CISCO

ADMINISTRATION GUIDE

Cisco Small Business
Unified Communications UC320W

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System Overview and Requirements

The Cisco UC320W Configuration Utility helps you to configure your Unified Communications System quickly and easily.

The dynamic user interface has two modes to help you to install, configure, and manage your Unified Communications System.

- **Initial setup:** When you create a new configuration, the user interface makes it easy to connect to services, install the equipment, and configure the features for your site. First you use the Getting Started menu to complete the essential installation tasks. Then, in the Configuration module, the interface guides you step by step through the configuration process. As you work, you also can access the Status menu to view information.

- **Ongoing management:** When you work from an applied configuration, the user interface makes it easy to monitor and maintain the Unified Communications System. The *Quick View* page provides an overview of the status. Use the links in the *Quick View* page and in the navigation tree to view detailed information about the network, the devices, and the telephony system. You also can view call detail records and system logs. You also can access the Configuration menu to review or modify the settings.

System Requirements

- Computer with a web browser. Cisco recommends Internet Explorer version 7 or 8, Firefox version 3.6, Safari version 4 or 5, and Google Chrome 10. For best results, set the screen resolution to 1024x768 or higher. Be aware that extra browser toolbars will reduce the usable screen area. At 1024x768, display four or fewer toolbars.
- Adobe Flash Player version 10.1 or later.
- Cisco SPA300 Series or Cisco SPA500 Series IP phones. You can have up to 25 users. **Note:** Only 24 phones, including all enabled Cisco SPA8800 FXS ports, may be licensed to the Cisco UC320W. The built-in FXS port on the Cisco UC320W does not count towards this license limit.
- Power adapters for the phones, as needed. Cisco SPA300 Series phones always require power adapters. Cisco SPA500 Series phones can receive power from a Power over Ethernet switch.
- Ethernet cables to connect IP phones and computers.
- For wireless operation, securely connect the antennas to the base unit. Signal loss can result if an antenna is not seated properly.
- Internet service. A WAN connection is required for operation of the Cisco UC320W. Time settings are provided by an NTP server.
- Voice over IP service or analog phone service.

Optional Equipment and Services

- **Secure router for Internet access:** Cisco recommends using a secure router, such as a Cisco SRP500 Series Services Ready Platform or a Cisco SA500 Series Security Appliance.
- **Additional ports for IP phones and network devices:** You can add ports by connecting a Cisco ESW500 Series Power over Ethernet Switch to a LAN port. Other switches may be used but may require configuration of VLAN and QoS settings (Voice VLAN 100, default voice VLAN subnet 10.1.1.1). More information is available in the Cisco UC320W Smart Designs. **Note:** An Ethernet hub is not recommended for use in a Voice over IP network.
- **Additional ports for analog devices and analog phone lines:** You can add up to two Cisco SPA8800 IP telephony gateways with 4 FXO ports and 4 FXS ports. **Note:** Only 24 phones, including all enabled Cisco SPA8800 FXS ports, may be licensed to the Cisco UC320W. The built-in FXS port on the Cisco UC320W does not count towards this license limit.
- **ISDN BRI service:** Install up to two Mediatrix 4400 Digital Gateways. Connect the Cisco UC320W and the BRI gateways to a secure router such as a Cisco SA500 Series Security Appliance. Application notes are available with the Cisco UC320W technical documentation on cisco.com.
- **Power cord retention kit:** To prevent accidental removal of the power cord, you can install the supplied power cord retention kit. Remove the screw next to the power port. Connect the clamp to the power cord. Insert the screw and install it onto the Cisco UC320W.

Note: For best results, install the latest firmware for any network devices, such as routers and Ethernet switches, before proceeding.

Startup Process

After you log on to the configuration utility, one of the following processes occurs.

- If you are launching the configuration utility for the first time, you will be prompted to enter a new username and password. Then the Getting Started with the Cisco UC320W appears, guiding you through the initial setup tasks.
- If you have applied a configuration, the system loads your settings and the latest status information. You can review or modify the settings as needed. **Note:** If you have a saved session with a more recent time stamp than the most recent applied configuration, you will be prompted to choose the file that you want to launch.

Getting Started with the Cisco UC320W

The Getting Started menu provides access to essential tasks. Especially if you are a new user of this tool, it is strongly recommended that you click each link and perform each task in the specified order. A new window will display more information about the selected task. Experienced users may choose to skip tasks. Click the **Begin configuration** button to proceed into the Configuration module.
Note: The **Begin configuration** button is available after you either complete or skip the tasks in the menu.

Goal: Watch the introductory video

You can launch the tutorial from the Getting Started menu or the Help menu near the top right corner of the window. If you are using the configuration utility for the first time, you may find it helpful to watch this short video to become familiar with the features. After viewing the video, close the pop-up window.

Goal: Choose your network topology

Choose your network topology. For help, click the **Help Me Choose** button or position your mouse pointer over the pointer icons on the screen. Choose your topology, enter any required settings, and then click **Apply Now**. The Cisco UC320W may reboot as the settings are applied. Depending on the topology changes, you may need to align your PC with new network addressing. You also may need to reconnect to the configuration utility by entering a new LAN IP address into the web browser.
Caution: This task is especially important if you are installing the Cisco UC320W in a network where another device acts as the DHCP server. IP address conflicts will result if two DHCP servers exist on the same network. If you have another DHCP server, be sure to complete this task before you connect any LAN devices.

Goal: Upgrade firmware

Configure your Internet connection to enable access to the web. Although you can click **Skip** and complete this step later, it is recommended that you enable your Internet connection immediately. When your Internet connection is enabled, the Cisco UC320W Configuration Utility accesses the following types of Cloud Features:

- Additional Help menu items, such as Small Business Support Community
- Additional top-level menu items running Cloud Applications, such as a Feedback form
- A Cloud Application that runs automatically and may perform any of the following functions:
  - Offers firmware upgrades that you can install with the click of a button.
  - Sends notifications providing helpful information for UC320W administrators.
  - Remotely administers Platform Modification Files.
  - Collects system information, such as configuration files (excluding passwords), installed firmware, Platform Modification Files, and language settings.

WAN Settings
WAN Type: Choose the type of Internet connection that is required by your service provider. Then enter the information for the selected WAN type. (A DHCP connection is made automatically.) Refer to the information provided by your service provider for your Internet service account. For information about the fields on the screen, you can position your mouse pointer over a field to view a tooltip.
After entering your settings, click **Apply Now** to apply the settings immediately.
If you want to upgrade the firmware by using a file from your PC, click **Upgrade from your PC**, and select the file.

Goal: Connect all devices

At this point in the Getting Started process, you can install the phones, Cisco SPA8800 IP telephony gateways, and computers. Use Ethernet cables to connect these devices directly to the Cisco UC320W LAN ports, or connect an Ethernet switch to a LAN port and then connect the devices to the LAN ports of the switch. After the devices are detected, status information appears on the screen. This process may take some time.

When you are finished connecting devices, click **All Devices Connected**.

Note: Cisco recommends using a Cisco ESW500 Series Ethernet Switch with Power over Ethernet. Other switches may be used but may require configuration of VLAN and QoS settings. The default Voice VLAN is VLAN 100. The default Voice VLAN Subnet is 10.1.1.x. For more information about deployment options, see the Smart Designs.

Caution: If you are using another device as the DHCP server for your LAN, do not connect devices until you complete the Network Topology task.

Welcome

In the Configuration module, the interface guides you step by step through the configuration process. Before you begin, you should read the information below to become familiar with the navigation and data entry features.

IMPORTANT: The settings are not applied to the devices until you apply the configuration. If you close the configuration module without applying the configuration or saving your settings, any unsaved changes are abandoned.

Navigation for a New Configuration

- **Order of tasks:** When creating a new configuration, you must proceed through the steps in the prescribed order. Click **Next** to advance to the next step, or click **Back** to return to the previous page. Use the links in the navigation tree to return to any page that you viewed previously. Links are unavailable for pages that you have not yet viewed.
- **Omitting steps:** On most configuration pages, if you are unsure or not ready to enter the settings, you can click **Next** to skip that step. You can return to those tasks in later sessions, as needed. Error messages will appear if you attempt to skip a required step.
- **Navigation tree icons:** Icons appear in the navigation tree to indicate the status of each configuration task:
  - **Blue flag:** Changes were made.
  - **Red X:** There are validation errors on this page. You cannot apply the configuration until all errors are fixed.
- **Summary pages:** At the end of each section, a Summary page appears. You can review the settings from each page within the section. Hyperlinks make it easy to jump to a page and change the settings. The system automatically saves your settings after you click **Next**.
- **Automatic saving of a new configuration:** For a new configuration, the AUTOSAVE feature automatically saves your settings as you advance from each *Summary* page. You also can save your session by clicking the **Save** button in the menu bar.
- **Returning to the Getting Started menu:** Until you apply the configuration, you can return to the Getting Started menu by clicking **Getting Started** in the menu bar.
- **Starting over:** To restart in initial setup mode, click the **New** button in the menu bar. **Note:** Creating a new configuration will remove all of your configuration settings. No changes will be made to the voicemail system or other site settings. To reset the Cisco UC320W to the factory default settings, press and hold the Reset button for 10 seconds.
- **Viewing the *Status* pages:** To view system status information, click **Status** in the menu bar.

Data Entry in the Configuration Module

- **Show/hide buttons:** To simplify the display, some features are hidden until you need to use them. As you start entering information on a page, additional features may appear. Several pages include buttons that you can click to show or hide fields.

- **Scrolling:** On some pages, you may need to use the vertical or horizontal scroll bars to view all of the fields.
- **Required fields:** Required fields are indicated by an icon next to the field name.
- **Errors:** If you omit required information or enter invalid information, an error message appears. A red X icon also appears next to the field and in the navigation bar next to the name of the configuration page. You can click the **Next** button to continue without fixing the errors, but you will not be able to apply the configuration until the errors are resolved.
- **Applying a new configuration:** At the end of the initial setup process, the *Apply Configuration* page appears. If any errors appear, resolve them. Then apply the configuration and wait for all devices to restart with the new settings. Your settings are not applied to the devices until you complete this task.
- **Working from an existing configuration:** After applying a configuration, you can view the *Status* pages or use the Configuration module to review and update your settings. When you are ready to apply your changes, click the **Apply Configuration** link near the lower right corner of the page, or click the **Apply Changes > Apply Configuration** link in the navigation tree. If any errors appear, resolve them. Then apply the configuration and wait for all devices to restart with the new settings. Your settings are not applied to the devices until you complete this task.

Saving a Session

If you need to close the configuration utility before applying your configuration, you can save your session. The session file includes the settings that you have entered, but does not include voicemail messages, recorded prompts, FXO Gain Settings, or Platform Modification Files. Click the **Save** button in the menu bar. Then choose one of the options described below.

- **Save Session to Device:** Choose this option to save the current unapplied configuration as a *.cfg* file on the Cisco UC320W. Enter a **Description**, and then click **Save**.
- **Save Session to File:** Choose this option to save the current unapplied configuration as a file on your PC. Then click **Save**. When the pop-up window appears, save the *.cfg* file on your PC.

Note:

- The administrator username and password are not saved in this procedure and therefore are not overwritten when you load a saved session.
- Recorded prompts and voicemail messages are not saved with your session. These files are saved only when you create a full site backup by using a USB key. For more information see the *Backing Up and Restoring the Configuration* section below.
- You can restore a saved session by using the **Load** button. For more information, see the *Loading a Saved Session or an Applied Configuration* section below.
- In this process, you are not applying the configuration to the devices, but are saving files that you can work from in future sessions, if needed.

Loading a Saved Session or an Applied Configuration

To resume a saved session or to reload the currently applied configuration from the device, click the **Load** button in the menu bar. Then choose one of the options described below.

- **Resume session from device:** Choose this option to resume a session that was saved to the Cisco UC320W by using the **Save** button. You also can restore a file that was saved by the Auto-Save feature. After you click the **Resume session from device** option, choose a saved session or Auto-Save file from the drop-down list. Then click **Load**.
- **Load applied configuration from the device:** This option allows you to abandon your unsaved changes and reload the currently applied settings into the configuration utility for editing. After you choose this option, click **Load**.
- **Resume session from a saved file:** Choose this option to resume a session that was saved to your PC by using the **Save** button. Click the radio button, and then click **Choose File** to select a *.cfg* file from your PC. Finally, click **Load**.

Note: The existing administrator username and password are not saved in the session file and therefore are not overwritten when you reload a session. Continue to log on with your current username and password.

Backing Up and Restoring the Configuration

You can save the currently applied configuration as a file on your PC, or you can create a full site backup including the site configuration, recorded prompts, and voicemail messages by using a USB key. You easily can restore a saved configuration or a full site backup.

As a best practice, you should save the configuration or create a full site backup before you make significant changes in your configuration. Then if you are unhappy with your changes, you easily can restore the previous configuration.

Note:

- To allow file transfers, temporarily disable the pop-up blocker in your web browser's Internet options.
- The Full Site Backup option is available only after you have applied a configuration.
- Voicemail access is interrupted while the backup is being saved. Therefore, Cisco recommends performing this procedure during a period when users and callers are unlikely to require voicemail access.
- Restoring a configuration removes any Platform Modification Files that are available in the current configuration.

To back up or restore the configuration, click the **Backup / Restore** link near the top right corner of the configuration utility window. In the *Backup / Restore* window, choose one of the options described below.

Note: Due to the large file size, do not use a wireless connection to back up the configuration.

- **Restore Site Configuration:** Choose this option to restore a site configuration that you saved by using the Save Site Configuration option. After you choose this option, click **Choose File**. Choose a saved *.site_backup* file from your PC or network drive. Finally, click **Restore**. Progress messages appear. When the configuration is restored, you will need to log in and re-apply the configuration to the devices.
- **Restore Full Site Backup from USB:** Choose this option to restore and apply a full site backup file, including all settings, recorded prompts, and voicemail messages. This option is available after you insert a USB key into the USB1 or USB2 slot. The USB key must be in FAT32 format. NTFS is not supported. If both USB slots have USB keys, two drop-down lists appear. Choose a *tar.gz* file, and then click **Restore from USB**. Progress messages appear. When the configuration is restored, you will need to log in and re-apply the configuration to the devices. **Note:** Restoring voicemail messages may take minutes to hours, depending on the amount of voicemail.
- **For the Restore Full Site Backup from USB option:** Choose a USB port for the backup.
- **Save Site Configuration:** Choose this option to save your configuration, including all settings but not including voicemail messages, recorded prompts, FXO Gain Settings, or Platform Modification Files. After choosing this option, click **Save**. When the download pop-up window appears, save the *.site_backup* file on your PC. **Tip:** The file name indicates the date and time of the backup.
- **Save Full Site Backup to a USB key:** Choose this option to save a full site backup file, including all settings, voicemail greetings, voicemail messages, Auto Attendant prompts, FXO Gain Settings, and Platform Modification Files. This option is available after you insert a USB key into the USB1 or USB2 slot. The USB key must be in FAT32 format. NTFS is not supported. If both USB slots have USB keys, select the USB slot where you want to save the file. Then click **Backup to USB**.

Firmware Updates

After you log in, you may see a *Firmware Available* message. This Cloud Features message indicates that a recent firmware update is available. You can upgrade immediately or postpone the install until later. In this case, an **Upgrade** link will appear near the top right corner of the configuration utility window. When you are ready, click the link to open the *Firmware Available* window, and install the new firmware.

Note: For best results, close other browser windows first. When other browser windows are open, the browser may display memory errors.

Features of the Help System

- **Tooltips:** For help with a field, button, or tab, position your mouse pointer over the object. Information appears in a tooltip.
- **Page Help (if applicable):** To view information about the current page, click the question mark icon near the top right corner of the page. To hide the Help, click the icon again.
- **System Map:** The System Map is a reference tool that indicates the devices and services that you are configuring on the current page. Near the top right corner of each configuration page, click the map icon to display the System Map. To hide the map, click the icon again.
- **Additional Help resources:** To access the complete Help , the introductory video, and other Help resources, use the Help link near the top of the configuration utility window.

Sending Feedback to Cisco

Cisco welcomes feedback from our customers. To send your comments and suggestions, click the **Services** link near the top of the window. Then click **Feedback**. Choose a **Category**, and type your comments in the **Issues or suggestions** box. Also take a moment to provide a **Rating** for the product. Provide your email address if you want to receive a reply. Finally, click **Send**. **Note:** The **Feedback** link appears after Cloud Features are enabled.

Logging Out

To log out immediately, click the **Log Out** link near the top right corner of the window. Any unsaved changes are abandoned.

Region

Use the *Configuration > Site > Region* page to specify your region, regional dial plan option (if available), and time zone.

Note: Internal Dialing plan settings, such as extension length and digits for outside lines, are set on the *Internal Dialing* page.

- **Region:** Select your region. This setting determines the default prompts for the Auto Attendant and the Voicemail Pilot, the regional dial plan, and the regional call processing tones. If the system is connected to the Internet, a button provides access to available region packs that you can install from the Cloud to expand the Region list. You also can install region packs that you have stored on your PC.
  Note: The Region list displays the name of each region in that region's default language.
  Note: After applying the initial configuration, the language on the phone screen can be changed only by using the phone menus.
    - **Cisco SPA525G/G2:** Press the Setup button, and then choose Device Administration > Language. Press the right-arrow navigation button to view the available languages. Use the navigation button to choose a language, and then press the Select softkey.
    - **Cisco SPA50x models:** Press the Setup button, and then choose Language. Use the navigation button to choose a language, and then press the Select softkey.
- **Dial Plan:** If multiple options are available for your region, choose from the drop-down list. For example, in North America, you can choose a 7-digit or a 10-digit dial plan. Complete any additional fields that appear.
- **Default Area Code:** If you chose the North American 7-digit dial plan, enter the area code for your site.
- **Time Zone:** Choose the time zone for your site.
- **Use Daylight Savings:** Check this box if you want the system to adjust the clock for daylight savings time.

System Access

Use the *Configuration > Site > System Access* page to update the administrator username and password. Optionally, enable access to this utility from the WAN and the wireless network.

Note: The configuration utility allows only one session at a time.

Administrative User

Change administrator username/password: Click this button to change the administrator username and password. Then enter the following information:

- **Admin Username:** Enter a username for the system administrator. The first character must be a letter. The following characters are valid: A-Z a-z 0-9 !*_.( ) Neither *cisco* nor *admin* is allowed in any form.
- **Password:** Enter a password for the system administrator. The password must begin with a letter and is case sensitive. The following characters are valid: A-Z a-z 0-9 $-+!*_.( ) Neither *cisco* nor *admin* is allowed in any form. As you enter your password, a message indicates its relative strength: *Very Strong*, *Strong*, *Good*, or *Weak*. See the guidelines for a strong password below.
    - Use at least 8 characters.
    - Include numbers, symbols, and both uppercase and lowercase letters.
    - Do not enter a password that is the same as the username.
    - Avoid repeated characters, such as xxxYYY2222.
    - Avoid consecutive numbers, such as 123, and consecutive letters, such as abc.
    - Avoid variations on the word Cisco, such as c1sc0 or ci$co.
- **Confirm Password:** Enter the same password again, for confirmation. The passwords must match.

Changes in the username and password take effect after you click **OK**.

Remote Access

- **Enable remote management of the Cisco UC320W via HTTPS:** Check this box to allow access to the configuration utility from the WAN side of the Cisco UC320W. After enabling this option, you can access the configuration utility from the WAN by entering the Cisco UC320W WAN IP address and the port number, as shown in the following example: *https://WAN_ipaddress:8080*. Keep the default port number shown, or enter another port number. As shown in the example, a port number is required when entering the address.

Notes:
- Click the pencil icon to edit the port number.
- This setting is available only when **Enable remote management of the Cisco UC320W via HTTPS** is checked.
- Do not set the port number to 443. Because this port is used by SSL and HTTPS, web browsers tend to remove it from a URL when entered. However, the UC320W Configuration Utility requires a port number to be specified.
- A remote management session is disconnected after a long idle time.
- If the Cisco UC320W is located behind another router, you may need to configure port forwarding on that router to allow traffic from the WAN to the Cisco UC320W.
- **Enable wireless management of the Cisco UC320W:** Check this box to allow access to the configuration utility from a computer that is connected to the wireless network. Be aware of security issues when submitting passwords wirelessly. Do not use a wireless connection to upgrade the firmware or to back up the configuration.
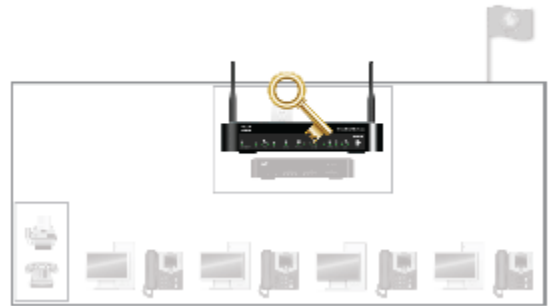
Automatic Maintenance

Use the *Configuration > Site > Automatic Maintenance* page to schedule system maintenance tasks and to enable automated backups to a USB key.

Maintenance Window

Automatically, on the specified schedule, the Cisco UC320W runs diagnostics and performs tasks to ensure system stability. At the end of this process, the Cisco UC320W may reboot. Schedule a convenient time when your users will not be impacted.

- **Time:** Choose the time of day to perform the maintenance tasks.
- **Day:** Choose a day. The maintenance tasks will be performed automatically each week on the specified day.

USB Backup

Use a USB key in FAT32 format. NTFS is not supported. The USB key should have storage capacity of at least 128MB, preferably 1GB. Insert your USB key into the USB1 or USB2 port.

The backup file will include all settings, voicemail greetings, voicemail messages, Auto Attendant prompts, FXO Gain Settings, and Platform Modification Files. Up to two files will be stored on the USB key at any time. If two files already exist, the older file will be replaced with the new file.

Caution: Configuration files include confidential information, such as your email and SIP/BRI account passwords. Use appropriate precautions to protect your data.

- **Enable USB Backup:** Check this box to enable automated backups, or uncheck the box to disable this feature.
- **USB1, USB2:** Choose the USB port to be used.
- **Time:** Choose the time of day to save the backup.
- **Day:** Choose a day of the week, or choose Daily to save the file every day.

Telephony

In the Telephony section of the Configuration module, you manage the IP phones and IP telephony gateways. You also configure the operational mode, Day/Night features, internal dialing plan, and music.

Devices

Use the *Configuration > Telephony > Devices* page to review the automatically discovered Cisco SPA8800 IP telephony gateways, IP phones and Cisco SPA500S expansion modules, also known as attendant consoles or side cars. You also can manually add gateways, phones and side cars that you intend to install later.

Note: To configure Mediatrix BRI Gateways, see the *SIP/BRI Trunks* page.

General Information and Options for Devices

- Click the tab for the type of device that you want to review.
- Devices are automatically discovered when they are connected to the network. Each device is listed by its model number and MAC address.
- If phones are assigned to users, the user names appear (not applicable when creating a new configuration). **Note:** Phones are assigned to users on the *Assign Phones* page.

- Icons provide more information:
  - **Check mark:** The device is currently available.
  - **Plus sign:** The device was added manually.
  - **Minus sign:** The device is unregistered or has no connectivity.
  - **Question mark:** The device previously was active, but its current state is unknown.
  - **Exclamation point:** The device cannot be configured due to capacity limits. You can add up to two Cisco SPA8800 IP telephony gateways and up to 30 phones on this page. **Note:** Only 24 phones, including all enabled Cisco SPA8800 FXS ports, may be licensed to the Cisco UC320W. The built-in FXS port on the Cisco UC320W does not count towards this license limit.

