



Smart Business Architecture
for Midsize Networks

Configuration Files Guide

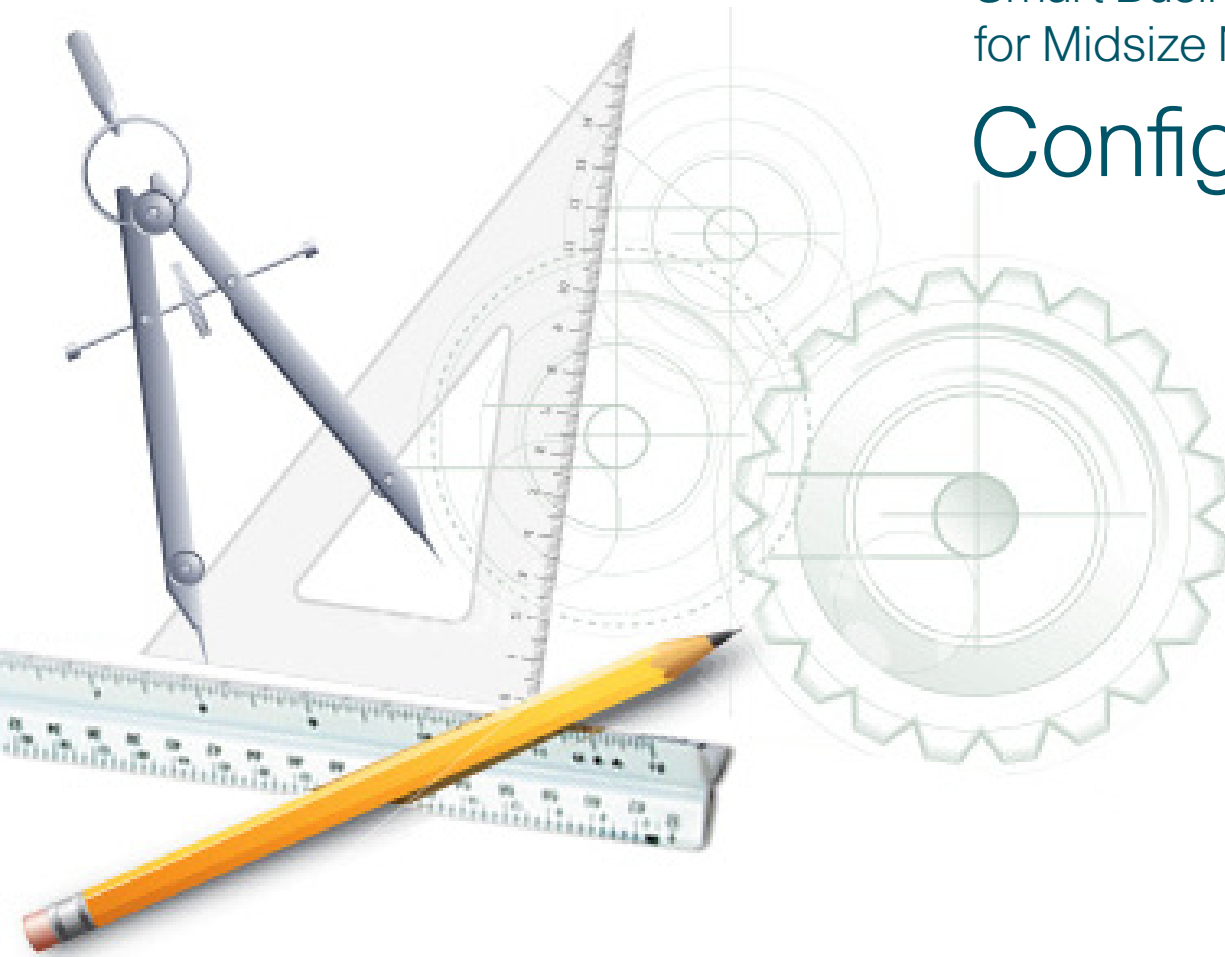


Table Of Contents

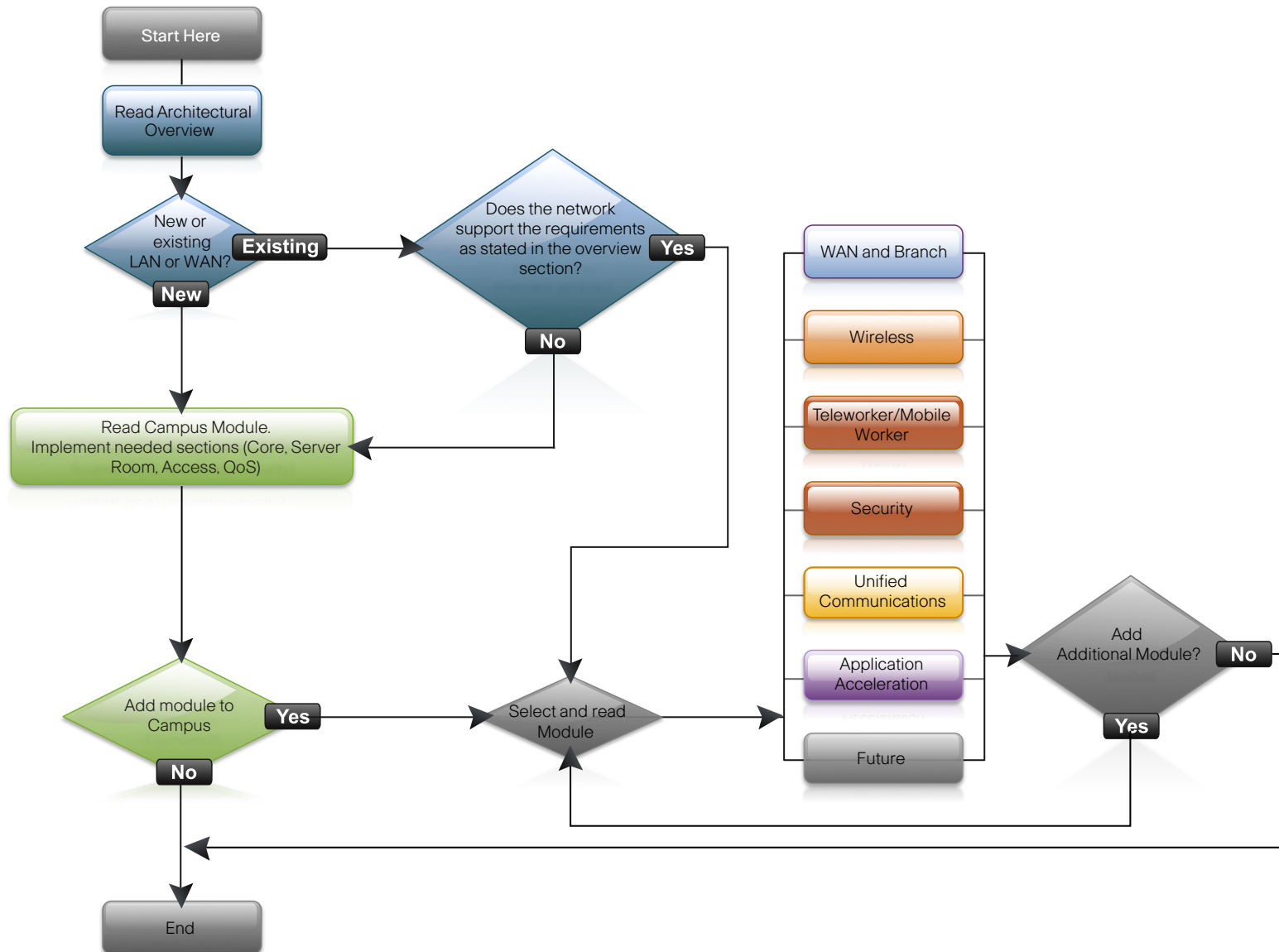
- **Flowchart**
- **A Blueprint for Deployment Made Easy**
 - Purpose of this Document
 - Architecture Overview
- **Product List**
- **Configuration Files Campus**
 - Campus Core, Cisco Catalyst 3750 Switch
 - Campus Core, Cisco Catalyst 4507R Switch
 - Server Room, Cisco Catalyst 3750 Switch
 - Campus Access, Cisco Catalyst 3750 Switch
- **Wide-Area Network (WAN)**
 - Headquarters
 - WAN Router, Cisco ISR 3845
 - Branch
 - WAN Router, Cisco ISR 2811
- **Wireless**
 - Cisco Wireless LAN Controller is configured via GUI management
- **Security**
 - Headquarters
 - Cisco ASA 5510
 - Intrusion Protection, Cisco IPS-SSM
 - Cisco IPS 4255
 - Branch
 - Cisco Catalyst 3560 Switch
 - WAN IPS, Cisco IPS-AIM
 - Remote Worker
 - Teleworkers
 - Cisco ASA 5505
- **WAN Optimization**
 - Cisco WAAS is configured via GUI management

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Flow Chart

Deployment Made Easy Flow Chart

This flow chart is a navigational aid for using the Deployment Guide, which is a companion guide to this document and can be found on Cisco.com. Follow the chart through the Campus Module, then select the module you want to implement.



Deployment Guide Configuration Files

We had one guiding principle with this new architecture designed by Cisco: Ease of Use.

For our Cisco partners servicing customers with 250-1000 connected users, we have designed an “out-of-the-box” deployment that is simple, fast, affordable, scalable, and flexible. We have designed it to be easy. Easy to configure, deploy, and manage.

The simplicity of this deployment, though, belies the depth and breadth of the architecture (and that's the point). Based on feedback from many customers and partners, Cisco has developed a solid network foundation with a flexible platform that does not require re-engineering to add overlay services. So whether you are adding advanced services during or after the core network deployment, time and expense won't be wasted reconfiguring what could have been configured to work with these services in the first place.

In a nutshell, this deployment has been architected to make your life a little bit—maybe even a lot—smoother. This architecture:

- Provides a solid foundation
- Makes deployment fast and easy
- Accelerates opportunities for Cisco partners to provide additional services
- Avoids the need for re-engineering of the core network

Using this Configuration Files Guide

This document is a companion document to the Smart Business Architecture for Midsize Networks Deployment Guide and should be used as such. In this document, you will find the specific configuration files from our lab to support you during deployment and ensure success.

NOTE: Certain information such as IP addresses, usernames, passwords, and specific command responses are used for example only and may not be appropriate for your specific deployment.

The Purpose of this Document

This is a deployment guide for Cisco partners and Cisco Systems®, Inc. Engineers whose customer base has 250-1000 connected users. It is meant for the Systems Engineers who will be deploying Cisco solutions at customer locations. It provides engineers step-by-step instructions to deploy these solutions. Because Cisco is delivering a modular architecture, you can deploy exactly what the customer needs quickly and efficiently.

Graphical Interface Management

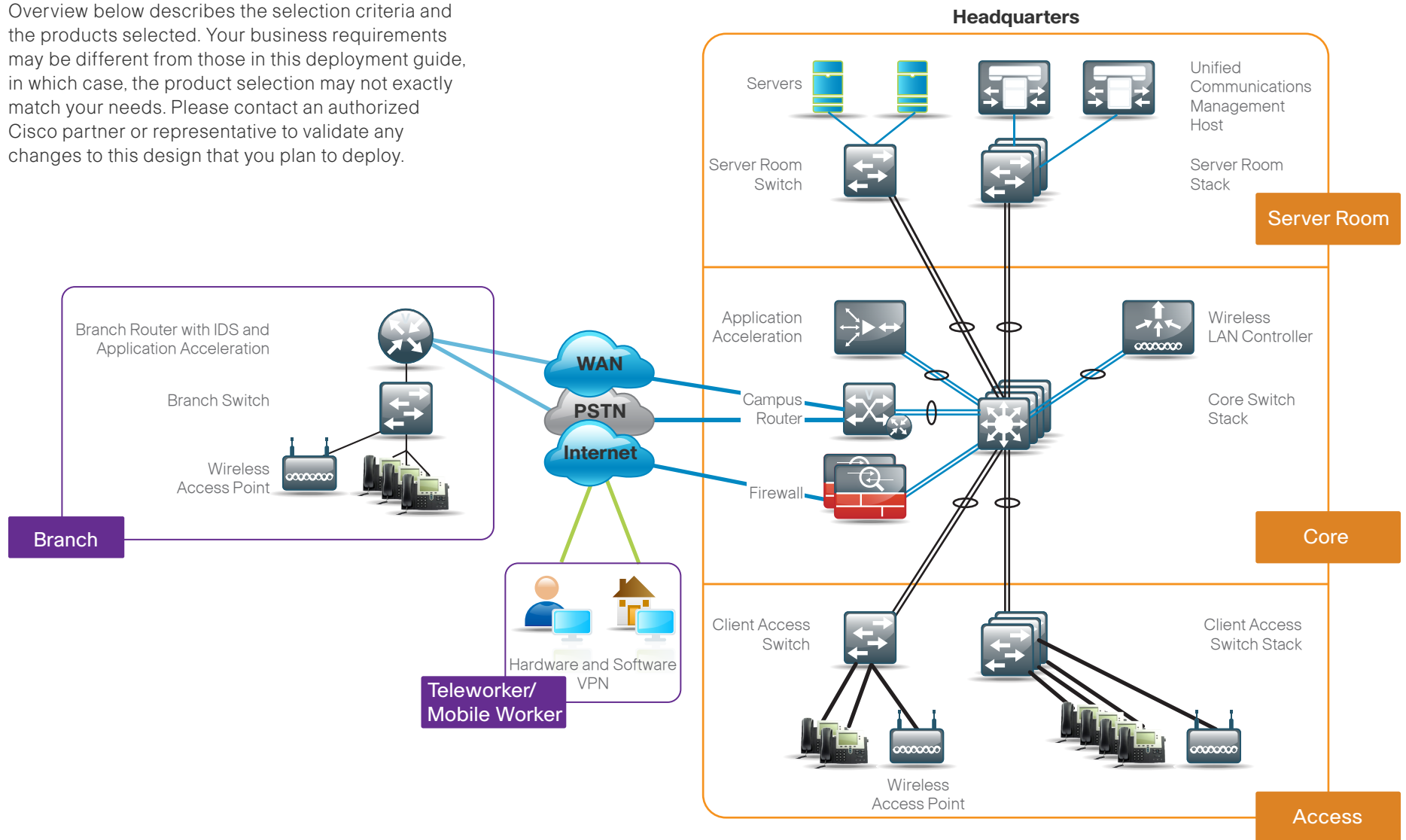
There are a few products in this design where we have omitted the configuration file. Those products have browser-based graphical configuration tools. Please refer to the companion Smart Business Architecture for Midsize Networks Deployment Guide on Cisco.com for step-by-step instructions on configuring those products.

