```
DSW2#
DSW2#show running-config
Building configuration...

Current configuration : 6019 bytes
!
! No configuration change since last restart
!
version 12.2
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname DSW2
!
no logging console
!
no aaa new-model
ipv6 unicast-routing
ip subnet-zero
ip routing
!
ip multicast-routing
vtp domain netlearning
vtp mode transparent
!
!
crypto pki trustpoint TP-self-signed-4246780416
 enrollment selfsigned
 subject-name cn=IOS-Self-Signed-Certificate-4246780416
 revocation-check none
 rsakeypair TP-self-signed-4246780416
!
!
crypto pki certificate chain TP-self-signed-4246780416
 certificate self-signed 01
  3082023D 308201A6 A0030201 02020101 300D0609 2A864886 F70D0101 04050030
  31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D 43657274
  69666963 6174652D 34323436 37383034 3136301E 170D3933 30333031 30303031
  30345A17 0D323030 31303130 30303030 305A3031 312F302D 06035504 03132649
  4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D34 32343637
  38303431 3630819F 300D0609 2A864886 F70D0101 01050003 818D0030 81890281
  8100D699 D2A8BD0D A26CE645 B2CE1EC4 EF83204E CBA4D34A B03BC30C 7BF013B1
  5BDEC621 F3CE12CC BC929D9C 463A59DC D49CEF76 3D5193FD 7992F7FF 660F179F
  54CA6370 902081BB ABB71246 5DC79E39 D241B749 11CB4812 07CF1238 A25C59F6
  740464A7 6B3EAE02 6B6B0C13 9B534C70 85BD199E E52D4FB2 AB4C4B5F 678ECD24
  17B30203 010001A3 65306330 0F060355 1D130101 FF040530 030101FF 30100603
  551D1104 09300782 05445357 322E301F 0603551D 23041830 168014A7 8C27C43F
  00BEB401 3F63B68A 9CD582EF D7B15430 1D060355 1D0E0416 0414A78C 27C43F00
  BEB4013F 63B68A9C D582EFD7 B154300D 06092A86 4886F70D 01010405 00038181
  00B9A060 055A57EE 0EE7C450 128718FA 07A5DCE4 8EABE33F 56BA385F 8F9477E8
  191A361C EBEFB296 6A2E4637 11BB4D89 CDFA4DDB 7229B8F1 856DCE18 DF11CA57
  180C3686 28E9079C F004E71B A9F11040 7C952427 573ED2F5 AB38C4D9 768156A4
```

```
    C597E2E3 B9D4C611 F902BEA8 A18209DD 239160AE E6AC24DE 41AD980B 261778F5
AA
  quit
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
spanning-tree vlan 10,200 priority 8192
spanning-tree vlan 20 priority 4096
!
vlan internal allocation policy ascending
!
vlan 10,20,200
!
!
!
!
!
!
interface Tunnel67
 no ip address
 ipv6 address 2026::3:2/122
 ipv6 enable
 ipv6 rip RIPNG enable
 tunnel source 10.2.4.14
 tunnel destination 10.2.4.13
!
interface Port-channel12
 no switchport
 ip address 10.2.4.14 255.255.255.252
 ip pim sparse-dense-mode
!
interface Port-channel23
 switchport trunk encapsulation dot1q
 switchport trunk allowed vlan 10,200
 switchport mode trunk
!
interface Port-channel24
 switchport trunk encapsulation dot1q
 switchport trunk allowed vlan 20,200
 switchport mode trunk
!
interface FastEthernet0/1
 no switchport
 ip address 10.1.4.10 255.255.255.252
 ip pim sparse-dense-mode
!
interface FastEthernet0/2
 switchport mode access
 shutdown
!
interface FastEthernet0/3
 switchport mode access
```

```
!
interface FastEthernet0/4
 switchport mode access
 shutdown
!
interface FastEthernet0/5
 switchport mode access
 shutdown
!
interface FastEthernet0/6
 switchport mode access
 shutdown
!
interface FastEthernet0/7
 switchport mode access
 shutdown
!
interface FastEthernet0/8
 switchport mode access
 shutdown
!
interface FastEthernet0/9
 switchport mode access
 shutdown
!
interface FastEthernet0/10
 switchport mode access
 shutdown
!
interface FastEthernet0/11
 switchport mode access
 shutdown
!
interface FastEthernet0/12
 switchport mode access
 shutdown
!
interface FastEthernet0/13
 switchport mode access
 shutdown
!
interface FastEthernet0/14
 switchport mode access
 shutdown
!
interface FastEthernet0/15
 switchport mode access
!
interface FastEthernet0/16
 switchport trunk encapsulation dot1q
 switchport trunk allowed vlan 20,200
 switchport mode trunk
 channel-group 24 mode desirable
!
