

Switch13_13 – SWITCH01

Building configuration...

Current configuration : 13265 bytes

!

! Last configuration change at 19:11:24 UTC Tue Feb 3 2026 by admin

!

version 15.2

no service pad

service tcp-keepalives-in

service tcp-keepalives-out

service timestamps debug datetime msec

service timestamps log datetime msec

service password-encryption

service compress-config

!

hostname SWITCH01

!

boot-start-marker

boot-end-marker

!

logging discriminator EXCESS severity drops 6 msg-body drops EXCESSCOLL

logging buffered 50000

enable secret 5 \$1\$1XKZ\$PPbr1HHdpOy9/fXttY0Qa/

!

```
username admin privilege 15 secret 5 $1$xT9W$DBx6zmBzfhhb5eQFeQkpY0
aaa new-model
```

!

```
aaa authentication login default local
```

```
aaa authentication login VTY-LOCAL local
```

```
aaa authorization exec default local
```

!

```
aaa session-id common
```

!

```
ip arp inspection vlan 10,20,22,30,33,40,50,60,65,70,75,80,90,100
```

```
ip arp inspection validate src-mac ip
```

```
ip arp inspection log-buffer entries 1024
```

```
no ip icmp rate-limit unreachable
```

!

```
ip dhcp snooping vlan 10,20,22,30,33,40,50,60,65,70,75,80,90,100
```

```
no ip dhcp snooping information option
```

```
ip dhcp snooping database flash:dhcp_snoop.db
```

```
ip dhcp snooping
```

```
no ip domain-lookup
```

```
ip domain-name lab.local
```

```
ip cef
```

```
login block-for 60 attempts 3 within 60
```

```
login delay 2
ipv6 multicast rpf use-bgp
no ipv6 cef
!
errdisable recovery cause bpduguard
errdisable recovery cause psecure-violation
errdisable recovery interval 30
archive
path tftp://192.168.70.50/SWITCH01-
write-memory
time-period 1440
!
spanning-tree mode rapid-pvst
spanning-tree loopguard default
spanning-tree portfast edge default
spanning-tree portfast edge bpduguard default
spanning-tree extend system-id
spanning-tree vlan 10,20,22,30,100 priority 28672
spanning-tree vlan 33 priority 24576
!
interface GigabitEthernet0/0
description TO-SWITCH01-MS01
switchport trunk allowed vlan 10,18,20,22,30,33,40,50,60,65,70,75,80,90,100
```

```
switchport trunk encapsulation dot1q
switchport trunk native vlan 999
switchport mode trunk
switchport nonegotiate
ip arp inspection trust
negotiation auto
no cdp enable
spanning-tree link-type point-to-point
spanning-tree guard root
ip dhcp snooping trust
!
interface GigabitEthernet0/1
switchport access vlan 100
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security aging time 5
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
```

```
ip dhcp snooping limit rate 25
```

```
!
```

```
interface GigabitEthernet0/2
```

```
switchport access vlan 100
```

```
switchport mode access
```

```
switchport port-security maximum 2
```

```
switchport port-security violation restrict
```

```
switchport port-security mac-address sticky
```

```
switchport port-security aging time 5
```

```
switchport port-security
```

```
ip arp inspection limit rate 25
```

```
negotiation auto
```

```
spanning-tree portfast edge
```

```
spanning-tree bpduguard enable
```

```
ip dhcp snooping limit rate 25
```

```
!
```

```
interface GigabitEthernet0/3
```

```
description TO-SWITCH01-SWITCH02
```

```
switchport trunk allowed vlan 10,20,22,30,33,40,50,60,65,70,75,80,90,100
```

```
switchport trunk encapsulation dot1q
```

```
switchport trunk native vlan 999
```

```
switchport mode trunk
```

```
switchport nonegotiate
```

```
ip arp inspection trust
negotiation auto
no cdp enable
spanning-tree link-type point-to-point
spanning-tree guard root
ip dhcp snooping trust
!
interface GigabitEthernet1/0
description PC1
switchport access vlan 10
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address sticky 0050.7966.6801
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet1/1
```

```
description PC2
switchport access vlan 10
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address sticky 0050.7966.6802
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet1/2
description PC3
switchport access vlan 20
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address sticky 0050.7966.6803
switchport port-security
```

```
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet1/3
description PC4
switchport access vlan 20
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address sticky 0050.7966.6804
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet2/0
description PC5
```

```
switchport access vlan 30
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address sticky 0050.7966.6805
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet2/1
description PC6
switchport access vlan 30
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address sticky 0050.7966.6806
switchport port-security
ip arp inspection limit rate 25
```

```
negotiation auto  
spanning-tree portfast edge  
spanning-tree bpduguard enable  
ip dhcp snooping limit rate 25  
!  
interface GigabitEthernet2/2  
switchport access vlan 100  
switchport mode access  
switchport port-security maximum 2  
switchport port-security violation restrict  
switchport port-security mac-address sticky  
switchport port-security aging time 5  
switchport port-security  
ip arp inspection limit rate 25  
negotiation auto  
spanning-tree portfast edge  
spanning-tree bpduguard enable  
ip dhcp snooping limit rate 25  
!  
interface GigabitEthernet2/3  
switchport access vlan 100  
switchport mode access  
switchport port-security maximum 2
```

```
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security aging time 5
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface Vlan18
ip address 192.168.18.2 255.255.255.252
!
interface Vlan22
ip address 192.168.22.55 255.255.255.0
!
interface Vlan70
no ip address
shutdown
!
ip default-gateway 192.168.18.1
ip forward-protocol nd
!
```

```
ip tcp synwait-time 5
no ip http server
no ip http secure-server
!
ip tftp source-interface Vlan22
ip route 0.0.0.0 0.0.0.0 192.168.18.1
ip ssh time-out 60
ip ssh authentication-retries 2
ip ssh source-interface Vlan22
ip ssh version 2
ip ssh server algorithm encryption aes128-ctr aes192-ctr aes256-ctr
ip ssh client algorithm encryption aes128-ctr aes192-ctr aes256-ctr
!
ip access-list standard MGMT-SSH
permit 192.168.22.0 0.0.0.255
permit 192.168.70.0 0.0.0.255
ip access-list standard SNMP-MGMT
permit 192.168.70.50
deny any
!
logging trap warnings
logging origin-id hostname
logging source-interface Vlan22
```

```
logging host 192.168.70.50
```

```
!
```

```
snmp-server group NMS-GROUP v3 priv read NETVIEW write NETVIEW  
access SNMP-MGMT
```

```
snmp-server view NETVIEW iso included
```

```
snmp-server enable traps snmp authentication linkdown linkup coldstart  
warmstart
```

```
snmp-server enable traps flowmon
```

```
snmp-server enable traps tty
```

```
snmp-server enable traps eigrp
```

```
snmp-server enable traps casa
```

```
snmp-server enable traps ospf state-change
```

```
snmp-server enable traps ospf errors
```

```
snmp-server enable traps ospf retransmit
```

```
snmp-server enable traps ospf lsa
```

```
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change
```

```
snmp-server enable traps ospf cisco-specific state-change shamlink interface
```

```
snmp-server enable traps ospf cisco-specific state-change shamlink neighbor
```

```
snmp-server enable traps ospf cisco-specific errors
```

```
snmp-server enable traps ospf cisco-specific retransmit
```

```
snmp-server enable traps ospf cisco-specific lsa
```

```
snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect  
loop config
```

snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown
service-up

snmp-server enable traps auth-framework sec-violation

snmp-server enable traps energywise

snmp-server enable traps pw vc

snmp-server enable traps l2tun session

snmp-server enable traps l2tun pseudowire status

snmp-server enable traps ether-oam

snmp-server enable traps lisp

snmp-server enable traps mpls rfc ldp

snmp-server enable traps mpls ldp

snmp-server enable traps mpls rfc traffic-eng

snmp-server enable traps mpls traffic-eng

snmp-server enable traps ethernet evc status create delete

snmp-server enable traps bridge newroot topologychange

snmp-server enable traps stpx inconsistency root-inconsistency loop-
inconsistency

snmp-server enable traps vtp

snmp-server enable traps vlancreate

snmp-server enable traps vlandelete

snmp-server enable traps ike policy add

snmp-server enable traps ike policy delete

snmp-server enable traps ike tunnel start

snmp-server enable traps ike tunnel stop

```
snmp-server enable traps ipsec cryptomap add
snmp-server enable traps ipsec cryptomap delete
snmp-server enable traps ipsec cryptomap attach
snmp-server enable traps ipsec cryptomap detach
snmp-server enable traps ipsec tunnel start
snmp-server enable traps ipsec tunnel stop
snmp-server enable traps ipsec too-many-sas
snmp-server enable traps bfd
snmp-server enable traps bgp cbgp2
snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-
change inconsistency
snmp-server enable traps dlsw
snmp-server enable traps frame-relay
snmp-server enable traps frame-relay subif
snmp-server enable traps hsrp
snmp-server enable traps ipmulticast
snmp-server enable traps isis
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-
pim-message
snmp-server enable traps rsvp
snmp-server enable traps ipsla
snmp-server enable traps slb real virtual csrp
```

```
snmp-server enable traps syslog
snmp-server enable traps event-manager
snmp-server enable traps pki
snmp-server enable traps ospfv3 state-change
snmp-server enable traps ospfv3 errors
snmp-server enable traps ethernet cfm alarm
snmp-server enable traps mpls vpn
snmp-server enable traps vrfmib vrf-up vrf-down vnet-trunk-up vnet-trunk-
down
snmp-server host 192.168.70.50 version 3 priv NMS-ADMIN
!
line con 0
exec-timeout 5 0
logging synchronous
stopbits 1
line aux 0
stopbits 1
line vty 0 4
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
login authentication VTY-LOCAL
transport input ssh
```

```
line vty 5 15
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
login authentication VTY-LOCAL
transport input ssh
!
```

```
end
```

Switch14_14 – SWITCH02

```
Building configuration...
```

```
Current configuration : 13272 bytes
```

```
!
```

```
! Last configuration change at 21:11:56 UTC Tue Feb 3 2026 by admin
```

```
!
```

```
version 15.2
```

```
no service pad
```

```
service timestamps debug datetime msec
```

```
service timestamps log datetime msec
```

```
service password-encryption
```

```
service compress-config
```

```
!
```

```
hostname SWITCH02
```

```
!
```

```
boot-start-marker
boot-end-marker
!
logging discriminator EXCESS severity drops 6 msg-body drops EXCESSCOLL
logging buffered 50000
enable secret 5 $1$A6Yx$cfOZxO4BJ7.iGt9JJfXmc.
!
username admin privilege 15 secret 5 $1$z7vl$Q4lpkKHUQi1EA9BJBmcu01
aaa new-model
aaa authentication login default local
aaa authentication login VTY-LOCAL local
aaa authorization exec default local
aaa session-id common
!
ip arp inspection vlan 10,20,22,30,33,40,50,60,65,70,75,80,90,100
ip arp inspection validate src-mac ip
ip arp inspection log-buffer entries 1024
no ip icmp rate-limit unreachable
!
ip dhcp snooping vlan 10,20,22,30,33,40,50,60,65,70,75,80,90,100
no ip dhcp snooping information option
ip dhcp snooping database flash:dhcp_snoop.db
ip dhcp snooping
```

```
no ip domain-lookup
ip domain-name corp.local
ip cef
login block-for 60 attempts 3 within 60
login delay 2
ipv6 multicast rpf use-bgp
no ipv6 cef
!
errdisable recovery cause bpduguard
errdisable recovery cause psecure-violation
errdisable recovery interval 30
archive
path tftp://192.168.70.50/$h-$t
write-memory
time-period 1440
!
spanning-tree mode rapid-pvst
spanning-tree loopguard default
spanning-tree portfast edge default
spanning-tree portfast edge bpduguard default
spanning-tree extend system-id
spanning-tree vlan 33,40,50,60,100 priority 28672
!
```

```
interface GigabitEthernet0/0
description TO-SWITCH02-MS02
switchport trunk allowed vlan 10,19,20,22,30,33,40,50,60,65,70,75,80,90,100
switchport trunk encapsulation dot1q
switchport trunk native vlan 999
switchport mode trunk
switchport nonegotiate
ip arp inspection trust
negotiation auto
no cdp enable
spanning-tree link-type point-to-point
spanning-tree guard root
ip dhcp snooping trust
!
interface GigabitEthernet0/1
switchport access vlan 100
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security aging time 5
switchport port-security aging type inactivity
switchport port-security
```

```
ip arp inspection limit rate 25  
negotiation auto  
spanning-tree portfast edge  
spanning-tree bpduguard enable  
ip dhcp snooping limit rate 25  
!
```

```
interface GigabitEthernet0/2  
switchport access vlan 100  
switchport mode access  
switchport port-security maximum 2  
switchport port-security violation restrict  
switchport port-security mac-address sticky  
switchport port-security aging time 5  
switchport port-security aging type inactivity  
switchport port-security  
ip arp inspection limit rate 25  
negotiation auto  
spanning-tree portfast edge  
spanning-tree bpduguard enable  
ip dhcp snooping limit rate 25  
!  
interface GigabitEthernet0/3  
description TO-SWITCH02-MS01
```

```
switchport trunk allowed vlan 10,20,22,30,33,40,50,60,65,70,75,80,90,100
switchport trunk encapsulation dot1q
switchport trunk native vlan 999
switchport mode trunk
switchport nonegotiate
ip arp inspection trust
negotiation auto
no cdp enable
spanning-tree link-type point-to-point
ip dhcp snooping trust
!
interface GigabitEthernet1/0
description PC7
switchport access vlan 40
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address sticky 0050.7966.6807
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
```

```
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet1/1
description PC8
switchport access vlan 40
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address sticky 0050.7966.6808
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet1/2
description PC9
switchport access vlan 50
switchport mode access
switchport port-security maximum 2
```

```
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address sticky 0050.7966.6809
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet1/3
description PC10
switchport access vlan 50
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address sticky 0050.7966.680a
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
```

```
ip dhcp snooping limit rate 25
```

```
!
```

```
interface GigabitEthernet2/0
```

```
description PC11
```

```
switchport access vlan 60
```

```
switchport mode access
```

```
switchport port-security maximum 2
```

```
switchport port-security violation restrict
```

```
switchport port-security mac-address sticky
```

```
switchport port-security mac-address sticky 0050.7966.680b
```

```
switchport port-security
```

```
ip arp inspection limit rate 25
```

```
negotiation auto
```

```
spanning-tree portfast edge
```

```
spanning-tree bpduguard enable
```

```
ip dhcp snooping limit rate 25
```

```
!
```

```
interface GigabitEthernet2/1
```

```
description PC12
```

```
switchport access vlan 60
```

```
switchport mode access
```

```
switchport port-security maximum 2
```

```
switchport port-security violation restrict
```

```
switchport port-security mac-address sticky
switchport port-security mac-address sticky 0050.7966.680c
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet2/2
switchport access vlan 100
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security aging time 5
switchport port-security aging type inactivity
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
```

