



Introduction

Today's growing businesses face relentless competitive pressures. To keep up with large global organizations as well as smaller, more technology-enabled businesses, your company must boost productivity through better communications, streamline business processes, get full value from resources and applications, and manage costs effectively. Superior customer service and business agility can help your organization stand apart from the competition. The Cisco® Smart Business Communications System can help you compete more successfully on all of these levels with an affordable, complete system designed and built for small businesses.

The Cisco Smart Business Communications System offers a new way for small businesses to reach, serve, and retain customers. Having secure access—anytime, anywhere—to voice, video, and wireless networking enables more effective and efficient communication with customers and employees. The Cisco Smart Business Communications System gives you the right mix of communications, productivity, and business operations applications, designed to work together so they are easier to deploy, operate, and manage. It lets you integrate your voice, video, and wireless communications in an affordable, complete system, complemented by award-winning support and easy financing, all delivered through trusted local partners.

Integrating your communications systems with an intelligent IT infrastructure transforms your network into a “human network” in which your business moves with you, security is everywhere, and your information is always available—whenever and wherever it's needed. You can efficiently access information on demand, interact with virtual teams all over the world, and manage these interactions on the go, in real time, as if you were everywhere at once. Every interaction is more valuable. Everyone is more efficient. All communications are more effective and secure. These capabilities let you excel in today's fast-paced marketplace and give your business the agility it needs to innovate continuously, adapt quickly, and grow successfully.

Cisco Smart Business Communications System Components

The Cisco Smart Business Communications System is made up of multiple components:

- Cisco Unified Communications 500 Series for Small Business
 - With integrated wireless option on specified versions
- Cisco Catalyst® Express 520 Series
- Cisco Mobility Express Solution

- Cisco 500 Series Wireless Express Access Point
- Cisco 500 Series Wireless Express Mobility Controller
- System management
 - Cisco Smart Assist
 - Cisco Configuration Assistant
 - Cisco Monitor Manager and Cisco Monitor Director

Cisco Unified Communications 500 Series (Cisco Unified 500 Series) for Small Business

The Cisco Unified 500 Series comes with eight Power over Ethernet (PoE) ports to support both IP phones and workstations, and through six different models it is possible to scale from 8 to 48 IP phones. The Cisco Unified 500 Series delivers an array of features, including:

- Call processing, with the intelligence of a telephony solution, directing how calls should be routed and used throughout the network
- Local storage of voicemail
- Eight Ethernet ports that support PoE, to provide power to IP phones using the IEEE 802.3af power standard
- WAN connection (Ethernet only) for either Internet connectivity or connection into a corporate data network
- Connectivity to the public switched telephone network (PSTN) for making and receiving external calls (FXO, BRI, and T1/E1 support on the new 48 IP phone model)
- FXS ports to connect local analog devices, such as fax machines
- Optional wireless connectivity for both wireless voice and data (only on specific models)
- Security for connectivity to the Internet

Cisco Unified 500 Series Integrated Wireless Access Point Option

The Cisco Unified 500 Series offers an integrated wireless access point option on specific models. Use this approach when the Cisco Unified 500 Series can be placed in a centralized area for the best wireless access.

This single access point resides in the Cisco Unified 500 Series and provides wireless access, acting like a standalone access point. This is an ideal solution, for instance, to deploy wireless IP phones in a small area without running wires.

As your business grows, you may need to expand the wireless coverage to more than a single access point. The Cisco Mobility Express Solution, described in a later sec-



tion, includes access points that can be installed as standalone access points and then upgraded when necessary to controller-based access points. It is possible to have up to 12 Cisco 500 Series Wireless Express Access Points in a network controlled by two Cisco 500 Series Wireless Express Mobility Controllers.

Note that the integrated wireless access point on the Cisco Unified 500 Series is not part of the Cisco Mobility Express Solution and cannot be upgraded into a controller-based architecture.

The following table compares the features of the new Cisco Unified Communications 500 Series models:

| | 8 IP Phones | 16 IP Phones | 32 IP Phones | 48 IP Phones | 48 IP Phones |
|-------------------------------|-------------|--------------|--------------|--------------|--------------|
| Desktop | Yes | Yes | No | No | No |
| 19 Inch Rack Mount | Optional | Optional | Yes | Yes | Yes |
| FXO | 4 | 4 | 8 | 12 | 4 |
| BRI | 2 | 2 | 4 | 6 | 2 |
| T1/E1 | N/A | N/A | N/A | N/A | 1 |
| FXS | 4 | 4 | 4 | 4 | 4 |
| Integrated WIFI option | Yes | Yes | No | No | No |
| VIC Expansion slot | Yes | Yes | Yes | No | Yes |

Cisco Catalyst Express 520 Series

The Cisco Catalyst Express 520 Series Switches are a series of fixed-configuration managed switches that range from 8 ports of 10/100 Power over Ethernet (PoE) to 24 ports of 10/100/1000. These switches are a part of the Smart Business Communications System and enable the Cisco Unified Communications 500 Series to scale from 8 to 48 IP phones as well as provide connectivity for up to 250 users.

The Cisco Catalyst Express 520 Series Switches feature:

- Quality of Service to ensure network traffic prioritization
- Embedded device security to protect management traffic with Secure Sockets Layer (SSL) encryption
- Wire-speed managed Fast Ethernet and Gigabit Ethernet connectivity
- Central management with Cisco Configuration Assistant

The following table compares the features of the Cisco Catalyst Express 500 Series Switches.

| | 8 Port Switch | 24 Port Switch (Data Only) | 24 Port Switch (Partial PoE) | 24 Port Switch (Full PoE) | 24 Port Switch (Gigabit Data) |
|---------------------|---------------|----------------------------|------------------------------|---------------------------|-------------------------------|
| SFP | 1 | N/A | 2 | 2 | 2 |
| 10/100 | 8 | 24 | 24 | 24 | N/A |
| 10/100/1000 | N/A | 2 | N/A | N/A | 24 |
| Power over Ethernet | 8 | N/A | 4 | 24 | N/A |

Cisco Mobility Express Solution

Wireless access to the Smart Business Communications System has been designed for both standalone and controller-based operation. It is composed of:

- Cisco 500 Series Wireless Express Access Points. The Cisco 521 Wireless Express Access Points can function in two modes:
 - Standalone mode: The access points are directly connected to the wired infrastructure and provide wireless connectivity to users in the area they cover. Configuration and management must be done at the individual access point level.
 - Controller-based mode: The access points associate with a Cisco Wireless Express Mobility Controller and, in addition to providing wireless connectivity, act as air monitors. The Cisco Wireless Express Mobility Controller manages the configurations of all the access points through a single interface.
- Cisco 500 Series Wireless Express Mobility Controller: This controller centralizes the intelligence of the wireless network, providing three key functions:
 - Single point of management for all access points in the network (configuration, software image management, security/access management, etc.)
 - Radio Resource Management, retrieving information from the access points and in turn coordinating them to optimize radio transmit power and channel settings to optimize coverage
 - Host for advanced mobility services like secure guest access with guest portal pages or VoWLAN optimizations

System Management

The Cisco Smart Business Communications System is managed by a suite of applications that provide:

- Setup
- Optimization
- Transparent integration

- Local management
- Remote management by a managed service provider (reseller, integrator, consultant, or service provider)

Each of the applications is part of the overall solution to set up, optimize, and maintain the Smart Business Communications System.