```

```
interface FastEthernet0/17
 switchport trunk encapsulation dot1q
 switchport trunk allowed vlan 20,200
 switchport mode trunk
 channel-group 24 mode desirable
!
interface FastEthernet0/18
 switchport trunk encapsulation dot1q
 switchport trunk allowed vlan 20,200
 switchport mode trunk
 channel-group 24 mode desirable
!
interface FastEthernet0/19
 switchport trunk encapsulation dot1q
 switchport trunk allowed vlan 10,200
 switchport mode trunk
 channel-group 23 mode active
!
interface FastEthernet0/20
 switchport trunk encapsulation dot1q
 switchport trunk allowed vlan 10,200
 switchport mode trunk
 channel-group 23 mode active
!
interface FastEthernet0/21
 switchport trunk encapsulation dot1q
 switchport trunk allowed vlan 10,200
 switchport mode trunk
 channel-group 23 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 10.2.1.2 255.255.255.0
 ip helper-address 10.1.4.9
 ip pim sparse-dense-mode
 standby 10 ip 10.2.1.254
 standby 10 priority 20
!
interface Vlan20
 ip address 10.2.2.1 255.255.255.0
 ip pim sparse-dense-mode
!
interface Vlan200
 ip address 192.168.1.130 255.255.255.224
!
!
router eigrp 10
 metric weights 0 1 1 1 1 1
 no auto-summary
 network 10.1.4.10 0.0.0.0
 network 10.2.1.2 0.0.0.0
 network 10.2.2.1 0.0.0.0
 network 10.2.4.14 0.0.0.0
!
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
 login
line vty 5 15
 login
```

```
!
ntp clock-period 17179923
ntp server 10.1.1.1
end

DSW2#
```

```
DSW2#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:
U.U.U
Success rate is 0 percent (0/5)
DSW2#
```

```
DSW2#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:
U.U.U
Success rate is 0 percent (0/5)
DSW2#
```

```
DSW2#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:
U.U.U
Success rate is 0 percent (0/5)
DSW2#
```

```
DSW2#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
DSW2#
```

```
DSW2#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 = 128/130/132
ms
DSW2#
```

```
DSW2#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
DSW2#
```

```
DSW2#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 = 64/67/72 ms
DSW2#
```

```
DSW2#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 = 64/66/68 ms
DSW2#
```

```
DSW2#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
DSW2#
```

```
DSW2#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 = 1/1/4 ms
DSW2#
```

```
DSW2#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
DSW2#
```

```
DSW2#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 = 4/4/4 ms
DSW2#
```

```
DSW2#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
DSW2#
```

```
DSW2#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 = 4/4/4 ms
DSW2#
```

```
DSW2#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 = 4/4/4 ms
DSW2#
```

```
DSW2#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 = 4/4/4 ms
DSW2#
```

```
DSW2#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 = 1/1/4 ms
DSW2#
```

```
DSW2#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 = 4/4/4 ms
DSW2#
```

```
DSW2#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 = 1/1/4 ms
DSW2#
```

```
DSW2#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 = 1/1/1 ms
DSW2#
```

```
DSW2#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 100 percent (5/5), round-trip min/avg/max = 1/3/8 ms
DSW2#
```

```
DSW2#show ip interface brief
Interface              IP-Address      OK? Method Status
Protocol
Vlan1                  unassigned      YES NVRAM  administratively down
down
Vlan10                 10.2.1.2        YES NVRAM  up
up
Vlan20                 10.2.2.1        YES NVRAM  up
up
Vlan200                192.168.1.130   YES NVRAM  up
up
FastEthernet0/1        10.1.4.10       YES NVRAM  up
up
FastEthernet0/2        unassigned      YES unset  administratively down
down
FastEthernet0/3        unassigned      YES unset  down
down
FastEthernet0/4        unassigned      YES unset  administratively down
down
FastEthernet0/5        unassigned      YES unset  administratively down
down
FastEthernet0/6        unassigned      YES unset  administratively down
down
```

```
FastEthernet0/7          unassigned      YES unset  administratively down
down
FastEthernet0/8          unassigned      YES unset  administratively down
down
FastEthernet0/9          unassigned      YES unset  administratively down
down
FastEthernet0/10         unassigned      YES unset  administratively down
down
FastEthernet0/11         unassigned      YES unset  administratively down
down
FastEthernet0/12         unassigned      YES unset  administratively down
down
FastEthernet0/13         unassigned      YES unset  administratively down
down
FastEthernet0/14         unassigned      YES unset  administratively down
down
FastEthernet0/15         unassigned      YES unset  down
down
FastEthernet0/16         unassigned      YES unset  up
up
FastEthernet0/17         unassigned      YES unset  up
up
FastEthernet0/18         unassigned      YES unset  up
up
FastEthernet0/19         unassigned      YES unset  up
up
FastEthernet0/20         unassigned      YES unset  up
up
FastEthernet0/21         unassigned      YES unset  up
up
FastEthernet0/22         unassigned      YES NVRAM  up
up
FastEthernet0/23         unassigned      YES NVRAM  up
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           10.2.4.14       YES NVRAM  up
up