!

```
interface GigabitEthernet2/3
switchport access vlan 100
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security aging time 5
switchport port-security aging type inactivity
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface Vlan19
ip address 192.168.19.2 255.255.255.252
!
interface Vlan33
ip address 192.168.33.55 255.255.255.0
!
ip default-gateway 192.168.19.1
```

```
ip forward-protocol nd
!
ip tcp synwait-time 5
no ip http server
no ip http secure-server
!
ip route 0.0.0.0 0.0.0.0 192.168.19.1
ip ssh time-out 60
ip ssh authentication-retries 2
ip ssh source-interface Vlan33
ip ssh version 2
ip ssh server algorithm encryption aes128-ctr aes192-ctr aes256-ctr
ip ssh client algorithm encryption aes128-ctr aes192-ctr aes256-ctr
!
ip access-list standard MGMT-SSH
permit 192.168.33.0 0.0.0.255
permit 192.168.70.0 0.0.0.255
deny any
ip access-list standard SNMP-MGMT
permit 192.168.70.50
deny any
!
logging trap warnings
```

```
logging origin-id hostname
logging source-interface Vlan33
logging host 192.168.70.50
!
snmp-server group NMS-GROUP v3 priv read NETVIEW write NETVIEW
access SNMP-MGMT
snmp-server view NETVIEW iso included
snmp-server enable traps snmp authentication linkdown linkup coldstart
warmstart
snmp-server enable traps flowmon
snmp-server enable traps tty
snmp-server enable traps eigrp
snmp-server enable traps casa
snmp-server enable traps ospf state-change
snmp-server enable traps ospf errors
snmp-server enable traps ospf retransmit
snmp-server enable traps ospf lsa
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change
snmp-server enable traps ospf cisco-specific state-change shamlink interface
snmp-server enable traps ospf cisco-specific state-change shamlink neighbor
snmp-server enable traps ospf cisco-specific errors
snmp-server enable traps ospf cisco-specific retransmit
snmp-server enable traps ospf cisco-specific lsa
```

snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect loop config

snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown service-up

snmp-server enable traps auth-framework sec-violation

snmp-server enable traps energywise

snmp-server enable traps pw vc

snmp-server enable traps l2tun session

snmp-server enable traps l2tun pseudowire status

snmp-server enable traps ether-oam

snmp-server enable traps lisp

snmp-server enable traps mpls rfc ldp

snmp-server enable traps mpls ldp

snmp-server enable traps mpls rfc traffic-eng

snmp-server enable traps mpls traffic-eng

snmp-server enable traps ethernet evc status create delete

snmp-server enable traps bridge newroot topologychange

snmp-server enable traps stpx inconsistency root-inconsistency loop-inconsistency

snmp-server enable traps vtp

snmp-server enable traps vlancreate

snmp-server enable traps vlandelete

snmp-server enable traps ike policy add

snmp-server enable traps ike policy delete

snmp-server enable traps ike tunnel start
snmp-server enable traps ike tunnel stop
snmp-server enable traps ipsec cryptomap add
snmp-server enable traps ipsec cryptomap delete
snmp-server enable traps ipsec cryptomap attach
snmp-server enable traps ipsec cryptomap detach
snmp-server enable traps ipsec tunnel start
snmp-server enable traps ipsec tunnel stop
snmp-server enable traps ipsec too-many-sas
snmp-server enable traps bfd
snmp-server enable traps bgp cbgp2
snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-change inconsistency
snmp-server enable traps dlsw
snmp-server enable traps frame-relay
snmp-server enable traps frame-relay subif
snmp-server enable traps hsrp
snmp-server enable traps ipmulticast
snmp-server enable traps isis
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-pim-message
snmp-server enable traps rsvp

```
snmp-server enable traps ipsla
snmp-server enable traps slb real virtual csrp
snmp-server enable traps syslog
snmp-server enable traps event-manager
snmp-server enable traps pki
snmp-server enable traps ospfv3 state-change
snmp-server enable traps ospfv3 errors
snmp-server enable traps ethernet cfm alarm
snmp-server enable traps mpls vpn
snmp-server enable traps vrfmib vrf-up vrf-down vnet-trunk-up vnet-trunk-
down
snmp-server host 192.168.70.50 version 3 priv NMS-ADMIN
!
line con 0
exec-timeout 5 0
logging synchronous
stopbits 1
line aux 0
stopbits 1
line vty 0 4
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
```

```
login authentication VTY-LOCAL
transport input ssh
line vty 5 15
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
login authentication VTY-LOCAL
transport input ssh
```

```
!
```

```
end
```

vIOS15_15 – MS01

```
Building configuration...
```

```
Current configuration : 17470 bytes
```

```
!
```

```
! Last configuration change at 21:01:53 UTC Sat Feb 7 2026 by admin
```

```
!
```

```
version 15.9
```

```
no service pad
```

```
service timestamps debug datetime msec
```

```
service timestamps log datetime msec
```

```
service password-encryption
```

```
!
```

```
hostname MS01
```

!

boot-start-marker

boot-end-marker

!

logging buffered 50000 warnings

enable secret 9
\$9\$Ixx7LKxYZcWaXf\$A2v6BUju0lI0Pfx95jEFk6ZOuR186/mW2UtUvKv8M6

!

aaa new-model

aaa authentication login default local

aaa authorization exec default local

aaa session-id common

!

mmi polling-interval 60

no mmi auto-configure

no mmi pvc

mmi snmp-timeout 180

!

no ip icmp rate-limit unreachable

!

ip dhcp excluded-address 192.168.1.1

ip dhcp excluded-address 192.168.2.1

ip dhcp excluded-address 192.168.3.1

ip dhcp excluded-address 192.168.4.1
ip dhcp excluded-address 192.168.5.1
ip dhcp excluded-address 192.168.6.1
ip dhcp excluded-address 192.168.7.1
ip dhcp excluded-address 192.168.8.1
ip dhcp excluded-address 192.168.9.1
ip dhcp excluded-address 192.168.11.1
ip dhcp excluded-address 192.168.12.1
ip dhcp excluded-address 192.168.13.1
ip dhcp excluded-address 192.168.14.1
ip dhcp excluded-address 192.168.16.1
ip dhcp excluded-address 192.168.17.1
ip dhcp excluded-address 192.168.22.1
ip dhcp excluded-address 192.168.33.1
ip dhcp excluded-address 192.168.44.1
ip dhcp excluded-address 192.168.100.1
ip dhcp excluded-address 192.168.10.1
ip dhcp excluded-address 192.168.20.1
ip dhcp excluded-address 192.168.30.1
ip dhcp excluded-address 192.168.40.1
ip dhcp excluded-address 192.168.50.1
ip dhcp excluded-address 192.168.60.1
ip dhcp excluded-address 192.168.70.1

```
ip dhcp excluded-address 192.168.80.1  
ip dhcp excluded-address 192.168.90.1  
ip dhcp excluded-address 192.168.75.1  
ip dhcp excluded-address 192.168.65.1  
ip dhcp excluded-address 192.168.18.1
```

```
!
```

```
ip dhcp pool vlan 10  
network 192.168.10.0 255.255.255.0  
default-router 192.168.10.1  
dns-server 8.8.8.8 1.1.1.1
```

```
!
```

```
ip dhcp pool vlan 20  
network 192.168.20.0 255.255.255.0  
default-router 192.168.20.1  
dns-server 8.8.8.8 1.1.1.1
```

```
!
```

```
ip dhcp pool vlan 30  
network 192.168.30.0 255.255.255.0  
default-router 192.168.30.1  
dns-server 8.8.8.8 1.1.1.1
```

```
!
```

```
ip flow-cache timeout active 1  
no ip domain lookup
```

```
ip domain name corp.local
ip cef
login block-for 60 attempts 3 within 60
login delay 2
no ipv6 cef
!
multilink bundle-name authenticated
!
archive
path tftp://192.168.70.50/MS01-$t.cfg
write-memory
time-period 1440
username admin privilege 15 secret 9
$9$jyWmiABlMce.nv$eqYsF0n34gsRQ7FGJC5d7uImW9I9/Rlv6h8YSK2aR5k
!
redundancy
!
track 1 ip sla 1 reachability
!
ip tcp synwait-time 5
!
class-map match-any CM-SNMP
match access-group name COPP-SNMP
```

```
class-map match-any CM-OSPF
  match access-group name COPP-OSPF
class-map match-any CM-ICMP
  match access-group name COPP-ICMP
class-map match-any CM-NTP
  match access-group name COPP-NTP
class-map match-any CM-SSH
  match access-group name COPP-SSH
!
policy-map PM-COPP
  class CM-SSH
    police 64000 conform-action transmit  exceed-action drop
  class CM-OSPF
    police 128000 conform-action transmit  exceed-action drop
  class CM-ICMP
    police 64000 conform-action transmit  exceed-action drop
  class CM-SNMP
    police 64000 conform-action transmit  exceed-action drop
  class CM-NTP
    police 32000 conform-action transmit  exceed-action drop
  class class-default
    police 32000 conform-action transmit  exceed-action drop
!
```

```
interface Loopback0
    ip address 10.255.0.12 255.255.255.255
!
interface GigabitEthernet0/0
    description TO-MS01-PERIMETERFW01
    ip address 192.168.1.2 255.255.255.252
    ip flow ingress
    ip flow egress
    ip ospf authentication message-digest
    ip ospf message-digest-key 1 md5 7 00370616014938030C345E4B221C1C
    ip ospf network point-to-point
    ip ospf hello-interval 1
    ip ospf 50 area 0
    ip ospf cost 10
    duplex auto
    speed auto
    media-type rj45
!
interface GigabitEthernet0/1
    description TO-MS01-PERIMETERFW02
    ip address 192.168.2.2 255.255.255.252
    ip flow ingress
    ip flow egress
```

```
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 03374E1B031D12494D1C0B003C1712
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 20
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/2
description TO-MS01-ADMINMS01
ip address 192.168.3.1 255.255.255.252
ip flow ingress
ip flow egress
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 0235114B0E143C244F5B1B1C2E120B
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 100
duplex auto
speed auto
```

```
media-type rj45
```

```
!
```

```
interface GigabitEthernet0/3
```

```
description TO-MS01-ADMINMS02
```

```
ip address 192.168.4.1 255.255.255.252
```

```
ip flow ingress
```

```
ip flow egress
```

```
ip ospf authentication message-digest
```

```
ip ospf message-digest-key 1 md5 7 012013145E19350A22595C0C32000E
```

```
ip ospf network point-to-point
```

```
ip ospf hello-interval 1
```

```
ip ospf 50 area 0
```

```
ip ospf cost 110
```

```
duplex auto
```

```
speed auto
```

```
media-type rj45
```

```
!
```

```
interface GigabitEthernet0/4
```

```
description TO-MS01-SWITCH01
```

```
no ip address
```

```
duplex auto
```

```
speed auto
```

```
media-type rj45
```

!

```
interface GigabitEthernet0/4.10
  encapsulation dot1Q 10
  ip address 192.168.10.1 255.255.255.0
  ip access-group USER-TO-MGMT-DENY in
  ip flow ingress
  ip flow egress
```

!

```
interface GigabitEthernet0/4.18
  encapsulation dot1Q 18
  ip address 192.168.18.1 255.255.255.252
  ip flow ingress
  ip flow egress
```

!

```
interface GigabitEthernet0/4.20
  encapsulation dot1Q 20
  ip address 192.168.20.1 255.255.255.0
  ip access-group USER-TO-MGMT-DENY in
  ip flow ingress
  ip flow egress
```

!

```
interface GigabitEthernet0/4.22
  encapsulation dot1Q 22
```

```
ip address 192.168.22.2 255.255.255.0
```

```
ip flow ingress
```

```
ip flow egress
```

```
standby 22 ip 192.168.22.1
```

```
standby 22 priority 110
```

```
standby 22 preempt
```

```
!
```

```
interface GigabitEthernet0/4.30
```

```
encapsulation dot1Q 30
```

```
ip address 192.168.30.1 255.255.255.0
```

```
ip access-group USER-TO-MGMT-DENY in
```

```
ip flow ingress
```

```
ip flow egress
```

```
!
```

```
interface GigabitEthernet0/4.33
```

```
encapsulation dot1Q 33
```

```
ip address 192.168.33.2 255.255.255.0
```

```
ip flow ingress
```

```
ip flow egress
```

```
standby 33 ip 192.168.33.1
```

```
standby 33 priority 110
```

```
standby 33 preempt
```

```
!
```

```
interface GigabitEthernet0/5
description TO-MS01-MS02
ip address 192.168.5.1 255.255.255.252
ip flow ingress
ip flow egress
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 06351A31495C3A1C0602000E270133
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 120
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/6
no ip address
shutdown
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/7
```

no ip address

shutdown

duplex auto

speed auto

media-type rj45

!

interface GigabitEthernet0/8

no ip address

shutdown

duplex auto

speed auto

media-type rj45

!

interface GigabitEthernet0/9

no ip address

shutdown

duplex auto

speed auto

media-type rj45

!

interface GigabitEthernet0/10

no ip address

shutdown

```
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/11
no ip address
shutdown
duplex auto
speed auto
media-type rj45
!
router ospf 50
router-id 1.2.1.2
area 0 authentication message-digest
passive-interface default
no passive-interface GigabitEthernet0/0
no passive-interface GigabitEthernet0/1
no passive-interface GigabitEthernet0/2
no passive-interface GigabitEthernet0/3
no passive-interface GigabitEthernet0/4
no passive-interface GigabitEthernet0/5
network 10.255.0.12 0.0.0.0 area 0
network 192.168.1.0 0.0.0.3 area 0
```

```
network 192.168.2.0 0.0.0.3 area 0
network 192.168.3.0 0.0.0.3 area 0
network 192.168.4.0 0.0.0.3 area 0
network 192.168.5.0 0.0.0.3 area 0
network 192.168.10.0 0.0.0.255 area 0
network 192.168.18.0 0.0.0.3 area 0
network 192.168.20.0 0.0.0.255 area 0
network 192.168.22.0 0.0.0.255 area 0
network 192.168.30.0 0.0.0.255 area 0
network 192.168.33.0 0.0.0.255 area 0
network 192.168.100.0 0.0.0.255 area 0
!
ip forward-protocol nd
!
ip flow-export source Loopback0
ip flow-export version 9
ip flow-export destination 192.168.70.50 9996
!
no ip http server
no ip http secure-server
ip route 0.0.0.0 0.0.0.0 192.168.1.1 track 1
ip route 0.0.0.0 0.0.0.0 192.168.2.1 10
ip ssh time-out 60
```

```
ip ssh authentication-retries 2
ip ssh source-interface Loopback0
ip ssh version 2
ip ssh server algorithm mac hmac-sha2-256 hmac-sha2-512
ip ssh server algorithm encryption aes128-ctr aes256-ctr
ip ssh server algorithm kex diffie-hellman-group14-sha1
!
ip access-list standard MGMT-SSH
permit 10.255.0.12
permit 192.168.22.0 0.0.0.255
permit 192.168.70.0 0.0.0.255
permit 192.168.33.0 0.0.0.255
permit 192.168.44.0 0.0.0.255
deny any
ip access-list standard SNMP-MGMT
permit 192.168.70.50
deny any
!
ip access-list extended COPP-ICMP
permit icmp 192.168.22.0 0.0.0.255 any
permit icmp 192.168.33.0 0.0.0.255 any
permit icmp 192.168.44.0 0.0.0.255 any
permit icmp 192.168.70.0 0.0.0.255 any
```

```
deny ip any any  
ip access-list extended COPP-NTP  
permit udp host 192.168.70.50 any eq ntp  
deny ip any any  
ip access-list extended COPP-OSPF  
permit ospf any any  
deny ip any any  
ip access-list extended COPP-SNMP  
permit udp host 192.168.70.50 any eq snmp  
permit udp host 192.168.70.50 any eq snmptrap  
deny ip any any  
ip access-list extended COPP-SSH  
permit tcp 192.168.22.0 0.0.0.255 any eq 22  
permit tcp 192.168.33.0 0.0.0.255 any eq 22  
permit tcp 192.168.44.0 0.0.0.255 any eq 22  
permit tcp 192.168.70.0 0.0.0.255 any eq 22  
deny ip any any log  
ip access-list extended NTP-ONLY  
permit udp host 192.168.70.50 any eq ntp  
deny udp any any eq ntp  
permit ip any any  
ip access-list extended USER-TO-MGMT-DENY  
deny ip any 192.168.70.0 0.0.0.255
```

```
deny ip any 192.168.22.0 0.0.0.255
deny ip any 192.168.33.0 0.0.0.255
deny ip any 192.168.44.0 0.0.0.255
deny ip any 10.255.0.0 0.0.0.255
permit ip any any
!
ip sla 1
  icmp-echo 192.168.1.1 source-interface GigabitEthernet0/0
  threshold 500
  frequency 5
ip sla schedule 1 life forever start-time now
logging trap warnings
logging source-interface Loopback0
logging host 192.168.70.50
ipv6 ioam timestamp
!
snmp-server group NMS-ADMIN v3 priv
snmp-server group NMS-GROUP v3 priv access SNMP-MGMT
snmp-server view NETVIEW iso included
snmp-server chassis-id
snmp-server enable traps snmp authentication linkdown linkup coldstart
warmstart
snmp-server enable traps vrrp
```