Cisco SPA8800 IP Telephony Gateways

- **Create a SPA8800:** Click this button to enter information for a Cisco SPA8800 that is not yet connected.
- To replace an existing SPA8800 with a new unit, first disconnect the old unit. Then click the Replace icon to clone the MAC address to the new unit. After you connect the new unit, it will be detected by the Cisco UC320W.
- **Description:** Keep the default description, or click the pencil icon to enter a description. This label will identify the device on the pages of the configuration utility. You can enter up to 25 characters. **Note:** After you edit the description, you can click the Restore icon to restore the default value.
- **MAC Address :** Enter the MAC address in the following format: *xxxx.xxxx.xxxx*, where x is a number or letter in the MAC address. The MAC address can be found on the hardware label on the bottom panel of the device.
- **To remove a manually added gateway or missing/unregistered gateway from the list:** Click the delete button (X) for the gateway that you want to remove. When the confirmation message appears, click **OK** to delete the device, or click **Cancel** to keep the device.

Adding and Removing IP Phones and Side Cars

You can manually add an IP phone that you intend to connect later. You also can indicate the number of connected side cars for each phone that you add. Alternatively, you can add phones by importing a list.

- **Create a phone:** Click this button to enter information for an IP phone that is not yet connected.
- **MAC Address:** Enter the MAC address of the phone in the following format: *xxxx.xxxx.xxxx*, where x is a number or letter in the MAC address. The MAC address can be found on the hardware label on the bottom panel of the phone.
- **Model:** Choose the phone model.
- **Side Cars:** Choose the number of side cars that are attached to this phone.
- **To download a CSV file as a template for data entry or as a phone list:** Click the Download icon to save a CSV file to use as a template. If you have not yet added phones, the file contains a sample record and can be used as a template for data entry. If you have added phones, the file includes all phone records. You can open the phones.csv file in a text-editing program such as Notepad or a spreadsheet program such as Microsoft Excel.
- **To enter the phone information in a CSV file:** You can use a downloaded template or create a new CSV file. Edit in a text-editing program such as Notepad or a spreadsheet program such as Microsoft Excel. You must enter a valid model number for each phone. Also enter the MAC address, using the following format: *xxxx.xxxx.xxxx*, where x is a number or letter. In a text-editing program, separate the values with commas, and create each entry on a new line. In a spreadsheet program, enter each value in a separate cell, and create each entry on a new row. If working from a template, delete the sample record. Save the file in CSV format. You can then import the file, as described below. **Note:** Valid model numbers are SPA301, SPA303, SPA501G, SPA502G, SPA504G, SPA508G, SPA509G, SPA525G, and SPA525G2.
- **To import a CSV file:** Click the Import icon to import a list of phones in a CSV file that you have prepared. Choose the file, and then click **Open**. Errors appear if any values are invalid. The imported phones appear at the bottom of the Phones list.
- **To physically replace a phone:** If a phone is damaged or needs to be replaced with a different model, first disconnect it from the network by removing its network cable from the port of the Cisco UC320W or Ethernet switch. Then wait about 2 minutes for the Cisco UC320W to detect

that the device was removed. You can now connect the new device, which will appear on the *Devices* page when it is automatically detected. You can then use the *Assign Phones* page to assign the new phone to the user who previously had the other phone.

PBX/Key System

Use the *Configuration > Telephony > PBX/Key System* page to choose the operational mode for the telephony system. **Tip:** To learn more, use the **Help Me Choose** button.

Note: If you change the mode after applying a configuration, errors may appear on other pages, due to the feature differences described below. Fix the errors before applying the configuration.

PBX
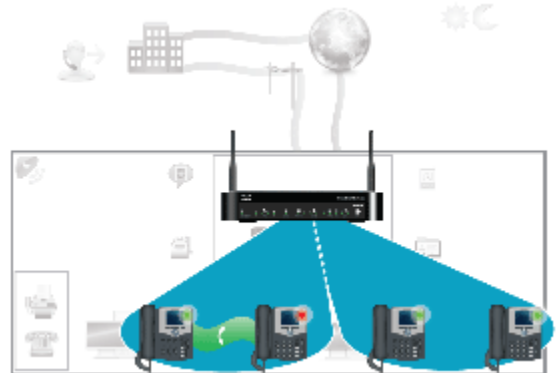
In PBX mode, users have no direct access to choose a phone line; instead, a trunk is selected from the pool of available trunks. When placing an outbound call, you must first press an outbound dialing digit such as 9. There are no shared FXO (analog) lines (as described for Key System). When you choose PBX mode, the following features are affected:

- **Trunks:** Phone service can be provided by SIP/BRI trunks (Voice over IP service) and FXO (analog) lines.
- **Shared FXO Lines:** You cannot configure Shared FXO Lines. **Note:** If you previously configured your system in another mode, any existing Shared FXO Lines will be removed.
- **Outbound Dialing:** You can use personal extensions to place calls to an external number.
- **Internal Dial Plan:** You need to specify the digit that is required for outbound dialing. If you have more than one trunk, you can specify a different digit for each trunk.

Key System

In Key System mode, users can directly choose an analog phone line by pressing a shared line button on the phone. All users can monitor all calls on all lines. If a call is placed on hold by one user, it can be resumed by any other user. When a user presses a shared line button, the line is immediately seized for an outbound call; you do not have to enter an outbound dialing digit, such as 9. When you choose Key System mode, the following features are affected:

- **Trunks:** Phone service is provided by FXO (analog) lines. You cannot configure SIP/BRI trunks (Voice over IP service). **Note:** If you previously configured your system in another mode, any existing SIP/BRI trunks will be removed.
- **Outbound dialing:** You cannot use a personal extension to place a call to an external number. Extensions are for internal calls. For outbound calls, use a shared line button.
- **Internal Dial Plan:** No outbound dialing digit is required. For example, you do not have to dial 9 to get an outside line. Simply select a shared line button.
- **Inbound Routing:** Configure inbound routing for each trunk on the *Shared FXO Lines* page. The *Inbound Calls* page is unavailable.

Blend

The system functions like a PBX, as described above, but allows the configuration of shared FXO (analog) lines, as in a Key System. Outbound calls require a steering digit except when a Shared FXO Line is selected by pressing a shared line button on a phone. Both FXO (analog) lines and SIP/BRI trunks may be used. All features are available for configuration.

Day/Night Features

Use the *Configuration > Telephony > Day/Night Features* page to choose the scheduling options for inbound call routing and the Auto Attendant (if enabled).

Call Scheduling

Call Routing

If needed, you can enable different call routing options when your business is opened or closed. Choose a scheduling option.

- **Single:** Click this button to use the same call routing settings for all times of day. You will configure these settings on the *Inbound Calls* page.
- **Day/Night:** Click this button to enable different call routing destinations for day (your open hours) and night (your closed hours). Selecting this option makes Day/Night settings available for inbound call routing and call forwarding.

Auto Attendant

When enabled, an Auto Attendant (AA) plays recorded messages to respond to incoming calls. If needed, you can enable different AA menus when your business is open or closed.

- **On** or **Off:** Click **On** to enable the Auto Attendant, or click **Off** to disable this feature.
- **Single:** Click this button to use the same Auto Attendant menu for all times of day. You will enter the settings on the *Auto Attendant* page.
- **Day/Night:** Click this button to enable a different Auto Attendant menu for day (your open hours) and night (your closed hours). You will enter the settings on the *Auto Attendant* page.

Call Forwarding

If needed, you can enable different call forwarding options when your business is opened or closed. Choose a scheduling option.

- **Single:** Click this button to use the same Call Forward settings for all times of day.
- **Day/Night:** Click this button to enable different call forwarding settings for day (your open hours) and night (your closed hours). When this option is enabled, night-time call forwarding options are available for Shared FXO Lines, Shared Extensions, Additional Extensions, and User Call Forwarding.

Note: Each option with Day/Night schedule selected will follow the same Day/Night schedule specified below.

Select Schedule Behavior

If you chose a Day/Night option, choose whether to require manual operation or to enable an automated schedule.

Choose a Schedule

- **Manual Schedule (Force Night button):** Choose this option if you want to enable the Day and Night behaviors by using a Force Night button on a user's phone. When the business closes, a user presses the Force Night button to enable the Night behavior. When the business opens, the user presses the Force Night button to resume the normal operations. **Note:** If you choose this option, at least one phone must have a Force Night button. See the *Phone Buttons* page.
- **Automatic Schedule:** Choose this option if you want the Cisco UC320W to automatically enable the Day and Night behaviors based on the business hours and holidays that you specify. (The schedule settings are available on the screen after you select this option.) **Tip:** Even when a schedule is enabled, you can force the system to Night mode by pressing a Force Night button on a user's phone. For example, if your business closes early for a special event, press the Force Night button to enable the Night behavior. When the business opens, press the button again to resume using the automated schedule. To add a Force Night button to a phone, see the *Phone Buttons* page.

Select the hours when the business is open

This section is available if you select the **Automatic Schedule** option. Specify the Day (open) and Night (closed) hours, as described below. The Cisco UC320W will automatically shift between Day and Night

behavior based on the specified schedule. A user can force the system into Night behavior by pressing a Force Night feature button on a phone, if configured (see the *Phone Buttons* page.)

- **Selecting your open hours:** To select your open hours (day), position your mouse pointer at the time of day when the business opens. Drag your mouse pointer to the time of day when your business closes. When you release the mouse button, a green bar indicates the open hours. The gray areas indicate the closed hours (night). Leave the row blank (all gray) if the business is closed all day. If you have difficulty using the mouse to expand or contract the selected hours, click the eraser icon to clear the selection. Then drag your mouse to select the open hours. For best results, select a segment by dragging the mouse in one smooth motion. **Tip:** You can use this technique to select multiple open periods within a day, such as 8 am. to 12 Noon and 1 p.m. to 5 p.m. (closed from Noon to 1).
- **Erasing the selected hours:** Click the pencil eraser icon to erase the selected hours.

Select Holidays:

Optionally, you can add holidays. Specify the dates when your business is closed all day. The Cisco UC320W will automatically shift to Night behavior for each holiday. **Note:** This section is available if you chose the Automatic Schedule option.

- **To select a date from the calendar:** Click the left-arrow button to choose the previous month, or click the right-arrow button to choose the next month. Then click the date of the holiday.
- **To choose a month from the list:** Choose the month when a holiday occurs. Then click the date of the holiday.

Holidays

Enter the information about the selected date.

- **Yearly:** Check this box if this holiday occurs on the same date every year.
- **Description:** Enter a word or short phrase to identify this holiday.
- **To remove a holiday:** Click the delete button (X) for the holiday that you want to remove.
- **To download a CSV file as a template for data entry or as a holiday list:** Click the Download icon to save a CSV file to use as a template. If you have not yet added holidays, the file contains a sample record and can be used as a template for data entry. If you have added holidays, the file includes all holiday records. You can open the holidays.csv file in a simple text-editing program such as Notepad or a spreadsheet program such as Microsoft Excel.
- **To enter the holiday information in a CSV file:** You can use a downloaded template or create a new CSV file. Edit in a text-editing program such as Notepad or a spreadsheet program such as Microsoft Excel.
 **Notes:**
  - Include the following information for each holiday, in the following order: description, day (values 1-31), month (values 1-12), year (four digits), yearly (enter either *true* or *false*).
  - In a text-editing program, separate the values with commas, and create each entry on a new line. **Example:** Using a text-editing program, you would enter Christmas on Dec. 25, 2011, as follows: *Christmas,25,12,2011,true*
  - In a spreadsheet program, enter each value in a separate cell, and create each entry on a new row. Do not include a heading row.
  - If working from a template, delete the sample record before saving your file.
  - Save the file in CSV format. You can then import the file, as described below.
- **Import Holidays:** Click the Import icon to import a list of holidays from a CSV file that you have prepared. Choose the file, and then click **Open**. Errors appear if any required values are missing. The imported records appear on the screen.

Internal Dialing

Use the *Configuration > Telephony > Internal Dialing* page to configure the internal extension format, the system extensions, and the functions of dialed digits. For example, specify which digits are used in extension numbers, which digits are pressed for an outside line, and so on.

Note: The external dial plan is determined by your regional settings (see the *Region* page). The external dial plan encompasses settings such as the required length of a dialed phone number (7 digits or 10 digits, for example) and the call processing tones that are used.
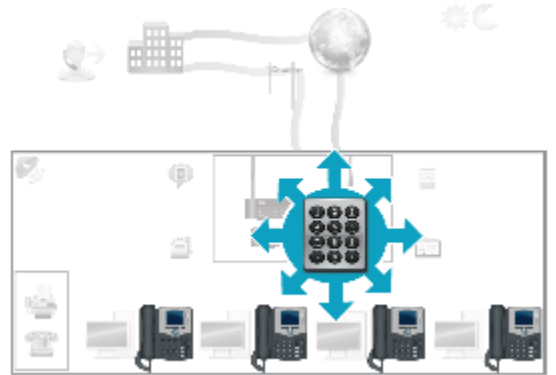
Extension Length

For **Extension Length**, specify the length of the internal extension numbers: 2 digits, 3 digits, or 4 digits. To choose the digits that can start each range of extension numbers, see the *Meaning of First Digit Dialed* section of this page.

Allowed Dial Patterns

Choose the function that you want to assign to each digit. After you make a selection, the Dial Pattern field displays an example. For Extensions, the Utilization field displays the number of possible assignments. For example, with the two-digit extension length, each selected digit can support up to 10 extensions.

Note: Assign at least one digit to each of the following dial patterns: Extensions, Voicemail Prefix, and Reserved. In PBX or Blend mode, also assign at least one digit to Outside Line. More information is provided below.

- **Dial Immediately:** The digit can be used as a one-digit extension number. For example, the default configuration allows 0 to be used for this purpose, and assigns 0 as the Auto Attendant extension number. Another option might be to assign another extension number to the Auto Attendant and assign 0 to a user, such as your receptionist. **Note:** If a digit is assigned to this function, it cannot be used as a personal speed dial digit.
- **Extensions:** The digit is used as the first digit of an internal extension number. For example, if you assign this function to the digit 2, and your extension length is three digits, you will be able to configure extensions such as 200, 201, 202, and so on. At least one digit must be assigned to this function, to support extension numbering.
- **Voicemail Prefix:** The digit is used to dial a voicemail box. For example, if this digit is 7, and a voicemail box is 201, then you can press 7201 to leave a message in this mailbox. At least one digit must be assigned to this function, to support voicemail access.
- **Outside Line:** The digit is used to place an outbound call. For example, you can press 9 to get an outside line. Not applicable when the system is in Key System mode. In PBX or Blend mode, at least one digit must be assigned to this function, to support outbound call routing. **Note:** If a digit is assigned to this function, it cannot be used as a personal speed dial digit.

Tip: In PBX mode or Blend mode, if you have FXO trunks and SIP/BRI trunks, you might want to enable more than one digit to get an outside line. Then on the *Outbound Trunks* page you can assign a different digit to each trunk. For example, users could then press 8 for the FXO trunk and press 9 for the SIP/BRI trunk.

- **Not Allowed:** The digit is not allowed as the first digit in a dialing sequence. If a user presses the digit to initiate a call, an error tone is played.
- **Reserved:** This digit supports system functions. One digit must be assigned to this function.

Extensions for System Features

For each system feature, keep the default settings, or enter an extension number in the box. Extension numbers must be unique and must comply with dial plan settings on this page. An error message appears if you enter an invalid or duplicate extension number. **Tip:** A quick way to enter a valid extension number is to click the phone icon next to the extension number field.

Note: By default, 0 is the extension number for the Auto Attendant. However, you can assign a different number to the AA and use 0 for other purposes. For example, you could change the AA extension to 300, and use the *Users* page to assign 0 to your receptionist.

- **Auto Attendant Extension:** Enter an extension number that users can dial to reach the Auto Attendant.
- **Auto Attendant Prompt Recorder Extension:** Enter an extension number that users can dial to reach the System Configuration tool to record prompts for the Auto Attendant.
- **Voicemail Pilot Extension:** Enter an extension number that users can dial to reach the Voicemail Pilot for access to the voicemail system.
- **External Paging Extension:** If an external speaker system is connected to the Line Out port, enter an extension number that users can dial to initiate an announcement through the speaker.
- **Music Extension:** Enter an extension number that users can dial to hear the music that is configured for music on hold and/or call park.

Music

Use the *Configuration > Telephony > Music* page to choose the music source and to enable music for held calls and parked calls. Also set the extension that can be dialed to listen to the music.

Note: Refer to the on-screen illustration for the location of the LINE IN port, where you can connect an external music source. You can position your mouse pointer over the pointer icon to view the picture at a larger size.

- **Internal:** Use the internal music server for any music feature that is enabled. A standard music file is stored on the device for this purpose.
- **External:** Use an external music server for any music feature that is enabled. You can connect a music player to the LINE IN port for this purpose. If you select this option but a music source is not detected, the system will fail over to the internal music source.
- **Play music for calls on hold:** Check this box to play music for calls that are placed on hold. Uncheck the box to disable this feature.
- **Play music for parked calls:** Check the box to play music for calls that are parked using the Call Park feature. Uncheck the box to disable this feature.
- **Play music over External Paging:** Check the box to enable an external music source to be played over an external speaker. This feature requires having an external music source connected to the Line In port of the Cisco UC320W, and an external speaker connected to the Line Out port.
- **Extension to listen to music:** Keep the default number or enter an extension number that users can dial from an IP phone to listen to the music. Extension numbers must be unique and must comply with the rules entered on the *Internal Dialing* page. An error message appears if you enter an invalid or duplicate extension number. **Tip:** A quick way to enter a valid extension number is to click the phone icon next to the extension number field.
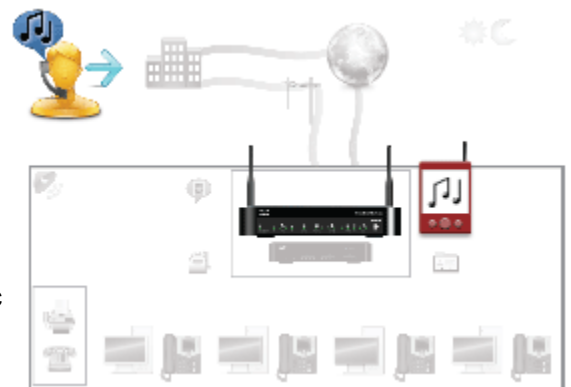
Ports and Trunks

In the Ports and Trunks section of the Configuration module, you enable the FXO (analog) trunks, configure the SIP/BRI (Voice over IP) trunks, and enable the FXS ports for analog devices.

Line (FXO) Ports

Use the *Configuration > Ports and Trunks > Line (FXO) Ports* page to enable the FXO ports for your analog phone lines. This configuration page is available if the System Mode is set to Key System or Blend. (See the *PBX/Key System* page.)

General Information and Options

- This page displays the FXO ports on your Cisco UC320W and any Cisco SPA8800 IP telephony gateways that are connected.
- The Cisco UC320W supports up to 12 simultaneous calls across all trunks (including FXO and SIP/BRI trunks).
- An error message appears if you have not enabled any trunks for outbound calls (including FXO and SIP/BRI trunks).
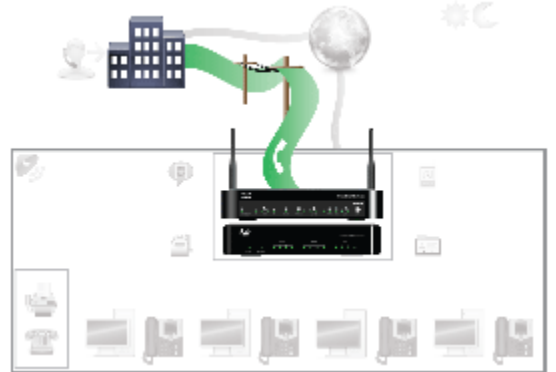
Settings for FXO Ports

- **Enabled:** Check the box to enable the port. Uncheck the box to disable the port.

Note: Refer to the on-screen illustration for the location of the FXO ports, where you can connect to your analog phone service. You can position your mouse pointer over the pointer icon to view the picture at a larger size.

- **Label:** Keep the default description, or click the pencil icon to enter a description. For example, type the published phone number, without punctuation or spaces. This label will appear on the phone screen as a default label for inbound calls, unless another CLID is provided by the Central Office. It also will identify any Shared FXO Line buttons that you configure for this trunk.

  Notes:
  - The Label field is available only if the port is enabled.
  - After you edit the description, you can click the Restore icon to restore the default value.

Troubleshooting Tools for FXO Trunks

These tools are available after you enable at least one FXO port and apply your configuration.

- **Adjust FXO Gain:** Use this tool if you experience volume issues on an FXO trunk.
- **FXO Impedance Matching:** Use this tool if you experience audio quality issues, such as echo or clipping, with an FXO trunk.

Adjust FXO Gain

Click the **Adjust FXO Gain** button to adjust the gain (volume) for each FXO port, as needed. It is usually necessary to make only minor adjustments.

Caution: Improper settings can cause voice quality issues that may include noise, signal misdetection, and distortion.

Note: Refer to the on-screen illustration for the location of the FXO ports, where you can connect your FXO (analog) phone lines. You can position your mouse pointer over the pointer icon to view the picture at a larger size.

- **Transmit (dB):** Drag the slider left to reduce the volume of the transmitted audio on the specified port. Drag the slider right to increase the volume.
- **Receive (dB):** Drag the slider left to reduce the volume of the received audio on the specified port. Drag the slider right to increase the volume.

- When finished, click **Apply Now** to immediately apply the new settings. You can check the new settings by placing calls through your FXO trunks. Make additional adjustments, if needed.
- To revert to the default settings, click **Restore Defaults** or **Reset**.
- To close the window without applying any changes, click **Cancel**.

FXO Impedance Matching

Important: For testing, the trunk must be connected to a Cisco UC320W FXO port. After the test, if you wish to connect the trunk to a Cisco SPA8800 instead, you can input the recommended settings in the fields for the SPA8800. Take care to ensure that you physically connect the trunk to the corresponding SPA8800 port.

1. **Phone number for testing:** Enter an external phone number, without spaces or punctuation. Choose a phone that you can answer during this test. No steering digit is required for an FXO call.

2. Choose a test port on the UC320W, and physically connect the test trunk to this port. All enabled ports are listed.

3. **Start:** Click this button to start the test. When your phone rings, answer it and immediately press the Mute button. The call will be active for about 7 minutes while the test tones are transmitted. **Note:** Click Stop if you do not want to continue the test.

4. When the status icon and recommended settings appear, hang up your phone. **Note:** For more information about the status icons, position your mouse pointer over the information button on the screen.

5. In the lower half of the screen, find the port where you want to use this trunk, and enter the settings:
- **Impedance:** Based on the test results, enter the recommended Impedance setting.
- **Co-Termination:** Based on the test results, enter the recommended Co-Termination setting.
- **Line Type:** Based on the test results, enter the recommended Line Type setting.

6. Physically connect the tested trunk to the selected port. Refer to the port labels on the device to ensure that you use the correct port.

7. If needed, repeat the above steps for other trunks.

8. Complete the procedure:
- **Apply Now:** Click to immediately apply the settings.
- **Cancel:** Click to close the window without making any changes.

FXS Ports

Use the *Configuration > Ports and Trunks > FXS Ports* page to enable the phone (FXS) ports on the Cisco UC320W and Cisco SPA8800 IP telephony gateways. These ports support analog devices.

Note: Refer to the on-screen illustration for the location of the FXS ports, where you can connect analog devices. You can position your mouse pointer over the pointer icon to view the picture at a larger size.

Enabled: Check this box to enable the port. Uncheck the box to disable the port. As a best practice, enable the ports only as needed, to avoid unnecessary impact on the 24-phone license limit. **Note:** Only 24 phones, including all enabled Cisco SPA8800 FXS ports, may be licensed to the Cisco UC320W. The built-in FXS port on the Cisco UC320W does not count towards this license limit.
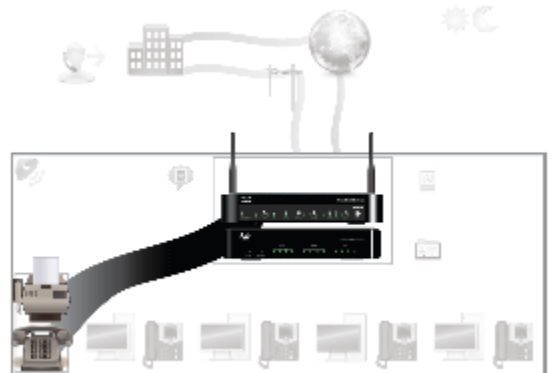
SIP/BRI Trunks

Use the *Configuration > Ports and Trunks > SIP/BRI Trunks* page to enter the settings for the SIP providers and BRI gateways that provide Voice over IP (VoIP) services. You can add up to four different services. **Note:** This configuration page is available if the System Mode is set to PBX or Blend. It is not available in Key System mode. (For more information, see the *PBX/Key System* page.)