Port-channel23           unassigned      YES unset  up
up
Port-channel24           unassigned      YES unset  up
up
Tunnel67                 unassigned      YES NVRAM  up
up
DSW2#
```

```
DSW2#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 10.1.4.9 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 10.1.4.9, 00:58:19, FastEthernet0/1
C       10.1.4.8/30 is directly connected, FastEthernet0/1
C       10.2.1.0/24 is directly connected, Vlan10
C       10.2.2.0/24 is directly connected, Vlan20
D       10.1.4.4/30 [90/111] via 10.2.2.2, 01:01:35, Vlan20
                    [90/111] via 10.2.1.1, 01:01:35, Vlan10
     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 10.1.4.9, 00:58:04, FastEthernet0/1
DSW2#
```

```
DSW2#show processes cpu
CPU utilization for five seconds: 1%/0%; one minute: 1%; five minutes: 1%
 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        751         0  0.00%  0.00%  0.00%   0 Load Meter
   3          8         35       228  0.00%  0.00%  0.00%   0 SpanTree
Helper
   4       3328        451      7379  0.31%  0.08%  0.06%   0 Check
heaps
   5          0          4         0  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         20        106       188  0.00%  0.00%  0.00%   0 ARP Input
```

9	0	1	0	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	4	2	2000	0.00%	0.00%	0.00%	0	AAA high-capacit
12	0	1	0	0.00%	0.00%	0.00%	0	Policy Manager
13	8	3	2666	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	64	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	3768	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	3769	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	3769	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	3751	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	36	5390	6	0.00%	0.00%	0.00%	0	Net Background
29	0	10	0	0.00%	0.00%	0.00%	0	IDB Work
30	20	30	666	0.00%	0.00%	0.00%	0	Logger
31	0	3748	0	0.00%	0.00%	0.00%	0	TTY Background
32	20	3760	5	0.00%	0.00%	0.00%	0	Per-Second Jobs
33	540	65	8307	0.23%	0.02%	0.00%	0	Per-minute Jobs
34	4	7	571	0.00%	0.00%	0.00%	0	IF-MGR control p
35	0	53	0	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	20	752	26	0.00%	0.00%	0.00%	0	Compute load avg

38	0	1127	0	0.00%	0.00%	0.00%	0	HC Counter Timer
39	4	3709	1	0.00%	0.00%	0.00%	0	Vegas Storm Cont
40	2696	2844	947	0.23%	0.18%	0.20%	0	Exec
41	24	72083	0	0.00%	0.00%	0.00%	0	DownWhenLooped
42	4	5	800	0.00%	0.00%	0.00%	0	Collection proce
43	2916	93720	31	0.00%	0.07%	0.08%	0	Vegas LED Proces
44	0	1	0	0.00%	0.00%	0.00%	0	SCQ_PROCESS
45	100	24957	4	0.00%	0.00%	0.00%	0	RAM Access
46	32	45274	0	0.00%	0.00%	0.00%	0	SW Frame Ager
47	28	34	823	0.00%	0.00%	0.00%	0	VLAN Info Update
48	0	1	0	0.00%	0.00%	0.00%	0	JADE Gbit lockup
49	0	7503	0	0.00%	0.00%	0.00%	0	L2TM Process
50	0	7504	0	0.00%	0.00%	0.00%	0	L3TM
51	14928	11126	1341	0.39%	0.40%	0.40%	0	Vegas Statistics
52	16	52086	0	0.00%	0.00%	0.00%	0	HMATM Learn proc
53	0	3754	0	0.00%	0.00%	0.00%	0	HMATM Age proces
54	32	62	516	0.00%	0.00%	0.00%	0	VL2MM
55	12	3777	3	0.00%	0.00%	0.00%	0	L3MD
56	908	9390	96	0.00%	0.00%	0.00%	0	L3MD_STAT
57	0	1	0	0.00%	0.00%	0.00%	0	Vegas Bridging
58	564	47406	11	0.00%	0.00%	0.00%	0	VegasPM
59	24	1923	12	0.00%	0.00%	0.00%	0	VUR_MGR bg proce
60	16	3754	4	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	63	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	2	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	168	1463	114	0.00%	0.00%	0.00%	0	DTP Protocol
69	0	1	0	0.00%	0.00%	0.00%	0	EAP Framework
70	0	63	0	0.00%	0.00%	0.00%	0	Port-Security
72	0	19	0	0.00%	0.00%	0.00%	0	Switch IP Host T
73	0	378	0	0.00%	0.00%	0.00%	0	Ethchnl
74	0	3756	0	0.00%	0.00%	0.00%	0	UDLD
75	0	1	0	0.00%	0.00%	0.00%	0	Vegas IPSG Proce
76	0	23	0	0.00%	0.00%	0.00%	0	VMATM Callback
77	0	33	0	0.00%	0.00%	0.00%	0	HL3U PBR bkgrd p
78	0	32	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	13	0	0.00%	0.00%	0.00%	0	IP Admin SM Proc
85	432	1451	297	0.00%	0.01%	0.00%	0	CDP Protocol
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	32	0	0.00%	0.00%	0.00%	0	DHCP Snooping
90	0	3	0	0.00%	0.00%	0.00%	0	CEF switching ba
91	1600	8185	195	0.00%	0.00%	0.00%	0	IP Input
92	0	1	0	0.00%	0.00%	0.00%	0	ICMP event handl
93	0	7336	0	0.00%	0.00%	0.00%	0	IP ARP Track
94	0	5	0	0.00%	0.00%	0.00%	0	ADJ resolve proc
95	756	8987	84	0.00%	0.00%	0.00%	0	Spanning Tree
96	0	2	0	0.00%	0.00%	0.00%	0	EAPoUDP Process
97	4	2	2000	0.00%	0.00%	0.00%	0	KRB5 AAA
98	0	65	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	49	0	0.00%	0.00%	0.00%	0	Cluster L2

101	0	377	0	0.00%	0.00%	0.00%	0	Cluster RARP
102	120	1040	115	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	4	15	266	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	8	30	266	0.00%	0.00%	0.00%	0	L2MM
110	40	316	126	0.00%	0.00%	0.00%	0	MRD
111	44	323	136	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	4	4	1000	0.00%	0.00%	0.00%	0	Crypto ACL
116	16	78	205	0.00%	0.00%	0.00%	0	IP RIB Update
117	12	16	750	0.00%	0.00%	0.00%	0	DHCPD Receive
118	0	1	0	0.00%	0.00%	0.00%	0	Transport Port A
119	2112	15	140800	0.00%	0.15%	0.22%	0	crypto sw pk pro
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	100	191	523	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	24	4	6000	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	3761	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	0	2	0	0.00%	0.00%	0.00%	0	DHCP Security He
