








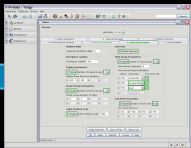
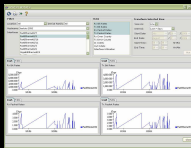
Cisco Unified Communications 500 Series

How to configure

Vedran Hafner

March 2008

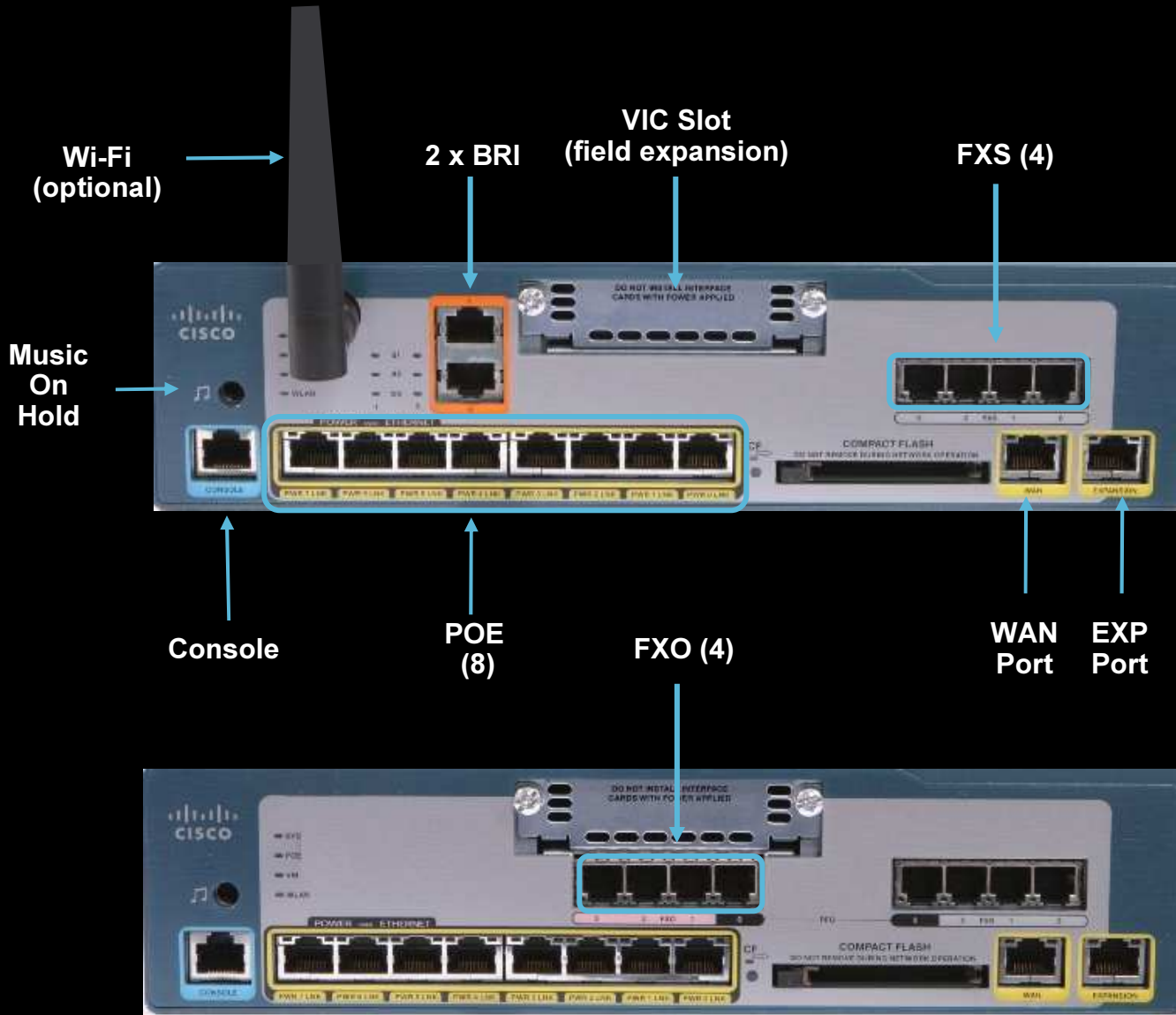
Cisco Smart Business Communications System (Shipping)