snmp-server enable traps pfr
snmp-server enable traps flowmon
snmp-server enable traps tty
snmp-server enable traps eigrp
snmp-server enable traps ospf state-change
snmp-server enable traps ospf errors
snmp-server enable traps ospf retransmit
snmp-server enable traps ospf lsa
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change
snmp-server enable traps ospf cisco-specific state-change shamlink interface
snmp-server enable traps ospf cisco-specific state-change shamlink neighbor
snmp-server enable traps ospf cisco-specific errors
snmp-server enable traps ospf cisco-specific retransmit
snmp-server enable traps ospf cisco-specific lsa
snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect
loop config
snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown
service-up
snmp-server enable traps ethernet evc status create delete
snmp-server enable traps diameter
snmp-server enable traps auth-framework sec-violation auth-fail
snmp-server enable traps trustsec-sxp conn-srcaddr-err msg-parse-err conn-
config-err binding-err conn-up conn-down binding-expn-fail oper-nodeid-
change bindin

g-conflict

snmp-server enable traps aaa_server

snmp-server enable traps atm subif

snmp-server enable traps bfd

snmp-server enable traps bgp cbgp2

snmp-server enable traps bstun

snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-change inconsistency

snmp-server enable traps memory bufferpeak

snmp-server enable traps cnpd

snmp-server enable traps config-copy

snmp-server enable traps config

snmp-server enable traps config-ctid

snmp-server enable traps dlsw

snmp-server enable traps dsp card-status

snmp-server enable traps dsp oper-state

snmp-server enable traps dsp video-usage

snmp-server enable traps dsp video-out-of-resource

snmp-server enable traps entity-ext

snmp-server enable traps entity

snmp-server enable traps fru-ctrl

snmp-server enable traps resource-policy

snmp-server enable traps frame-relay multilink bundle-mismatch

```
snmp-server enable traps frame-relay
snmp-server enable traps frame-relay subif
snmp-server enable traps hsrp
snmp-server enable traps ipmobile
snmp-server enable traps ipmulticast
snmp-server enable traps isis
snmp-server enable traps mempool
snmp-server enable traps mpls traffic-eng
snmp-server enable traps mpls fast-reroute protected
snmp-server enable traps mpls rfc ldp
snmp-server enable traps mpls ldp
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-
pim-message
snmp-server enable traps pppoe
snmp-server enable traps cpu threshold
snmp-server enable traps nhrp nhs
snmp-server enable traps nhrp nhc
snmp-server enable traps nhrp nhp
snmp-server enable traps nhrp quota-exceeded
snmp-server enable traps rsvp
snmp-server enable traps ipsla
```

```
snmp-server enable traps stun  
snmp-server enable traps syslog  
snmp-server enable traps l2tun session  
snmp-server enable traps l2tun pseudowire status  
snmp-server enable traps pw vc  
snmp-server enable traps waas  
snmp-server enable traps event-manager  
snmp-server enable traps lisp  
snmp-server enable traps firewall serverstatus  
snmp-server enable traps ospfv3 state-change  
snmp-server enable traps ospfv3 errors  
snmp-server enable traps pki  
snmp-server enable traps gdoi gm-start-registration  
snmp-server enable traps gdoi gm-registration-complete  
snmp-server enable traps gdoi gm-re-register  
snmp-server enable traps gdoi gm-rekey-rcvd  
snmp-server enable traps gdoi gm-rekey-fail  
snmp-server enable traps gdoi ks-rekey-pushed  
snmp-server enable traps gdoi gm-incomplete-cfg  
snmp-server enable traps gdoi ks-no-rsa-keys  
snmp-server enable traps gdoi ks-new-registration  
snmp-server enable traps gdoi ks-reg-complete  
snmp-server enable traps gdoi ks-role-change
```

```
snmp-server enable traps gdoi ks-gm-deleted
snmp-server enable traps gdoi ks-peer-reachable
snmp-server enable traps gdoi ks-peer-unreachable
snmp-server enable traps ike policy add
snmp-server enable traps ike policy delete
snmp-server enable traps ike tunnel start
snmp-server enable traps ike tunnel stop
snmp-server enable traps ipsec cryptomap add
snmp-server enable traps ipsec cryptomap delete
snmp-server enable traps ipsec cryptomap attach
snmp-server enable traps ipsec cryptomap detach
snmp-server enable traps ipsec tunnel start
snmp-server enable traps ipsec tunnel stop
snmp-server enable traps ipsec too-many-sas
snmp-server enable traps ethernet cfm alarm
snmp-server enable traps rf
snmp-server enable traps bulkstat collection transfer
snmp-server enable traps mpls vpn
snmp-server enable traps vrfmib vrf-up vrf-down vnet-trunk-up vnet-trunk-
down
snmp-server host 192.168.70.50 version 3 priv NMS-ADMIN
!
control-plane
```

```
service-policy input PM-COPP
```

```
!
```

```
line con 0
```

```
exec-timeout 5 0
```

```
logging synchronous
```

```
stopbits 1
```

```
line aux 0
```

```
stopbits 1
```

```
line vty 0 4
```

```
access-class MGMT-SSH in
```

```
exec-timeout 5 0
```

```
logging synchronous
```

```
transport input ssh
```

```
line vty 5 15
```

```
access-class MGMT-SSH in
```

```
exec-timeout 5 0
```

```
logging synchronous
```

```
transport input ssh
```

```
!
```

```
no scheduler allocate
```

```
ntp source Loopback0
```

```
ntp server 192.168.70.50 prefer
```

```
!
```

End

vIOS16_16 MS02

Building configuration...

Current configuration : 16487 bytes

!

! Last configuration change at 20:25:36 UTC Thu Feb 5 2026 by admin

!

version 15.9

no service pad

service timestamps debug datetime msec

service timestamps log datetime msec

service password-encryption

!

hostname MS02

!

boot-start-marker

boot-end-marker

!

logging buffered 50000 warnings

enable secret 9

\$9\$wtqlFbuatKAotP\$QE/aGv/UYxUzydkNCLM55A2D9ftt6osSX3Shw0uBNLg

!

```
aaa new-model
aaa authentication login default local
aaa authorization exec default local
aaa session-id common
!
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
no ip icmp rate-limit unreachable
!
ip dhcp excluded-address 192.168.1.1
ip dhcp excluded-address 192.168.2.1
ip dhcp excluded-address 192.168.3.1
ip dhcp excluded-address 192.168.4.1
ip dhcp excluded-address 192.168.5.1
ip dhcp excluded-address 192.168.6.1
ip dhcp excluded-address 192.168.7.1
ip dhcp excluded-address 192.168.8.1
ip dhcp excluded-address 192.168.9.1
ip dhcp excluded-address 192.168.11.1
ip dhcp excluded-address 192.168.12.1
```

```
ip dhcp excluded-address 192.168.13.1
ip dhcp excluded-address 192.168.14.1
ip dhcp excluded-address 192.168.16.1
ip dhcp excluded-address 192.168.17.1
ip dhcp excluded-address 192.168.22.1
ip dhcp excluded-address 192.168.33.1
ip dhcp excluded-address 192.168.44.1
ip dhcp excluded-address 192.168.100.1
ip dhcp excluded-address 192.168.10.1
ip dhcp excluded-address 192.168.20.1
ip dhcp excluded-address 192.168.30.1
ip dhcp excluded-address 192.168.40.1
ip dhcp excluded-address 192.168.50.1
ip dhcp excluded-address 192.168.60.1
ip dhcp excluded-address 192.168.70.1
ip dhcp excluded-address 192.168.80.1
ip dhcp excluded-address 192.168.90.1
ip dhcp excluded-address 192.168.75.1
ip dhcp excluded-address 192.168.65.1
ip dhcp excluded-address 192.168.18.1
ip dhcp excluded-address 192.168.19.1
!
ip dhcp pool VLAN40
```

network 192.168.40.0 255.255.255.0

default-router 192.168.40.1

dns-server 8.8.8.8 1.1.1.1

!

ip dhcp pool VLAN50

network 192.168.50.0 255.255.255.0

default-router 192.168.50.1

dns-server 8.8.8.8 1.1.1.1

!

ip dhcp pool VLAN60

network 192.168.60.0 255.255.255.0

default-router 192.168.60.1

dns-server 8.8.8.8 1.1.1.1

!

ip flow-cache timeout active 1

no ip domain lookup

ip domain name lab.local

ip cef

login block-for 60 attempts 3 within 60

login delay 2

no ipv6 cef

!

multilink bundle-name authenticated

!

archive

path tftp://192.168.70.50/MS02-\$t.cfg

write-memory

time-period 1440

username admin privilege 15 secret 9
\$9\$Mcc36RpuT/9FPv\$3GDDP88VIw6eXfI8mucOqHVPsf5qHea0jk9bNem9RL
2

!

redundancy

!

track 1 ip sla 1 reachability

!

ip tcp synwait-time 5

!

class-map match-any CM-SNMP

match access-group name COPP-SNMP

class-map match-any CM-OSPF

match access-group name COPP-OSPF

class-map match-any CM-ICMP

match access-group name COPP-ICMP

class-map match-any CM-NTP

match access-group name COPP-NTP

class-map match-any CM-SSH

```
match access-group name COPP-SSH
!
policy-map PM-COPP
    class CM-SSH
        police 64000 conform-action transmit exceed-action drop
    class CM-OSPF
        police 128000 conform-action transmit exceed-action drop
    class CM-ICMP
        police 64000 conform-action transmit exceed-action drop
    class CM-SNMP
        police 64000 conform-action transmit exceed-action drop
    class CM-NTP
        police 32000 conform-action transmit exceed-action drop
    class class-default
        police 32000 conform-action transmit exceed-action drop
!
interface Loopback0
    ip address 10.255.0.13 255.255.255.255
!
interface GigabitEthernet0/0
    description TO-MS02-PERIMETERFW01
    ip address 192.168.6.2 255.255.255.252
    ip ospf authentication message-digest
```

```
ip ospf message-digest-key 1 md5 7 0812595E0C0B3612111E1E01012E3D
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 10
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/1
description TO-MS02-PERIMETERFW02
ip address 192.168.7.2 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 012013145E19350A22595C0C32000E
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 20
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/2
```

```
description TO-MS02-ADMINMS01
ip address 192.168.8.1 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 00370616014938030C345E4B221C1C
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 100
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/3
description TO-MS02-ADMINMS02
ip address 192.168.9.1 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 097F5B191C1724170819162F002131
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 110
duplex auto
speed auto
```

```
media-type rj45
```

```
!
```

```
interface GigabitEthernet0/4
```

```
no ip address
```

```
shutdown
```

```
duplex auto
```

```
speed auto
```

```
media-type rj45
```

```
!
```

```
interface GigabitEthernet0/5
```

```
description TO-MS02-MS01
```

```
ip address 192.168.5.2 255.255.255.252
```

```
ip ospf authentication message-digest
```

```
ip ospf message-digest-key 1 md5 7 15211E1C013818212B26272738020F
```

```
ip ospf network point-to-point
```

```
ip ospf hello-interval 1
```

```
ip ospf 50 area 0
```

```
ip ospf cost 120
```

```
duplex auto
```

```
speed auto
```

```
media-type rj45
```

```
!
```

```
interface GigabitEthernet0/6
```

```
no ip address
shutdown
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/7
description TO-MS02-SWITCH02
no ip address
duplex full
speed auto
media-type rj45
!
interface GigabitEthernet0/7.19
encapsulation dot1Q 19
ip address 192.168.19.1 255.255.255.252
!
interface GigabitEthernet0/7.22
encapsulation dot1Q 22
standby 22 ip 192.168.22.1
standby 22 preempt
shutdown
!
```

```
interface GigabitEthernet0/7.33
  encapsulation dot1Q 33
  shutdown
!
interface GigabitEthernet0/7.40
  encapsulation dot1Q 40
  ip address 192.168.40.1 255.255.255.0
  ip access-group USER-TO-MGMT-DENY in
!
interface GigabitEthernet0/7.50
  encapsulation dot1Q 50
  ip address 192.168.50.1 255.255.255.0
  ip access-group USER-TO-MGMT-DENY in
!
interface GigabitEthernet0/7.60
  encapsulation dot1Q 60
  ip address 192.168.60.1 255.255.255.0
  ip access-group USER-TO-MGMT-DENY in
!
interface GigabitEthernet0/7.100
  encapsulation dot1Q 100
  ip address 192.168.100.1 255.255.255.0
!
```

```
router ospf 50
  router-id 1.3.1.3
    area 0 authentication message-digest
      passive-interface default
        no passive-interface GigabitEthernet0/0
        no passive-interface GigabitEthernet0/1
        no passive-interface GigabitEthernet0/2
        no passive-interface GigabitEthernet0/3
        no passive-interface GigabitEthernet0/5
      network 10.255.0.13 0.0.0.0 area 0
      network 192.168.5.0 0.0.0.3 area 0
      network 192.168.6.0 0.0.0.3 area 0
      network 192.168.7.0 0.0.0.3 area 0
      network 192.168.8.0 0.0.0.3 area 0
      network 192.168.9.0 0.0.0.3 area 0
      network 192.168.19.0 0.0.0.3 area 0
      network 192.168.22.0 0.0.0.255 area 0
      network 192.168.33.0 0.0.0.255 area 0
      network 192.168.40.0 0.0.0.255 area 0
      network 192.168.50.0 0.0.0.255 area 0
      network 192.168.60.0 0.0.0.255 area 0
      network 192.168.100.0 0.0.0.255 area 0
!
```

```
ip forward-protocol nd
!
ip flow-export version 9
ip flow-export destination 192.168.70.50 2055
!
no ip http server
no ip http secure-server
ip tftp source-interface Loopback0
ip route 0.0.0.0 0.0.0.0 192.168.6.1 track 1
ip route 0.0.0.0 0.0.0.0 192.168.7.1 10
ip route 0.0.0.0 0.0.0.0 192.168.5.1 20
ip ssh time-out 60
ip ssh authentication-retries 2
ip ssh source-interface Loopback0
ip ssh version 2
ip ssh server algorithm mac hmac-sha2-256 hmac-sha2-512
ip ssh server algorithm encryption aes128-ctr aes256-ctr
ip ssh server algorithm kex diffie-hellman-group14-sha1
!
ip access-list standard MGMT-SSH
permit 10.255.0.13
permit 192.168.22.0 0.0.0.255
permit 192.168.70.0 0.0.0.255
```

```
permit 192.168.33.0 0.0.0.255
permit 192.168.44.0 0.0.0.255
ip access-list standard SNMP-MGMT
permit 192.168.70.50
deny  any
!
ip access-list extended COPP-ICMP
permit icmp 192.168.22.0 0.0.0.255 any
permit icmp 192.168.33.0 0.0.0.255 any
permit icmp 192.168.44.0 0.0.0.255 any
permit icmp 192.168.70.0 0.0.0.255 any
deny  ip any any
ip access-list extended COPP-NTP
permit udp host 192.168.70.50 any eq ntp
deny  ip any any
ip access-list extended COPP-OSPF
permit ospf any any
deny  ip any any
ip access-list extended COPP-SNMP
permit udp host 192.168.70.50 any eq snmp
permit udp host 192.168.70.50 any eq snmptrap
deny  ip any any
ip access-list extended COPP-SSH
```

```
permit tcp 192.168.22.0 0.0.0.255 any eq 22
permit tcp 192.168.33.0 0.0.0.255 any eq 22
permit tcp 192.168.44.0 0.0.0.255 any eq 22
permit tcp 192.168.70.0 0.0.0.255 any eq 22
deny ip any any log

ip access-list extended USER-TO-MGMT-DENY
deny ip any 192.168.70.0 0.0.0.255
deny ip any 192.168.22.0 0.0.0.255
deny ip any 192.168.33.0 0.0.0.255
deny ip any 192.168.44.0 0.0.0.255
deny ip any 10.255.0.0 0.0.0.255
permit ip any any

!
ip sla 1
  icmp-echo 192.168.6.1 source-interface GigabitEthernet0/0
  threshold 500
  frequency 5
ip sla schedule 1 life forever start-time now
logging trap warnings
logging source-interface Loopback0
logging host 192.168.70.50
ipv6 ioam timestamp
!
```

```
snmp-server group NMS-ADMIN v3 priv  
snmp-server group NMS-GROUP v3 priv access SNMP-MGMT  
snmp-server view NETVIEW iso included  
snmp-server chassis-id  
snmp-server enable traps snmp authentication linkdown linkup coldstart  
warmstart  
snmp-server enable traps vrrp  
snmp-server enable traps pfr  
snmp-server enable traps flowmon  
snmp-server enable traps tty  
snmp-server enable traps eigrp  
snmp-server enable traps ospf state-change  
snmp-server enable traps ospf errors  
snmp-server enable traps ospf retransmit  
snmp-server enable traps ospf lsa  
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change  
snmp-server enable traps ospf cisco-specific state-change shamlink interface  
snmp-server enable traps ospf cisco-specific state-change shamlink neighbor  
snmp-server enable traps ospf cisco-specific errors  
snmp-server enable traps ospf cisco-specific retransmit  
snmp-server enable traps ospf cisco-specific lsa  
snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect  
loop config
```

snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown service-up

snmp-server enable traps ethernet evc status create delete

snmp-server enable traps diameter

snmp-server enable traps auth-framework sec-violation auth-fail

snmp-server enable traps trustsec-sxp conn-srcaddr-err msg-parse-err conn-config-err binding-err conn-up conn-down binding-expn-fail oper-nodeid-change bindin

g-conflict

snmp-server enable traps aaa_server

snmp-server enable traps atm subif

snmp-server enable traps bfd

snmp-server enable traps bgp cbgp2

snmp-server enable traps bstun

snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-change inconsistency

snmp-server enable traps memory bufferpeak

snmp-server enable traps cnpd

snmp-server enable traps config-copy

snmp-server enable traps config

snmp-server enable traps config-ctid

snmp-server enable traps dlsw

snmp-server enable traps dsp card-status

snmp-server enable traps dsp oper-state

```
snmp-server enable traps dsp video-usage
snmp-server enable traps dsp video-out-of-resource
snmp-server enable traps entity-ext
snmp-server enable traps entity
snmp-server enable traps fru-ctrl
snmp-server enable traps resource-policy
snmp-server enable traps frame-relay multilink bundle-mismatch
snmp-server enable traps frame-relay
snmp-server enable traps frame-relay subif
snmp-server enable traps hsrp
snmp-server enable traps ipmobile
snmp-server enable traps ipmulticast
snmp-server enable traps isis
snmp-server enable traps mempool
snmp-server enable traps mpls traffic-eng
snmp-server enable traps mpls fast-reroute protected
snmp-server enable traps mpls rfc ldp
snmp-server enable traps mpls ldp
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-
pim-message
snmp-server enable traps pppoe
```

snmp-server enable traps cpu threshold
snmp-server enable traps nhrp nhs
snmp-server enable traps nhrp nhc
snmp-server enable traps nhrp nhp
snmp-server enable traps nhrp quota-exceeded
snmp-server enable traps rsvp
snmp-server enable traps ipsla
snmp-server enable traps stun
snmp-server enable traps syslog
snmp-server enable traps l2tun session
snmp-server enable traps l2tun pseudowire status
snmp-server enable traps pw vc
snmp-server enable traps waas
snmp-server enable traps event-manager
snmp-server enable traps lisp
snmp-server enable traps firewall serverstatus
snmp-server enable traps ospfv3 state-change
snmp-server enable traps ospfv3 errors
snmp-server enable traps pki
snmp-server enable traps gdoi gm-start-registration
snmp-server enable traps gdoi gm-registration-complete
snmp-server enable traps gdoi gm-re-register
snmp-server enable traps gdoi gm-rekey-rcvd

```
snmp-server enable traps gdoi gm-rekey-fail
snmp-server enable traps gdoi ks-rekey-pushed
snmp-server enable traps gdoi gm-incomplete-cfg
snmp-server enable traps gdoi ks-no-rsa-keys
snmp-server enable traps gdoi ks-new-registration
snmp-server enable traps gdoi ks-reg-complete
snmp-server enable traps gdoi ks-role-change
snmp-server enable traps gdoi ks-gm-deleted
snmp-server enable traps gdoi ks-peer-reachable
snmp-server enable traps gdoi ks-peer-unreachable
snmp-server enable traps ike policy add
snmp-server enable traps ike policy delete
snmp-server enable traps ike tunnel start
snmp-server enable traps ike tunnel stop
snmp-server enable traps ipsec cryptomap add
snmp-server enable traps ipsec cryptomap delete
snmp-server enable traps ipsec cryptomap attach
snmp-server enable traps ipsec cryptomap detach
snmp-server enable traps ipsec tunnel start
snmp-server enable traps ipsec tunnel stop
snmp-server enable traps ipsec too-many-sas
snmp-server enable traps ethernet cfm alarm
snmp-server enable traps rf
```

```
snmp-server enable traps bulkstat collection transfer
snmp-server enable traps mpls vpn
snmp-server enable traps vrfmib vrf-up vrf-down vnet-trunk-up vnet-trunk-
down
snmp-server host 192.168.70.50 version 3 priv NMS-ADMIN
!
control-plane
service-policy input PM-COPP
!
line con 0
exec-timeout 5 0
logging synchronous
stopbits 1
line aux 0
stopbits 1
line vty 0 4
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
transport input ssh
line vty 5 15
access-class MGMT-SSH in
exec-timeout 5 0
```

```
logging synchronous
transport input ssh
!
no scheduler allocate
ntp source Loopback0
ntp server 192.168.70.50 prefer
!
end
```

Switch22 – ADMINSWITCH

Building configuration...

```
Current configuration : 13742 bytes
!
! Last configuration change at 20:20:47 UTC Sat Feb 7 2026
!
```

```
version 15.2
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
service compress-config
!
hostname ADMINSWITCH
!
```

```
boot-start-marker
boot-end-marker
!
logging buffered 50000 warnings
enable secret 5 $1$Fj74$LGaYYT37qkymNd.sktVJB/
!
username admin privilege 15 secret 5 $1$yDOM$5k5i3oS6bc9JU0zYcE/hO1
!
aaa new-model
aaa authentication login default local
aaa authentication login VTY-LOGIN local
aaa authorization exec default local
aaa session-id common
!
ip arp inspection vlan 44,65,70,75,80,90,100
ip arp inspection validate src-mac ip
ip arp inspection log-buffer entries 1024
ip arp inspection filter ARP-VLAN65 vlan 65
ip arp inspection filter ARP-VLAN70 vlan 70
ip arp inspection filter ARP-VLAN75 vlan 75
ip arp inspection filter ARP-VLAN80 vlan 80
ip arp inspection filter ARP-VLAN90 vlan 90
!
```

ip dhcp snooping vlan 44,65,70,75,80,90,100

no ip dhcp snooping information option

ip dhcp snooping

no ip domain-lookup

ip domain-name corp.local

ip cef

login block-for 60 attempts 3 within 60

login delay 2

no ipv6 cef

!

errdisable recovery cause psecure-violation

errdisable recovery interval 30

archive

log config

logging enable

notify syslog contenttype plaintext

hidekeys

path tftp://192.168.70.50/ADMINSWITCH-\$t.cfg

write-memory

time-period 1440

!

spanning-tree mode pvst

spanning-tree extend system-id

!

```
interface GigabitEthernet0/0
description TO-ADMINSWITCH-ADMINROUTER
switchport trunk allowed vlan 21,44,65,70,75,80,90,100
switchport trunk encapsulation dot1q
switchport trunk native vlan 999
switchport mode trunk
switchport nonegotiate
ip arp inspection trust
negotiation auto
spanning-tree link-type point-to-point
spanning-tree guard root
ip dhcp snooping trust
```

!

```
interface GigabitEthernet0/1
switchport access vlan 100
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security aging time 5
switchport port-security
ip arp inspection limit rate 25
```

```
negotiation auto  
spanning-tree portfast edge  
spanning-tree bpduguard enable  
ip dhcp snooping limit rate 25
```

```
!
```

```
interface GigabitEthernet0/2  
switchport access vlan 100  
switchport mode access  
switchport port-security maximum 2  
switchport port-security violation restrict  
switchport port-security mac-address sticky  
switchport port-security aging time 5  
switchport port-security  
ip arp inspection limit rate 25
```

```
negotiation auto  
spanning-tree portfast edge  
spanning-tree bpduguard enable  
ip dhcp snooping limit rate 25
```

```
!
```

```
interface GigabitEthernet0/3  
switchport access vlan 100  
switchport mode access  
switchport port-security maximum 2
```

```
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security aging time 5
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet1/0
description ADMINISTRATION
switchport access vlan 70
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address 0050.7966.6811
switchport port-security mac-address sticky 5000.0012.0000
switchport port-security
ip arp inspection trust
ip arp inspection limit rate 25
negotiation auto
```

```
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
ip dhcp snooping trust
!
interface GigabitEthernet1/1
description WEB SERVER
switchport access vlan 80
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address 0050.7966.6812
switchport port-security
ip arp inspection trust
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
ip dhcp snooping trust
!
interface GigabitEthernet1/2
description FTP SERVER1
```

```
switchport access vlan 90
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address 0050.7966.6813
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet1/3
description FTPSERVER2
switchport access vlan 75
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security mac-address 0050.7966.6814
switchport port-security
ip arp inspection limit rate 25
```

```
negotiation auto  
spanning-tree portfast edge  
spanning-tree bpduguard enable  
ip dhcp snooping limit rate 25  
!  
interface GigabitEthernet2/0  
description 1CSERVER  
switchport access vlan 65  
switchport mode access  
switchport port-security maximum 2  
switchport port-security violation restrict  
switchport port-security mac-address sticky  
switchport port-security mac-address 0050.7966.6815  
switchport port-security  
ip arp inspection limit rate 25  
negotiation auto  
spanning-tree portfast edge  
spanning-tree bpduguard enable  
ip dhcp snooping limit rate 25  
!  
interface GigabitEthernet2/1  
switchport access vlan 100  
switchport mode access
```

```
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security aging time 5
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
ip dhcp snooping limit rate 25
!
interface GigabitEthernet2/2
switchport access vlan 100
switchport mode access
switchport port-security maximum 2
switchport port-security violation restrict
switchport port-security mac-address sticky
switchport port-security aging time 5
switchport port-security
ip arp inspection limit rate 25
negotiation auto
spanning-tree portfast edge
spanning-tree bpduguard enable
```

```
ip dhcp snooping limit rate 25
```

```
!
```

```
interface GigabitEthernet2/3
```

```
switchport access vlan 100
```

```
switchport mode access
```

```
switchport port-security maximum 2
```

```
switchport port-security violation restrict
```

```
switchport port-security mac-address sticky
```

```
switchport port-security aging time 5
```

```
switchport port-security
```

```
ip arp inspection limit rate 25
```

```
negotiation auto
```

```
spanning-tree portfast edge
```

```
spanning-tree bpduguard enable
```

```
ip dhcp snooping limit rate 25
```

```
!
```

```
interface Vlan21
```

```
ip address 192.168.21.2 255.255.255.252
```

```
!
```

```
interface Vlan44
```

```
ip address 192.168.44.55 255.255.255.0
```

```
!
```

```
ip forward-protocol nd
```

!

no ip http server

no ip http secure-server

!

ip route 0.0.0.0 0.0.0.0 192.168.21.1

ip ssh time-out 30

ip ssh authentication-retries 2

ip ssh source-interface Vlan21

ip ssh version 2

ip ssh server algorithm encryption aes128-ctr aes192-ctr aes256-ctr

ip ssh client algorithm encryption aes128-ctr aes192-ctr aes256-ctr

!

ip access-list standard MGMT-SSH

permit 192.168.70.0 0.0.0.255

permit 192.168.44.0 0.0.0.255

permit 192.168.21.0 0.0.0.3

deny any

!

logging trap warnings

logging source-interface Vlan21

logging host 192.168.70.50

!

arp access-list ARP-VLAN65

```
permit ip host 192.168.65.50 mac host 0050.7966.6815
permit ip host 192.168.65.1 mac host ca17.1baf.00a8
arp access-list ARP-VLAN70
permit ip host 192.168.70.50 mac host 0050.7966.6811
permit ip host 192.168.70.1 mac host ca17.1ba8.0038
arp access-list ARP-VLAN75
permit ip host 192.168.75.50 mac host 0050.7966.6814
permit ip host 192.168.75.1 mac host ca17.1baf.00a8
arp access-list ARP-VLAN80
permit ip host 192.168.80.50 mac host 0050.7966.6812
permit ip host 192.168.80.1 mac host ca17.1baf.00a8
arp access-list ARP-VLAN90
permit ip host 192.168.90.50 mac host 0050.7966.6813
permit ip host 192.168.90.1 mac host ca17.1baf.00a8
!
snmp-server group NMS-GROUP v3 priv read NETVIEW write NETVIEW
snmp-server view NETVIEW iso included
snmp-server enable traps snmp authentication linkdown linkup coldstart
warmstart
snmp-server enable traps flowmon
snmp-server enable traps tty
snmp-server enable traps eigrp
snmp-server enable traps casa
```

snmp-server enable traps ospf state-change
snmp-server enable traps ospf errors
snmp-server enable traps ospf retransmit
snmp-server enable traps ospf lsa
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change
snmp-server enable traps ospf cisco-specific state-change shamlink interface
snmp-server enable traps ospf cisco-specific state-change shamlink neighbor
snmp-server enable traps ospf cisco-specific errors
snmp-server enable traps ospf cisco-specific retransmit
snmp-server enable traps ospf cisco-specific lsa
snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect
loop config
snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown
service-up
snmp-server enable traps auth-framework sec-violation
snmp-server enable traps energywise
snmp-server enable traps pw vc
snmp-server enable traps l2tun session
snmp-server enable traps l2tun pseudowire status
snmp-server enable traps ether-oam
snmp-server enable traps lisp
snmp-server enable traps mpls rfc ldp
snmp-server enable traps mpls ldp
snmp-server enable traps mpls rfc traffic-eng

```
snmp-server enable traps mpls traffic-eng
snmp-server enable traps ethernet evc status create delete
snmp-server enable traps bridge newroot topologychange
snmp-server enable traps stpx inconsistency root-inconsistency loop-
inconsistency
snmp-server enable traps vtp
snmp-server enable traps vlancreate
snmp-server enable traps vlandelete
snmp-server enable traps ike policy add
snmp-server enable traps ike policy delete
snmp-server enable traps ike tunnel start
snmp-server enable traps ike tunnel stop
snmp-server enable traps ipsec cryptomap add
snmp-server enable traps ipsec cryptomap delete
snmp-server enable traps ipsec cryptomap attach
snmp-server enable traps ipsec cryptomap detach
snmp-server enable traps ipsec tunnel start
snmp-server enable traps ipsec tunnel stop
snmp-server enable traps ipsec too-many-sas
snmp-server enable traps bfd
snmp-server enable traps bgp cbgp2
snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-
change inconsistency
snmp-server enable traps dlsw
```

```
snmp-server enable traps frame-relay
snmp-server enable traps frame-relay subif
snmp-server enable traps hsrp
snmp-server enable traps ipmulticast
snmp-server enable traps isis
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-
pim-message
snmp-server enable traps rsvp
snmp-server enable traps ipsla
snmp-server enable traps slb real virtual csrp
snmp-server enable traps syslog
snmp-server enable traps event-manager
snmp-server enable traps pki
snmp-server enable traps ospfv3 state-change
snmp-server enable traps ospfv3 errors
snmp-server enable traps ethernet cfm alarm
snmp-server enable traps mpls vpn
snmp-server enable traps vrfmib vrf-up vrf-down vnet-trunk-up vnet-trunk-
down
snmp-server host 192.168.70.50 version 3 priv NMS-ADMIN
!
line con 0
```

```
exec-timeout 5 0
logging synchronous
line aux 0
line vty 0 4
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
login authentication VTY-LINKIN
transport input ssh
line vty 5 15
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
login authentication VTY-LINKIN
transport input ssh
!
ntp source Vlan21
!
end
7206VXR23 – ADMINROUTER
Building configuration...
Current configuration : 11136 bytes
!
```

```
upgrade fpd auto
version 12.4
service tcp-keepalives-in
service tcp-keepalives-out
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
!
hostname ADMINROUTER
!
boot-start-marker
boot-end-marker
!
logging message-counter syslog
logging buffered 50000 warnings
enable secret 5 $1$OOXY$51XVwePVwZIb.YtUjcd06.
!
aaa new-model
aaa authentication login default local
aaa authentication login SSH-AUTH local
aaa authentication login VTY-LOCAL local
aaa authentication login CONSOLE-LOCAL local
aaa authorization exec default local
```

```
aaa authorization exec SSH-AUTH local
aaa session-id common
!
no ip source-route
ip cef
!
ip dhcp excluded-address 192.168.1.1
ip dhcp excluded-address 192.168.2.1
ip dhcp excluded-address 192.168.3.1
ip dhcp excluded-address 192.168.4.1
ip dhcp excluded-address 192.168.5.1
ip dhcp excluded-address 192.168.6.1
ip dhcp excluded-address 192.168.7.1
ip dhcp excluded-address 192.168.8.1
ip dhcp excluded-address 192.168.9.1
ip dhcp excluded-address 192.168.11.1
ip dhcp excluded-address 192.168.12.1
ip dhcp excluded-address 192.168.13.1
ip dhcp excluded-address 192.168.14.1
ip dhcp excluded-address 192.168.16.1
ip dhcp excluded-address 192.168.17.1
ip dhcp excluded-address 192.168.22.1
ip dhcp excluded-address 192.168.33.1
```

```
ip dhcp excluded-address 192.168.44.1
ip dhcp excluded-address 192.168.100.1
ip dhcp excluded-address 192.168.10.1
ip dhcp excluded-address 192.168.20.1
ip dhcp excluded-address 192.168.30.1
ip dhcp excluded-address 192.168.40.1
ip dhcp excluded-address 192.168.50.1
ip dhcp excluded-address 192.168.60.1
ip dhcp excluded-address 192.168.70.1
ip dhcp excluded-address 192.168.80.1
ip dhcp excluded-address 192.168.90.1
ip dhcp excluded-address 192.168.75.1
ip dhcp excluded-address 192.168.65.1
!
no ip domain lookup
ip domain name lab.local
login block-for 120 attempts 3 within 60
login delay 3
no ipv6 cef
!
multilink bundle-name authenticated
!
username admin privilege 15 secret 5 $1$c/V.$2vi0A/HLoF22lDPt88qB7.
```

```
archive
log config
logging enable
notify syslog contenttype plaintext
hidekeys
path tftp://192.168.70.50/ADMINROUTER-$h-$t.cfg
write-memory
time-period 1440
!
ip ssh time-out 30
ip ssh authentication-retries 2
ip ssh source-interface Loopback0
ip ssh version 2
!
track 1 ip sla 1 reachability
!
interface Loopback0
ip address 10.255.0.14 255.255.255.255
!
interface FastEthernet0/0
description TO-ADMINROUTER-ADMINMS01
ip address 192.168.11.2 255.255.255.252
ip flow ingress
```

```
ip flow egress

ip ospf authentication message-digest

ip ospf message-digest-key 1 md5 7 0812595E0C0B3612111E1E01012E3D

ip ospf network point-to-point

ip ospf cost 10

ip ospf hello-interval 1

ip ospf 50 area 0

duplex full

!

interface FastEthernet1/0

description TO-ADMINROUTER-ADMINMS02

ip address 192.168.12.2 255.255.255.252

ip flow ingress

ip flow egress

ip ospf authentication message-digest

ip ospf message-digest-key 1 md5 7 122A100717193F01293E362D18303B

ip ospf network point-to-point

ip ospf cost 20

ip ospf hello-interval 1

ip ospf 50 area 0

duplex full

!

interface FastEthernet2/0
```

```
no ip address
shutdown
duplex half
!
interface FastEthernet3/0
no ip address
shutdown
duplex half
!
interface FastEthernet4/0
no ip address
shutdown
duplex half
!
interface FastEthernet5/0
no ip address
shutdown
duplex half
!
interface FastEthernet6/0
description TO-ADMINROUTER-ADMINSWITCH
no ip address
duplex full
```