140	20	6312	3	0.00%	0.00%	0.00%	0	PM Callback
141	12	32	375	0.00%	0.00%	0.00%	0	VLAN Manager
142	0	32	0	0.00%	0.00%	0.00%	0	DHCPD Timer
143	0	302	0	0.00%	0.00%	0.00%	0	dhcp snooping sw
144	228	1262	180	0.00%	0.00%	0.00%	0	Inline Power
145	256	8325	30	0.00%	0.00%	0.00%	0	Marvell wk-a Pow
146	0	2	0	0.00%	0.00%	0.00%	0	Inline Power Twe
147	0	1	0	0.00%	0.00%	0.00%	0	VFM Queue Proces
148	4	1	4000	0.00%	0.00%	0.00%	0	VFM/VQM Merge Pr
149	0	1	0	0.00%	0.00%	0.00%	0	VFM Deferred Upd
150	0	13	0	0.00%	0.00%	0.00%	0	VTP Trap Process
152	0	2	0	0.00%	0.00%	0.00%	0	AAA SEND STOP EV
153	0	1	0	0.00%	0.00%	0.00%	0	Syslog Traps
154	0	1	0	0.00%	0.00%	0.00%	0	DATA Transfer Pr
155	0	1	0	0.00%	0.00%	0.00%	0	DATA Collector
156	4	21	190	0.00%	0.00%	0.00%	0	Syslog
157	0	1	0	0.00%	0.00%	0.00%	0	C3550 DHCP Snoop
158	0	2	0	0.00%	0.00%	0.00%	0	STP STACK TOPOLO
159	0	2	0	0.00%	0.00%	0.00%	0	STP FAST TRANSIT
160	0	2	0	0.00%	0.00%	0.00%	0	STP STACK TOPOLO
161	0	2	0	0.00%	0.00%	0.00%	0	CSRT RAPID TRANS
163	0	5	0	0.00%	0.00%	0.00%	0	SSH Event handle
164	4	16	250	0.00%	0.00%	0.00%	0	IPv6 RIB Redistr

```
 165          32       5798         5  0.00%  0.00%  0.00%   0 CEF: IPv4
proces
 166           0          1         0  0.00%  0.00%  0.00%   0 ADJ
background
 167          12        121        99  0.00%  0.00%  0.00%   0 IP
Background
 168         272       2260       120  0.00%  0.00%  0.00%   0 IPv6 Input
 169           0        181         0  0.00%  0.00%  0.00%   0 IPv6 IDB
 170           0          4         0  0.00%  0.00%  0.00%   0 IPv6 ND
 171          24        443        54  0.00%  0.00%  0.00%   0 IPv6 RIP
 172           0       3765         0  0.00%  0.00%  0.00%   0 DVMRP
Timers
 173          40       4089         9  0.00%  0.00%  0.00%   0 IGMP Input
 174          96       4931        19  0.00%  0.00%  0.00%   0 PIM
Process
 175          12      37620         0  0.00%  0.00%  0.00%   0 Mwheel
Process
 176         132        836       157  0.00%  0.00%  0.00%   0 PAgP
 177         148       1249       118  0.00%  0.00%  0.00%   0 LACP
Protocol
 178         132       2616        50  0.00%  0.00%  0.00%   0 HSRP
(Standby)
 180          24       3871         6  0.00%  0.00%  0.00%   0 NTP
 181           0       1056         0  0.00%  0.00%  0.00%   0 DHCPD
Database
 182           0         17         0  0.00%  0.00%  0.00%   0 EIGRP:
Router
 183         488       3815       127  0.00%  0.00%  0.00%   0 EIGRP-
IPv4:
 184         292       6618        44  0.00%  0.00%  0.00%   0 EIGRP-
IPv4: Hell
DSW2#
```

```
DSW2#show interfaces
Vlan1 is administratively down, line protocol is down
  Hardware is EtherSVI, address is 000b.fd20.ba00 (bia 000b.fd20.ba00)
  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 runts, 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 000b.fd20.ba00 (bia 000b.fd20.ba00)
  Internet address is 10.2.1.2/24
  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 00:00:00, output 00:00:02, 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
     2452 packets input, 193553 bytes, 0 no buffer
     Received 0 broadcasts (816 IP multicasts)
     0 runts, 0 giants, 0 throttles
```

```
      0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
      2382 packets output, 163155 bytes, 0 underruns
      0 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 000b.fd20.ba00 (bia 000b.fd20.ba00)
  Internet address is 10.2.2.1/24
  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 00:00:03, 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
      984 packets input, 77950 bytes, 0 no buffer
      Received 0 broadcasts (818 IP multicasts)
      0 runts, 0 giants, 0 throttles
      0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
      1068 packets output, 79885 bytes, 0 underruns
      0 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 000b.fd20.ba00 (bia 000b.fd20.ba00)
  Internet address is 192.168.1.130/27
  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 never, output 01:02:07, 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
      0 packets input, 0 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 000b.fd20.ba00 (bia
000b.fd20.ba00)
  Internet address is 10.1.4.10/30
  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 00:00:03, output 00:00:02, 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
      5361 packets input, 437092 bytes, 0 no buffer
      Received 1096 broadcasts (831 IP multicasts)
      0 runts, 0 giants, 0 throttles
      0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
      0 watchdog, 1093 multicast, 0 pause input
      0 input packets with dribble condition detected
      1713 packets output, 164003 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 administratively down, line protocol is down
(disabled)
  Hardware is Fast Ethernet, address is 000b.fd20.ba02 (bia
000b.fd20.ba02)
  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 000b.fd20.ba03 (bia
000b.fd20.ba03)
  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
FastEthernet0/4 is administratively down, line protocol is down
(disabled)
  Hardware is Fast Ethernet, address is 000b.fd20.ba04 (bia
000b.fd20.ba04)
  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
FastEthernet0/5 is administratively down, line protocol is down
(disabled)
  Hardware is Fast Ethernet, address is 000b.fd20.ba05 (bia
000b.fd20.ba05)
