



## Cisco Unified Communications for the Telecom and Voice Expert

### What Can Cisco Unified Communications Do for Your Organization?

In today's fast-paced business environment, an organization's employees increasingly rely on a variety of communications technologies and devices. Despite the proliferation of e-mail, instant messaging, voice messaging, fax, rich-media conferencing, and other technologies, however, communication bottlenecks still occur all too frequently.

According to a recent Forrester Consulting study commissioned by Cisco Systems®, 78 percent of respondents reported experiencing project delays at least once a quarter, while 27 percent said such setbacks occurred as often as once a day. The reason for these delays, survey respondents said, was the inability to quickly communicate with peers, supervisors, or subordinates.

### THE RIGHT RESOURCE AT THE RIGHT TIME

The Cisco® Unified Communications system of voice, video and IP Communications products and applications helps organizations communicate more efficiently so that workers can streamline business processes, reach the right resource the first time, and increase profitability.

Cisco Unified Communications is a family of Cisco products and applications designed to meet an organization's entire range of communications needs, including call management, rich-media conferencing, voicemail and messaging, customer contact, IP phones and endpoints, video telephony, videoconferencing, and unified communications clients.

This paper provides a detailed overview of Cisco Unified Communications to help those responsible for making voice and telecommunications decisions. Topics discussed include:

- Specific solutions and technologies that Cisco Unified Communications offers
- The many benefits Cisco Unified Communications provides, and expectations in terms of return on investment (ROI)
- How to migrate to a Cisco Unified Communications system
- How migrating to Cisco Unified Communications can make voice decision makers and telecom managers even more strategic to the organization

**Q.** What is Cisco Unified Communications, and how does it differ from voice over IP (VoIP), IP telephony, and IP Communications?

**A.**

- VoIP refers to a way to carry phone calls over an IP data network, whether the public Internet or an organization's own internal network. One of the primary attractions of VoIP is its ability to help companies reduce expenses because telephone calls travel over the data network rather than the phone company's network.
- IP telephony encompasses the full suite of telephony services enabled by VoIP, including the interconnection of phones for actual communications; related services such as billing and dialing plans; and basic features such as conferencing, transfer, forward, hold, and many more. These services might previously have been provided by a private branch exchange (PBX).
- IP communications evolves the concept to include business applications that enhance communications to enable applications such as unified messaging, integrated contact centers, and rich-media conferencing that combines voice, data, and video.
- Unified communications takes IP communications a step further with technologies such as Session Initiation Protocol (SIP) and presence and mobility solutions. These technologies unify and simplify all forms of communication—independent of location, time, or device. Unified communications users can be reached at any time based on their preferences and can communicate through any media using any device they prefer. The multiple phones and devices, along with the multiple networks (fixed, Internet, cable, satellite, or mobile) are brought together by

unified communications. With unified communications, users can be geographically independent and communications can be transparently integrated with business processes, streamlining business and improving productivity and profitability.

[More information about the differences between VoIP, IP telephony, IP communications, and unified communications.](#)

Another resource is the [Cisco video on demand, "Understanding VoIP, IPT, and IPC."](#)

For more information, browse for [Cisco Press books](#) on IP Communications.

**Q.** What business demands affect the need for Cisco Unified Communications?

**A.** The multiplicity of communications devices among today's workforces has not solved an obvious problem: how to access an important colleague or decision maker in a timely manner. In a recent Sage Research study, 36 percent of respondents said they could not reach colleagues on the first attempt, and 52 percent said they were forced to use multiple means of contact.

Why has the proliferation of communications technologies—including e-mail and voicemail—not eliminated communication bottlenecks? First, the modern enterprise is awash in communications devices; the average is more than six devices per employee, according to Sage Research. As a result, workers are overwhelmed with messages, weekly receiving hundreds of e-mail messages, instant messages, and voicemail messages, making it difficult to respond in a timely manner.

Meanwhile, workforces are increasingly mobile and distributed, making it difficult for workers to engage in any meaningful collaboration with colleagues and to be accessible to customers, partners, and other important contacts.

Project delays are the inevitable result of communications bottlenecks. In turn, project delays cause missed deadlines—and opportunities. Productivity and quality of work decline, and employee frustration rises. Customer service and channel partnerships inevitably suffer.