Midsize Network Architecture

Architectural Overview

The products and priorities for this design were based on requirements from customers, partners, and Cisco field personnel. The Architectural Overview below describes the selection criteria and the products selected. Your business requirements may be different from those in this deployment guide, in which case, the product selection may not exactly match your needs. Please contact an authorized Cisco partner or representative to validate any changes to this design that you plan to deploy.

Network Architecture Baseline



Midsize Architecture Product List

Functional Area	Product	Part Numbers	Software Version
250-600 Network Core	Catalyst 3750G Stackable 12 Port SFP	WS-C3750G-12S-S Catalyst 3750 12 SFP + IPB Image	12.2-40.SE
500-1000 Network Core	Catalyst 4507R Dual Supervisors Dual Power Supplies	WS-C4507R-E Cat4500 E-Series 7-Slot Chassis, fan, no ps, Red Sup Capable WS-X4624-SFP-E Catalyst 4500 E-Series 24-Port GE (SFP) WS-X45-SUP6-E Catalyst 4500 E-Series Sup 6-E, 2x10GE(X2) with Twin Gig	12.2-46.SG
Headquarter access for PC, phones, APs, other devices	Catalyst 3750G Stackable 24 Ethernet 10/100/1000 ports with PoE and 4 SFP ports Cisco Catalyst 3560G 24 & 48 Ethernet 10/100/1000 ports with PoE and 4 SFP ports	WS-C3750G-24PS-S Catalyst 3750 24 10/100/1000T PoE + 4 SFP + IPB Image WS-C3750G-48PS-S Catalyst 3750 48 10/100/1000T PoE + 4 SFP + IPB Image WS-C3560G-24PS-S Catalyst 3560 24 10/100/1000T PoE + 4 SFP + IPB Image WS-C3560G-48PS-S Catalyst 3560 48 10/100/1000T PoE + 4 SFP + IPB Image	12.2-40.SE
Server room switch	Catalyst 3750G 24 & 48 Ethernet 10/100/1000 ports and 4 SFP ports Catalyst 3560G 24 & 48 Ethernet 10/100/1000 ports and 4 SFP ports	WS-C3750G-24TS-S1U Catalyst 3750 24 10/100/1000 + 4 SFP + IPB Image; 1RU WS-C3750G-48TS-S1 Catalyst 3750 48 10/100/1000 + 4 SFP + IPB Image WS-C3560G-24TS-S Catalyst 3560 24 10/100/1000T + 4 SFP + IPB Image WS-C3560G-48TS-S Catalyst 3560 48 10/100/1000T + 4 SFP + IPB Image	12.2-40.SE
Headquarters WAN router	Cisco Integrated Services Router ISR 3845	CISCO3845 HWIC-2CE1T1-PRI	12.4.22T
Branch WAN router	Cisco Integrated Services Router ISR 2811	C2811-VSEC-SRST/K9 HWIC-2CE1T1-PRI	12.4.22T
Branch router modules	Wide Area Acceleration Module Intrusion Prevention Module	NME-WAE-502-K9 AIM-IPS-K9	4.1.1 6.1

Midsize Architecture Product List

Functional Area	Product	Part Numbers	Software Version
Branch Switch	Catalyst 3750G Stackable 24 & 48 Ethernet 10/100/1000 ports with PoE and 4 SFP ports Cisco Catalyst 3560G 24 & 48 Ethernet 10/100/1000 ports with PoE and 4 SFP ports	WS-C3750G-24PS-S Catalyst 3750 24 10/100/1000T PoE + 4 SFP + IPB Image WS-C3750G-48PS-S Catalyst 3750 48 10/100/1000T PoE + 4 SFP + IPB Image WS-C3560G-24PS-S Catalyst 3560 24 10/100/1000T PoE + 4 SFP + IPB Image WS-C3560G-48PS-S Catalyst 3560 48 10/100/1000T PoE + 4 SFP + IPB Image	12.2-40.SE
Internet Edge Firewall	Adaptive Security Appliance ASA 5510 with the SSM-10 IPS Module	ASA5510-AIP10-K9	8.0.4.ED
Headquarters— Intrusion Prevention System	Cisco Intrusion Prevention System 4200 Series	IPS-4240-K9 (300 Mbps) IPS-4255-K9 (600 Mbps) IPS-4260-K9 (2 Gbps)	6.1
Application Acceleration Headquarters CM Headquarters endpoint	WAE 512 -1 WAE 512 -1	WAE-512-K9 Wide-Area Application Engine 512, 1GB MEM, No HDD Incl.	WAAS 4.1.1
Wireless Access Points	1140 Fixed with Internal Antennas 1250 Ruggedized, External Ant.	AIR-LAP1142N (Country-specific) AIR-AP1252AG (Country-specific)	
Wireless LAN Controller	WLC 4402	AIR-WLC4402-25-K9	5.1
Unified Communications	Cisco Unified Communications Manager—MCS 7835 CMC1	MCS7835I2-K9-CMC1 (2 required) MCS7825I3-K9-UCB1	7.0
	Cisco Unity Connections MCS 7825 UCB1	Hardware Only	7.0

Midsize Architecture Product List

Functional Area	Product	Part Numbers	Software Version
Phones	CP-7921G Wireless Phone CP-7925G Wireless Phone CP-7931G Multibutton Phone CP-7937G Conference Phone CP-7942G B&W Display Phone CP-7962G B&W Display Phone CP-7945G Color Display Phone CP-7965G Color Display Phone CP-7975G Color Executive Phone IPCOMM7-SW Soft Phone	A wide variety of phone models are available that meet specific needs of the user and the country they are deployed in.	
Teleworker	Adaptive Security Appliance ASA 5505	ASA5505-BUN-K9 ASA 5505 Appliance with SW, 10 Users, 8 ports, 3DES/AES	8.0.4

Campus Core Switch, Cisco Catalyst 3750

```
vlan internal allocation policy ascending
!
vlan 8,10,12,14,16,28-31
!
ip tftp source-interface Vlan1
ip ssh version 2
!
!
!
interface Port-channel1
description Trunk to Wiring Closet 1
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
!
interface Port-channel2
description Trunk to Wiring Closet 2
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
!
interface Port-channel3
description Trunk to Wiring Closet 3
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
!
interface Port-channel4
description Trunk to Wiring Closet 4
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
!
interface Port-channel5
description Trunk to Server Farm Switch 1
switchport trunk encapsulation dot1q

switchport trunk allowed vlan 1,28,29
switchport mode trunk
!
interface Port-channel6
description Trunk to Server Farm Switch 2
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,28,29
switchport mode trunk
!
interface Port-channel7
switchport trunk encapsulation dot1q

switchport mode trunk
!
interface Port-channel8
description Wide Area Acceleration Appliance
switchport access vlan 31
switchport mode access
!
interface Port-channel11
description WLAN Controller
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 10,14,16,31
switchport mode trunk
!
interface Port-channel12
description WAN Edge ISR 3845
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 31
switchport mode trunk
!
interface GigabitEthernet1/0/1
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2

priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/2
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 2 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/3
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
```

Campus Core Switch, Cisco Catalyst 3750

```
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 3 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/4
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2

priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 4 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/5
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,28,29
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 5 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/6
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,28,29
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 7 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/7
switchport trunk encapsulation dot1q

switchport trunk allowed vlan 1,8,12
switchport mode trunk
srr-queue bandwidth share 10 10 60 20

queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 2 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/8
description WAAS
switchport access vlan 31
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 8 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/9
switchport trunk encapsulation dot1q
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
!
interface GigabitEthernet1/0/10
description ASA5510
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,16,31
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out

mls qos trust cos
auto qos voip trust
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/11
description WLAN Controller
```

Campus Core Switch, Cisco Catalyst 3750

```
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 10,14,16,31
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 11 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/12
description ISR3845
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 31
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 12 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/1
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2

priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/2
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 2 mode on

spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/3
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 3 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/4
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2

priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 4 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/5
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,28,29
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 5 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/6
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,28,29
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
```

Campus Core Switch, Cisco Catalyst 3750

```
auto qos voip trust
channel-group 6 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/7
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2

priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 2 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/8
description WAAS
switchport access vlan 31
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
channel-group 8 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/9
switchport trunk encapsulation dot1q
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/10
description ASA5510
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 16,31
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out

mls qos trust cos
auto qos voip trust
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/11
description WLAN Controller
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 10,14,16,31
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 11 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/12
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 17,31
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 12 mode on
spanning-tree link-type point-to-point
!
interface Vlan1
ip address 192.168.1.1 255.255.255.0
!
interface Vlan8
description Data
ip address 192.168.8.1 255.255.255.0
ip pim sparse-mode
!
interface Vlan10
description Data WLAN
ip address 192.168.10.1 255.255.255.0
!
interface Vlan12
description Voice
ip address 192.168.12.1 255.255.255.0
ip pim sparse-mode
```

Campus Core Switch, Cisco Catalyst 3750

```
!
interface Vlan14
  description Voice WLAN
  ip address 192.168.14.1 255.255.255.0
!
interface Vlan16
  description Wireless Guest *** SET NO IP ADDRESS ****
  no ip address
!
interface Vlan28
  ip address 192.168.28.1 255.255.255.0
  ip pim sparse-mode
!
interface Vlan29
  ip address 192.168.29.1 255.255.255.0
  ip pim sparse-mode
!
interface Vlan31
  description Network Services and WAN Router
  ip address 192.168.31.1 255.255.255.0
  ip pim sparse-mode
!
router eigrp 1
  network 192.168.0.0 0.0.255.255
  no auto-summary
  passive-interface default
  no passive-interface Vlan31
!

ip classless
ip http server
ip http secure-server
!
ip pim rp-address 192.168.31.1
!
snmp-server community cisco RO
snmp-server community cisco123 RW
!
control-plane
!
!
line con 0
line vty 0 4
  login local
  transport input all
line vty 5 15
  login local

  transport input all
!
!
monitor session 1 source vlan 1 - 31
monitor session 1 destination interface Gi1/0/9
ntp clock-period 36027834
ntp server 192.168.31.2
end
```

Campus Core, Cisco Catalyst 4507R

```
version 12.2
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
service compress-config
!
hostname 4507RC2
!
boot-start-marker
boot-end-marker
!
enable secret 5 $1$8rSx$OUibWKseOKOD.BR6XSaM4.
!
username cisco privilege 15 password 0 cisco123
no aaa new-model
clock timezone UTC -8
clock summer-time UTC recurring
uudld aggressive

ip subnet-zero
ip domain-name wwss.local
ip dhcp database flash:dhcp-access
ip dhcp relay information trust-all
ip dhcp excluded-address 192.168.8.1 192.168.8.10
ip dhcp excluded-address 192.168.12.1 192.168.12.10
ip dhcp excluded-address 192.168.16.1 192.168.16.10
ip dhcp excluded-address 192.168.17.1 192.168.17.10
ip dhcp excluded-address 192.168.10.1 192.168.10.10
ip dhcp excluded-address 192.168.14.1 192.168.14.10
ip dhcp excluded-address 192.168.16.1 192.168.16.10
!
ip dhcp pool access
    network 192.168.8.0 255.255.255.0
    default-router 192.168.8.1
    domain-name wwss.local
    dns-server 192.168.28.10
!
ip dhcp pool voice
    network 192.168.12.0 255.255.255.0
    default-router 192.168.12.1
    dns-server 192.168.28.10
    option 150 ip 192.168.28.20 192.168.28.21
    domain-name wwss.local
!
ip dhcp pool guest
    network 192.168.16.0 255.255.255.0

    default-router 192.168.16.1
!
ip dhcp pool wireless-access
    network 192.168.10.0 255.255.255.0
    default-router 192.168.10.1
    domain-name wwss.local
    dns-server 192.168.28.10
!
ip dhcp pool wireless-voice
    network 192.168.14.0 255.255.255.0
    default-router 192.168.14.1
    domain-name wwss.local
    dns-server 192.168.28.10
    option 150 ip 192.168.28.20 192.168.28.21
!
ip dhcp pool wireless-guest
    network 192.168.16.0 255.255.255.0
    default-router 192.168.16.1
    domain-name wwss.local
    dns-server 192.168.28.10
!
ip multicast-routing
vtp mode transparent
cluster run
!
!
crypto pki trustpoint TP-self-signed-12209
    enrollment selfsigned
    subject-name cn=IOS-Self-Signed-Certificate-12209
    revocation-check none
    rsakeypair TP-self-signed-12209
!
!
crypto pki certificate chain TP-self-signed-12209
    certificate self-signed 01
        3082023F 308201A8 A0030201 02020101 300D0609 2A864886 F70D0101 04050030
        2C312A30 28060355 04031321 494F532D 53656C66 2D536967 6E65642D 43657274
        69666963 6174652D 31323230 39301E17 0D303831 31303931 37343930 395A170D
        32303031 30313030 30303030 5A302C31 2A302806 03550403 1321494F 532D5365
        6C662D53 69676E65 642D4365 72746966 69636174 652D3132 32303930 819F300D
        06092A86 4886F70D 01010105 0003818D 00308189 02818100 C4BF6788 5A0ACBD7
        ACD710B6 49E9C005 8F0F86B0 4FE13D04 6A724C1C 59C4C9CD 96956991 251A9F59
        EC773AB7 49262398 4B369FB3 D14D963A 55A8FD48 E9C3F07B 24CBB9AA D8764125
        C44C8D1A EABCAD35 FE90A6BF 3611ED34 52FB0440 C4CBCF99 07AFA924 36FCDE9A
        4B5935EA C0DA124A 89BA5CB4 60812E9D D3E05D09 A0BDCC13 02030100 01A37130
        6F300F06 03551D13 0101FF04 05300301 01FF301C 0603551D 11041530 13821134
        35303752 43322E63 6973636F 2E636F6D 301F0603 551D2304 18301680 14054225
        523B53F4 FD843583 88F28EBE 5DADFA6E 3C301D06 03551D0E 04160414 05422552
```