  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
FastEthernet0/6 is administratively down, line protocol is down
(disabled)
  Hardware is Fast Ethernet, address is 000b.fd20.ba06 (bia
000b.fd20.ba06)
  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
FastEthernet0/7 is administratively down, line protocol is down
(disabled)
  Hardware is Fast Ethernet, address is 000b.fd20.ba07 (bia
000b.fd20.ba07)
  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 administratively down, line protocol is down
(disabled)
  Hardware is Fast Ethernet, address is 000b.fd20.ba08 (bia
000b.fd20.ba08)
  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 administratively down, line protocol is down
(disabled)
  Hardware is Fast Ethernet, address is 000b.fd20.ba09 (bia
000b.fd20.ba09)
  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
FastEthernet0/10 is administratively down, line protocol is down
(disabled)
  Hardware is Fast Ethernet, address is 000b.fd20.ba0a (bia
000b.fd20.ba0a)
  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 administratively down, line protocol is down
(disabled)
   Hardware is Fast Ethernet, address is 000b.fd20.ba0b (bia
000b.fd20.ba0b)
   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
FastEthernet0/12 is administratively down, line protocol is down
(disabled)
   Hardware is Fast Ethernet, address is 000b.fd20.ba0c (bia
000b.fd20.ba0c)
   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 administratively down, line protocol is down
(disabled)
  Hardware is Fast Ethernet, address is 000b.fd20.ba0d (bia
000b.fd20.ba0d)
  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
FastEthernet0/14 is administratively down, line protocol is down
(disabled)
  Hardware is Fast Ethernet, address is 000b.fd20.ba0e (bia
000b.fd20.ba0e)
  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 000b.fd20.ba0f (bia
000b.fd20.ba0f)
  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 000b.fd20.ba10 (bia
000b.fd20.ba10)
  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 00:00:05, output 00:00:02, 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
      717 packets input, 72694 bytes, 0 no buffer
      Received 338 broadcasts (0 multicasts)
      0 runts, 0 giants, 0 throttles
      0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
      0 watchdog, 338 multicast, 0 pause input
      0 input packets with dribble condition detected
      1805 packets output, 162591 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)
  Hardware is Fast Ethernet, address is 000b.fd20.ba11 (bia
000b.fd20.ba11)
  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 00:00:07, 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
      3999 packets input, 319284 bytes, 0 no buffer
      Received 3204 broadcasts (0 multicasts)
      0 runts, 0 giants, 0 throttles
      0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
      0 watchdog, 3202 multicast, 0 pause input
      0 input packets with dribble condition detected
      733 packets output, 74020 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 000b.fd20.ba12 (bia
000b.fd20.ba12)
  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 00:00:10, 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 1000 bits/sec, 1 packets/sec
     718 packets input, 72784 bytes, 0 no buffer
     Received 339 broadcasts (0 multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 339 multicast, 0 pause input
     0 input packets with dribble condition detected
     2616 packets output, 208864 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 000b.fd20.ba13 (bia
000b.fd20.ba13)
  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 00:00:11, output 00:00:02, 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, 2 packets/sec
  5 minute output rate 1000 bits/sec, 1 packets/sec
     7260 packets input, 578236 bytes, 0 no buffer
     Received 6819 broadcasts (0 multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 6705 multicast, 0 pause input
     0 input packets with dribble condition detected
     3139 packets output, 263539 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 000b.fd20.ba14 (bia
000b.fd20.ba14)
  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 00:00:12, 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
     720 packets input, 78338 bytes, 0 no buffer
     Received 340 broadcasts (0 multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 340 multicast, 0 pause input
     0 input packets with dribble condition detected
     721 packets output, 77932 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 000b.fd20.ba15 (bia
000b.fd20.ba15)
  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 00:00:07, 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
     724 packets input, 78880 bytes, 0 no buffer
     Received 340 broadcasts (0 multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 340 multicast, 0 pause input
     0 input packets with dribble condition detected
     4359 packets output, 376566 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 000b.fd20.ba00 (bia
000b.fd20.ba00)
  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 00:00:21, 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 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
      3720 packets input, 447026 bytes, 0 no buffer
      Received 1099 broadcasts (0 multicasts)
