

## IP Communications Overview

**Converged IP communications solutions that integrate voice and data infrastructures on a single network enable small and midsize companies to enhance productivity, simplify management, and reduce costs.**

### Background

In today's rapidly changing business world, organizations are faced with increased competition, shrinking margins, and evolving business models. While traditional areas of concern—such as productivity and customer satisfaction—are more important than ever, newer challenges such as the expansion of the virtual workforce, growth of communications traffic, and the heightened need for business agility must now be factored in as well. To meet these challenges, organizations are looking at technology solutions that can help give them an edge over the competition.

At the forefront of these challenges are businesses' voice networks, which face changing communication requirements and expectations. Like everything else, phone communication is now moving at Internet speed. Writing down a message and returning a call within 24 hours is no longer acceptable to today's customers. Small and midsize businesses need voice solutions that can deliver immediate gratification to demanding customers.

Businesses are also seeking ways to better manage ongoing expenses related to their voice and data networks. Although outsourcing network management is common for growing organizations, however outsourcing is not cost-effective for routine

administrative tasks. Small and midsize businesses need solutions that can enable self-service management for common tasks such as voice moves, adds, and changes.

One of the most effective ways companies can realize these benefits is by migrating to an IP communications solution that combines voice and data infrastructures on a single, converged IP network. An end-to-end IP communications solution can deliver cost savings to businesses of all sizes, enabling them to increase production by taking advantage of telecommunication applications such as unified messaging, interactive voice response (IVR), automatic call distributor (ACD), and Extensible Markup Language (XML) productivity solutions. The solution also lets businesses align their processes with technology to enhance performance and improve efficiency.

IP communications supports voice communications over IP-based networks with equal or greater quality and reliability as traditional circuit-switched telephone networks, enabling companies to deploy it with confidence. A proven technology, IP communications is now widely adopted by businesses worldwide, many of whom are realizing the benefits of their decisions just weeks after implementation.



## **Challenge**

Growing pains are nothing new for most small to midsize businesses. As they expand operations to support new customers or enter new marketplaces, companies face a variety of strategic challenges.

Many growing companies are already supporting independent networks to handle voice and data communication. As network administrators contend with managing new equipment, staff, and budget, these separate voice and data networks become increasingly difficult to scale, manage, and maintain, resulting in higher costs.

Private branch exchange (PBX) installation and upgrades are also costly, sensitive issues for organizations that are growing or moving to a new office space. And for companies whose PBX is reaching the end of its lease, the renewal or replacement process can be slow, frustrating, and expensive.

Businesses that are growing geographically must often support several branch offices, where traditional PBX installations and toll charges can prove to be expensive.

Many companies also need the ability to efficiently and affordably accept and route inbound calls without operator intervention, using an automated attendant application. Others maintain call centers distributed throughout many disparate geographic locations, and need solutions to let them integrate Web and back-end systems to improve responsiveness, retain customers, and increase market share.

## **Solution**

An IP communications solution can help growing companies overcome these business challenges in the short term, while laying the groundwork to take advantage of new opportunities in the future.

A well-planned IP communications solution should consist of standards-based, fully integrated components that can enable companies to protect their existing investment, while adding new features and applications to the network. A standards-based solution delivers increased reliability, integrates smoothly with the existing network, and can easily be modified or upgraded as business needs change.

A comprehensive, end-to-end IP communications solution is composed of five major components:

- At the heart of the solution is the converged IP network infrastructure, which includes switches with inline power, routers, and other network components such as gateways, services, and software. For companies that have been planning for an IP communications migration, the Cisco MCS 7800 series of media convergence servers offers a high-performance server platform for voice, video and integrated data that is cost-effective and easy to deploy. And the Cisco ICS 7750 Integrated Communications System delivers call processing, multiservice routing, and voice applications within a single system that provides ease of management and superior call-processing functionality. IPC platforms can be added to an existing data network immediately, and then easily enhanced as needed to support advanced services such as IVR, unified messaging, ACD, and XML productivity applications to meet the evolving needs of a growing business.
- End-point devices, such as IP phones that connect to a converged IP network, enable users to place phone calls as quickly and easily as they would using an analog phone. IP phones can be managed just like any other network device, making it easy to perform moves, adds, and changes with minimal staff, and saving money on network administration. They deliver high-quality voice communication and feature LCD display screens to support advanced IP communications applications. IP end-point devices also enhance employee mobility, enabling users to receive and make calls from anywhere.