Cisco Smart Assist

Cisco Smart Assist is a collection of features that provide auto-configuration and service activation between Cisco products and applications. Cisco Smart Assist features, initially supported on products in the Smart Business Communications System, are unique in offering assistance in:

- Improved ease of setup and deployment of Cisco products
- Optimizing network performance and security
- The ongoing operation of Cisco networks as they grow

Cisco Configuration Assistant

Cisco Configuration Assistant simplifies the task of configuring, deploying, and administering Cisco network solutions and provides everything needed to quickly set up a small office network. Purpose-built for single-site networks serving 8 to 250 users, this PC-based application with a simple graphical user interface (GUI) discovers all devices in the network and dynamically configures all routers, switches, and wireless access points as well as Cisco Unified Communications call-routing and voicemail systems.

Cisco Configuration Assistant was designed to provide comprehensive configuration, deployment, and ongoing network management support for the entire line of products in the Cisco Smart Business Communications System.

The Cisco Configuration Assistant provides the following:

- Holistic, network-level insight through multiple network views
- Simplified network design and deployment through dynamic discovery
- Clear separation of services through VLAN highlighting
- Improved network visibility with continual health monitoring
- Simplified network reporting
- Enhanced security for configuration and monitoring activities
- Increased IT staff efficiency through simplified software updates
- Improved network security and performance with dynamic application updates
- Increased security and performance through network synchronization

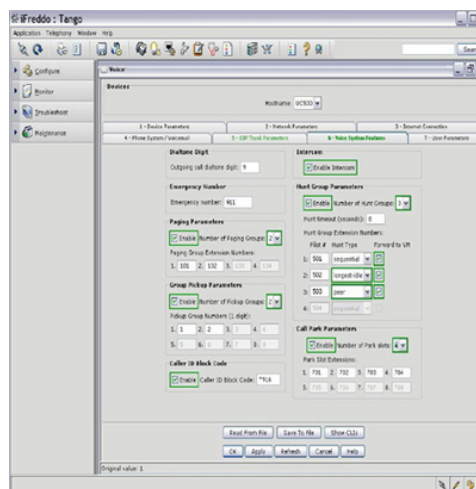
- Simplified troubleshooting with the Troubleshooting Advisor
- Faster network configuration and improved network performance through intelligent port configuration with Cisco Smartports Advisor

Cisco Monitor Manager and Cisco Monitor Director

The Cisco Monitor Manager and Cisco Monitor Director bring real-time management to the Smart Business Communications System. Whether you are a small or medium-sized business (SMB) managing your own network or a partner needing to manage your customers' networks remotely, these two products offer the perfect solution.

- Cisco Monitor Manager: The Cisco Monitor Manager provides management functionality at the SMB main and branch offices. This application allows customers to manage their own network infrastructure, including data and voice. Supported features include:
 - Network discovery
 - Device inventory
 - Configuration archive
 - Performance monitoring
 - Fault management
 - Performance and fault history
 - Reporting

Figure 1. Cisco Configuration Assistant can configure the full Smart Business Communications System solution.



- Alerts
- End-of-sale (EoS) report
- Discovery, inventory, topology, monitoring, and reporting, including IP telephony devices
- Cisco Unified Communications Manager Express monitoring
- Cisco Unity® Express monitoring
- Monitoring of IP phones
- Voice gateway monitoring

Figure 2. Cisco Monitor Manager provides management functionality at the SMB main and branch offices.

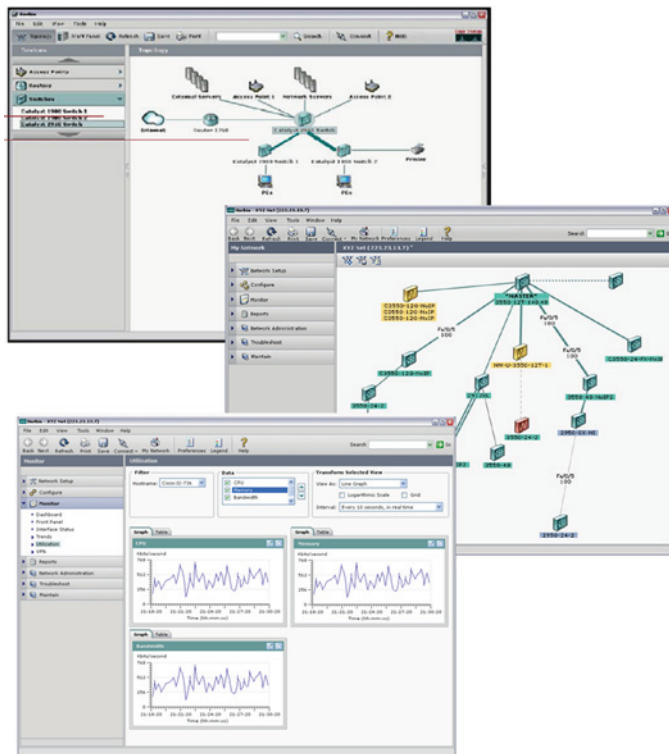
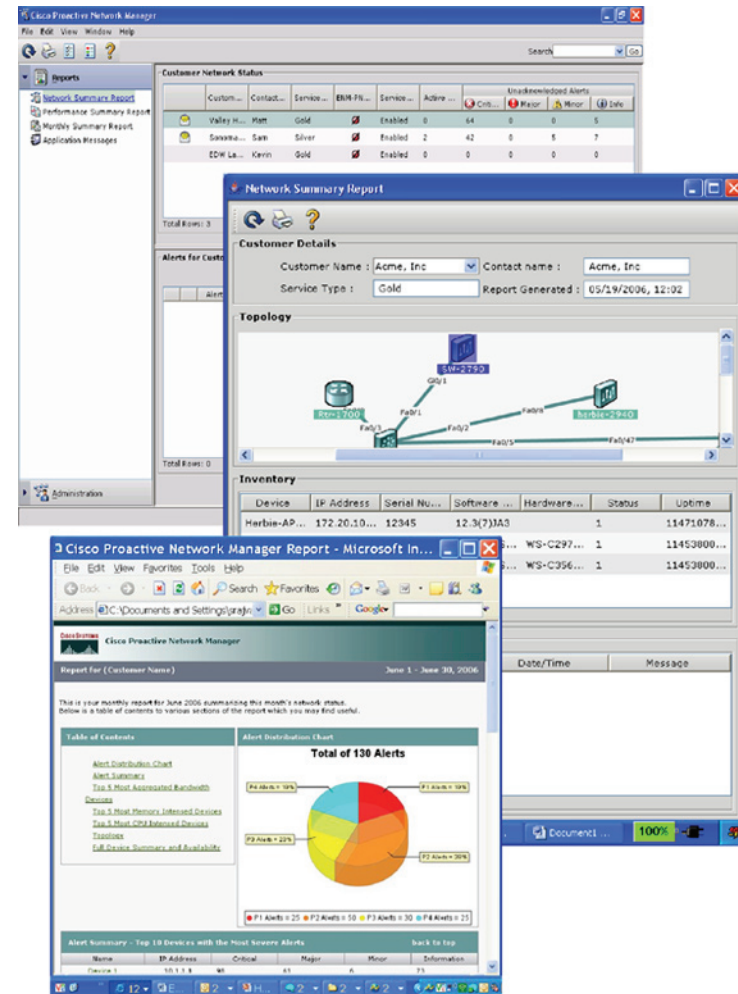


Figure 3. Cisco Monitor Director lets partners manage 50 individual customers at the same time.