Campus Core, Cisco Catalyst 4507R

```
3B53F4FD 84358388 F28EBE5D ADFA6E3C 300D0609 2A864886 F70D0101 04050003
8181008C 5DE3731D D4A22B64 81FD65C7 16024EEB 6F0BF264 C99FBFE4 78CDC844
2907FDB5 476451B8 284785EB 2F13A8FF 8CD22EF8 469DDD69 C26724F2 C3DBEA76
B1131D28 2CCAA887 30189BDA 0469F8BC 6D54E0B3 A5BA292F FC0E49C6 660F6A48
211673BF DA03DCBE 1CAC91FF 055E3B76 17175A12 B16E1B93 E51F0C95 2D2AF7DB 8A1148
quit
power redundancy-mode redundant
!
!
!
!
!
!
spanning-tree mode rapid-pvst
spanning-tree extend system-id
spanning-tree vlan 1-1005 priority 24576
!
redundancy
mode rpr
!
vlan internal allocation policy ascending
!
vlan 8,10,12,14,16,28-31
!
ip ssh version 2
!
class-map match-all AutoQos-VoIP-Control-Dscp26
match dscp af31
class-map match-all AutoQos-VoIP-Control-Dscp24
match dscp cs3
class-map match-all AutoQos-VoIP-Bearer-Cos
match cos 5
class-map match-all AutoQos-VoIP-Control-QosGroup24
match qos-group 24
class-map match-all AutoQos-VoIP-Control-QosGroup26
match qos-group 26
class-map match-all AutoQos-VoIP-Bearer-QosGroup
match qos-group 46
class-map match-all AutoQos-VoIP-Bearer-Dscp
match dscp ef
class-map match-all AutoQos-VoIP-Control-Cos
match cos 3
!
!
policy-map AutoQos-VoIP-Input-Dscp-Policy
class AutoQos-VoIP-Bearer-Dscp
set qos-group 46
class AutoQos-VoIP-Control-Dscp26
set qos-group 26
class AutoQos-VoIP-Control-Dscp24
set qos-group 24
policy-map AutoQos-VoIP-Input-Cos-Policy
class AutoQos-VoIP-Bearer-Cos
set qos-group 46
class AutoQos-VoIP-Control-Cos
set qos-group 24
policy-map AutoQos-VoIP-Output-Policy
class AutoQos-VoIP-Bearer-QosGroup
set dscp ef
set cos 5
priority
police cir percent 33
class AutoQos-VoIP-Control-QosGroup26
set dscp af31
set cos 3
bandwidth remaining percent 5
class AutoQos-VoIP-Control-QosGroup24
set dscp cs3
set cos 3
bandwidth remaining percent 5
class class-default
dbl
!
!
!
interface Port-channel1
switchport
switchport trunk allowed vlan 1,8,12
switchport mode trunk
no ethernet cfm enable
!
interface Port-channel2
switchport
switchport trunk allowed vlan 1,8,12
switchport mode trunk
no ethernet cfm enable
!
interface Port-channel3
switchport
switchport trunk allowed vlan 1,8,12
switchport mode trunk
no ethernet cfm enable
!
interface Port-channel4
switchport
switchport trunk allowed vlan 1,8,12
```

Campus Core, Cisco Catalyst 4507R

```
switchport mode trunk
!
interface Port-channel5
switchport
switchport trunk allowed vlan 1,28-30
switchport mode trunk
no ethernet cfm enable
!
interface Port-channel6
switchport
switchport trunk allowed vlan 1,28-30
switchport mode trunk
!
interface Port-channel8
switchport
switchport mode trunk
!
interface Port-channel11
switchport
switchport trunk allowed vlan 10,14,16,31
switchport mode trunk
!
interface Port-channel12
switchport
switchport trunk allowed vlan 31
switchport mode trunk
no ethernet cfm enable
!
interface GigabitEthernet2/1
switchport trunk allowed vlan 1,8,12
switchport mode trunk
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/2
switchport trunk allowed vlan 1,8,12
switchport mode trunk
channel-group 2 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/3
switchport trunk allowed vlan 1,8,12
switchport mode trunk
channel-group 3 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/4
switchport trunk allowed vlan 1,8,12
```

```
switchport mode trunk
channel-group 4 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/5
switchport trunk allowed vlan 1,28-30
switchport mode trunk
channel-group 5 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/6
switchport mode trunk
channel-group 8 mode on
!
interface GigabitEthernet2/7
switchport mode access
!
interface GigabitEthernet2/8
!
interface GigabitEthernet2/9
switchport mode access
!
interface GigabitEthernet2/10
switchport trunk allowed vlan 16,31
switchport mode trunk
spanning-tree link-type point-to-point
no ethernet cfm enable
!
interface GigabitEthernet2/11
switchport trunk allowed vlan 10,14,16,31
switchport mode trunk
channel-group 11 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/12
switchport trunk allowed vlan 31
switchport mode trunk
channel-group 12 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/13
switchport trunk allowed vlan 1,8,12
switchport mode trunk
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/14
switchport trunk allowed vlan 1,8,12
```


Campus Core, Cisco Catalyst 4507R

```
switchport mode trunk
channel-group 2 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/15
switchport trunk allowed vlan 1,8,12
switchport mode trunk
channel-group 3 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/16
switchport trunk allowed vlan 1,28-30
switchport mode trunk
channel-group 5 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/17
!
interface GigabitEthernet2/18
switchport mode trunk
channel-group 8 mode on
!
interface GigabitEthernet2/19
switchport access vlan 31
switchport mode access
!
interface GigabitEthernet2/20
!
interface GigabitEthernet2/21
switchport access vlan 31
switchport mode access
!
interface GigabitEthernet2/22
switchport trunk allowed vlan 16,31
switchport mode trunk
spanning-tree link-type point-to-point
no ethernet cfm enable
!
interface GigabitEthernet2/23
switchport trunk allowed vlan 10,14,16,31
switchport mode trunk
channel-group 11 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/24
switchport trunk allowed vlan 31
switchport mode trunk
channel-group 12 mode on

spanning-tree link-type point-to-point
!
interface TenGigabitEthernet3/1
!
interface TenGigabitEthernet3/2
!
interface GigabitEthernet3/3
!
interface GigabitEthernet3/4
!
interface GigabitEthernet3/5
!
interface GigabitEthernet3/6
!
interface TenGigabitEthernet4/1
!
interface TenGigabitEthernet4/2
!
interface GigabitEthernet4/3
!
interface GigabitEthernet4/4
!
interface GigabitEthernet4/5
!
interface GigabitEthernet4/6
!
interface Vlan1
ip address 192.168.1.1 255.255.255.0
!
interface Vlan8
ip address 192.168.8.1 255.255.255.0
ip pim sparse-mode
!
interface Vlan10
ip address 192.168.10.1 255.255.255.0
!
interface Vlan12
ip address 192.168.12.1 255.255.255.0
ip pim sparse-mode
!
interface Vlan14
ip address 192.168.14.1 255.255.255.0
!
interface Vlan16
description Wireless Guest *** SET NO IP ADDRESS ****
no ip address
!
interface Vlan28
```

Campus Core, Cisco Catalyst 4507R

```
ip address 192.168.28.1 255.255.255.0
ip pim sparse-mode
!
interface Vlan29
ip address 192.168.29.1 255.255.255.0
ip pim sparse-mode
!
interface Vlan31
ip address 192.168.31.1 255.255.255.0
ip pim sparse-mode
!
!
router eigrp 1
passive-interface default
no passive-interface Vlan31
no passive-interface Port-channel6
no passive-interface Port-channel8
no passive-interface Port-channel11
no passive-interface Port-channel12
network 192.168.0.0 0.0.255.255
!
ip default-gateway 192.168.1.1
ip route 192.168.17.0 255.255.255.0 192.168.31.192
ip http server
ip http secure-server
!
!
!
!
snmp-server community cisco RO
snmp-server community cisco123 RW

!
line con 0
stopbits 1
line vty 0 4
login local
length 0
transport input all
!
!
monitor session 1 source vlan 1 - 31
monitor session 1 destination interface Gi2/9
ntp clock-period 17181286
ntp server 192.168.31.2
end
```

Server Farm Switch, Cisco Catalyst 3750

```
version 12.2
no service pad
service timestamps debug uptime
service timestamps log uptime
service password-encryption
!
hostname 3750SF1

enable secret cisco123
enable password cisco
!
username cisco password cisco123
no aaa new-model
clock timezone UTC -8
clock summer-time UTC recurring
switch 1 provision ws-c3750g-24ps
switch 2 provision ws-c3750g-24ps
system mtu routing 1500
vtp mode transparent
udld aggressive

ip subnet-zero
ip domain-name cisco.com
!
cluster enable 3750SF 0
!
mls qos map cos-dscp 0 8 16 24 32 46 48 56
mls qos srr-queue input bandwidth 90 10
mls qos srr-queue input threshold 1 8 16
mls qos srr-queue input threshold 2 34 66
mls qos srr-queue input buffers 67 33
mls qos srr-queue input cos-map queue 1 threshold 2 1
mls qos srr-queue input cos-map queue 1 threshold 3 0
mls qos srr-queue input cos-map queue 2 threshold 1 2
mls qos srr-queue input cos-map queue 2 threshold 2 4 6 7
mls qos srr-queue input cos-map queue 2 threshold 3 3 5

mls qos srr-queue input dscp-map queue 1 threshold 2 9 10 11 12 13 14 15
mls qos srr-queue input dscp-map queue 1 threshold 3 0 1 2 3 4 5 6 7
mls qos srr-queue input dscp-map queue 1 threshold 3 32
mls qos srr-queue input dscp-map queue 2 threshold 1 16 17 18 19 20 21 22 23
mls qos srr-queue input dscp-map queue 2 threshold 2 33 34 35 36 37 38 39 48
mls qos srr-queue input dscp-map queue 2 threshold 2 49 50 51 52 53 54 55 56
mls qos srr-queue input dscp-map queue 2 threshold 2 57 58 59 60 61 62 63
mls qos srr-queue input dscp-map queue 2 threshold 3 24 25 26 27 28 29 30 31
mls qos srr-queue input dscp-map queue 2 threshold 3 40 41 42 43 44 45 46 47
mls qos srr-queue output cos-map queue 1 threshold 3 5
```

Server Farm Switch, Cisco Catalyst 3750

```
mls qos srr-queue output cos-map queue 2 threshold 3 3 6 7
mls qos srr-queue output cos-map queue 3 threshold 3 2 4
mls qos srr-queue output cos-map queue 4 threshold 2 1
mls qos srr-queue output cos-map queue 4 threshold 3 0
mls qos srr-queue output dscp-map queue 1 threshold 3 40 41 42 43 44 45 46 47
mls qos srr-queue output dscp-map queue 2 threshold 3 24 25 26 27 28 29 30 31
mls qos srr-queue output dscp-map queue 2 threshold 3 48 49 50 51 52 53 54 55
mls qos srr-queue output dscp-map queue 2 threshold 3 56 57 58 59 60 61 62 63
mls qos srr-queue output dscp-map queue 3 threshold 3 16 17 18 19 20 21 22 23
mls qos srr-queue output dscp-map queue 3 threshold 3 32 33 34 35 36 37 38 39
mls qos srr-queue output dscp-map queue 4 threshold 1 8
mls qos srr-queue output dscp-map queue 4 threshold 2 9 10 11 12 13 14 15
mls qos srr-queue output dscp-map queue 4 threshold 3 0 1 2 3 4 5 6 7
mls qos queue-set output 1 threshold 1 138 138 92 138
mls qos queue-set output 1 threshold 2 138 138 92 400
mls qos queue-set output 1 threshold 3 36 77 100 318
mls qos queue-set output 1 threshold 4 20 50 67 400
mls qos queue-set output 2 threshold 1 149 149 100 149
mls qos queue-set output 2 threshold 2 118 118 100 235
mls qos queue-set output 2 threshold 3 41 68 100 272
mls qos queue-set output 2 threshold 4 42 72 100 242
mls qos queue-set output 1 buffers 10 10 26 54
mls qos queue-set output 2 buffers 16 6 17 61
mls qos
!
spanning-tree mode pvst

spanning-tree extend system-id
!
vlan internal allocation policy ascending
!
vlan 28,29
!
ip ssh version 2
!
!
interface Port-channel1
 switchport trunk encapsulation dot1q
 switchport trunk allowed vlan 1,28,29
 switchport mode trunk
!
interface GigabitEthernet1/0/1
 switchport access vlan 28
 switchport mode access
 srr-queue bandwidth share 10 10 60 20
 queue-set 2
 priority-queue out

mls qos trust dscp
```