!

```
interface FastEthernet6/0.21
  encapsulation dot1Q 21
  ip address 192.168.21.1 255.255.255.252
```

!

```
interface FastEthernet6/0.44
  encapsulation dot1Q 44
  ip address 192.168.44.1 255.255.255.0
```

!

```
interface FastEthernet6/0.65
  encapsulation dot1Q 65
  ip address 192.168.65.1 255.255.255.0
```

!

```
interface FastEthernet6/0.70
  encapsulation dot1Q 70
  ip address 192.168.70.1 255.255.255.0
  ip access-group VLAN70-MGMT in
  ip flow ingress
  ip flow egress
```

!

```
interface FastEthernet6/0.75
  encapsulation dot1Q 75
  ip address 192.168.75.1 255.255.255.0
```

!

```
interface FastEthernet6/0.80
  encapsulation dot1Q 80
  ip address 192.168.80.1 255.255.255.0
```

!

```
interface FastEthernet6/0.90
  encapsulation dot1Q 90
  ip address 192.168.90.1 255.255.255.0
```

!

```
interface FastEthernet6/0.100
  encapsulation dot1Q 100
  ip address 192.168.100.1 255.255.255.0
```

!

```
router ospf 50
  router-id 1.4.1.4
  log-adjacency-changes
  area 0 authentication message-digest
  passive-interface default
  no passive-interface FastEthernet0/0
  no passive-interface FastEthernet1/0
  no passive-interface FastEthernet6/0
  network 10.255.0.14 0.0.0.0 area 0
  network 192.168.11.0 0.0.0.3 area 0
```

```
network 192.168.12.0 0.0.0.3 area 0
network 192.168.21.0 0.0.0.3 area 0
network 192.168.44.0 0.0.0.255 area 0
network 192.168.65.0 0.0.0.255 area 0
network 192.168.70.0 0.0.0.255 area 0
network 192.168.75.0 0.0.0.255 area 0
network 192.168.80.0 0.0.0.255 area 0
network 192.168.90.0 0.0.0.255 area 0
network 192.168.100.0 0.0.0.255 area 0
!
ip forward-protocol nd
ip route 0.0.0.0 0.0.0.0 192.168.11.1 track 1
ip route 0.0.0.0 0.0.0.0 192.168.12.1 10
no ip http server
no ip http secure-server
!
ip flow-cache timeout active 1
ip flow-export source FastEthernet6/0.70
ip flow-export version 9
ip flow-export destination 192.168.70.50 9996
!
ip access-list standard MGMT-SSH
permit 192.168.70.0 0.0.0.255
```

```
permit 192.168.44.0 0.0.0.255
permit 192.168.3.0 0.0.0.3
permit 192.168.21.0 0.0.0.3
permit 10.255.0.0 0.0.0.255
deny any
!
ip access-list extended VLAN70-MGMT
permit icmp host 192.168.70.50 host 10.255.0.15
permit icmp host 10.255.0.15 host 192.168.70.50
permit udp host 192.168.70.50 any eq snmp
permit udp host 192.168.70.50 any eq snmptrap
permit udp host 192.168.70.50 any eq ntp
permit tcp host 192.168.70.50 host 192.168.18.2 eq 22
permit udp host 192.168.70.50 any eq tftp
permit icmp any host 192.168.70.50 time-exceeded
permit icmp any host 192.168.70.50 unreachable
permit icmp host 192.168.70.50 host 192.168.18.2
permit tcp host 192.168.18.2 host 192.168.70.50
permit icmp host 192.168.18.2 host 192.168.70.50
deny ip 192.168.70.0 0.0.0.255 192.168.18.0 0.0.0.3 log
permit ip any any
!
ip sla 1
```

```
icmp-echo 192.168.11.1 source-interface FastEthernet0/0
frequency 5
ip sla schedule 1 life forever start-time now
logging trap warnings
logging source-interface FastEthernet6/0.44
logging 192.168.70.50
!
snmp-server group NMS-GROUP v3 priv match exact read NETVIEW write
NETVIEW
snmp-server view NETVIEW iso included
snmp-server enable traps snmp authentication linkdown linkup coldstart
warmstart
snmp-server enable traps vrrp
snmp-server enable traps ds1
snmp-server enable traps call-home message-send-fail server-fail
snmp-server enable traps tty
snmp-server enable traps gatekeeper
snmp-server enable traps eigrp
snmp-server enable traps xgcp
snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect
loop config
snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown
service-up
snmp-server enable traps flash insertion removal
```

```
snmp-server enable traps srp
snmp-server enable traps ds3
snmp-server enable traps envmon
snmp-server enable traps isdn call-information
snmp-server enable traps isdn layer2
snmp-server enable traps isdn chan-not-avail
snmp-server enable traps isdn ietf
snmp-server enable traps ima
snmp-server enable traps diameter
snmp-server enable traps channel
snmp-server enable traps ip local pool
snmp-server enable traps aaa_server
snmp-server enable traps atm subif
snmp-server enable traps bgp
snmp-server enable traps bstun
snmp-server enable traps bulkstat collection transfer
snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-
change inconsistency
snmp-server enable traps memory bufferpeak
snmp-server enable traps cnpd
snmp-server enable traps config-copy
snmp-server enable traps config
snmp-server enable traps config-ctid
```

snmp-server enable traps dial
snmp-server enable traps dlsw
snmp-server enable traps dsp card-status
snmp-server enable traps dsp oper-state
snmp-server enable traps entity
snmp-server enable traps fru-ctrl
snmp-server enable traps resource-policy
snmp-server enable traps frame-relay multilink bundle-mismatch
snmp-server enable traps frame-relay
snmp-server enable traps frame-relay subif
snmp-server enable traps hsrp
snmp-server enable traps ipmobile
snmp-server enable traps ipmulticast
snmp-server enable traps mpls ldp
snmp-server enable traps mpls traffic-eng
snmp-server enable traps mpls fast-reroute protected
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps ospf state-change
snmp-server enable traps ospf errors
snmp-server enable traps ospf retransmit
snmp-server enable traps ospf lsa
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change

snmp-server enable traps ospf cisco-specific state-change shamlink interface-old

snmp-server enable traps ospf cisco-specific state-change shamlink neighbor

snmp-server enable traps ospf cisco-specific errors

snmp-server enable traps ospf cisco-specific retransmit

snmp-server enable traps ospf cisco-specific lsa

snmp-server enable traps pim neighbor-change rp-mapping-change invalid-pim-message

snmp-server enable traps pppoe

snmp-server enable traps cpu threshold

snmp-server enable traps rsvp

snmp-server enable traps ipsla

snmp-server enable traps stun

snmp-server enable traps syslog

snmp-server enable traps l2tun session

snmp-server enable traps l2tun pseudowire status

snmp-server enable traps pw vc

snmp-server enable traps event-manager

snmp-server enable traps firewall serverstatus

snmp-server enable traps rf

snmp-server enable traps isakmp policy add

snmp-server enable traps isakmp policy delete

snmp-server enable traps isakmp tunnel start

snmp-server enable traps isakmp tunnel stop

```
snmp-server enable traps ipsec cryptomap add
snmp-server enable traps ipsec cryptomap delete
snmp-server enable traps ipsec cryptomap attach
snmp-server enable traps ipsec cryptomap detach
snmp-server enable traps ipsec tunnel start
snmp-server enable traps ipsec tunnel stop
snmp-server enable traps ipsec too-many-sas
snmp-server enable traps alarms informational
snmp-server enable traps ccme
snmp-server enable traps srst
snmp-server enable traps mpls vpn
snmp-server enable traps voice
snmp-server enable traps dnis
snmp-server host 192.168.70.50 version 3 priv NMS-ADMIN
!
control-plane
!
gatekeeper
shutdown
!
line con 0
exec-timeout 5 0
logging synchronous
```

```
login authentication CONSOLE-LOCAL
stopbits 1
line aux 0
stopbits 1
line vty 0 4
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
login authentication VTY-LOCAL
transport input ssh
line vty 5 15
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
login authentication VTY-LOCAL
transport input ssh
!
ntp update-calendar
ntp server 192.168.70.50 prefer
end
vIOS24_24 -ADMINMS01
Building configuration...
Current configuration : 15397 bytes
```

!

version 15.9

no service pad

service timestamps debug datetime msec

service timestamps log datetime msec

service password-encryption

!

hostname ADMINMS01

!

boot-start-marker

boot-end-marker

!

logging buffered 50000 warnings

enable secret 9
\$9\$yCwRV1JlG6CAz9\$vWBaJ8zOHaA0iIsctK2KGtv5IJUYFad5BkLsDk8bXRw

!

aaa new-model

aaa authentication login default local

aaa authentication login VTY-LOCAL local

aaa authorization exec default local

aaa session-id common

!

mmi polling-interval 60

```
no mmi auto-configure  
no mmi pvc  
mmi snmp-timeout 180  
!  
no ip icmp rate-limit unreachable  
!  
ip dhcp excluded-address 192.168.1.1  
ip dhcp excluded-address 192.168.2.1  
ip dhcp excluded-address 192.168.3.1  
ip dhcp excluded-address 192.168.4.1  
ip dhcp excluded-address 192.168.5.1  
ip dhcp excluded-address 192.168.6.1  
ip dhcp excluded-address 192.168.7.1  
ip dhcp excluded-address 192.168.8.1  
ip dhcp excluded-address 192.168.9.1  
ip dhcp excluded-address 192.168.11.1  
ip dhcp excluded-address 192.168.12.1  
ip dhcp excluded-address 192.168.13.1  
ip dhcp excluded-address 192.168.14.1  
ip dhcp excluded-address 192.168.16.1  
ip dhcp excluded-address 192.168.17.1  
ip dhcp excluded-address 192.168.22.1  
ip dhcp excluded-address 192.168.33.1
```

```
ip dhcp excluded-address 192.168.44.1
ip dhcp excluded-address 192.168.100.1
ip dhcp excluded-address 192.168.10.1
ip dhcp excluded-address 192.168.20.1
ip dhcp excluded-address 192.168.30.1
ip dhcp excluded-address 192.168.40.1
ip dhcp excluded-address 192.168.50.1
ip dhcp excluded-address 192.168.60.1
ip dhcp excluded-address 192.168.70.1
ip dhcp excluded-address 192.168.80.1
ip dhcp excluded-address 192.168.90.1
ip dhcp excluded-address 192.168.75.1
ip dhcp excluded-address 192.168.65.1
!
ip flow-cache timeout active 1
no ip domain lookup
ip domain name lab.local
ip cef
login block-for 60 attempts 3 within 60
login delay 2
no ipv6 cef
!
multilink bundle-name authenticated
```

!

archive

log config

logging enable

notify syslog contenttype plaintext

hidekeys

path tftp://192.168.70.50/\$h-\$t

write-memory

time-period 1440

username admin privilege 15 secret 9
\$9\$3sQk0mUqRaUnfv\$zCCM1z1S9zeIZ3HlHLWrvOMwYgyY/TdqeczkWlfyx1

.

