

```
DSW1#
DSW1#show running-config
Building configuration...

Current configuration : 6892 bytes
!
! Last configuration change at 15:22:39 UTC Tue Jun 8 2010
! NVRAM config last updated at 15:26:17 UTC Tue Jun 8 2010
!
version 12.2
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname DSW1
!
no logging console
enable secret 5 $1$rODO$qAtdAg3h15SehH6GUuZwF/
!
no aaa new-model
ipv6 unicast-routing
ip subnet-zero
ip routing
!
ip multicast-routing
!
!
crypto pki trustpoint TP-self-signed-3185798656
  enrollment selfsigned
  subject-name cn=IOS-Self-Signed-Certificate-3185798656
  revocation-check none
  rsakeypair TP-self-signed-3185798656
!
!
crypto pki certificate chain TP-self-signed-3185798656
  certificate self-signed 01
    3082023D 308201A6 A0030201 02020101 300D0609 2A864886 F70D0101 04050030
    31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D 43657274
    69666963 6174652D 33313835 37393836 3536301E 170D3933 30333031 30303031
    30305A17 0D323030 31303130 30303030 305A3031 312F302D 06035504 03132649
    4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D33 31383537
    39383635 3630819F 300D0609 2A864886 F70D0101 01050003 818D0030 81890281
    8100B5A7 E06E306F 8CE03E7C 7F0A5ED4 F3E83B4D 84C44C79 53FFBF4B AD0AA040
    6F1B5F48 450A6605 064E98C8 F383BF35 7B1E930A 50CE8941 983A7541 00257105
    B72F88B5 9EFA7F55 1555F03C BB445809 46675034 6907395C 62E3997D C6AD08DE
    D5DA2E7A F8F1BCBF F5279179 178DDC57 0F0FC565 3D690CC3 CC342B98 192CDE4C
    FE5B0203 010001A3 65306330 0F060355 1D130101 FF040530 030101FF 30100603
    551D1104 09300782 05445357 312E301F 0603551D 23041830 168014F8 76AF7B7F
    ED73BF2B 4B98E0FA 521E848A 8A439230 1D060355 1D0E0416 0414F876 AF7B7FED
    73BF2B4B 98E0FA52 1E848A8A 4392300D 06092A86 4886F70D 01010405 00038181
    008E47B1 A4F77ADB 27CF55C5 17BB031C 15FE5D6F 1FCD9212 D925F95C 90244899
    1F97EAD1 89880DA0 BD0CCAC2 5DDAC877 BC6A5756 4B6B7389 6F74FF8C 97F41CCB
    4EF0975B CA5E1343 C8682DA1 D2D3EF12 7A9CF7AB C9C4F367 831798CC 4D182B50
```

```
4EF0D03C BBC28793 6A47C9D5 8E5960AD 8D4943CB 5D1A4B18 870DDEB6 E0DA2B3A
CB
quit
!
!
!
spanning-tree mode rapid-pvst
spanning-tree extend system-id
spanning-tree vlan 10,200 priority 4096
spanning-tree vlan 20 priority 8192
!
vlan internal allocation policy ascending
!
!
!
!
!
!
interface Tunnel46
no ip address
ipv6 address 2026::2:2/122
ipv6 enable
ipv6 rip RIPNG enable
tunnel source 10.1.4.6
tunnel destination 10.1.4.5
!
interface Tunnel67
no ip address
ipv6 address 2026::3:1/122
ipv6 enable
ipv6 rip RIPNG enable
tunnel source 10.2.4.13
tunnel destination 10.2.4.14
!
interface Port-channel12
no switchport
ip address 10.2.4.13 255.255.255.252
ip pim sparse-dense-mode
!
interface Port-channel13
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 10,200
switchport mode trunk
!
interface Port-channel14
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 20,200
switchport mode trunk
!
interface FastEthernet0/1
no switchport
ip address 10.1.4.6 255.255.255.252
ip pim sparse-dense-mode
spanning-tree portfast
```

```
!  
interface FastEthernet0/2  
    switchport access vlan 101  
    switchport mode access  
    switchport port-security maximum 2  
    switchport port-security  
    spanning-tree portfast  
!  
interface FastEthernet0/3  
    switchport access vlan 102  
    switchport mode access  
    spanning-tree portfast  
!  
interface FastEthernet0/4  
    switchport mode dynamic desirable  
!  
interface FastEthernet0/5  
    switchport access vlan 104  
    switchport mode access  
    spanning-tree portfast  
!  
interface FastEthernet0/6  
    switchport access vlan 105  
    switchport mode access  
    spanning-tree portfast  
!  
interface FastEthernet0/7  
    switchport access vlan 106  
    switchport mode access  
    spanning-tree portfast  
!  
interface FastEthernet0/8  
    switchport access vlan 109  
    switchport mode access  
    spanning-tree portfast  
!  
interface FastEthernet0/9  
    switchport access vlan 17  
    switchport mode access  
    spanning-tree portfast  
!  
interface FastEthernet0/10  
    switchport mode access  
    spanning-tree portfast  
!  
interface FastEthernet0/11  
    switchport mode access  
    spanning-tree portfast  
!  
interface FastEthernet0/12  
    switchport access vlan 123  
    switchport mode access  
    spanning-tree portfast  
!
```

```
interface FastEthernet0/13
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/14
  switchport mode access
  spanning-tree portfast
!
interface FastEthernet0/15
  switchport mode access
!
interface FastEthernet0/16
  switchport trunk encapsulation dot1q
  switchport trunk allowed vlan 20,200
  switchport mode trunk
  channel-group 14 mode auto
!
interface FastEthernet0/17
  switchport trunk encapsulation dot1q
  switchport trunk allowed vlan 20,200
  switchport mode trunk
  channel-group 14 mode auto
!
interface FastEthernet0/18
  switchport trunk encapsulation dot1q
  switchport trunk allowed vlan 20,200
  switchport mode trunk
  channel-group 14 mode auto
!
interface FastEthernet0/19
  switchport trunk encapsulation dot1q
  switchport trunk allowed vlan 10,200
  switchport mode trunk
  channel-group 13 mode active
!
interface FastEthernet0/20
  switchport trunk encapsulation dot1q
  switchport trunk allowed vlan 10,200
  switchport mode trunk
  channel-group 13 mode active
!
interface FastEthernet0/21
  switchport trunk encapsulation dot1q
  switchport trunk allowed vlan 10,200
  switchport mode trunk
  channel-group 13 mode active
!
interface FastEthernet0/22
  no switchport
  no ip address
  channel-group 12 mode on
!
interface FastEthernet0/23
  no switchport
```

```
no ip address
channel-group 12 mode on
!
interface FastEthernet0/24
no switchport
no ip address
channel-group 12 mode on
!
interface GigabitEthernet0/1
switchport mode dynamic desirable
shutdown
!
interface GigabitEthernet0/2
switchport mode dynamic desirable
shutdown
!
interface Vlan1
no ip address
shutdown
!
interface Vlan10
ip address 10.2.1.1 255.255.255.0
ip helper-address 10.1.4.5
ip pim sparse-dense-mode
standby 10 ip 10.2.1.254
standby 10 priority 110
standby 10 preempt
!
interface Vlan20
ip address 10.2.2.2 255.255.255.0
ip pim sparse-dense-mode
!
interface Vlan200
ip address 192.168.1.129 255.255.255.224
!
!
router eigrp 10
metric weights 0 1 1 1 1 1
no auto-summary
eigrp router-id 6.6.6.6
network 10.1.4.6 0.0.0.0
network 10.2.1.1 0.0.0.0
network 10.2.2.2 0.0.0.0
network 10.2.4.13 0.0.0.0
!
router ospf 1
log-adjacency-changes
network 10.3.3.2 0.0.0.0 area 0
network 10.17.17.1 0.0.0.0 area 0
!
ip classless
ip http server
ip http secure-server
!
```

```
!  
ip access-list standard DENY_10  
  deny 10.0.0.0 0.255.255.255  
  permit any  
ip access-list standard DENY_ALL  
  deny any  
ip access-list standard PERMIT_10  
  permit 10.0.0.0 0.255.255.255  
ip access-list standard PERMIT_ALL  
  permit any  
!  
ipv6 router rip RIPNG  
!  
!  
control-plane  
!  
!  
line con 0  
  exec-timeout 0 0  
  logging synchronous  
line vty 0 4  
  password cisco  
  login  
line vty 5 15  
  password cisco  
  login  
!  
ntp clock-period 17180136  
ntp server 10.1.1.1  
end
```

DSW1#

```
DSW1#ping 209.65.200.241
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 209.65.200.241, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 224/227/228  
ms
```

```
DSW1#
```

```
DSW1#ping 209.65.200.226
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 209.65.200.226, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 224/227/228  
ms
```

```
DSW1#
```



```
DSW1#ping 209.65.200.225
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 209.65.200.225, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 192/194/196  
ms
```

```
DSW1#
```

```
DSW1#ping 10.1.1.1
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.1.1.1, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 192/195/196  
ms
```

```
DSW1#
```

```
DSW1#ping 10.1.1.2
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 128/129/132  
ms
```

```
DSW1#
```

```
DSW1#ping 10.1.1.5
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.1.1.5, timeout is 2 seconds:
```

```
!!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 128/130/132  
ms
```

```
DSW1#
```

```
DSW1#ping 10.1.1.6
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.1.1.6, timeout is 2 seconds:
```

```
!!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 64/65/68 ms
```

```
DSW1#
```

```
DSW1#ping 10.1.1.9
```

```
Type escape sequence to abort.  
Sending 5, 100-byte ICMP Echos to 10.1.1.9, timeout is 2 seconds:  
!!!!!  
Success rate is 100 percent (5/5), round-trip min/avg/max = 64/65/68 ms  
DSW1#
```

```
DSW1#ping 10.1.1.10
```

```
Type escape sequence to abort.  
Sending 5, 100-byte ICMP Echos to 10.1.1.10, timeout is 2 seconds:  
!!!!!
```

Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/4 ms
DSW1#

DSW1#ping 10.1.4.10

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to 10.1.4.10, timeout is 2 seconds:

!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/4 ms

DSW1#

```
DSW1#ping 10.1.4.9
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.1.4.9, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/4 ms
```

```
DSW1#
```



```
DSW1#ping 10.1.4.6
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.1.4.6, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/4 ms
```

```
DSW1#
```

```
DSW1#ping 10.1.4.5
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.1.4.5, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/4 ms
```

```
DSW1#
```

```
DSW1#ping 10.2.1.1
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.2.1.1, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/4 ms
```

```
DSW1#
```

```
DSW1#ping 10.2.2.2
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.2.2.2, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/4 ms
```

```
DSW1#
```

```
DSW1#ping 10.2.1.254
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.2.1.254, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/4 ms
```

```
DSW1#
```

```
DSW1#ping 10.2.4.14
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.2.4.14, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/4 ms
```

```
DSW1#
```

```
DSW1#ping 10.2.4.13
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.2.4.13, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/4 ms
```

```
DSW1#
```

```
DSW1#ping 10.2.1.2
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.2.1.2, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/4 ms
```

```
DSW1#
```



```
DSW1#ping 10.2.2.1
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.2.2.1, timeout is 2 seconds:
```

```
!!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/4 ms
```

```
DSW1#
```

```
DSW1#ping 10.2.1.4
```

```
Type escape sequence to abort.
```

```
Sending 5, 100-byte ICMP Echos to 10.2.1.4, timeout is 2 seconds:
```

```
.....
```

```
Success rate is 0 percent (0/5)
```

```
DSW1#
```

```
DSW1#show ip interface brief
```

| Interface | IP-Address | OK? | Method | Status |
|-----------|------------|-----|--------|--------|
| Protocol | | | | |

| | | | |
|--------------------------|---------------|-----------|-----------------------|
| Vlan1 down | unassigned | YES NVRAM | administratively down |
| Vlan10 up | 10.2.1.1 | YES NVRAM | up |
| Vlan20 up | 10.2.2.2 | YES NVRAM | up |
| Vlan200 up | 192.168.1.129 | YES NVRAM | up |
| FastEthernet0/1 up | 10.1.4.6 | YES NVRAM | up |
| FastEthernet0/2 down | unassigned | YES unset | down |
| FastEthernet0/3 down | unassigned | YES unset | down |
| FastEthernet0/4 down | unassigned | YES unset | down |
| FastEthernet0/5 down | unassigned | YES unset | down |
| FastEthernet0/6 down | unassigned | YES unset | down |
| FastEthernet0/7 down | unassigned | YES unset | down |
| FastEthernet0/8 down | unassigned | YES unset | down |
| FastEthernet0/9 down | unassigned | YES unset | down |
| FastEthernet0/10 down | unassigned | YES unset | down |
| FastEthernet0/11 down | unassigned | YES unset | down |
| FastEthernet0/12 down | unassigned | YES unset | down |
| FastEthernet0/13 down | unassigned | YES unset | down |
| FastEthernet0/14 down | unassigned | YES unset | down |
| FastEthernet0/15 down | unassigned | YES unset | down |
| FastEthernet0/16 up | unassigned | YES unset | up |
| FastEthernet0/17 up | unassigned | YES unset | up |
| FastEthernet0/18 up | unassigned | YES unset | up |
| FastEthernet0/19 up | unassigned | YES unset | up |
| FastEthernet0/20 up | unassigned | YES unset | up |
| FastEthernet0/21 up | unassigned | YES unset | up |
| FastEthernet0/22 up | unassigned | YES NVRAM | up |
| FastEthernet0/23 up | unassigned | YES NVRAM | up |

| | | | | |
|--------------------|------------|-----|-------|-----------------------|
| FastEthernet0/24 | unassigned | YES | NVRAM | up |
| up | | | | |
| GigabitEthernet0/1 | unassigned | YES | unset | administratively down |
| down | | | | |
| GigabitEthernet0/2 | unassigned | YES | unset | administratively down |
| down | | | | |
| Port-channel12 | 10.2.4.13 | YES | NVRAM | up |
| up | | | | |
| Port-channel13 | unassigned | YES | unset | up |
| up | | | | |
| Port-channel14 | unassigned | YES | unset | up |
| up | | | | |
| Tunnel46 | unassigned | YES | NVRAM | up |
| up | | | | |
| Tunnel67 | unassigned | YES | NVRAM | up |
| up | | | | |

DSW1#

DSW1#show ip route

Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS

level-2

ia - IS-IS inter area, * - candidate default, U - per-user static

route

o - ODR, P - periodic downloaded static route

Gateway of last resort is 10.1.4.5 to network 0.0.0.0

10.0.0.0/8 is variably subnetted, 6 subnets, 2 masks

C 10.2.4.12/30 is directly connected, Port-channel12

D EX 10.1.1.8/30 [170/1023] via 10.1.4.5, 00:25:04, FastEthernet0/1

D 10.1.4.8/30 [90/111] via 10.2.2.1, 00:25:04, Vlan20
[90/111] via 10.2.1.2, 00:25:04, Vlan10