About SIP/BRI Trunks

- The Cisco UC320W supports up to 12 simultaneous calls across all trunks (including FXO and SIP/BRI trunks).
- To configure the dialing prefix for outbound call routing through your FXO trunks and SIP/BRI trunks, see the *Outbound Trunks* page.
- To enter the phone numbers and configure the inbound call routing for these trunks, see the *Inbound Calls* page.
- After applying your configuration, verify your settings by placing outbound calls through this trunk. Also use an external phone such as a cell phone to place a call to the phone numbers for this trunk.

Adding and Removing SIP/BRI Trunks

- **Add a SIP/BRI Trunk:** Click this button to add a new SIP/BRI trunk.
- **Provider:** Choose the type of trunk.
- After choosing a provider, either complete all required fields or delete the record. An incomplete entry produces an error, indicated by a red X in the navigation tree.
- **To remove a SIP/BRI trunk:** Click the delete button (X) for the trunk that you want to remove.
- **To enter a list of phone numbers for a SIP/BRI trunk:** See the *Inbound Calls* page.

SIP Provider Settings

This section is available after you select a provider. To enter the settings, click **Settings**. To hide the settings, click the button again. The required fields are indicated by icons next to the field names. However, your service provider may require other settings that are not marked in this manner. Be sure to enter all of the information from your provider.

- **Description:** Enter a short description of this service for your reference.
- **Proxy:** Enter the IP address or domain name of the SIP proxy server.
- **Require registration:** Check the box if the SIP proxy server requires SIP registration.
- **Outbound Proxy:** If your provider specified a proxy for outbound calls, enter the IP address of the outbound proxy server.
- **Only Allow Calls To:** Specify the valid phone numbers for inbound SIP traffic. Use this setting to block unauthorized SIP traffic. Enter an exact phone number, or use wildcards. An **x** represents any single digit. An asterisk ***** represents any string. As a best practice, enter a specific pattern that includes all phone numbers that your SIP carrier has assigned to you. **Examples:** *** is not recommended because it allows any number. A blank field also allows any number. *214** is more specific, but less so than *214xxxxxxx*, which requires a 10-digit phone number starting with 214. *214842xxxx* is better because it includes all assigned numbers but is not too general.
- **Call Capacity:** Select the maximum number of concurrent calls that are supported on this trunk by your service provider.
- **Prefix dialed numbers with:** Check the box if this feature is required by the SIP provider. When this feature is enabled, the system automatically inserts the appropriate dialing prefix to an external number (such as +1 in the US or +44 in the UK, based on the specified Regional Settings).
- **Company Name:** Enter the business name.

- **Account ID:** Enter the account ID, which is usually the main phone number for the trunk. This number may be used as the calling line ID for your outbound calls, if allowed by your service provider.
- **Authentication ID:** If your provider requires SIP authentication, enter the authentication code for your account. Typically this code is case sensitive.
- **Password:** If your provider requires SIP authentication, enter the password for your account. Typically this password is case sensitive.
- **SRV Record Lookup:** If required by your provider, check this box to use DNS SRV lookup for Proxy and Outbound Proxy, or leave this box unchecked to disable SRV lookup.
- **SRV Auto Prefix:** If you enabled SRV Record Lookup, you can check this box to automatically prepend the Proxy or Outbound Proxy name with _sip._udp when performing a DNS SRV lookup on that name. Uncheck the box not to use this service.
- **Local SIP Port:** Displays the local port number that is used for this service. This information is for your reference, if needed.
- **NAT Mapping:** Check this box if NAT mapping is not provided by your SIP provider and therefore local NAT mapping is required. Then specify the NAT settings in the Systemwide SIP Parameters section. **Note:** Network Address Translation (NAT) is a function that allows multiple devices on a private network to share the same public, routable, IP address to establish Internet connections. To enable VoIP to co-exist with NAT, some form of NAT traversal is required. Some service providers provide NAT traversal, but some do not. If you are unsure, check with your SIP provider.
- **Send NAT Keep Alive:** Check this box to allow the Cisco UC320W to periodically send Keep Alive messages to the server to maintain the current NAT mapping. **Note:** This option is available if you check the NAT Mapping box.

Note: Other NAT settings are configured in the *Systemwide SIP Parameters* section below.

Mediatrix Gateway Settings

This section is available after you select a provider. To enter the settings, click **Settings**. To hide the settings, click the button again. Requirements vary by provider; refer to the information from your provider.

Note: You can install up to two Mediatrix 4400 Digital Gateways. Connect the Cisco UC320W and the BRI gateway to a secure router such as Cisco SA500. For application notes, visit the Small Business Support Community.

- **Description:** Enter a short description of this service for your reference.
- **Mediatrix IP Address:** Enter the IP address for the Mediatrix server.
- **Call Capacity:** Select the maximum number of concurrent calls that are supported on this trunk by your provider.
- **Prefix dialed numbers with:** Check the box if this feature is required by the SIP provider. When this feature is enabled, the system automatically inserts the appropriate dialing prefix to an external number (such as +1 in the US or +44 in the UK, based on the specified Regional Settings).
- **Account Phone Number:** Enter the main phone number for your BRI service.
- **Launch Mediatrix Interface:** Click this link to open the Mediatrix configuration tool (not a Cisco product).
- **Local SIP Port:** Displays the local port number to be used for this service. You will need this port number when you configure the Mediatrix Gateway to interoperate with the Cisco UC320W.

Systemwide SIP Parameters

This section of the page is available after you choose a provider. These settings apply to all SIP providers.

- **Codec:** Keep the default setting or choose the codec for outbound calls. This list includes the appropriate codecs for your region. **Tip:** G711 provides better audio quality but uses more bandwidth than G729. With G729, audio is compressed and may be slightly distorted, most noticeably when music is played.
- **Outbound FAX:** Choose a fax transmission setting.

- **NAT STUN Server (button):** If you enabled NAT mapping for a SIP provider, you can select this option use a STUN server to discover NAT mapping. This setting applies to all configured SIP providers with NAT mapping enabled. Not applicable to Mediatrix BRI Gateways.
- **NAT STUN Server (text box):** Enter the IP address or the hostname of the NAT STUN Server. **Note:** This option is available if you enabled NAT mapping for one or more SIP providers. This setting applies to all SIP trunks.
- **Static IP Address for Site (button):** Specify the public static IP address that is used for Internet connections at your site. **Note:** This option is available if you enabled NAT mapping for one or more SIP providers. This setting applies to all SIP trunks.
- **Static IP Address for Site (text box):** Enter the publicly routable static IP address for your site.

Outbound Trunks

Use the *Configuration > Ports and Trunks > Outbound Trunks* page to specify the trunks that are selected for each Outside Line digit in your Internal Dialing plan. Also choose a trunk to use for emergency calls.
Note: This selection is relevant if you enabled multiple trunks. If you enabled only FXO trunks, or only one SIP/BRI service, this page displays the trunk assignment for the Outside Line digits.

- **Outbound Trunk Assignment:** Click the button to show or hide this section. You can assign one or more trunks to each digit that is used to get an outside line. You can assign different trunks to different digits. For example, you may want your users to press 8 for an FXO trunk and 9 for a SIP/BRI trunk.
- **Emergency Calls:** Click the button to show or hide this section. Choose a trunk to use for emergency calls, if supported by your phone service provider. Contact your service provider for details. If the phone system requires an Outside Line digit for outbound calls, instruct users to enter that digit before dialing an emergency number. Also obtain any information that users need to be aware of when placing emergency calls through the trunk. For example, it may be necessary to specify the site location when calling an emergency number.

Notes:
- Check the box to select a trunk. The order in which you check the boxes is the order in which the trunks are used. For example if you select an FXO trunk first and a SIP provider second, the SIP provider is used only when the FXO trunk is busy.
- The FXO group includes all unassigned FXO trunks, meaning those trunks that are not reserved for Shared FXO Lines (see the *Shared FXO Lines* page).
- You can change the order of the trunks by dragging a trunk up or down in the list. Alternatively, uncheck all of the boxes, and then check them in the desired order.
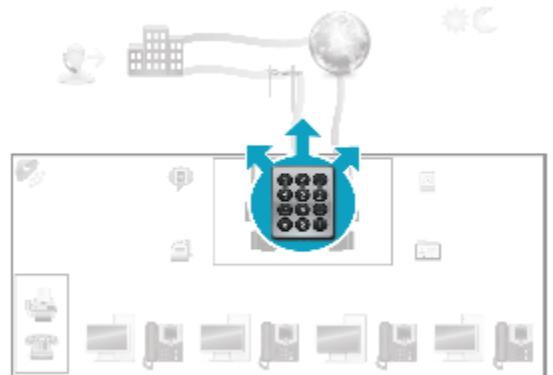
Users/Phones

In Users/Phones section of the Configuration module, you add the users and assign the phones.

Users

Use the *Configuration > Users/Phones > Users* page to enter the names of the users, to assign extension numbers, and to enable voicemail, if needed. You can enter the data directly into the fields, type the data in a pop-up window, or import a structured list of users from a CSV (comma-separated values) file.
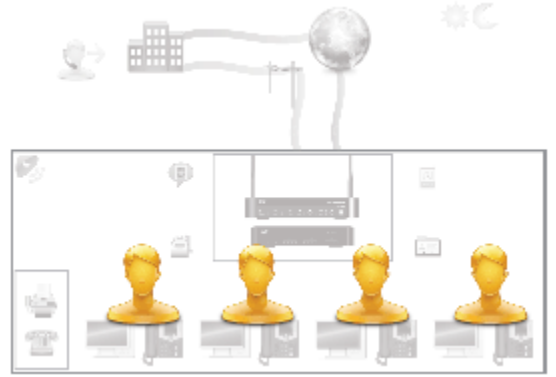
General Information and Options

- To simplify the display, only the First Name and Last Name fields appear when you first view this page. After you type the name, additional features appear. A first name or a last name is required. Either complete the entry or delete it; an incomplete entry produces an error, indicated by a red X in the navigation tree.
- You must create at least one user. You can have up to 25 users. **Note:** Only 24 phones, including all enabled Cisco SPA8800 FXS ports, may be licensed to the Cisco UC320W. The built-in FXS port on the Cisco UC320W does not count towards this license limit.
- Create a user entry for each phone that you want to enable. For an unstaffed phone, enter a description such as Lobby in the First Name or Last Name field.
- The system allows up to 25 voicemail boxes for primary personal extensions and 15 voicemail boxes for additional extensions and group extensions. Each voicemail box can store up to 30 minutes of messages.
- If you enable voicemail, inform the users that the default voicemail password is **12345**.

Settings for User Records

The page automatically displays a blank user record. Enter the information, as described below.

- **First Name:** Enter the given name, as you want it to appear in the on the phone menu and in the caller ID for internal calls. Either a first name or a last name is required.
- **Last Name:** Enter the surname, as you want it to appear in the Corporate Directory on the phone menu and in the caller ID for internal calls. Either a first name or a last name is required.
- **Extension:** Keep the default extension number or enter a unique number that complies with the extension settings on the *Internal Dialing* page. **Tip:** A quick way to enter a new extension number is to click the phone icon next to this field.
  Note: If a user needs a one-digit extension number, such as 0, verify that your Internal Dialing settings allow the digit to be used this way. Then simply enter the digit in the Extension field.
- **Voicemail:** Check the box to create a voicemail box for this user. Uncheck the box if voicemail is not required. The voicemail box number is the same as the extension number. The default password is **12345**. A user can check for voicemail messages by pressing the Messages button on the phone.
- **Create a User:** Click this button to create a new user.
- **To remove a user:** Click the delete button (X) for the user that you want to remove.

Other Data Entry Options

- **To quickly add names from a list:** Click the clipboard icon to open a pop-up window where you can either paste or type a list of users. Include the following information for each user, in the following order: first name, last name, extension number, and voicemail preference (enter *true* or *false*). Either a first name or a last name is required. See the Notes below.

Notes:

- The clipboard icon and import icons are unavailable if you have 25 users, the maximum allowed.
- The extension number must be a unique number that complies with the extension settings on the *Internal Dialing* page. If you do not enter an extension number in the pop-up window, you can enter it on the screen. **Tip:** A quick way to enter a new extension number is to click the phone icon next to the field.
- For voicemail, enter *true* to create a voicemail box for this user, or enter *false* if the user does not need voicemail.
- Enter a space between each value. At the end of one user record, either type a comma or press the Enter key.
- **To download a CSV file as a template for data entry or as a user list:** Click the Download icon to save a CSV file to use as a template. If you have not yet added users, it contains a sample record and can be used as a template for data entry. If you have added users, the file includes all user records. You can open the users.csv file in a text-editing program such as Notepad or a spreadsheet program such as Microsoft Excel.
- **To enter the user information in a CSV file:** You can use a downloaded template or create a new CSV file. Edit in a text-editing program such as Notepad or a spreadsheet program such as Microsoft Excel. Include the following information for each user, in the following order: first name, last name, extension number, and voicemail preference (enter *true* or *false*). Either a first name or a last name is required.

Notes:

- The extension number must be a unique number that complies with the extension settings on the *Internal Dialing* page. If you do not enter an extension number in the CSV file, you can enter it on the screen.
- For voicemail, enter *true* to enable or enter *false* to disable.
- In a text-editing program, separate the values with commas, and create each entry on a new line.
- In a spreadsheet program, enter each value in a separate cell, and create each entry on a new row. Do not include a heading row.
- If working from a template, delete the sample record before saving your file.
- Save the file in CSV format. You can then import the file, as described below.
- **To import a user list from a file:** Click the Import icon to import user records from a CSV file that you have prepared. Choose the file, and then click **Open**. Errors appear if any required values are missing, or if you try to import more than 25 users. The imported user records appear on the screen.

Note: The Import icon is unavailable if you have 25 users, the maximum allowed.

Assign Phones

Use the *Configuration > Users/Phones > Assign Phones* page to assign phones to users.

About the Phone Assignments

- To help you choose an appropriate phone for each user, the description includes the model and the number of buttons. If the phone has a Cisco SPA500S expansion module, also known as an attendant console or side car, the number of side car buttons also appears. Phone buttons can be used for additional extensions, shared extensions, and shared FXO (analog) lines. Phone buttons and side car buttons can be used for special features such as auto-dial (speed dial), call pickup, and Line Monitor. You assign the button functions on the *Phone Buttons* page.
- For some phones, you may see a yellow circle containing a minus sign. The icon indicates that the phone is not registered (does not have connectivity to the Cisco UC320W). Possibly this
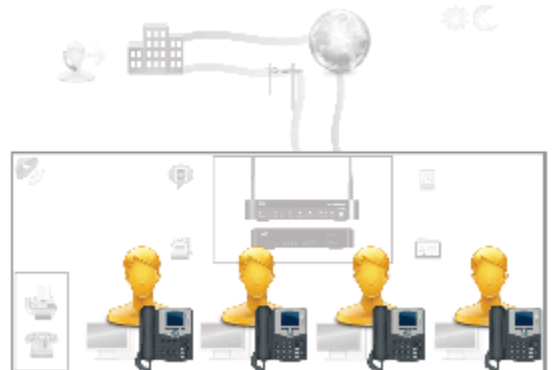
phone record was added manually for future use, or possibly the phone was disconnected but the record was not removed. You can assign the phone to a user, but it is not operational.

- Users are entered on the *Users* page. A user record is required even for an unstaffed phone, such as a phone in a lobby.
- You must make at least one phone assignment. Otherwise, an error appears.

Managing Phone Assignments

You can use various methods to assign, reassign, or remove phones.

- **Choose a phone from the drop-down list:** Click the large down-arrow button on the right end of the Assigned Phone slot, and then choose an unassigned phone from the list.
- **Drag and drop to assign an Unassigned Phone:** To assign an Unassigned Phone to a user, drag the phone to the empty slot next to the username. When the slot is highlighted in green, release the mouse button. If the user already had a phone assignment, the former phone is returned to the Unassigned Phones. A warning appears if the new phone has fewer phone buttons than are currently configured for the user.
- **Remove a phone assignment with the Delete button:** Click the delete button (X) next to the Assigned Phone. The phone returns to the Unassigned Phones list.
- **Drag and drop an Assigned Phone to reassign it or return it to the Unassigned Phones list:** To remove a phone, drag it to the Unassigned Phones list. To exchange Assigned Phones between two users, drag the phone to the phone assignment slot for the other user. When the other phone is highlighted in green, release the mouse button.

Note: If needed, you can use the Show assigned phones box to show the assigned phones in the Unassigned Phones list. Check the box to show the assigned phones, or uncheck the box to show only the unassigned phones.

Extension Buttons

In the Extension Buttons section of the Configuration module, you add buttons to the users' phones for Shared FXO Lines, shared extensions, and additional personal extensions.

Shared FXO Lines

Use the *Configuration > Extension Buttons > Shared FXO Lines* page to reserve an FXO (analog) trunk for use by the specified users.

In the office: In an insurance office, a Shared FXO Line includes two agents as members. They can easily monitor and manage calls to ensure good customer service.

Note: This page is available if you selected Key System or Blend on the *PBX/Key System* page and you enabled at least one FXO port on the *Line (FXO) Ports* page.
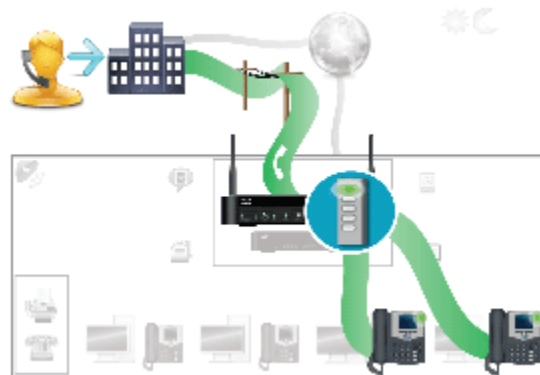
Features of a Shared FXO Line

- A Shared FXO Line button will be added to the phone for each member. If the Shared FXO Line includes multiple trunks, there will be a line button for each trunk. By default, the line button displays the port number. If you configured a label on the *Line (FXO) Ports* page, that label appears instead. You can edit the line button labels on the *Phone Button Labels* page.
- If the group has only one member, the selected Shared FXO Line is a private line for that person.
- Inbound calls through the specified FXO port will cause all members' phones to ring simultaneously.
- To place an outbound call, a user presses the shared line button to seize the trunk. No outbound dialing digit, such as 9, is needed.

- The shared line button indicates the status of the line.
  - **Unlit:** Idle.
  - **Green (steady):** Connected to a call on this phone.
  - **Green (flashing):** Holding a call on this phone. To resume the call, press the phone button.
  - **Orange (flashing):** Ringing.
  - **Red (steady):** Connected to a call on another phone.
  - **Red (flashing):** Holding a call on another phone. To pick up the call, press the line button.
  - **Orange (steady):** There is an error. Contact your phone administrator for assistance.
- Shared FXO Line buttons take priority over programmable feature buttons. If you add a Shared FXO Line after configuring a user's phone buttons, all buttons will shift down on the phone. If the button limit is exceeded, the lowest programmable feature button is displaced.
- A Shared FXO Line is not used for station-to-station calling within your phone system. It is used for inbound and outbound calls on the specified FXO trunk.

General Information and Options for Shared Lines

- To simplify the display, only the Label field is available when you first view this page. After you type a label, additional features are available.
- **Label:** Enter a description, for your reference in the configuration utility. After entering a label, either complete the entry or delete it. An incomplete entry produces an error, indicated by a red X in the navigation tree.
- **Create a Shared FXO Line:** Click this button to create a new Shared FXO Line. Then type a Label, enter the settings, and choose a member.
- **To remove a Shared FXO Line:** Click the delete button (X) for the Shared FXO Line that you want to remove.

Settings for Shared FXO Lines

- **Shared FXO Line Settings:** This button is available after you enter a label. Click this button to open or close the Settings section.
- **To assign or unassign an FXO trunk:** To assign an FXO trunk to a Shared FXO Line, use your mouse to drag the trunk from the Available FXO Trunks list to the Assigned FXO Trunks list. An icon appears in the Available FXO Trunks list to indicate that the trunk is assigned to the specified Shared FXO Line. To unassign an FXO trunk, drag it from the Assigned FXO Trunks list to the Available FXO Trunks list.

Note: If needed, you can use the Show assigned FXO trunks. box to show the assigned FXO trunks in the Available FXO Trunks list. Check the box to show the assigned FXO trunks, or uncheck the box to show only the unassigned FXO trunks.

- **To move an FXO trunk to a different Shared FXO Line:** Click the Move button, and then either choose a shared line from the list, or click New Shared FXO Line. **Note:** The New Shared FXO Line option is available only if there are remaining Assigned FXO Trunks.
- **Night Route:** Available only if you enabled Day/Night call routing on the *Day/Night Features* page. Choose a destination for inbound calls when the system is in Night mode. Calls will be forwarded immediately to the specified destination.
- **Shared Voicemail Box:** Check this box to create a voicemail box for this Shared FXO Line. The mailbox number is displayed. The default mailbox password is **12345**. Uncheck this box if voicemail is not required. You can edit the mailbox number, if needed. Any user can leave a message in this voicemail box by dialing the voicemail access digit (default 7) and the mailbox number, as shown on the screen. To retrieve messages for this Shared FXO Line, a user can dial the Voicemail Pilot extension number and enter the mailbox number (without the 7) and the password. The line button on the phone will display an envelope icon to indicate new messages.

Note: The system allows up to 25 voicemail boxes for primary personal extensions and 15 voicemail boxes for additional extensions and group extensions. Each voicemail box can store up to 30 minutes of messages.

- **Include in outbound dialing:** Check this box if you want to include the specified FXO trunk in the pool of lines that can be seized for outbound calls by all users. Uncheck this box if you want allow the specified FXO trunk to be used only when someone presses this Shared FXO Line button. If you uncheck this box, ensure that at least one FXO trunk is unassigned and remains available for outbound calling by other users.

- **If busy or no answer, forward to:** *Available after you apply the initial configuration. During the initial setup, you can set call forwarding on the Call Forwarding page.* Use the first drop-down list to choose a destination for an unanswered call. Use the second drop-down list to specify the timeout period in seconds. If you enabled a Day/Night schedule for Call Forwarding on the *Day/Night Features* page, you can specify a different destination for night. At night, call forwarding is immediate. **Note:** If you choose None for the destination, the timeout setting is unavailable. The phone rings until the caller disconnects or the phone is answered.

Selecting Members for Shared FXO Lines

- **Select Members:** This button is available after you enter a label. Click this button to open or close the Members section.
- **To add a member:** Check the box to add the user. Uncheck the box to remove the user. Successfully added members appear with a green background. Errors are indicated by a red background. Available Buttons indicates the buttons that are not currently used for Shared Lines, Shared Extensions, or Additional Extensions. The new line button may displace a previously configured feature button, such as a speed dial or Line Monitor.
- **Select All:** Click to select all users.
- **Clear All:** Click to de-select all users.
- **To remove a user from the group:** Uncheck the box next to the name. Unselected users appear with a white background.

Note:
- Available Buttons includes only phone buttons. This feature can be assigned only to a phone button, not to a side car button.
- The list includes all users. If a user does not have an assigned phone, has an FXS phone, or does not have enough phone buttons available, the background is gray. If you previously configured a shared line and then a phone assignment was removed, the background appears red.
- To configure users, see the *Users* page. To assign phones to users, see the *Assign Phones* page.