      0 runts, 0 giants, 0 throttles
      0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
      0 watchdog, 1097 multicast, 0 pause input
      0 input packets with dribble condition detected
      3731 packets output, 444141 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 000b.fd20.ba00 (bia
000b.fd20.ba00)
  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 00:00:22, 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
      450 packets input, 49610 bytes, 0 no buffer
      Received 65 broadcasts (0 multicasts)
      0 runts, 0 giants, 0 throttles
      0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
      0 watchdog, 65 multicast, 0 pause input
      0 input packets with dribble condition detected
```

```
     447 packets output, 51120 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 000b.fd20.ba00 (bia
000b.fd20.ba00)
  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 00:00:24, 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
     445 packets input, 49020 bytes, 0 no buffer
     Received 65 broadcasts (0 multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 65 multicast, 0 pause input
     0 input packets with dribble condition detected
     448 packets output, 51184 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 000b.fd20.ba19 (bia
000b.fd20.ba19)
  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 000b.fd20.ba1a (bia
000b.fd20.ba1a)
  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 000b.fd20.ba00 (bia
000b.fd20.ba00)
  Internet address is 10.2.4.14/30
  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 00:00:00, 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
        4618 packets input, 545888 bytes, 0 no buffer
        Received 1232 broadcasts (841 IP multicasts)
        0 runts, 0 giants, 0 throttles
        0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
        0 watchdog, 1230 multicast, 0 pause input
        0 input packets with dribble condition detected
        4629 packets output, 546665 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-channel23 is up, line protocol is up (connected)
  Hardware is EtherChannel, address is 000b.fd20.ba13 (bia
000b.fd20.ba13)
  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 00:00:00, 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 1000 bits/sec, 1 packets/sec
     8704 packets input, 735010 bytes, 0 no buffer
     Received 7493 broadcasts (0 multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 7378 multicast, 0 pause input
     0 input packets with dribble condition detected
     8211 packets output, 716741 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-channel24 is up, line protocol is up (connected)
  Hardware is EtherChannel, address is 000b.fd20.ba11 (bia
000b.fd20.ba11)
  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
       5436 packets input, 465024 bytes, 0 no buffer
       Received 3875 broadcasts (0 multicasts)
       0 runts, 0 giants, 0 throttles
       0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
       0 watchdog, 3873 multicast, 0 pause input
       0 input packets with dribble condition detected
       5154 packets output, 445563 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
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 10.2.4.14, destination 10.2.4.13
  Tunnel protocol/transport GRE/IP, key disabled, sequencing disabled
  Tunnel TTL 255
  Checksumming of packets disabled
  Last input 00:00:25, output 00:00:24, 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
     2195 packets input, 273800 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
     2203 packets output, 269108 bytes, 0 underruns
     0 output errors, 0 collisions, 0 interface resets
     0 output buffer failures, 0 output buffers swapped out
DSW2#
```

```
DSW2#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
```

Port					
Po23	0	0	0	0	0
Po24	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
Po23               0          0          0          0          0          0
0
Po24               0          0          0          0          0          0
0
DSW2#
```

DSW2#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         133         R S I     1841      Fas
0/1
DSW1            Fas 0/24        134         R S I     WS-C3550- Fas
0/24
DSW1            Fas 0/23        134         R S I     WS-C3550- Fas
0/23
DSW1            Fas 0/22        134         R S I     WS-C3550- Fas
0/22
ASW1            Fas 0/20        122           S I     WS-C2950- Fas
0/17
ASW1            Fas 0/21        122           S I     WS-C2950- Fas
0/18
ASW1            Fas 0/19        122           S I     WS-C2950- Fas
0/16
ASW2            Fas 0/18        123           S I     WS-C2950- Fas
0/21
ASW2            Fas 0/16        123           S I     WS-C2950- Fas
0/19
ASW2            Fas 0/17        123           S I     WS-C2950- Fas
0/20
DSW2#
```

```
DSW2#show cdp neighbors detail
-------------------------
Device ID: R4
Entry address(es):
  IP address: 10.1.4.9
Platform: Cisco 1841,  Capabilities: Router Switch IGMP
Interface: FastEthernet0/1,  Port ID (outgoing port): FastEthernet0/1
Holdtime : 125 sec

Version :
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version
12.4(25b), RELEASE SOFTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2009 by Cisco Systems, Inc.