C 10.2.1.0/24 is directly connected, Vlan10

C 10.2.2.0/24 is directly connected, Vlan20

C 10.1.4.4/30 is directly connected, FastEthernet0/1

192.168.1.0/27 is subnetted, 1 subnets

C 192.168.1.128 is directly connected, Vlan200

D*EX 0.0.0.0/0 [170/1023] via 10.1.4.5, 00:25:04, FastEthernet0/1

DSW1#

```
DSW1#show processes cpu
```

```
CPU utilization for five seconds: 1%/0%; one minute: 1%; five minutes: 0%
```

| PID | Runtime (ms) | Invoked | uSecs | 5Sec | 1Min | 5Min | TTY | Process |
|------------------|--------------|---------|-------|-------|-------|-------|-----|------------|
| 1 | 0 | 9 | 0 | 0.00% | 0.00% | 0.00% | 0 | Chunk |
| Manager | | | | | | | | |
| 2 | 0 | 1415 | 0 | 0.00% | 0.00% | 0.00% | 0 | Load Meter |
| 3 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | OSPF-1 |
| Hello | | | | | | | | |
| 4 | 6292 | 855 | 7359 | 0.00% | 0.09% | 0.06% | 0 | Check |
| heaps | | | | | | | | |
| 5 | 4 | 4 | 1000 | 0.00% | 0.00% | 0.00% | 0 | Pool |
| Manager | | | | | | | | |
| 6 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 | Timers |
| 7 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | Crash |
| writer | | | | | | | | |
| 8 | 44 | 216 | 203 | 0.00% | 0.00% | 0.00% | 0 | ARP Input |
| 9 | 4 | 1 | 4000 | 0.00% | 0.00% | 0.00% | 0 | CEF MIB |
| API | | | | | | | | |
| 10 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | |
| AAA_SERVER_DEADT | | | | | | | | |
| 11 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 | AAA high- |
| capacit | | | | | | | | |
| 12 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | Policy |
| Manager | | | | | | | | |
| 13 | 12 | 7 | 1714 | 0.00% | 0.00% | 0.00% | 0 | Entity MIB |
| API | | | | | | | | |
| 14 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | IFS Agent |
| Manage | | | | | | | | |
| 15 | 0 | 119 | 0 | 0.00% | 0.00% | 0.00% | 0 | IPC |
| Dynamic Cach | | | | | | | | |
| 16 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | IPC Zone |
| Manager | | | | | | | | |
| 17 | 0 | 7090 | 0 | 0.00% | 0.00% | 0.00% | 0 | IPC |
| Periodic Tim | | | | | | | | |

| | | | | | | | |
|----------------|-----|--------|------|-------|-------|-------|--------------|
| 18 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 IPC |
| Managed Time | | | | | | | |
| 19 | 0 | 7091 | 0 | 0.00% | 0.00% | 0.00% | 0 IPC |
| Deferred Por | | | | | | | |
| 20 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 IPC Seat |
| Manager | | | | | | | |
| 21 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 IPC |
| Session Serv | | | | | | | |
| 22 | 0 | 7091 | 0 | 0.00% | 0.00% | 0.00% | 0 Dynamic |
| ARP Insp | | | | | | | |
| 23 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 ARP Snoop |
| 24 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 Net Input |
| 25 | 0 | 7073 | 0 | 0.00% | 0.00% | 0.00% | 0 GraphIt |
| 26 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 XML Proxy |
| Client | | | | | | | |
| 27 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 Critical |
| Bkgnd | | | | | | | |
| 28 | 8 | 10887 | 0 | 0.00% | 0.00% | 0.00% | 0 Net |
| Background | | | | | | | |
| 29 | 0 | 14 | 0 | 0.00% | 0.00% | 0.00% | 0 IDB Work |
| 30 | 4 | 80 | 50 | 0.00% | 0.00% | 0.00% | 0 Logger |
| 31 | 0 | 7069 | 0 | 0.00% | 0.00% | 0.00% | 0 TTY |
| Background | | | | | | | |
| 32 | 0 | 7081 | 0 | 0.00% | 0.00% | 0.00% | 0 Per-Second |
| Jobs | | | | | | | |
| 33 | 944 | 120 | 7866 | 0.00% | 0.00% | 0.00% | 0 Per-minute |
| Jobs | | | | | | | |
| 34 | 4 | 7 | 571 | 0.00% | 0.00% | 0.00% | 0 IF-MGR |
| control p | | | | | | | |
| 35 | 8 | 64 | 125 | 0.00% | 0.00% | 0.00% | 0 IF-MGR |
| event pro | | | | | | | |
| 36 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 AggMgr |
| Process | | | | | | | |
| 37 | 4 | 1417 | 2 | 0.00% | 0.00% | 0.00% | 0 Compute |
| load avg | | | | | | | |
| 38 | 0 | 2124 | 0 | 0.00% | 0.00% | 0.00% | 0 HC Counter |
| Timer | | | | | | | |
| 39 | 8 | 6989 | 1 | 0.00% | 0.00% | 0.00% | 0 Vegas |
| Storm Cont | | | | | | | |
| 40 | 8 | 36 | 222 | 0.00% | 0.00% | 0.00% | 0 SpanTree |
| Helper | | | | | | | |
| 41 | 4 | 135896 | 0 | 0.00% | 0.00% | 0.00% | 0 |
| DownWhenLooped | | | | | | | |
| 42 | 0 | 5 | 0 | 0.00% | 0.00% | 0.00% | 0 Collection |
| proce | | | | | | | |
| 43 | 88 | 176736 | 0 | 0.07% | 0.00% | 0.00% | 0 Vegas LED |
| Proces | | | | | | | |
| 44 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 |
| SCQ_PROCESS | | | | | | | |
| 45 | 72 | 44623 | 1 | 0.00% | 0.00% | 0.00% | 0 RAM Access |
| 46 | 0 | 72269 | 0 | 0.00% | 0.00% | 0.00% | 0 SW Frame |
| Ager | | | | | | | |
| 47 | 36 | 49 | 734 | 0.00% | 0.00% | 0.00% | 0 VLAN Info |
| Update | | | | | | | |

| | | | | | | | | |
|------------|-------|-------|------|-------|-------|-------|---|------------|
| 48 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | JADE Gbit |
| lookup | | | | | | | | |
| 49 | 0 | 14145 | 0 | 0.00% | 0.00% | 0.00% | 0 | L2TM |
| Process | | | | | | | | |
| 50 | 4 | 14147 | 0 | 0.00% | 0.00% | 0.00% | 0 | L3TM |
| 51 | 30232 | 20966 | 1441 | 0.39% | 0.41% | 0.40% | 0 | Vegas |
| Statistics | | | | | | | | |
| 52 | 4 | 98181 | 0 | 0.00% | 0.00% | 0.00% | 0 | HMATM |
| Learn proc | | | | | | | | |
| 53 | 0 | 7075 | 0 | 0.00% | 0.00% | 0.00% | 0 | HMATM Age |
| proces | | | | | | | | |
| 54 | 40 | 109 | 366 | 0.00% | 0.00% | 0.00% | 0 | VL2MM |
| 55 | 0 | 7109 | 0 | 0.00% | 0.00% | 0.00% | 0 | L3MD |
| 56 | 300 | 17695 | 16 | 0.00% | 0.00% | 0.00% | 0 | L3MD_STAT |
| 57 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | Vegas |
| Bridging | | | | | | | | |
| 58 | 616 | 88387 | 6 | 0.00% | 0.00% | 0.00% | 0 | VegasPM |
| 59 | 28 | 3617 | 7 | 0.00% | 0.00% | 0.00% | 0 | VUR_MGR bg |
| proce | | | | | | | | |
| 60 | 4 | 7076 | 0 | 0.00% | 0.00% | 0.00% | 0 | PI MATM |
| Aging Pr | | | | | | | | |
| 61 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | Switch |
| Backup In | | | | | | | | |
| 62 | 0 | 119 | 0 | 0.00% | 0.00% | 0.00% | 0 | MMN bkgrd |
| proces | | | | | | | | |
| 63 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 | Dot1x Mgr |
| Proces | | | | | | | | |
| 64 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 | 802.1x |
| Accountin | | | | | | | | |
| 65 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | MAB |
| Framework | | | | | | | | |
| 66 | 0 | 7 | 0 | 0.00% | 0.00% | 0.00% | 0 | 802.1x |
| switch | | | | | | | | |
| 67 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | 802.1x |
| Webauth F | | | | | | | | |
| 68 | 228 | 2791 | 81 | 0.00% | 0.00% | 0.00% | 0 | DTP |
| Protocol | | | | | | | | |
| 69 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | EAP |
| Framework | | | | | | | | |
| 70 | 0 | 120 | 0 | 0.00% | 0.00% | 0.00% | 0 | Port- |
| Security | | | | | | | | |
| 71 | 0 | 10 | 0 | 0.00% | 0.00% | 0.00% | 0 | SpanTree |
| Flush | | | | | | | | |
| 72 | 0 | 40 | 0 | 0.00% | 0.00% | 0.00% | 0 | Switch IP |
| Host T | | | | | | | | |
| 73 | 0 | 710 | 0 | 0.00% | 0.00% | 0.00% | 0 | Ethchnl |
| 74 | 0 | 7077 | 0 | 0.00% | 0.00% | 0.00% | 0 | UDLD |
| 75 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | Vegas IPSG |
| Proce | | | | | | | | |
| 76 | 12 | 32 | 375 | 0.00% | 0.00% | 0.00% | 0 | VMATM |
| Callback | | | | | | | | |
| 77 | 4 | 63 | 63 | 0.00% | 0.00% | 0.00% | 0 | HL3U PBR |
| bkgrd p | | | | | | | | |

| | | | | | | | |
|--------------|------|-------|------|-------|-------|-------|--------------|
| 78 | 0 | 59 | 0 | 0.00% | 0.00% | 0.00% | 0 Vegas PBR |
| n-h re | | | | | | | |
| 79 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 AAA Server |
| 80 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 AAA ACCT |
| Proc | | | | | | | |
| 81 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 ACCT |
| Periodic Pr | | | | | | | |
| 82 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 AAA System |
| Acct | | | | | | | |
| 83 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 Auth-proxy |
| AAA B | | | | | | | |
| 84 | 0 | 24 | 0 | 0.00% | 0.00% | 0.00% | 0 IP Admin |
| SM Proc | | | | | | | |
| 85 | 652 | 3137 | 207 | 0.00% | 0.01% | 0.00% | 0 CDP |
| Protocol | | | | | | | |
| 86 | 6128 | 2660 | 2303 | 0.23% | 0.20% | 0.22% | 0 Exec |
| 87 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 Key Proc |
| 88 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 AAA |
| Dictionary R | | | | | | | |
| 89 | 0 | 60 | 0 | 0.00% | 0.00% | 0.00% | 0 DHCP |
| Snooping | | | | | | | |
| 90 | 4 | 3 | 1333 | 0.00% | 0.00% | 0.00% | 0 CEF |
| switching ba | | | | | | | |
| 91 | 1436 | 8846 | 162 | 0.00% | 0.05% | 0.02% | 0 IP Input |
| 92 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 ICMP event |
| handl | | | | | | | |
| 93 | 0 | 13824 | 0 | 0.00% | 0.00% | 0.00% | 0 IP ARP |
| Track | | | | | | | |
| 94 | 0 | 4 | 0 | 0.00% | 0.00% | 0.00% | 0 ADJ |
| resolve proc | | | | | | | |
| 95 | 512 | 14262 | 35 | 0.00% | 0.00% | 0.00% | 0 Spanning |
| Tree | | | | | | | |
| 96 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 EAPoUDP |
| Process | | | | | | | |
| 97 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 KRB5 AAA |
| 98 | 0 | 120 | 0 | 0.00% | 0.00% | 0.00% | 0 CEF |
| background p | | | | | | | |
| 99 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 IP IRDP |
| 100 | 0 | 91 | 0 | 0.00% | 0.00% | 0.00% | 0 Cluster L2 |
| 101 | 0 | 709 | 0 | 0.00% | 0.00% | 0.00% | 0 Cluster |
| RARP | | | | | | | |
| 102 | 168 | 1870 | 89 | 0.00% | 0.00% | 0.00% | 0 Cluster |
| Base | | | | | | | |
| 103 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 TCP Timer |
| 104 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 TCP |
| Protocols | | | | | | | |
| 105 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 Socket |
| Timers | | | | | | | |
| 106 | 0 | 26 | 0 | 0.00% | 0.00% | 0.00% | 0 HTTP CORE |
| 107 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 RARP Input |
| 108 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 802.1x |
| Critical | | | | | | | |
| 109 | 12 | 58 | 206 | 0.00% | 0.00% | 0.00% | 0 L2MM |
| 110 | 32 | 424 | 75 | 0.00% | 0.00% | 0.00% | 0 MRD |

| | | | | | | | | |
|-------------|-----|-------|------|-------|-------|-------|---|------------|
| 111 | 32 | 363 | 88 | 0.00% | 0.00% | 0.00% | 0 | IGMPSN |
| 112 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | IGMPQR |
| 113 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 | L2TRACE |
| SERVER | | | | | | | | |
| 114 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | Vegas wccp |
| manag | | | | | | | | |
| 115 | 0 | 4 | 0 | 0.00% | 0.00% | 0.00% | 0 | Crypto ACL |
| 116 | 40 | 146 | 273 | 0.00% | 0.00% | 0.00% | 0 | IP RIB |
| Update | | | | | | | | |
| 117 | 28 | 22 | 1272 | 0.00% | 0.00% | 0.00% | 0 | DHCPD |
| Receive | | | | | | | | |
| 118 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | Transport |
| Port A | | | | | | | | |
| 119 | 0 | 60 | 0 | 0.00% | 0.00% | 0.00% | 0 | DHCPD |
| Timer | | | | | | | | |
| 120 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 | Crypto |
| Support | | | | | | | | |
| 121 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 | LOCAL AAA |
| 122 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 | ENABLE AAA |
| 123 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 | LINE AAA |
| 125 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 | TPLUS |
| 126 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | CRYPTO QoS |
| proce | | | | | | | | |
| 127 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | Crypto INT |
| 128 | 0 | 4 | 0 | 0.00% | 0.00% | 0.00% | 0 | Crypto |
| IKMP | | | | | | | | |
| 129 | 104 | 357 | 291 | 0.00% | 0.00% | 0.00% | 0 | IPSEC key |
| engine | | | | | | | | |
| 130 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | IPSEC |
| manual key | | | | | | | | |
| 131 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | Crypto PAS |
| Proc | | | | | | | | |
| 132 | 4 | 12 | 333 | 0.00% | 0.00% | 0.00% | 0 | crypto |
| engine pr | | | | | | | | |
| 133 | 28 | 4 | 7000 | 0.00% | 0.00% | 0.00% | 0 | Crypto CA |
| 134 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | Crypto |
| PKI-CRL | | | | | | | | |
| 135 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | Crypto SSL |
| 136 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 | encrypt |
| proc | | | | | | | | |
| 137 | 0 | 7083 | 0 | 0.00% | 0.00% | 0.00% | 0 | Vegas |
| EnvMon Pro | | | | | | | | |
| 138 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 | VTPMIB |
| EDIT BUFF | | | | | | | | |
| 139 | 4 | 2 | 2000 | 0.00% | 0.00% | 0.00% | 0 | DHCP |
| Security He | | | | | | | | |
| 140 | 32 | 18950 | 1 | 0.00% | 0.00% | 0.00% | 0 | PM |
| Callback | | | | | | | | |
| 141 | 40 | 69 | 579 | 0.00% | 0.00% | 0.00% | 0 | VLAN |
| Manager | | | | | | | | |
| 142 | 0 | 1991 | 0 | 0.00% | 0.00% | 0.00% | 0 | DHCPD |
| Database | | | | | | | | |
| 143 | 0 | 568 | 0 | 0.00% | 0.00% | 0.00% | 0 | dhcp |
| snooping sw | | | | | | | | |