When decisions take longer to make, an organization is not as nimble as it could be, and therefore it is less competitive. Technology and communications resources are squandered. Strategic initiatives, such as just-in-time manufacturing, are stymied. And an ineffective communications system means higher costs (from long-distance fees, travel costs, and more).

In an effort to solve these daunting challenges, many organizations deploy devices (such as basic telephone service phones, cell phones, pagers, laptops, and personal digital assistants [PDAs]) and applications (including third-party audio and Web- and videoconferencing services) that are not integrated. This strategy inevitably creates communication "silos" that cannot talk to one another. These silos make traditional communications systems unnecessarily expensive, constricted, difficult to administer, and unable to offer spontaneous, ongoing, full, and deep collaboration.

**Q.** What are the top-level benefits of Cisco Unified Communications?

**A.** The Cisco Unified Communications system strengthens connections to securely provide better, more natural collaboration; quicker decision making; reduced communications bottlenecks; and improved overall efficiency. With more informed, responsive customer service, organizations can improve customer loyalty, sales, and profitability.

- **Boost productivity**—A unified communications solution can significantly enhance an organization's communications by reducing productivity-draining bottlenecks. According to a 2005 Sage Research report, workers with access to a unified communications system save an average of 55 minutes per day in productivity.
- **Align communications solutions to business processes**—The Cisco Unified Communications portfolio provides structure and intelligence to business communications, helping organizations streamline and integrate their communications more closely with business processes—ultimately connecting users to users instead of devices to devices.
- **Reach the right resource the first time, using the right medium**—Using the reach and intelligence of the network to deliver presence and preference information, Cisco Unified Communications helps ensure that information and interactions reach recipients quickly using the most effective medium. Designed for ease of use, it lets users quickly access the people, tools, and content they need wherever they are, based on their own rules and preferences.

- **Advanced, real-time collaboration**—With Cisco Unified Communications, businesses can collaborate in real time using advanced applications such as videoconferencing, integrated voice- and Webconferencing, mobile IP soft phones, voicemail, and more—from an integrated, easy-to-use interface. The solution saves time and helps control costs while improving productivity and competitiveness.
- **Communications solutions exist *in the network*, not *on it***—Cisco Unified Communications products combine the intelligence in the network with sophisticated IP Communications applications to deliver a comprehensive system that works together to offer more effective communications. Cisco Unified Communications applications exist in the network, rather than “on” it. As a result, Cisco Unified Communications can easily accommodate emerging business processes, applications, and new devices, helping organizations securely take advantage of the resources and applications they already have. In addition, an organization can migrate to new communications technologies based on business needs rather than technical limitations.
- **Easy deployment, configuration, and administration**—Easy-to-use tools make it simple for telecom managers to deploy and configure Cisco Unified Communications solutions and to administer such tasks as moves, adds, and changes.

For more information, visit any of the following:

<http://www.cisco.com/go/voice>

<http://www.cisco.com/go/unified>

<http://www.cisco.com/youinc>

<http://www.cisco.com/go/ipc>

<http://newsroom.cisco.com/dlls/innovators/VoIP/index.html>

- Q.** What specific solutions and technologies are included in the Cisco Unified Communications family of products?  
**A.** The Cisco Unified Communications portfolio of products includes the following components:

#### **IP Telephony**

- **Cisco Unified CallManager**—Call-processing software that manages voice and video calls between IP phones, media processing devices, VoIP gateways to the public switched telephone network (PSTN), and multimedia applications
- **Cisco Unified CallManager Express**—Software embedded in Cisco integrated services routers to provide call processing for small businesses and branch offices
- **Cisco IP Communicator**—Software that delivers advanced telephony functions to Microsoft Windows-based personal computers for Cisco Unified CallManager and Cisco Unified CallManager Express users
- **Cisco Unified IP phones**—Includes hard, soft, and video phones for all types of businesses and users from the executive office to the factory floor

#### **Presence and Instant Messaging**

- **Cisco Unified Presence Server**—Uses dynamic presence information, helping users check the availability of colleagues in real time, and provides a standards-based instant messaging (IM) service