Compiled Wed 12-Aug-09 10:49 by prod_rel_team

advertisement version: 2
VTP Management Domain: ''
Duplex: full
Management address(es):

-------------------------
Device ID: DSW1
Entry address(es):
  IP address: 10.2.4.13
Platform: Cisco WS-C3550-24,  Capabilities: Router Switch IGMP
Interface: FastEthernet0/24,  Port ID (outgoing port): FastEthernet0/24
Holdtime : 125 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=00000000FFFFFFFF0102250C000000000000000DBDE36E00FF0000
VTP Management Domain: 'netlearning'
Duplex: full
Management address(es):
  IP address: 10.2.4.13

-------------------------
Device ID: DSW1
Entry address(es):
  IP address: 10.2.4.13
Platform: Cisco WS-C3550-24,  Capabilities: Router Switch IGMP
Interface: FastEthernet0/23,  Port ID (outgoing port): FastEthernet0/23
Holdtime : 124 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=00000000FFFFFFFF0102250C000000000000000DBDE36E00FF0000
VTP Management Domain: 'netlearning'
Duplex: full
Management address(es):
  IP address: 10.2.4.13

-------------------------
Device ID: DSW1
Entry address(es):
  IP address: 10.2.4.13
Platform: Cisco WS-C3550-24,  Capabilities: Router Switch IGMP
Interface: FastEthernet0/22,  Port ID (outgoing port): FastEthernet0/22
Holdtime : 123 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=00000000FFFFFFFF0102250C000000000000000DBDE36E00FF0000
VTP Management Domain: 'netlearning'
Duplex: full
Management address(es):
  IP address: 10.2.4.13

-------------------------
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): FastEthernet0/17
Holdtime : 172 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=00000000FFFFFFFF010225020000000000000015FAAC46C0FF0000
```

```
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: FastEthernet0/21,  Port ID (outgoing port): FastEthernet0/18
Holdtime : 171 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=00000000FFFFFFFF010225020000000000000015FAAC46C0FF0000
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): FastEthernet0/16
Holdtime : 170 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=00000000FFFFFFFF010225020000000000000015FAAC46C0FF0000
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: FastEthernet0/18,  Port ID (outgoing port): FastEthernet0/21
Holdtime : 169 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=00000000FFFFFFFF010225010000000000000015FAB82880FF0000
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: FastEthernet0/16,  Port ID (outgoing port): FastEthernet0/19
Holdtime : 169 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=00000000FFFFFFFF010225010000000000000015FAB82880FF0000
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): FastEthernet0/20
```

```
Holdtime : 167 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=00000000FFFFFFFF010225010000000000000015FAB82880FF0000
VTP Management Domain: 'netlearning'
Native VLAN: 1
Duplex: full
Management address(es):
  IP address: 192.168.1.132

DSW2#
```

```
DSW2#show arp
Protocol  Address           Age (min)  Hardware Addr    Type   Interface
Internet  10.2.4.13             64     000d.bde3.6e00   ARPA   Port-
channel12
Internet  10.2.4.14              -     000b.fd20.ba00   ARPA   Port-
channel12
Internet  10.1.4.10              -     000b.fd20.ba00   ARPA
FastEthernet0/1
Internet  10.1.4.9              64     0019.5578.1cb3   ARPA
FastEthernet0/1
Internet  10.2.1.1              63     000d.bde3.6e00   ARPA   Vlan10
Internet  10.2.2.2              63     000d.bde3.6e00   ARPA   Vlan20
Internet  10.2.2.1               -     000b.fd20.ba00   ARPA   Vlan20
Internet  10.2.1.2               -     000b.fd20.ba00   ARPA   Vlan10
Internet  10.2.1.4               2     001c.238e.dbbc   ARPA   Vlan10
Internet  192.168.1.130          -     000b.fd20.ba00   ARPA   Vlan200
Internet  10.2.1.254            53     0000.0c07.ac0a   ARPA   Vlan10
DSW2#
```

```
DSW2#show ip arp
Protocol  Address           Age (min)  Hardware Addr    Type   Interface
Internet  10.2.4.13             64     000d.bde3.6e00   ARPA   Port-
channel12
Internet  10.2.4.14              -     000b.fd20.ba00   ARPA   Port-
channel12
Internet  10.1.4.10             -      000b.fd20.ba00   ARPA
FastEthernet0/1
Internet  10.1.4.9              64     0019.5578.1cb3   ARPA
FastEthernet0/1
Internet  10.2.1.1              63     000d.bde3.6e00   ARPA   Vlan10
Internet  10.2.2.2              63     000d.bde3.6e00   ARPA   Vlan20
Internet  10.2.2.1              -      000b.fd20.ba00   ARPA   Vlan20
Internet  10.2.1.2              -      000b.fd20.ba00   ARPA   Vlan10
Internet  10.2.1.4              2      001c.238e.dbbc   ARPA   Vlan10
Internet  192.168.1.130        -      000b.fd20.ba00   ARPA   Vlan200
Internet  10.2.1.254            53     0000.0c07.ac0a   ARPA   Vlan10
DSW2#
```

```
DSW2#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 10.2.1.2/24
  Broadcast address is 255.255.255.255
  Address determined by non-volatile memory
  MTU is 1500 bytes
  Helper address is 10.1.4.9
  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 unreachables 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 10.2.2.1/24
  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 unreachables 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 192.168.1.130/27
     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 unreachables 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 10.1.4.10/30
  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 unreachables 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 administratively 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 administratively down, line protocol is down
  Inbound  access list is not set
FastEthernet0/5 is administratively down, line protocol is down