| | | | | | | | |
|--------------|------|-------|--------|-------|-------|-------|--------------|
| 144 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 VFM Queue |
| Proces | | | | | | | |
| 145 | 8 | 1 | 8000 | 0.00% | 0.00% | 0.00% | 0 VFM/VQM |
| Merge Pr | | | | | | | |
| 146 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 VFM |
| Deferred Upd | | | | | | | |
| 147 | 0 | 17 | 0 | 0.00% | 0.00% | 0.00% | 0 VTP Trap |
| Process | | | | | | | |
| 149 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 AAA SEND |
| STOP EV | | | | | | | |
| 150 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 Syslog |
| Traps | | | | | | | |
| 151 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 DATA |
| Transfer Pr | | | | | | | |
| 152 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 DATA |
| Collector | | | | | | | |
| 153 | 0 | 45 | 0 | 0.00% | 0.00% | 0.00% | 0 Syslog |
| 154 | 0 | 1 | 0 | 0.00% | 0.00% | 0.00% | 0 C3550 DHCP |
| Snoop | | | | | | | |
| 155 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 STP STACK |
| TOPOLO | | | | | | | |
| 156 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 STP FAST |
| TRANSIT | | | | | | | |
| 157 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 STP STACK |
| TOPOLO | | | | | | | |
| 158 | 0 | 2 | 0 | 0.00% | 0.00% | 0.00% | 0 CSRT RAPID |
| TRANS | | | | | | | |
| 160 | 4 | 5 | 800 | 0.00% | 0.00% | 0.00% | 0 SSH Event |
| handle | | | | | | | |
| 161 | 0 | 22 | 0 | 0.00% | 0.00% | 0.00% | 0 IPv6 RIB |
| Redistr | | | | | | | |
| 162 | 16 | 9712 | 1 | 0.00% | 0.00% | 0.00% | 0 CEF: IPv4 |
| proces | | | | | | | |
| 163 | 0 | 3 | 0 | 0.00% | 0.00% | 0.00% | 0 ADJ |
| background | | | | | | | |
| 164 | 20 | 197 | 101 | 0.00% | 0.00% | 0.00% | 0 IP |
| Background | | | | | | | |
| 165 | 2572 | 17 | 151294 | 0.00% | 0.00% | 0.00% | 0 crypto sw |
| pk pro | | | | | | | |
| 166 | 104 | 645 | 161 | 0.00% | 0.00% | 0.00% | 0 IPv6 Input |
| 167 | 0 | 313 | 0 | 0.00% | 0.00% | 0.00% | 0 IPv6 IDB |
| 168 | 0 | 10 | 0 | 0.00% | 0.00% | 0.00% | 0 IPv6 ND |
| 169 | 116 | 1077 | 107 | 0.00% | 0.00% | 0.00% | 0 IPv6 RIP |
| 170 | 0 | 7087 | 0 | 0.00% | 0.00% | 0.00% | 0 DVMRP |
| Timers | | | | | | | |
| 171 | 216 | 7617 | 28 | 0.00% | 0.00% | 0.00% | 0 IGMP Input |
| 172 | 132 | 8948 | 14 | 0.00% | 0.00% | 0.00% | 0 PIM |
| Process | | | | | | | |
| 173 | 0 | 70811 | 0 | 0.00% | 0.00% | 0.00% | 0 Mwheel |
| Process | | | | | | | |
| 174 | 220 | 1554 | 141 | 0.00% | 0.00% | 0.00% | 0 PAgP |
| 175 | 168 | 2326 | 72 | 0.00% | 0.00% | 0.00% | 0 LACP |
| Protocol | | | | | | | |

DSW1#show interfaces

Vlan1 is administratively down, line protocol is down

Hardware is EtherSVI, address is 000d.bde3.6e00 (bia 000d.bde3.6e00)

MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,

reliability 255/255, txload 1/255, rxload 1/255

Encapsulation ARPA, loopback not set

Keepalive not supported

ARP type: ARPA, ARP Timeout 04:00:00

Last input never, output never, output hang never

Last clearing of "show interface" counters never

Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0

Queueing strategy: fifo

Output queue: 0/40 (size/max)

5 minute input rate 0 bits/sec, 0 packets/sec

5 minute output rate 0 bits/sec, 0 packets/sec

0 packets input, 0 bytes, 0 no buffer

Received 0 broadcasts (0 IP multicasts)

0 runs, 0 giants, 0 throttles

0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored

0 packets output, 0 bytes, 0 underruns

0 output errors, 1 interface resets

0 output buffer failures, 0 output buffers swapped out

Vlan10 is up, line protocol is up

Hardware is EtherSVI, address is 000d.bde3.6e00 (bia 000d.bde3.6e00)

Internet address is 10.2.1.1/24

MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,

reliability 255/255, txload 1/255, rxload 1/255

Encapsulation ARPA, loopback not set

Keepalive not supported

ARP type: ARPA, ARP Timeout 04:00:00

Last input 00:00:01, output 00:00:00, output hang never

Last clearing of "show interface" counters never

Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 9

Queueing strategy: fifo

Output queue: 0/40 (size/max)

5 minute input rate 0 bits/sec, 0 packets/sec

5 minute output rate 0 bits/sec, 0 packets/sec

1892 packets input, 164496 bytes, 0 no buffer

Received 0 broadcasts (442 IP multicasts)

0 runs, 0 giants, 0 throttles

0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored

1380 packets output, 98585 bytes, 0 underruns

188 output errors, 0 interface resets

0 output buffer failures, 0 output buffers swapped out

Vlan20 is up, line protocol is up

Hardware is EtherSVI, address is 000d.bde3.6e00 (bia 000d.bde3.6e00)

Internet address is 10.2.2.2/24

MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,

reliability 255/255, txload 1/255, rxload 1/255

Encapsulation ARPA, loopback not set

Keepalive not supported

ARP type: ARPA, ARP Timeout 04:00:00

Last input 00:00:03, output 00:00:00, output hang never

```

Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 8
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  1860 packets input, 149406 bytes, 0 no buffer
  Received 0 broadcasts (1513 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  1872 packets output, 142138 bytes, 0 underruns
  3 output errors, 0 interface resets
  0 output buffer failures, 0 output buffers swapped out
Vlan200 is up, line protocol is up
  Hardware is EtherSVI, address is 000d.bde3.6e00 (bia 000d.bde3.6e00)
  Internet address is 192.168.1.129/27
  MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not supported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 01:56:45, output 01:57:36, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 6
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    1 packets input, 64 bytes, 0 no buffer
    Received 0 broadcasts (0 IP multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    1 packets output, 60 bytes, 0 underruns
    0 output errors, 0 interface resets
    0 output buffer failures, 0 output buffers swapped out
FastEthernet0/1 is up, line protocol is up (connected)
  Hardware is Fast Ethernet, address is 000d.bde3.6e00 (bia
000d.bde3.6e00)
  Internet address is 10.1.4.6/30
  MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 100Mb/s, media type is 10/100BaseTX
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:02, output 00:00:00, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    3683 packets input, 347108 bytes, 0 no buffer

```

```
Received 2130 broadcasts (1551 IP multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 2127 multicast, 0 pause input
0 input packets with dribble condition detected
3840 packets output, 366516 bytes, 0 underruns
0 output errors, 0 collisions, 3 interface resets
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 PAUSE output
0 output buffer failures, 0 output buffers swapped out
FastEthernet0/2 is down, line protocol is down (notconnect)
Hardware is Fast Ethernet, address is 000d.bde3.6e02 (bia
000d.bde3.6e02)
MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 0 multicast, 0 pause input
0 input packets with dribble condition detected
0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 PAUSE output
0 output buffer failures, 0 output buffers swapped out
FastEthernet0/3 is down, line protocol is down (notconnect)
Hardware is Fast Ethernet, address is 000d.bde3.6e03 (bia
000d.bde3.6e03)
MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
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5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts (0 multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 watchdog, 0 multicast, 0 pause input
  0 input packets with dribble condition detected
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier, 0 PAUSE output
  0 output buffer failures, 0 output buffers swapped out
FastEthernet0/4 is down, line protocol is down (notconnect)
  Hardware is Fast Ethernet, address is 000d.bde3.6e04 (bia
000d.bde3.6e04)
  MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is 10/100BaseTX
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output 01:58:14, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts (0 multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 watchdog, 0 multicast, 0 pause input
  0 input packets with dribble condition detected
  10 packets output, 1051 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier, 0 PAUSE output
  0 output buffer failures, 0 output buffers swapped out
FastEthernet0/5 is down, line protocol is down (notconnect)
  Hardware is Fast Ethernet, address is 000d.bde3.6e05 (bia
000d.bde3.6e05)
  MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is 10/100BaseTX
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo

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Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts (0 multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 watchdog, 0 multicast, 0 pause input
  0 input packets with dribble condition detected
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier, 0 PAUSE output
  0 output buffer failures, 0 output buffers swapped out
FastEthernet0/6 is down, line protocol is down (notconnect)
  Hardware is Fast Ethernet, address is 000d.bde3.6e06 (bia
000d.bde3.6e06)
  MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is 10/100BaseTX
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 0 multicast, 0 pause input
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
    0 output buffer failures, 0 output buffers swapped out
FastEthernet0/7 is down, line protocol is down (notconnect)
  Hardware is Fast Ethernet, address is 000d.bde3.6e07 (bia
000d.bde3.6e07)
  MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is 10/100BaseTX
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
```

Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 0 multicast, 0 pause input
0 input packets with dribble condition detected
0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 PAUSE output
0 output buffer failures, 0 output buffers swapped out
FastEthernet0/8 is down, line protocol is down (notconnect)
Hardware is Fast Ethernet, address is 000d.bde3.6e08 (bia 000d.bde3.6e08)
MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 0 multicast, 0 pause input
0 input packets with dribble condition detected
0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 PAUSE output
0 output buffer failures, 0 output buffers swapped out
FastEthernet0/9 is down, line protocol is down (notconnect)
Hardware is Fast Ethernet, address is 000d.bde3.6e09 (bia 000d.bde3.6e09)
MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00

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Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 0 multicast, 0 pause input
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
    0 output buffer failures, 0 output buffers swapped out
FastEthernet0/10 is down, line protocol is down (notconnect)
  Hardware is Fast Ethernet, address is 000d.bde3.6e0a (bia
000d.bde3.6e0a)
  MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is 10/100BaseTX
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 0 multicast, 0 pause input
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
    0 output buffer failures, 0 output buffers swapped out
FastEthernet0/11 is down, line protocol is down (notconnect)
  Hardware is Fast Ethernet, address is 000d.bde3.6e0b (bia
000d.bde3.6e0b)
  MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is 10/100BaseTX

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```
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts (0 multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 watchdog, 0 multicast, 0 pause input
  0 input packets with dribble condition detected
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier, 0 PAUSE output
  0 output buffer failures, 0 output buffers swapped out
FastEthernet0/12 is down, line protocol is down (notconnect)
  Hardware is Fast Ethernet, address is 000d.bde3.6e0c (bia
000d.bde3.6e0c)
  MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts (0 multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 watchdog, 0 multicast, 0 pause input
  0 input packets with dribble condition detected
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier, 0 PAUSE output
  0 output buffer failures, 0 output buffers swapped out
FastEthernet0/13 is down, line protocol is down (notconnect)
  Hardware is Fast Ethernet, address is 000d.bde3.6e0d (bia
000d.bde3.6e0d)
  MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
```

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Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts (0 multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
  0 watchdog, 0 multicast, 0 pause input
  0 input packets with dribble condition detected
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 babbles, 0 late collision, 0 deferred
  0 lost carrier, 0 no carrier, 0 PAUSE output
  0 output buffer failures, 0 output buffers swapped out
FastEthernet0/14 is down, line protocol is down (notconnect)
  Hardware is Fast Ethernet, address is 000d.bde3.6e0e (bia
000d.bde3.6e0e)
  MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto-speed, media type is 10/100BaseTX
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 0 multicast, 0 pause input
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
    0 output buffer failures, 0 output buffers swapped out
FastEthernet0/15 is down, line protocol is down (notconnect)
  Hardware is Fast Ethernet, address is 000d.bde3.6e0f (bia
000d.bde3.6e0f)
  MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
```

```
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Auto-duplex, Auto-speed, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 0 multicast, 0 pause input
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
    0 output buffer failures, 0 output buffers swapped out
FastEthernet0/16 is up, line protocol is up (connected)
    Hardware is Fast Ethernet, address is 000d.bde3.6e10 (bia
000d.bde3.6e10)
    MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
        reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:04, output 00:00:03, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    1332 packets input, 134505 bytes, 0 no buffer
    Received 621 broadcasts (0 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 621 multicast, 0 pause input
    0 input packets with dribble condition detected
    6821 packets output, 549814 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
    0 output buffer failures, 0 output buffers swapped out
FastEthernet0/17 is up, line protocol is up (connected)
```

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Hardware is Fast Ethernet, address is 000d.bde3.6e11 (bia
000d.bde3.6e11)
MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:01, output 00:00:05, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    6861 packets input, 557356 bytes, 0 no buffer
    Received 6029 broadcasts (0 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 6028 multicast, 0 pause input
    0 input packets with dribble condition detected
    1348 packets output, 134646 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
    0 output buffer failures, 0 output buffers swapped out
FastEthernet0/18 is up, line protocol is up (connected)
Hardware is Fast Ethernet, address is 000d.bde3.6e12 (bia
000d.bde3.6e12)
MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:02, output 00:00:06, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
    1334 packets input, 134984 bytes, 0 no buffer
    Received 622 broadcasts (0 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 622 multicast, 0 pause input
    0 input packets with dribble condition detected
    1332 packets output, 130948 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
```

0 output buffer failures, 0 output buffers swapped out
FastEthernet0/19 is up, line protocol is up (connected)
Hardware is Fast Ethernet, address is 000d.bde3.6e13 (bia 000d.bde3.6e13)
MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:04, output 00:00:07, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 1000 bits/sec, 1 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
5644 packets input, 505276 bytes, 0 no buffer
Received 4875 broadcasts (0 multicasts)
0 runs, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 4536 multicast, 0 pause input
0 input packets with dribble condition detected
2912 packets output, 269293 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 PAUSE output
0 output buffer failures, 0 output buffers swapped out
FastEthernet0/20 is up, line protocol is up (connected)
Hardware is Fast Ethernet, address is 000d.bde3.6e14 (bia 000d.bde3.6e14)
MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:06, output 00:00:09, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
1768 packets input, 186792 bytes, 0 no buffer
Received 622 broadcasts (0 multicasts)
0 runs, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 622 multicast, 0 pause input
0 input packets with dribble condition detected
1339 packets output, 142868 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets


```
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
    0 output buffer failures, 0 output buffers swapped out
FastEthernet0/21 is up, line protocol is up (connected)
  Hardware is Fast Ethernet, address is 000d.bde3.6e15 (bia
000d.bde3.6e15)
  MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 100Mb/s, media type is 10/100BaseTX
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:08, output 00:00:01, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    1332 packets input, 144646 bytes, 0 no buffer
    Received 621 broadcasts (0 multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 621 multicast, 0 pause input
    0 input packets with dribble condition detected
    5981 packets output, 477246 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
    0 output buffer failures, 0 output buffers swapped out
FastEthernet0/22 is up, line protocol is up (connected)
  Hardware is Fast Ethernet, address is 000d.bde3.6e00 (bia
000d.bde3.6e00)
  MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 100Mb/s, media type is 10/100BaseTX
  input flow-control is off, output flow-control is unsupported
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:00, output 00:00:08, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    3072 packets input, 277583 bytes, 0 no buffer
    Received 2044 broadcasts (0 multicasts)
    0 runs, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 2041 multicast, 0 pause input
    0 input packets with dribble condition detected
```