Unified Communications & Network Foundation	UC Applications	Cisco Unified IP Phones	Switching	Wireless	Teleworker
<p>Unified 500 Series</p>  <p>8, 16, 32 and 48 Users for Voice</p> <p>Optional Integrated WLAN AP</p>	<p>Cisco Unified CallConnectors</p> <p>Cisco Unified Video Advantage</p> <p>Cisco IP Communicator</p> <p>Third Party Apps</p>	 <p>All IP Phones are supported</p>	<p>CE520-8PC</p> 	<p>AP500 WLC 500</p>  <p>UC500 has Optional WLAN AP</p> <p>Autonomous APs or Unified Wireless Solution with WLAN Controller 500</p>	<p>C871W</p>  <p>VPN, Wired & Wireless Access, IP Phone ext.</p>
<div style="display: flex; justify-content: space-between; align-items: center;">  <div style="text-align: center;"> <p>Systems Management</p> <p>Cisco Smart Assist Features Phase 2</p> <p>Cisco Configuration Assistant Phase 1.5</p> <p>Cisco Monitor Manager / Cisco Monitor Director</p> </div>  </div>					

Unified 500 Series: Overview

- Scales with Catalyst Express (CE)520 Companion Switches
 - CE520 Companion Switches are recommended, but the solution can scale with any switch
 - The system ships with a default configuration
 - User licenses are included in the base system SKU
- Smart Assist
 - Embedded technology that enables Plug-n-Play by automatically detecting and configuring Cisco products and applications
 - Ships with a default configuration for voice and secure data networking
 - Improves ease of set up, deployment, and optimizes network performance and security
- Powerful Management Solution
 - Complete Pre/Post Management solution (System, User, Phone, Voice Messaging)
 - Drag and Drop (Software Upgrades, IP Phone load updates, Localization updates)
 - Secure Remote Management

Unified 500 Series: Overview – Base Models



Expansion Modules:

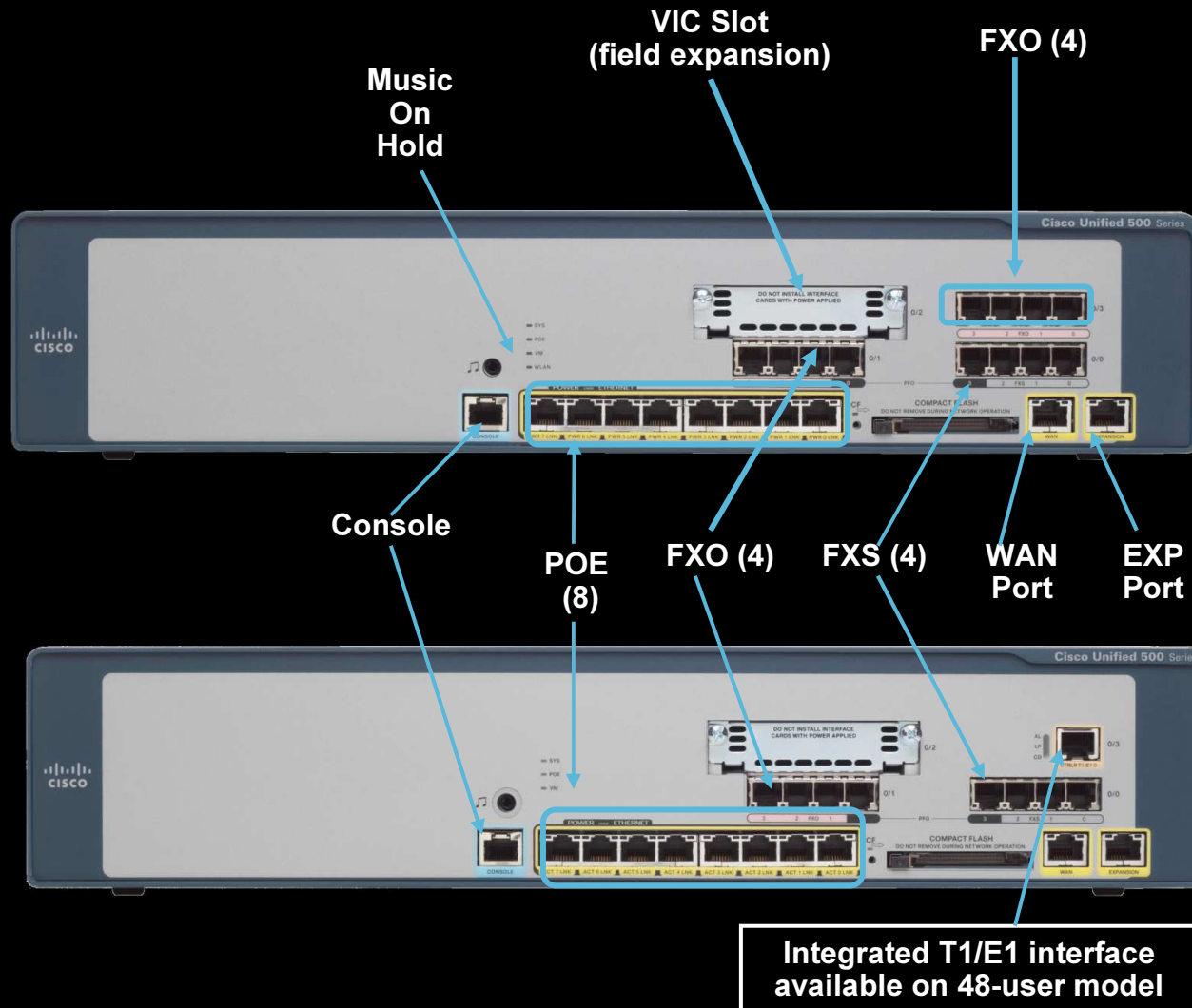
- VIC-4FXS/DID
- VIC2-2FXO
- VIC2-4FXO
- VIC2-2BRI-NT/TE
- VIC2-2FXS
- VIC3-2FXS/DID +
- VIC3-4FXS/DID +
- VWIC2-1MFT-T1/E1 ++

