Cisco Unified Communications Manager or Cisco Unified Communications Manager Express deployment
- Compact, fanless, desktop form-factor chassis that is wall-mountable

The Cisco VG202 Analog Voice Gateway combines granular RJ11 analog interfaces with Cisco IOS Software manageability to deliver a platform designed to maximize the functionality of existing distributed analog equipment in a Cisco Unified Communications system deployment. It offers the following key benefits:

- Low-density two-port gateway for analog phones, fax machines, modems, and speakerphones
- Enhances an enterprise voice system architecture that is based on a Cisco Integrated Services Router, Cisco modular access router, or a Cisco VG224 in a Cisco Unified Communications Manager or Cisco Unified Communications Manager Express deployment.
- Compact, fanless, desktop form-factor chassis that is wall-mountable

For additional information, go to:

http://www.cisco.com/en/US/products/hw/gatecont/ps2250/index.html

Cisco Virtualization Experience Infrastructure

The Cisco Virtualization Experience Infrastructure (VXI) system integrates virtualized data centers, networks, and endpoints with desktop virtualization services for comprehensive media, security, and performance acceleration. The Cisco Desktop Virtualization solution delivers the following features:

- Unprecedented control and increased security
- Rapid deployment, scaling, and lifecycle management of virtual desktops
- Improved user experience and application responsiveness
- Greater control of desktop total cost of ownership (TCO)

For more information about the Cisco Desktop Virtualization., goto:

http://www.cisco.com/en/US/products/ps11295/Products_Sub_Category_Home.html

Cisco RSVP Agent

Cisco RSVP Agent is a Cisco IOS Software feature that uses the network to deliver call admission control and quality of service for Cisco Unified Communications Manager deployments. Cisco RSVP Agent employs Resource Reservation Protocol (RSVP), an IETF standards-based signaling protocol for reserving bandwidth in an IP network. The RSVP protocol enables dynamic adjustment to changes in the network, supports complex network topologies, and enables call admission decisions.

Cisco RSVP Agent offers benefits such as the following:

- Provides guaranteed WAN bandwidth for Cisco Unified Communications Manager calls
- Supports complex network topologies, including meshed designs, redundant links, and dynamically changing topologies

- Controls the quality and availability of voice and video calls, and authorization of calls
- Provides seamless interworking of any call control signaling that Cisco Unified Communications Manager supports such as SIP, H.323, Media Gateway Control Protocol (MGCP), and Skinny Client Control Protocol (SCCP).

For additional information, go to:

http://www.cisco.com/en/US/products/ps6832/index.html

Cisco Design Tools

The Cisco Unified Communications Solution includes the following Design Tools components.

Note These tools are available to Cisco and Unified Communications specialized partners only.

- Unified Communications Sizing Tool—a web-based tool that assists users with hardware sizing of large or complex Cisco Unified Communications solutions by calculating the call processing requirements for products that have a major impact on performance and scalability.

  With the Cisco Unified Communications Sizing Tool, system engineers with Cisco Unified Communications solution experience or individuals with equivalent abilities can design and model solutions for existing and prospective customers. The tool requires various types of information to calculate the minimum size and type of devices required for a solution, such as the type and quantity of IP phones, gateways, and media resources. For most device types, the tool also requires the average number of call attempts per hour per device during the busy hour (known as busy hour call average or BHCA) and the average utilization time. The resulting calculations produced by the tool can be saved, copied, and sent to other users.

- Quote Builder—a solutions quoting application for Cisco Unified Communications products.

  With Quote Builder, users can build a system quote with design documents to aid in the implementation of the solution. Quote Builder also validates designs for common deployments. Quote Builder generates a bill of materials, a network diagram, and design guides for deployment. To access Quote Builder, go to the following URL

- Solution Expert—a web-based tool that assists in the design, configuration, quoting, and ordering of Cisco Unified Communications products.

  With Solution Expert, users can generate a recommended solution based on their requirements. Users can modify the recommended configuration if desired. Solution Expert validates any changes when it presents the new solution. Solution Expert also generates a bill of materials with list pricing, a Visio diagram, and other design documentation.