Shared Extensions

Use the *Configuration > Extension Buttons > Shared Extensions* page to allow a group of users to answer, monitor, and manage calls.

In the office: In a pet store, the grooming department has two phones, one in the reception area and one in the back. With a shared extension including both phones, the pet store staff can transfer calls to a single extension number. The groomer can pick up the call from either phone. The shared extension also makes it easy for the groomer to place a call on hold from one phone and resume it from the other phone.

Features of Shared Extensions

- Each group member will have one or more phone buttons to manage and monitor the shared extension.
- The group can be contacted by dialing the extension number, by choosing the extension from the directory, or by using a phone button that is configured to speed-dial this group.
- The group can be contacted from an external phone if the group is specified as a call target for an AA menu option, an inbound call routing group, or a call forwarding option.
- An incoming call will ring all members' phones simultaneously.
- Shared Extensions and Hunt Groups are similar but have unique features. With a Shared Extension, a call rings all users simultaneously, and all members can monitor and manage the calls through a line button on the phone. With a hunt group, you can enable simultaneous or sequential call routing, but it does not allow members to monitor and manage calls.

Note: The shared extension button indicates the status of the extension.

- **Unlit:** Idle.
- **Green (steady):** Connected to a call on this phone. **Note:** The shared extension doesn't show as in use when placing a call through the Shared FXO Line.
- **Green (flashing):** Holding a call on this phone. To resume the call, press the phone button.
- **Orange (flashing):** Ringing.
- **Red (steady):** Connected to a call on another phone.
- **Red (flashing):** Holding a call on another phone. To pick up the call, press the line button.
- **Orange (steady):** There is an error. Contact your phone administrator for assistance.

- Shared extension buttons take priority over programmable feature buttons. If you add a shared extension after configuring a user's phone buttons, all buttons will shift down on the phone. If the button limit is exceeded, the lowest programmable feature button is displaced.

General Information and Options for Shared Extensions

- To simplify the display, only the Label field is available when you first view this page. After you type a label, additional features become available.
- After entering a label, either complete the entry or delete it. An incomplete entry produces an error, indicated by a red X in the navigation tree.
- **To create the first shared extension:** Enter a label. Then enter the settings and select the members.
- **Create a Shared Extension:** Click this button to create a new shared extension. Then type a label, enter the settings, and select the members.
- **To remove a shared extension:** Click the delete button (X) for the shared extension that you want to remove.

Shared Extension Settings

- **Shared Extension Settings:** This button is available after you enter a label. Click the button to open or close the Settings section.
- **Label:** Enter a name, which will identify this extension on the line button, in the Directory, and in the configuration utility.
- **Extension:** Enter an extension number for the shared extension. Extension numbers must be unique and must comply with the rules entered on the *Internal Dialing* page. An error message appears if you enter an invalid or duplicate extension number. **Tip:** A quick way to enter a valid extension number is to click the phone icon next to the extension number field.
- **Number of Buttons/Calls:** Click the + or - button to increase or decrease the number of buttons to assign to this extension. Either the + or the - may be unavailable, depending on the number of phone buttons. Up to four buttons can be used.
- **Shared Voicemail Box:** Check this box to create a voicemail box for this extension. The mailbox number is the same as the extension number. The default mailbox password is **12345**. Uncheck this box if voicemail is not required. To retrieve messages for this shared extension, a user can dial the Voicemail Pilot extension number and enter the mailbox number and the password. The line button on the phone will display an envelope icon to indicate new messages.

Note: The system allows up to 25 voicemail boxes for primary personal extensions and 15 voicemail boxes for additional extensions and group extensions. Each voicemail box can store up to 30 minutes of messages.

- **If busy or no answer, forward to:** *Available after you apply the initial configuration. During the initial setup, you can set call forwarding on the Call Forwarding page.* Use the first drop-down list to choose a destination for an unanswered call. Use the second drop-down list to specify the timeout period in seconds. If you enabled a Day/Night schedule for Call Forwarding on the *Day/Night Features* page, you can specify a different destination for night. At night, call forwarding is immediate. **Note:** If you choose None for the destination, the timeout setting is unavailable. The phone rings until the caller disconnects or the phone is answered.

Selecting Members for Shared Extensions

- **Select Members:** This button is available after you enter a label. Click this button to open or close the Members section.
- **To add a member:** Check the box to add the user. Uncheck the box to remove the user. Successfully added members appear with a green background. Errors are indicated by a red background. Available Buttons indicates the buttons that are not currently used for Shared Lines, Shared Extensions, or Additional Extensions. The new line button may displace a previously configured feature button, such as a speed dial or Line Monitor.
- **Select All:** Click to select all users.
- **Clear All:** Click to de-select all users.
- **To remove a user from the group:** Uncheck the box next to the name. Unselected users appear with a white background.

Note:

- The available buttons includes only phone buttons. This feature can be assigned only to a phone button, not to a side car button.
- The list includes all users. If a user does not have an assigned phone, has an FXS phone, or does not have enough phone buttons available, the background is gray. If you previously configured a shared extension including a user and then the phone assignment was removed, the background appears red.
- To configure users, see the *Users* page. To assign phones to users, see the *Assign Phones* page. Then return to this page to assign membership.

Additional Extensions

By default, each user has one personal extension. You can use the *Configuration > Extension Buttons > Additional Extensions* page to create additional personal extensions for users.

General Information and Options for Additional Extensions

- **To create the first additional extension:** Choose the user, and then enter the settings. The additional extension will be added to this phone, if phone buttons are available. (See the *Phone Buttons* page.)
- After choosing a user, either complete the entry or delete it. An incomplete entry produces an error, indicated by a red X in the navigation tree.
- **To remove an additional extension:** Click the delete button (X) for the extension that you want to remove.
- Additional extension buttons take priority over programmable feature buttons. If you add an additional extension after configuring a user's phone buttons, all buttons will shift down on the phone. If the button limit is exceeded, the lowest programmable feature button is displaced.
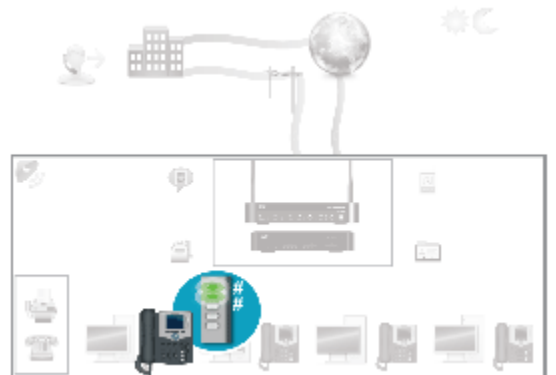
Settings for Additional Extensions

- **Create an Additional Extension:** Click this button to create an additional extension. Then choose a user and enter the settings, as described below.
- **Additional Extension:** Choose the user who will have this extension.
- **Additional Extension Settings:** This button is available after you choose a user. Click this button to open this section. To close this section, click the button again.
- **Extension:** Keep the default extension number or enter a unique number that complies with the extension settings on the *Internal Dialing* page. **Tip:** A quick way to enter a new extension number is to click the phone icon next to this field.
- **Number of Buttons/Calls:** Click the + or - button to increase or decrease the number of buttons to assign to this extension. Each button supports two concurrent calls.

Note: Available Buttons indicates the buttons that are not currently used for Shared Lines, Shared Extensions, or Additional Extensions. The new line button may displace a previously configured feature button, such as a speed dial or Line Monitor.

- **Create Voicemail Box:** Check the box to create a voicemail box for this extension. The mailbox number is displayed. The default mailbox password is **12345**. Uncheck this box if voicemail is not required. To retrieve messages, a user can dial the Voicemail Pilot extension number, and then enter the mailbox number and the password.

Note: The system allows up to 25 voicemail boxes for primary personal extensions and a total of 15 voicemail boxes for other types of extensions, such as additional extensions, Shared FXO Lines, and hunt groups. Each mailbox can store up to 30 minutes of messages.

- **If busy or no answer, forward to:** *Available after you apply the initial configuration. During the initial setup, you can set call forwarding on the Call Forwarding page.* Use the first drop-down list to choose a destination for an unanswered call. Use the second drop-down list to specify the timeout period in seconds. If you enabled a Day/Night schedule for Call Forwarding on the *Day/Night Features* page, you can specify a different destination for night. **Tip:** You may want to set a short timeout period for the night-time call forwarding.**Note:** If you choose None for the destination, the timeout setting is unavailable. The phone rings until the caller disconnects or the phone is answered.

Call Routing

In the Call Routing section of the Configuration utility, you configure the call routing features, such as call paging, hunt groups, Auto Attendant, and inbound call routing.

Call Paging

Use the *Configuration > Call Routing > Call Paging* page to configure the settings for an external speaker system, if connected, and to set up user groups to page all members simultaneously through their phone speakers.

Note: Refer to the on-screen illustration for the location of the Line Out port, where you can connect an external speaker. You can position your mouse pointer over the pointer icon to view the picture at a larger size.

External Paging

The External Paging feature is used to make an announcement through an external speaker system that is connected to the Line Out port of the Cisco UC320W.

Any other audio on the speaker, such as music, will be interrupted for the duration of the page.

- **Extension:** Enter the extension number that users can dial to initiate an announcement over the external speaker system. Extension numbers must be unique and must comply with the rules entered on the *Internal Dialing* page. An error message appears if you enter an invalid or duplicate extension number. **Tip:** A quick way to enter a valid extension number is to click the phone icon next to the extension number field.
- **Volume:** Drag the slider button up to increase the volume, or drag the slider button down to decrease the volume.

Paging Groups

This feature is used to make an intercom announcement through the speakers of all of the member phones. You can choose whether pages go only to extensions without active calls, or interrupt calls, as might be needed during an emergency.

General Information and Options for Paging Groups

- To simplify the display, only the Label field is available. After you type a label, additional features are available.
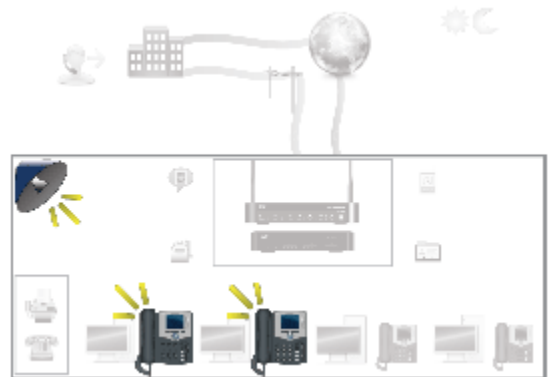
- After entering a label, either complete the entry or delete it. An incomplete entry produces an error, indicated by a red X in the navigation tree.
- **To create the first paging group:** Enter a label. Then enter the settings and select the members.
- **Create a Paging Group:** Click this button to add another paging group. Then type a label, enter the settings, and select the members.
- **To remove a paging group:** Click the delete button (X) for the paging group that you want to remove.

Paging Group Settings
- **Label:** Enter a name, which will identify this group in the Directory in the configuration utility.
- **Paging Group Settings:** After you enter a label, you can click this button to open or close the Settings section.
- **Gentle Page:** Choose this option to prevent the page from interrupting a user who has an active call. When this feature is enabled, the group can be paged only from an IP phone. It cannot be paged from an FXS phone and cannot be the destination for inbound calls, Auto Attendant, or call forwarding. In addition, the paging group cannot include an external speaker.
- **Emergency Page:** Choose this option to send the page to all member phones, even if the extension has an active call. When this feature is enabled, the group can be paged from IP phones and FXS phones. It also can be selected as a destination for the Auto Attendant. It cannot be the destination for inbound calls or call forwarding. This type of paging group can include an external speaker.
- Enter an extension number for this paging group, or keep the automatically assigned number.

Selecting Members for Paging Groups
- **Select Members:** This button is available after you enter a label. Click this button to open this section. To close this section, click the button again.
- **Include External Paging:** Check this box if you want the announcement to go to the member phones and the external speaker system (if connected). Uncheck the box to use only the speakers on the member phones.
- **To add a member:** Check the box to add the user. Uncheck the box to remove the user. Successfully added members appear with a green background. Errors are indicated by a red background. If Gentle Page is selected, some users may be unavailable. A user can belong only to two groups that use this feature.
- **Select All:** Click to select all users.
- **Clear All:** Click to de-select all users.
- **To remove a user from the group:** Uncheck the box next to the name. Unselected users appear with a white background.

Note: This list includes all users. If a user does not have an assigned phone, or has a phone that lacks a speaker, the background is gray. If you previously configured a paging group including a user and then the phone assignment was removed, the background appears red. To configure users, see the *Users* page. To assign phones to users, see the *Assign Phones* page. Then return to this page to assign membership.

Hunt Groups

Use the *Configuration > Call Routing > Hunt Groups* page to create user groups for the purpose of routing calls to all members simultaneously, sequentially, or randomly. Features are described below:

In the office: In a busy shop, the manager wants to ensure that customer calls are answered by service agents, rather than going to voicemail. The phone administrator created a hunt group by using the *Sequential from start* option. Each new call rings the service desk first. An unanswered call goes to the first agent, then the second, and then returns to the service
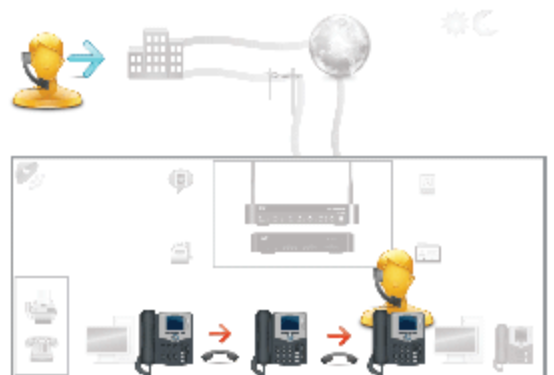
desk. After six attempts, if there is still no answer, then the call goes to voicemail.

Features of Hunt Groups

- A hunt group can be contacted by dialing the group extension number, by choosing the extension from the directory, or by using a phone button that is configured to speed-dial this group.
- A hunt group can be contacted from an external phone if the group is specified as a call target for an AA menu option, an inbound call routing group, or a call forwarding option.
- Hunt Groups and Shared Extensions are similar but have unique features. With a Shared Extension, a call rings all users simultaneously, and all members can monitor and manage the calls through a line button on the phone. With a hunt group, you can enable simultaneous or sequential call routing, but it does not allow members to monitor and manage calls.

General Information and Options for Hunt Groups

- To simplify the display, only the Label field is available when you first view this page. After you type the label, additional features are available.
- After entering a label, either complete the entry or delete it. An incomplete entry produces an error, indicated by a red X in the navigation tree.
- **To create the first hunt group:** Enter a label. Then enter the settings and select the members.
- **Create a Hunt Group:** Click this button to add another hunt group. Then type a label, enter the settings, and select the members.
- **To remove a hunt group:** Click the delete button (X) for the hunt group that you want to remove.

Hunt Group Settings

- **Hunt Group Settings:** This button is available after you enter a label. Click this button to open or close the Settings section.
- **Label:** Enter a name, which will identify this group in the Directory and in the configuration utility.
- **Extension:** Keep the default extension number or enter a unique number that complies with the extension settings on the *Internal Dialing* page. **Tip:** A quick way to enter a new extension number is to click the phone icon next to this field.
- **Order:** Choose a routing method: **Simultaneous** (rings all members at once), **Sequential from start** (always starts from the first member of the list), **Sequential from last answered** (chooses the next member after the person who answered the previous call), or **Random** (chooses a member randomly). For sequential types, be sure to select the members in the desired order.
- **Ring duration for each phone:** Enter the number of seconds to ring one phone before routing it to another phone. For Simultaneous order, all phones ring for the specified duration. **Tip:** The total ring time is the Ring duration for each phone multiplied by the Maximum Attempts.
- **Maximum Attempts:** Enter the number of extensions to try before the call is transferred to the specific Call Forward number. For example, if you have 3 members in a Sequential order, and you want to try each phone twice, enter 6. Not applicable if **Order** is **Simultaneous** or if **If busy or no answer, forward to** is set to None.
- **If busy or no answer, forward to:** *Available after you apply the initial configuration. During the initial setup, you can set call forwarding on the Call Forwarding page.* Choose a destination for an unanswered call. If you enabled a Day/Night schedule for Call Forwarding on the *Day/Night Features* page, you can specify a different destination for night. At night, call forwarding is immediate. **Note:** If you choose None for the destination, the phone rings until the caller disconnects or the phone is answered.
- **Group Voicemail:** Check the box to create a voicemail box for this hunt group. Uncheck the box if voicemail is not required. The mailbox number is the same as the extension number. The default mailbox password is **12345**. To retrieve messages, a user can dial the Voicemail Pilot extension number, and then enter the mailbox number and the password. **Tip:** You can use the *Phone Buttons* page to add a Group Voicemail Monitor button to users' phones.

Note: The system allows up to 25 voicemail boxes for primary personal extensions and 15 voicemail boxes for additional extensions and group extensions. Each voicemail box can store up to 30 minutes of messages.

## Selecting Members for Hunt Groups

- **Select Members in Sequence:** This button is available after you enter a label. Click this button to open this section. To close this section, click the button again.
- **To add a member:** Check the box to add the extension. Uncheck the box to remove the extension. For a Sequential type, select the members in the desired order. Successfully added members appear with a green background. Errors are indicated with a red background.
- **Select All:** Click to select all extensions.
- **Clear All:** Click to de-select all extensions.
- **To remove an extension from the group:** Uncheck the box next to the name. Unselected extensions appear with a white background.

Note:

- The list includes all extensions.
- If you previously configured a hunt group including an extension and then the phone assignment was removed, the background appears red. All red members must be deselected.
- To configure users, see the *Users* page. To assign phones to users, see the *Assign Phones* page. Then return to this page to assign membership.

Auto Attendant

An Auto Attendant is a feature that you can configure to automatically answer inbound calls and play recorded prompts to announce options and provide information. Use the *Configuration > Call Routing > Auto Attendant* page to define the buttons that your callers can press to contact extensions, groups, and external numbers. If you chose a region that has dual languages, such as English and French, this page includes a Dual Language Menu tab. If you enabled the Day/Night menu option for the Auto Attendant on the *Day/Night Features* page, this page includes tabs for a Day menu and a Night menu. For each option on the Night menu, you can specify new settings or choose *Same As Day*. (See the *Day/Night Features* page.)
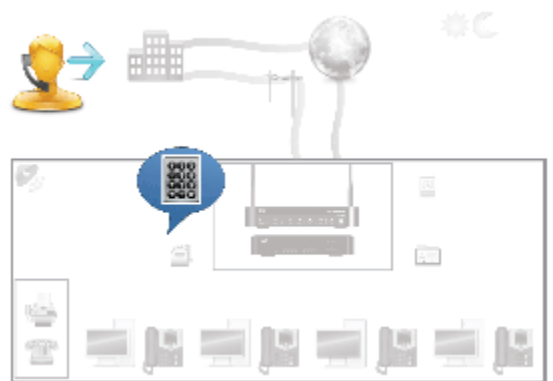
Settings for AA Menus

Specify the settings for your AA menus.

Dual Language Menu

This menu is available if you selected a dual language option such as English/French on the *Region* page. Enter the settings to enable the Auto Attendant to offer the callers a choice of languages for prompts.

- **Optional Greeting:** This prompt plays before any other prompts. Choose a custom prompt that you have created to greet your callers. To add a new prompt to the list, click the plus button (+). Then type a description. To record a new prompt, dial the extension number for the AA Prompt Recorder, enter the password (default **12345**), and follow the instructions. (For detailed instructions, see the information button on the *Prompts* page.) Refer to the Dual Language Mode field for the button options that can be used.
- **Dual Language Mode:** Choose Force caller to choose a language to require a caller to select one of the language options; if the timeout limit is reached, the greeting plays again. Choose Allow caller to switch to the secondary language to allow the caller to choose a secondary language; if the caller does not act, the AA continues in the primary language. Select a default prompt or create custom prompts.
- Choose the number of seconds that the AA will wait for the caller to make a selection. When this limit expires, the AA takes the action that is specified in the Dual Language Mode field.

Main Menu, Day Menu, and Night Menu

- **Extension to call Auto Attendant:** (for Main and Day menus only) Enter an extension number that users can dial to reach the Auto Attendant.

- **Initial Menu Prompt:** Choose the recorded prompt that the AA will play.
  - **To edit the description:** Click the pencil icon to edit the description for a selected prompt. After typing the new description, click **Done**.
  - **To add a new prompt:** Click the plus button (+) to add a new prompt. Then type a description. To record prompts, dial the extension number for the AA Prompts recorder, enter the password (default **12345**), and follow the instructions. (For detailed instructions, see the information button on the Prompts page.)
- **Dial Extensions at Any Time:** Select **On** to allow callers to dial extension numbers at any time. Select **Off** to allow callers to choose only the announced menu options. Enabling this option restricts the digits available for your menu.

Notes:
- The Dial Extensions at Any Time option is enabled by default and is announced as a valid option in the default Prompt 1 (*If you know the extension, you may dial it now.*). If you turn off this feature, be sure to record a custom prompt to replace default Prompt 1. For instructions about the Auto Attendant Prompts Recorder, see the information button on the Prompts page.
- When the Dial Extensions at Any Time option is enabled, the Auto Attendant menu cannot include digits that are reserved for Internal Dialing patterns. If you disable the Dial Extensions at Any Time option, you can use digits 0 through 9 in your menu.

Buttons for AA Menus

Use this section to define the actions that are taken when the user presses a number on the phone keypad.

Note: If you checked the **Dial Extensions at Any Time** box, your menu options can use only the digits that are not used by your dial plan. For example, if your dial plan uses 1 and 2 for extensions, and 0 for immediate dial, then your menu cannot include the numbers 0, 1, or 2. To make changes in the dial plan, see the *Internal Dialing* page.

- **Hide Undefined Buttons:** Check this box if you want to hide the undefined buttons on this page. Uncheck this box to show all of the buttons.
- **Action drop-down list:** Choose the action that occurs when a user presses the specified digit. You can choose to transfer the call, end the call, play a prompt and then perform another action, or open a sub-menu. If you choose Not Defined, then the digit is considered invalid input. These options are described below:
  - **Not Defined:** This button is not a valid option in this menu.
  - **Transfer Call:** When the caller presses this button, the AA routes the call to the specified internal or external number.
  - **End Call:** When the caller presses the button, the call is disconnected.
  - **Play Prompt, Then...:** When the caller presses the button, the AA plays the prompt that you specify and then takes the action that you specify (Return to Menu, Transfer Call, or End Call). To edit the description for a selected prompt, click the pencil icon, type the new description, and then click **Done**. To add a new prompt, click the plus button (+). For more information about prompts, click the **Prompts** tab.
  - **Submenu:** When the caller presses the button, the AA opens a sub-menu that you configure. Click **Edit** to show the settings. Choose the prompt and other general settings (as described above). Then configure the buttons. To hide the submenu details, click the **Hide** button.
- **Invalid Input:** Choose the action that occurs if the user presses an invalid key or key sequence.
- **Timeout:** Choose the action that occurs when the Timeout limit is reached. From the list next to the clock icon, choose the timeout period. Choose the number of seconds that the AA will wait for the caller to make a selection. When this limit expires, the AA takes the action that you specify in the Timeout field.

Note: The timeout period is not applicable when the Timeout is Not Defined or Same as Day.

Setting Up Prompts

Click the **Prompts** tab to manage the prompts that the Auto Attendant plays to assist the callers. You can use the default prompts or record your own prompts.

In the office: A phone administrator replaces the default greeting with one that includes the company name and announces special menu options: *Thank you for calling Family Medical. Press 1 for our hours and location. Press 2 to make an appointment. Press 3 for billing.*

General Information and Options for AA Prompts

- There are recording slots for 20 prompts. For dual languages, there are two sets of 20 prompts. Each prompt in the primary language set corresponds to a prompt in the secondary language set: Prompt 1 corresponding to Prompt 21, Prompt 2 to 22, and so on.
- You can combine multiple prompts into a single prompt sequence for use in your AA menus.
- **AA default prompts**: The system includes four default prompts in the language that is selected on the *Region* page. Prompt 1: *If you know your party's extension, you may enter it now.* Prompt 2: *Your call has been forwarded.* Prompt 3: *Not a valid extension, please try again* Prompt 4: *Goodbye*

IMPORTANT: Prompt #2 will play when a Direct Extension Dial transfer is initiated. If you change this prompt, record a message that is appropriate for that purpose.