Desktop models:

- External Power Supply
- Two (2) 5510 DSPs
- Deployment could be either Desktop or Wall mount; Wall mount requires additional kit for mounting the UC500 and the power supply

10.5" wide, 11.05" deep, 1.5 RU tall (2.625")

Unified 500 Series 32- & 48-user Models



Expansion Modules:

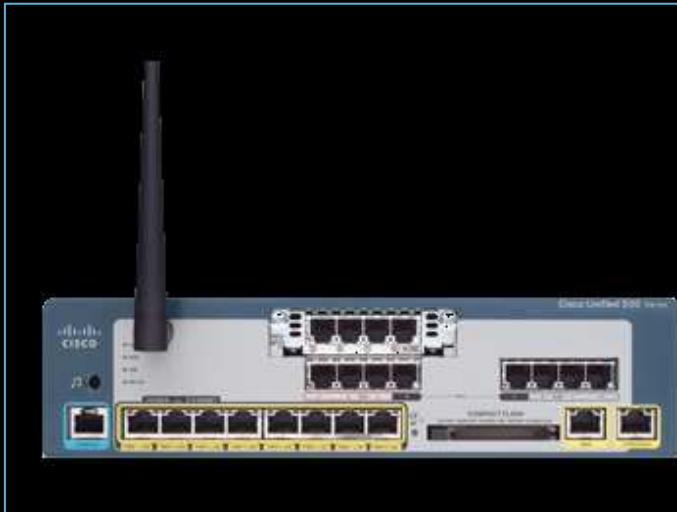
- VIC-4FXS/DID
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- VIC2-2FXS
- VIC3-2FXS/DID +
- VIC3-4FXS/DID +
- VWIC2-1MFT-T1/E1 ++

Rackmount models:

- Internal Power Supply
- Four (4) 5510 DSPs

Rack Mount Models - 17.5" wide, 14" deep, 2 RU tall (3.5")