```
3093 packets output, 297728 bytes, 0 underruns
0 output errors, 0 collisions, 3 interface resets
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 PAUSE output
0 output buffer failures, 0 output buffers swapped out
FastEthernet0/23 is up, line protocol is up (connected)
Hardware is Fast Ethernet, address is 000d.bde3.6e00 (bia
000d.bde3.6e00)
MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:02, output 00:00:00, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
830 packets input, 94112 bytes, 0 no buffer
Received 122 broadcasts (0 multicasts)
0 runs, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 122 multicast, 0 pause input
0 input packets with dribble condition detected
839 packets output, 93466 bytes, 0 underruns
0 output errors, 0 collisions, 3 interface resets
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 PAUSE output
0 output buffer failures, 0 output buffers swapped out
FastEthernet0/24 is up, line protocol is up (connected)
Hardware is Fast Ethernet, address is 000d.bde3.6e00 (bia
000d.bde3.6e00)
MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:04, output 00:00:01, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
830 packets input, 94112 bytes, 0 no buffer
Received 122 broadcasts (0 multicasts)
0 runs, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
```

```

    0 watchdog, 122 multicast, 0 pause input
    0 input packets with dribble condition detected
    835 packets output, 92940 bytes, 0 underruns
    0 output errors, 0 collisions, 3 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
    0 output buffer failures, 0 output buffers swapped out
GigabitEthernet0/1 is administratively down, line protocol is down
(disabled)
  Hardware is Gigabit Ethernet, address is 000d.bde3.6e19 (bia
000d.bde3.6e19)
  MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not set
  Auto-duplex, Auto-speed, link type is auto, media type is unknown
  input flow-control is off, output flow-control is off
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts (0 multicasts)
    0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog, 0 multicast, 0 pause input
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier, 0 PAUSE output
    0 output buffer failures, 0 output buffers swapped out
GigabitEthernet0/2 is administratively down, line protocol is down
(disabled)
  Hardware is Gigabit Ethernet, address is 000d.bde3.6e1a (bia
000d.bde3.6e1a)
  MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive not set
  Auto-duplex, Auto-speed, link type is auto, media type is unknown
  input flow-control is off, output flow-control is off
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec

```

```
0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts (0 multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 0 multicast, 0 pause input
0 input packets with dribble condition detected
0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 PAUSE output
0 output buffer failures, 0 output buffers swapped out
Port-channel12 is up, line protocol is up (connected)
  Hardware is EtherChannel, address is 000d.bde3.6e00 (bia
000d.bde3.6e00)
    Internet address is 10.2.4.13/30
    MTU 1500 bytes, BW 300000 Kbit, DLY 100 usec,
      reliability 255/255, txload 1/255, rxload 1/255
    Encapsulation ARPA, loopback not set
    Keepalive set (10 sec)
    Full-duplex, 100Mb/s, media type is 10/100BaseTX
    input flow-control is off, output flow-control is unsupported
    Members in this channel: Fa0/22 Fa0/23 Fa0/24
    ARP type: ARPA, ARP Timeout 04:00:00
    Last input 00:00:03, output 00:00:03, output hang never
    Last clearing of "show interface" counters never
    Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
    Queueing strategy: fifo
    Output queue: 0/40 (size/max)
    5 minute input rate 0 bits/sec, 0 packets/sec
    5 minute output rate 1000 bits/sec, 1 packets/sec
      4736 packets input, 466077 bytes, 0 no buffer
      Received 2289 broadcasts (1556 IP multicasts)
      0 runts, 0 giants, 0 throttles
      0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
      0 watchdog, 2286 multicast, 0 pause input
      0 input packets with dribble condition detected
      4773 packets output, 484990 bytes, 0 underruns
      0 output errors, 0 collisions, 4 interface resets
      0 babbles, 0 late collision, 0 deferred
      0 lost carrier, 0 no carrier, 0 PAUSE output
      0 output buffer failures, 0 output buffers swapped out
Port-channel13 is up, line protocol is up (connected)
  Hardware is EtherChannel, address is 000d.bde3.6e13 (bia
000d.bde3.6e13)
    MTU 1500 bytes, BW 300000 Kbit, DLY 100 usec,
      reliability 255/255, txload 1/255, rxload 1/255
    Encapsulation ARPA, loopback not set
    Keepalive set (10 sec)
    Full-duplex, 100Mb/s, media type is 10/100BaseTX
    input flow-control is off, output flow-control is unsupported
    Members in this channel: Fa0/19 Fa0/20 Fa0/21
    ARP type: ARPA, ARP Timeout 04:00:00
    Last input 00:26:52, output 00:00:01, output hang never
    Last clearing of "show interface" counters never
```

Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 1000 bits/sec, 1 packets/sec
8739 packets input, 836088 bytes, 0 no buffer
Received 6110 broadcasts (0 multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 5772 multicast, 0 pause input
0 input packets with dribble condition detected
10238 packets output, 889387 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 PAUSE output
0 output buffer failures, 0 output buffers swapped out
Port-channel14 is up, line protocol is up (connected)
Hardware is EtherChannel, address is 000d.bde3.6e11 (bia 000d.bde3.6e11)
MTU 1500 bytes, BW 300000 Kbit, DLY 100 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full-duplex, 100Mb/s, media type is 10/100BaseTX
input flow-control is off, output flow-control is unsupported
Members in this channel: Fa0/16 Fa0/17 Fa0/18
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:01, output 00:00:00, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
9543 packets input, 828358 bytes, 0 no buffer
Received 7281 broadcasts (0 multicasts)
0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog, 7280 multicast, 0 pause input
0 input packets with dribble condition detected
9516 packets output, 816588 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier, 0 PAUSE output
0 output buffer failures, 0 output buffers swapped out
Tunnel46 is up, line protocol is up
Hardware is Tunnel
MTU 1514 bytes, BW 100 Kbit, DLY 50000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation TUNNEL, loopback not set
Keepalive not set
Tunnel source 10.1.4.6, destination 10.1.4.5
Tunnel protocol/transport GRE/IP, key disabled, sequencing disabled
Tunnel TTL 255

```
Checksumming of packets disabled
Last input 00:00:20, output 00:00:07, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  283 packets input, 42040 bytes, 0 no buffer
  Received 0 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
  267 packets output, 30820 bytes, 0 underruns
  0 output errors, 0 collisions, 0 interface resets
  0 output buffer failures, 0 output buffers swapped out
Tunnel67 is up, line protocol is up
  Hardware is Tunnel
  MTU 1514 bytes, BW 100 Kbit, DLY 50000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation TUNNEL, loopback not set
  Keepalive not set
  Tunnel source 10.2.4.13, destination 10.2.4.14
  Tunnel protocol/transport GRE/IP, key disabled, sequencing disabled
  Tunnel TTL 255
Checksumming of packets disabled
Last input 00:00:01, output 00:00:09, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 10
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  256 packets input, 24576 bytes, 0 no buffer
  Received 0 broadcasts (0 IP multicasts)
  0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
  273 packets output, 45904 bytes, 0 underruns
  0 output errors, 0 collisions, 0 interface resets
  0 output buffer failures, 0 output buffers swapped out
DSW1#
```

DSW1#show interfaces counters errors

| Port | Align-Err | FCS-Err | Xmit-Err | Rcv-Err | UnderSize |
|--------|-----------|---------|----------|---------|-----------|
| Fa0/1 | 0 | 0 | 0 | 0 | 0 |
| Fa0/2 | 0 | 0 | 0 | 0 | 0 |
| Fa0/3 | 0 | 0 | 0 | 0 | 0 |
| Fa0/4 | 0 | 0 | 0 | 0 | 0 |
| Fa0/5 | 0 | 0 | 0 | 0 | 0 |
| Fa0/6 | 0 | 0 | 0 | 0 | 0 |
| Fa0/7 | 0 | 0 | 0 | 0 | 0 |
| Fa0/8 | 0 | 0 | 0 | 0 | 0 |
| Fa0/9 | 0 | 0 | 0 | 0 | 0 |
| Fa0/10 | 0 | 0 | 0 | 0 | 0 |
| Fa0/11 | 0 | 0 | 0 | 0 | 0 |
| Fa0/12 | 0 | 0 | 0 | 0 | 0 |
| Fa0/13 | 0 | 0 | 0 | 0 | 0 |
| Fa0/14 | 0 | 0 | 0 | 0 | 0 |
| Fa0/15 | 0 | 0 | 0 | 0 | 0 |
| Fa0/16 | 0 | 0 | 0 | 0 | 0 |
| Fa0/17 | 0 | 0 | 0 | 0 | 0 |
| Fa0/18 | 0 | 0 | 0 | 0 | 0 |
| Fa0/19 | 0 | 0 | 0 | 0 | 0 |
| Fa0/20 | 0 | 0 | 0 | 0 | 0 |
| Fa0/21 | 0 | 0 | 0 | 0 | 0 |
| Fa0/22 | 0 | 0 | 0 | 0 | 0 |

| | | | | | |
|--------|---|---|---|---|---|
| Fa0/23 | 0 | 0 | 0 | 0 | 0 |
| Fa0/24 | 0 | 0 | 0 | 0 | 0 |
| Gi0/1 | 0 | 0 | 0 | 0 | 0 |
| Gi0/2 | 0 | 0 | 0 | 0 | 0 |
| Po12 | 0 | 0 | 0 | 0 | 0 |
| Po13 | 0 | 0 | 0 | 0 | 0 |
| Po14 | 0 | 0 | 0 | 0 | 0 |

| Port | Single-Col | Multi-Col | Late-Col | Excess-Col | Carri-Sen | Runts |
|--------|------------|-----------|----------|------------|-----------|-------|
| Giants | | | | | | |
| Fa0/1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/10 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/12 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/17 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/18 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/19 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/20 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/21 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/22 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |

| | | | | | | |
|--------|---|---|---|---|---|---|
| Fa0/23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Fa0/24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Gi0/1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Gi0/2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Po12 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Po13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| Po14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | | | | | | |
| DSW1# | | | | | | |

DSW1#show cdp neighbors

Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge

S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone

| Device ID | Local Intrfce | Holdtme | Capability | Platform | Port |
|-----------|---------------|---------|------------|-----------|------|
| ID | | | | | |
| R4 | Fas 0/1 | 172 | R S I | 1841 | Fas |
| 0/0 | | | | | |
| DSW2 | Fas 0/24 | 152 | R S I | WS-C3550- | Fas |
| 0/24 | | | | | |
| DSW2 | Fas 0/23 | 152 | R S I | WS-C3550- | Fas |
| 0/23 | | | | | |
| DSW2 | Fas 0/22 | 152 | R S I | WS-C3550- | Fas |
| 0/22 | | | | | |
| ASW1 | Fas 0/21 | 143 | S I | WS-C2950- | Fas |
| 0/21 | | | | | |
| ASW1 | Fas 0/20 | 143 | S I | WS-C2950- | Fas |
| 0/20 | | | | | |
| ASW1 | Fas 0/19 | 143 | S I | WS-C2950- | Fas |
| 0/19 | | | | | |
| ASW2 | Fas 0/16 | 143 | S I | WS-C2950- | Fas |
| 0/16 | | | | | |
| ASW2 | Fas 0/18 | 143 | S I | WS-C2950- | Fas |
| 0/18 | | | | | |
| ASW2 | Fas 0/17 | 143 | S I | WS-C2950- | Fas |
| 0/17 | | | | | |
| DSW1# | | | | | |

DSW1#show cdp neighbors detail

Device ID: R4

Entry address(es):

IP address: 10.1.4.5

Platform: Cisco 1841, Capabilities: Router Switch IGMP

Interface: FastEthernet0/1, Port ID (outgoing port): FastEthernet0/0

Holdtime : 165 sec

Version :

Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version 12.4(25b), RELEASE SOFTWARE (fc1)

Technical Support: <http://www.cisco.com/techsupport>

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Compiled Wed 12-Aug-09 10:49 by prod_rel_team

advertisement version: 2

VTP Management Domain: ''

Duplex: full

Management address(es):

Device ID: DSW2

Entry address(es):

IP address: 10.2.4.14

Platform: Cisco WS-C3550-24-PWR, Capabilities: Router Switch IGMP

Interface: FastEthernet0/24, Port ID (outgoing port): FastEthernet0/24

Holdtime : 145 sec

Version :

Cisco IOS Software, C3550 Software (C3550-IPSERVICESK9-M), Version 12.2(44)SE6, RELEASE SOFTWARE (fc1)

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Compiled Mon 09-Mar-09 20:28 by gereddy

advertisement version: 2
Protocol Hello: OUI=0x00000C, Protocol ID=0x0112; payload len=27,
value=00000000FFFFFFFFF0102250C00000000000000BFD20BA0FF0000
VTP Management Domain: 'netlearning'
Duplex: full
Management address(es):
 IP address: 10.2.4.14

Device ID: DSW2
Entry address(es):
 IP address: 10.2.4.14
Platform: Cisco WS-C3550-24-PWR, Capabilities: Router Switch IGMP
Interface: FastEthernet0/23, Port ID (outgoing port): FastEthernet0/23
Holdtime : 144 sec

Version :
Cisco IOS Software, C3550 Software (C3550-IPSERVICESK9-M), Version
12.2(44)SE6, RELEASE SOFTWARE (fc1)
Copyright (c) 1986-2009 by Cisco Systems, Inc.
Compiled Mon 09-Mar-09 20:28 by gereddy

advertisement version: 2
Protocol Hello: OUI=0x00000C, Protocol ID=0x0112; payload len=27,
value=00000000FFFFFFFFF0102250C00000000000000BFD20BA0FF0000
VTP Management Domain: 'netlearning'
Duplex: full
Management address(es):
 IP address: 10.2.4.14

Device ID: DSW2
Entry address(es):
 IP address: 10.2.4.14
Platform: Cisco WS-C3550-24-PWR, Capabilities: Router Switch IGMP
Interface: FastEthernet0/22, Port ID (outgoing port): FastEthernet0/22
Holdtime : 143 sec

Version :
Cisco IOS Software, C3550 Software (C3550-IPSERVICESK9-M), Version
12.2(44)SE6, RELEASE SOFTWARE (fc1)
Copyright (c) 1986-2009 by Cisco Systems, Inc.
Compiled Mon 09-Mar-09 20:28 by gereddy

advertisement version: 2
Protocol Hello: OUI=0x00000C, Protocol ID=0x0112; payload len=27,
value=00000000FFFFFFFFF0102250C00000000000000BFD20BA0FF0000
VTP Management Domain: 'netlearning'
Duplex: full
Management address(es):
 IP address: 10.2.4.14

Device ID: ASW1
Entry address(es):
 IP address: 192.168.1.131
Platform: cisco WS-C2950-24, Capabilities: Switch IGMP
Interface: FastEthernet0/21, Port ID (outgoing port): FastEthernet0/21
Holdtime : 134 sec

Version :
Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(22)EA4a, RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Fri 16-Sep-05 10:46 by yenanh

advertisement version: 2
Protocol Hello: OUI=0x00000C, Protocol ID=0x0112; payload len=27,
value=00000000FFFFFFFFF010225010000000000000015FAAC46C0FF0000
VTP Management Domain: 'netlearning'
Native VLAN: 1
Duplex: full
Management address(es):
 IP address: 192.168.1.131

Device ID: ASW1
Entry address(es):
 IP address: 192.168.1.131
Platform: cisco WS-C2950-24, Capabilities: Switch IGMP
Interface: FastEthernet0/20, Port ID (outgoing port): FastEthernet0/20
Holdtime : 133 sec

Version :
Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(22)EA4a, RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Fri 16-Sep-05 10:46 by yenanh

advertisement version: 2
Protocol Hello: OUI=0x00000C, Protocol ID=0x0112; payload len=27,
value=00000000FFFFFFFFF010225010000000000000015FAAC46C0FF0000
VTP Management Domain: 'netlearning'
Native VLAN: 1
Duplex: full
Management address(es):
 IP address: 192.168.1.131

Device ID: ASW1
Entry address(es):
 IP address: 192.168.1.131
Platform: cisco WS-C2950-24, Capabilities: Switch IGMP
Interface: FastEthernet0/19, Port ID (outgoing port): FastEthernet0/19
Holdtime : 132 sec

Version :
Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(22)EA4a, RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Fri 16-Sep-05 10:46 by yenanh

advertisement version: 2
Protocol Hello: OUI=0x00000C, Protocol ID=0x0112; payload len=27,
value=00000000FFFFFFFFF010225010000000000000015FAAC46C0FF0000
VTP Management Domain: 'netlearning'
Native VLAN: 1
Duplex: full
Management address(es):
IP address: 192.168.1.131

Device ID: ASW2
Entry address(es):
IP address: 192.168.1.132
Platform: cisco WS-C2950-24, Capabilities: Switch IGMP
Interface: FastEthernet0/16, Port ID (outgoing port): FastEthernet0/16
Holdtime : 131 sec

Version :
Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(22)EA4a, RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Fri 16-Sep-05 10:46 by yenanh

advertisement version: 2
Protocol Hello: OUI=0x00000C, Protocol ID=0x0112; payload len=27,
value=00000000FFFFFFFFF010225020000000000000015FAB82880FF0000
VTP Management Domain: 'netlearning'
Native VLAN: 1
Duplex: full
Management address(es):
IP address: 192.168.1.132

Device ID: ASW2
Entry address(es):
IP address: 192.168.1.132
Platform: cisco WS-C2950-24, Capabilities: Switch IGMP
Interface: FastEthernet0/18, Port ID (outgoing port): FastEthernet0/18
Holdtime : 130 sec

Version :
Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(22)EA4a, RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2005 by cisco Systems, Inc.

Compiled Fri 16-Sep-05 10:46 by yenanh

advertisement version: 2
Protocol Hello: OUI=0x00000C, Protocol ID=0x0112; payload len=27,
value=00000000FFFFFFFFF0102250200000000000000015FAB82880FF0000
VTP Management Domain: 'netlearning'
Native VLAN: 1
Duplex: full
Management address(es):
IP address: 192.168.1.132

Device ID: ASW2
Entry address(es):
IP address: 192.168.1.132
Platform: cisco WS-C2950-24, Capabilities: Switch IGMP
Interface: FastEthernet0/17, Port ID (outgoing port): FastEthernet0/17
Holdtime : 129 sec

Version :
Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(22)EA4a, RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Fri 16-Sep-05 10:46 by yenanh

advertisement version: 2
Protocol Hello: OUI=0x00000C, Protocol ID=0x0112; payload len=27,
value=00000000FFFFFFFFF0102250200000000000000015FAB82880FF0000
VTP Management Domain: 'netlearning'
Native VLAN: 1
Duplex: full
Management address(es):
IP address: 192.168.1.132

DSW1#