Server Farm Switch, Cisco Catalyst 3750

```
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/2
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!

interface GigabitEthernet1/0/3
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!

interface GigabitEthernet1/0/4
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!

interface GigabitEthernet1/0/5
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast

spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/6
switchport access vlan 28
switchport mode access

srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/7
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/8
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/9
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out

mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
```

Server Farm Switch, Cisco Catalyst 3750

```
!  
interface GigabitEthernet1/0/10  
  switchport access vlan 28  
  switchport mode access  
  srr-queue bandwidth share 10 10 60 20  
  queue-set 2  
  priority-queue out  
  mls qos trust dscp  
  auto qos voip trust  
  spanning-tree portfast  
  spanning-tree bpduguard enable  
!  
interface GigabitEthernet1/0/11  
  switchport access vlan 28  
  switchport mode access  
  srr-queue bandwidth share 10 10 60 20  
  queue-set 2  
  priority-queue out  
  mls qos trust dscp  
  auto qos voip trust  
  spanning-tree portfast  
  spanning-tree bpduguard enable  
!  
interface GigabitEthernet1/0/12  
  switchport access vlan 28  
  switchport mode access  
  srr-queue bandwidth share 10 10 60 20  
  queue-set 2  
  priority-queue out  
  mls qos trust dscp  
  auto qos voip trust  
  spanning-tree portfast  
  
  spanning-tree bpduguard enable  
!  
interface GigabitEthernet1/0/13  
  switchport access vlan 29  
  switchport mode access  
  srr-queue bandwidth share 10 10 60 20  
  queue-set 2  
  priority-queue out  
  mls qos trust dscp  
  auto qos voip trust  
  spanning-tree bpduguard disable  
!  
interface GigabitEthernet1/0/14  
  switchport access vlan 29  
  
  switchport mode access  
  srr-queue bandwidth share 10 10 60 20  
  queue-set 2  
  priority-queue out  
  mls qos trust dscp  
  auto qos voip trust  
  spanning-tree portfast  
  spanning-tree bpduguard enable  
!  
interface GigabitEthernet1/0/15  
  switchport access vlan 29  
  switchport mode access  
  srr-queue bandwidth share 10 10 60 20  
  queue-set 2  
  priority-queue out  
  mls qos trust dscp  
  auto qos voip trust  
  spanning-tree portfast  
  spanning-tree bpduguard enable  
!  
interface GigabitEthernet1/0/16  
  switchport access vlan 29  
  
  switchport mode access  
  srr-queue bandwidth share 10 10 60 20  
  queue-set 2  
  priority-queue out  
  mls qos trust dscp  
  auto qos voip trust  
  spanning-tree portfast  
  spanning-tree bpduguard enable  
!  
interface GigabitEthernet1/0/17  
  switchport access vlan 29  
  switchport mode access  
  srr-queue bandwidth share 10 10 60 20  
  queue-set 2  
  priority-queue out  
  mls qos trust dscp  
  auto qos voip trust  
  spanning-tree portfast  
  spanning-tree bpduguard enable  
!  
interface GigabitEthernet1/0/18  
  switchport access vlan 29  
  switchport mode access  
  srr-queue bandwidth share 10 10 60 20
```

Server Farm Switch, Cisco Catalyst 3750

```
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/19
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2

priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/20
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/21
switchport trunk encapsulation dot1q
switchport mode trunk
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/22
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out

mls qos trust dscp
auto qos voip trust

spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/23
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/24
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/25
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,28,29
switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/26
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,28,29

switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/27
switchport trunk encapsulation dot1q
```

Server Farm Switch, Cisco Catalyst 3750

```
switchport trunk allowed vlan 1,28,29
switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/28
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,28,29
switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/1
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/2
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20

queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/3
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable

!
interface GigabitEthernet2/0/4
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/5
switchport access vlan 28
switchport mode access
shutdown
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out

mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/6
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/7
switchport access vlan 28
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
```


Server Farm Switch, Cisco Catalyst 3750

```
interface GigabitEthernet2/0/8
 switchport access vlan 28
 switchport mode access
 srr-queue bandwidth share 10 10 60 20
 queue-set 2
 priority-queue out
 mls qos trust dscp
 auto qos voip trust
 spanning-tree portfast

 spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/9
 switchport access vlan 28
 switchport mode access
 srr-queue bandwidth share 10 10 60 20
 queue-set 2
 priority-queue out
 mls qos trust dscp
 auto qos voip trust
 spanning-tree portfast
 spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/10
 switchport access vlan 28
 switchport mode access
 srr-queue bandwidth share 10 10 60 20
 queue-set 2
 priority-queue out
 mls qos trust dscp
 auto qos voip trust
 spanning-tree portfast
 spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/11
 switchport access vlan 28
 switchport mode access
 srr-queue bandwidth share 10 10 60 20
 queue-set 2
 priority-queue out
 mls qos trust dscp
 auto qos voip trust
 spanning-tree portfast
 spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/12
 switchport access vlan 28

 switchport mode access
 srr-queue bandwidth share 10 10 60 20
 queue-set 2
 priority-queue out
 mls qos trust dscp
 auto qos voip trust
 spanning-tree portfast
 spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/13
 switchport access vlan 29
 switchport mode access
 srr-queue bandwidth share 10 10 60 20
 queue-set 2
 priority-queue out
 mls qos trust dscp
 auto qos voip trust
 spanning-tree portfast
 spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/14
 switchport access vlan 29
 switchport mode access
 srr-queue bandwidth share 10 10 60 20
 queue-set 2
 priority-queue out
 mls qos trust dscp
 auto qos voip trust
 spanning-tree portfast
 spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/15
 switchport access vlan 29
 switchport mode access
 srr-queue bandwidth share 10 10 60 20

 queue-set 2
 priority-queue out
 mls qos trust dscp
 auto qos voip trust
 spanning-tree portfast
 spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/16
 switchport access vlan 29
 switchport mode access
 srr-queue bandwidth share 10 10 60 20
```

Server Farm Switch, Cisco Catalyst 3750

```
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/17
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/18
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp

auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/19
switchport access vlan 29
switchport mode access
shutdown
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/20
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2

priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/21
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast

spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/22
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/23
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/24
switchport access vlan 29
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
```

Server Farm Switch, Cisco Catalyst 3750

```
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/25

    switchport trunk encapsulation dot1q
    switchport trunk allowed vlan 1,28,29
    switchport mode trunk
    mls qos trust dscp
    channel-group 1 mode on
    spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/26
    switchport trunk encapsulation dot1q
    switchport trunk allowed vlan 1,28,29
    switchport mode trunk
    mls qos trust dscp
    channel-group 1 mode on
    spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/27
    switchport trunk encapsulation dot1q
    switchport trunk allowed vlan 1,28,29
    switchport mode trunk
    mls qos trust dscp
    channel-group 1 mode on
    spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/28
    switchport trunk encapsulation dot1q
    switchport trunk allowed vlan 1,28,29
    switchport mode trunk
    mls qos trust dscp
    channel-group 1 mode on
    spanning-tree link-type point-to-point
!
interface Vlan1
    ip address 192.168.1.8 255.255.255.0
!
ip default-gateway 192.168.1.1
ip classless

ip http server
ip http secure-server
!
!
```

```
snmp-server community cisco RO
snmp-server community cisco123 RW
!
control-plane
!
!
line con 0
line vty 0 4
    login local
    transport input all
line vty 5 15
    login local
    transport input all
!
ntp clock-period 36028040
ntp server 192.168.31.2
end
```

Campus Access Switch, Cisco Catalyst 3750

```
version 12.2
no service pad
service timestamps debug uptime
service timestamps log uptime
service password-encryption
!
hostname 3750A1-1
!
enable secret cisco123
enable password cisco
!
username cisco password cisco123
no aaa new-model
clock timezone UTC -8
clock summer-time UTC recurring
switch 1 provision ws-c3750g-24ps
switch 2 provision ws-c3750g-24ps
system mtu routing 1500
vtp mode transparent
ip subnet-zero
ip domain-name cisco.com
!
ip dhcp snooping vlan 1-12
no ip dhcp snooping information option
ip dhcp snooping
ip arp inspection vlan 1-12
cluster enable 3750CA-1 0
!
mls qos map policed-dscp 24 26 46 to 0
mls qos map cos-dscp 0 8 16 24 32 46 48 56
mls qos srr-queue input bandwidth 90 10
mls qos srr-queue input threshold 1 8 16
mls qos srr-queue input threshold 2 34 66
mls qos srr-queue input buffers 67 33
mls qos srr-queue input cos-map queue 1 threshold 2 1
mls qos srr-queue input cos-map queue 1 threshold 3 0

mls qos srr-queue input cos-map queue 2 threshold 1 2
mls qos srr-queue input cos-map queue 2 threshold 2 4 6 7
mls qos srr-queue input cos-map queue 2 threshold 3 3 5
mls qos srr-queue input dscp-map queue 1 threshold 2 9 10 11 12 13 14 15
mls qos srr-queue input dscp-map queue 1 threshold 3 0 1 2 3 4 5 6 7
mls qos srr-queue input dscp-map queue 1 threshold 3 32
mls qos srr-queue input dscp-map queue 2 threshold 1 16 17 18 19 20 21 22 23
mls qos srr-queue input dscp-map queue 2 threshold 2 33 34 35 36 37 38 39 48
mls qos srr-queue input dscp-map queue 2 threshold 2 49 50 51 52 53 54 55 56
mls qos srr-queue input dscp-map queue 2 threshold 2 57 58 59 60 61 62 63
```

Campus Access Switch, Cisco Catalyst 3750

```
mls qos srr-queue input dscp-map queue 2 threshold 3 24 25 26 27 28 29 30 31
mls qos srr-queue input dscp-map queue 2 threshold 3 40 41 42 43 44 45 46 47
mls qos srr-queue output cos-map queue 1 threshold 3 5
mls qos srr-queue output cos-map queue 2 threshold 3 3 6 7
mls qos srr-queue output cos-map queue 3 threshold 3 2 4
mls qos srr-queue output cos-map queue 4 threshold 2 1
mls qos srr-queue output cos-map queue 4 threshold 3 0
mls qos srr-queue output dscp-map queue 1 threshold 3 40 41 42 43 44 45 46 47
mls qos srr-queue output dscp-map queue 2 threshold 3 24 25 26 27 28 29 30 31
mls qos srr-queue output dscp-map queue 2 threshold 3 48 49 50 51 52 53 54 55
mls qos srr-queue output dscp-map queue 2 threshold 3 56 57 58 59 60 61 62 63
mls qos srr-queue output dscp-map queue 3 threshold 3 16 17 18 19 20 21 22 23
mls qos srr-queue output dscp-map queue 3 threshold 3 32 33 34 35 36 37 38 39
mls qos srr-queue output dscp-map queue 4 threshold 1 8
mls qos srr-queue output dscp-map queue 4 threshold 2 9 10 11 12 13 14 15
mls qos srr-queue output dscp-map queue 4 threshold 3 0 1 2 3 4 5 6 7
mls qos queue-set output 1 threshold 1 138 138 92 138
mls qos queue-set output 1 threshold 2 138 138 92 400
mls qos queue-set output 1 threshold 3 36 77 100 318
mls qos queue-set output 1 threshold 4 20 50 67 400
mls qos queue-set output 2 threshold 1 149 149 100 149
mls qos queue-set output 2 threshold 2 118 118 100 235
mls qos queue-set output 2 threshold 3 41 68 100 272
mls qos queue-set output 2 threshold 4 42 72 100 242
mls qos queue-set output 1 buffers 10 10 26 54
mls qos queue-set output 2 buffers 16 6 17 61

mls qos
!
spanning-tree mode rapid-pvst
spanning-tree extend system-id
!
vlan internal allocation policy ascending
!
vlan 8,12
!
ip ssh version 2
!
class-map match-all AutoQoS-VoIP-RTP-Trust
  match ip dscp ef
class-map match-all AutoQoS-VoIP-Control-Trust
  match ip dscp cs3 af31
!
!
policy-map AutoQoS-Police-CiscoPhone
  class AutoQoS-VoIP-RTP-Trust
    set dscp ef
```

Campus Access Switch, Cisco Catalyst 3750

```
    police 320000 8000 exceed-action policed-dscp-transmit
class AutoQoS-VoIP-Control-Trust
  set dscp cs3
  police 32000 8000 exceed-action policed-dscp-transmit
!
!
!
interface Port-channel1
  switchport trunk encapsulation dot1q
  switchport trunk allowed vlan 1,8,12
  switchport mode trunk
  ip arp inspection trust
  ip dhcp snooping trust
!
interface GigabitEthernet1/0/1
  switchport access vlan 8

switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/2
  switchport access vlan 8
  switchport mode access
  switchport voice vlan 12
  switchport port-security maximum 11
  switchport port-security
  switchport port-security aging time 2
  switchport port-security violation restrict
  switchport port-security aging type inactivity
  ip arp inspection limit rate 100
```

```
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone

spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/3
  switchport access vlan 8
  switchport mode access
  switchport voice vlan 12
  switchport port-security maximum 11
  switchport port-security
  switchport port-security aging time 2
  switchport port-security violation restrict
  switchport port-security aging type inactivity
  ip arp inspection limit rate 100
  srr-queue bandwidth share 10 10 60 20
  queue-set 2
  priority-queue out
  mls qos trust device cisco-phone
  mls qos trust cos
  auto qos voip cisco-phone
  spanning-tree portfast
  spanning-tree bpduguard enable
  service-policy input AutoQoS-Police-CiscoPhone
  ip verify source
  ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/4
  switchport access vlan 8
  switchport mode access
  switchport voice vlan 12
  switchport port-security maximum 11
  switchport port-security
  switchport port-security aging time 2
  switchport port-security violation restrict

  switchport port-security aging type inactivity
  ip arp inspection limit rate 100
  srr-queue bandwidth share 10 10 60 20
```