Unified 500 Series: Overview – Configuration Options



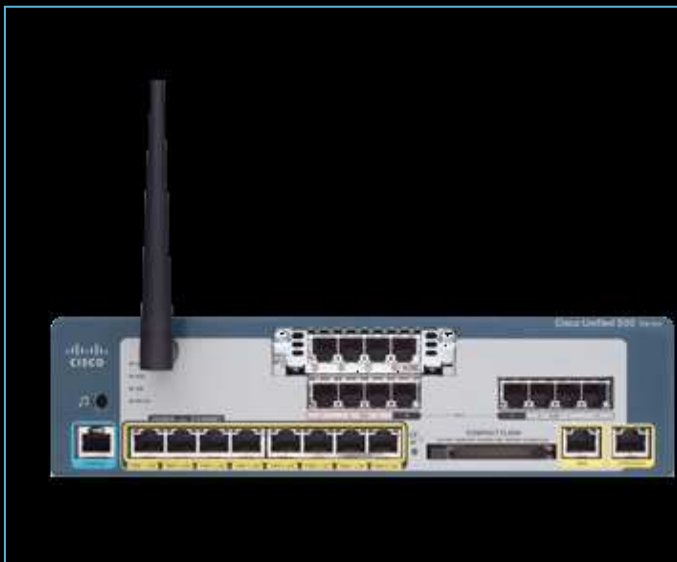
8 User Configuration

- **Integrated PSTN Trunk Options:** FXO (4 port), BRI (2 port), SIP
- **Power over Ethernet Ports:** 8
- **Integrated Analog Stations:** FXS (4 port)
- **Voice Module Expansion Slot:** FXO (2 or 4 port), BRI (2 port), FXS/DID (2 or 4 port), T1/E1
- **Models have optional WLAN SKU**

**UC520-8U-4FXO-K9 or
UC520-8U-2BRI-K9**

With Integrated AP Option

**UC520W-8U-4FXO-K9 or
UC520W-8U-2BRI-K9**



16 User Configuration

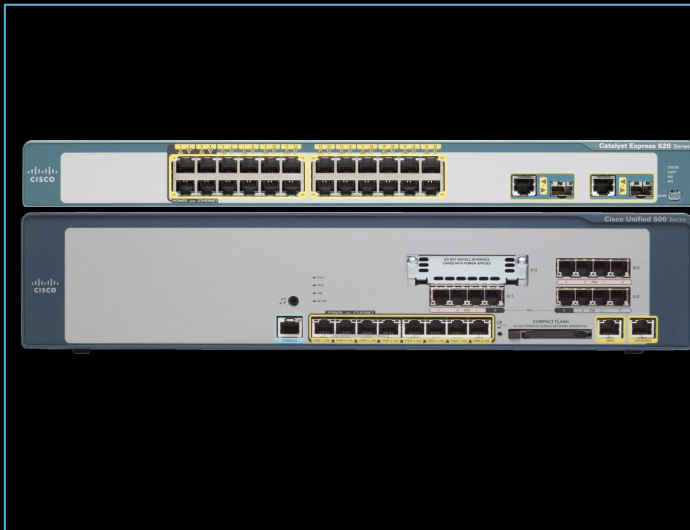
- **Integrated PSTN Trunk Options:** FXO (4 port), BRI (2 port), SIP
- **Power over Ethernet Ports:** 16
- **Integrated Analog Stations:** FXS (4 port)
- **Voice Module Expansion Slot:** FXO (2 or 4 port), BRI (2 port), FXS/DID (2 or 4 port), T1/E1
- **Models have optional WLAN SKU**

**UC520-16U-4FXO-K9 or
UC520-16U-2BRI-K9
+
WS-CE520-8PC-K9**

With Integrated AP Option

**UC520W-16U-4FXO-K9 or
UC520W-16U-2BRI-K9
+
WS-CE520-8PC-K9**

Unified 500 Series : Overview – Configuration Options

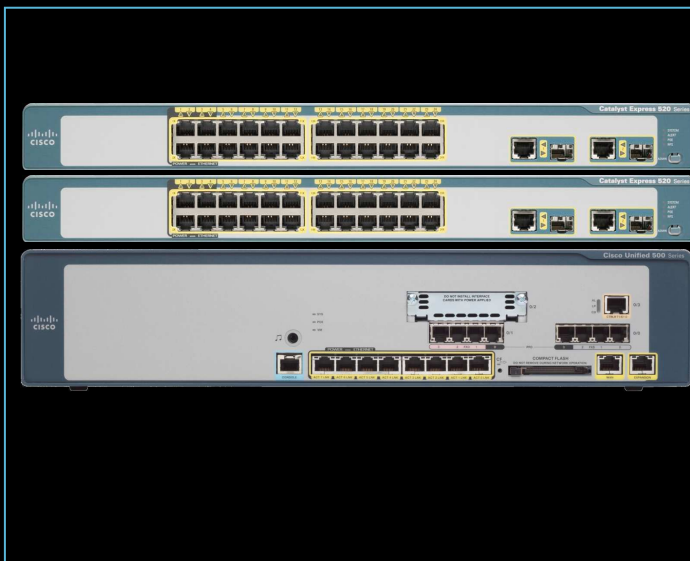


32 User Configuration

- **Integrated PSTN Trunk Options:** FXO (8 port), BRI (4 port), SIP
- **Power over Ethernet Ports:** 32
- **Integrated Analog Stations:** FXS (4 port)
- **Voice Module Expansion Options:** FXO (2 or 4 port), BRI (2 port), FXS/DID (2 or 4 port), T1/E1