#### **Unified Communications Applications**

- **Cisco Unity<sup>®</sup> Unified Messaging**—Helps users listen to e-mail over the telephone; check voice messages from their PC inbox or the Internet; and send, receive, or forward faxes to wherever they are
- **Cisco Unified Video Advantage**—A video telephony solution that easily adds video to every communications experience, using the Cisco Unified Video Advantage software application and Cisco VT Camera II, a video telephony USB camera
- **Cisco Unified Personal Communicator**—An integrated communication client that provides powerful productivity tools, including voice, video, presence, and Webconferencing

- **Cisco Unified MeetingPlace® solution**—Combines voice, video, and Webconferencing capabilities in one solution that can be integrated with Microsoft Outlook and IBM Lotus Notes calendars to streamline the process of setting up and attending rich-media conference sessions
- **Cisco Unified MeetingPlace Express**—Includes feature-rich voice and conferencing with Web, Cisco Unified IP phone, and touchtone phone interfaces for setting up and attending meetings

### **Mobility Solutions**

- **Cisco Mobile Connect**—The single-number reach feature of Cisco Unified MobilityManager that helps mobile users publish a single phone number to customers, colleagues, and partners and have calls routed to whichever device is most convenient at any given time

### **Customer Contact Solutions**

- **The comprehensive family of Cisco Unified Contact Center products, including the Cisco Unified Intelligent Contact Management and Cisco Unified Contact Center products**—Help organizations provide better response time while also making more effective use of internal resources
- **Cisco Unified Customer Interaction Analyzer**—Allows call centers to interpret, analyze, and understand customer interactions; it provides complete business context and meaning to each customer interaction by turning unstructured customer call content into structured, usable data and by drawing from multiple data sources relevant to the call center; it also provides call centers with new and advantageous insights into each customer interaction and has the potential to transform how call centers service and retain customers and how they recruit, train, coach, and measure customer service representatives

### **Management Solutions**

- **Cisco Unified Communications Management Suite, including Cisco Unified Service Monitor and Cisco Unified Operations Manager**—Helps businesses actively monitor Cisco voice elements in the network to discover potential problems, maintain quality and user satisfaction, and minimize service downtime

For more information about Cisco Unified Communications products, read the [Cisco Unified Communications Solutions Guide](#).

[Compare Cisco Unified Communications products and services.](#)

[Cisco IP phones brochure.](#)

[Information about the accessibility of Cisco Unified Communications solutions.](#)

Learn about [third-party productivity applications from Cisco technology developer partners](#) that enhance the Cisco Unified Communications system.

[Additional information about rich-media conferencing.](#)

**Q.** Can Cisco Unified Communications support an organization's mission-critical contact center applications?

**A.** Yes. Cisco Unified Contact Center, part of the Cisco Unified Communications family of products, provides a platform for deploying and managing agents anywhere in the world from a single application that is supported on your fully redundant, high-availability data network. You have the level of fault tolerance and resiliency that you expect from your solutions today, without having to deploy contact center infrastructure into each location.

In addition, the Cisco Unified Contact Center allows you to take advantage of advanced applications more transparently than a TDM solution allows. For example, with Enterprise Expert (a Cisco Unified Contact Center product), you can easily integrate resources from outside the contact center and make them available to agents and customers. The Cisco Unified Customer Interaction Analyzer, another Cisco Unified Contact Center product, allows you to measure customer satisfaction on every call and to measure agent performance more effectively.

[Learn more about Cisco Unified Contact Center products.](#)

**Q.** What types of organizations would benefit most from Cisco Unified Communications?

**A.** Cisco Unified Communications can benefit a variety of organizations, ranging in size from small and medium-sized businesses (SMBs) to global enterprises in the areas of financial services, government, healthcare, education, retail, professional services (such as legal and engineering), hospitality and travel, entertainment, and more.

[Find Cisco Unified Communications and voice solutions specific to your company's industry.](#)

More information for [small and medium-sized businesses](#).

More information for [large organizations](#).

**Q.** What benefits and return on investment (ROI) are Cisco customers realizing from Cisco Unified Communications?

**A.** Organizations using Cisco Unified Communications products are streamlining communications, reducing costs, boosting productivity, and improving customer satisfaction. The following are a few examples of the benefits Cisco customers are realizing from Cisco Unified Communications solutions.