```

DSW1#show arp
Protocol Address Age (min) Hardware Addr Type Interface
Internet 10.2.4.13 - 000d.bde3.6e00 ARPA Port-
channel12
Internet 10.2.4.14 118 000b.fd20.ba00 ARPA Port-
channel12
Internet 10.2.1.1 - 000d.bde3.6e00 ARPA Vlan10
Internet 10.2.2.2 - 000d.bde3.6e00 ARPA Vlan20
Internet 10.1.4.6 - 000d.bde3.6e00 ARPA
FastEthernet0/1
Internet 10.1.4.5 119 0019.5578.1cb2 ARPA
FastEthernet0/1
Internet 10.2.1.2 9 000b.fd20.ba00 ARPA Vlan10
Internet 10.2.2.1 110 000b.fd20.ba00 ARPA Vlan20
Internet 10.2.1.4 2 001c.238e.dbbc ARPA Vlan10
Internet 192.168.1.129 - 000d.bde3.6e00 ARPA Vlan200
Internet 10.2.1.254 - 0000.0c07.ac0a ARPA Vlan10
DSW1#

```



```

DSW1#show ip arp

```

| Protocol | Address | Age (min) | Hardware Addr | Type | Interface |
|-----------------|---------------|-----------|----------------|------|-----------|
| Internet | 10.2.4.13 | - | 000d.bde3.6e00 | ARPA | Port- |
| channel12 | | | | | |
| Internet | 10.2.4.14 | 118 | 000b.fd20.ba00 | ARPA | Port- |
| channel12 | | | | | |
| Internet | 10.2.1.1 | - | 000d.bde3.6e00 | ARPA | Vlan10 |
| Internet | 10.2.2.2 | - | 000d.bde3.6e00 | ARPA | Vlan20 |
| Internet | 10.1.4.6 | - | 000d.bde3.6e00 | ARPA | |
| FastEthernet0/1 | | | | | |
| Internet | 10.1.4.5 | 119 | 0019.5578.1cb2 | ARPA | |
| FastEthernet0/1 | | | | | |
| Internet | 10.2.1.2 | 9 | 000b.fd20.ba00 | ARPA | Vlan10 |
| Internet | 10.2.2.1 | 110 | 000b.fd20.ba00 | ARPA | Vlan20 |
| Internet | 10.2.1.4 | 2 | 001c.238e.dbbc | ARPA | Vlan10 |
| Internet | 192.168.1.129 | - | 000d.bde3.6e00 | ARPA | Vlan200 |
| Internet | 10.2.1.254 | - | 0000.0c07.ac0a | ARPA | Vlan10 |

```

DSW1#

```

```
DSW1#show ip interface
Vlan1 is administratively down, line protocol is down
  Internet protocol processing disabled
Vlan10 is up, line protocol is up
  Internet address is 10.2.1.1/24
  Broadcast address is 255.255.255.255
  Address determined by non-volatile memory
  MTU is 1500 bytes
  Helper address is 10.1.4.5
  Directed broadcast forwarding is disabled
  Multicast reserved groups joined: 224.0.0.1 224.0.0.2 224.0.0.22
  224.0.0.13
    224.0.0.10
  Outgoing access list is not set
  Inbound access list is not set
```

Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP CEF switching is enabled
IP CEF switching turbo vector
IP Null turbo vector
IP multicast fast switching is enabled
IP multicast distributed fast switching is disabled
IP route-cache flags are Fast, CEF
Router Discovery is disabled
IP output packet accounting is disabled
IP access violation accounting is disabled
TCP/IP header compression is disabled
RTP/IP header compression is disabled
Probe proxy name replies are disabled
Policy routing is disabled
Network address translation is disabled
BGP Policy Mapping is disabled
WCCP Redirect outbound is disabled
WCCP Redirect inbound is disabled
WCCP Redirect exclude is disabled
Vlan20 is up, line protocol is up
Internet address is 10.2.2.2/24
Broadcast address is 255.255.255.255
Address determined by non-volatile memory
MTU is 1500 bytes
Helper address is not set
Directed broadcast forwarding is disabled
Multicast reserved groups joined: 224.0.0.1 224.0.0.2 224.0.0.22
224.0.0.13
224.0.0.10
Outgoing access list is not set
Inbound access list is not set
Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP CEF switching is enabled
IP CEF switching turbo vector
IP Null turbo vector
IP multicast fast switching is enabled
IP multicast distributed fast switching is disabled
IP route-cache flags are Fast, CEF
Router Discovery is disabled
IP output packet accounting is disabled

IP access violation accounting is disabled
TCP/IP header compression is disabled
RTP/IP header compression is disabled
Probe proxy name replies are disabled
Policy routing is disabled
Network address translation is disabled
BGP Policy Mapping is disabled
WCCP Redirect outbound is disabled
WCCP Redirect inbound is disabled
WCCP Redirect exclude is disabled
Vlan200 is up, line protocol is up
Internet address is 192.168.1.129/27
Broadcast address is 255.255.255.255
Address determined by non-volatile memory
MTU is 1500 bytes
Helper address is not set
Directed broadcast forwarding is disabled
Outgoing access list is not set
Inbound access list is not set
Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP CEF switching is enabled
IP CEF switching turbo vector
IP Null turbo vector
IP multicast fast switching is enabled
IP multicast distributed fast switching is disabled
IP route-cache flags are Fast, CEF
Router Discovery is disabled
IP output packet accounting is disabled
IP access violation accounting is disabled
TCP/IP header compression is disabled
RTP/IP header compression is disabled
Probe proxy name replies are disabled
Policy routing is disabled
Network address translation is disabled
BGP Policy Mapping is disabled
WCCP Redirect outbound is disabled
WCCP Redirect inbound is disabled
WCCP Redirect exclude is disabled
FastEthernet0/1 is up, line protocol is up
Internet address is 10.1.4.6/30
Broadcast address is 255.255.255.255
Address determined by non-volatile memory
MTU is 1500 bytes
Helper address is not set
Directed broadcast forwarding is disabled
Multicast reserved groups joined: 224.0.0.1 224.0.0.2 224.0.0.22
224.0.0.13

224.0.0.10

Outgoing access list is not set
Inbound access list is not set
Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP CEF switching is enabled
IP CEF switching turbo vector
IP Null turbo vector
IP multicast fast switching is enabled
IP multicast distributed fast switching is disabled
IP route-cache flags are Fast, CEF
Router Discovery is disabled
IP output packet accounting is disabled
IP access violation accounting is disabled
TCP/IP header compression is disabled
RTP/IP header compression is disabled
Probe proxy name replies are disabled
Policy routing is disabled
Network address translation is disabled
BGP Policy Mapping is disabled
WCCP Redirect outbound is disabled
WCCP Redirect inbound is disabled
WCCP Redirect exclude is disabled
FastEthernet0/2 is down, line protocol is down
Inbound access list is not set
FastEthernet0/3 is down, line protocol is down
Inbound access list is not set
FastEthernet0/4 is down, line protocol is down
Inbound access list is not set
FastEthernet0/5 is down, line protocol is down
Inbound access list is not set
FastEthernet0/6 is down, line protocol is down
Inbound access list is not set
FastEthernet0/7 is down, line protocol is down
Inbound access list is not set
FastEthernet0/8 is down, line protocol is down
Inbound access list is not set
FastEthernet0/9 is down, line protocol is down
Inbound access list is not set
FastEthernet0/10 is down, line protocol is down
Inbound access list is not set
FastEthernet0/11 is down, line protocol is down
Inbound access list is not set
FastEthernet0/12 is down, line protocol is down
Inbound access list is not set
FastEthernet0/13 is down, line protocol is down
Inbound access list is not set
FastEthernet0/14 is down, line protocol is down

```
Inbound access list is not set
FastEthernet0/15 is down, line protocol is down
Inbound access list is not set
FastEthernet0/16 is up, line protocol is up
Inbound access list is not set
FastEthernet0/17 is up, line protocol is up
Inbound access list is not set
FastEthernet0/18 is up, line protocol is up
Inbound access list is not set
FastEthernet0/19 is up, line protocol is up
Inbound access list is not set
FastEthernet0/20 is up, line protocol is up
Inbound access list is not set
FastEthernet0/21 is up, line protocol is up
Inbound access list is not set
FastEthernet0/22 is up, line protocol is up
Internet protocol processing disabled
FastEthernet0/23 is up, line protocol is up
Internet protocol processing disabled
FastEthernet0/24 is up, line protocol is up
Internet protocol processing disabled
GigabitEthernet0/1 is administratively down, line protocol is down
Inbound access list is not set
GigabitEthernet0/2 is administratively down, line protocol is down
Inbound access list is not set
Port-channel12 is up, line protocol is up
Internet address is 10.2.4.13/30
Broadcast address is 255.255.255.255
Address determined by non-volatile memory
MTU is 1500 bytes
Helper address is not set
Directed broadcast forwarding is disabled
Multicast reserved groups joined: 224.0.0.1 224.0.0.2 224.0.0.22
224.0.0.13
224.0.0.10
Outgoing access list is not set
Inbound access list is not set
Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP CEF switching is enabled
IP CEF switching turbo vector
IP Null turbo vector
IP multicast fast switching is enabled
IP multicast distributed fast switching is disabled
IP route-cache flags are Fast, CEF
Router Discovery is disabled
IP output packet accounting is disabled
IP access violation accounting is disabled
```

TCP/IP header compression is disabled
RTP/IP header compression is disabled
Probe proxy name replies are disabled
Policy routing is disabled
Network address translation is disabled
BGP Policy Mapping is disabled
WCCP Redirect outbound is disabled
WCCP Redirect inbound is disabled
WCCP Redirect exclude is disabled
Port-channel13 is up, line protocol is up
Port-channel14 is up, line protocol is up
Tunnel46 is up, line protocol is up
Internet protocol processing disabled
Tunnel67 is up, line protocol is up
Internet protocol processing disabled
DSW1#

```

DSW1#show ip cef
Prefix          Next Hop          Interface
0.0.0.0/0       10.1.4.5          FastEthernet0/1
0.0.0.0/32      receive
10.1.1.8/30     10.1.4.5          FastEthernet0/1
10.1.4.4/30     attached          FastEthernet0/1
10.1.4.4/32     receive          FastEthernet0/1
10.1.4.5/32     attached          FastEthernet0/1
10.1.4.6/32     receive          FastEthernet0/1
10.1.4.7/32     receive          FastEthernet0/1
10.1.4.8/30     10.2.1.2          Vlan10
                  10.2.2.1          Vlan20
10.2.1.0/24     attached          Vlan10
10.2.1.0/32     receive          Vlan10
10.2.1.1/32     receive          Vlan10
10.2.1.2/32     attached          Vlan10
10.2.1.4/32     attached          Vlan10
10.2.1.254/32   receive
10.2.1.255/32   receive          Vlan10
10.2.2.0/24     attached          Vlan20
10.2.2.0/32     receive          Vlan20
10.2.2.1/32     attached          Vlan20
10.2.2.2/32     receive          Vlan20
10.2.2.255/32   receive          Vlan20
10.2.4.12/30    attached          Port-channel12
10.2.4.12/32    receive          Port-channel12
10.2.4.13/32    receive          Port-channel12
10.2.4.14/32    attached          Port-channel12
10.2.4.15/32    receive          Port-channel12
192.168.1.128/27 attached          Vlan200
192.168.1.128/32 receive          Vlan200
192.168.1.129/32 receive          Vlan200
192.168.1.159/32 receive          Vlan200
224.0.0.0/4     multicast
224.0.0.0/24    receive
240.0.0.0/4     drop
255.255.255.255/32 receive
DSW1#

```