- Cisco Monitor Director: The Cisco Monitor Director enables partners to manage 50 individual customers at the same time. Partners gain intimate knowledge of their SMB customers and can migrate to the managed service provider (MSP) monthly recurring revenue model. They can manage customers' sites using features such as:

- Real-time alerts and notifications
- Configurable e-mail and pager addresses based on time-of-day setting
- Automated e-mails sent to prevalent trouble ticketing applications
- Multilayer alert filtering capability
- End-of-life/end-of-sale database reference and notifications
- Scheduled, HTML-based, automated e-mail reports that include a network alert summary, a device availability analysis, Top Number (TopN) performance reports, and a network topology

Network Designs

The Cisco Smart Business Communications System is a versatile solution that can be designed to satisfy multiple customer requirements. The infrastructure and application designs in this section can be used as a starting point for any customer design.

- Infrastructure designs
 - Smart Business Communications System with 8 IP phones
 - Smart Business Communications System with 16 IP phones
 - Smart Business Communications System with 32 IP phones
 - Smart Business Communications System with 48 IP phones
 - Smart Business Communications System with wireless access
 - Smart Business Communications System with guest wireless access
- Application designs
 - Smart Business Communications Systems: Adding advanced call features and presence integration
 - Smart Business Communications Systems: Integrating customer relationship management application
 - Smart Business Communications Systems: Adding presence to customer relationship management application
 - Smart Business Communications Systems: Adding secure mobility

Infrastructure Designs

The infrastructure designs in this section are reference architectures that can be used as a starting point when designing a voice and data network with the Smart Business Communications System.

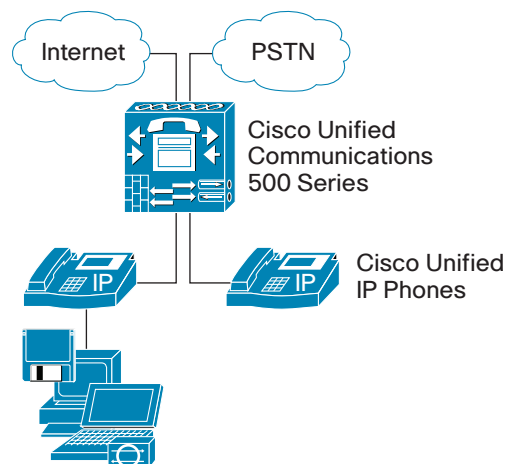
Smart Business Communications System with 8 IP Phones

The 8-IP phone solution includes the following products:

- Cisco Unified Communications 500 Series 8 IP Phone version (Cisco Unified 500 Series)
 - Cisco Unified Communications Manager Express
 - Cisco Unity Express
- Cisco Configuration Assistant
- Cisco Monitor Manager and Cisco Monitor Director
- Cisco Unified IP Phones

The IP phones are connected to and powered directly by the Cisco Unified 500 Series. Workstations can be connected directly to the IP phones, taking advantage of a single cabling infrastructure. Figure 4 demonstrates the network connectivity for both the IP phones and workstations.

Figure 4. Smart Business Communications System with Eight Users



The Cisco Unified 500 Series can be connected directly to the Internet to enable Internet connectivity for end users. It is possible to configure a Cisco IOS® Firewall on the Cisco Unified 500 Series to protect the solution.

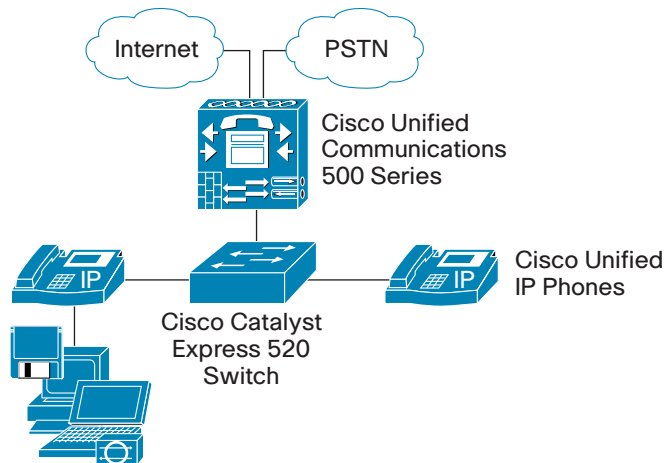
Smart Business Communications System with 16 IP Phones

The Smart Business Communications System is available in a 16-user version, with the addition of the Cisco Catalyst Express 520 Series Switch. This switch adds 8 ports for 8 additional IP phones. Figure 5 demonstrates the connection of IP phones and workstations to the Cisco Catalyst 520 Series Switch, taking advantage of a single cable infrastructure.

The 16-IP phone solution includes the following products:

- Cisco Unified Communications 500 Series 16 IP Phone version (Cisco Unified 500 Series)
 - Cisco Unified Communications Manager Express
 - Cisco Unity Express
- Cisco Catalyst Express 520 Series Switch
- Cisco Configuration Assistant
- Cisco Monitor Manager and Cisco Monitor Director
- Cisco Unified IP Phones

Figure 5. Smart Business Communications System with 16 Users



Smart Business Communications System with 32 IP Phones

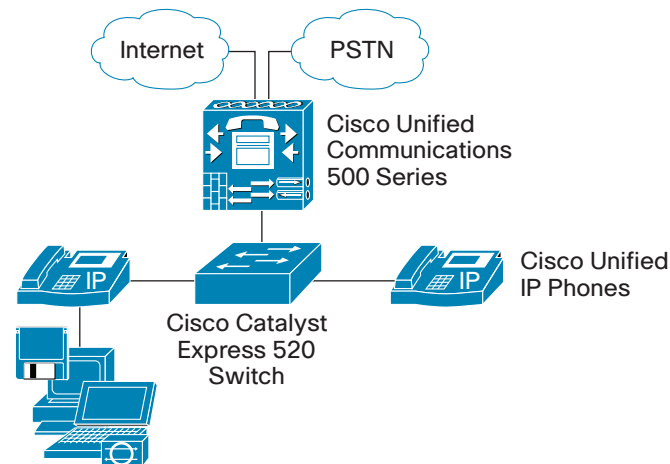
With the addition of the 24-port Cisco Catalyst Express 520 Series Switch and the existing 8 ports on the Cisco Unified Communications 500 Series, it is now possible to

support up to 32 IP phones. Figure 6 demonstrates the connection of IP phones and workstations to the Cisco Catalyst 520 Series Switch, taking advantage of a single cable infrastructure.