Settings for AA Prompts

You can add prompts, edit the descriptions, and combine them into sequences. To record prompts, use any IP phone to dial the Auto Attendant Prompt Recorder.

Note: The Prompt Number column displays the prompt number. If you chose a region that has dual languages, such as English and French, there is one number for the primary language and one for the secondary language. You use prompt numbers when recording and editing prompts with the AA Prompt Recorder.

Auto Attendant Prompt Recorder Extension: Enter an extension number that users can dial to reach the Auto Attendant Prompt Recorder.

Adding prompts:

- **Prompt Name:** Enter a description or the complete text of the prompt, for your reference.
- **Prevent Barge In:** Check this box to require the AA to play the full prompt or prompt sequence before allowing the caller to make a selection. Leave the box unchecked to allow the caller to make a selection without listening to the full prompt or prompt sequence. By default, barge in is allowed.
- **Create a Prompt:** Click this button to add a new prompt to the list. Then type a description. To record a prompt, use the Auto Attendant Prompts Recorder (see the information button on the Prompts page).
- **To remove a prompt from the list:** Click the delete button (X) for the prompt that you want to remove from the list. To delete a recording use the Auto Attendant Prompts Recorder. (For detailed instructions, see the information button on the Prompts page.)

Combining prompts into sequences:

- **Create a Prompt Sequence:** Click this button to combine multiple prompts into a new prompt sequence that can be selected more easily in an AA menu. You can include up to 10 prompts.
- **Prompt Name:** Type a name for the sequence.
- **Prevent Barge In:** Check this box to require the AA to play the full prompt sequence before allowing the caller to make a selection. Leave the box unchecked to allow the caller to make a selection without listening to the full prompt sequence. By default, barge in is allowed.
- **Add prompt to sequence:** Use the drop-down list to choose the first prompt to include in this sequence. Repeat as needed to add each prompt in the desired order. To remove a prompt from the sequence, click the delete button (X).
- **To remove a prompt sequence from the list:** Click the delete button (X) for the sequence that you want to remove from the list. This action does not delete the prompt entries or the recordings.

Using the AA Prompts Recorder

There are recording slots for 20 prompts. For dual languages, there are two sets of 20 prompts. Each prompt in the primary language set corresponds to a prompt in the secondary language set: Prompt 1 corresponding to Prompt 21, Prompt 2 to 22, and so on.

IMPORTANT: When you save the new prompts, the phones will restart. All AA prompt changes should be scheduled during a convenient maintenance window.

1. From a connected IP phone, lift the receiver or press the speaker button to place a call. Then enter the extension number for the Auto Attendant Prompt Recorder. (See the extension numbers on the *Internal Dialing* page.)

2. When prompted, enter the password, followed by **#**. The default password is **12345**.

3. Enter the prompt number that you want to change (valid entries are numbers from 1 to 20). Then press **#**.

4. Listen for instructions, and follow them to record, review, or delete the selected prompt. To exit to the previous menu without changing a prompt, you can press *****.

5. When you hear the confirmation message (*Value saved*), you can enter another prompt number to modify.

6. End the call by replacing the receiver or pressing the speaker button. Wait for several seconds while the save process is completed. The phones reboot, and the recordings are saved in the flash memory of the Cisco UC320W.

Notes:

- Your customized prompts will be erased if the device is reset to the factory default settings.
- If you edit a prompt, be sure to update the Prompt Name.
- If you add a prompt, be sure to add it to this page by using the **Create a Prompt** button.

Inbound Calls

Use the *Configuration > Call Routing > Inbound Calls* page to specify the call destinations for inbound calls through each FXO trunk and SIP/BRI trunk. If a route is directed to a user or a hunt group, you can use the phone number as the Calling Line ID for outbound calls from the user or group.
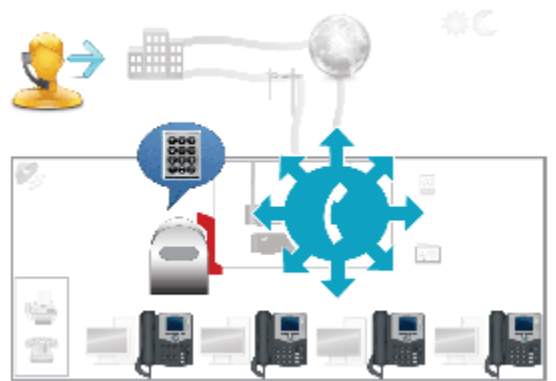
General Information and Options for Inbound Routing

- Click the tab for the trunk that you want to configure.
- Each SIP/BRI trunk has a default route that includes all phone numbers for the specified provider. As described in the "Settings for Routing Groups" section below, use the **Move** button or the **Create an Inbound Calling Route** button to create new routing groups for phone numbers that you specify.
- If you enabled a Day/Night schedule for Call Routing on the *Day/Night Features* page, you can specify different destinations for day (your open hours) and night (your closed hours). Inbound calls are immediately directed to the specified destination.
- These settings do not apply to FXO ports that are configured as shared lines. The inbound calls for shared lines are routed to the group members' phones. (See the *Shared FXO Lines* page.)

Settings for Routing Groups

- **Label:** Keep the default description, or click the pencil icon to enter a description. This label is used for your reference in the configuration utility. You can enter up to 25 characters. **Note:** After you edit the description, you can click the Restore icon to restore the default value.
- **Move:** Click this button to move the selected call source to a different route. Then choose the route or click **New Route...** to move it to a new route.
- **Dragging and dropping:** You can use your mouse to drag and drop a call source to a different route. Each button represents a call source. For SIP/BRI trunks, it includes all phone numbers,

except those that you specifically add for separate routing. To move a call source to a different route, click the Move button or use your mouse to drag it to another route.

- **Create an Inbound Calling Route:** Click this button to create a new route. Then enter a label, move call sources into the route, and specify the destination.
- **To delete a route:** To delete a route, click the delete button (X). You cannot delete the default route.
- **Ring:** Choose the call destination. If you enabled a Day/Night schedule for Call Routing on the *Day/Night Features* page, you can specify different destinations for day (your open hours) and night (your closed hours). During closed hours, calls are forwarded immediately.
- **Use as Calling Line ID:** Check the box to use this phone number as the Calling Line ID (CLID) for outbound calls from the user or group that you selected for the daytime Ring. The Calling Name ID will be the user's name. When the Ring is a hunt group, the specified phone number will be the CLID for all members, although the individual's Calling Name will be used. If a member has an individual CLID, the individual CLID will be used instead. If the *Use as Calling Line ID* box is unchecked, the CLID is the default phone number for the trunk.

Specifying Phone Numbers with Different Destinations

You may have multiple phone numbers for a single SIP/BRI trunk. If you want to route all of the numbers to the same destination, it is not necessary to enter the individual numbers. However, to route individual phone numbers to different destinations, you must specify the phone numbers and create new routes to specify the destinations.

- **Add Specified Number:** Click this button if you need to specify different routing for a particular phone number within this trunk group. When entering the number, do not include any spaces or symbols but instead enter the exact number as specified by your service provider, for example 19725550123. Each phone number can be moved to a different route, if needed. To specify a route, click **Move** and then choose the route or create a new route.
- **To delete a phone number:** Click the delete button (X).

User/Group Features

In the User/Group Features section of the Configuration module, you configure the user and group features, such as call forwarding, voicemail-to-email notifications, phone buttons, and the directory.

Call Forwarding

Use the *Configuration > User/Group Features > Call Forwarding* page to configure call forwarding for users and groups.

Notes:

- Group call forwarding also can be configured on the configuration page for the group (such as Shared FXO Lines or Shared Extensions).
- Users can set Call Forward All on the phone by using the Forward or Cfwd button on the phone. This page does not display any user call forward settings.
- A call can be forwarded up to five times.

To open the Users or Groups section, click the **User Call Forwards** or **Group Call Forwards** button. To hide a section, click the button again.

- **Call Forward Busy/No Answer:** Choose a destination for calls that are received when the extension is busy or the call is not answered.
  - Choose a destination. The default selection is voicemail, if enabled.
  - Optionally, specify a different destination for night. The default selection is Same as Day. Note that there is no timeout option. At night, call forwarding is immediate. This option is available if you enabled Day/Night Call Forwarding on the *Day/Night Features* page.
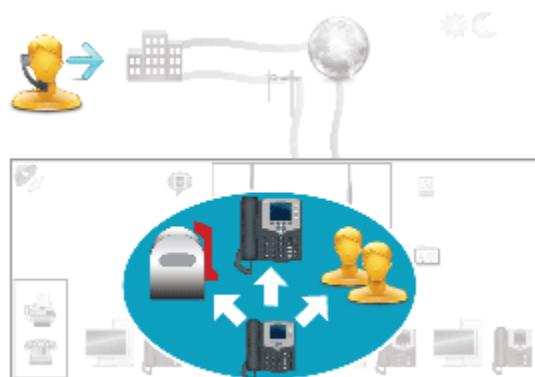
- **After (seconds):** Enter the number of seconds that a call can ring before it is considered unanswered.

Voicemail to Email

Use the *Configuration > User/Group Features > Voicemail to Email* page to enter information for the SMTP server that you will use to send voicemail messages to specified email addresses. Contact your service provider for requirements and outgoing server settings.

Note: Examples are included at the end of this Help topic. Requirements may vary. Some providers do not allow SMTP email from a free account. Other providers may require a user to log on to a new mailbox before sending emails. For accurate information, read the support documentation from your provider. In your provider's support or help system, search for information about SMTP server settings.
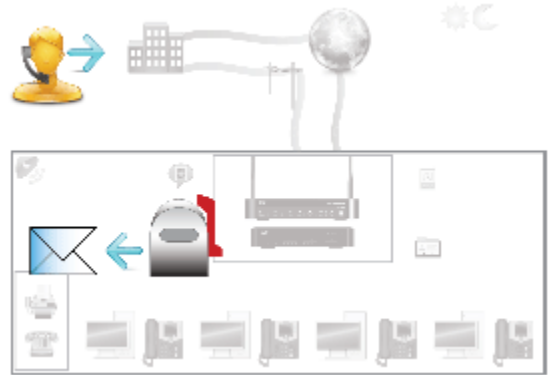
Settings for Voicemail to Email

- **Use Voicemail to Email:** Check this box to enable email notifications to be sent when new voicemail messages are received. Uncheck the box to disable this feature.
- **Use SSL/TLS:** Check this box to enable Secure Socket Layer (SSL)/Transport Layer Security (TLS) for secure communications. Many providers require this setting to send emails.
- **SMTP Server:** Enter the IP address or host name of your provider's outgoing SMTP server.
- **SMTP Port:** Enter the port number to use for the outbound emails, typically 25, or 587 when SSL/TLS is used.
- **Username:** Enter the username for the email account that will be used to send these emails. Typically the username is the full email address including the domain (such as myName@example.com). The specified account will be used as the sender's email address.
  Tip: Do not use your personal email address, which would unnecessarily expose your personal email login credentials in the Cisco UC320W configuration. Use a separate email account instead. Also be aware that many email accounts keep a copy of all sent messages by default. Anyone with access to this email account will have access to the sent messages. Review your email settings to ensure that they are appropriate for the privacy policy of your business.
- **Password:** Enter the password for the email account that will be used to send these emails.
- **Email Address:** Enter the email address where the voicemail notifications will be sent. You can enter multiple email addresses, separated by commas. Only commas can be used as separators.
- **Attach VM:** Check this box to include the voicemail message as an attachment. Uncheck this box to send the notification only. In considering this option, be aware of any file size limitations in your email system. For example, a three-minute message file is about 2MB.

Examples

Gmail

Gmail recommends the following settings:

- **Use SSL/TLS:** Check the box to use TLS or SSL encryption.
- **SMTP Server:** smtp.gmail.com
- **SMTP Port:** 587
- **Username:** Your full email address, such as *myName@gmail.com* or *myName@myDomain.com*
- **Password:** Your Gmail account password

Windows Live Hotmail

Windows Live Hotmail recommends the following settings:

- **Use SSL/TLS:** Check the box to use TLS or SSL encryption.
- **SMTP Server:** smtp.live.com
- **SMTP Port:** 587
- **Username:** Your full email address, such as *myName@hotmail.com* or *myName@myDomain.com*
- **Password:** Your Windows Live account password

Yahoo! Mail

Yahoo requires using a paid account for this type of service. Yahoo recommends the following settings:

- **Use SSL/TLS:** Check the box to use TLS or SSL encryption.
- **SMTP Server:** plus.smtp.mail.yahoo.com
- **SMTP Port:** 465 or 587
- **Username:** Your email address, without the domain name such as *myName* (without @yahoo.com)
- **Password:** Your Yahoo account password

Phone Buttons

Use the *Configuration > User/Group Features > Phone Buttons* page to customize the programmable feature buttons that are available on the IP phones and Cisco SPA500S expansion modules, also known as attendant consoles or side cars.

General Information and Options for Phone Buttons

- Buttons appear on a phone in the following order: Primary Personal Extensions, Additional Extensions, Shared Lines, Shared Extensions, and Individual Buttons. If you add or remove buttons, the relative position of buttons may change.
- This page does not display any user-configured speed dial buttons.
- To select a device to configure, use the selection list near the top left corner of the page. Each entry in the list represents an assigned phone or side car. If a user has only a phone, there is only one entry in the list. If the user has a side car, there is an entry for the phone and a separate entry for the side car. Refer to the device photo to see which device is selected.
    - To browse forward in the list, click the right-arrow button.
    - To browse backward in the list, click the left-arrow button.
    - To choose a device, click the down-arrow button and then choose an entry in the list.
    - You also can browse for a device by using the **Previous Set** and **Next Set** buttons near the lower right corner of the page.
- The selection list includes all users that have phones. However, programmable feature buttons are not available on all phones. To assign phones to users, see the *Assign Phones* page.
- The image of the phone or side car is interactive. If you position your mouse pointer over a field that you are configuring, such as *Personal Extension Right 1* or *SC1 Left 1*, a green arrow points to the corresponding button on the image of the phone or side car.
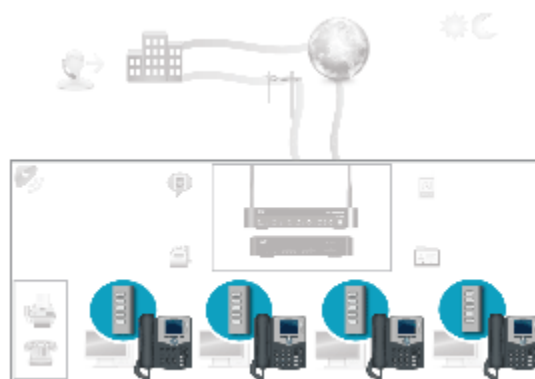
Settings for Phone Buttons

- **Personal Extension (phones only):** Choose the number of buttons to reserve for the primary personal extension. Each button supports two concurrent calls. Click the + or - button to increase or decrease the number of buttons to assign to this extension. Either the + or the - button may be unavailable, depending on the number of buttons. Up to four buttons can be used. The selected buttons are represented by white icons displaying the user name and extension number.
- **Group Buttons (phones only):** If the user has Additional Extensions or is a member of a Shared FXO Line or a Shared Extension, the configured buttons appear. To adjust the settings, see the *Shared FXO Lines* page, the *Additional Extensions* page, or the *Shared Extensions* page.
- **Individual Buttons (phones and side cars):** From the drop-down list, choose a function, as described below.
    - **Unused:** This button is not configured. **Tip:** You may wish to leave a button unconfigured so the user can add a personal speed dial. To do so, the user presses and holds the unused button for 3 to 4 seconds. Then the user enters a name and phone number. **Note:** If a digit

is used for Dial Immediately or Outside Line on the *Internal Dialing* page, it cannot be used as a personal speed dial digit. A personal speed dial button can be overwritten if you change the phone button settings in the configuration utility. This page does not display any user-configured speed dial buttons.

- **Auto-dial (Speed Dial):** Dials a specified number. During an active call, immediately transfers the call to the specified number. After you choose this option, choose Internal or External. For internal numbers, choose from the drop-down list. For an external number, specify the digit that is required to get an outside line, and then enter the phone number. Digits for outside lines are specified on the *Internal Dialing* page. **Tip:** This feature is useful if a user frequently calls or transfers calls to another user or group.

- **Line Monitor:** Monitors the status (ringing, on a call, or on hold) of a single extension. Also known as Busy Lamp Field (BLF). (Not available for FXS phones and system extensions such as Auto Attendant.) It also functions as a Auto-dial (Speed Dial) button to immediately call a user or to immediately transfer a call to a user, without consultation. In addition, it can be used as an Individual Pickup button to pick up a call that is ringing on the specified extension. If multiple calls are ringing, the first received call is picked up. A device can have only one Line Monitor or Phone Monitor to monitor a user. **Tip:** This feature is useful for an administrative assistant who monitors an extension of an executive, and for co-workers who back up one another during breaks. Note that this button does not reflect the user's activity on other extensions such as Shared Lines and Shared Extensions.

- **Phone Monitor:** Monitors the status (ringing, on a call, or on hold) of another phone, including all extensions on the phone. Also known as Phone Busy Lamp Field (Phone BLF). (Not available for FXS phones and system extensions such as Auto Attendant.) It also functions as a Auto-dial (Speed Dial) button to immediately call a user or to immediately transfer a call to a user, without consultation. In addition, it can be used as an Individual Pickup button to pick up a call that is ringing on the specified phone. If multiple calls are ringing, the first received call is picked up. A device can have only one Line Monitor or Phone Monitor to monitor a user. **Tip:** This feature is useful for an administrative assistant who monitors an extension of an executive, and for co-workers who back up one another during breaks.

- **Block CLID (phones only):** Blocks the caller ID from a call. To use this feature, the user presses the button and then dials the number. Caller ID is blocked for the current call only. This feature applies to internal station-to-station calls and SIP calls, not to calls placed through analog phone lines. A phone can have only one Block CLID button. **Tip:** This feature is useful for users who frequently use star codes to block the CLID for calls; time is saved by not entering star codes.

- **Call Park Slot:** Works like a speed dial to the specified call park slot (numbered 1 through 10). During an active call, a user presses this button to place the call on hold in the specified call park slot. To retrieve the call, the user can press this button again. Alternatively, the call can be unparked from any IP phone by using the softkeys or star codes, as described in the phone user guide (available at www.cisco.com/go/uc300). **Note:** Soft keys are not available on all phone models. **Tip:** This feature is useful if a user frequently parks calls; time is saved by not using softkeys or star codes, or entering a park slot number. This feature is especially helpful if a user parks calls on one phone and retrieves them from another phone; there is no need to memorize a park slot number.

- **Force Night:** The function depends on the Call Scheduling settings and Schedule Behavior settings on the *Day/Night Features* page. With a manually operated schedule, at least one phone must have a Force Night button. In normal use, the button is green. A user presses this button when the office closes, activating the specified Night settings (red). When the business opens, the user presses the button to return to the Day settings (green). With an automated schedule, a user presses this button to override the automated schedule and immediately implement the Night settings (red). For example, this step would be needed if the office normally closes at 5 but is closing at noon on the day before a holiday. The user presses the button again to return to the normal schedule (green). Be aware, the button cannot be used to override the automated Night schedule with the Day settings. A phone can have only one Force Night button. **Tip:** This feature is helpful if a user is responsible for opening and closing the office.

- **Group Pickup:** Displays a list of ringing calls on the phone screen. The user can choose a call to answer. A phone can have only one Group Pickup button. **Tip:** This feature is useful in a busy office in which it is important to quickly answer calls.
- **Group VM Monitor (phones only):** Adds a line button that indicates when new messages are available in the specified group voicemail box. The button acts as a speed dial to the voicemail box. After you choose this option, select a voicemail box to monitor. **Tip:** This feature is useful if a user is responsible for managing the voicemail messages for a hunt group or for a group of which he/she is not a member. **Note:** It is not necessary to add a Group VM Monitor to monitor a Shared FXO Line or a Shared Extension of which the user is a member. For these features, the line button displays an envelope icon to indicate new messages.
- **Intercom:** Initiates a two-way intercom call to the specified user through the speaker of the assigned phone. After you choose this option, choose the user from the drop-down list. **Tip:** This feature is useful for an executive who needs to communicate frequently with an assistant.
- **Page Group:** Initiates a one-way call to all members of a paging group by using the speakers of the members' phones. After you choose this option, choose the page group from the drop-down list. **Tip:** This feature is useful for a user who frequently pages a particular group; time is saved by not having to dial the paging group extension number.

Phone Button Labels

Use the *Configuration > User/Group Features > Phone Button Labels* page if you need to adjust the button labels that appear on the phone screens.

- Keep the default description, or click the pencil icon to enter a description. This label will appear on the phone screen. A change in a Group Button label applies to all phones in the group. A label can include up to 30 characters. However, depending on the phone model and the number of buttons that are configured, a long label may be truncated. For best display on the phone screen, keep the labels short. **Note:** After you edit the description, you can click the Restore icon to restore the default value.

- To select a device to configure, use the selection list near the top left corner of the page. Each entry in the list represents an assigned phone. If a user has only a phone, there is only one entry in the list. Refer to the device photo to see which device is selected.
  - To browse forward in the list, click the right-arrow button.
  - To browse backward in the list, click the left-arrow button.
  - To choose a specific phone, click the down-arrow button and then choose an entry in the list.
  - You also can browse for a device by using the **Previous Set** and **Next Set** buttons near the lower right corner of the page.
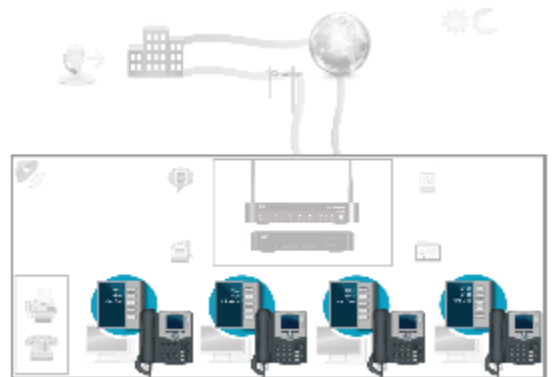
Directory

Use the *Configuration > User/Group Features > Directory* page to view the directory listings that users can access through the phone menus. Add external numbers to the directory if needed.