- **Reduced costs**—Customers of Cisco Unified Communications solutions routinely cite dramatically reduced costs as a major benefit.
  - NCR Corporation of Dayton, Ohio, is saving millions of dollars annually after replacing its third-party hosted conferencing services with the Cisco Unified MeetingPlace internal conferencing system.
  - Lyondell Chemical Company of Houston, Texas, expected to reduce its annual voice communications expenses by 22 percent four years after it deployed Cisco Unified Communications, but the company realized the 22-percent cost-savings just two years after deployment.
  - Case Western Reserve University in Cleveland, Ohio, has implemented Cisco telephony solutions that provide voicemail, call forwarding, and other services. Cisco Unified IP Telephony solutions cost the university 31 percent less to install than a PBX system, and the university is saving 85 percent on annual telecommunication service costs compared to a PBX system.
  - SouthTrust Bank (now Wachovia) of Birmingham, Alabama, is saving more than \$5 million in communications costs as a result of its deployment of a Cisco Unified Communications system. The cost reductions include 20-percent savings in local and Frame Relay circuits; 51.3 percent in moves, adds, and changes; 93.9 percent in conference-call charges; and 38.4 percent in long-distance costs. In addition, the bank expects to reduce overall voice and data systems maintenance costs by about 15.4 percent annually.
  - GreenStone Farm Credit Services (FCS) of East Lansing, Michigan, is saving approximately \$12,000 every year in long-distance costs and \$15,000 in moves, adds, and changes as a result of Cisco Unified IP Telephony solutions.
  - ACH Food Companies Inc., Memphis, Tennessee, has been able to discontinue outsourcing its PBX telephony maintenance and operation, saving \$32,000 annually, by migrating to a Cisco Unified Communications system.
- **Increased revenue**—The Cisco Unified Communications system has enabled Case Western Reserve University to foster enhanced collaboration between departments, students, and faculty, as well as the entire community. As a result, the university has experienced a 400-percent increase in revenue resulting from inventions and a 21-percent increase in grants received.
- **Enhanced productivity**—With unified messaging, ACH Food Companies employees report saving 20 minutes or more per day. Similarly, NCR reports that the Cisco Unified MeetingPlace solution has greatly reduced the time required to organize, set up, and manage virtual conferences (audio, video, or Web).
- **Improved customer service**—GreenStone FCS has integrated its customer-relationship-management (CRM) system with the Cisco Unified Communications system, enabling its employees to provide better customer service. For example, GreenStone FCS uses an in-house application, SpreadChecker, which provides daily interest rates. The Cisco Unified CRM Connector integrates that application into Microsoft CRM and into every customer call. When a customer calls, a GreenStone FCS employee can immediately see what the customer's current interest rate is and offer the customer a better rate.
- **Better collaboration tools**—ACH Food Companies' mobile workforce now has rich-media conferencing tools available during their travels. For instance, while visiting clients, the company's sales force can use their laptops to establish a real-time videoconference, enabling the clients they are visiting to ask questions directly of ACH Food Companies experts. The ability to facilitate rich-media conferencing in the field greatly enhances the sales force's ability to provide clients with personalized information from top-level executives.

- **Faster IT response time**—Cisco Unified Communications is enabling ACH Food Companies' IT department to commit to a 15-minute response time, compared to response times that ranged from 15 minutes to 24 hours when its telephony maintenance and service was outsourced.
- **The ability to focus IT resources on productive rather than administrative tasks**—Cisco Unified Communications is enabling NCR's IT staff to spend much less time managing basic administration tasks, such as facilitating moves, adds, and changes. Cisco Unified Communications has made network monitoring much easier as well, helping the IT department proactively detect and prevent problems—thus reducing time spent fixing them.
- **The ability to provide a complete telephony system to remote workers**—Teleworker employees of Liz Claiborne Inc. can access the same Cisco telephony features as their peers at the clothing designer/retailer's headquarters, including voicemail and caller ID. This setup gives the company more freedom to hire people who otherwise could not commute to the headquarters office because of distance, preference, or disability.

For more information about these customer examples, go to the following links:

[NCR Corporation](#)

[Lyondell Chemical Company](#)

[SouthTrust Bank](#)

[GreenStone FCS](#)

ACH Food Companies

Liz Claiborne Inc.

[Additional Cisco Unified Communications customer case studies.](#)

[Featured customer videos](#)

For more information about ROI, try the [Cisco IPC Cost Savings Calculator](#).