The 32-IP phone solution includes the following products:

- Cisco Unified Communications 500 Series 32 IP Phone version (Cisco Unified 500 Series)
 - Cisco Unified Communications Manager Express
 - Cisco Unity Express
- Cisco Catalyst Express 520 Series Switch
- Cisco Configuration Assistant
- Cisco Monitor Manager and Cisco Monitor Director
- Cisco Unified IP Phones

Figure 6. Smart Business Communications System with 32 Users



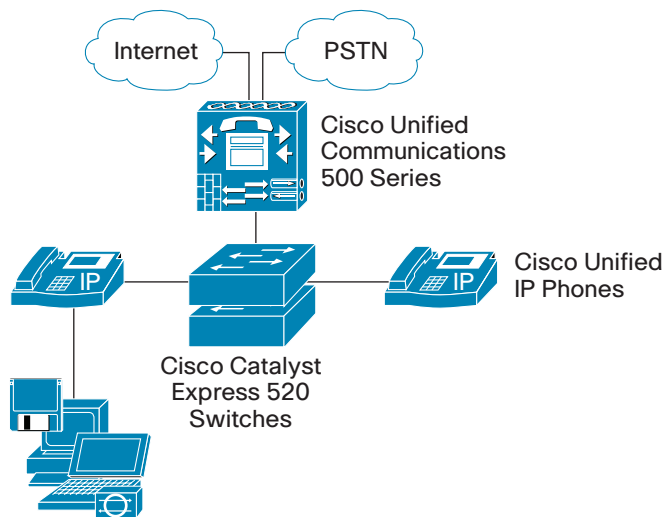
Smart Business Communications System with 48 IP Phones

The Cisco Unified Communications 500 Series with two Cisco Catalyst Express 520 Series Switches can support up to 48 IP phones. Figure 7 demonstrates the connection of IP phones and workstations to the Cisco Catalyst 520 Series Switch, taking advantage of a single cable infrastructure.

The 48-IP phone solution includes the following products:

- Cisco Unified Communications 500 Series 48 IP Phone version (Cisco Unified 500 Series)
 - Cisco Unified Communications Manager Express
 - Cisco Unity Express
- Cisco Catalyst Express 520 Series Switch
- Cisco Configuration Assistant
- Cisco Monitor Manager and Cisco Monitor Director
- Cisco Unified IP Phones

Figure 7. Smart Business Communications System with 48 Users



Smart Business Communications System with Wireless Access

Wireless access to the Smart Business Communications System can be provided in two ways:

- Using an integrated wireless option in a standalone mode that can eventually be expanded with up to two Cisco 500 Series Wireless Express Access Points. This configuration is recommended for a small coverage area and when no roaming across access points is needed for Voice over Wi-Fi.

- Using the Cisco Mobility Express Solution in a standalone or controller-based architecture. Among other features, the controller-based architecture allows dynamic Radio Resources Management for always optimized bandwidth and roaming to maintain Voice over Wi-Fi calls from one access point to another. The Cisco Mobility Express Solution is designed for small and medium-sized businesses with fewer than 250 employees.

Each access point can handle between 8 and 10 wireless IP phones with data connectivity (depending on the applications being used). Each Cisco 500 Series Wireless Express Mobility Controller can handle up to 6 Cisco 500 Series Wireless Express Access Points.

The Cisco Mobility Express Solution can be implemented with or without the Cisco Unified Communications 500 Series, offering customers the ability to start today with wireless connectivity for their data network and complete wired and wireless security and then add voice in the future.

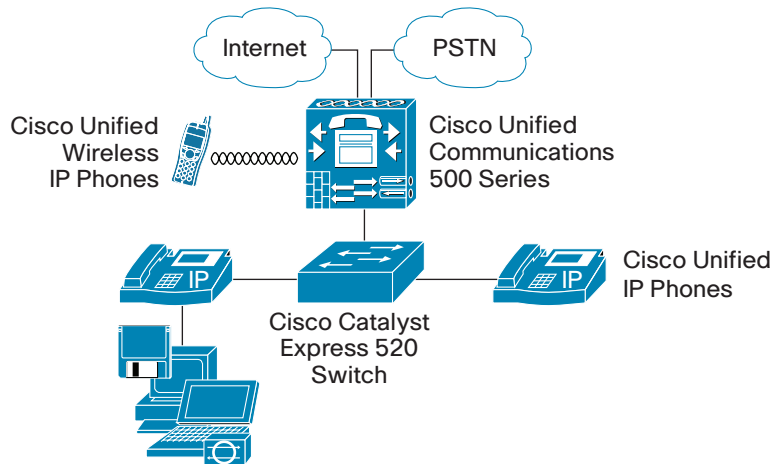
Cisco Unified Communications and Mobility Express Solutions

The following products are used for unified communications and wireless access:

- Cisco Unified Communications 500 Series (Cisco Unified 500 Series)
 - Cisco Unified Communications Manager Express
 - Cisco Unity Express
 - Integrated wireless option (offered only on specific models)
- Cisco Catalyst Express 520 Series Switch (16-user version)
- Cisco Configuration Assistant
- Cisco Monitor Manager and Cisco Monitor Director
- Cisco Unified IP Phones
- Cisco Mobility Express Solution
 - Cisco 500 Series Wireless Express Access Point
 - Cisco 500 Series Wireless Express Mobility Controller

When using the integrated wireless option, no additional network hardware is needed, for both voice and data wireless connectivity. When only one access point is deployed, no roaming is needed, as shown in Figure 8.

Figure 8. Integrated Wireless Option



It is not always possible to use the integrated wireless option, even when only one access point is needed, due to the location of the Cisco Unified 500 Series system. In such cases, an external wireless access point, the Cisco 521 Wireless Express Access Point, can be added to the solution and placed anywhere in the facility to provide wireless connectivity where it is needed; this is demonstrated in Figure 9.

When multiple access points are needed to provide the necessary coverage and bandwidth, two Cisco 521 Wireless Express Access Points can be added to the integrated access point. These can be deployed in either a standalone mode or a controller-based mode.

In the controller-based mode a Cisco 500 Series Wireless Express Mobility Controller would be deployed to manage up to six Cisco 500 Series Wireless Express Access Points, offering numerous advanced features such as centralized management of users, access points, or policies; automated Radio Resource Management; simple setup of up to 8 VLANs, Mobility Management for roaming from one access point to the other, secure wireless guest access, and optimized bandwidth for Voice over Wi-Fi.

The Cisco Mobility Express Solution can be implemented with or without the Cisco Unified 500 Series, offering customers the ability to start today with wireless connectivity for their data network and complete wired and wireless security to then add voice in the future. Figure 10 illustrates this solution.