**UC520-32U-8FXO-K9 or
UC520-32U-4BRI-K9
+
WS-CE520-24PC-K9**

**Wi-Fi support through
AP521 and WLC526**



48 User Configuration

- **Integrated PSTN Trunk Options:** T1/E1, FXO (12 port), BRI (6 port), SIP
- **Power over Ethernet Ports:** 56
- **Integrated Analog Stations:** FXS (4 port)
- **Voice Module Expansion Options:** FXO (2 or 4 port), BRI (2 port), FXS/DID (2 or 4 port)

**UC520-48U-12FXO-K9 or
UC520-48U-6BRI-K9 or
UC520-48U-T/E/F-K9 or
UC520-48U-T/E/B-K9
+
WS-CE520-24PC-K9 (x2)**

**Wi-Fi support through
AP521 and WLC526**

Unified 500 Series : Overview – IOS Feature set based on Advanced IP Services

- 12.4(11)XW4 is the Recommended IOS release for deployments. The software bundle UC520-4.2.4.zip can be downloaded from <http://www.cisco.com/cgi-bin/tablebuild.pl/UC520>
- Unified 500 Series uses an IOS feature set is derived from the Advanced IP Services feature set
- The feature set supports all of the voice, video, data, security, and wireless features with the following **exceptions**:

For Voice – MGCP / CCM / SRST – cannot support Cisco Unified Communications Manager

For Data – WAN Protocols such as FR / ATM / X.25 / MPLS / Tag / LAPB

For Security – L2TP, IDS/IPS, URL Filtering (Websense, N2H2), Advanced application inspection and control.

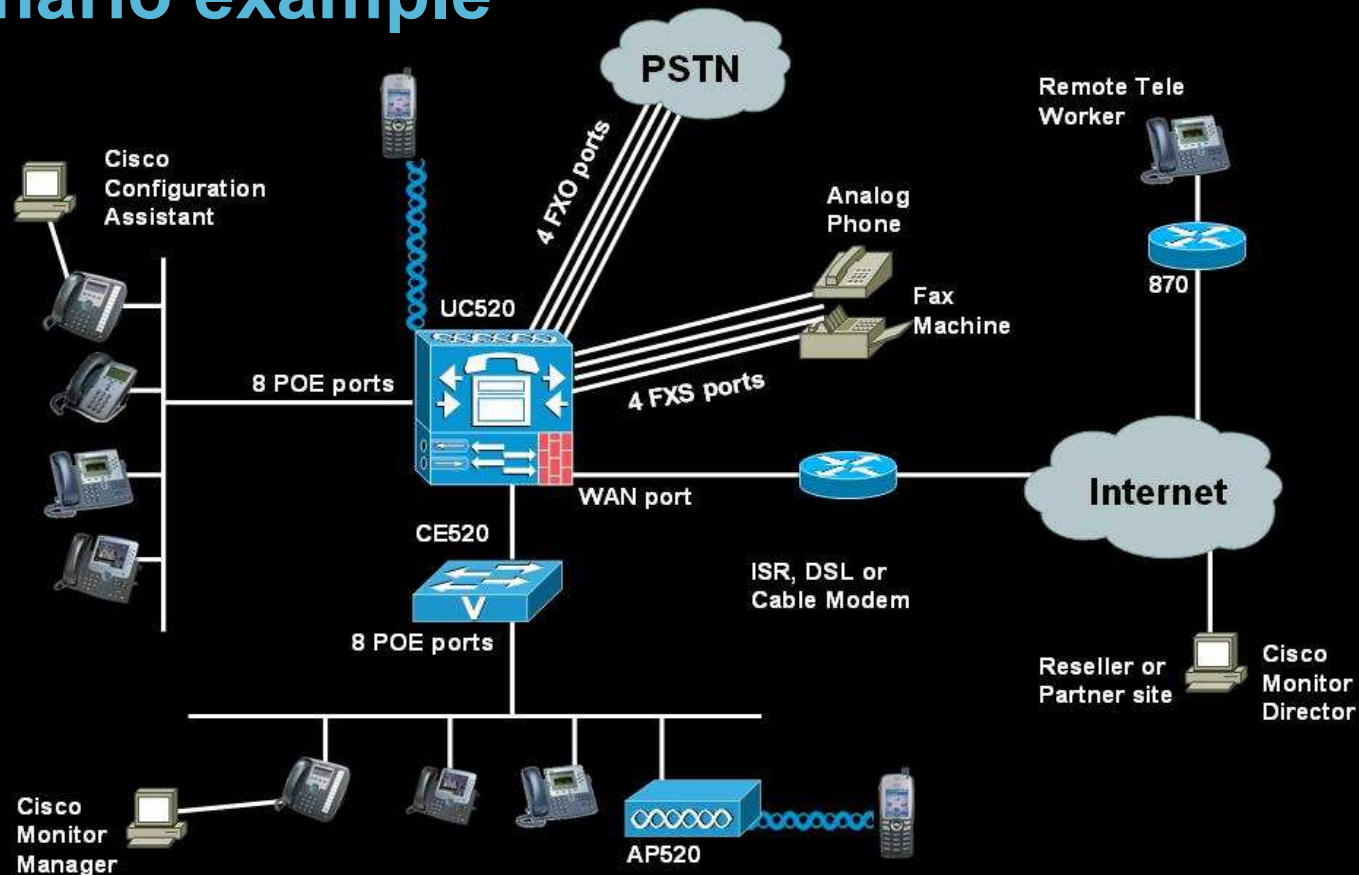
For Routing – Routing Protocols such as RIP/OSPF/BGP/EIGRP