**Q.** How is Cisco Unified Communications different from other telephony solutions?

**A.** Unlike telephony solutions from other vendors, Cisco Unified Communications securely integrates all information types—including voice, data, and video—using intelligent technologies that are built *into*, rather than *onto*, the network. When your organization's telephony solutions are designed by the same company that built the network, your communications system can be transparently integrated with the business tools workers use every day. You can streamline business processes, and your organization's communications system is more reliable, flexible, secure, and scalable.

Embedded in the Cisco Intelligent Network, the Cisco Unified Communications applications are also network-aware. They seek out the network services they require—for example, an IP phone automatically retrieves the proper settings for power or quality of service (QoS), or a video-enabled PC automatically retrieves the newest software versions and upgrades itself.

In addition, Cisco Systems offers its customers a complete end-to-end solution that can include telephony hardware and software; network design and infrastructure; service and support; additional products and services available from Cisco resellers and partners; and flexible financing options.

Get more information about the [Cisco Technology Developer Partner program and its members](#).

[Find a local partner](#) that can provide expert or specialized network design, consultation, installation, and support services.

Providers of managed services worldwide offer a flexible, wide range of product and service options for fast, easy, cost-effective implementation of managed Cisco Unified Communications solutions, from design and implementation to fully managed monitoring and support. Learn more about [service providers with the Cisco Powered Network designation](#).

**Q.** What is involved in deploying Cisco Unified Communications?

**A.** The Cisco Unified Communications family of products and Cisco networking technology are standards-based and interoperable, helping ensure a smooth migration path.

With the comprehensive ability to interoperate with your existing PBX, voicemail, and contact center solutions, Cisco makes it easy for you to take advantage of your investment in networking and applications and still gain the benefits of the Cisco Unified Communications family of converged IP business communications solutions.

The building-block approach of Cisco Unified Communications provides organizations with a smooth transition from—or coexistence with—older equipment, including time-division multiplexing (TDM)-based telephony systems. There is no need to perform a wholesale upgrade all at once. Working closely with Cisco and its partners, your organization can incrementally deploy Cisco Unified Communications based on your business plans and priorities—one site at a time, one functional group at a time, or whatever makes the most sense for your organization.

This steady migration path enables your organization to better plan for future growth, simplify technology adoption, improve deployment time, and reduce overall costs. You can upgrade as your business grows, taking advantage of both your original investment in network solutions and innovative new technology as it becomes available.

In addition, the Cisco Lifecycle Services approach outlines critical tasks required throughout the lifecycle of Cisco Unified Communications (and other Cisco solutions), including the preparation, planning, design, implementation, operation, and optimization. Your organization can work with Cisco and its partners to develop a lifecycle services approach that is tailored to your individual needs. A Cisco Lifecycle Services approach helps ensure your organization's migration to

Cisco Unified Communications is successful, efficient, and at the pace you want.

In short, the goal of Cisco Systems is to make it as easy as possible for you to help your organization transition from a traditional telephony system to IP Communications.

Learn more about [Cisco Unified Communications service and support](#).

Learn more about [migration to Cisco Unified Communications](#).

Video on demand that provides information about [Bank of America's IP Communications migration](#).

Find out about [Sequoia Community Health Centers' experience migrating to IP telephony](#).

Information for small and medium-sized businesses interested in migrating to IP Communications is included in the *iQ* magazine article "[The Future Calls \(on an IP Phone\)](#)."

**Q.** Does Cisco offer leasing or financing options?

**A.** Cisco Systems Capital<sup>®</sup> Corporation offers financing programs, including leasing options, that can help your organization acquire the Cisco technology it needs at a pace that is right for you—without a major capital investment. With innovative, customized financing, your organization can maximize cash flow, preserve capital budgets, gain tax advantages, reduce risk of obsolescence, and retain the flexibility to easily upgrade technologies as needs evolve. In fact, 80 percent of businesses now use leasing as an integral part of their business strategy.

Your organization can also reduce initial investment by focusing on a usage model where costs of equipment are matched to business revenue. This setup allows you to spread the costs of equipment and services over several years, freeing cash for alternative growth opportunities. At the same time, you can avoid technology obsolescence and enjoy flexible upgrade options—all through a single source that delivers all your technology equipment financing needs.