Figure 9. Wireless Access Through a Cisco 521 Wireless Express Access Point

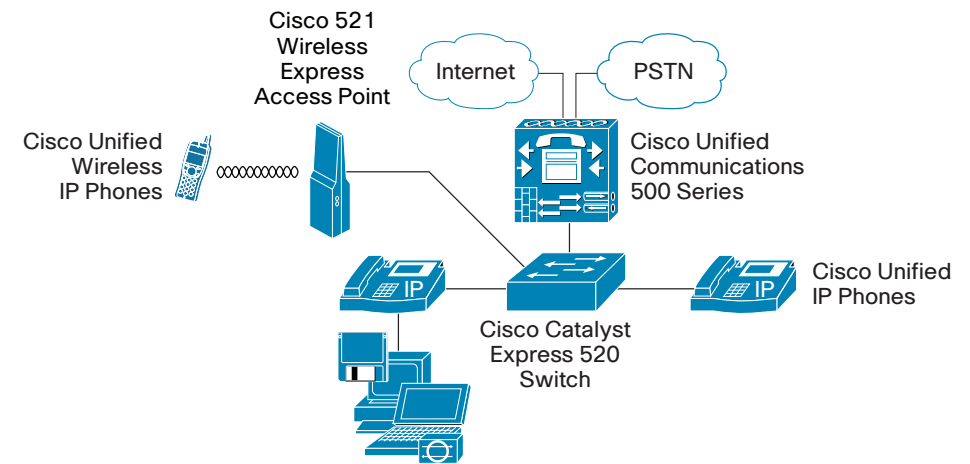
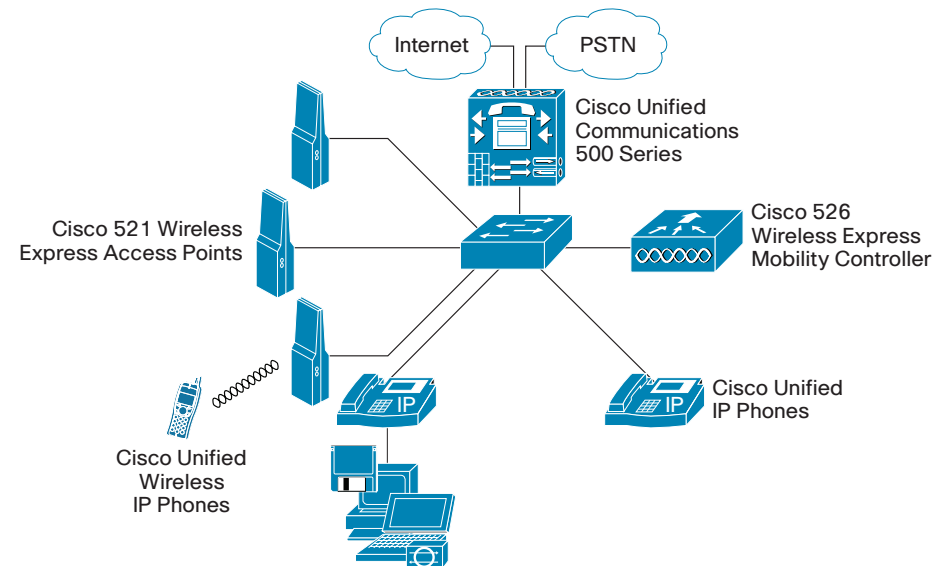


Figure 10. Cisco Mobility Express Solution, Offering Mobility Management for Voice over Wi-Fi



To obtain optimal performance, a wireless site survey of the facility into which wireless will be introduced is recommended.

Wireless access allows the customer to take full advantage of the Smart Business Communications System, using every aspect of the solution, from a wired network for both voice and data to a wireless solution that allows mobility throughout the facility.

Guest access to the wireless network is becoming a more accepted solution in all lines of business. It is important not just for employees who need to continue to be productive wherever they are, but also for guests who are visiting the facility. This access is accomplished via the same Cisco 526 Wireless Express Mobility Controller that is used by the corporate network.

The Mobility Controller uses separate VLANs for the guest network that have access only to the Internet, with no corporate access.

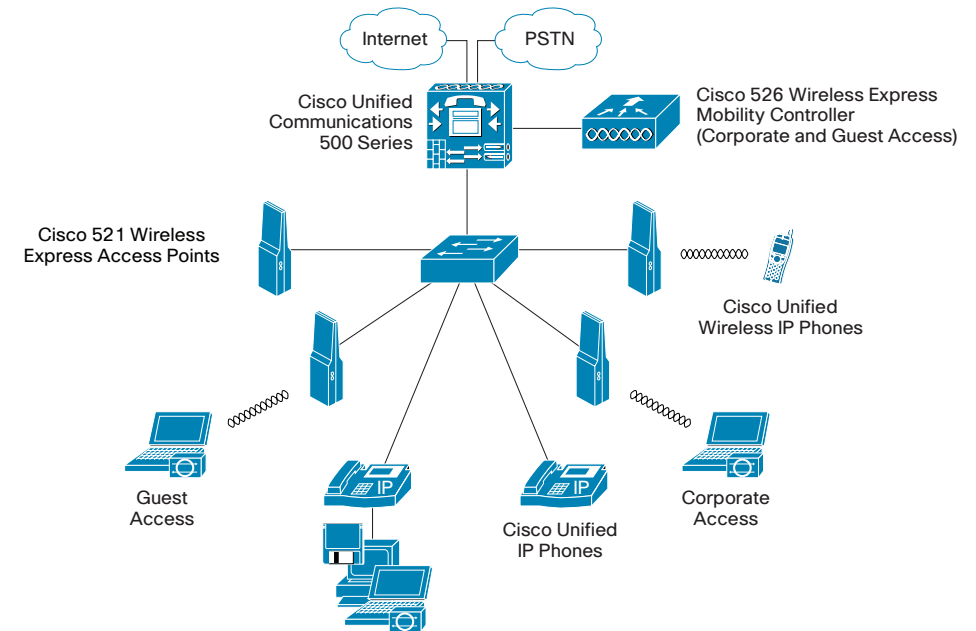
Once users access the guest network, they are presented with a login page that will challenge them for a username and password, though it is also possible to set up anonymous access that immediately drops unauthorized users in the guest network. Both of these options will allow guests to use the Internet and also to use their VPN client to connect to their own corporate network and get work done. Figure 11 illustrates a configuration that allows wireless access to the network, including guest access.

Some of the benefits of guest access on the Cisco 526 Wireless Express Mobility Controller are:

- Creates a hotspot-like experience
- Uses a separate VLAN to ensure that guest traffic can't reach anything but the Internet
- Allows choice of a "tweakable" login page that can be lightly customized in a minute or two or a fully customizable login page, built by scratch by a partner or the customer, using provided starter templates

The guest network feature is supported by the Cisco Mobility Express Solution and does not require the use of the Cisco Unified Communication 500 Series.

Figure 11. Cisco Mobility Express Solution, Including Guest Access



Mobility Express Solution Only

Although voice capability may already exist in a customer location, it is always important to prepare for the future. The Cisco wireless solution provided through the Smart Business Communications System provides this type of preparation. The solution consists of the following products:

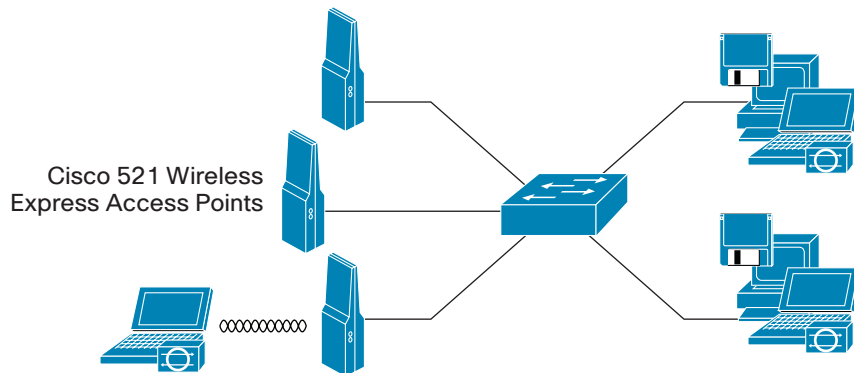
- Cisco Catalyst Express 520 Series Switch (optional)
- Cisco Configuration Assistant
- Cisco Monitor Manager and Cisco Monitor Director (optional)
- Cisco Mobility Express Solution
 - Cisco 500 Series Wireless Express Access Point
 - Cisco 500 Series Wireless Express Mobility Controller

These products are all part of the Smart Business Communications System, allowing easy growth into the voice capabilities of this solution as well as easy growth of the wireless network. Indeed, the Cisco Mobility Express Solution can scale up to 250 users.