- **Internal Directory:** This directory includes all internal numbers, including system extensions, personal extensions, shared extensions, paging groups, and hunt groups.
- **External Directory:** This directory includes up to 100 external phone numbers. You can maintain these entries as described below. The new directory entries are available on the phones when you apply the configuration
    - **Create an external entry:** Click this button to add an external phone number to the directory.
    - **Name:** Type the name, as it will appear in the Directory on the phones.
    - **Number:** Enter the phone number, including any digit that is required to get an outside line. Do not include spaces or punctuation.
    - **To delete an entry:** Click the delete button (X).
    - **To edit an entry:** Click in a field and make your changes.
    - **To download a CSV file as a template for data entry:** Click the Download icon to save a CSV file to use as a template. You can open the directory.csv file in a text-editing program such as Notepad or a spreadsheet program such as Microsoft Excel. The file includes any records previously entered in the directory, or a sample record for reference.
    - **To enter the information in a CSV file:** You can use a downloaded template or create a new CSV file. Edit in a text-editing program such as Notepad or a spreadsheet program such as Microsoft Excel. Enter a name, as it will appear in the Directory on the phones. Then enter the phone number, including any digit that is required to get an outside line. Do not include spaces or punctuation. In a text-editing program, separate the values with commas, and create each entry on a new line. In a spreadsheet program, enter each value in a separate cell, and create each entry on a new row. If working from a template, delete the sample record. Save the file in CSV format. You can then import the file, as described below.
    - **To import a CSV file:** Click the Import icon to import a CSV file of names and phone numbers that you have prepared. Choose the file, and then click **Open**. Errors appear if any values are invalid. The imported entries appear at the bottom of the list.
- **Groups Directory:** This directory includes shared extensions, paging groups, and hunt groups.
- **Stations Directory:** This directory includes users and personal extensions.
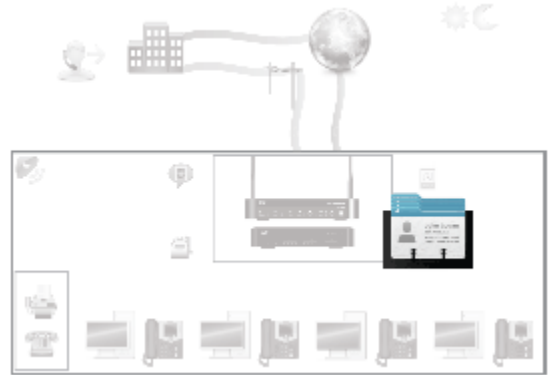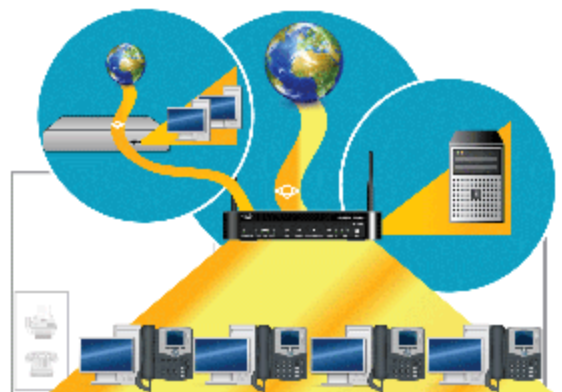
Network

In the Network section of the Configuration module, you configure your topology, WAN connection, and LAN settings. You also can enable port forwarding.

Topology

Use the *Configuration > Network > Topology* page to choose the correct topology for your site. For help, click the **Help Me Choose** button or position your mouse pointer over the pointer icons on the screen.
Enter any required settings for the selected type.
Depending on the changes, after you apply the configuration, you may need to align your PC with new

network addressing. You also may need to reconnect to the configuration utility by entering a new LAN IP address into the web browser.

WAN

Use the *Configuration > Network > WAN* page to configure your Internet settings for connectivity to Cloud Features. For example, the Cisco UC320W can allow you to access firmware upgrades and documentation after you configure your Internet connection. By default, the Cisco UC320W will connect by using DHCP. However, your Internet Service Provider may require special settings. Refer to the information provided by your ISP for your Internet service account.

Note: Refer to the on-screen illustration for the location of the WAN port, where you can connect the Cisco UC320W to your Internet service. You can position your mouse pointer over the pointer icon to view the picture at a larger size.

- **Estimated Uplink Bandwidth:** Choose a rate that is equal to or less than the upstream bandwidth specified by your service provider. **Tip:** Consider choosing a setting that is one level below your provider's advertised limit. This setting helps to ensure that voice is prioritized during periods of heavy network traffic.
- **WAN Type:** Choose the type of Internet connection that is required by your service provider. Then enter the information for the selected WAN type.

WAN Types
- **DHCP:** Dynamic Host Control Protocol, the default option, is often used with cable modems. Select this option if your ISP did not assign a static IP address to your account and instead uses DHCP to assign an IP address dynamically. No other information is required for this selection. Optionally, you can enter a **Domain Name**, if provided by your ISP. **Note:** One disadvantage of using a dynamic IP address is that if your IP address changes, your Cisco UC320W and all connected devices will reboot. Telephone service will be interrupted.
- **Static IP:** Select this option if your ISP provides you with a static IP address. Complete the required fields. Also complete the optional fields if the information was provided by your ISP.
- **PPPoE (DSL):** PPPoE is often used with DSL services. Select this option if your ISP uses PPPoE and the router obtains an IP address by using PPP/IPCP address negotiation. Complete the required fields. Also complete the optional fields if the information was provided by your ISP. Finally, configure your connection with the Keep Alive or Connect on Demand option, as described below.
    - **Keep Alive**: Choose this option to use Keep Alive messages to keep the connection permanently open, regardless of the level of Internet activity by your users.
    - **Connect on Demand**: Choose this option to open a connection only when a user attempts to connect to the Internet. In the **Maximum Idle Time**, enter the number of minutes of inactivity that will cause the connection to be terminated. This option is recommended if your billing is based on the time that you are connected.
- **PPTP DHCP:** Select this option if your ISP uses PPTP (Point to Point Tunneling Protocol) and did not assign a static IP address to your account. Complete the required fields. Also complete the optional fields if the information was provided by your ISP. **Note:** One disadvantage of using a dynamic IP address is that if your IP address changes, your Cisco UC320W and all connected devices will reboot. Phone service will be interrupted. Finally, configure your connection with the Keep Alive or Connect on Demand option, as described below.
    - **Keep Alive**: Choose this option to use Keep Alive messages to keep the connection permanently open, regardless of the level of Internet activity by your users.
    - **Connect on Demand**: Choose this option to open a connection only when a user attempts to connect to the Internet. In the **Maximum Idle Time**, enter the number of minutes of

inactivity that will cause the connection to be terminated. This option is recommended if your billing is based on the time that you are connected.

- **PPTP static:** Select this option if your ISP uses PPTP (Point to Point Tunneling Protocol) and gave you a static IP address. Complete the required fields. Also complete the optional fields if the information was provided by your ISP. Finally, configure your connection with the Keep Alive or Connect on Demand option, as described below.

  - **Keep Alive**: Choose this option to use Keep Alive messages to keep the connection permanently open, regardless of the level of Internet activity by your users.
  - **Connect on Demand**: Choose this option to open a connection only when a user attempts to connect to the Internet. In the **Maximum Idle Time**, enter the number of minutes of inactivity that will cause the connection to be terminated. This option is recommended if your billing is based on the time that you are connected.

- **L2TP DHCP:** Select this option if your ISP uses L2TP (Layer 2 Tunneling Protocol) and did not assign a static IP address to your account. Complete the required fields. Also complete the optional fields if the information was provided by your ISP. Finally, configure your connection with the Keep Alive or Connect on Demand option, as described below. **Note:** One disadvantage of using a dynamic IP address is that if your IP address changes, your Cisco UC320W and all connected devices will reboot. Phone service will be interrupted.

  - **Keep Alive**: Choose this option to use Keep Alive messages to keep the connection permanently open, regardless of the level of Internet activity by your users.
  - **Connect on Demand**: Choose this option to open a connection only when a user attempts to connect to the Internet. In the **Maximum Idle Time**, enter the number of minutes of inactivity that will cause the connection to be terminated. This option is recommended if your billing is based on the time that you are connected.

- **L2TP static:** Select this option if your ISP uses L2TP (Layer 2 Tunneling Protocol) and gave you a static IP address. Also configure your connection with the Keep Alive or Connect on Demand option, as described below. Finally, configure your connection with the Keep Alive or Connect on Demand option, as described below.

  - **Keep Alive**: Choose this option to use Keep Alive messages to keep the connection permanently open, regardless of the level of Internet activity by your users.
  - **Connect on Demand**: Choose this option to open a connection only when a user attempts to connect to the Internet. In the **Maximum Idle Time**, enter the number of minutes of inactivity that will cause the connection to be terminated. This option is recommended if your billing is based on the time that you are connected.

LAN

The use of VLANs improves network performance and helps to maintain Quality of Service (QoS) for IP phone calls. Use the *Configuration > Network > LAN* page to configure the basic settings for the Data VLAN and the Voice VLAN.

Notes:

- Refer to the on-screen illustration for the location of the LAN ports, where you can connect network devices such as IP phones, Ethernet switches, and computers. You can position your mouse pointer over the pointer icon to view the picture at a larger size.

- The default address scheme for the Data and Voice VLANs should be sufficient in most cases, but you can change these settings if your existing network requires a different address scheme.

- The Data VLAN settings are unavailable if you choose Topology Option 2 or 3 on the *Topology* page.
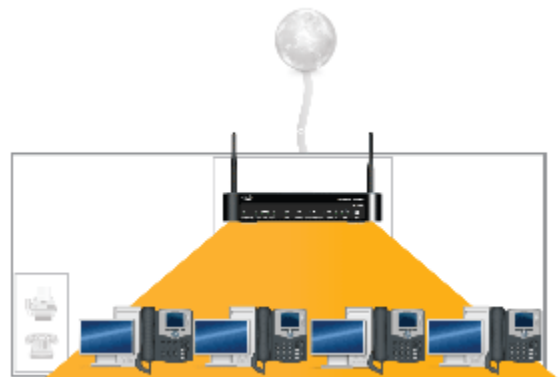
To view the Voice VLAN or Data VLAN settings, click the button. Then enter the settings, as described below.

- **Interface Number: VLAN:** The VLAN identification number. The Data VLAN is VLAN1 and the Voice VLAN is VLAN100. The Interface Number cannot be changed.
- **IP Address:** Enter an IP address for this VLAN. Choose an IP address outside the DHCP Address Range. The Data VLAN IP address is used to launch the configuration utility. If you change this setting, use the new Data VLAN IP address to connect to the configuration utility.
- **Subnet Mask:** Enter the subnet mask for the VLAN.
- **Default Gateway:** Enter the default gateway address for the VLAN.
- **Starting IP Address:** Enter the first IP address in the range of IP addresses that the Cisco UC320W can assign to the connected devices in this VLAN.
- **Ending IP Address:** Enter the final IP address in the range of IP addresses that the Cisco UC320W can assign to the connected devices in this VLAN. You must enter a valid range, based on the subnet mask.
- **Restore Defaults:** Click this button to clear your entries and restore the default VLAN settings.

Note: If you need to assign static IP addresses to servers and other devices, you can use any addresses that are outside the DHCP Address Range for the Data VLAN. If needed, adjust the Starting IP Address and Ending IP Address entries to allow for more static IP addresses.

Wireless

Use the *Configuration > Network > Wireless* page to configure separate wireless networks for data traffic and voice traffic.

Note: For wireless operation of Cisco SPA525G/G2 phones, first configure the phones with an Ethernet connection. Then enable the wireless network, enter other settings as needed, and apply your configuration. After the devices reboot, you can disconnect the Cisco SPA525G/G2 phone for wireless operation.

- **Enabled:** Check this box to enable the network, or uncheck the box to disable the network. For each enabled network, enter the settings, as described below.

Note: These settings are available only if the network is enabled.

- **Network Name (SSID):** Keep the default Service Set Identifier (SSID), or click the pencil icon to enter a name. This name identifies the wireless network to users. The SSID can include from 1-31 characters. Do not include spaces or special characters. **Note:** After you edit the SSID, you can click the Restore icon to restore the default value.
- **Broadcast the SSID?:** Check this box if you want to broadcast the network name to all wireless devices in range. Users of wireless devices will be able to see the SSID when they scan for available networks. Uncheck this box to prevent auto-detection of the SSID. In this case, a user must know the SSID to set up a wireless connection to the network.
- **Security Strength:** Choose the type of security required for access to the wireless network. Cisco recommends choosing the highest level of security that is compatible with your wireless devices. The following options are available:
  - **Higher Security (WPA2 Personal AES):** Cisco recommends this option. WPA2 provides better security than WEP because it uses dynamic key encryption. If you choose this option, also enter a **WPA PassPhrase**. It can include any numbers or letters and must be between 8 and 63 characters long. Example: HagensKey1293. When configuring your wireless connections, specify WPA2 Personal with AES encryption.
  - **Better compatibility with older wireless devices (WEP) :** Choose this option if you need to allow wireless access by network devices that are not compatible with WPA2. However, be aware that WEP is not considered to be secure and can easily be broken. If you choose this option, enter a **WEP Key**. It can include hexadecimal characters (a-f, 0-9) and must be either 10 (64-bit WEP) or 26 (128-bit WEP) characters long. Example:

1e34a678f0123456e89b123cc6 Alternatively, click Generate Key to automatically generate a valid key.

- **None (not recommended):** Choose this option to allow any wireless device within range to access your wireless network. This option is not recommended. Instead, you should use the highest level of security that is compatible with your network devices.

- **Wireless Channel:** Keep the default setting, Seek, to allow the Cisco UC320W to choose the best channel (strongly recommended). If you need to adjust this setting due to issues within your environment, choose a channel from the list. This setting applies to both wireless networks (if enabled).

Port Forwarding

Use the *Configuration > Network > Port Forwarding* page if you need to allow Internet users to access servers on your network that host services such as World Wide Web, email, FTP, videoconferencing, and gaming. You can add up to 25 entries.

General Information and Options for Port Forwarding

- To simplify the display, only the **Application Name** field is available when you first view this page. After you type a name, additional features become available. Either complete the entry or delete it; an incomplete entry produces an error, indicated by a red X in the navigation tree.

Note: You will need to assign a static IP address to each server rather than allowing these devices to receive dynamic IP addresses from the DHCP server.

- **To create the first entry:** Enter an Application Name, and then enter the settings as described below.
- **Create an Entry:** Click this button to create a new entry.
- **To remove an entry:** Click the delete button (X) for the shared extension that you want to remove.

Settings for Port Forwarding

- **Application Name:** Enter a name for the application, for your reference when working on this configuration page. Either complete the entry or delete it; an incomplete entry produces an error, indicated by a red X in the navigation tree.
- **Protocol:** Choose the protocol for this application. The options are TCP and UDP.
- **External Port:** Enter the external port number used by the server or Internet application. Port numbers can range from 1 to 65535. Check with the Internet application documentation for more information.
- **Internal Port:** Enter the internal port number used by the server or Internet application. Port numbers can range from 1 to 65535. Check with the Internet application documentation for more information.
- **Target IP Address:** Enter the IP address of the server that is hosting this application on your network. Choose a static IP address outside the range of IP addresses that the Cisco UC320W assigns dynamically to connected devices. To adjust the DHCP Address Range for the Data VLAN, see the *LAN* page.

Site Summary

Use the *Apply Changes > Site Summary* page to enter any comments about the site or the configuration and to review the settings from each module of the configuration utility.

To review and modify settings:

- Position your mouse pointer over a tab to view the full label. Click the tab to view a summary of the settings from the specified module.
- On each page, the settings appear in black type. Blue type indicates a link that you can click to return to a particular configuration page.
- Remember that the settings are not applied to the devices until you apply all changes on the *Apply Configuration* page. If you wish to exit without applying your configuration, you can use the Backup/Save Session link to save your session for later use.

Apply Configuration

Use the *Apply Changes > Apply Configuration* page to apply your settings. Applying your configuration will restart the Cisco UC320W. Phone service will be interrupted and network traffic will stop for several minutes. For some types of changes, a configuration may be applied without a reboot. However, since service will be interrupted, you should schedule this task for a time that is least disruptive to the business.

You can apply the configuration only if there are no errors on the configuration screens. If there are errors, the Apply Configuration button is unavailable, and a message appears at the bottom of the screen. To find the errors, look for red X icons in the navigation tree. Open the indicated pages, and fix the problems before attempting to apply the configuration.

Tip: If you are not ready to apply your changes, you can continue working on other configuration pages. Return to this page when you are ready to apply the configuration. If you want to apply your configuration settings at a later time or date, you can use the **Save** button to save your session.

- **To apply the new settings:** Click **Apply All Changes**. When the confirmation appears, click **OK** to continue, or click **Cancel** to close the window without applying the configuration. After you apply a configuration, wait for the Cisco UC320W and all connected devices to restart. However, if a call is in progress, the phone will not reboot until completion of the call. If any error messages appear at the bottom of the screen, refer to the navigation tree to find the pages that are marked with the red X error icon. Fix the problems on those pages before you apply your configuration.
- **To view the system status:** Click **Finish and View System Status**. This button appears after you apply all changes. After you click this button, you will be redirected to the *Quick View* page.

Quick View

The *Status > Quick View* page provides a visual summary of the status of your site. To view more information about any section of the Quick View page, click the image to open the status page. Alternatively, use the links in the navigation tree.

Note: After the Configuration Utility is launched, it may take up to a minute for the Cisco UC320W to collect and display the current status information for all devices.

- **Devices:** This summary displays the number of IP phones, FXS phones, and IP telephony gateways. A yellow or red background indicates issues. Click for details.
- **Networks:** This summary displays the status of the WAN, the LAN and the Wireless network (if enabled). A yellow or red background indicates issues. Click for details.
- **DHCP Clients:** This summary displays the number of DHCP clients. A yellow border indicates a warning condition.
- **Voicemail:** This summary displays the number of messages and configured voicemail boxes. A yellow or red background indicates issues. Click for details.
- **External Trunks:** This summary displays the number of current calls, FXO (analog) trunks, and SIP/BRI (voice over IP) trunks. A yellow or red background indicates issues. Click for details.
- **External Call Records:** This summary displays the number of External Call Records.

- **Troubleshooting:** Provides access to the support tools.

Devices

Use the *Status* > *Devices* page to view statistics for the Cisco UC320W, the SPA8800 IP telephony gateways, and the IP phones.

Cisco UC320W Front Panel

Refer to the illustration for the current port states, corresponding to the lights on the front panel of the hardware.

- **POWER/SYS:** Green - Normal operation. Slow flashing - Booting up. Fast flashing - Upgrading firmware. Off - No power.
- **LAN 1:** LAN 1 port status: Green - Connected to a device on this port. Flashing - Sending or receiving data. Off- Not connected.
- **LAN 2:** LAN 2 port status: Green - Connected to a device on this port. Flashing - Sending or receiving data. Off- Not connected.
- **LAN 3:** LAN 3 port status: Green - Connected to a device on this port. Flashing - Sending or receiving data. Off- Not connected.
- **LAN 4:** LAN 4 port status: Green - Connected to a device on this port. Flashing - Sending or receiving data. Off- Not connected.
- **WAN:** WAN port status: Green - Connected to WAN. Flashing - Sending or receiving data. Off- Not connected.
- **PHONE (FXS):** Phone (FXS) port status: Green - Service is available on the port, and the port is not in use. Slow Flashing - Service is available and the attached phone is off hook (in use). Off - The port is disabled.
- **LINE (FXO) 1:** Line (FXO) port 1 status: Green - PSTN line loop detected on this port. Slow Flashing - FXO port is in use. Off - Not connected.
- **LINE (FXO) 2:** Line (FXO) port 2 status: Green - PSTN line loop detected on this port. Slow Flashing - FXO port is in use. Off - Not connected.
- **LINE (FXO) 3:** Line (FXO) port 3 status: Green - PSTN line loop detected on this port. Slow Flashing - FXO port is in use. Off - Not connected.
- **LINE (FXO) 4:** Line (FXO) port 4 status: Green - PSTN line loop detected on this port. Slow Flashing - FXO port is in use. Off - Not connected.
- **WLAN:** Wireless network status: Green - Wireless radio is on. Flashing - Sending or receiving data. Off - Disabled.
- **VM:** Voicemail system status: Green - Voicemail is enabled. Fast Flashing - System is full. Slow flashing - Retrieving or recording voicemail. Off - Disabled.
- **USB 1:** USB port 1 status: Green - A USB key is installed. Off - Not connected. Flashing - Connected but not yet available for access.
- **USB 2:** USB port 2 status: Green - A USB key is installed. Off - Not connected.
- **WPS:** Green - WiFi Protected Setup succeeded. Slow flashing - Setup is in progress. Fast flashing - Setup error. Off - Not in use. To configure a WiFi connection by using WPS, make sure the wireless device is located near the Cisco UC320W, and then press and hold this button until the WPS light flashes.

Cisco UC320W Status Information

- **Device WAN MAC:** The MAC address of the WAN interface.
- **Device LAN MAC:** The MAC address of the LAN interface.
- **System Time:** The current date and time.
- **Night Time Ring Mode:** The active operational mode: Day Mode Active or Night Mode Active.
- **PMF Files Active:** The number of Platform Modification Files that are active on the Cisco UC320W. These files may be provided to you by Cisco support personnel.
- **Alter PMFs:** Click this button to add or remove Platform Modification Files. For more information, see the "Working with Platform Modification Files" section below.
- **Current firmware version:** The current firmware that is installed on the device.

- **Upgrade from your PC:** Click this button to upgrade the device with new firmware that you have stored on your computer. When the confirmation message appears, click **OK** to continue, or click **Cancel** to close the message without upgrading. After clicking OK, choose the firmware that you want to install, and click **Open**. Progress messages appear as the devices are updated.

During the upgrade process, do not disconnect power, press the reset button, close the web browser, or navigate to another web page. Wait for the Cisco UC320W and all connected devices to reboot. This process may take several minutes.

At the end of the process, if the browser displays a prompt about navigating to a new web page, click **OK**. The login page appears. If there are errors, a message appears.

Note: Your web browser may display a message indicating that the server cannot be reached. This situation occurs because the connection from the PC to the Cisco UC320W is interrupted during the restart process. After the Cisco UC320W restarts, you can refresh the web page or re-enter the LAN IP address for the Cisco UC320W, and you can log on.

Additional information about the upgrade process:

- It is a good practice to back up your configuration before you upgrade the firmware. If you use a USB key for the backup, it will include all settings, voicemail messages, voicemail greetings, and Auto Attendant prompts.
- For best results, close other browser windows before starting an upgrade. When other browser windows are open, the browser may display memory errors.
- Due to the large file size, do not use a wireless connection to upgrade the firmware.
- If the new firmware involves any changes in required settings, error icons may appear on some configuration pages after the upgrade is completed. Read the messages on the screen to learn more.
- After you install an earlier version of the firmware, you may be prompted to choose a compatible configuration file from a list of available files. If no compatible files are available, you will be prompted to create a new configuration.
- Auto Save files are removed during a firmware upgrade.
- Unapplied settings are abandoned during a firmware upgrade.
- **System Uptime:** The amount of time that the system has been in operation since the last reboot.
- **Restart System:** Click this button to reboot the Cisco UC320W.
- **System OS Uptime:** The number of days, minutes, hours, and seconds that the system has been in operation.

Working with Platform Modification Files

Use this tool to manage Platform Modification Files, if provided to you by Cisco support personnel.

Note:

- This window appears after you click the Alter PMFs button.
- For most types of Platform Modification Files, changes are not applied until you apply the configuration.

In the pop-up window, you can perform the tasks listed below.

- **Add PMF from Your PC:** Click this button to upload new Platform Modification Files from your PC. When the pop-up window appears, choose the file, and then click **Open**.
- **Enabled:** Check the box to enable the file.
- **Done:** Click to close the window and apply the enabled Platform Modification Files.
- **To remove a file:** Click the delete button (X) for the file that you want to remove. When the confirmation message appears, click **OK** to delete the file, or click **Cancel** to keep the file.

SPA8800 IP Telephony Gateway Status

The MAC address appears. Green bars indicate the status of the configuration: Configurable, Configured, and Registered.

Phones

- **Phone:** The phone model and MAC address.

Note: A yellow circle containing a minus sign indicates that the device previously was active, but its current state is unknown.

- **User:** The user to whom this phone is assigned. The primary personal extension number also appears here.

- **Reset Phone Password:** Click this button to reset the phone password for the user. The user's phone will be unlocked and the password will be cleared (no password). When the confirmation message appears, click **Reset** to continue, or click **Cancel** to close the message without resetting the password.
- **Configuration status icons:** The green bars on the right side of the page show the current configuration status:
    - 1 bar: Configurable
    - 2 bars: Configured
    - 3 bars: Registered

Networks

Use the *Status > Networks* page to view statistics for the WAN, wireless network, and LAN.
This page refreshes every 15 seconds.
Clear Counters: Click this button to reset all statistics on this page to 0. The counters are cleared the next time that the page refreshes.
WAN
- **WAN IP Address:** The public IP address of this interface.
- **WAN Mask:** The subnet mask for the WAN.
- **WAN Default Gateway:** The gateway address for the WAN.
- **WAN TX Packets:** The number of packets transmitted through this interface.
- **WAN RX Packets:** The number of packets received through this interface.
- **WAN MAC Address:** The MAC address of this interface.