For small and medium-sized businesses, Cisco offers the Cisco Systems Capital Easy Lease program. Under this program, Cisco Systems Capital Corporation can finance deals as low as \$1000 with simplified, automated documentation that leads to rapid credit approvals and faster funding.

More information about [Cisco Systems Capital financing and leasing](#).

[“Making IP Telephony Affordable.”](#) an *iQ* magazine article, also provides helpful information.

**Q.** How secure is Cisco Unified Communications?

**A.** IP telephony systems are potential targets of hackers who once focused only on PCs, servers, and data applications. Hackers are aided in their search for vulnerabilities in IP voice systems by the open and well-known standards and protocols used by IP networks.

Cisco solutions for protecting IP traffic of all types are based on the Cisco Self-Defending Network (SDN) strategy. The Cisco SDN presents an innovative, multiphase security approach that dramatically improves the ability of IP networks to identify, prevent, and adapt to security threats. This approach advances the Cisco strategy of integrating security services throughout an IP network by delivering secure communications and new threat defense capabilities at the systems level. Also, this systems-level approach helps enable a combined focus on protecting the critical network elements that deliver IP telephony services with three essential security principles:

- **Secure connectivity and management**—A Cisco IP network infrastructure reliably and securely connects the endpoints, call-control components, and application services for effective operation of voice services on the network. The broad portfolio of Cisco technologies, products, and services is designed to deliver numerous connectivity and management options with exceptional levels of privacy, integrity, and reliability.
- **Threat defense**—In a converged network, security threats come in many forms, from many points of origin, and with a cascading effect on many network systems, services, applications, and users. Effective protection against threats requires a system-level security approach. Through the collaboration of security technologies and network services, the Cisco SDN defends against both known and unknown threats. It also provides comprehensive security coverage, helping enable a defense-in-depth security deployment that encompasses the entire network, including voice systems.
- **Managing identity and trust**—A truly secure network requires a contextual method for establishing the identity of connected users, devices, and applications, as well as managing their associated privileges and trust levels. In voice systems, this principle is important to prevent risks such as unauthorized network access. Cisco products incorporate scalable and secure technologies such as encrypted passwords; one-time passwords; digital certificates; and authentication, authorization, and accounting (AAA) tools to help ensure the identity and permissions of devices, users, and applications at multiple points within the network.

By using Cisco security technologies and best practices, your organization can implement these principles for comprehensive, system-level protection across the Cisco Unified Communications infrastructure.

More information about the [security of communications solutions on Cisco IP networks](#).

**Q.** Will an organization that migrates from a traditional telecom system to Cisco Unified Communications still have a need for the telecom staff's expertise?

**A.** An organization that migrates to a unified communications solution running on an IP network will still require the expertise of voice and telecom managers, and others in the telecom staff. The telecom staff possesses valuable knowledge of and experience in the complexities of telephony that the typical IT department lacks.

For example, telephony specialists have a deep understanding of end users' business needs; expertise in working with carriers (a skill that remains indispensable); knowledge of the requirements and procedures for handling 911 calls; call-routing best practices; call-detail reporting; and more.

The need to handle these challenges does not disappear when an organization transitions to an IP telephony solution. In fact, rather than replacing the need for telecom support staff, the migration to IP telephony often enables voice and telecom experts to develop important new skills, such as the ability to set up and administer videoconferencing. As a result, telephony specialists are even more valuable to their organization, and ultimately, their new skills can position them for strategic job opportunities in the future.

Undoubtedly, the migration to IP Communications presents an opportunity for telecom and datacom teams to be reorganized, improving efficiencies and giving both teams the chance to learn new skills. For further information, read the sidebar in this guide, “Migrating to IP Communications: Best Practices.”

**Q.** Does a voice or telecom expert need Cisco certification to manage a Cisco Unified Communications system?

**A.** To manage a Cisco Unified Communications system, you do not need to earn Cisco certification or become a CCIE® expert. The Cisco Unified Communications system provides intuitive user interfaces, easy-to-use management tools, and ready-to-use IP phones, so you do not need a deep level of experience in IP telephony to deploy and manage the system.

However, Cisco training and certification helps you develop new skills and knowledge that will make you more valuable to your organization, as well as more marketable in your career.