Campus Access Switch, Cisco Catalyst 3750

```
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/5
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/6
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
```

```
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/7
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone

mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/8
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
```

Campus Access Switch, Cisco Catalyst 3750

```
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/9
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security

switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/10
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
```

```
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source

ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/11
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/12
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2

priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
```


Campus Access Switch, Cisco Catalyst 3750

```
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/13
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/14
switchport access vlan 8
switchport mode access
switchport voice vlan 12

switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100

!
interface GigabitEthernet1/0/15
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable

service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/16
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/17
```

Campus Access Switch, Cisco Catalyst 3750

```
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100

srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/18
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/19
switchport access vlan 8

switchport mode access

switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/20
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone

spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/21
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
```

Campus Access Switch, Cisco Catalyst 3750

```
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/22
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict

switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/23
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2

switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/24
description Wireless AP Port
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet1/0/25
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
ip arp inspection trust
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
```

Campus Access Switch, Cisco Catalyst 3750

```
channel-group 1 mode on
spanning-tree link-type point-to-point
ip dhcp snooping trust
!
interface GigabitEthernet1/0/26

switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
ip arp inspection trust
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 1 mode on
spanning-tree link-type point-to-point
ip dhcp snooping trust
!
interface GigabitEthernet1/0/27
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
ip arp inspection trust
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 1 mode on
spanning-tree link-type point-to-point
ip dhcp snooping trust
!
interface GigabitEthernet1/0/28
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
ip arp inspection trust
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp

auto qos voip trust
channel-group 1 mode on
spanning-tree link-type point-to-point
ip dhcp snooping trust

!
interface GigabitEthernet2/0/1
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
srr-queue bandwidth shape 10 0 0 0
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/2
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict

switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
srr-queue bandwidth shape 10 0 0 0
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
```

Campus Access Switch, Cisco Catalyst 3750

```
!  
interface GigabitEthernet2/0/3  
  switchport access vlan 8  
  switchport mode access  
  switchport voice vlan 12  
  switchport port-security maximum 11  
  switchport port-security  
  switchport port-security aging time 2  
  switchport port-security violation restrict  
  switchport port-security aging type inactivity  
  ip arp inspection limit rate 100  
  srr-queue bandwidth share 10 10 60 20  
  srr-queue bandwidth shape 10 0 0 0  
  queue-set 2  
  priority-queue out  
  mls qos trust device cisco-phone  
  mls qos trust cos  
  auto qos voip cisco-phone  
  spanning-tree portfast  
  spanning-tree bpduguard enable  
  service-policy input AutoQoS-Police-CiscoPhone  
  ip verify source  
  
  ip dhcp snooping limit rate 100  
!  
interface GigabitEthernet2/0/4  
  switchport access vlan 8  
  switchport mode access  
  switchport voice vlan 12  
  switchport port-security maximum 11  
  switchport port-security  
  switchport port-security aging time 2  
  switchport port-security violation restrict  
  switchport port-security aging type inactivity  
  ip arp inspection limit rate 100  
  srr-queue bandwidth share 10 10 60 20  
  srr-queue bandwidth shape 10 0 0 0  
  queue-set 2  
  priority-queue out  
  mls qos trust device cisco-phone  
  mls qos trust cos  
  auto qos voip cisco-phone  
  spanning-tree portfast  
  spanning-tree bpduguard enable  
  service-policy input AutoQoS-Police-CiscoPhone  
  ip verify source  
  ip dhcp snooping limit rate 100
```

```
!  
interface GigabitEthernet2/0/5  
  switchport access vlan 8  
  switchport mode access  
  switchport voice vlan 12  
  switchport port-security maximum 11  
  switchport port-security  
  switchport port-security aging time 2  
  switchport port-security violation restrict  
  switchport port-security aging type inactivity  
  ip arp inspection limit rate 100  
  srr-queue bandwidth share 10 10 60 20  
  
  srr-queue bandwidth shape 10 0 0 0  
  queue-set 2  
  priority-queue out  
  mls qos trust device cisco-phone  
  mls qos trust cos  
  auto qos voip cisco-phone  
  spanning-tree portfast  
  spanning-tree bpduguard enable  
  service-policy input AutoQoS-Police-CiscoPhone  
  ip verify source  
  ip dhcp snooping limit rate 100  
!  
interface GigabitEthernet2/0/6  
  switchport access vlan 8  
  switchport mode access  
  switchport voice vlan 12  
  switchport port-security maximum 11  
  switchport port-security  
  switchport port-security aging time 2  
  switchport port-security violation restrict  
  switchport port-security aging type inactivity  
  ip arp inspection limit rate 100  
  srr-queue bandwidth share 10 10 60 20  
  srr-queue bandwidth shape 10 0 0 0  
  queue-set 2  
  priority-queue out  
  mls qos trust device cisco-phone  
  mls qos trust cos  
  auto qos voip cisco-phone  
  spanning-tree portfast  
  spanning-tree bpduguard enable  
  service-policy input AutoQoS-Police-CiscoPhone  
  ip verify source  
  ip dhcp snooping limit rate 100
```

Campus Access Switch, Cisco Catalyst 3750

```
!  
interface GigabitEthernet2/0/7  
  
    switchport access vlan 8  
    switchport mode access  
    switchport voice vlan 12  
    switchport port-security maximum 11  
    switchport port-security  
    switchport port-security aging time 2  
    switchport port-security violation restrict  
    switchport port-security aging type inactivity  
    ip arp inspection limit rate 100  
    srr-queue bandwidth share 10 10 60 20  
    srr-queue bandwidth shape 10 0 0 0  
    queue-set 2  
    priority-queue out  
    mls qos trust device cisco-phone  
    mls qos trust cos  
    auto qos voip cisco-phone  
    spanning-tree portfast  
    spanning-tree bpduguard enable  
    service-policy input AutoQoS-Police-CiscoPhone  
    ip verify source  
    ip dhcp snooping limit rate 100  
!  
interface GigabitEthernet2/0/8  
    switchport access vlan 8  
    switchport mode access  
    switchport voice vlan 12  
    switchport port-security maximum 11  
    switchport port-security  
    switchport port-security aging time 2  
    switchport port-security violation restrict  
    switchport port-security aging type inactivity  
    ip arp inspection limit rate 100  
    srr-queue bandwidth share 10 10 60 20  
    srr-queue bandwidth shape 10 0 0 0  
    queue-set 2  
    priority-queue out  
  
    mls qos trust device cisco-phone  
    mls qos trust cos  
    auto qos voip cisco-phone  
    spanning-tree portfast  
    spanning-tree bpduguard enable  
    service-policy input AutoQoS-Police-CiscoPhone  
    ip verify source
```

```
    ip dhcp snooping limit rate 100  
!  
interface GigabitEthernet2/0/9  
    switchport access vlan 8  
    switchport mode access  
    switchport voice vlan 12  
    switchport port-security maximum 11  
    switchport port-security  
    switchport port-security aging time 2  
    switchport port-security violation restrict  
    switchport port-security aging type inactivity  
    ip arp inspection limit rate 100  
    srr-queue bandwidth share 10 10 60 20  
    srr-queue bandwidth shape 10 0 0 0  
    queue-set 2  
    priority-queue out  
    mls qos trust device cisco-phone  
    mls qos trust cos  
    auto qos voip cisco-phone  
    spanning-tree portfast  
    spanning-tree bpduguard enable  
    service-policy input AutoQoS-Police-CiscoPhone  
    ip verify source  
    ip dhcp snooping limit rate 100  
!  
interface GigabitEthernet2/0/10  
    switchport access vlan 8  
    switchport mode access  
    switchport voice vlan 12  
  
    switchport port-security maximum 11  
    switchport port-security  
    switchport port-security aging time 2  
    switchport port-security violation restrict  
    switchport port-security aging type inactivity  
    ip arp inspection limit rate 100  
    srr-queue bandwidth share 10 10 60 20  
    srr-queue bandwidth shape 10 0 0 0  
    queue-set 2  
    priority-queue out  
    mls qos trust device cisco-phone  
    mls qos trust cos  
    auto qos voip cisco-phone  
    spanning-tree portfast  
    spanning-tree bpduguard enable  
    service-policy input AutoQoS-Police-CiscoPhone  
    ip verify source
```

Campus Access Switch, Cisco Catalyst 3750

```
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/11
 switchport access vlan 8
 switchport mode access
 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2
 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100
 srr-queue bandwidth share 10 10 60 20
 srr-queue bandwidth shape 10 0 0 0
 queue-set 2
 priority-queue out
 mls qos trust device cisco-phone
 mls qos trust cos
 auto qos voip cisco-phone

 spanning-tree portfast
 spanning-tree bpduguard enable
 service-policy input AutoQoS-Police-CiscoPhone
 ip verify source
 ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/12
 switchport access vlan 8
 switchport mode access
 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2
 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100
 srr-queue bandwidth share 10 10 60 20
 srr-queue bandwidth shape 10 0 0 0
 queue-set 2
 priority-queue out
 mls qos trust device cisco-phone
 mls qos trust cos
 auto qos voip cisco-phone
 spanning-tree portfast
 spanning-tree bpduguard enable
 service-policy input AutoQoS-Police-CiscoPhone
 ip verify source
```

```
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/13
 switchport access vlan 8
 switchport mode access
 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2

 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100
 srr-queue bandwidth share 10 10 60 20
 srr-queue bandwidth shape 10 0 0 0
 queue-set 2
 priority-queue out
 mls qos trust device cisco-phone
 mls qos trust cos
 auto qos voip cisco-phone
 spanning-tree portfast
 spanning-tree bpduguard enable
 service-policy input AutoQoS-Police-CiscoPhone
 ip verify source
 ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/14
 switchport access vlan 8
 switchport mode access
 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2
 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100
 srr-queue bandwidth share 10 10 60 20
 srr-queue bandwidth shape 10 0 0 0
 queue-set 2
 priority-queue out
 mls qos trust device cisco-phone
 mls qos trust cos
 auto qos voip cisco-phone
 spanning-tree portfast
 spanning-tree bpduguard enable
 service-policy input AutoQoS-Police-CiscoPhone

 ip verify source
```

Campus Access Switch, Cisco Catalyst 3750

```
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/15
 switchport access vlan 8
 switchport mode access
 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2
 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100
 srr-queue bandwidth share 10 10 60 20
 srr-queue bandwidth shape 10 0 0 0
 queue-set 2
 priority-queue out
 mls qos trust device cisco-phone
 mls qos trust cos
 auto qos voip cisco-phone
 spanning-tree portfast
 spanning-tree bpduguard enable
 service-policy input AutoQoS-Police-CiscoPhone
 ip verify source
 ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/16
 switchport access vlan 8
 switchport mode access
 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2
 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100

srr-queue bandwidth share 10 10 60 20
srr-queue bandwidth shape 10 0 0 0
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
```

```
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/17
 switchport access vlan 8
 switchport mode access
 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2
 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100
 srr-queue bandwidth share 10 10 60 20
 srr-queue bandwidth shape 10 0 0 0
 queue-set 2
 priority-queue out
 mls qos trust device cisco-phone
 mls qos trust cos
 auto qos voip cisco-phone
 spanning-tree portfast
 spanning-tree bpduguard enable
 service-policy input AutoQoS-Police-CiscoPhone
 ip verify source
 ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/18
 switchport access vlan 8
 switchport mode access
 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2
 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100
 srr-queue bandwidth share 10 10 60 20
 srr-queue bandwidth shape 10 0 0 0
 queue-set 2
 priority-queue out
 mls qos trust device cisco-phone
 mls qos trust cos
 auto qos voip cisco-phone
 spanning-tree portfast
 spanning-tree bpduguard enable
 service-policy input AutoQoS-Police-CiscoPhone
 ip verify source
```


Campus Access Switch, Cisco Catalyst 3750

```
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/19
 switchport access vlan 8
 switchport mode access
 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2
 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100
 srr-queue bandwidth share 10 10 60 20
 srr-queue bandwidth shape 10 0 0 0
 queue-set 2

priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/20
 switchport access vlan 8
 switchport mode access
 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2
 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100
 srr-queue bandwidth share 10 10 60 20
 srr-queue bandwidth shape 10 0 0 0
 queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
```

```
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/21
 switchport access vlan 8
 switchport mode access

 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2
 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100
 srr-queue bandwidth share 10 10 60 20
 srr-queue bandwidth shape 10 0 0 0
 queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/22
 switchport access vlan 8
 switchport mode access
 switchport voice vlan 12
 switchport port-security maximum 11
 switchport port-security
 switchport port-security aging time 2
 switchport port-security violation restrict
 switchport port-security aging type inactivity
 ip arp inspection limit rate 100
 srr-queue bandwidth share 10 10 60 20
 srr-queue bandwidth shape 10 0 0 0
 queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos

auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
```