Wireless
- **Wireless TX Packets:** The number of packets that have been transmitted through your wireless network
- **Wireless RX Packets:** The number of packets that have been received through your wireless network.

LAN
- **LAN1 - LAN4 TX Packets:** The number of packets that have been transmitted through the specified LAN port.
- **LAN1 - LAN4 RX Packets:** The number of packets that have been received through the specified LAN port.
- **LAN MAC Address:** The unique hardware identification code for the LAN interface.
- **IP Address:** The IP address of the LAN interface.
- **Network Mask:** The subnet mask for the LAN interface.

DHCP Clients

Use the *Status > DHCP Clients* page to view a list of DHCP clients.
- **Server:** The name of the DHCP server: DHCP_Server1 for Data (if applicable) and DHCP_Server2 for Voice.
- **Client Name:** The device name.
- **IP Address:** The dynamically assigned IP address of the device.
- **MAC:** The MAC address of the device.
- **Expire Time:** The time of day when the dynamically assigned address will expire.
- **Interface:** The interface in use: LAN for Ethernet connections and WL for wireless connections.

Voicemail

Use the *Status > Voicemail* page to view information about voicemail usage. You also can reset users' passwords.
The information on this page is automatically refreshed at 60-second intervals.

Voicemail System

- **Total Size:** The total storage capacity of the voicemail system, in minutes.
- **Allocated:** The amount of storage capacity that is used by the configured voicemail boxes.
- **Free:** The amount of storage capacity that is unused. **Note:** A mailbox is limited to 100 new messages, regardless of the total message length. If this limit is met, no additional messages can be received until the user saves or deletes some of the new messages.
- **Number of boxes:** The number of configured mailboxes.
- **Reinitialize All:** Click this button to delete all messages and personal settings from all mailboxes.

The following information is provided for each voicemail box.

- **Name:** The first and last name of the user, with the extension number for the voicemail box.
- **Reset Password:** Click this button to reset the voicemail password to the default password, **12345**. When the confirmation message appears, click **Reset** to continue, or click **Cancel**.
- **Reinitialize:** Click this button to delete all messages and personal settings from this mailbox.
- **New:** The number of messages that are in the mail box and have not been retrieved by the user
- **Saved:** The number of messages that are in the mail box and have been previously retrieved by the user
- **Used:** The amount of voicemail storage space that is currently used by all of the messages for this user
- **Last Message:** The date and time when the most recent message was stored

External Trunks

Use the *Status > External Trunks* page to view the state of each trunk.

The information on this page is automatically refreshed at 5-second intervals.

- **Trunk Name:** The label that is assigned to this port in your settings.
- **URL:** The URL that is used in SIP packets.
- **State:** The current status of the trunk.
- **Calls:** The number of calls currently in progress.
- **Capacity:** The number of simultaneous calls that are supported on this trunk.

Note: The Cisco UC320W supports up to 12 simultaneous calls across all trunks (including FXO and SIP/BRI trunks).

External Call Records

Use the *Status > External Call Records* page to view External Call Records for inbound and outbound calls (calls involving a SIP trunk or an FXO trunk. Internal, station-to-station calls are not included. Click a file at the top of the page, and view the data in the table. The data is automatically updated every 600 seconds (10 minutes), or you can refresh the page to show the latest data.

Within the table, you can view additional information and use filters to find the data that you want.

Displayed Information

- **Timestamp:** The date and time when the call was initiated.
- **Trunk:** The trunk that was used for the call.
- **Direction:** The direction of the call, inbound or outbound.
- **CLID:** The Caller ID phone number of the calling party.
- **Calling Line:** The Caller ID name of the calling party.
- **DNIS:** The dialed number, as determined by the Dialed Number Identification Service (DNIS).
- **Duration:** The length of the call, displayed in hours, minutes, and seconds.

Working with the Data

- **To sort the records:** Click any column heading to sort the list in ascending order. Click the column heading again to sort in descending order.
- **To filter the list to show only records containing specified values:** Click in the filter field type characters or keywords, and then press the Enter key to filter the display. For example, in the CLID field, enter a phone number to view only the records for that number.

- **To remove a filter:** An X icon appears immediately to the right of the filter field. Click this button to remove the filter.
- **To remove all filters:** An X button appears at the end of the filter row. Click this button to remove all filters and to show all available records.
- **To refresh the list of records:** Click the Refresh button to refresh the list with the latest data.
- **To refresh the details:** Click the Refresh button to refresh this section with the latest data. The icon appears near the top right corner of the table.
- **To export the data:** Click the Download icon to export the data to an XML file.

Support Tools

When investigating issues, you can use the *Status > Support Tools* page to capture system logs and perform ping tests. Additional tools may be available with Platform Modification Files.

System Logs

Click the **System Logs** tab to enable system logs. As a best practice, Cisco recommends that you enable logging only when needed, and disable logging when you finish the investigation. Logging consumes resources and can impact system performance.

- Click **On** to enable logging, or click **Off** to disable this feature. To avoid unnecessary impact on system resources, disable logging when you finish troubleshooting.
- **Choose additional items to include in the system log:** Check the box to include this information the logs. Uncheck the box to exclude this information from the logs. Changes take effect immediately, when system logging is enabled.
- **Reset Syslog:** Click to remove all data from the system logs.
- **Show SIP Only:** Check this box to show only SIP traffic in the logs. Uncheck this box to remove this filter.
- **To export the data:** Click the Export icon near the top right corner of the System Log to save the logs as a text file. This icon is available after you display a log.

Ping

Click the **Ping** tab to use ICMP Echo (ping) requests to test connectivity between the Cisco UC320W and a specified IP address.

- **Destination address:** Enter the IP address or domain name that you want to ping.
- **Start PING:** Click to start the ping test.
- **Stop PING:** Click if you do not want to continue the ping test.
- **Ping Results:** Displays the results of the ping test
- **Clear Ping Results:** Click to delete the ping test results.
- **Number of packets to send:** Choose the number of packets to send.
- **Size of packets:** Choose the size of each packet to send.

CDP Neighbors

Use the *Status > CDP Neighbors* page to view status information about neighboring devices that were discovered by the Cisco Discovery Protocol. This information may be useful for troubleshooting.

- **Device:** The host name of the device.
- **Interface:** The interface where the device is connected.
- **Hold Time:** The number of seconds that the device will hold packets received from neighbor devices.
- **Capability:** The device type: R - Router, T - Trans Bridge, B - Source Route Bridge, S - Switch, H - Host, I - IGMP, r - Repeater.
- **Platform:** The model number of the device.
- **Port ID:** The port where the device is connected.
- **IP Address:** The IP address of the device.

How Do I?

Read the information below to find answers to common questions about configuration tasks.

How do I upgrade the firmware?

To upgrade the firmware from a file on your PC, click the **Upgrade from your PC** button on the *Status > Devices* page.

How do I reserve an analog phone line as a private line for an executive?

For this scenario, complete the following tasks:

- Use the *Configuration > Telephony > PBX/Key System* page to set the System mode to Key System or Blend mode to allow the configuration of Shared FXO Lines.
- Use the *Configuration > Ports and Trunks > Line (FXO) Ports* page to enable your FXO trunks.
- Use the *Configuration > Users/Phones > Users* page to create a user record for the executive.
- Use the *Configuration > Users/Phones > Assign Phones* page to assign a phone to the executive.
- Use the *Configuration > Extension Buttons > Shared FXO Lines* page to create a Shared FXO Line. Add only one Member, the executive who needs the private line.
- When finished entering settings in the system, apply the configuration. The phone of the executive will have a phone button that displays the name that you assigned to the line. The executive can press the button to receive and place calls on this line. No other users will have access to this line.

How do I route calls for specific SIP/BRI phone numbers to individual users or groups?

In this scenario, there are three phone numbers that need to be routed as follows:

- 972 555-0100 Main Number (Auto Attendant)
- 972 555-0300 Sales Number (Sales Hunt Group)
- 972 555-0301 Billing Number (Business Manager)

For this scenario, complete the following tasks:

- Use the *Configuration > Telephony > PBX/Key System* page to set the System mode to PBX or Blend mode to allow the configuration of SIP/BRI trunks.
- Use the *Configuration > Telephony > Day/Night Features* page to enable the Auto Attendant.
- Use the *SIP/BRI Trunks* page to configure the SIP/BRI trunks.
- Use the *Configuration > Users/Phones > Users* page to create the user records.
- Use the *Configuration > Users/Phones > Assign Phones* page to assign phones to the users.
- Use the *Configuration > Call Routing > Hunt Groups* page to create a hunt group for the Sales team.
- On the *Configuration > Call Routing > Inbound Calls* page, complete the following tasks:
  - Click **Add Specified Number**. Enter a phone number. Repeat until all numbers are added.
  - In the list of numbers that you entered, find 972 555-0100 (your Main Number). Click **Move** to move it to a new route. For the label, type Main Number. Under **Ring**, choose your destination, Auto Attendant. Repeat this step for your Sales Number (choosing the Sales Hunt Group as the destination). Finally, repeat this step for your Billing Number (choosing the personal extension of the Business Manager as the destination).
  - When finished entering settings in the system, apply the configuration. To verify your settings, use an external phone such a cell phone to place calls to the specified numbers.

How do I assign different outbound dialing digits to each outbound trunk? I want users to press 8 for our Voice over IP service and 9 for our local telephone service.

For this scenario, complete the following tasks:

- Use the *Configuration > Telephony > PBX/Key System* page to set the System mode to PBX mode or Blend mode to allow the configuration of Shared FXO Lines and SIP/BRI trunks.
- On the *Configuration > Telephony > Internal Dialing* page, configure the digits 8 and 9 with the Outside Line option.
- On the *Configuration > Telephony > Outbound Trunks* page, both trunks are selected by default for both Outside Line digits. Make the changes described below.
  - For digit 8, uncheck the FXO trunk. The SIP/BRI trunk will remain selected and will appear on the screen as choice number 1.
  - For digit 9, uncheck the SIP/BRI trunk. The FXO trunk will remain selected and will appear on the screen as choice number 1.

Note: Optionally, you can select a second trunk to be used when the first choice is busy. The Busy state of a SIP/BRI trunk depends on the number of maximum concurrent calls specified by your SIP provider. The Cisco UC320W supports up to 12 simultaneous calls across all trunks (including FXO and SIP/BRI trunks).

- Use the *Configuration > Ports and Trunks > Line (FXO) Ports* page to enable your FXO trunks.
- Use the *Configuration > Ports and Trunks > SIP/BRI Trunks* page to configure the SIP/BRI trunks.
- When finished entering settings in the system, apply the configuration. To verify your settings, place an outbound call by pressing 8 before you dial the number. After ending that call, place an outbound call by pressing 9 before you dial the number. Use the *Status > External Call Records* page to check the call detail records to confirm that the expected trunk was used in each case.

How do I set up the Music On Hold to use a recording other than the default music? We would like to loop through a recording that includes music and announcements.

For this scenario, complete the following tasks:

- Prepare your recording, and store it on your music player.
- Connect the music player to the Line In port of the Cisco UC320W. Use the controls on the music player to play the recording.
- In the configuration utility, use the *Configuration > Telephony > Music* page. Choose the External option to use an external music source.
- When finished entering settings, apply the configuration. To verify, you can place a call from one extension to another. When the call is placed on hold, the recording is played. If the recording does not play, verify the settings on the music player. The system will fail over to the internal music source if audio is not detected from the external device.

How do I set up the phones so that a user can monitor an extension for another user? A nurse needs to monitor the extension for a doctor.

For this scenario, complete the following tasks:

- Use the *Configuration > Users/Phones > Users* page to create the user records.
- Use the *Configuration > Users/Phones > Assign Phones* page to assign phones to the users. Make sure to choose phone models that provide enough phone buttons to support the user needs.
- On the *Configuration > User/Group Features > Phone Buttons* page, choose the phone or side car from the selection list near the top left corner of the page. Find an unused button, and select Line Monitor from the drop-down list. In the Target User field, choose the doctor. Also choose the Target Extension (a user may have more than one extension).
- When finished entering settings, apply the configuration. The new button appears on the selected phone or side car. The nurse can see whether the monitored extension is idle (unlit), ringing (flashing orange), on a call (red), or holding a call (flashing red). The nurse can press the Line Monitor button to speed-dial the doctor, immediately transfer an active call to the doctor, or to pick up a call that is ringing on the monitored extension.

How do I enable intercom calls? A manager wants to use the intercom to communicate with an assistant.

For this scenario, complete the following tasks:

- Use the *Configuration > Users/Phones > Users* page to create the user records.
- Use the *Configuration > Users/Phones > Assign Phones* page to assign phones to the users. Make sure to choose phone models that provide enough phone buttons to support the user needs.
- On the *Configuration > User/Group Features > Phone Buttons* page, choose the phone or side car from the selection list near the top left corner of the page. Find an unused button, and select Intercom from the drop-down list. In the Target User field, choose the assistant.
- When finished entering settings, apply the configuration. The new button appears on the selected phone or side car. The manager can press the Intercom button to initiate the intercom call, using the phone speaker for audio. The manager can begin speaking immediately. They have two-way audio through the speakers of the two phones, or can use their handsets if preferred.

How do users retrieve voicemail for a Hunt Group, Shared Extension, or Shared Line?
Use one of the following options:
- Dial the Voicemail Pilot extension number, and enter the mailbox number, followed by **#**. Also enter the password. The default mailbox password is **12345**. The first time that a user opens the mailbox, the system will provide instructions for the new mailbox setup process.
- Press the Messages button on a phone, and then press **#** to go to the main menu. Enter the mailbox number, followed by **#**. Also enter the password. The default mailbox password is **12345**. The first time that a user opens the mailbox, the system will provide instructions for the new mailbox setup process.

How do employees retrieve voicemail from outside the office?
There are several options.
- **An employee calls the office and either dials or is transferred to his or her own extension.** If you have an Auto Attendant that allows callers to dial an extension at any time, the user can call in, connect to the Auto Attendant, and dial his or her own extension number. If you do not have an Auto Attendant enabled, an employee can call the office number and ask to be transferred to his or her own extension. When the call goes to voicemail, the user presses * for the menu. Then the user enters the password, followed by **#**.
- **Configure an Auto Attendant menu option for this purpose.** On the *Configuration > Call Routing > Auto Attendant* page, configure a button that transfers calls to the Voicemail Pilot. Record a prompt that announces this option to employees.
- **Reserve a phone line for voicemail retrieval.** If you have sufficient telephone numbers, you can devote one phone number for employees to use for voicemail retrieval. On the *Configuration > Call Routing > Inbound Calls* page, click **Create an Inbound Calling Route**, and enter a label. Move a phone number to this routing group. For the destination, choose Voicemail Pilot. Apply your configuration. To verify, call this number from an outside phone, such as a cell phone. When an employee dials this number, calls are routed to the Voicemail Pilot.

How can I reach the AA Prompt Recorder from outside the office?
There may be times when you want to update your Auto Attendant prompts from outside the office. For example, in a bad weather situation, you could dial into the office and change your greeting to announce a delayed schedule for the day. There are several ways to access the AA Prompt Recorder.
- **An employee calls the office and either dials or is transferred to the AA Prompt Recorder extension.** If you have an Auto Attendant that allows callers to dial an extension at any time, you can call in, connect to the Auto Attendant, and dial the AA Prompt Recorder Extension. If you do not have an Auto Attendant enabled, you can call the office number and ask to be transferred to this extension.
- **Configure an Auto Attendant menu option for this purpose.** On the *Configuration > Call Routing > Auto Attendant* page, configure a button that transfers calls to the AA Prompt Recorder. Record a prompt that announces this option to employees.

How do I send night-time calls to my answering service? Should I use night-time call forwarding or night-time call routing?
The choice depends on whether you want to immediately send calls to your answering service or whether you want to allow a night-time employee to answer calls, and forward only the unanswered calls to the answering service.
- To immediately send calls to your answering service, complete the following tasks:
  - Enable night-time call routing on the Day/Night Features page.
  - On the *Configuration > Telephony > Inbound Calls* page, in the night settings for the route, specify the answering service's phone number as the destination. Inbound calls to this trunk will be sent immediately to the answering service. Repeat this step as needed for each route and each trunk.
- To allow time for a night-time staff person to answer before the call is forwarded, complete the following tasks:
  - On the *Configuration > Telephony > Day/Night Features* page, enable night-time call routing (optional) and night-time call forwarding .
  - Optionally, if you enabled night-time call routing, use the *Inbound Calls* page to specify night-time destinations as needed. For example, perhaps you route calls to the AA during the day but to a desk clerk at night.

- On the *Call Forwarding* page, adjust the night-time call forward settings for the individuals and groups. For example, if you are routing inbound calls to the night clerk, specify that unanswered night calls are forwarded to the answering service.

How do I configure the SMTP settings for my email account?

For this scenario, open the *Configuration > User/Group Features > Voicemail to Email* page, and check the **Use Voicemail to Email** box to enable this feature. To enter the SMTP settings, refer to the examples below. (For up-to-date information about the requirements, refer to the your provider's support site.)

Tip: Cisco recommends that you create a new email account to send your voicemail-to-email notifications. Using your personal email address would unnecessarily expose your personal email login credentials in the Cisco UC320W configuration. Also be aware that many email accounts keep a copy of all sent messages by default. Anyone with access to this email account will have access to the sent messages. Review your email settings to ensure that they are appropriate for the privacy policy of your business. After setting up an account, verify that you can send and receive email through the account before configuring your voicemail-to-email settings for the Cisco UC320W.

Example: Gmail

Gmail recommends the following settings:

- **Use SSL/TLS:** Check the box to use TLS or SSL encryption.
- **SMTP Server:** smtp.gmail.com
- **SMTP Port:** 587
- **Username:** Your full email address, such as *myName@gmail.com* or *myName@myDomain.com*
- **Password:** Your Gmail account password

Example: Windows Live Hotmail

Windows Live Hotmail recommends the following settings:

- **Use SSL/TLS:** Check the box to use TLS or SSL encryption.
- **SMTP Server:** smtp.live.com
- **SMTP Port:** 587
- **Username:** Your full email address, such as *myName@hotmail.com* or *myName@myDomain.com*
- **Password:** Your Windows Live account password

Example: Yahoo! Mail

Yahoo requires using a paid account for this type of service. Yahoo recommends the following settings:

- **Use SSL/TLS:** Check the box to use TLS or SSL encryption.
- **SMTP Server:** plus.smtp.mail.yahoo.com
- **SMTP Port:** 465 or 587
- **Username:** Your email address, without the domain name such as *myName* (without @yahoo.com)
- **Password:** Your Yahoo account password

Appendix A: Installation Options for the Unified Communications System

This appendix provides instructions about the following installation options:

- **Wall Mounting, page 60**

- **Optional Power Cord Retention Kit, page 62**
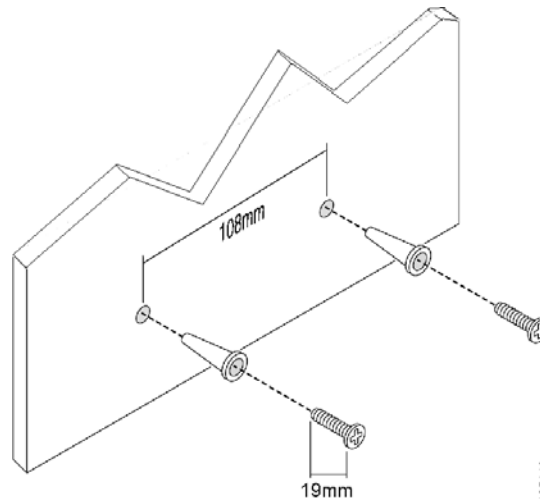
Wall Mounting

Recommended hardware (not included): #6 (0.1380 in. diameter) pan-head tapping screws, 3/4-in. (19mm), with anchors for sheet rock installation.

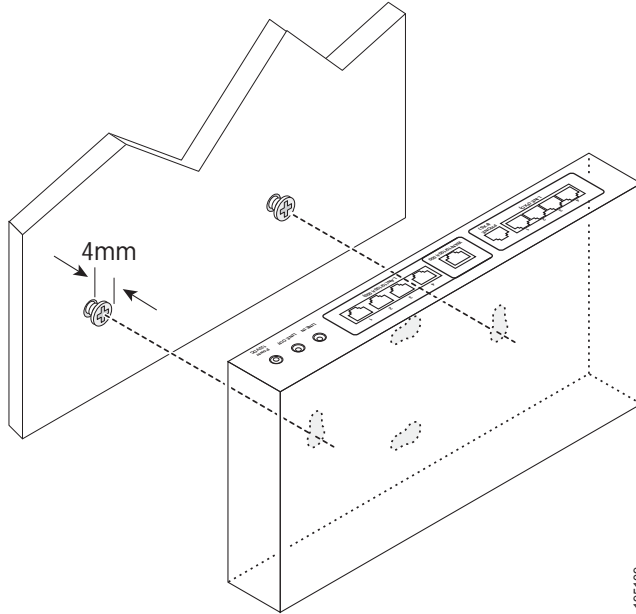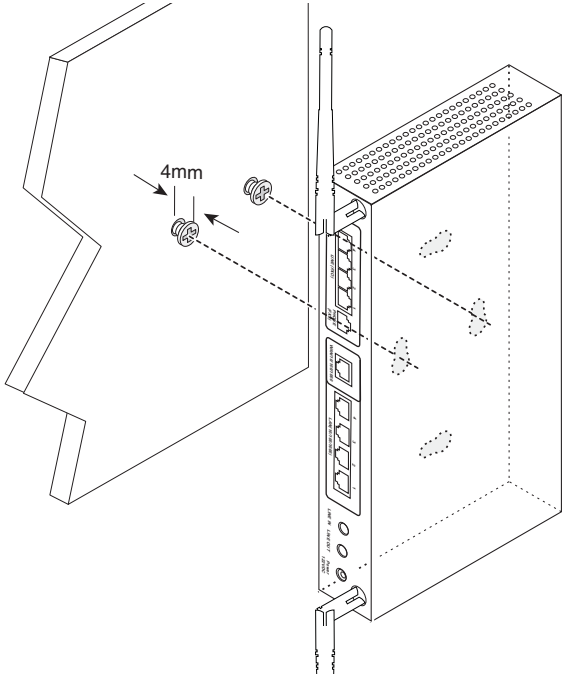**STEP 1** Drill the holes as shown.

Horizontal Orientation:
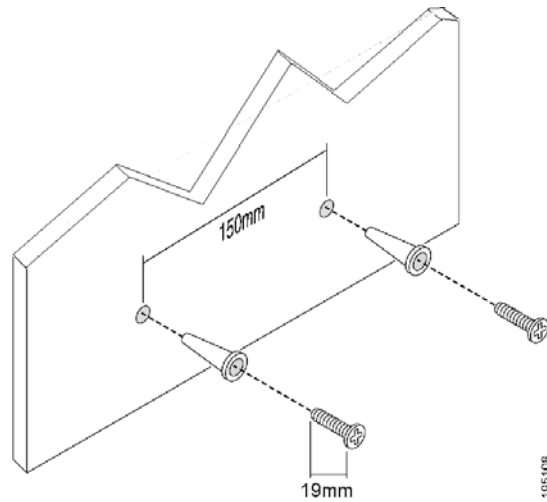
Vertical Orientation

STEP 2 Insert the screws, leaving a gap of 4mm between the screw head and the wall. Then mount the Cisco UC320W as shown.

Horizontal Orientation

4mm

195109

Vertical Orientation

4mm

195111

Optional Power Cord Retention Kit

Optionally, you can install the power cord retention kit to prevent accidental removal of the power cord.