Cisco offers three levels of general certification, with each level representing an increasing level of expertise: Associate, Professional, and Expert (CCIE certification). There are six different certification paths across these three levels, including one for voice that is designed for professionals who install and maintain voice solutions over IP networks. A variety of specialist certifications are available as well to indicate expertise in specific technologies, solutions, or job roles. For example, Cisco CCIE Voice certification indicates expert-level knowledge of VoIP solutions.

There are no formal prerequisites for CCIE certification; other professional certifications or training courses are not required. Instead, candidates must first pass a written qualification exam and then the corresponding hands-on lab exam. Candidates are expected to have an in-depth understanding of the topics in the exam blueprints and are strongly encouraged to have three to five years of job experience before attempting certification.

More information about the [Cisco CCIE Voice certification](#).

More information about [Cisco training and certification](#).

Additional information about [Cisco Unified Communications training](#) is available online through Cisco learning partners through [live seminars, mobile demonstration vehicles, and online Webcasts](#).

Numerous resources are available for networking with other voice and telecom managers about training and other topics:

- Cisco Networking Professionals—[IP Communications and video user message boards](#)
- [Cisco IP Telecommunications User Group](#)
- [Cisco Networkers](#) annual user group conference

**Q.** How can Cisco Unified Communications continue to enhance an organization’s communications in the future?

**A.** Traditional PBX systems, the standard telephony solution in organizations for many years, simply cannot support the kind of sophisticated applications that enable organizations to be more productive today—and better prepared for tomorrow’s new and enhanced communications solutions.

For example, Cisco Unified Presence Server provides dynamic presence information, which helps users check the availability of colleagues in real time, reducing “phone tag” and improving productivity. Such capabilities are easily accomplished on a Cisco IP network infrastructure but are not possible with a traditional PBX system—or even one that has been IP-enabled.

Like other Cisco IP-based solutions, the Cisco Unified Communications family of products is scalable and flexible, and it builds on IP from the beginning. As a result, the products can grow and change according to your organization’s needs. You can easily add new applications and services as they become available or needed. And you can easily and cost-effectively extend telephony services to new users wherever they are located.

With Cisco Unified Communications, your organization's telephony solution can be directly mapped to its business goals, and you can continuously take advantage of your organization's telephony investment years after it is first deployed. The end result: your business becomes more agile, flexible, competitive, and strategic.

## MIGRATING TO IP COMMUNICATIONS: BEST PRACTICES

Migrating to an IP Communications system from a traditional telecom environment presents an organization and its employees with new challenges—and opportunities. The following migration best practices will help ensure your organization's transition is as smooth and successful as possible.

- **Consider merging datacom and telecom**—Usually, an organization has one staff member that handles IT and another in charge of telecom. Migrating to an IP Communications solution often gives organizations the opportunity to reorganize those two departments to create enhanced efficiencies, while also giving employees in those departments the opportunity to develop new skills and knowledge.

For example, before New Jersey-based clothing designer/retailer Liz Claiborne Inc. deployed Cisco Unified Communications solutions, its datacom and telecom teams rarely interacted. When the decision to deploy Cisco Unified Communications solutions was made, the company merged the two departments into a single IP Communications team, comprising an infrastructure group and a services group.

Both groups report to the IT director. Each group includes nearly an even number of members from both teams. The infrastructure group manages implementation and project planning; the services group handles day-to-day monitoring; reporting; provisioning; vendor relations; and moves, adds, and changes. Before and during the transition, employees of both groups were cross-trained on voice and data. Today, the two groups physically work side by side.

- **Organize under one director**—Voice traffic must have priority on an IP network (few people notice when data traffic slows down a bit, but they are sure to notice if voice traffic slows). If the telecom team reports to a facilities manager and the datacom team reports to IT, however, giving voice traffic priority can become a contentious problem.
- **Consider introducing the new telephony system to employees gradually**—Tequila Herradura of Mexico introduced Cisco IP Telephony to its employees gradually, beginning with just 50 employees in a volunteer, pilot-test program. After hearing about unified messaging and other IP telephony benefits, more people in the organization volunteered to participate in the program. Within 2 years, every employee had a Cisco IP phone.

For more information, read the *iQ* magazine article, [“Making the Switch to a Converged Network.”](#)

Additional information is available in the *Packet*® magazine article, [“When Organizations Converge.”](#)



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