When the controller features are not needed, a standalone architecture can be deployed. The standalone Cisco 500 Series Wireless Express Access Points can be upgraded at any time in the future into a controller-based architecture, preserving customer investment. The access points can be placed in various areas throughout the facility to provide full coverage. No Cisco 500 Series Wireless Express Mobility Controller is deployed. Figure 12 illustrates this configuration.

The capacity of the wireless network is limited to a maximum of three access point in this configuration.

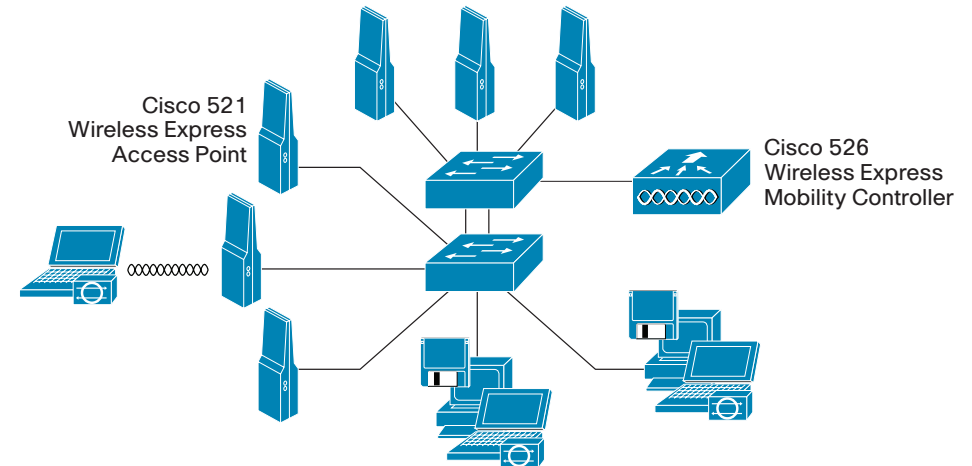
Figure 12. Cisco Mobility Express Solution in a standalone architecture



As the number of users and the need for more bandwidth grow, and as features such as centralized management, automated Radio Resource Management, Mobility Management, or secure wireless guest access are needed, the access points can be deployed in a controller-based architecture. In this configuration, up to two Cisco 500 Series Wireless Express Mobility Controllers can be added.

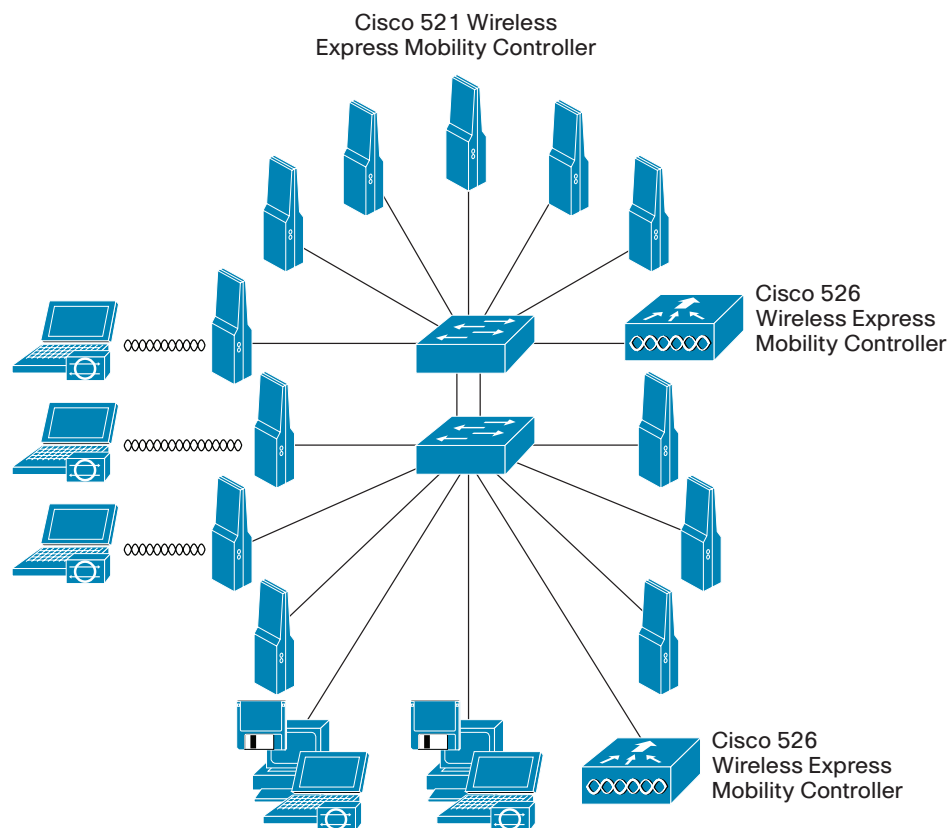
A single Cisco 500 Series Wireless Express Mobility Controller can manage up to six Cisco 500 Series Wireless Express Access Points. Figure 13 illustrates this configuration.

Figure 13. Cisco Mobility Express Solution in a controller-based architecture



This solution could provide mobility for business with up to 250 employees. The network design can be expanded for even greater coverage, due to capacity requirements or for environmental reasons. This expansion would involve adding another Cisco 500 Series Wireless Express Mobility Controller to the solution, to cover up to 12 access points located anywhere in the network. Figure 14 demonstrates how 12 Cisco 500 Series Wireless Express Access Points can be managed by 2 Cisco 500 Series Wireless Express Mobility Controllers.

Figure 14 Cisco Mobility Express Solution in a controller-based architecture at maximum capacity



It is important during any wireless design to perform a wireless site survey of the facility. This assessment will help to create a wireless network that will cover all areas of the facility while taking a variety of environmental issues into consideration. These might include steel girders, microwaves, and fluorescent lighting. Without this type of assessment, it may not be possible to guarantee service throughout the facility.

Typical guidelines for the number of access points are as follows:

| AP Count (rough estimates) | | |
|----------------------------|--|---------------------------------|
| Data quality | One every ~3,000 sq ft/ 280 sq meters, plus one | ~15-20 laptops per access point |
| Voice quality | One every ~1,700 sq ft/ 160 sq meters, plus one | ~8-12 phones per access point |

Application Designs

Different applications can be integrated into the Smart Business Communication System. Some additional features that could be added in this way include:

- Advanced call features
- Presence
- Customer relationship management (CRM) integration

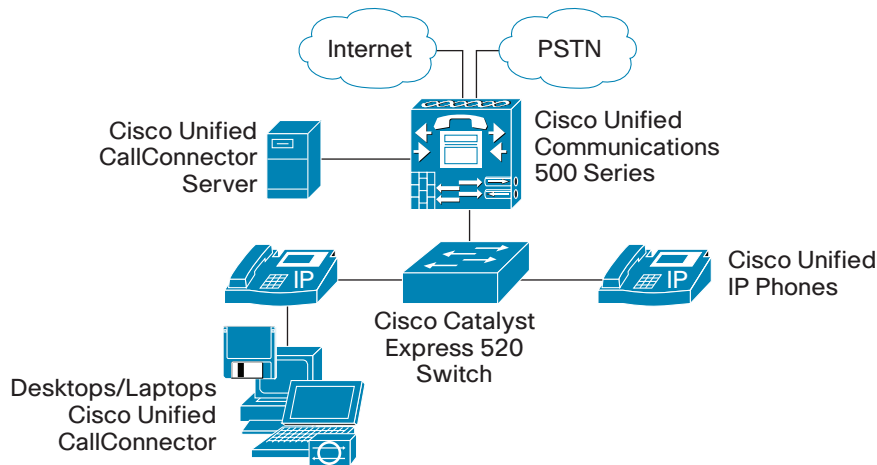
Smart Business Communications System: Adding Advanced Call Features and Presence Integration

Through Cisco Unified CallConnector for Microsoft Windows, the Smart Business Communications System can support multiple advanced call features, including presence (see Figure 15).