!

redundancy

!

track 1 ip sla 1 reachability

!

ip tcp synwait-time 5

!

class-map match-any CM-SNMP

match access-group name COPP-SNMP

class-map match-any CM-OSPF

match access-group name COPP-OSPF

class-map match-any CM-ICMP

```
match access-group name COPP-ICMP
class-map match-any CM-NTP
match access-group name COPP-NTP
class-map match-any CM-SSH
match access-group name COPP-SSH
!
policy-map PM-COPP
class CM-SSH
police 64000 conform-action transmit exceed-action drop
class CM-OSPF
police 128000 conform-action transmit exceed-action drop
class CM-ICMP
police 64000 conform-action transmit exceed-action drop
class CM-SNMP
police 64000 conform-action transmit exceed-action drop
class CM-NTP
police 32000 conform-action transmit exceed-action drop
class class-default
police 32000 conform-action transmit exceed-action drop
!
interface Loopback0
ip address 10.255.0.15 255.255.255.255
!
```

```
interface GigabitEthernet0/0
description TO-ADMINMS01-MS02
ip address 192.168.8.2 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 097F5B191C1724170819162F002131
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 20
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/1
no ip address
shutdown
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/2
no ip address
shutdown
```

```
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/3
no ip address
shutdown
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/4
no ip address
shutdown
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/5
no ip address
shutdown
duplex auto
speed auto
```

```
media-type rj45
```

```
!
```

```
interface GigabitEthernet0/6
```

```
description TO-ADMINMS01-ADMINMS02
```

```
ip address 192.168.13.1 255.255.255.252
```

```
ip ospf authentication message-digest
```

```
ip ospf message-digest-key 1 md5 7 097F5B191C1724170819162F002131
```

```
ip ospf network point-to-point
```

```
ip ospf hello-interval 1
```

```
ip ospf 50 area 0
```

```
ip ospf cost 100
```

```
duplex auto
```

```
speed auto
```

```
media-type rj45
```

```
!
```

```
interface GigabitEthernet0/7
```

```
description TO-ADMNIMS01-ADMINROUTER
```

```
ip address 192.168.11.1 255.255.255.252
```

```
ip ospf authentication message-digest
```

```
ip ospf message-digest-key 1 md5 7 06351A31495C3A1C0602000E270133
```

```
ip ospf network point-to-point
```

```
ip ospf hello-interval 1
```

```
ip ospf 50 area 0
```

```
ip ospf cost 110
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/8
description TO-ADMINMS01-MS01
ip address 192.168.3.2 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 073C345C4B1B2A00140719092F2F32
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 10
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/9
no ip address
shutdown
duplex auto
speed auto
```

```
media-type rj45
!
router ospf 50
  router-id 1.5.1.5
  area 0 authentication message-digest
  passive-interface default
  no passive-interface GigabitEthernet0/0
  no passive-interface GigabitEthernet0/6
  no passive-interface GigabitEthernet0/7
  no passive-interface GigabitEthernet0/8
  network 10.255.0.15 0.0.0.0 area 0
  network 192.168.3.0 0.0.0.3 area 0
  network 192.168.8.0 0.0.0.3 area 0
  network 192.168.11.0 0.0.0.3 area 0
  network 192.168.13.0 0.0.0.3 area 0
!
ip forward-protocol nd
!
ip flow-export version 9
ip flow-export destination 192.168.70.50 2055
!
no ip http server
no ip http secure-server
```

```
ip route 0.0.0.0 0.0.0.0 192.168.8.1 track 1
```

```
ip route 0.0.0.0 0.0.0.0 192.168.3.1 10
```

```
ip ssh time-out 60
```

```
ip ssh authentication-retries 2
```

```
ip ssh source-interface Loopback0
```

```
ip ssh version 2
```

```
!
```

```
ip access-list standard MGMT-SSH
```

```
permit 192.168.22.0 0.0.0.255
```

```
permit 192.168.70.0 0.0.0.255
```

```
permit 192.168.33.0 0.0.0.255
```

```
permit 192.168.44.0 0.0.0.255
```

```
deny any
```

```
ip access-list standard SNMP-MGMT
```

```
permit 192.168.70.50
```

```
deny any
```

```
!
```

```
ip access-list extended COPP-ICMP
```

```
permit icmp 192.168.22.0 0.0.0.255 any
```

```
permit icmp 192.168.33.0 0.0.0.255 any
```

```
permit icmp 192.168.44.0 0.0.0.255 any
```

```
permit icmp 192.168.70.0 0.0.0.255 any
```

```
permit icmp host 10.255.0.15 any
```

```
deny ip any any  
ip access-list extended COPP-NTP  
permit udp host 192.168.70.50 any eq ntp  
deny ip any any  
ip access-list extended COPP-OSPF  
permit ospf any any  
deny ip any any  
ip access-list extended COPP-SNMP  
permit udp host 192.168.70.50 any eq snmp  
permit udp host 192.168.70.50 any eq snmptrap  
deny ip any any  
ip access-list extended COPP-SSH  
permit tcp 192.168.22.0 0.0.0.255 any eq 22  
permit tcp 192.168.33.0 0.0.0.255 any eq 22  
permit tcp 192.168.44.0 0.0.0.255 any eq 22  
permit tcp 192.168.70.0 0.0.0.255 any eq 22  
deny ip any any log  
ip access-list extended VLAN70-MGMT  
permit tcp host 192.168.70.50 192.168.18.0 0.0.0.3 eq 22  
permit icmp host 192.168.70.50 192.168.18.0 0.0.0.3  
deny ip 192.168.70.0 0.0.0.255 192.168.18.0 0.0.0.3  
permit ip any any  
!
```

```
ip sla 1
  icmp-echo 192.168.3.1 source-interface GigabitEthernet0/8
  threshold 500
  frequency 5
ip sla schedule 1 life forever start-time now
  logging trap warnings
  logging source-interface Loopback0
  logging host 192.168.70.50
  ipv6 ioam timestamp
!
snmp-server group NMS-ADMIN v3 priv
snmp-server group NMS-GROUP v3 priv read NETVIEW write NETVIEW
snmp-server view NETVIEW iso included
snmp-server chassis-id
snmp-server enable traps snmp authentication linkdown linkup coldstart
warmstart
snmp-server enable traps vrrp
snmp-server enable traps pfr
snmp-server enable traps flowmon
snmp-server enable traps tty
snmp-server enable traps eigrp
snmp-server enable traps ospf state-change
snmp-server enable traps ospf errors
```

snmp-server enable traps ospf retransmit
snmp-server enable traps ospf lsa
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change
snmp-server enable traps ospf cisco-specific state-change shamlink interface
snmp-server enable traps ospf cisco-specific state-change shamlink neighbor
snmp-server enable traps ospf cisco-specific errors
snmp-server enable traps ospf cisco-specific retransmit
snmp-server enable traps ospf cisco-specific lsa
snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect
loop config
snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown
service-up
snmp-server enable traps ethernet evc status create delete
snmp-server enable traps diameter
snmp-server enable traps auth-framework sec-violation auth-fail
snmp-server enable traps trustsec-sxp conn-srcaddr-err msg-parse-err conn-
config-err binding-err conn-up conn-down binding-expn-fail oper-nodeid-
change bindin
g-conflict
snmp-server enable traps aaa_server
snmp-server enable traps atm subif
snmp-server enable traps bfd
snmp-server enable traps bgp cbgp2
snmp-server enable traps bstun

snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-change inconsistency

snmp-server enable traps memory bufferpeak

snmp-server enable traps cnpd

snmp-server enable traps config-copy

snmp-server enable traps config

snmp-server enable traps config-ctid

snmp-server enable traps dlsw

snmp-server enable traps dsp card-status

snmp-server enable traps dsp oper-state

snmp-server enable traps dsp video-usage

snmp-server enable traps dsp video-out-of-resource

snmp-server enable traps entity-ext

snmp-server enable traps entity

snmp-server enable traps fru-ctrl

snmp-server enable traps resource-policy

snmp-server enable traps frame-relay multilink bundle-mismatch

snmp-server enable traps frame-relay

snmp-server enable traps frame-relay subif

snmp-server enable traps hsrp

snmp-server enable traps ipmobile

snmp-server enable traps ipmulticast

snmp-server enable traps isis

```
snmp-server enable traps mempool
snmp-server enable traps mpls traffic-eng
snmp-server enable traps mpls fast-reroute protected
snmp-server enable traps mpls rfc ldp
snmp-server enable traps mpls ldp
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-
pim-message
snmp-server enable traps pppoe
snmp-server enable traps cpu threshold
snmp-server enable traps nhrp nhs
snmp-server enable traps nhrp nhc
snmp-server enable traps nhrp nhp
snmp-server enable traps nhrp quota-exceeded
snmp-server enable traps rsvp
snmp-server enable traps ipsla
snmp-server enable traps stun
snmp-server enable traps syslog
snmp-server enable traps l2tun session
snmp-server enable traps l2tun pseudowire status
snmp-server enable traps pw vc
snmp-server enable traps waas
```

```
snmp-server enable traps event-manager
snmp-server enable traps lisp
snmp-server enable traps firewall serverstatus
snmp-server enable traps ospfv3 state-change
snmp-server enable traps ospfv3 errors
snmp-server enable traps pki
snmp-server enable traps gdoi gm-start-registration
snmp-server enable traps gdoi gm-registration-complete
snmp-server enable traps gdoi gm-re-register
snmp-server enable traps gdoi gm-rekey-rcvd
snmp-server enable traps gdoi gm-rekey-fail
snmp-server enable traps gdoi ks-rekey-pushed
snmp-server enable traps gdoi gm-incomplete-cfg
snmp-server enable traps gdoi ks-no-rsa-keys
snmp-server enable traps gdoi ks-new-registration
snmp-server enable traps gdoi ks-reg-complete
snmp-server enable traps gdoi ks-role-change
snmp-server enable traps gdoi ks-gm-deleted
snmp-server enable traps gdoi ks-peer-reachable
snmp-server enable traps gdoi ks-peer-unreachable
snmp-server enable traps ike policy add
snmp-server enable traps ike policy delete
snmp-server enable traps ike tunnel start
```

```
snmp-server enable traps ike tunnel stop
snmp-server enable traps ipsec cryptomap add
snmp-server enable traps ipsec cryptomap delete
snmp-server enable traps ipsec cryptomap attach
snmp-server enable traps ipsec cryptomap detach
snmp-server enable traps ipsec tunnel start
snmp-server enable traps ipsec tunnel stop
snmp-server enable traps ipsec too-many-sas
snmp-server enable traps ethernet cfm alarm
snmp-server enable traps rf
snmp-server enable traps bulkstat collection transfer
snmp-server enable traps mpls vpn
snmp-server enable traps vrfmib vrf-up vrf-down vnet-trunk-up vnet-trunk-
down
snmp-server host 192.168.70.50 version 3 priv NMS-ADMIN
!
control-plane
service-policy input PM-COPP
!
line con 0
exec-timeout 5 0
logging synchronous
line aux 0
```

```
stopbits 1  
line vty 0 4  
access-class MGMT-SSH in  
exec-timeout 5 0  
logging synchronous  
login authentication VTY-LOCAL  
transport input ssh  
line vty 5 15  
access-class MGMT-SSH in  
exec-timeout 5 0  
logging synchronous  
login authentication VTY-LOCAL  
transport input ssh
```

!

```
no scheduler allocate  
ntp server 192.168.70.50 prefer
```

!

End

vIOS25_25 – ADMINMS02

Building configuration...

Current configuration : 14859 bytes

!

! Last configuration change at 16:08:43 UTC Sun Feb 8 2026 by admin

!

version 15.9

service timestamps debug datetime msec

service timestamps log datetime msec

service password-encryption

!

hostname ADMINMS02

!

boot-start-marker

boot-end-marker

!

logging buffered 50000 warnings

enable secret 9

\$9\$nnpNpvQ.ABo77f\$ofhwT7vV32WLJzUKRNBHwB9SvfJmcp7GKXTwlrrflqE

!

aaa new-model

aaa authentication login default local

aaa authentication login VTY-LOCAL local

aaa authorization exec default local

aaa session-id common

!

mmi polling-interval 60

no mmi auto-configure

no mmi pvc

mmi snmp-timeout 180

!

no ip icmp rate-limit unreachable

!

ip dhcp excluded-address 192.168.1.1

ip dhcp excluded-address 192.168.2.1

ip dhcp excluded-address 192.168.3.1

ip dhcp excluded-address 192.168.4.1

ip dhcp excluded-address 192.168.5.1

ip dhcp excluded-address 192.168.6.1

ip dhcp excluded-address 192.168.7.1

ip dhcp excluded-address 192.168.8.1

ip dhcp excluded-address 192.168.9.1

ip dhcp excluded-address 192.168.11.1

ip dhcp excluded-address 192.168.12.1

ip dhcp excluded-address 192.168.13.1

ip dhcp excluded-address 192.168.14.1

ip dhcp excluded-address 192.168.16.1

ip dhcp excluded-address 192.168.17.1

ip dhcp excluded-address 192.168.22.1

ip dhcp excluded-address 192.168.33.1

ip dhcp excluded-address 192.168.44.1

```
ip dhcp excluded-address 192.168.100.1
ip dhcp excluded-address 192.168.10.1
ip dhcp excluded-address 192.168.20.1
ip dhcp excluded-address 192.168.30.1
ip dhcp excluded-address 192.168.40.1
ip dhcp excluded-address 192.168.50.1
ip dhcp excluded-address 192.168.60.1
ip dhcp excluded-address 192.168.70.1
ip dhcp excluded-address 192.168.80.1
ip dhcp excluded-address 192.168.90.1
ip dhcp excluded-address 192.168.75.1
ip dhcp excluded-address 192.168.65.1
```

!

```
ip flow-cache timeout active 1
no ip domain lookup
ip domain name lab.local
ip cef
login block-for 60 attempts 3 within 60
login delay 2
no ipv6 cef
!
multilink bundle-name authenticated
!
```

```
archive  
log config  
logging enable  
notify syslog contenttype plaintext  
hidekeys  
path tftp://192.168.70.50/$h-$t  
write-memory  
time-period 1440  
username admin privilege 15 secret 9  
$9$4rbHjYLrfqUxeP$Sk8wvxRIIzJi5iFeKHn444J3B/jVNoBB7AfD97b9YP.  
!  
redundancy  
!  
track 1 ip sla 1 reachability  
!  
ip tcp synwait-time 5  
!  
class-map match-any CM-SNMP  
match access-group name COPP-SNMP  
class-map match-any CM-OSPF  
match access-group name COPP-OSPF  
class-map match-any CM-ICMP  
match access-group name COPP-ICMP
```

```
class-map match-any CM-NTP
  match access-group name COPP-NTP
class-map match-any CM-SSH
  match access-group name COPP-SSH
!
policy-map PM-COPP
  class CM-SSH
    police 64000 conform-action transmit  exceed-action drop
  class CM-OSPF
    police 128000 conform-action transmit  exceed-action drop
  class CM-ICMP
    police 64000 conform-action transmit  exceed-action drop
  class CM-SNMP
    police 64000 conform-action transmit  exceed-action drop
  class CM-NTP
    police 32000 conform-action transmit  exceed-action drop
  class class-default
    police 32000 conform-action transmit  exceed-action drop
!
interface Loopback0
  ip address 10.255.0.16 255.255.255.255
!
interface GigabitEthernet0/0
```

```
description TO-ADMINMS02-MS02
ip address 192.168.9.2 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 097F5B191C1724170819162F002131
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 10
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/1
no ip address
shutdown
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/2
no ip address
shutdown
duplex auto
```

```
speed auto
media-type rj45
!
interface GigabitEthernet0/3
no ip address
shutdown
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/4
no ip address
shutdown
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/5
no ip address
shutdown
duplex auto
speed auto
media-type rj45
```

!

```
interface GigabitEthernet0/6
description TO-ADMINMS02-ADMINMS01
ip address 192.168.13.2 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 1424071B0916192E273D213009161E
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 100
duplex auto
speed auto
media-type rj45
```

!

```
interface GigabitEthernet0/7
description TO-ADMINMS02-ADMINROUTER
ip address 192.168.12.1 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 073C345C4B1B2A00140719092F2F32
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 110
```

```
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/8
description TO-ADMINMS02-MS01
ip address 192.168.4.2 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 122A100717193F01293E362D18303B
ip ospf network point-to-point
ip ospf hello-interval 1
ip ospf 50 area 0
ip ospf cost 20
duplex auto
speed auto
media-type rj45
!
interface GigabitEthernet0/9
no ip address
shutdown
duplex auto
speed auto
media-type rj45
```

!

router ospf 50

 router-id 1.6.1.6

 area 0 authentication message-digest

 passive-interface default

 no passive-interface GigabitEthernet0/0

 no passive-interface GigabitEthernet0/6

 no passive-interface GigabitEthernet0/7

 no passive-interface GigabitEthernet0/8

 network 10.255.0.16 0.0.0.0 area 0

 network 192.168.4.0 0.0.0.3 area 0

 network 192.168.9.0 0.0.0.3 area 0

 network 192.168.12.0 0.0.0.3 area 0

 network 192.168.13.0 0.0.0.3 area 0

!

ip forward-protocol nd

!

ip flow-export version 9

ip flow-export destination 192.168.70.50 2055

!

no ip http server

no ip http secure-server

ip route 0.0.0.0 0.0.0.0 192.168.9.1 track 1

```
ip route 0.0.0.0 0.0.0.0 192.168.4.1 10
ip route 0.0.0.0 0.0.0.0 192.168.13.1 20
ip ssh time-out 60
ip ssh authentication-retries 2
ip ssh source-interface Loopback0
ip ssh version 2
ip ssh server algorithm encryption aes256-ctr aes192-ctr aes128-ctr
!
ip access-list standard MGMT-SSH
permit 192.168.70.50
permit 192.168.22.0 0.0.0.255
permit 192.168.33.0 0.0.0.255
permit 192.168.44.0 0.0.0.255
deny any
ip access-list standard SNMP-MGMT
permit 192.168.70.50
deny any
!
ip access-list extended COPP-ICMP
permit icmp 192.168.22.0 0.0.0.255 any
permit icmp 192.168.33.0 0.0.0.255 any
permit icmp 192.168.44.0 0.0.0.255 any
permit icmp 192.168.70.0 0.0.0.255 any
```

```
permit icmp host 10.255.0.16 any  
deny ip any any  
  
ip access-list extended COPP-NTP  
permit udp host 192.168.70.50 any eq ntp  
deny ip any any  
  
ip access-list extended COPP-OSPF  
permit ospf any any  
deny ip any any  
  
ip access-list extended COPP-SNMP  
permit udp host 192.168.70.50 any eq snmp  
permit udp host 192.168.70.50 any eq snmptrap  
deny ip any any  
  
ip access-list extended COPP-SSH  
permit tcp 192.168.22.0 0.0.0.255 any eq 22  
permit tcp 192.168.33.0 0.0.0.255 any eq 22  
permit tcp 192.168.44.0 0.0.0.255 any eq 22  
permit tcp 192.168.70.0 0.0.0.255 any eq 22  
deny ip any any log  
  
ip access-list extended VLAN70-MGMT  
permit tcp host 192.168.70.50 192.168.18.0 0.0.0.3 eq 22  
permit icmp host 192.168.70.50 192.168.18.0 0.0.0.3  
deny ip 192.168.70.0 0.0.0.255 192.168.18.0 0.0.0.3  
permit ip any any
```