- Telephony applications such as unified messaging let users access and manage voice mail, e-mail, and fax messages from a single mailbox. Unified messaging helps business professionals manage how and where they want to be reached, enhancing communications, productivity, and responsiveness.
- Call-processing software extends telephony features and functions to the converged IP network, while providing support for applications such as unified messaging, multimedia conferencing, collaborative contact centers, and interactive multimedia response systems.
- Management software provides support for IP applications, from basic connectivity, security, and network management to more advanced services.

### **Benefits**

An end-to-end, standards-based IP communications solution can unlock cost savings enhance customer relationships and provide a converged network foundation so small that midsize businesses can later deploy innovative IP applications with ease.

Companies can quickly reduce their total cost of network ownership by migrating their voice and data infrastructures to a converged IP network. A unified infrastructure lets organizations minimize ongoing network administration costs by enabling self-service voice moves, adds, and changes. And companies with several offices can avoid costly toll charges and monthly fees for previously dedicated leased voice lines that connected branch offices and teleworkers.

IP communications can also deliver significant strategic benefits by improving a business' overall communication with services such as IP call handling and unified messaging. A recent study by The Radicati Group, Inc., a research firm in Palo Alto, California, estimates that unified messaging generates 25 to 40 minutes per day of additional productivity per employee. IP communications also enables increased employee productivity from mobility, so workers can stay productive no matter where they are working.

Bringing together separate data and voice networks in one IP infrastructure enables companies to simplify network operations as they build additional value into the network. With an IP communications solution, companies can merge once disparate support and administrative staffs for voice and data networks. As a result, by eliminating redundancy, companies can direct their assets toward strategic core business investments. Network support staff productivity has improved by up to 40 percent at some organizations as a result of an IP communications deployment. IP communications also enables companies to support innovative XML applications, ensuring content and integration with back-end database systems for sales and marketing, new service creation, finance, legal, and technology operations.

### **Next Steps**

Small and midsize businesses will often see an immediate return on investment after deploying an IP communications solution. To optimize their solution, organizations should evaluate their IP communications system frequently, assessing areas where it has been most effective and exploring possible new applications or processes that could bring additional benefits to a company.

The Cisco end-to-end IP communications solution can be tailored to accommodate businesses of all sizes and types, and is reliable, scalable, and easy to manage and support. With a flexible Cisco IP communications solution in place, businesses are well positioned to easily accommodate new telephony initiatives in the future.



## CISCO SYSTEMS



### Corporate Headquarters

Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA

www.cisco.com  
Tel: 408 526-4000  
800 553-NETS (6387)  
Fax: 408 526-4100

### European Headquarters

Cisco Systems International BV  
Haarlerbergpark  
Haarlerbergweg 13-19  
1101 CH Amsterdam  
The Netherlands

www-europe.cisco.com  
Tel: 31 0 20 357 1000  
Fax: 31 0 20 357 1100

### Americas Headquarters

Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA

www.cisco.com  
Tel: 408 526-7660  
Fax: 408 527-0883

### Asia Pacific Headquarters

Cisco Systems, Inc.  
Capital Tower  
168 Robinson Road  
#22-01 to #29-01  
Singapore 068912

www.cisco.com  
Tel: +65 6317 7777  
Fax: +65 6317 7799

Cisco Systems has more than 200 offices in the following countries and regions. Addresses, phone numbers, and fax numbers are listed on the  
**Cisco Web site at [www.cisco.com/go/offices](http://www.cisco.com/go/offices)**

Argentina • Australia • Austria • Belgium • Brazil • Bulgaria • Canada • Chile • China PRC • Colombia • Costa Rica • Croatia  
Czech Republic • Denmark • Dubai, UAE • Finland • France • Germany • Greece • Hong Kong SAR • Hungary • India • Indonesia • Ireland  
Israel • Italy • Japan • Korea • Luxembourg • Malaysia • Mexico • The Netherlands • New Zealand • Norway • Peru • Philippines • Poland  
Portugal • Puerto Rico • Romania • Russia • Saudi Arabia • Scotland • Singapore • Slovakia • Slovenia • South Africa • Spain • Sweden  
Switzerland • Taiwan • Thailand • Turkey • Ukraine • United Kingdom • United States • Venezuela • Vietnam • Zimbabwe

All contents are Copyright © 1992–2003 Cisco Systems, Inc. All rights reserved. Cisco, Cisco IOS, Cisco Systems, and the Cisco Systems logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries.

All other trademarks mentioned in this document or Web site are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0301R)