STEP 1 Remove the screw next to the power port.
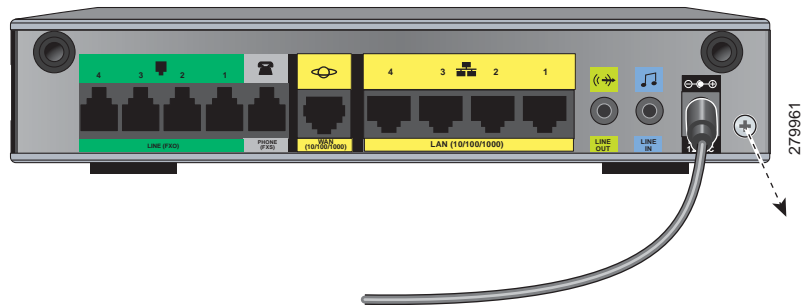
STEP 2 Ensure that the power cord is firmly connected to the power port.

STEP 3 Clip the power cord retention clamp to the power cord, about 10 to 12 inches from the connector.

STEP 4 Position the clamp against the rear panel of the unit, and install the screw, as illustrated below.
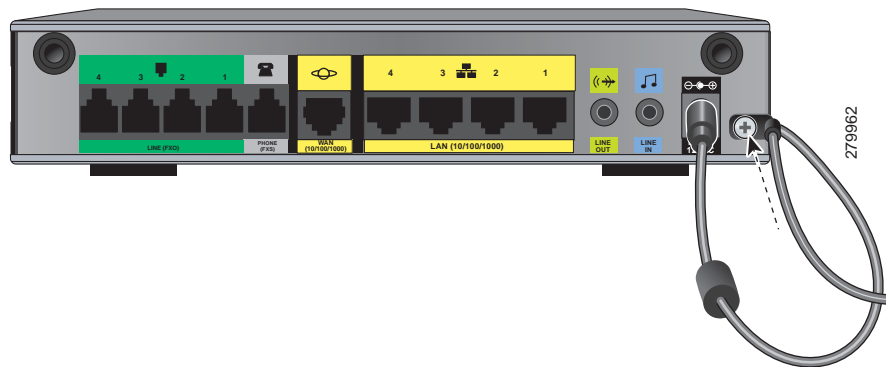
Appendix B: Installing Phones and Side Cars

This document provides information about the installation of IP phones and attendant consoles, or "side cars."

Refer to the following topics:

Phone Connections

Refer to these illustrations to connect the handset and power. On all models other than the Cisco SPA301, you also can connect a PC to your phone.

Cisco SPA301 Connections
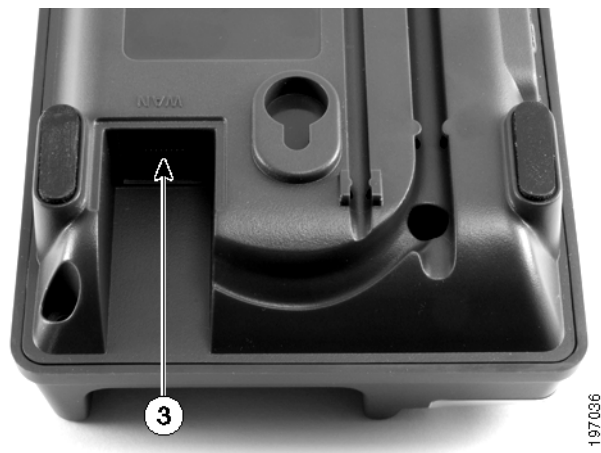
1. **Power port:** Use this port to connect the supplied power cord. Note: This phone can receive power over Ethernet only if a Cisco POES5 5-Volt Power Over Ethernet Splitter accessory is connected.

2. **Handset port:** Insert the long end of the phone cord into this port, which is marked with a phone symbol. Insert the short end of the phone cord into the port at the bottom of the handset (not shown).

3. **WAN port:** Insert one end of an Ethernet cable into the network port on the phone body marked WAN. Insert the other end of the Ethernet cable into the appropriate device, such as a network switch, on your network.

Cisco SPA303 and SPA500 Series Connections
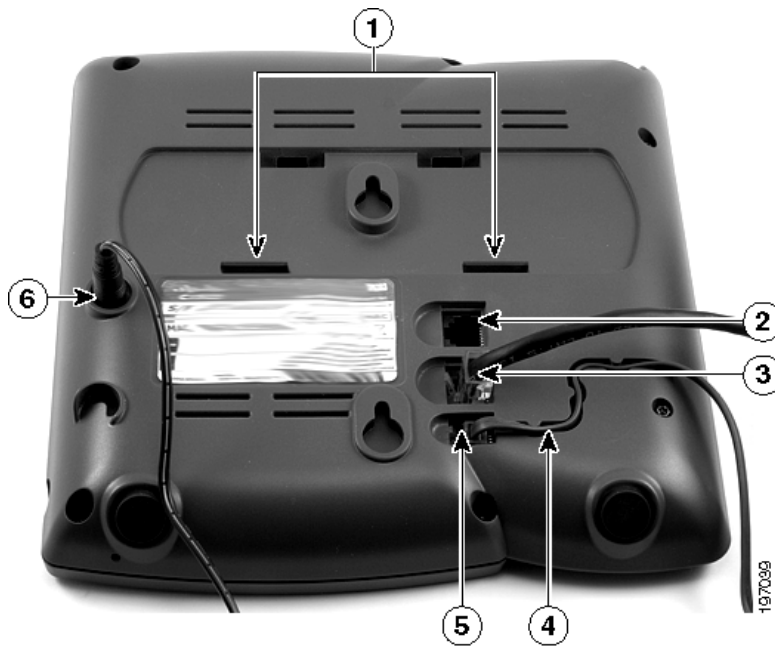
1. **Desk stand slots:** Use these slots to connect the desk stand. See **Installing a Desk Stand (Optional), page 66**.

2. **PC:** Use this port to connect a PC to the phone for the purpose of sharing the same Ethernet connection.

3. **SW:** Use this port to connect the phone to an Ethernet switch. It also can be used to connect directly to a LAN port of the Unified Communications System.

4. **Phone cable channel:** Optionally, thread the long end of the phone cord through this channel.

5. **Phone port:** Use this port to connect the phone cord for the handset. Connect the other end of the phone cord into port on the bottom of the handset (not shown).

6. **Power port:** Use this port to connect the supplied power cord. Note: This phone can receive power over Ethernet only if a Cisco POES5 5-Volt Power Over Ethernet Splitter accessory is connected.

7. **Side car Attachment features (not illustrated):** See **Connecting Attendant Consoles, page 75**.

Installing a Desk Stand (Optional)

A desk stand is provided with each Cisco IP phone. The stand can be easily attached or removed.

NOTE

- Do not attach the desk stand if you want to mount the phone to the wall. See **Mounting a Phone to a Wall (Optional), page 66**.

- If you plan to attach a Cisco SPA500S attendant console, attach it before attaching the desk stand. See **Connecting Attendant Consoles, page 75**.

STEP 1 Connect the phone stand by lining up the tabs on the stand with the slots on the phone body.

STEP 2 Slide the bottom tabs into the lower slots on the phone body and lightly press down on the stand. It should easily slide into the upper stand slots. Do not force.
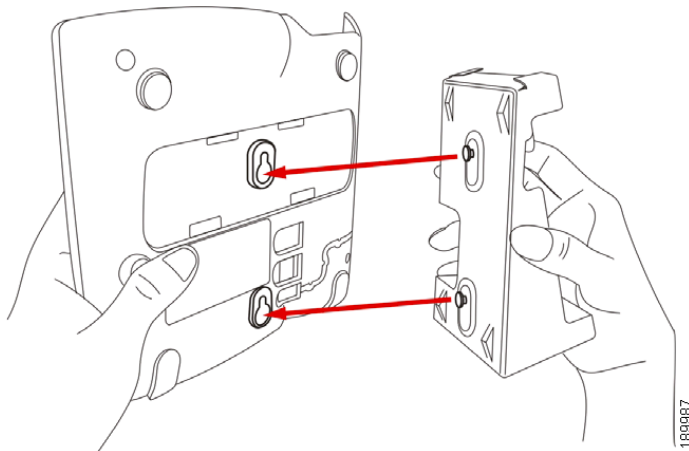
Mounting a Phone to a Wall (Optional)

NOTE This procedure requires an MB100 wall mount bracket kit (sold separately).
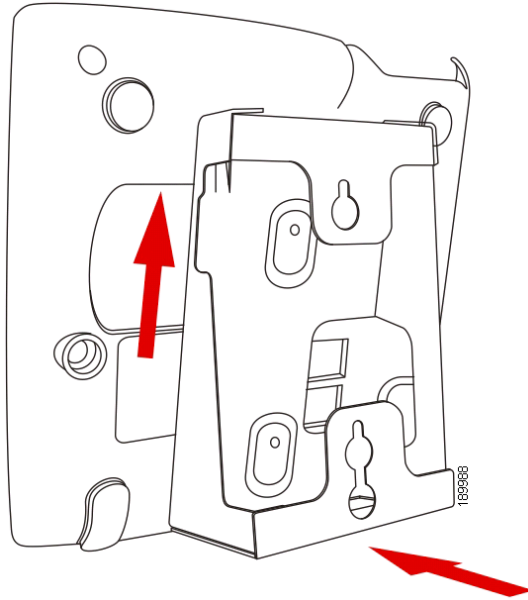
Attaching and Installing the Wall Mount Bracket Kit

STEP 1 To attach the Mounting Bracket (MB), align the two cleats on the MB with the holes in the phone's base.

STEP 2 Orient the MB such that the phone's Ethernet and handset ports are accessible after installation.
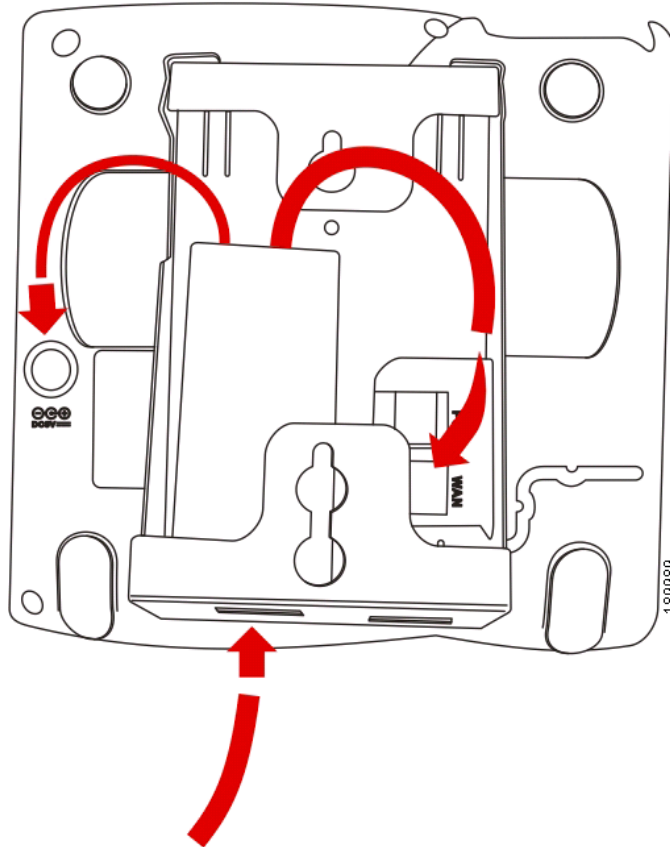
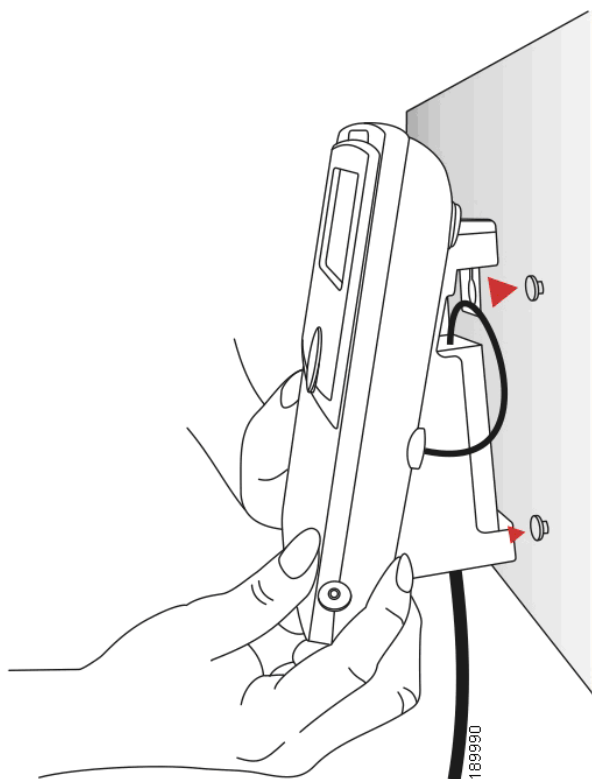**STEP 3** Push the MB onto the phone's base. Slide the MB upwards to lock it in place.

STEP 4 Plug in the Ethernet and power cables.

STEP 5 Hang onto screws mounted in the wall.

Reversing the Handset Retention Tab

After mounting the phone to a vertical surface, must reverse the handset retention tab to secure the handset when it is placed on the cradle.

STEP 1   To turn the tab:

- **Cisco SPA300 Series models:** Insert a coin or similar object into the slot. Rotate the tab 180 degrees.

- **Cisco SPA500 Series models:** Push the latch in. Slide the retention tab up until it detaches from the phone. Rotate the tab 180 degrees and re-attach it.

| 1 | Retention tab | 2 | Latch |

Connecting the Power

If you are using an external power source, insert one end of the power cord into an outlet and insert the other end of the power cord into the power port on the phone body.

Connecting a Phone to the Network

Connecting a Phone with an Ethernet Cable

STEP 1 Insert one end of the Ethernet cable into the network port on the phone body marked "SW."

STEP 2 Insert the other end of the Ethernet cable into a LAN port of the Cisco UC320W or into a LAN port on an Ethernet switch.

NOTE On all models excepts Cisco SPA301, you can connect a PC to the phone's second Ethernet port (see **Phone Connections, page 64**). This port can be used when the phone is connected the LAN with an Ethernet cable, but not when the phone is operating wirelessly.

Connecting a Cisco SPA525G/G2 Model Phone to the UC320W Wireless Voice Network

If you enable the wireless voice network in the UC320W configuration utility, Cisco SPA525 models can be used wirelessly. The wireless profile will be added to the phone during the initial configuration.

IMPORTANT: For initial configuration of the phone, use an Ethernet cable. After entering the settings, including the wireless network settings, apply the configuration in the UC320W configuration utility. Wait for all devices to reboot and reinitialize. At that point, you can begin this procedure.

Follow this procedure to verify that your phone is connected to the UC320W wireless network. This procedure also explains how to connect to the network if the wireless connection is not made automatically.

STEP 1 If an Ethernet cable is connected to the phone, remove it and wait for the phone to reboot. If an Ethernet connection is present on the phone, it is used instead of the Wi-Fi connection.

STEP 2 Press the Setup button on your phone.

STEP 3 Scroll to **Network Configuration** and press **Select**.

STEP 4 In the *Wi-Fi* field, confirm that there is check mark to indicate that Wi-Fi is On. If the check mark does not appear, press the left-arrow or right-arrow navigation button to enter a check mark in the field.

STEP 5 Select **Wireless Profile**. The display should show that the phone is connected the wireless voice network of your UC320W.

NOTE If the connection is not shown, complete the following tasks to connect to the wireless network by using Wi-Fi Protected Setup.

  a. Press the down-arrow navigation button to move the cursor to **Wi-Fi Configuration**.

  b. Press the right-arrow navigation button to open the Wi-Fi Configuration menu.

  c. Select **Wi-Fi Protected Setup**. The *Select the WPS Mode* window appears.

  d. Select **Push Button Configuration**. The Push Button Configuration instructions appear.

  e. On the front panel of the UC520W, press the Wi-Fi Protected Setup (WPS) button.

  f. On the phone, press **Select**. The phone displays a message: *Connecting to AP*. The phone may reboot before the Wi-Fi connection is working.

NOTE The PC port is not supported in wireless operation. A PC can be connected to the port only when an Ethernet cable is connected to the phone.

Connecting a PC to a Phone (Optional)

PC ports are not available on Cisco SPA300 Series phones.

A PC cannot be connected to Cisco SPA525 models that are connected to the wireless network.

STEP 1 To provide network access to a PC, connect one end of an additional Ethernet cable (not provided) to the PC port on the back of the phone body. See the illustrations in the **Phone Connections, page 64**.

STEP 2 Connect the other end of the Ethernet cable to the network port on the PC.

After receiving power and network connectivity, the phone executes a boot-up sequence. During this sequence, phones with screens display the Cisco logo and then "Initializing Network." All of the lights on the phone will flash.

After your phone is successfully connected to the network, it receives a basic configuration. On all models except Cisco SPA501G, the time, date, extension number, and softkeys appear on the display screen. On Cisco SPA501G, which has no display screen, you should hear a dial tone when picking up the handset or pressing the speakerphone button.

If the phone does not start, confirm your installation and connections. If these are correct, try unplugging the phone and plugging it back in again.

Upgrading the Phone Firmware

Use the 320W Configuration Utility to upgrade the firmware for all components of the Unified Communications system.

Connecting Attendant Consoles

For extra line buttons, you can connect up to two Cisco SPA500S Attendant Consoles to a Cisco SPA500 Series IP phone. Before you begin, you need the following items:

- Cisco SPA500S Attendant Console

- Attachment Arm

- Two (2) Attachment Arm Screws

- Auxiliary Interconnect Cable

- Stand

STEP 1 Place the IP phone and Cisco SPA500S face down on a flat surface, with Cisco SPA500S on the left.

STEP 2 Align the attachment arm over the peg holes on the right side of the phone and the left side of Cisco SPA500S. Insert the attachment arm pegs into the peg holes.

**STEP 3** Using the attachment arm screws, secure the attachment arm to the phone and Cisco SPA500S.

STEP 4 Locate the AUX IN port on the back of Cisco SPA500S. Connect one end of the auxiliary cable to this port.

STEP 5 Locate the AUX port on the back of the IP phone. Connect the other end of the auxiliary cable to this port. Cisco SPA500S is powered by the auxiliary cable with the IP phone; no additional power source is required.

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CAUTION Do not plug a phone line cord into the AUX port. Use only the auxiliary cable provided with Cisco SPA500S.

STEP 6 Route the auxiliary cable inside the cable slot of Cisco SPA500S.
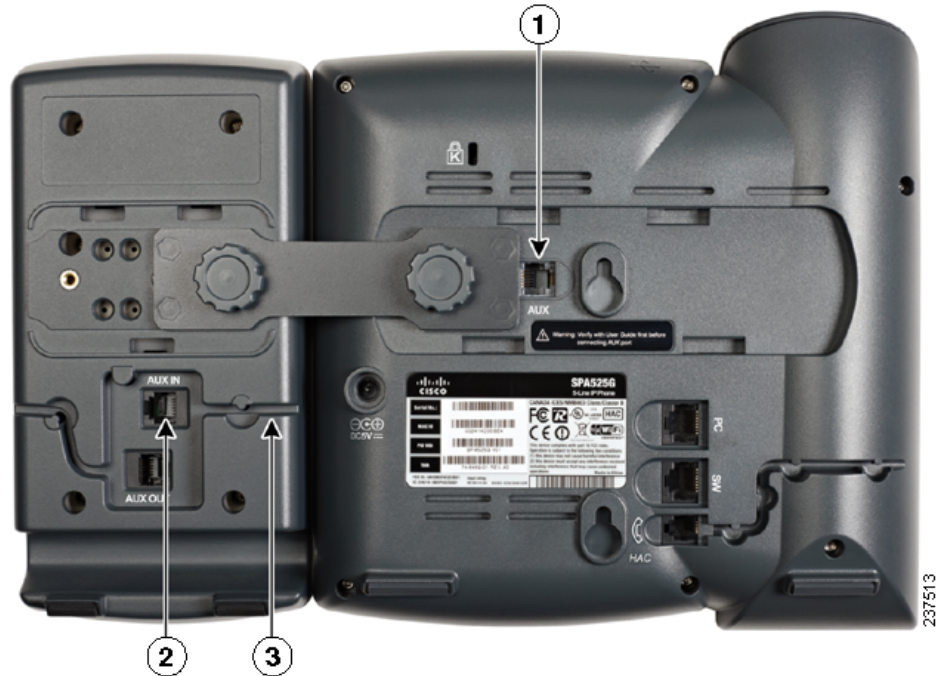
1	AUX port	**2**	AUX IN port
3	Cable slot		

STEP 7 If you need to attach another attendant console, position it next to the first, and complete the tasks described below. If you have only one attendant console, omit this step.
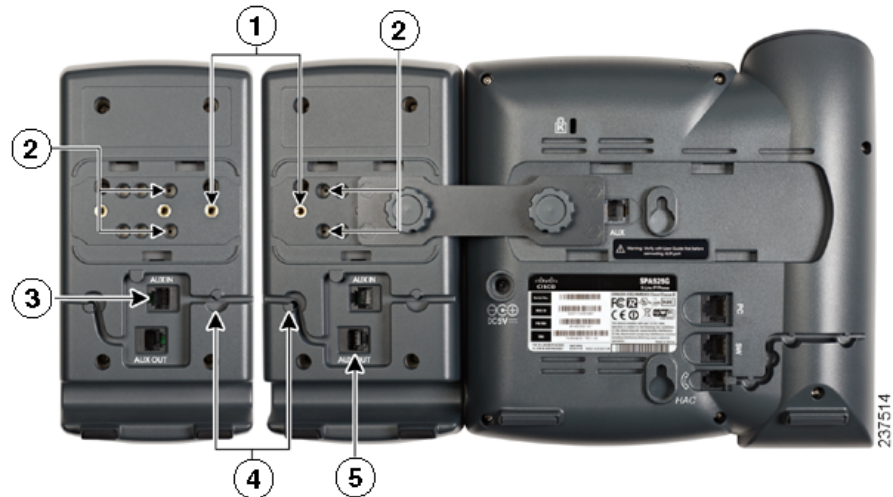
1	Screw holes	2	Peg holes
3	AUX IN port	4	Cable slot
5	AUX OUT port		

a. Align the attachment arm over the peg holes on the right side of the first Cisco SPA500S and the left side of the second Cisco SPA500S. Insert the attachment arm pegs into the peg holes.

b. Using the attachment arm screws, secure the attachment arm to the two attendant consoles.

c. Locate the AUX OUT port on the back of the first Cisco SPA500S. Connect one end of the auxiliary cable to this port.

d. Locate the AUX IN port on the back of the second Cisco SPA500S. Connect the other end of the auxiliary cable to this port. **Do not plug a phone line cord into the AUX port. Use only the auxiliary cable provided with Cisco SPA500S.**

e. Route the auxiliary cable inside the cable slot. Cisco SPA500S is powered by the auxiliary cable with the IP phone; no additional power source is required.

STEP 8   Attach the appropriate desktop stand to each unit.

Where to Go From Here

Cisco provides a wide range of resources to help you and your customer obtain the full benefits of the Cisco UC320W.

Support	
Cisco Small Business Support Community	www.cisco.com/go/smallbizsupport
Cisco Small Business Support and Resources	www.cisco.com/go/smallbizhelp
Phone Support Contacts	www.cisco.com/go/sbsc
Cisco Small Business Firmware Downloads	www.cisco.com/go/software
Product Documentation	
Unified Communications Cisco UC 320W	www.cisco.com/go/uc300
Smart Designs	www.cisco.com/go/partner/smartdesigns
SPA300 Series IP Phones	www.cisco.com/go/300phones
SPA500 Series IP Phones	www.cisco.com/go/spa500phones
SA500 Series Security Appliances	www.cisco.com/go/sa500
ESW500 Ethernet Switches	www.cisco.com/go/esw500help
SPA8800 IP Telephony Gateway	www.cisco.com/go/gateways
Cisco Small Business	
Cisco Partner Central for Small Business (Partner Login Required)	www.cisco.com/web/partners/sell/smb
Cisco Small Business Home	www.cisco.com/smb