Campus Access Switch, Cisco Catalyst 3750

```
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/23
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security
switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
srr-queue bandwidth shape 10 0 0 0
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/24
switchport access vlan 8
switchport mode access
switchport voice vlan 12
switchport port-security maximum 11
switchport port-security

switchport port-security aging time 2
switchport port-security violation restrict
switchport port-security aging type inactivity
ip arp inspection limit rate 100
srr-queue bandwidth share 10 10 60 20
srr-queue bandwidth shape 10 0 0 0
queue-set 2
priority-queue out
mls qos trust device cisco-phone
mls qos trust cos
auto qos voip cisco-phone
spanning-tree portfast
spanning-tree bpduguard enable
service-policy input AutoQoS-Police-CiscoPhone
```

```
ip verify source
ip dhcp snooping limit rate 100
!
interface GigabitEthernet2/0/25
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
ip arp inspection trust
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 1 mode on
spanning-tree link-type point-to-point
ip dhcp snooping trust
!
interface GigabitEthernet2/0/26
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
ip arp inspection trust

srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 1 mode on
spanning-tree link-type point-to-point
ip dhcp snooping trust
!
interface GigabitEthernet2/0/27
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
ip arp inspection trust
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 1 mode on
spanning-tree link-type point-to-point
ip dhcp snooping trust
!
interface GigabitEthernet2/0/28
```

Campus Access Switch, Cisco Catalyst 3750

```
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,8,12
switchport mode trunk
ip arp inspection trust
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust dscp
auto qos voip trust
channel-group 1 mode on
spanning-tree link-type point-to-point
ip dhcp snooping trust

!
interface Vlan1
 ip address 192.168.1.10 255.255.255.0
!
ip default-gateway 192.168.1.1
ip classless
ip http server
ip http secure-server
!
!
snmp-server community cisco RO
snmp-server community cisco123 RW
!
control-plane
!
!
line con 0
line vty 0 4
 login local
 transport input all
line vty 5 15
 login local
 transport input all
!
ntp clock-period 36028011
ntp server 192.168.31.2
end
```

Headquarters WAN Router, Cisco ISR 3845

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
!
hostname HQ-ISR3845
!
boot-start-marker
boot-end-marker
!
card type t1 0 0
logging message-counter syslog
enable secret cisco
enable password cisco
!
no aaa new-model
clock timezone UTC -8
clock summer-time UTC recurring
network-clock-participate wic 0
!
ip wccp 61
ip wccp 62
ip cef
!
ip domain name cisco.com
ip name-server 192.168.28.10
ip multicast-routing
no ipv6 cef
!
!
voice-card 0
dsp services dspfarm
!
username cisco password cisco123
!
controller T1 0/0/0

clock source internal
cablelength short 110
channel-group 0 timeslots 1-24
!
controller T1 0/0/1
cablelength short 110
pri-group timeslots 1-24 service mgcp
!
ip ssh version 2
!

class-map match-all Interactive-Video
match ip dscp af41 af42
class-map match-any Network-Control
match ip dscp cs6
match ip dscp cs2
class-map match-all Critical-Data
match ip dscp af21 af22
class-map match-all Call-Signalling
match ip dscp cs3
class-map match-all Voice
match ip dscp ef
!
policy-map Lan-Edge
class class-default
set cos dscp
policy-map WAN
class Voice
priority percent 7
compress header ip rtp
class Interactive-Video
priority percent 31
class Network-Control
bandwidth percent 5
class Critical-Data
bandwidth percent 25
random-detect dscp-based

class Call-Signalling
bandwidth percent 5
class class-default
bandwidth percent 25
random-detect
!
interface Loopback0
ip address 192.168.1.12 255.255.255.255
!
interface Port-channel1
no ip address
hold-queue 150 in
!
!
interface Port-channel1.31
encapsulation dot1Q 31
ip address 192.168.31.2 255.255.255.0
ip wccp 61 redirect in
ip pim sparse-mode
service-policy output Lan-Edge
```

Headquarters WAN Router, Cisco ISR 3845

```
!
interface GigabitEthernet0/0
no ip address
duplex auto
speed auto
media-type rj45
channel-group 1
!
!
interface GigabitEthernet0/0.31
channel-group 1
!
interface GigabitEthernet0/1
no ip address
duplex auto
speed auto

media-type rj45
channel-group 1
!
!
interface GigabitEthernet0/1.31
channel-group 1
!
interface Serial0/0/0:0
ip address 10.0.1.1 255.255.255.252
ip wccp 62 redirect in
ip pim sparse-mode
load-interval 30
max-reserved-bandwidth 100
service-policy output WAN
!
interface Serial0/0/1:23
no ip address
encapsulation hdslc
isdn switch-type primary-ni
isdn incoming-voice voice
isdn bind-13 ccm-manager
no cdp enable
!
router eigrp 1
network 10.0.1.0 0.0.0.255
network 192.168.0.0 0.0.255.255
no auto-summary
!
ip http server
ip http secure-server

!
ip pim rp-address 192.168.31.1
!
snmp-server community cisco RO
snmp-server community cisco123 RW
!

control-plane
!
voice-port 0/0/1:23
!
ccm-manager redundant-host cucm1
ccm-manager mgcp
ccm-manager fax protocol cisco
ccm-manager music-on-hold
ccm-manager config server cucm1.cisco.com cucm2.cisco.com
ccm-manager config
ccm-manager sccp local Port-channel1
!
mgcp
mgcp call-agent cucm2 2427 service-type mgcp version 0.1
mgcp rtp unreachable timeout 1000 action notify
mgcp modem passthrough voip mode nse
mgcp package-capability rtp-package
mgcp package-capability sst-package
mgcp package-capability pre-package
no mgcp package-capability res-package
no mgcp timer receive-rtcp
mgcp sdp simple
mgcp fax t38 ecm
mgcp rtp payload-type g726r16 static
!
mgcp profile default
!
sccp local Port-channel1.31
sccp ccm 192.168.28.20 identifier 1 priority 2 version 7.0
sccp ccm 192.168.29.20 identifier 2 priority 1 version 7.0
sccp
!
sccp ccm group 1
bind interface Port-channel1.31
associate ccm 2 priority 1
associate ccm 1 priority 2

associate profile 1 register hq_conf
switchback method graceful
switchback interval 60
```

Headquarters WAN Router, Cisco ISR 3845

```
!  
dspfarm profile 1 conference  
description HQ Conference Bridges  
codec g711ulaw  
codec g711alaw  
codec g729ar8  
codec g729abr8  
codec g729r8  
codec g729br8  
codec g722-64  
codec ilbc  
maximum sessions 2  
associate application SCCP  
!  
line con 0  
line aux 0  
line vty 0 4  
login local  
transport input all  
!  
scheduler allocate 20000 1000  
ntp master  
end
```

Branch WAN Router, Cisco ISR 2811

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
!
hostname Branch1_ISR2811
!
boot-start-marker
boot-end-marker
!
card type t1 0 0
logging message-counter syslog
enable secret cisco123
enable password cisco
!
no aaa new-model
network-clock-participate wic 0
network-clock-select 1 T1 0/0/0
!
ip wccp 61
ip wccp 62
!
!
ip cef
ip dhcp excluded-address 192.168.64.1 192.168.64.10
ip dhcp excluded-address 192.168.65.1 192.168.65.10
ip dhcp excluded-address 192.168.66.1 192.168.66.10
ip dhcp excluded-address 192.168.67.1 192.168.67.10
!
ip dhcp pool access
network 192.168.64.0 255.255.255.0
default-router 192.168.64.1
dns-server 192.168.28.10
domain-name cisco.com
!
ip dhcp pool voice
network 192.168.65.0 255.255.255.0
domain-name cisco.com
dns-server 192.168.28.10
default-router 192.168.65.1
option 150 ip 192.168.28.20 192.168.29.20
!
ip dhcp pool Wireless_Access
network 192.168.69.0 255.255.255.0
domain-name cisco.com
dns-server 192.168.28.10
```

```
default-router 192.168.69.1
!
ip dhcp pool Wireless_Voice
network 192.168.70.0 255.255.255.0
domain-name cisco.com
dns-server 192.168.28.10
default-router 192.168.70.1
option 150 ip 192.168.28.20 192.168.29.20
!
!
ip domain name cisco.com
ip name-server 192.168.28.10
ip multicast-routing
no ipv6 cef
!
!
isdn switch-type primary-ni
!
voice service voip
fax protocol cisco
sip
bind control source-interface FastEthernet0/0.65
bind media source-interface FastEthernet0/0.65
!
!
voice class codec 1
codec preference 1 g711ulaw
codec preference 2 g711alaw
codec preference 3 g729r8
codec preference 4 ilbc

voice-card 0
dsp services dspfarm
!

username cisco password cisco123

application
global
service alternate Default
!
username cisco password cisco123

!
controller T1 0/0/0
clock source line primary
cablelength short 110
channel-group 0 timeslots 1-24
```

Branch WAN Router, Cisco ISR 2811

```
!  
controller T1 0/0/1  
cablelength short 110  
pri-group timeslots 1-24  
!  
ip ssh version 2  
!  
class-map match-all Interactive-Video  
match ip dscp af41 af42  
class-map match-any Network-Control  
match ip dscp cs6  
match ip dscp cs2  
class-map match-all Critical-Data  
match ip dscp af21 af22  
class-map match-all Call-Signalling  
match ip dscp cs3  
match ip dscp af31  
class-map match-all Voice  
match ip dscp ef  
!  
!  
policy-map Lan-Edge  
class class-default  
set cos dscp  
policy-map WAN  
class Voice  
priority percent 10  
compress header ip rtp  
class Interactive-Video  
priority percent 35  
class Network-Control  
  
bandwidth percent 5  
class Call-Signalling  
bandwidth percent 5  
class Critical-Data  
bandwidth percent 15  
random-detect dscp-based  
class class-default  
bandwidth percent 25  
random-detect  
!  
interface Loopback0  
ip address 192.168.1.65 255.255.255.252  
!  
interface FastEthernet0/0  
no ip address  
  
duplex auto  
speed auto  
!  
interface FastEthernet0/0.64  
description Access subnet  
encapsulation dot1Q 64  
ip address 192.168.64.1 255.255.255.0  
ip wccp 61 redirect in  
ip pim sparse-mode  
ids-service-module monitoring promiscuous access-list 199  
service-policy output Lan-Edge  
!  
interface FastEthernet0/0.65  
description Voice Subnet  
encapsulation dot1Q 65  
ip address 192.168.65.1 255.255.255.0  
ip pim sparse-mode  
service-policy output Lan-Edge  
!  
!  
interface FastEthernet0/0.69  
  
description Wireless Access  
encapsulation dot1Q 69  
ip address 192.168.69.1 255.255.255.0  
service-policy output Lan-Edge  
!  
interface FastEthernet0/0.70  
description Wireless Voice  
encapsulation dot1Q 70  
ip address 192.168.70.1 255.255.255.0  
service-policy output Lan-Edge  
!  
interface FastEthernet0/1  
no ip address  
duplex auto  
speed auto  
!  
interface Serial0/0/0:0  
ip address 10.0.1.2 255.255.255.252  
ip wccp 62 redirect out  
ip pim sparse-mode  
load-interval 30  
max-reserved-bandwidth 100  
service-policy output WAN  
!  
interface Serial0/0/1:23
```


Branch WAN Router, Cisco ISR 2811

```
no ip address
encapsulation hdlc
isdn switch-type primary-ni
isdn incoming-voice voice
no cdp enable
!
interface Integrated-Service-Engine1/0
ip address 192.168.68.1 255.255.255.0
service-module ip address 192.168.68.2 255.255.255.0
service-module ip default-gateway 192.168.68.1

!
interface IDS-Sensor0/0
ip unnumbered Loopback0
service-module fail-open
hold-queue 60 out
!
router eigrp 1
network 10.0.1.0 0.0.0.255
network 192.168.0.0 0.0.255.255
no auto-summary
!
ip route 192.168.1.66 255.255.255.255 IDS-Sensor0/0
ip http server
ip http secure-server
!
ip pim rp-address 192.168.31.1
!
access-list 199 permit tcp any any eq 443
access-list 199 deny ip any any
!
snmp-server community cisco RO
snmp-server community cisco123 RW
!
control-plane
!
voice-port 0/0/1:23
!
! dial-peer voice 100 voip
description SIP TRUNK to CUCM1
preference 2
destination-pattern 1408555....
voice-class codec 1
session protocol sipv2
session target ipv4:192.168.28.20
incoming called-number .
!

dial-peer voice 101 voip
description SIP TRUNK to CUCM2
preference 1
destination-pattern 1408555....
voice-class codec 1
session protocol sipv2
session target ipv4:192.168.29.20
incoming called-number .
!
dial-peer voice 123 pots
incoming called-number .
direct-inward-dial
!
dial-peer voice 911 pots
destination-pattern 911
port 0/0/1:23
forward-digits 3
!
dial-peer voice 9911 pots
destination-pattern 9911
port 0/0/1:23
forward-digits 3
!
dial-peer voice 7 pots
destination-pattern 9[2-9].....
port 0/0/1:23
forward-digits 7
!
dial-peer voice 11 pots
destination-pattern 91[2-9]..[2-9].....
port 0/0/1:23
forward-digits 11
!
dial-peer voice 9011 pots
destination-pattern 9011T
incoming called-number .
direct-inward-dial
port 0/0/1:23
prefix 011
!
!
sccp local FastEthernet0/0.65
sccp ccm 192.168.28.20 identifier 1 priority 2 version 7.0
sccp ccm 192.168.29.20 identifier 2 priority 1 version 7.0
sccp
!
sccp ccm group 1
```