!

ip sla 1

 icmp-echo 192.168.9.1 source-interface GigabitEthernet0/0

 threshold 500

 frequency 5

ip sla schedule 1 life forever start-time now

 logging trap warnings

 logging source-interface Loopback0

 logging host 192.168.70.50

 ipv6 ioam timestamp

!

snmp-server group NMS-GROUP v3 priv read NETVIEW write NETVIEW

snmp-server view NETVIEW iso included

snmp-server chassis-id

snmp-server enable traps snmp authentication linkdown linkup coldstart
warmstart

snmp-server enable traps vrrp

snmp-server enable traps pfr

snmp-server enable traps flowmon

snmp-server enable traps tty

snmp-server enable traps eigrp

snmp-server enable traps ospf state-change

snmp-server enable traps ospf errors

snmp-server enable traps ospf retransmit
snmp-server enable traps ospf lsa
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change
snmp-server enable traps ospf cisco-specific state-change shamlink interface
snmp-server enable traps ospf cisco-specific state-change shamlink neighbor
snmp-server enable traps ospf cisco-specific errors
snmp-server enable traps ospf cisco-specific retransmit
snmp-server enable traps ospf cisco-specific lsa
snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect
loop config
snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown
service-up
snmp-server enable traps ethernet evc status create delete
snmp-server enable traps diameter
snmp-server enable traps vrrpv3
snmp-server enable traps auth-framework sec-violation auth-fail
snmp-server enable traps trustsec-sxp conn-srcaddr-err msg-parse-err conn-
config-err binding-err conn-up conn-down binding-expn-fail oper-nodeid-
change bindin
g-conflict
snmp-server enable traps aaa_server
snmp-server enable traps atm subif
snmp-server enable traps bfd
snmp-server enable traps bgp cbgp2

snmp-server enable traps bstun
snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-change inconsistency
snmp-server enable traps memory bufferpeak
snmp-server enable traps cnpd
snmp-server enable traps config-copy
snmp-server enable traps config
snmp-server enable traps config-ctid
snmp-server enable traps dlsw
snmp-server enable traps dsp card-status
snmp-server enable traps dsp oper-state
snmp-server enable traps dsp video-usage
snmp-server enable traps dsp video-out-of-resource
snmp-server enable traps entity-ext
snmp-server enable traps entity
snmp-server enable traps fru-ctrl
snmp-server enable traps resource-policy
snmp-server enable traps frame-relay multilink bundle-mismatch
snmp-server enable traps frame-relay
snmp-server enable traps frame-relay subif
snmp-server enable traps hsrp
snmp-server enable traps ipmobile
snmp-server enable traps ipmulticast

snmp-server enable traps isis
snmp-server enable traps mempool
snmp-server enable traps mpls traffic-eng
snmp-server enable traps mpls fast-reroute protected
snmp-server enable traps mpls rfc ldp
snmp-server enable traps mpls ldp
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-pim-message
snmp-server enable traps pppoe
snmp-server enable traps cpu threshold
snmp-server enable traps nhrp nhs
snmp-server enable traps nhrp nhc
snmp-server enable traps nhrp nhp
snmp-server enable traps nhrp quota-exceeded
snmp-server enable traps rsvp
snmp-server enable traps ipsla
snmp-server enable traps stun
snmp-server enable traps syslog
snmp-server enable traps l2tun session
snmp-server enable traps l2tun pseudowire status
snmp-server enable traps pw vc

snmp-server enable traps waas
snmp-server enable traps event-manager
snmp-server enable traps lisp
snmp-server enable traps firewall serverstatus
snmp-server enable traps ospfv3 state-change
snmp-server enable traps ospfv3 errors
snmp-server enable traps pki
snmp-server enable traps gdoi gm-start-registration
snmp-server enable traps gdoi gm-registration-complete
snmp-server enable traps gdoi gm-re-register
snmp-server enable traps gdoi gm-rekey-rcvd
snmp-server enable traps gdoi gm-rekey-fail
snmp-server enable traps gdoi ks-rekey-pushed
snmp-server enable traps gdoi gm-incomplete-cfg
snmp-server enable traps gdoi ks-no-rsa-keys
snmp-server enable traps gdoi ks-new-registration
snmp-server enable traps gdoi ks-reg-complete
snmp-server enable traps gdoi ks-role-change
snmp-server enable traps gdoi ks-gm-deleted
snmp-server enable traps gdoi ks-peer-reachable
snmp-server enable traps gdoi ks-peer-unreachable
snmp-server enable traps ike policy add
snmp-server enable traps ike policy delete

```
snmp-server enable traps ike tunnel start
snmp-server enable traps ike tunnel stop
snmp-server enable traps ipsec cryptomap add
snmp-server enable traps ipsec cryptomap delete
snmp-server enable traps ipsec cryptomap attach
snmp-server enable traps ipsec cryptomap detach
snmp-server enable traps ipsec tunnel start
snmp-server enable traps ipsec tunnel stop
snmp-server enable traps ipsec too-many-sas
snmp-server enable traps ethernet cfm alarm
snmp-server enable traps rf
snmp-server enable traps bulkstat collection transfer
snmp-server enable traps mpls vpn
snmp-server enable traps vrfmib vrf-up vrf-down vnet-trunk-up vnet-trunk-
down
snmp-server host 192.168.70.50 version 3 priv NMS-ADMIN
!
control-plane
service-policy input PM-COPP
!
line con 0
exec-timeout 5 0
logging synchronous
```

```
line aux 0
stopbits 1

line vty 0 4
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
login authentication VTY-LOCAL
transport input ssh

line vty 5 15
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
login authentication VTY-LOCAL
transport input ssh
```

!

```
no scheduler allocate
ntp server 192.168.70.50 prefer
!
```

End

7206VXR27_27 – PERIMETER-FW01

Building configuration...

Current configuration : 7617 bytes

!

```
upgrade fpd auto
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
!
hostname PERIMETER-FW01
!
boot-start-marker
boot-end-marker
!
logging message-counter syslog
logging buffered 50000 warnings
enable secret 5 $1$sOyL$o7cAt4dmXzhvGSTdlvcMA/
!
aaa new-model
aaa authentication login default local
aaa session-id common
!
no ip source-route
ip cef
!
no ip domain lookup
```

```
ip domain name lab.local
login block-for 60 attempts 3 within 60
login delay 2
no ipv6 cef
!
multilink bundle-name authenticated
!
username admin privilege 15 secret 5 $1$N5Hf$hdmTFCy0VQyYa3RQ7Pnyt/
archive
log config
logging enable
notify syslog contenttype plaintext
hidekeys
path tftp://192.168.70.50/$h-$t
write-memory
time-period 1440
!
ip ssh time-out 60
ip ssh authentication-retries 2
ip ssh source-interface Loopback0
ip ssh version 2
!
track 1 ip sla 1 reachability
```

!

interface Loopback0

ip address 10.255.0.20 255.255.255.255

!

interface FastEthernet0/0

description TO-PERIMETERFW01-PERIMETERFW1

ip address 192.168.16.2 255.255.255.252

ip ospf authentication message-digest

ip ospf message-digest-key 1 md5 7 012013145E19350A22595C0C32000E

ip ospf network point-to-point

ip ospf cost 10

ip ospf hello-interval 1

ip ospf 50 area 0

duplex half

!

interface FastEthernet1/0

no ip address

shutdown

duplex half

!

interface FastEthernet2/0

no ip address

shutdown

```
duplex half
!
interface FastEthernet3/0
no ip address
shutdown
duplex half
!
interface FastEthernet4/0
description TO-PERIMETERFW01-PERIMETERFW02
ip address 192.168.14.1 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 15211E1C013818212B26272738020F
ip ospf network point-to-point
ip ospf cost 20
ip ospf hello-interval 1
ip ospf 50 area 0
duplex half
!
interface FastEthernet5/0
description TO-PERIMETERFW01-MS02
ip address 192.168.6.1 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 06351A31495C3A1C0602000E270133
```

```
ip ospf network point-to-point
ip ospf cost 100
ip ospf hello-interval 1
ip ospf 50 area 0
duplex half
!
interface FastEthernet6/0
description TO-PERIMETERFW01-MS01
ip address 192.168.1.1 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 107D1C090005210E0F11382E0F2D2A
ip ospf network point-to-point
ip ospf cost 110
ip ospf hello-interval 1
ip ospf 50 area 0
duplex half
!
router ospf 50
router-id 2.1.2.1
log-adjacency-changes
area 0 authentication message-digest
passive-interface default
no passive-interface FastEthernet0/0
```

```
no passive-interface FastEthernet4/0
no passive-interface FastEthernet5/0
no passive-interface FastEthernet6/0
network 10.255.0.20 0.0.0.0 area 0
network 192.168.1.0 0.0.0.3 area 0
network 192.168.6.0 0.0.0.3 area 0
network 192.168.14.0 0.0.0.3 area 0
network 192.168.16.0 0.0.0.3 area 0
!
ip forward-protocol nd
ip route 0.0.0.0 0.0.0.0 192.168.16.1
no ip http server
no ip http secure-server
!
ip flow-export version 9
!
ip access-list standard MGMT-SSH
permit 192.168.70.50
deny any
!
ip sla 1
icmp-echo 192.168.16.1 source-interface FastEthernet0/0
frequency 5
```

```
ip sla schedule 1 life forever start-time now
logging trap warnings
logging source-interface Loopback0
logging 192.168.70.50
!
snmp-server group NMS-GROUP v3 priv match exact read NETVIEW write
NETVIEW
snmp-server view NETVIEW iso included
snmp-server enable traps snmp authentication linkdown linkup coldstart
warmstart
snmp-server enable traps vrrp
snmp-server enable traps ds1
snmp-server enable traps call-home message-send-fail server-fail
snmp-server enable traps tty
snmp-server enable traps gatekeeper
snmp-server enable traps eigrp
snmp-server enable traps xgcp
snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect
loop config
snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown
service-up
snmp-server enable traps flash insertion removal
snmp-server enable traps srp
snmp-server enable traps ds3
```

```
snmp-server enable traps envmon
snmp-server enable traps isdn call-information
snmp-server enable traps isdn layer2
snmp-server enable traps isdn chan-not-avail
snmp-server enable traps isdn ietf
snmp-server enable traps ima
snmp-server enable traps diameter
snmp-server enable traps channel
snmp-server enable traps ip local pool
snmp-server enable traps aaa_server
snmp-server enable traps atm subif
snmp-server enable traps bgp
snmp-server enable traps bstun
snmp-server enable traps bulkstat collection transfer
snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-
change inconsistency
snmp-server enable traps memory bufferpeak
snmp-server enable traps cnpd
snmp-server enable traps config-copy
snmp-server enable traps config
snmp-server enable traps config-ctid
snmp-server enable traps dial
snmp-server enable traps dlsw
```

```
snmp-server enable traps dsp card-status
snmp-server enable traps dsp oper-state
snmp-server enable traps entity
snmp-server enable traps fru-ctrl
snmp-server enable traps resource-policy
snmp-server enable traps frame-relay multilink bundle-mismatch
snmp-server enable traps frame-relay
snmp-server enable traps frame-relay subif
snmp-server enable traps hsrp
snmp-server enable traps ipmobile
snmp-server enable traps ipmulticast
snmp-server enable traps mpls ldp
snmp-server enable traps mpls traffic-eng
snmp-server enable traps mpls fast-reroute protected
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps ospf state-change
snmp-server enable traps ospf errors
snmp-server enable traps ospf retransmit
snmp-server enable traps ospf lsa
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change
snmp-server enable traps ospf cisco-specific state-change shamlink interface-old
```

snmp-server enable traps ospf cisco-specific state-change shamlink neighbor
snmp-server enable traps ospf cisco-specific errors
snmp-server enable traps ospf cisco-specific retransmit
snmp-server enable traps ospf cisco-specific lsa
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-pim-message
snmp-server enable traps pppoe
snmp-server enable traps cpu threshold
snmp-server enable traps rsvp
snmp-server enable traps ipsla
snmp-server enable traps stun
snmp-server enable traps syslog
snmp-server enable traps l2tun session
snmp-server enable traps l2tun pseudowire status
snmp-server enable traps pw vc
snmp-server enable traps event-manager
snmp-server enable traps firewall serverstatus
snmp-server enable traps rf
snmp-server enable traps isakmp policy add
snmp-server enable traps isakmp policy delete
snmp-server enable traps isakmp tunnel start
snmp-server enable traps isakmp tunnel stop
snmp-server enable traps ipsec cryptomap add

```
snmp-server enable traps ipsec cryptomap delete
snmp-server enable traps ipsec cryptomap attach
snmp-server enable traps ipsec cryptomap detach
snmp-server enable traps ipsec tunnel start
snmp-server enable traps ipsec tunnel stop
snmp-server enable traps ipsec too-many-sas
snmp-server enable traps alarms informational
snmp-server enable traps ccme
snmp-server enable traps srst
snmp-server enable traps mpls vpn
snmp-server enable traps voice
snmp-server enable traps dnis
snmp-server host 192.168.70.50 version 3 priv NMS-ADMIN
!
control-plane
!
gatekeeper
shutdown
!
line con 0
stopbits 1
line aux 0
stopbits 1
```

```
line vty 0 4
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
transport input ssh
!
```

End

7206VXR28_28 – PERIMETER-FW02

Building configuration...