```
DSW1#show tcp statistics
Rcvd: 0 Total, 0 no port
      0 checksum error, 0 bad offset, 0 too short
      0 packets (0 bytes) in sequence
      0 dup packets (0 bytes)
      0 partially dup packets (0 bytes)
      0 out-of-order packets (0 bytes)
      0 packets (0 bytes) with data after window
      0 packets after close
      0 window probe packets, 0 window update packets
      0 dup ack packets, 0 ack packets with unsend data
      0 ack packets (0 bytes)
Sent: 0 Total, 0 urgent packets
      0 control packets (including 0 retransmitted)
      0 data packets (0 bytes)
      0 data packets (0 bytes) retransmitted
      0 data packets (0 bytes) fastretransmitted
      0 ack only packets (0 delayed)
      0 window probe packets, 0 window update packets
0 Connections initiated, 0 connections accepted, 0 connections
established
0 Connections closed (including 0 dropped, 0 embryonic dropped)
```

```
0 Total rxmt timeout, 0 connections dropped in rxmt timeout
0 Keepalive timeout, 0 keepalive probe, 0 Connections dropped in
keepalive
DSW1#
```

```
DSW1#show ip protocols
*** IP Routing is NSF aware ***
```

```
Routing Protocol is "eigrp 10"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Default networks flagged in outgoing updates
```

Default networks accepted from incoming updates
Redistributing: eigrp 10

Address Family Protocol EIGRP-IPv4:(10)
EIGRP metric weight K1=1, K2=1, K3=1, K4=1, K5=1
EIGRP maximum hopcount 100
EIGRP maximum metric variance 1
EIGRP NSF-aware route hold timer is 240
Topologies : 0(base)

Automatic network summarization is not in effect
Maximum path: 4

Routing for Networks:

10.1.4.6/32
10.2.1.1/32
10.2.2.2/32
10.2.4.13/32

Routing Information Sources:

| Gateway | Distance | Last Update |
|-----------|----------|-------------|
| 10.2.4.14 | 90 | 00:27:36 |
| 10.1.4.5 | 90 | 00:27:36 |
| 10.2.1.2 | 90 | 00:27:36 |
| 10.2.2.1 | 90 | 00:27:36 |

Distance: internal 90 external 170

Routing Protocol is "ospf 1"

Outgoing update filter list for all interfaces is not set

Incoming update filter list for all interfaces is not set

Router ID 192.168.1.129

Number of areas in this router is 1. 1 normal 0 stub 0 nssa

Maximum path: 4

Routing for Networks:

10.3.3.2 0.0.0.0 area 0
10.17.17.1 0.0.0.0 area 0

Routing Information Sources:

| Gateway | Distance | Last Update |
|---------|----------|-------------|
|---------|----------|-------------|

Distance: (default is 110)

DSW1#

```
DSW1#show access-lists
Standard IP access list DENY_10
  10 deny 10.0.0.0, wildcard bits 0.255.255.255
  20 permit any
Standard IP access list DENY_ALL
  10 deny any
Standard IP access list PERMIT_10
  10 permit 10.0.0.0, wildcard bits 0.255.255.255
Standard IP access list PERMIT_ALL
  10 permit any
DSW1#
```

```
DSW1#show ip route eigrp
      10.0.0.0/8 is variably subnetted, 6 subnets, 2 masks
D EX    10.1.1.8/30 [170/1023] via 10.1.4.5, 00:27:50, FastEthernet0/1
D        10.1.4.8/30 [90/111] via 10.2.2.1, 00:27:50, Vlan20
          [90/111] via 10.2.1.2, 00:27:50, Vlan10
D*EX 0.0.0.0/0 [170/1023] via 10.1.4.5, 00:27:50, FastEthernet0/1
DSW1#
```

```

DSW1#show ip eigrp neighbors
EIGRP-IPv4:(10) neighbors for process 10
H   Address                Interface      Hold Uptime    SRTT    RTO    Q
Seq                                     (sec)         (ms)          Cnt
Num
3   10.2.1.2                V110          10 00:27:59    3      200    0
110
2   10.2.2.1                V120          12 01:51:37    3      200    0
112
1   10.2.4.14               Po12          12 01:59:47    1      200    0
111
0   10.1.4.5                Fa0/1         14 02:00:25    1      200    0
53
DSW1#

```

```
DSW1#show ip eigrp interfaces
EIGRP-IPv4:(10) interfaces for process 10
```

| Pending Interface Routes | Peers | Xmit Queue Un/Reliable | Mean SRTT | Pacing Time Un/Reliable | Multicast Flow Timer |
|--------------------------------|-------|---------------------------|--------------|----------------------------|-------------------------|
| Fa0/1 0 | 1 | 0/0 | 1 | 0/1 | 50 |
| Vl10 0 | 1 | 0/0 | 3 | 0/1 | 50 |
| Vl20 0 | 1 | 0/0 | 3 | 0/1 | 50 |
| Po12 0 | 1 | 0/0 | 1 | 0/1 | 50 |

```
DSW1#
```

| VLAN | Name | Status | Ports |
|----------------|-----------------|-----------|---|
| ----- ----- | | | |
| 1 | default | active | Fa0/4, Fa0/10, Fa0/11, Fa0/13 Fa0/14, Fa0/15, Gi0/1, Gi0/2 |
| 10 | VLAN0010 | active | |
| 20 | VLAN0020 | active | |
| 200 | VLAN0200 | active | |
| 1002 | fddi-default | act/unsup | |
| 1003 | trcrf-default | act/unsup | |
| 1004 | fddinet-default | act/unsup | |
| 1005 | trbrf-default | act/unsup | |
| VLAN Type | SAID | MTU | Parent RingNo BridgeNo Stp BrdgMode Transl |
| Trans2 | | | |
| ----- ----- | | | |

| | | | | | | | | | | |
|------|-------|--------|------|------|------|----|------|-----|---|---|
| 1 | enet | 100001 | 1500 | - | - | - | - | - | 0 | 0 |
| 10 | enet | 100010 | 1500 | - | - | - | - | - | 0 | 0 |
| 20 | enet | 100020 | 1500 | - | - | - | - | - | 0 | 0 |
| 200 | enet | 100200 | 1500 | - | - | - | - | - | 0 | 0 |
| 1002 | fddi | 101002 | 1500 | - | - | - | - | - | 0 | 0 |
| 1003 | trcrf | 101003 | 4472 | 1005 | 3276 | - | - | srp | 0 | 0 |
| 1004 | fdnet | 101004 | 1500 | - | - | - | ieee | - | 0 | 0 |
| 1005 | trbrf | 101005 | 4472 | - | - | 15 | ibm | - | 0 | 0 |

| VLAN | AREHops | STEHops | Backup | CRF |
|------|---------|---------|--------|-----|
| 1003 | 7 | 7 | off | |

Remote SPAN VLANs

| Primary | Secondary | Type | Ports |
|---------|-----------|-------|-------|
| ----- | ----- | ----- | ----- |
| ----- | | | |

DSW1#

DSW1#show spanning-tree

VLAN0010

Spanning tree enabled protocol rstp

Root ID Priority 4106
 Address 000d.bde3.6e00
 This bridge is the root
 Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID Priority 4106 (priority 4096 sys-id-ext 10)
 Address 000d.bde3.6e00
 Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
 Aging Time 300

| Interface | Role | Sts | Cost | Prio.Nbr | Type |
|-----------|------|-----|-------|----------|----------------|
| ----- | ---- | --- | ----- | ----- | ----- |
| ----- | | | | | |
| Pol3 | Desg | FWD | 9 | 128.66 | P2p Peer (STP) |

VLAN0020

Spanning tree enabled protocol rstp

Root ID Priority 4116
 Address 000b.fd20.ba00
 Cost 18
 Port 67 (Port-channel14)
 Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID Priority 8212 (priority 8192 sys-id-ext 20)
 Address 000d.bde3.6e00
 Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
 Aging Time 300

| Interface | Role | Sts | Cost | Prio.Nbr | Type |
|-----------|------|-----|-------|----------|----------------|
| ----- | ---- | --- | ----- | ----- | ----- |
| ----- | | | | | |
| Pol4 | Root | FWD | 9 | 128.67 | P2p Peer (STP) |

VLAN0200

Spanning tree enabled protocol rstp

Root ID Priority 4296
Address 000d.bde3.6e00
This bridge is the root
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID Priority 4296 (priority 4096 sys-id-ext 200)
Address 000d.bde3.6e00
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 300

| Interface | Role | Sts | Cost | Prio.Nbr | Type |
|-----------|------|-----|-------|----------|----------------|
| ----- | ---- | --- | ----- | ----- | ----- |
| ----- | | | | | |
| Pol3 | Desg | FWD | 9 | 128.66 | P2p Peer (STP) |
| Pol4 | Desg | FWD | 9 | 128.67 | P2p Peer (STP) |

DSW1#

DSW1#show interfaces status

| Port | Name | Status | Vlan | Duplex | Speed | Type |
|--------------|------|------------|--------|--------|-------|------|
| Fa0/1 | | connected | routed | a-full | a-100 | |
| 10/100BaseTX | | | | | | |
| Fa0/2 | | notconnect | 101 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/3 | | notconnect | 102 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/4 | | notconnect | 1 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/5 | | notconnect | 104 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/6 | | notconnect | 105 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/7 | | notconnect | 106 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/8 | | notconnect | 109 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/9 | | notconnect | 17 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/10 | | notconnect | 1 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/11 | | notconnect | 1 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/12 | | notconnect | 123 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/13 | | notconnect | 1 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/14 | | notconnect | 1 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/15 | | notconnect | 1 | auto | auto | |
| 10/100BaseTX | | | | | | |
| Fa0/16 | | connected | trunk | a-full | a-100 | |
| 10/100BaseTX | | | | | | |
| Fa0/17 | | connected | trunk | a-full | a-100 | |
| 10/100BaseTX | | | | | | |
| Fa0/18 | | connected | trunk | a-full | a-100 | |
| 10/100BaseTX | | | | | | |
| Fa0/19 | | connected | trunk | a-full | a-100 | |
| 10/100BaseTX | | | | | | |
| Fa0/20 | | connected | trunk | a-full | a-100 | |
| 10/100BaseTX | | | | | | |
| Fa0/21 | | connected | trunk | a-full | a-100 | |
| 10/100BaseTX | | | | | | |
| Fa0/22 | | connected | routed | a-full | a-100 | |
| 10/100BaseTX | | | | | | |

| | | | | |
|--------------|-----------|--------|--------|-------|
| Fa0/23 | connected | routed | a-full | a-100 |
| 10/100BaseTX | | | | |
| Fa0/24 | connected | routed | a-full | a-100 |
| 10/100BaseTX | | | | |
| Gi0/1 | disabled | 1 | auto | auto |
| unknown | | | | |
| Gi0/2 | disabled | 1 | auto | auto |
| unknown | | | | |
| Pol2 | connected | routed | a-full | a-100 |
| Pol3 | connected | trunk | a-full | a-100 |
| Pol4 | connected | trunk | a-full | a-100 |
| DSW1# | | | | |

DSW1#show interfaces switchport

Name: Fa0/2

Switchport: Enabled

Administrative Mode: static access

Operational Mode: down

Administrative Trunking Encapsulation: negotiate

Negotiation of Trunking: Off

Access Mode VLAN: 101 (Inactive)

Trunking Native Mode VLAN: 1 (default)

Administrative Native VLAN tagging: enabled

Voice VLAN: none

Administrative private-vlan host-association: none

Administrative private-vlan mapping: none

Administrative private-vlan trunk native VLAN: none

Administrative private-vlan trunk Native VLAN tagging: enabled

Administrative private-vlan trunk encapsulation: dot1q

Administrative private-vlan trunk normal VLANs: none

Administrative private-vlan trunk associations: none

Administrative private-vlan trunk mappings: none

Operational private-vlan: none

Trunking VLANs Enabled: ALL

Pruning VLANs Enabled: 2-1001

Capture Mode Disabled

Capture VLANs Allowed: ALL

Protected: false

Unknown unicast blocked: disabled

Unknown multicast blocked: disabled

Appliance trust: none

Name: Fa0/3

Switchport: Enabled

Administrative Mode: static access

Operational Mode: down

Administrative Trunking Encapsulation: negotiate

Negotiation of Trunking: Off

Access Mode VLAN: 102 (Inactive)

Trunking Native Mode VLAN: 1 (default)

Administrative Native VLAN tagging: enabled

Voice VLAN: none

Administrative private-vlan host-association: none

Administrative private-vlan mapping: none

Administrative private-vlan trunk native VLAN: none

Administrative private-vlan trunk Native VLAN tagging: enabled

Administrative private-vlan trunk encapsulation: dot1q

Administrative private-vlan trunk normal VLANs: none

Administrative private-vlan trunk associations: none

Administrative private-vlan trunk mappings: none

Operational private-vlan: none

Trunking VLANs Enabled: ALL

Pruning VLANs Enabled: 2-1001

Capture Mode Disabled

Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/4
Switchport: Enabled
Administrative Mode: dynamic desirable
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/5
Switchport: Enabled
Administrative Mode: static access
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: Off
Access Mode VLAN: 104 (Inactive)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none

Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/6
Switchport: Enabled
Administrative Mode: static access
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: Off
Access Mode VLAN: 105 (Inactive)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/7
Switchport: Enabled
Administrative Mode: static access
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: Off
Access Mode VLAN: 106 (Inactive)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled

Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/8
Switchport: Enabled
Administrative Mode: static access
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: Off
Access Mode VLAN: 109 (Inactive)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/9
Switchport: Enabled
Administrative Mode: static access
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: Off
Access Mode VLAN: 17 (Inactive)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none

Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/10
Switchport: Enabled
Administrative Mode: static access
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/11
Switchport: Enabled
Administrative Mode: static access
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: Off

Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/12
Switchport: Enabled
Administrative Mode: static access
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: Off
Access Mode VLAN: 123 (Inactive)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/13
Switchport: Enabled

Administrative Mode: static access
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/14
Switchport: Enabled
Administrative Mode: static access
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled

Appliance trust: none

Name: Fa0/15
Switchport: Enabled
Administrative Mode: static access
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/16
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk (member of bundle Po14)
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: 20,200
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled

Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/17
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk (member of bundle Po14)
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: 20,200
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/18
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk (member of bundle Po14)
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none

Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: 20,200
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/19
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk (member of bundle Po13)
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: 10,200
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/20
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk (member of bundle Po13)
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none

Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: 10,200
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Fa0/21
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk (member of bundle Po13)
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: 10,200
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Gi0/1
Switchport: Enabled
Administrative Mode: dynamic desirable
Operational Mode: down
Administrative Trunking Encapsulation: negotiate

Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Gi0/2
Switchport: Enabled
Administrative Mode: dynamic desirable
Operational Mode: down
Administrative Trunking Encapsulation: negotiate
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Po13

Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: 10,200
Pruning VLANs Enabled: 2-1001

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

Name: Po14
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk associations: none
Administrative private-vlan trunk mappings: none
Operational private-vlan: none
Trunking VLANs Enabled: 20,200
Pruning VLANs Enabled: 2-1001

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none

DSW1#

DSW1#show interfaces trunk

| Port | Mode | Encapsulation | Status | Native vlan |
|------|------|---------------|----------|-------------|
| Po13 | on | 802.1q | trunking | 1 |
| Po14 | on | 802.1q | trunking | 1 |

| Port | Vlans allowed on trunk |
|------|------------------------|
| Po13 | 10,200 |
| Po14 | 20,200 |

| | |
|------|---|
| Port | Vlans allowed and active in management domain |
| Po13 | 10,200 |
| Po14 | 20,200 |

| | |
|------|--|
| Port | Vlans in spanning tree forwarding state and not pruned |
| Po13 | 10,200 |
| Po14 | 20,200 |

DSW1#