Branch WAN Router, Cisco ISR 2811

```
bind interface FastEthernet0/0.65
associate ccm 2 priority 1

associate ccm 1 priority 2
associate profile 1 register br1_conf
switchback method graceful
switchback interval 60
!
dspfarm profile 1 conference
description Branch 1 Conference Bridges
codec g711ulaw
codec g711alaw
codec g729ar8
codec g729abr8
codec g729r8
codec g729br8
maximum sessions 4
associate application SCCP
!
gateway
timer receive-rtp 1200
!
call-manager-fallback
max-conferences 8 gain -6
transfer-system full-consult
ip source-address 192.168.65.1 port 2000
!
line con 0
line aux 0
!
line vty 0 4
login local
transport input all
!
scheduler allocate 20000 1000
ntp server 192.168.31.2
end
```

Branch Switch, Cisco Catalyst 3560

```
version 12.2
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname Branch1SW1
!
enable secret 5 $1$yjKf$m4IKI3REH6CLlU1Irz9cE.
enable password cisco123
!
username cisco privilege 15 password 0 cisco123
no aaa new-model
system mtu routing 1500
ip subnet-zero
ip domain-name wwss.local
ip name-server 192.168.28.10
!
mls qos map cos-dscp 0 8 16 26 32 46 48 56
mls qos srr-queue input bandwidth 90 10
mls qos srr-queue input threshold 1 8 16
mls qos srr-queue input threshold 2 34 66
mls qos srr-queue input buffers 67 33
mls qos srr-queue input cos-map queue 1 threshold 2 1
mls qos srr-queue input cos-map queue 1 threshold 3 0
mls qos srr-queue input cos-map queue 2 threshold 1 2
mls qos srr-queue input cos-map queue 2 threshold 2 4 6 7
mls qos srr-queue input cos-map queue 2 threshold 3 3 5
mls qos srr-queue input dscp-map queue 1 threshold 2 9 10 11 12 13 14 15
mls qos srr-queue input dscp-map queue 1 threshold 3 0 1 2 3 4 5 6 7
mls qos srr-queue input dscp-map queue 1 threshold 3 32
mls qos srr-queue input dscp-map queue 2 threshold 1 16 17 18 19 20 21 22 23
mls qos srr-queue input dscp-map queue 2 threshold 2 33 34 35 36 37 38 39 48
mls qos srr-queue input dscp-map queue 2 threshold 2 49 50 51 52 53 54 55 56
mls qos srr-queue input dscp-map queue 2 threshold 2 57 58 59 60 61 62 63

mls qos srr-queue input dscp-map queue 2 threshold 3 24 25 26 27 28 29
30 31
mls qos srr-queue input dscp-map queue 2 threshold 3 40 41 42 43 44 45
46 47
mls qos srr-queue output cos-map queue 1 threshold 3 5
mls qos srr-queue output cos-map queue 2 threshold 3 3 6 7
mls qos srr-queue output cos-map queue 3 threshold 3 2 4
mls qos srr-queue output cos-map queue 4 threshold 2 1
mls qos srr-queue output cos-map queue 4 threshold 3 0
mls qos srr-queue output dscp-map queue 1 threshold 3 40 41 42 43 44 45
46 47
mls qos srr-queue output dscp-map queue 2 threshold 3 24 25 26 27 28 29
30 31
mls qos srr-queue output dscp-map queue 2 threshold 3 48 49 50 51 52 53
54 55
mls qos srr-queue output dscp-map queue 2 threshold 3 56 57 58 59 60 61
62 63
mls qos srr-queue output dscp-map queue 3 threshold 3 16 17 18 19 20 21
22 23
mls qos srr-queue output dscp-map queue 3 threshold 3 32 33 34 35 36 37
38 39
mls qos srr-queue output dscp-map queue 4 threshold 1 8
mls qos srr-queue output dscp-map queue 4 threshold 2 9 10 11 12 13 14 15
mls qos srr-queue output dscp-map queue 4 threshold 3 0 1 2 3 4 5 6 7
mls qos queue-set output 1 threshold 1 138 138 92 138
mls qos queue-set output 1 threshold 2 138 138 92 400
mls qos queue-set output 1 threshold 3 36 77 100 318
mls qos queue-set output 1 threshold 4 20 50 67 400
mls qos queue-set output 2 threshold 1 149 149 100 149
mls qos queue-set output 2 threshold 2 118 118 100 235
mls qos queue-set output 2 threshold 3 41 68 100 272
mls qos queue-set output 2 threshold 4 42 72 100 242
mls qos queue-set output 1 buffers 10 10 26 54
mls qos queue-set output 2 buffers 16 6 17 61
mls qos
!
!
!
spanning-tree mode rapid-pvst
spanning-tree extend system-id
!
vlan internal allocation policy ascending
!
ip ssh version 2
!
```

Branch Switch, Cisco Catalyst 3560

```
interface FastEthernet0/1
  switchport access vlan 64
  switchport mode access
  switchport voice vlan 65
  switchport port-security maximum 10
  switchport port-security
  switchport port-security aging time 2
  switchport port-security violation restrict
  switchport port-security aging type inactivity
  ip arp inspection limit rate 100
  srr-queue bandwidth share 10 10 60 20
  srr-queue bandwidth shape 10 0 0 0
  mls qos trust device cisco-phone
  mls qos trust cos
  auto qos voip cisco-phone
  macro description cisco-phone
  spanning-tree portfast
  spanning-tree bpduguard enable
  ip verify source
  ip dhcp snooping limit rate 100
! Same configuration FA port 0/1-0/4, 6, 7
!
interface FastEthernet0/5
  description Wireless Access Point
  switchport trunk encapsulation dot1q
  switchport trunk native vlan 64
  switchport trunk allowed vlan 64,69,70
  switchport mode trunk
  srr-queue bandwidth share 10 10 60 20
  priority-queue out
  mls qos trust dscp
  auto qos voip trust
  spanning-tree bpduguard enable
!
interface FastEthernet0/8
  switchport trunk encapsulation dot1q
  switchport trunk native vlan 64
  switchport trunk allowed vlan 1,64,65,69,70
  switchport mode trunk
!
interface GigabitEthernet0/1
  switchport trunk encapsulation dot1q
  switchport mode trunk
  spanning-tree link-type point-to-point
!
```

```
interface Vlan1
  no ip address
!
interface Vlan64
  ip address 192.168.64.8 255.255.255.0
!
interface Vlan65
  no ip address
!
interface Vlan66
  no ip address
!
interface Vlan67
  no ip address
!
interface Vlan69
  no ip address
!
interface Vlan70
  no ip address
!
ip default-gateway 192.168.64.1
ip classless
ip http server
ip http secure-server
!
snmp-server community cisco RO
snmp-server community cisco123 RW
snmp-server community cisco@es0 RO
snmp-server community cisco123@es0 RW
!
control-plane
!
!
line con 0
line vty 0 4
  login local
  transport input all
line vty 5 15
  login local
  transport input all
!
end
```

Headquarters Security, Cisco ASA 5510

```
ASA Version 8.0(4)
!
hostname ASA5510
domain-name wwss.local
enable password cisco123
passwd cisco123
names
name 192.168.0.0 Internal
name 192.168.28.10 DNS_Server
name 192.168.30.128 VPN-Pool
!
interface Ethernet0/0
 no nameif
 no security-level
 no ip address
!
interface Ethernet0/0.16
 vlan 16
 nameif guest
 security-level 0
 ip address 192.168.16.254 255.255.255.0 standby 192.168.16.253
!
interface Ethernet0/0.31
 vlan 31
 nameif inside
 security-level 100
 ip address 192.168.31.254 255.255.255.0 standby 192.168.31.253
!
interface Ethernet0/1
 nameif DMZ
 security-level 50
 ip address 192.168.30.65 255.255.255.192 standby 192.168.30.66
!
interface Ethernet0/2
 description LAN/STATE Failover Interface
!
interface Ethernet0/3
 nameif outside
 security-level 0
 ip address 10.194.40.56 255.255.255.0 standby 10.194.40.55
!
interface Management0/0
 shutdown
 no nameif
 no security-level
 no ip address
!
```

Headquarters Security, Cisco ASA 5510

```
ASA Version 8.0(4)
!
hostname ASA5510
domain-name wwss.local
enable password cisco123
passwd cisco123
names
name 192.168.0.0 Internal
name 192.168.28.10 DNS_Server
name 192.168.30.128 VPN-Pool
!
interface Ethernet0/0
 no nameif
 no security-level
 no ip address
!
interface Ethernet0/0.16
 vlan 16
 nameif guest
 security-level 0
 ip address 192.168.16.254 255.255.255.0 standby 192.168.16.253
!
interface Ethernet0/0.31
 vlan 31
 nameif inside
 security-level 100
 ip address 192.168.31.254 255.255.255.0 standby 192.168.31.253
!
interface Ethernet0/1
 nameif DMZ
 security-level 50
 ip address 192.168.30.65 255.255.255.192 standby 192.168.30.66
!
interface Ethernet0/2
 description LAN/STATE Failover Interface
!
interface Ethernet0/3
 nameif outside
 security-level 0
 ip address 10.194.40.56 255.255.255.0 standby 10.194.40.55
!
interface Management0/0
 shutdown
 no nameif
 no security-level
 no ip address
!
```

Headquarters Security, Cisco ASA 5510

```
ftp mode passive
dns domain-lookup inside
dns server-group DefaultDNS
  name-server DNS_Server
  domain-name wwss.local
same-security-traffic permit inter-interface
object-group service DM_INLINE_TCP_1 tcp
  port-object eq https
  port-object eq ssh
object-group network DM_INLINE_NETWORK_1
  network-object 192.168.192.0 255.255.255.0
  network-object VPN-Pool 255.255.255.128
access-list inside_access_in extended permit ip any any
access-list outside_access_in extended permit tcp any 10.194.40.0 255.255.255.0 object-group DM_INLINE_TCP_1
access-list outside_access_in extended permit icmp any any
access-list inside_mpc extended permit ip Internal 255.255.0.0 any
access-list outside_mpc extended permit ip any Internal 255.255.0.0
access-list inside_nat0_outbound extended permit ip Internal 255.255.0.0 object-group DM_INLINE_NETWORK_1
access-list guest_access_in extended permit udp any 192.168.16.0 255.255.255.0 eq bootpc
access-list guest_access_in extended deny ip any Internal 255.255.0.0
access-list guest_access_in extended permit ip 192.168.16.0 255.255.255.0 any
access-list RA_SplitTunnelACL standard permit Internal 255.255.0.0
pager lines 24
logging enable
logging asdm informational
mtu guest 1500
mtu inside 1500
mtu DMZ 1500
mtu outside 1500
ip local pool VPN-Pool 192.168.30.129-192.168.30.254 mask 255.255.255.128
failover
failover lan unit primary
failover lan interface failover Ethernet0/2
failover polltime unit 1 holdtime 3
failover polltime interface 1 holdtime 5
failover replication http
failover link failover Ethernet0/2
failover interface ip failover 192.168.30.1 255.255.255.252 standby 192.168.30.2
monitor-interface inside
icmp unreachable rate-limit 1 burst-size 1
asdm image disk0:/asdm-615.bin
no asdm history enable
arp timeout 14400
global (outside) 1 interface
nat (guest) 1 192.168.16.0 255.255.255.0
nat (inside) 0 access-list inside_nat0_outbound
nat (inside) 1 Internal 255.255.0.0
```

Headquarters Security, Cisco ASA 5510

```
access-group guest_access_in in interface guest
access-group outside_access_in in interface outside
!
router eigrp 1
 network Internal 255.255.0.0
 passive-interface guest
 passive-interface DMZ
 passive-interface outside
 redistribute static
!
route outside 0.0.0.0 0.0.0.0 10.194.40.1 1
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 icmp 0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00 mgcp-pat
0:05:00
timeout sip 0:30:00 sip_media 0:02:00 sip-invite 0:03:00 sip-disconnect
0:02:00
timeout sip-provisional-media 0:02:00 uauth 0:05:00 absolute
dynamic-access-policy-record DfltAccessPolicy
aaa-server AD protocol nt
aaa-server AD (inside) host DNS_Server
 nt-auth-domain-controller 192.168.28.10
aaa authentication telnet console LOCAL
aaa authentication ssh console LOCAL
http server enable
http Internal 255.255.0.0 inside
http 0.0.0.0 0.0.0.0 outside
http redirect outside 80
no snmp-server location
no snmp-server contact
snmp-server enable traps snmp authentication linkup linkdown coldstart
service resetoutside
crypto ipsec transform-set ESP-3DES-SHA esp-3des esp-sha-hmac
crypto ipsec transform-set ESP-AES-128-SHA esp-aes esp-sha-hmac
crypto ipsec transform-set 5505SET esp-3des esp-md5-hmac
crypto ipsec security-association lifetime seconds 28800
crypto ipsec security-association lifetime kilobytes 4608000
crypto dynamic-map SYSTEM_DEFAULT_CRYPTOMAP 65535 set pfs group1
crypto dynamic-map SYSTEM_DEFAULT_CRYPTOMAP 65535 set transform-set ESP-AES-
128-SHA ESP-3DES-SHA
crypto dynamic-map SYSTEM_DEFAULT_CRYPTOMAP 65535 set security-association
lifetime seconds 28800
crypto dynamic-map SYSTEM_DEFAULT_CRYPTOMAP 65535 set security-association
lifetime kilobytes 4608000
crypto dynamic-map SYSTEM_DEFAULT_CRYPTOMAP 65535 set reverse-route
crypto dynamic-map CAB_MAP 10 set security-association lifetime seconds 28800
crypto dynamic-map CAB_MAP 10 set security-association lifetime kilobytes
4608000
crypto dynamic-map 5505DYN-MAP 5 set transform-set 5505SET
crypto dynamic-map 5505DYN-MAP 5 set security-association lifetime
seconds 28800
crypto dynamic-map 5505DYN-MAP 5 set security-association lifetime
kilobytes 4608000
crypto dynamic-map 5505DYN-MAP 5 set reverse-route
crypto map outisde_map 10 set security-association lifetime seconds
28800
crypto map outisde_map 10 set security-association lifetime kilobytes
4608000
crypto map outside_map 65535 ipsec-isakmp dynamic SYSTEM_DEFAULT_
CRYPTOMAP
crypto map 5505MAP 60 ipsec-isakmp dynamic 5505DYN-MAP
crypto map 5505MAP interface outside
crypto ca trustpoint ASDM_TrustPoint0
 enrollment self
 subject-name CN=ASA5510
 crl configure
crypto ca certificate chain ASDM_TrustPoint0
crypto isakmp enable outside
crypto isakmp policy 10
 authentication pre-share
 encryption 3des
 hash sha
 group 2
 lifetime 86400
crypto isakmp policy 65535
 authentication pre-share
 encryption 3des
 hash sha
 group 2
 lifetime 86400
telnet Internal 255.255.0.0 inside
telnet timeout 5
ssh 0.0.0.0 0.0.0.0 inside
ssh 0.0.0.0 0.0.0.0 outside
ssh timeout 60
ssh version 2
console timeout 0
dhcpd address 192.168.16.11-192.168.16.250 guest
dhcpd dns 171.68.226.120 171.68.235.228 interface guest
dhcpd domain cisco.com interface guest
dhcpd enable guest
!
dhcprelay timeout 60
threat-detection basic-threat
```