Current configuration : 7666 bytes

!

upgrade fpd auto

version 12.4

service timestamps debug datetime msec

service timestamps log datetime msec

service password-encryption

!

hostname PERIMETER-FW02

!

boot-start-marker

boot-end-marker

!

logging message-counter syslog

```
logging buffered 50000 warnings
enable secret 5 $1$Qg3Z$zFLy42S0ZGLlr8exdQob6.
!
aaa new-model
aaa authentication login default local
aaa session-id common
!
no ip source-route
ip cef
!
no ip domain lookup
ip domain name lab.local
login block-for 60 attempts 3 within 60
login delay 2
no ipv6 cef
!
multilink bundle-name authenticated
!
username admin privilege 15 secret 5
$1$Cmjh$NO4r2GQT3W3UnkL4rxXFW0
archive
log config
logging enable
```

```
notify syslog contenttype plaintext
hidekeys
path tftp://192.168.70.50/$h-$t
write-memory
time-period 1440
!
ip ssh time-out 60
ip ssh authentication-retries 2
ip ssh source-interface Loopback0
ip ssh version 2
!
track 1 ip sla 1 reachability
!
interface Loopback0
ip address 10.255.0.21 255.255.255.255
!
interface FastEthernet0/0
description TO-PERIMETERFW02-PERIMETERFW1
ip address 192.168.17.2 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 133602020E1E372F28313A361E270A
ip ospf network point-to-point
ip ospf cost 10
```

```
ip ospf hello-interval 1
ip ospf 50 area 0
duplex half
!
interface FastEthernet1/0
no ip address
shutdown
duplex half
!
interface FastEthernet2/0
no ip address
shutdown
duplex half
!
interface FastEthernet3/0
no ip address
shutdown
duplex half
!
interface FastEthernet4/0
description TO-PERIMETERFW02-PERIMETERFW01
ip address 192.168.14.2 255.255.255.252
ip ospf authentication message-digest
```

```
ip ospf message-digest-key 1 md5 7 073C345C4B1B2A00140719092F2F32
ip ospf network point-to-point
ip ospf cost 20
ip ospf hello-interval 1
ip ospf 50 area 0
duplex half
!
interface FastEthernet5/0
description TO-PERIMETERFW02-MS02
ip address 192.168.7.1 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 113A0C1512003809073F392103362C
ip ospf network point-to-point
ip ospf cost 100
ip ospf hello-interval 1
ip ospf 50 area 0
duplex half
!
interface FastEthernet6/0
description TO-PERIMETERFW02-MS01
ip address 192.168.2.1 255.255.255.252
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 133602020E1E372F28313A361E270A
```

```
ip ospf network point-to-point
ip ospf cost 110
ip ospf hello-interval 1
ip ospf 50 area 0
duplex half
!
router ospf 50
router-id 3.1.3.1
log-adjacency-changes
area 0 authentication message-digest
passive-interface default
no passive-interface FastEthernet0/0
no passive-interface FastEthernet4/0
no passive-interface FastEthernet5/0
no passive-interface FastEthernet6/0
network 10.255.0.21 0.0.0.0 area 0
network 192.168.2.0 0.0.0.3 area 0
network 192.168.7.0 0.0.0.3 area 0
network 192.168.14.0 0.0.0.3 area 0
network 192.168.17.0 0.0.0.3 area 0
!
ip forward-protocol nd
ip route 0.0.0.0 0.0.0.0 192.168.17.1 track 1
```

```
ip route 0.0.0.0 0.0.0.0 192.168.14.1 10
no ip http server
no ip http secure-server
!
ip flow-export version 9
!
ip access-list standard MGMT-SSH
permit 192.168.70.50
deny any
!
ip sla 1
icmp-echo 192.168.17.1 source-interface FastEthernet0/0
frequency 5
ip sla schedule 1 life forever start-time now
logging trap warnings
logging source-interface Loopback0
logging 192.168.70.50
!
snmp-server group NMS-GROUP v3 priv match exact read NETVIEW write
NETVIEW
snmp-server view NETVIEW iso included
snmp-server enable traps snmp authentication linkdown linkup coldstart
warmstart
snmp-server enable traps vrrp
```

```
snmp-server enable traps ds1
snmp-server enable traps call-home message-send-fail server-fail
snmp-server enable traps tty
snmp-server enable traps gatekeeper
snmp-server enable traps eigrp
snmp-server enable traps xgcp
snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect
loop config
snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown
service-up
snmp-server enable traps flash insertion removal
snmp-server enable traps srp
snmp-server enable traps ds3
snmp-server enable traps envmon
snmp-server enable traps isdn call-information
snmp-server enable traps isdn layer2
snmp-server enable traps isdn chan-not-avail
snmp-server enable traps isdn ietf
snmp-server enable traps ima
snmp-server enable traps diameter
snmp-server enable traps channel
snmp-server enable traps ip local pool
snmp-server enable traps aaa_server
snmp-server enable traps atm subif
```

```
snmp-server enable traps bgp
snmp-server enable traps bstun
snmp-server enable traps bulkstat collection transfer
snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-
change inconsistency
snmp-server enable traps memory bufferpeak
snmp-server enable traps cnpd
snmp-server enable traps config-copy
snmp-server enable traps config
snmp-server enable traps config-ctid
snmp-server enable traps dial
snmp-server enable traps dlsw
snmp-server enable traps dsp card-status
snmp-server enable traps dsp oper-state
snmp-server enable traps entity
snmp-server enable traps fru-ctrl
snmp-server enable traps resource-policy
snmp-server enable traps frame-relay multilink bundle-mismatch
snmp-server enable traps frame-relay
snmp-server enable traps frame-relay subif
snmp-server enable traps hsrp
snmp-server enable traps ipmobile
snmp-server enable traps ipmulticast
```

```
snmp-server enable traps mpls ldp
snmp-server enable traps mpls traffic-eng
snmp-server enable traps mpls fast-reroute protected
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps ospf state-change
snmp-server enable traps ospf errors
snmp-server enable traps ospf retransmit
snmp-server enable traps ospf lsa
snmp-server enable traps ospf cisco-specific state-change nssa-trans-change
snmp-server enable traps ospf cisco-specific state-change shamlink interface-old
snmp-server enable traps ospf cisco-specific state-change shamlink neighbor
snmp-server enable traps ospf cisco-specific errors
snmp-server enable traps ospf cisco-specific retransmit
snmp-server enable traps ospf cisco-specific lsa
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-pim-message
snmp-server enable traps pppoe
snmp-server enable traps cpu threshold
snmp-server enable traps rsvp
snmp-server enable traps ipsla
snmp-server enable traps stun
snmp-server enable traps syslog
```

snmp-server enable traps l2tun session
snmp-server enable traps l2tun pseudowire status
snmp-server enable traps pw vc
snmp-server enable traps event-manager
snmp-server enable traps firewall serverstatus
snmp-server enable traps rf
snmp-server enable traps isakmp policy add
snmp-server enable traps isakmp policy delete
snmp-server enable traps isakmp tunnel start
snmp-server enable traps isakmp tunnel stop
snmp-server enable traps ipsec cryptomap add
snmp-server enable traps ipsec cryptomap delete
snmp-server enable traps ipsec cryptomap attach
snmp-server enable traps ipsec cryptomap detach
snmp-server enable traps ipsec tunnel start
snmp-server enable traps ipsec tunnel stop
snmp-server enable traps ipsec too-many-sas
snmp-server enable traps alarms informational
snmp-server enable traps ccme
snmp-server enable traps srst
snmp-server enable traps mpls vpn
snmp-server enable traps voice
snmp-server enable traps dnis

```
snmp-server host 192.168.70.50 version 3 priv NMS-ADMIN
```

```
!
```

```
control-plane
```

```
!
```

```
gatekeeper
```

```
shutdown
```

```
!
```

```
line con 0
```

```
stopbits 1
```

```
line aux 0
```

```
stopbits 1
```

```
line vty 0 4
```

```
access-class MGMT-SSH in
```

```
exec-timeout 5 0
```

```
logging synchronous
```

```
transport input ssh
```

```
!
```

```
End
```

7206VXR26_26 – PERIMETER-FW

```
Building configuration...
```

```
Current configuration : 9751 bytes
```

```
!
```

```
upgrade fpd auto
```

```
version 12.4

service tcp-keepalives-in

service tcp-keepalives-out

service timestamps debug datetime msec

service timestamps log datetime msec

service password-encryption

service sequence-numbers

!

hostname PERIMETER-FW

!

boot-start-marker

boot-end-marker

!

logging message-counter syslog

logging buffered 50000 warnings

no logging console

enable secret 5 $1$Tfh8$npkISpPATlxwgMeMWeJ9a/

!

aaa new-model

aaa session-id common

!

no ip source-route

ip cef
```

!

ip domain name aurorashield.lab

no ipv6 cef

!

multilink bundle-name authenticated

!

username admin privilege 15 secret 5 \$1\$uN71\$KpAB2LchCs93/yX51ZLi1.

!

archive

log config

logging enable

hidekeys

path tftp://192.168.70.50/\$h-\$t

write-memory

time-period 1440

!

ip ssh time-out 60

ip ssh authentication-retries 2

ip ssh source-interface Loopback0

ip ssh version 2

!

class-map match-any CM-CP

match access-group name CP-ALLOW

```
class-map type inspect match-any CM-INTERNET
    match protocol tcp
    match protocol udp
    match protocol icmp
class-map type inspect match-any CM-SSH
    match protocol ssh
!
policy-map PM-CP
    class CM-CP
        police 128000 conform-action transmit exceed-action drop
    class class-default
        police 64000 conform-action transmit exceed-action drop
policy-map type inspect PM-SELF
    class type inspect CM-SSH
        inspect
    class class-default
        drop
policy-map type inspect PM-INSIDE-OUT
    class type inspect CM-INTERNET
        inspect
    class class-default
        drop
policy-map type inspect PM-OUT-IN
```

```
class class-default
  pass
!
zone security INSIDE
zone security OUTSIDE
zone security SELF
zone-pair security ZP-IN-OUT source INSIDE destination OUTSIDE
  service-policy type inspect PM-INSIDE-OUT
zone-pair security ZP-OUT-IN source OUTSIDE destination INSIDE
  service-policy type inspect PM-OUT-IN
zone-pair security ZP-IN-SELF source INSIDE destination SELF
  service-policy type inspect PM-SELF
!
interface Loopback0
  ip address 10.255.0.41 255.255.255.255
  zone-member security SELF
!
interface FastEthernet0/0
  no ip address
  duplex half
!
interface FastEthernet1/0
  description TO-PERIMETERFW-PERIMETERFW01
```

```
ip address 192.168.16.1 255.255.255.252
ip flow ingress
ip flow egress
ip nat inside
ip virtual-reassembly
zone-member security INSIDE
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 7 012013145E19350A22595C0C32000E
ip ospf network point-to-point
ip ospf cost 10
ip ospf hello-interval 1
ip ospf 50 area 0
duplex half
!
interface FastEthernet2/0
description TO-PERIMETERFW-PERIMETERFW02
ip address 192.168.17.1 255.255.255.252
ip flow ingress
ip flow egress
ip nat inside
ip virtual-reassembly
zone-member security INSIDE
ip ospf authentication message-digest
```

```
ip ospf message-digest-key 1 md5 7 04681E160A337F4B0A0C1712390E15
ip ospf network point-to-point
ip ospf cost 20
ip ospf hello-interval 1
ip ospf 50 area 0
duplex half
!
interface FastEthernet3/0
description TO-PERIMETERFW-INTERNET
ip address dhcp
ip access-group OUTSIDE-ANTI-SPOOF in
ip flow ingress
ip flow egress
ip nat outside
ip virtual-reassembly
zone-member security OUTSIDE
duplex half
!
interface FastEthernet4/0
no ip address
shutdown
duplex half
!
```

```
interface FastEthernet5/0
no ip address
shutdown
duplex half
!
interface FastEthernet6/0
no ip address
shutdown
duplex half
!
router ospf 50
router-id 3.3.3.3
log-adjacency-changes
area 0 authentication message-digest
passive-interface default
no passive-interface FastEthernet1/0
no passive-interface FastEthernet2/0
network 10.255.0.41 0.0.0.0 area 0
network 192.168.16.0 0.0.0.3 area 0
network 192.168.17.0 0.0.0.3 area 0
!
ip forward-protocol nd
ip route 0.0.0.0 0.0.0.0 dhcp
```

```
no ip http server
no ip http secure-server
!
ip flow-cache timeout active 1
ip flow-export version 9
ip flow-export destination 192.168.70.50 9996
!
ip nat inside source list FOR-NAT interface FastEthernet3/0 overload
!
ip access-list standard FOR-NAT
permit 192.168.10.0 0.0.0.255
permit 192.168.20.0 0.0.0.255
permit 192.168.30.0 0.0.0.255
permit 192.168.40.0 0.0.0.255
permit 192.168.50.0 0.0.0.255
permit 192.168.60.0 0.0.0.255
permit 192.168.70.0 0.0.0.255
permit 192.168.80.0 0.0.0.255
!
ip access-list standard MGMT-SSH
permit 192.168.70.50
deny any
!
```

ip access-list extended BOGON

deny ip 10.0.0.0 0.255.255.255 any

deny ip 172.16.0.0 0.15.255.255 any

deny ip 192.168.0.0 0.0.255.255 any

permit ip any any

ip access-list extended CP-ALLOW

permit tcp host 192.168.70.50 any eq 22

permit ospf any any

permit icmp any any echo-reply

deny ip any any

ip access-list extended OUTSIDE-ANTI-SPOOF

deny ip 10.0.0.0 0.255.255.255 any log

deny ip 172.16.0.0 0.15.255.255 any log

deny ip 192.168.0.0 0.0.255.255 any log

deny ip 127.0.0.0 0.255.255.255 any log

deny ip 0.0.0.0 0.255.255.255 any log

deny ip 169.254.0.0 0.0.255.255 any log

permit ip any any

ip access-list extended OUTSIDE-IN

permit tcp any any established

permit icmp any any echo-reply

deny ip any 192.168.0.0 0.0.255.255 log

deny ip any any log

!

logging trap warnings

logging origin-id hostname

logging source-interface Loopback0

logging 192.168.70.50

no cdp run

!

snmp-server group NMS-GROUP v3 priv match exact read NETVIEW write
NETVIEW

snmp-server view NETVIEW iso included

snmp-server enable traps snmp authentication linkdown linkup coldstart
warmstart

snmp-server enable traps vrrp

snmp-server enable traps ds1

snmp-server enable traps call-home message-send-fail server-fail

snmp-server enable traps tty

snmp-server enable traps gatekeeper

snmp-server enable traps eigrp

snmp-server enable traps xgcp

snmp-server enable traps ethernet cfm cc mep-up mep-down cross-connect
loop config

snmp-server enable traps ethernet cfm crosscheck mep-missing mep-unknown
service-up

snmp-server enable traps flash insertion removal
snmp-server enable traps srp
snmp-server enable traps ds3
snmp-server enable traps envmon
snmp-server enable traps isdn call-information
snmp-server enable traps isdn layer2
snmp-server enable traps isdn chan-not-avail
snmp-server enable traps isdn ietf
snmp-server enable traps ima
snmp-server enable traps diameter
snmp-server enable traps channel
snmp-server enable traps ip local pool
snmp-server enable traps aaa_server
snmp-server enable traps atm subif
snmp-server enable traps bgp
snmp-server enable traps bstun
snmp-server enable traps bulkstat collection transfer
snmp-server enable traps cef resource-failure peer-state-change peer-fib-state-change inconsistency
snmp-server enable traps memory bufferpeak
snmp-server enable traps cnpd
snmp-server enable traps config-copy
snmp-server enable traps config

```
snmp-server enable traps config-ctid
snmp-server enable traps dial
snmp-server enable traps dlsw
snmp-server enable traps dsp card-status
snmp-server enable traps dsp oper-state
snmp-server enable traps entity
snmp-server enable traps fru-ctrl
snmp-server enable traps resource-policy
snmp-server enable traps frame-relay multilink bundle-mismatch
snmp-server enable traps frame-relay
snmp-server enable traps frame-relay subif
snmp-server enable traps hsrp
snmp-server enable traps ipmobile
snmp-server enable traps ipmulticast
snmp-server enable traps mpls ldp
snmp-server enable traps mpls traffic-eng
snmp-server enable traps mpls fast-reroute protected
snmp-server enable traps msdp
snmp-server enable traps mvpn
snmp-server enable traps ospf state-change
snmp-server enable traps ospf errors
snmp-server enable traps ospf retransmit
snmp-server enable traps ospf lsa
```

snmp-server enable traps ospf cisco-specific state-change nssa-trans-change
snmp-server enable traps ospf cisco-specific state-change shamlink interface-old
snmp-server enable traps ospf cisco-specific state-change shamlink neighbor
snmp-server enable traps ospf cisco-specific errors
snmp-server enable traps ospf cisco-specific retransmit
snmp-server enable traps ospf cisco-specific lsa
snmp-server enable traps pim neighbor-change rp-mapping-change invalid-pim-message
snmp-server enable traps pppoe
snmp-server enable traps cpu threshold
snmp-server enable traps rsvp
snmp-server enable traps ipsla
snmp-server enable traps stun
snmp-server enable traps syslog
snmp-server enable traps l2tun session
snmp-server enable traps l2tun pseudowire status
snmp-server enable traps pw vc
snmp-server enable traps event-manager
snmp-server enable traps firewall serverstatus
snmp-server enable traps rf
snmp-server enable traps isakmp policy add
snmp-server enable traps isakmp policy delete
snmp-server enable traps isakmp tunnel start

```
snmp-server enable traps isakmp tunnel stop
snmp-server enable traps ipsec cryptomap add
snmp-server enable traps ipsec cryptomap delete
snmp-server enable traps ipsec cryptomap attach
snmp-server enable traps ipsec cryptomap detach
snmp-server enable traps ipsec tunnel start
snmp-server enable traps ipsec tunnel stop
snmp-server enable traps ipsec too-many-sas
snmp-server enable traps alarms informational
snmp-server enable traps ccme
snmp-server enable traps srst
snmp-server enable traps mpls vpn
snmp-server enable traps voice
snmp-server enable traps dnis
snmp-server host 192.168.70.50 version 3 priv NMS-ADMIN
!
control-plane
service-policy input PM-CP
!
gatekeeper
shutdown
!
line con 0
```

```
stopbits 1
line aux 0
stopbits 1
line vty 0 4
access-class MGMT-SSH in
exec-timeout 5 0
logging synchronous
transport input ssh
!
```

End