Cisco Unified CallConnector for Microsoft Windows comes in three configurations:

- Cisco Unified CallConnector Personal Edition: This user-based application requires no additional server. With this solution, the user has the benefit of:
 - A toolbar in Microsoft Outlook or Internet Explorer to help manipulate calls
 - Quick Dial (click to dial) from personal or Outlook contacts or from any high-lighted text in any Microsoft application
 - Inbound screen pop (such as Outlook e-mail) with calling line identification (CLID) and name from Outlook with the option of answering or rejecting the call
 - Ability to control all Cisco Unified Communications Manager Express phone features from Outlook or Internet Explorer, including transfer, conference, or end call

Figure 15. Presence Integration



- Cisco Unified CallConnector Server Edition: This server-based solution supports multiple users and provides the following features:
 - Same toolbar in Microsoft Outlook or Internet Explorer as the Personal Edition
 - Easy to deploy; simply send an e-mail with an install link to all users
 - Same features as Cisco Unified CallConnector Personal Edition plus dynamic presence showing availability, location, phone status (busy or idle), and optional custom message to fellow workers
 - Quick Message instant messaging service
 - Ability for operator or administrator to change users' status
- Cisco Unified CallConnector Mobility Edition: In addition to the CallConnector Server Edition features, CallConnector Mobility Edition adds rules-based call routing plus single number reach (SNR), providing the following capabilities:
 - Ability to route calls to a mobile phone or home phone and to return calls that are not answered to Cisco Unity Express voicemail, giving users a single mailbox
 - An option to bridge calls, even with a mobile phone, and then press a button to switch from the mobile phone back to the IP phone

Design Considerations

This design enables advanced features for the end users through the Cisco Unified CallConnector for Microsoft Windows.

When designing this it is possible to start with the Personal Edition, when more advanced features are needed it is a simple upgrade to add these features.

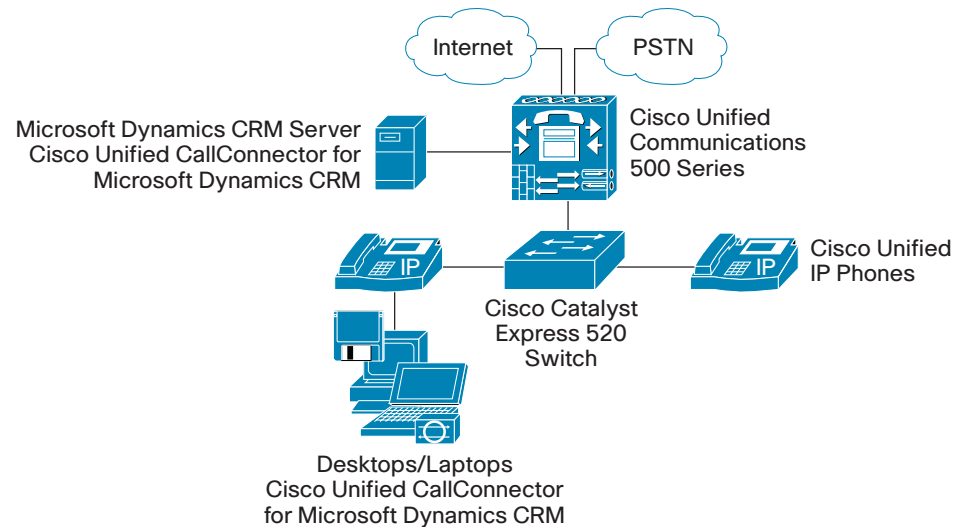
Smart Business Communications System: Integrating Customer Relationship Management

Many vendors have created customer relationship management (CRM) applications, but few have the ability to scale down into the SMB in the way Microsoft and Salesforce.com can.

Using Microsoft Dynamics CRM Server

Together with Microsoft, Cisco has co-developed Cisco Unified CallConnector for Microsoft Dynamics CRM to integrate its Dynamics CRM Server into the Cisco Unified Communications solutions, as demonstrated in Figure 16. Cisco Unified CallConnector for Microsoft Dynamics CRM currently supports the features in the following table:

Figure 16. Microsoft Dynamics CRM integration



| Feature | Description |
|---|---|
| Click to dial | Allows a user to click to dial from within a Microsoft CRM contact record |
| Screen pops | Provides screen pops of customer contact records or prepopulated phone call activity records |
| Call tracking | Tracks and inserts call-related information automatically into phone call activity records, eliminating the need to manually enter call information |
| Tracking call duration | Tracks the actual call duration and inserts the time into the Microsoft Dynamics CRM phone call activity record |
| Pop associated customer service case | Associates a Microsoft CRM customer service case with any incoming call or available contact |
| Cisco platforms supported | Integrates with Smart Business Communications System; Cisco Unified Communications Manager Express Software releases 3.3, 3.4, and 4.0; Cisco Unified Communications Manager Software releases 4.x and 5.x; and Cisco Unified Contact Center Express Software release 4.0 |
| Microsoft platforms supported | Integrates with Microsoft Small Business Server 2003, Microsoft Windows Server 2003, Windows 2000 Professional, and Windows XP |

Cisco Unified CallConnector for Microsoft Dynamics CRM consists of two pieces of software. One is installed on the user's desktop or laptop, and the other is installed on the Microsoft CRM Server. The software is supported on the following platforms:

- Microsoft Dynamics CRM Server 3.0
- Cisco Smart Business Communications System
- Cisco Unified Communications Manager Express 3.3 or later
- Cisco Unified Communications Manager 4.0 or later
- Cisco Unified Contact Center Express 4.0 or later

Design Considerations

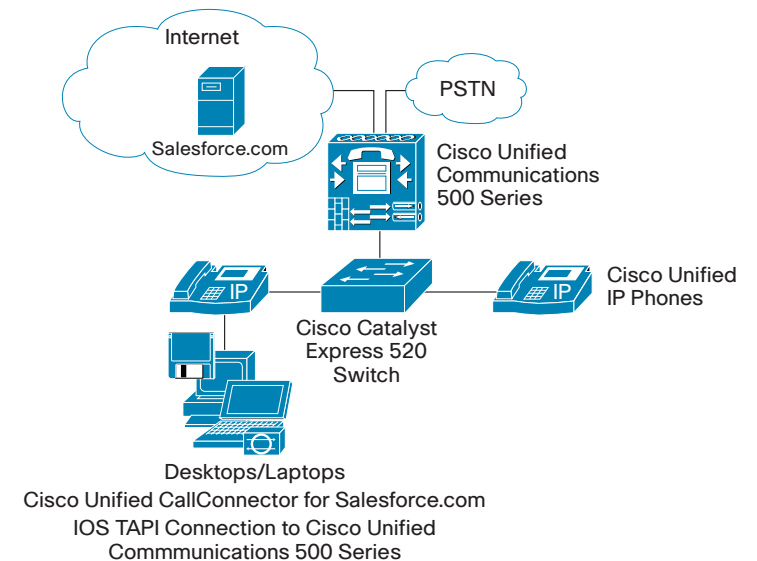
This solution requires a Microsoft Dynamics CRM Server; it will not work with other CRM vendors at this time. Cisco Unified CallConnector for Microsoft Dynamics CRM is a free download from the <http://www.cisco.com> site; it does not require any licensing from Cisco. If your customer currently has a Microsoft Dynamics CRM Server and a Cisco Unified Communications solution, they have everything they require.