For Network Management – SNMP Proxy

Other – GLBP (load balancing)

CME 4.2 exceptions – Secure RTP and Unified Contact Center express integration

Unified 500 Series: Overview – Deployment Scenario example



- The scenario shows a 16 User Stand alone setup
- Either the integrated AP can be used or an external AP (AP521) can be used. A maximum of 4 wireless IP Phones are supported on a per AP basis. When using multiple AP521s, make sure to also deploy a WLC526 for bandwidth management and roaming features
- The scenario also shows a Remote Teleworker setup. It is recommended to use the C871W router at the remote site

Unified 500 Series: Management

- Cisco Smart Assist: Automatic assignment of extensions to phones for ease of deployment and future phone additions.
- Cisco Configuration Assistant (CCA): GUI-based tool for complete system set-up, customization and management. (<http://www.cisco.com/go/configassist>)
- SNMP support with Cisco Unified Operations Manager or third-party management consoles.

Unified 500 Series: Management – CCA

- A PC based GUI tool that facilitates system configuration of Telephony, Security, Wireless Networking, Switching, Routing, DHCP, SNMP, etc.
- Helps monitor the system by providing insight on system health, system messages, and inventory report.
- Assists in system maintenance by providing easy steps for software upgrade, flash file management, archiving configuration and data.



Unified 500 Series: Management – CCA

- **Voice has following options:**

- Device Parameters – Voice system type (PBX or KeySystem), General Info (hostname, timezone, locale, system message, etc.)
- Network Parameter – Voice vlan setting and NTP setting.
- Dialplan/Voicemail – Dial Plan, Auto Attendant, Voicemail.
- SIP Trunk Parameter – Provider, Proxy, Registrar, Digest, etc.
- Voice System Features – Emergency number, Paging, Call Park, Hunt Group, etc.
- User Parameters – mac address, userid/password, name, CFB, CFNA, Class of restriction, etc.

- **Security has following options:**

- NAT – Outside interface, Port translation config for applications, etc.
- Firewall – Inside interfaces, adjustable security levels, DMZ config
- VPN – EzVPN Server settings, user accounts, Pre-shared keys, etc.

- **Wireless has following options:**

- SSID config, Radius server config.

- **Switching has following options:**

- Creating/Editing Vlans

- **Routing has following options:**

- Adding/Deleting Static routes

- **DHCP has following options:**

- Adding/Deleting/Editing DHCP pools

- **Other options:**

- Assigning IP address to vlans and interfaces
- Hostname, System Time, User Access
- SNMP Community Strings, Trap Managers, etc.



CISCO