Headquarters Security, Cisco ASA 5510

```
threat-detection statistics port
threat-detection statistics protocol
threat-detection statistics access-list

no threat-detection statistics tcp-intercept
webvpn
  enable outside
  csd image disk0:/securedesktop-asa-3.3.0.151-k9.pkg
  svc image disk0:/anyconnect-win-2.2.0140-k9.pkg 1
  svc enable
group-policy 5505Group internal
group-policy 5505Group attributes
  vpn-tunnel-protocol IPSec svc
  ip-comp enable
  split-tunnel-policy tunnelspecified
  split-tunnel-network-list value RA_SplitTunnelACL
  nem enable
group-policy DfltGrpPolicy attributes
  dns-server value 192.168.28.10
  vpn-tunnel-protocol IPSec svc webvpn
  split-tunnel-policy tunnelspecified
  split-tunnel-network-list value RA_SplitTunnelACL
  address-pools value VPN-Pool
username 5505site1 password cisco123
username 5505site1 attributes
  vpn-group-policy 5505Group
username 5505site2 password cisco123
username 5505site2 attributes
  vpn-group-policy 5505Group
username user1 password cisco123
username user2 password cisco123
username user3 password cisco123
username cisco password cisco123

tunnel-group DefaultRAGroup general-attributes
  address-pool VPN-Pool
  authentication-server-group AD LOCAL
tunnel-group DefaultRAGroup ipsec-attributes
  pre-shared-key cisco123
tunnel-group DefaultWEBVPGNGroup general-attributes

address-pool VPN-Pool
  authentication-server-group AD LOCAL
  default-group-policy 5505Group
tunnel-group RA5505 type remote-access
tunnel-group RA5505 general-attributes
  default-group-policy 5505Group

tunnel-group RA5505 ipsec-attributes
  pre-shared-key cisco123
!
class-map inside-class
  match access-list inside_mpc
class-map inspection_default
  match default-inspection-traffic
class-map outside-class
  match access-list outside_mpc
!
!
policy-map type inspect dns preset_dns_map
  parameters
    message-length maximum 512
policy-map IDS-Inside
  class inside-class
    ips promiscuous fail-open sensor vs0
policy-map global_policy
  class inspection_default
    inspect dns preset_dns_map
    inspect ftp
    inspect h323 h225
    inspect h323 ras
    inspect netbios
    inspect rsh
    inspect rtsp
    inspect skinny
    inspect esmtp
    inspect sqlnet
    inspect sunrpc

    inspect tftp
    inspect sip
    inspect xdmcp
policy-map IDS-Outside
  class outside-class
    ips promiscuous fail-open sensor vs0
!
service-policy global_policy global
service-policy IDS-Inside interface inside
service-policy IDS-Outside interface outside
prompt hostname context
Cryptochecksum:0b8211296b3883fa5bbf59027077ed2c
: end
```

Headquarters Intrusion Protection, Cisco IPS-SSM

```
! -----
! Current configuration last modified Fri Dec 12 10:20:56 2008
! -----
! Version 6.2(1)
! Host:
!   Realm Keys          key1.0
! Signature Definition:
!   Signature Update    S369.0      2008-12-06
!   Virus Update        V1.4        2007-03-02
! -----
service interface
exit
! -----
service authentication
exit
! -----
service event-action-rules rules0
exit
! -----
service host
network-settings
host-ip 192.168.1.57/24,192.168.1.1
host-name IPSSSM20B
telnet-option disabled
access-list 192.168.0.0/16
exit
time-zone-settings
offset 0
standard-time-zone-name UTC
exit
ntp-option enabled-ntp-unauthenticated
ntp-server 192.168.31.2
exit
summertime-option recurring
summertime-zone-name UTC
exit

auto-upgrade
cisco-server enabled
schedule-option periodic-schedule
start-time 10:00:00
interval 4
exit
user-name cisco
password cisco123
cisco-url https://198.133.219.25//cgi-bin/front.x/ida/locator/locator.pl
exit

exit
exit
! -----
service logger
exit
! -----
service network-access
exit
! -----
service notification
exit
! -----
service signature-definition sig0
exit
! -----
service ssh-known-hosts
exit
! -----
service trusted-certificates
exit
! -----
service web-server
exit
! -----
service anomaly-detection ad0
exit

! -----
service external-product-interface
exit
! -----
service health-monitor
exit
! -----
service analysis-engine
virtual-sensor vs0
physical-interface GigabitEthernet0/1
exit
exit
```

Headquarters Security, Cisco IPS 4255

```
! -----
! Current configuration last modified Tue Oct 28 19:08:36 2008
! -----
! Version 6.2(1)
! Host:
!   Realm Keys          key1.0
! Signature Definition:
!   Signature Update    S372.0      2008-12-10
!   Virus Update        V1.4        2007-03-02
! -----
service interface
physical-interfaces GigabitEthernet0/0
no description
admin-state enabled
duplex auto
speed auto
default-vlan 0
alt-tcp-reset-interface none
exit
physical-interfaces GigabitEthernet0/1
no description
admin-state disabled
duplex auto
speed auto
default-vlan 0
alt-tcp-reset-interface none
exit
bypass-mode off
exit
! -----
service authentication
exit
! -----
service event-action-rules rules0
overrides deny-packet-inline
override-item-status Enabled

risk-rating-range 75-100
exit
overrides produce-alert
override-item-status Enabled
exit
exit
! -----
service host
network-settings
host-ip 192.168.1.55/24,192.168.1.1

host-name IPS4255
telnet-option enabled
access-list 0.0.0.0/0
exit
time-zone-settings
offset 0
standard-time-zone-name UTC
exit
ntp-option enabled-ntp-unauthenticated
ntp-server 192.168.31.2
exit
summertime-option recurring
summertime-zone-name UTC
exit
auto-upgrade
cisco-server enabled
schedule-option periodic-schedule
start-time 10:00:00
interval 4
exit
user-name cisco
password cisco123
cisco-url https://198.133.219.25//cgi-bin/front.x/ida/locator/locator.pl
exit
exit
exit

! -----
service logger
exit
! -----
service network-access
exit
! -----
service notification
exit
! -----
service signature-definition sig0
signatures 1315 0
engine normalizer
event-action produce-alert
exit
exit
signatures 1316 0
engine normalizer
event-action produce-alert
exit
```

Headquarters Security, Cisco IPS 4255

```
status
enabled true
exit
exit
signatures 1330 16
status
enabled true
exit
exit
signatures 2000 0
status
enabled true
exit
exit
signatures 2004 0
status

enabled true
exit
exit
signatures 3327 12
status
enabled false
exit
exit
signatures 5429 0
status
enabled false
exit
exit
signatures 5759 3
status
enabled false
exit
exit
exit
! -----
service ssh-known-hosts
exit
! -----
service trusted-certificates
exit
! -----
service web-server
exit
! -----
service anomaly-detection ad0
exit

! -----
service external-product-interface
exit
! -----
service health-monitor
exit

! -----
service analysis-engine
virtual-sensor vs0
physical-interface GigabitEthernet0/0 subinterface-number 0
```

Branch WAN Intrusion Protection, Cisco IPS-AIM

```
! -----
! Current configuration last modified Fri Dec 12 17:38:59 2008
! -----
! Version 6.2(1)
! Host:
!   Realm Keys          key1.0
! Signature Definition:
!   Signature Update    S373.0      2008-12-18
!   Virus Update        V1.4        2007-03-02
! -----
service interface
exit
! -----
service authentication
exit
! -----
service event-action-rules rules0
exit
! -----
service host
network-settings
host-ip 192.168.1.66/30,192.168.1.65
host-name IPSAIM
telnet-option disabled
access-list 192.168.0.0/16
exit
time-zone-settings
offset 0
standard-time-zone-name UTC
exit
ntp-option enabled-ntp-unauthenticated
ntp-server 192.168.31.2
exit
summertime-option recurring
summertime-zone-name UTC
exit

auto-upgrade
cisco-server enabled
schedule-option periodic-schedule
start-time 10:00:00
interval 4
exit
user-name cisco
password cisco123
cisco-url https://198.133.219.25//cgi-bin/front.x/ida/locator/locator.pl
exit
exit

exit
! -----
service logger
exit
! -----
service network-access
exit
! -----
service notification
exit
! -----
service signature-definition sig0
exit
! -----
service ssh-known-hosts
exit
! -----
service trusted-certificates
exit
! -----
service web-server
exit
! -----
service anomaly-detection ad0
exit

! -----
service external-product-interface
exit
! -----
service health-monitor
exit
! -----
service analysis-engine
virtual-sensor vs0
physical-interface GigabitEthernet0/1
exit
exit
```

Secure Teleworker Access, Cisco ASA 5505

```
ASA Version 8.0(4)
!
hostname ASA5505
domain-name wwss.local
enable password 9jNfZuG3TC5tCVH0 encrypted
passwd 2KFQnbNIdI.2KYOU encrypted
names
!
interface Vlan1
 nameif inside
 security-level 100
 ip address 192.168.192.1 255.255.255.0
!
interface Vlan2
 nameif outside
 security-level 0
 ip address dhcp setroute
!
interface Ethernet0/0
 switchport access vlan 2
!
interface Ethernet0/1
!
interface Ethernet0/2
!
interface Ethernet0/3
!
interface Ethernet0/4
!
interface Ethernet0/5
!
interface Ethernet0/6
!
interface Ethernet0/7
!
boot system disk0:/asa804-k8.bin

ftp mode passive
dns server-group DefaultDNS
 domain-name wwss.local
pager lines 24
logging asdm informational
mtu inside 1500
mtu outside 1500
no failover
icmp unreachable rate-limit 1 burst-size 1
asdm image disk0:/asdm-615.bin
no asdm history enable

arp timeout 14400
global (outside) 1 interface
nat (inside) 1 0.0.0.0 0.0.0.0
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 icmp 0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00 mgcp-pat 0:05:00
timeout sip 0:30:00 sip_media 0:02:00 sip-invite 0:03:00 sip-disconnect 0:02:00
timeout sip-provisional-media 0:02:00 uauth 0:05:00 absolute
dynamic-access-policy-record DfltAccessPolicy
http server enable
http 192.168.192.0 255.255.255.0 inside
http 0.0.0.0 0.0.0.0 outside
no snmp-server location
no snmp-server contact
snmp-server enable traps snmp authentication linkup linkdown coldstart
crypto ipsec security-association lifetime seconds 28800
crypto ipsec security-association lifetime kilobytes 4608000
crypto isakmp policy 65535
 authentication pre-share
 encryption 3des
 hash sha
 group 2
 lifetime 86400
telnet 192.168.0.0 255.255.0.0 inside
telnet 192.168.0.0 255.255.0.0 outside

telnet timeout 5
ssh timeout 5
console timeout 0
dhcpd auto_config outside
dhcpd option 150 ip 192.168.28.20
!
dhcpd address 192.168.192.2-192.168.192.254 inside
dhcpd dns 192.168.28.10 interface inside
dhcpd domain wwss.local interface inside
dhcpd enable inside
!
vpnclient server 10.194.40.56
vpnclient mode network-extension-mode
vpnclient nem-st-autoconnect
vpnclient vpngroup RA5505 password *****
vpnclient username 5505site1 password *****
vpnclient enable
threat-detection basic-threat
threat-detection statistics access-list
no threat-detection statistics tcp-intercept
username cisco password ffIRPGpDSOJh9YLq encrypted privilege 15
!
```

Secure Teleworker Access, Cisco ASA 5505

```
class-map inspection_default
match default-inspection-traffic
!
!
policy-map type inspect dns preset_dns_map
parameters
  message-length maximum 512
policy-map global_policy
class inspection_default
  inspect dns preset_dns_map
  inspect ftp
  inspect h323 h225
  inspect h323 ras
  inspect netbios

  inspect rsh
  inspect rtsp
  inspect skinny
  inspect esmtp
  inspect sqlnet
  inspect sunrpc
  inspect tftp
  inspect sip
  inspect xdmcp
!
service-policy global_policy global
prompt hostname context
Cryptochecksum:c256a7baab527829ece847b81b8f5100
: end
```



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