Using Salesforce.com

It is now possible to connect Salesforce.com to the Cisco Unified Communications solution, as shown in Figure 17. This connection requires no additional server at the customer site from either Cisco or Salesforce.com. As long as an existing relationship is in place with Salesforce.com, it is necessary to add only the following to the workstation or laptop:

- Cisco Unified CallConnector for Salesforce.com for the connection to Salesforce.com
- A Telephony Application Programming Interface (TAPI) connection to Cisco Unified Communications Manager Express on the Cisco Unified Communications 500 Series (Cisco Unified 500 Series)

Figure 17. Salesforce.com Integration



As the call comes into the Cisco Unified 500 Series, through Cisco Unified Communications Manager Express, it notifies the workstation using the TAPI connection. The workstation then notifies the Salesforce.com solution and the information is presented to the screen as the user picks up the phone. Some of the information that can be displayed, created, and monitored includes:

- **Screen pops:** Opens a contact record and creates a new phone call activity record as the call arrives; creates screen pops from both click-to-dial calls and manually dialed outbound calls

- **Click-to-dial:** Allows users to click to dial from a Salesforce.com contact record
- **Call duration tracking:** Accurately tracks the duration of a phone call and associates it with a phone activity record
- **Call information capture:** Captures incoming and outgoing call information, including calling number, called number, and call start and end times
- **Customer record creation:** Easily creates a new Salesforce.com customer record when a call arrives from a new customer

Design Considerations

When designing this solution, it is important to confirm with the customer that they either have or will have:

- A Salesforce.com relationship
- A Cisco Unified Communications solution based on the Cisco Smart Business Communications System, Cisco Unified Communications Manager Express, or Cisco Unified Communications Manager

Smart Business Communications System: Adding Presence to a CRM Application

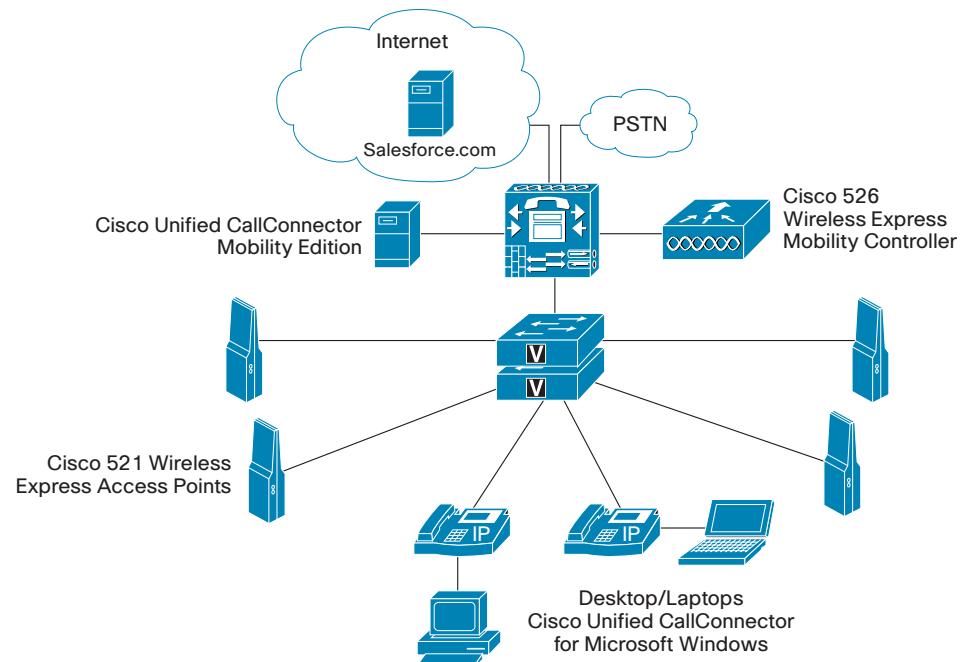
Organizations can further enhance CRM by combining two of the solutions discussed above:

- Cisco Unified CallConnector for Salesforce.com with the Cisco Unified CallConnector for Microsoft Windows
- Cisco Unified CallConnector for Microsoft Dynamics CRM with the Cisco Unified CallConnector for Microsoft Windows

Using these applications together enables organizations to add presence capabilities to their IP-based CRM solution, to achieve a new level of customer service.

For example, suppose that a customer calls a salesperson at a company. As the call arrives, the salesperson sees a screen pop from Salesforce.com showing all the customer information. After completing the discussion with the salesperson, the customer wants to speak to a technical representative. Using Cisco Unified CallConnector for Microsoft Windows, the salesperson checks the status of the technical staff to see who is available to work with this customer. The salesperson can transfer the customer to the technical representative or conference the resource in.

Figure 18. Adding Presence to CRM



Design Considerations:

Cisco Unified Communications brings these two different applications together to provide a truly integrated solution. To support this solution, the organization would need:

- A relationship with Salesforce.com or a Microsoft Dynamics CRM server
- Cisco Unified CallConnector for Microsoft Windows Server Edition
- Cisco Smart Business Communications System

Smart Business Communications System: Securing Mobile Workers

Many people work from the road or a home office, and it is important for their communications to be secure without impeding the way they do business.

Highly secure VPN connectivity allows users to connect to the corporate network while they are on the road. Adding voice and voice applications to this capability is a natural progression. Remote users, when connected to the corporate office in this way, bring their office with them wherever they go. They have highly secure access to:

- Corporate data
- Their desktop phone extension
- Any voice applications, as though they were in the office

Examples of voice applications include:

- The ability to answer their office extension on their laptop
- Voicemail
- Presence information for all users in the office
- Integrated CRM applications such as Salesforce.com and Microsoft Dynamics CRM

Virtually any application used in the office can be used from the road.

Design Considerations

This configuration is very versatile, allowing people to access their office from nearly anywhere, but it raises some security issues. The following are recommended security measures for mobile workers:

- Add security to the laptops that have the ability to connect into the corporate network. Other security precautions could include:
 - Virus protection
 - Spyware protection
 - Intrusion prevention like Cisco Secure Agent
- Make sure all users use either complex passwords or random passwords.
- Make sure all users are aware that voice over the Internet is “best effort” and that voice quality may be degraded at times.

Figure 19. Providing Security for Mobile Workers