```
DSW1#show vtp status
VTP Version           : running VTP2
Configuration Revision : 40
```

Maximum VLANs supported locally : 1005
Number of existing VLANs : 8
VTP Operating Mode : Server
VTP Domain Name : netlearning
VTP Pruning Mode : Disabled
VTP V2 Mode : Enabled
VTP Traps Generation : Disabled
MD5 digest : 0x63 0xFA 0x67 0x50 0xC8 0xE4 0x66 0xC8
Configuration last modified by 10.2.2.2 at 6-8-10 15:22:39
Local updater ID is 10.2.1.1 on interface Vl10 (lowest numbered VLAN
interface found)
DSW1#

```
DSW1#show vtp password
VTP Password: cisco
DSW1#
```

```
DSW1#show etherchannel detail
Channel-group listing:
-----

Group: 12
-----
Group state = L3
```

Ports: 3 Maxports = 8
Port-channels: 1 Max Port-channels = 1
Protocol: -
Minimum Links: 0

Ports in the group:

Port: Fa0/22

Port state = Up Mstr In-Bndl
Channel group = 12 Mode = On Gcchange = -
Port-channel = Po12 GC = - Pseudo port-channel =
Po12
Port index = 0 Load = 0x00 Protocol = -

Age of the port in the current state: 0d:02h:01m:26s

Port: Fa0/23

Port state = Up Mstr In-Bndl
Channel group = 12 Mode = On Gcchange = -
Port-channel = Po12 GC = - Pseudo port-channel =
Po12
Port index = 0 Load = 0x00 Protocol = -

Age of the port in the current state: 0d:02h:01m:27s

Port: Fa0/24

Port state = Up Mstr In-Bndl
Channel group = 12 Mode = On Gcchange = -
Port-channel = Po12 GC = - Pseudo port-channel =
Po12
Port index = 0 Load = 0x00 Protocol = -

Age of the port in the current state: 0d:02h:01m:27s

Port-channels in the group:

Port-channel: Po12

Age of the Port-channel = 0d:02h:02m:18s
Logical slot/port = 1/0 Number of ports = 3
GC = 0x00000000 HotStandBy port = null
Passive port list = Fa0/22 Fa0/23 Fa0/24
Port state = Port-channel L3-Ag Ag-Inuse
Protocol = -
Port security = Disabled

Ports in the Port-channel:

| Index | Load | Port | EC state | No of bits |
|-------|------|--------|----------|------------|
| 0 | 00 | Fa0/22 | On | 0 |
| 0 | 00 | Fa0/23 | On | 0 |
| 0 | 00 | Fa0/24 | On | 0 |

Time since last port bundled: 0d:02h:01m:27s Fa0/24
Time since last port Un-bundled: 0d:02h:01m:29s Fa0/24

Group: 13

Group state = L2

Ports: 3 Maxports = 16

Port-channels: 1 Max Port-channels = 1

Protocol: LACP

Minimum Links: 0

Ports in the group:

Port: Fa0/19

Port state = Up Mstr Assoc In-Bndl

Channel group = 13 Mode = Active

Gcchange = -

Port-channel = Po13 GC = -

Pseudo port-channel =

Po13

Port index = 0 Load = 0x00

Protocol = LACP

Flags: S - Device is sending Slow LACPDUs F - Device is sending fast LACPDUs.

A - Device is in active mode. P - Device is in passive mode.

Local information:

| Port | Flags | State | LACP port Priority | Admin Key | Oper Key | Port Number |
|----------------|-------|-------|-----------------------|--------------|-------------|----------------|
| Fa0/19 0x3D | SA | bndl | 32768 | 0xD | 0xD | 0x10 |

Partner's information:

| Port | Flags | Priority | LACP port Dev ID | Admin Age | Oper key | Port Key | Port Number |
|----------------|-------|----------|---------------------|--------------|-------------|-------------|----------------|
| Fa0/19 0x3C | SP | 32768 | 0015.faac.46c0 | 12s | 0x0 | 0x1 | 0x13 |

Age of the port in the current state: 0d:02h:02m:11s

Port: Fa0/20

Port state = Up Mstr Assoc In-Bndl
Channel group = 13 Mode = Active Gcchange = -
Port-channel = Po13 GC = - Pseudo port-channel =
Po13
Port index = 0 Load = 0x00 Protocol = LACP

Flags: S - Device is sending Slow LACPDUs F - Device is sending fast
LACPDUs.
A - Device is in active mode. P - Device is in passive
mode.

Local information:

| Port | Flags | State | LACP port Priority | Admin Key | Oper Key | Port Number |
|----------------|-------|-------|-----------------------|--------------|-------------|----------------|
| Fa0/20 0x3D | SA | bndl | 32768 | 0xD | 0xD | 0x11 |

Partner's information:

| Port | Flags | State | LACP port Priority | Dev ID | Age | Admin key | Oper Key | Port Number |
|----------------|-------|-------|-----------------------|----------------|-----|--------------|-------------|----------------|
| Fa0/20 0x3C | SP | | 32768 | 0015.faac.46c0 | 12s | 0x0 | 0x1 | 0x14 |

Age of the port in the current state: 0d:02h:02m:10s

Port: Fa0/21

Port state = Up Mstr Assoc In-Bndl
Channel group = 13 Mode = Active Gcchange = -
Port-channel = Po13 GC = - Pseudo port-channel =
Po13
Port index = 0 Load = 0x00 Protocol = LACP

Flags: S - Device is sending Slow LACPDUs F - Device is sending fast
LACPDUs.
A - Device is in active mode. P - Device is in passive
mode.

Local information:

| Port | Flags | State | LACP port Priority | Admin Key | Oper Key | Port Number |
|----------------|-------|-------|-----------------------|--------------|-------------|----------------|
| Fa0/21 0x3D | SA | bndl | 32768 | 0xD | 0xD | 0x12 |

Partner's information:

| LACP port | | | | | Admin | Oper | Port |
|-----------|-------|----------|----------------|-----|-------|------|--------|
| Port | Flags | Priority | Dev ID | Age | key | Key | Number |
| Fa0/21 | SP | 32768 | 0015.faac.46c0 | 19s | 0x0 | 0x1 | 0x15 |

0x3C

Age of the port in the current state: 0d:02h:02m:11s

Port-channels in the group:

Port-channel: Po13 (Primary Aggregator)

Age of the Port-channel = 0d:02h:02m:23s
 Logical slot/port = 1/1 Number of ports = 3
 HotStandBy port = null
 Port state = Port-channel Ag-Inuse
 Protocol = LACP
 Port security = Disabled

Ports in the Port-channel:

| Index | Load | Port | EC state | No of bits |
|-------|------|--------|----------|------------|
| 0 | 00 | Fa0/19 | Active | 0 |
| 0 | 00 | Fa0/20 | Active | 0 |
| 0 | 00 | Fa0/21 | Active | 0 |

Time since last port bundled: 0d:02h:02m:12s Fa0/21

Group: 14

Group state = L2
 Ports: 3 Maxports = 8
 Port-channels: 1 Max Port-channels = 1
 Protocol: PAgP
 Minimum Links: 0

Ports in the group:

Port: Fa0/16

Port state = Up Mstr In-Bndl
 Channel group = 14 Mode = Automatic-S1 Gcchange = 0
 Port-channel = Po14 GC = 0x000E0001 Pseudo port-channel =
 Po14
 Port index = 0 Load = 0x00 Protocol = PAgP

Flags: S - Device is sending Slow hello. C - Device is in Consistent state.

A - Device is in Auto mode. P - Device learns on physical port.
 d - PAgP is down.
 Timers: H - Hello timer is running. Q - Quit timer is running.
 S - Switching timer is running. I - Interface timer is running.

Local information:

| Group | Port | Flags | State | Timers | Hello Interval | Partner Count | PAgP Priority | Learning Method | |
|---------|--------|-------|-------|--------|----------------|---------------|---------------|-----------------|----|
| Ifindex | Fa0/16 | SAC | U6/S7 | HQ | 30s | 1 | 128 | Any | 33 |

Partner's information:

| Group | Partner | Partner | Partner | Partner |
|--------|---------|----------------|---------|---------|
| Port | Name | Device ID | Port | Age |
| Cap. | | | | Flags |
| Fa0/16 | ASW2 | 0015.fab8.2880 | Fa0/16 | 5s SC |
| 20001 | | | | |

Age of the port in the current state: 0d:02h:02m:16s

Port: Fa0/17

Port state = Up Mstr In-Bndl
 Channel group = 14 Mode = Automatic-S1 Gcchange = 0
 Port-channel = Po14 GC = 0x000E0001 Pseudo port-channel = Po14
 Port index = 0 Load = 0x00 Protocol = PAgP

Flags: S - Device is sending Slow hello. C - Device is in Consistent state.
 A - Device is in Auto mode. P - Device learns on physical port.
 d - PAgP is down.
 Timers: H - Hello timer is running. Q - Quit timer is running.
 S - Switching timer is running. I - Interface timer is running.

Local information:

| Group | Port | Flags | State | Timers | Hello Interval | Partner Count | PAgP Priority | Learning Method | |
|---------|--------|-------|-------|--------|----------------|---------------|---------------|-----------------|----|
| Ifindex | Fa0/17 | SAC | U6/S7 | HQ | 30s | 1 | 128 | Any | 33 |

Partner's information:

| Group | Partner | Partner | Partner | Partner |
|-------|---------|---------|---------|---------|
|-------|---------|---------|---------|---------|

| Port | Name | Device ID | Port | Age | Flags |
|--------|------|----------------|--------|-----|-------|
| Cap. | | | | | |
| Fa0/17 | ASW2 | 0015.fab8.2880 | Fa0/17 | 0s | SC |
| 20001 | | | | | |

Age of the port in the current state: 0d:02h:02m:18s

Port: Fa0/18

Port state = Up Mstr In-Bndl
Channel group = 14 Mode = Automatic-Sl Gcchange = 0
Port-channel = Po14 GC = 0x000E0001 Pseudo port-channel = Po14
Port index = 0 Load = 0x00 Protocol = PAgP

Flags: S - Device is sending Slow hello. C - Device is in Consistent state.
A - Device is in Auto mode. P - Device learns on physical port.
d - PAgP is down.
Timers: H - Hello timer is running. Q - Quit timer is running.
S - Switching timer is running. I - Interface timer is running.

Local information:

| Group | Flags | State | Timers | Interval | Count | Priority | Method | Learning |
|---------|-------|-------|--------|----------|-------|----------|--------|----------|
| Port | | | | | | | | |
| Ifindex | | | | | | | | |
| Fa0/18 | SAC | U6/S7 | HQ | 30s | 1 | 128 | Any | 33 |

Partner's information:

| Group | Partner | Partner | Partner | Partner |
|--------|---------|----------------|---------|---------|
| Port | Name | Device ID | Port | Age |
| Cap. | | | | Flags |
| Fa0/18 | ASW2 | 0015.fab8.2880 | Fa0/18 | 3s |
| 20001 | | | | SC |

Age of the port in the current state: 0d:02h:02m:19s

Port-channels in the group:

Port-channel: Po14

Age of the Port-channel = 0d:02h:02m:28s
Logical slot/port = 1/2 Number of ports = 3
GC = 0x000E0001 HotStandBy port = null
Port state = Port-channel Ag-Inuse
Protocol = PAgP

Port security = Disabled

Ports in the Port-channel:

| Index | Load | Port | EC state | No of bits |
|-------|------|--------|--------------|------------|
| 0 | 00 | Fa0/16 | Automatic-S1 | 0 |
| 0 | 00 | Fa0/17 | Automatic-S1 | 0 |
| 0 | 00 | Fa0/18 | Automatic-S1 | 0 |

Time since last port bundled: 0d:02h:02m:20s Fa0/16

DSW1#

```
DSW1#show standby
Vlan10 - Group 10
  State is Active
    4 state changes, last state change 00:29:56
  Virtual IP address is 10.2.1.254
  Active virtual MAC address is 0000.0c07.ac0a
    Local virtual MAC address is 0000.0c07.ac0a (v1 default)
  Hello time 3 sec, hold time 10 sec
    Next hello sent in 0.600 secs
  Preemption enabled
  Active router is local
  Standby router is 10.2.1.2, priority 20 (expires in 8.724 sec)
  Priority 110 (configured 110)
  IP redundancy name is "hsrp-Vl10-10" (default)
DSW1#
```

DSW1#show standby brief

P indicates configured to preempt.

|

| Interface | Grp | Prio | P | State | Active | Standby | Virtual |
|------------|-----|------|---|--------|--------|----------|---------|
| IP | | | | | | | |
| Vl10 | 10 | 110 | P | Active | local | 10.2.1.2 | |
| 10.2.1.254 | | | | | | | |
| DSW1# | | | | | | | |

```
DSW1#show spanning-tree inconsistentports
```

| Name | Interface | Inconsistency |
|-------|-----------|---------------|
| ----- | ----- | ----- |

```
Number of inconsistent ports (segments) in the system : 0
```

```
DSW1#
```



```

DSW1#show spanning-tree summary
Switch is in rapid-pvst mode
Root bridge for: VLAN0010, VLAN0200
Extended system ID      is enabled
Portfast Default        is disabled
PortFast BPDU Guard Default is disabled
Portfast BPDU Filter Default is disabled
Loopguard Default       is disabled
EtherChannel misconfig guard is enabled
UplinkFast              is disabled
BackboneFast            is disabled
Configured Pathcost method used is short

```

| Name | Blocking | Listening | Learning | Forwarding | STP Active |
|----------|----------|-----------|----------|------------|------------|
| VLAN0010 | 0 | 0 | 0 | 1 | 1 |
| VLAN0020 | 0 | 0 | 0 | 1 | 1 |
| VLAN0200 | 0 | 0 | 0 | 2 | 2 |
| 3 vlans | 0 | 0 | 0 | 4 | 4 |

DSW1#

```
DSW1#show udld
```

```
Interface Fa0/1
```

```
---
```

```
Port enable administrative configuration setting: Disabled  
Port enable operational state: Disabled  
Current bidirectional state: Unknown
```

```
Interface Fa0/2
```

```
---
```

```
Port enable administrative configuration setting: Disabled  
Port enable operational state: Disabled  
Current bidirectional state: Unknown
```

```
Interface Fa0/3
```

```
---
```

```
Port enable administrative configuration setting: Disabled  
Port enable operational state: Disabled  
Current bidirectional state: Unknown
```

```
Interface Fa0/4
```

```
---
```

```
Port enable administrative configuration setting: Disabled  
Port enable operational state: Disabled  
Current bidirectional state: Unknown
```

```
Interface Fa0/5
```

```
---
```

```
Port enable administrative configuration setting: Disabled  
Port enable operational state: Disabled  
Current bidirectional state: Unknown
```

```
Interface Fa0/6
```

```
---
```

```
Port enable administrative configuration setting: Disabled  
Port enable operational state: Disabled  
Current bidirectional state: Unknown
```

```
Interface Fa0/7
```

```
---
```

```
Port enable administrative configuration setting: Disabled  
Port enable operational state: Disabled  
Current bidirectional state: Unknown
```

Interface Fa0/8

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/9

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/10

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/11

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/12

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/13

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/14

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/15

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/16

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/17

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/18

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/19

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/20

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/21

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/22

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/23

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Fa0/24

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Gi0/1

Port enable administrative configuration setting: Disabled
Port enable operational state: Disabled
Current bidirectional state: Unknown

Interface Gi0/2

Port enable administrative configuration setting: Disabled

Port enable operational state: Disabled

Current bidirectional state: Unknown

DSW1#

DSW1#show etherchannel summary

Flags: D - down P - bundled in port-channel

I - stand-alone s - suspended

H - Hot-standby (LACP only)

R - Layer3 S - Layer2

U - in use f - failed to allocate aggregator

M - not in use, minimum links not met

u - unsuitable for bundling

w - waiting to be aggregated

d - default port

Number of channel-groups in use: 3

Number of aggregators: 3

| Group | Port-channel | Protocol | Ports |
|-------|--------------|----------|--------------------------------------|
| 12 | Po12 (RU) | - | Fa0/22 (P) Fa0/23 (P) Fa0/24 (P) |
| 13 | Po13 (SU) | LACP | Fa0/19 (P) Fa0/20 (P) Fa0/21 (P) |
| 14 | Po14 (SU) | PAgP | Fa0/16 (P) Fa0/17 (P) Fa0/18 (P) |

DSW1#

```
DSW1#show etherchannel protocol
      Channel-group listing:
      -----
```

```
Group: 12
-----
```

```
Protocol:  -  (Mode ON)
```

```
Group: 13
-----
```

```
Protocol:  LACP
```

```
Group: 14
-----
```

```
Protocol:  PAgP
```

```
DSW1#
```

```
DSW1#show etherchannel port
      Channel-group listing:
      -----
```

```
Group: 12
-----
```

```
      Ports in the group:
      -----
```

```
Port: Fa0/22
-----
```

```
Port state      = Up Mstr In-Bndl
Channel group   = 12          Mode = On          Gcchange = -
Port-channel    = Po12        GC   = -          Pseudo port-channel =
Po12
Port index      = 0           Load = 0x00        Protocol = -
```

```
Age of the port in the current state: 0d:02h:02m:37s
```

```
Port: Fa0/23
-----
```

```
Port state      = Up Mstr In-Bndl
Channel group   = 12          Mode = On          Gcchange = -
Port-channel    = Po12        GC   = -          Pseudo port-channel =
Po12
Port index      = 0           Load = 0x00        Protocol = -
```

```
Age of the port in the current state: 0d:02h:02m:37s
```

```
Port: Fa0/24
-----
```

```
Port state      = Up Mstr In-Bndl
Channel group   = 12          Mode = On          Gcchange = -
Port-channel    = Po12        GC   = -          Pseudo port-channel =
Po12
Port index      = 0           Load = 0x00        Protocol = -
```

```
Age of the port in the current state: 0d:02h:02m:37s
```


Group: 13

Ports in the group:

Port: Fa0/19

Port state = Up Mstr Assoc In-Bndl
Channel group = 13 Mode = Active Gcchange = -
Port-channel = Po13 GC = - Pseudo port-channel =
Po13
Port index = 0 Load = 0x00 Protocol = LACP

Flags: S - Device is sending Slow LACPDUs F - Device is sending fast
LACPDUs.
A - Device is in active mode. P - Device is in passive
mode.

Local information:

| Port | Flags | State | LACP port Priority | Admin Key | Oper Key | Port Number |
|----------------|-------|-------|-----------------------|--------------|-------------|----------------|
| Fa0/19 0x3D | SA | bndl | 32768 | 0xD | 0xD | 0x10 |

Partner's information:

| Port | Flags | Priority | LACP port Dev ID | Admin Age | Oper key | Port Key | Port Number |
|----------------|-------|----------|---------------------|--------------|-------------|-------------|----------------|
| Fa0/19 0x3C | SP | 32768 | 0015.faac.46c0 | 24s | 0x0 | 0x1 | 0x13 |

Age of the port in the current state: 0d:02h:03m:20s

Port: Fa0/20

Port state = Up Mstr Assoc In-Bndl
Channel group = 13 Mode = Active Gcchange = -
Port-channel = Po13 GC = - Pseudo port-channel =
Po13
Port index = 0 Load = 0x00 Protocol = LACP

Flags: S - Device is sending Slow LACPDUs F - Device is sending fast
LACPDUs.
A - Device is in active mode. P - Device is in passive
mode.

Local information:

| | | | | | | |
|--------|-------|-------|-----------|-------|------|--------|
| | | | LACP port | Admin | Oper | Port |
| Port | | | | | | |
| Port | Flags | State | Priority | Key | Key | Number |
| State | | | | | | |
| Fa0/20 | SA | bndl | 32768 | 0xD | 0xD | 0x11 |
| 0x3D | | | | | | |

Partner's information:

| | | | | | | | |
|--------|-------|----------|----------------|-----|-------|------|--------|
| | | | LACP port | | Admin | Oper | Port |
| Port | | | | | | | |
| Port | Flags | Priority | Dev ID | Age | key | Key | Number |
| State | | | | | | | |
| Fa0/20 | SP | 32768 | 0015.faac.46c0 | 24s | 0x0 | 0x1 | 0x14 |
| 0x3C | | | | | | | |

Age of the port in the current state: 0d:02h:03m:20s

Port: Fa0/21

Port state = Up Mstr Assoc In-Bndl
Channel group = 13 Mode = Active Gcchange = -
Port-channel = Po13 GC = - Pseudo port-channel =
Po13
Port index = 0 Load = 0x00 Protocol = LACP

Flags: S - Device is sending Slow LACPDUs F - Device is sending fast LACPDUs.
A - Device is in active mode. P - Device is in passive mode.

Local information:

| | | | | | | |
|--------|-------|-------|-----------|-------|------|--------|
| | | | LACP port | Admin | Oper | Port |
| Port | | | | | | |
| Port | Flags | State | Priority | Key | Key | Number |
| State | | | | | | |
| Fa0/21 | SA | bndl | 32768 | 0xD | 0xD | 0x12 |
| 0x3D | | | | | | |

Partner's information:

| | | | | | | | |
|--------|-------|----------|----------------|-----|-------|------|--------|
| | | | LACP port | | Admin | Oper | Port |
| Port | | | | | | | |
| Port | Flags | Priority | Dev ID | Age | key | Key | Number |
| State | | | | | | | |
| Fa0/21 | SP | 32768 | 0015.faac.46c0 | 7s | 0x0 | 0x1 | 0x15 |
| 0x3C | | | | | | | |

Age of the port in the current state: 0d:02h:03m:21s

Group: 14

Ports in the group:

Port: Fa0/16

Port state = Up Mstr In-Bndl
Channel group = 14 Mode = Automatic-Sl Gcchange = 0
Port-channel = Po14 GC = 0x000E0001 Pseudo port-channel =
Po14
Port index = 0 Load = 0x00 Protocol = PAgP

Flags: S - Device is sending Slow hello. C - Device is in Consistent
state.
A - Device is in Auto mode. P - Device learns on physical
port.
d - PAgP is down.
Timers: H - Hello timer is running. Q - Quit timer is running.
S - Switching timer is running. I - Interface timer is
running.

Local information:

| Group | | | | Hello | Partner | PAgP | Learning |
|---------|-------|-------|--------|----------|---------|----------|----------|
| Port | Flags | State | Timers | Interval | Count | Priority | Method |
| Ifindex | | | | | | | |
| Fa0/16 | SAC | U6/S7 | HQ | 30s | 1 | 128 | Any 33 |

Partner's information:

| Group | Partner | Partner | Partner | Partner |
|--------|---------|----------------|---------|-----------|
| Port | Name | Device ID | Port | Age Flags |
| Cap. | | | | |
| Fa0/16 | ASW2 | 0015.fab8.2880 | Fa0/16 | 17s SC |
| 20001 | | | | |

Age of the port in the current state: 0d:02h:03m:25s

Port: Fa0/17

Port state = Up Mstr In-Bndl
Channel group = 14 Mode = Automatic-Sl Gcchange = 0
Port-channel = Po14 GC = 0x000E0001 Pseudo port-channel =
Po14
Port index = 0 Load = 0x00 Protocol = PAgP

Flags: S - Device is sending Slow hello. C - Device is in Consistent
state.
A - Device is in Auto mode. P - Device learns on physical
port.
d - PAgP is down.
Timers: H - Hello timer is running. Q - Quit timer is running.

S - Switching timer is running. I - Interface timer is running.

Local information:

| Group | Port | Flags | State | Timers | Hello Interval | Partner Count | PAGP Priority | Learning Method | |
|-------|--------|-------|-------|--------|----------------|---------------|---------------|-----------------|----|
| | Fa0/17 | SAC | U6/S7 | HQ | 30s | 1 | 128 | Any | 33 |

Partner's information:

| Group | Partner | Partner | Partner | Partner |
|--------|---------|----------------|---------|---------|
| Port | Name | Device ID | Port | Age |
| Cap. | | | | Flags |
| Fa0/17 | ASW2 | 0015.fab8.2880 | Fa0/17 | 11s SC |
| 20001 | | | | |

Age of the port in the current state: 0d:02h:03m:27s

Port: Fa0/18

Port state = Up Mstr In-Bndl
Channel group = 14 Mode = Automatic-Sl Gcchange = 0
Port-channel = Po14 GC = 0x000E0001 Pseudo port-channel = Po14
Port index = 0 Load = 0x00 Protocol = PAGP

Flags: S - Device is sending Slow hello. C - Device is in Consistent state.
A - Device is in Auto mode. P - Device learns on physical port.
d - PAGP is down.
Timers: H - Hello timer is running. Q - Quit timer is running.
S - Switching timer is running. I - Interface timer is running.

Local information:

| Group | Port | Flags | State | Timers | Hello Interval | Partner Count | PAGP Priority | Learning Method | |
|-------|--------|-------|-------|--------|----------------|---------------|---------------|-----------------|----|
| | Fa0/18 | SAC | U6/S7 | HQ | 30s | 1 | 128 | Any | 33 |

Partner's information:

| Group | Partner | Partner | Partner | Partner |
|--------|---------|----------------|---------|---------|
| Port | Name | Device ID | Port | Age |
| Cap. | | | | Flags |
| Fa0/18 | ASW2 | 0015.fab8.2880 | Fa0/18 | 19s SC |
| 20001 | | | | |

Age of the port in the current state: 0d:02h:03m:28s

DSW1#

```
DSW1#show etherchannel load-balance
EtherChannel Load-Balancing Configuration:
    src-mac
```

```
EtherChannel Load-Balancing Addresses Used Per-Protocol:
Non-IP: Source MAC address
```

IPv4: Source MAC address

DSW1#

```
DSW1#show etherchannel port-channel
      Channel-group listing:
      -----
```

```
Group: 12
-----
```

```
      Port-channels in the group:
      -----
```

Port-channel: Po12

Age of the Port-channel = 0d:02h:03m:48s
Logical slot/port = 1/0 Number of ports = 3
GC = 0x00000000 HotStandBy port = null
Passive port list = Fa0/22 Fa0/23 Fa0/24
Port state = Port-channel L3-Ag Ag-Inuse
Protocol = -
Port security = Disabled

Ports in the Port-channel:

| Index | Load | Port | EC state | No of bits |
|-------|------|--------|----------|------------|
| 0 | 00 | Fa0/22 | On | 0 |
| 0 | 00 | Fa0/23 | On | 0 |
| 0 | 00 | Fa0/24 | On | 0 |

Time since last port bundled: 0d:02h:02m:57s Fa0/24
Time since last port Un-bundled: 0d:02h:02m:58s Fa0/24

Group: 13

Port-channels in the group:

Port-channel: Po13 (Primary Aggregator)

Age of the Port-channel = 0d:02h:03m:49s
Logical slot/port = 1/1 Number of ports = 3
HotStandBy port = null
Port state = Port-channel Ag-Inuse
Protocol = LACP
Port security = Disabled

Ports in the Port-channel:

| Index | Load | Port | EC state | No of bits |
|-------|------|--------|----------|------------|
| 0 | 00 | Fa0/19 | Active | 0 |
| 0 | 00 | Fa0/20 | Active | 0 |
| 0 | 00 | Fa0/21 | Active | 0 |

Time since last port bundled: 0d:02h:03m:38s Fa0/21

Group: 14

Port-channels in the group:

Port-channel: Po14

Age of the Port-channel = 0d:02h:03m:50s
Logical slot/port = 1/2 Number of ports = 3
GC = 0x000E0001 HotStandBy port = null
Port state = Port-channel Ag-Inuse
Protocol = PAgP
Port security = Disabled

Ports in the Port-channel:

| Index | Load | Port | EC state | No of bits |
|-------|-------|--------|--------------|------------|
| ----- | ----- | ----- | ----- | ----- |
| 0 | 00 | Fa0/16 | Automatic-Sl | 0 |
| 0 | 00 | Fa0/17 | Automatic-Sl | 0 |
| 0 | 00 | Fa0/18 | Automatic-Sl | 0 |

Time since last port bundled: 0d:02h:03m:42s Fa0/16

DSW1#

DSW1#show pagp neighbor

Flags: S - Device is sending Slow hello. C - Device is in Consistent state.

A - Device is in Auto mode. P - Device learns on physical port.

Channel group 14 neighbors

| Group | Partner | Partner | Partner | Partner |
|--------|---------|----------------|---------|-----------|
| Port | Name | Device ID | Port | Age Flags |
| Fa0/16 | ASW2 | 0015.fab8.2880 | Fa0/16 | 13s SC |
| 20001 | | | | |
| Fa0/17 | ASW2 | 0015.fab8.2880 | Fa0/17 | 5s SC |
| 20001 | | | | |
| Fa0/18 | ASW2 | 0015.fab8.2880 | Fa0/18 | 11s SC |
| 20001 | | | | |

DSW1#

A - Device is in Active mode P - Device is in Passive mode

Partner's information:

| Port | Flags | LACP port | Dev ID | Age | Admin | Oper | Port |
|--------|-------|-----------|----------------|-----|-------|------|--------|
| Port | Flags | Priority | Dev ID | Age | key | Key | Number |
| Fa0/19 | SP | 32768 | 0015.faac.46c0 | 0s | 0x0 | 0x1 | 0x13 |
| 0x3C | | | | | | | |
| Fa0/20 | SP | 32768 | 0015.faac.46c0 | 0s | 0x0 | 0x1 | 0x14 |
| 0x3C | | | | | | | |
| Fa0/21 | SP | 32768 | 0015.faac.46c0 | 13s | 0x0 | 0x1 | 0x15 |
| 0x3C | | | | | | | |
| DSW1# | | | | | | | |

DSW1#show port-security

| Secure Port | MaxSecureAddr | CurrentAddr | SecurityViolation | Security |
|-------------|---------------|-------------|-------------------|----------|
| Action | (Count) | (Count) | (Count) | |

| | | | | |
|-------|--|--|--|--|
| ----- | | | | |
| -- | | | | |

| | | | | |
|-------|---|---|---|--|
| Fa0/2 | 2 | 0 | 0 | |
|-------|---|---|---|--|

Shutdown

--

Total Addresses in System (excluding one mac per port) : 0

Max Addresses limit in System (excluding one mac per port) : 5120

DSW1#

```
DSW1#show port-security address
      Secure Mac Address Table
```

| Vlan | Mac Address | Type | Ports | Remaining Age (mins) |
|------|-------------|------|-------|-------------------------|
| ---- | ----- | ---- | ---- | ----- |

```
-----
Total Addresses in System (excluding one mac per port)    : 0
Max Addresses limit in System (excluding one mac per port) : 5120
```