  Inbound  access list is not set
FastEthernet0/6 is administratively down, line protocol is down
```

```
     Inbound  access list is not set
FastEthernet0/7 is administratively down, line protocol is down
   Inbound  access list is not set
FastEthernet0/8 is administratively down, line protocol is down
   Inbound  access list is not set
FastEthernet0/9 is administratively down, line protocol is down
   Inbound  access list is not set
FastEthernet0/10 is administratively down, line protocol is down
   Inbound  access list is not set
FastEthernet0/11 is administratively down, line protocol is down
   Inbound  access list is not set
FastEthernet0/12 is administratively down, line protocol is down
   Inbound  access list is not set
FastEthernet0/13 is administratively down, line protocol is down
   Inbound  access list is not set
FastEthernet0/14 is administratively 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 10.2.4.14/30
   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 unreachables 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-channel23 is up, line protocol is up
Port-channel24 is up, line protocol is up
Tunnel67 is up, line protocol is up
   Internet protocol processing disabled
DSW2#
```

```
DSW2#show ip cef
Prefix                  Next Hop              Interface
0.0.0.0/0               10.1.4.9             FastEthernet0/1
0.0.0.0/32              receive
10.1.1.8/30             10.1.4.9             FastEthernet0/1
10.1.4.4/30             10.2.1.1             Vlan10
                        10.2.2.2             Vlan20
10.1.4.8/30             attached             FastEthernet0/1
10.1.4.8/32             receive              FastEthernet0/1
10.1.4.9/32             attached             FastEthernet0/1
10.1.4.10/32            receive              FastEthernet0/1
10.1.4.11/32            receive              FastEthernet0/1
10.2.1.0/24             attached             Vlan10
10.2.1.0/32             receive              Vlan10
10.2.1.1/32             attached             Vlan10
10.2.1.2/32             receive              Vlan10
10.2.1.4/32             attached             Vlan10
10.2.1.254/32           attached             Vlan10
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             receive              Vlan20
10.2.2.2/32             attached             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            attached             Port-channel12
10.2.4.14/32            receive              Port-channel12
10.2.4.15/32            receive              Port-channel12
192.168.1.128/27        attached             Vlan200
192.168.1.128/32        receive              Vlan200
192.168.1.130/32        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
DSW2#
```

```
DSW2#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
DSW2#
```

```
DSW2#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:
  10.1.4.10/32
  10.2.1.2/32
  10.2.2.1/32
  10.2.4.14/32
Routing Information Sources:
  Gateway          Distance      Last Update
  10.2.4.13             90       01:00:34
  10.1.4.9              90       01:00:34
  10.2.1.1              90       01:00:34
  10.2.2.2              90       01:00:34
Distance: internal 90 external 170

DSW2#
```

```
DSW2#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
DSW2#
```

```
DSW2#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 10.1.4.9, 01:01:04, FastEthernet0/1
D       10.1.4.4/30 [90/111] via 10.2.2.2, 01:04:20, Vlan20
                    [90/111] via 10.2.1.1, 01:04:20, Vlan10
D*EX 0.0.0.0/0 [170/1023] via 10.1.4.9, 01:00:48, FastEthernet0/1
```

```
DSW2#
```

```
DSW2#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    10.2.1.1               Vl10             12 01:04:29     55    330   0
94
2    10.2.2.2               Vl20             10 01:04:29     35    210   0
93
1    10.2.4.13              Po12             13 01:05:10      1    200   0
95
0    10.1.4.9               Fa0/1            10 01:05:11      1    200   0
47
DSW2#
```

```
DSW2#show ip eigrp interfaces
EIGRP-IPv4:(10) interfaces for process 10

                         Xmit Queue   Mean   Pacing Time   Multicast
Pending
Interface       Peers   Un/Reliable   SRTT   Un/Reliable   Flow Timer
Routes
Fa0/1             1        0/0          1        0/1           50
0
Vl10              1        0/0         55        0/1          276
0
Vl20              1        0/0         35        0/1          176
0
Po12              1        0/0          1        0/1           50
0
DSW2#
```

```
DSW2#show vlan

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------
------
1    default                          active    Fa0/2, Fa0/3, Fa0/4,
Fa0/5
                                                Fa0/6, Fa0/7, Fa0/8,
Fa0/9
                                                Fa0/10, Fa0/11, Fa0/12,
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 Trans1 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   -        -    srb      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
------- --------- ---------------- ------------------------------------------


DSW2#
```

```
DSW2#show spanning-tree

VLAN0010
  Spanning tree enabled protocol ieee
  Root ID    Priority    4106
             Address     000d.bde3.6e00
             Cost        18
             Port        66 (Port-channel23)
             Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    8202   (priority 8192 sys-id-ext 10)
             Address     000b.fd20.ba00
             Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time 300

Interface          Role Sts Cost      Prio.Nbr Type
------------------ ---- --- --------- -------- -------------------------
-------
Po23               Root FWD 9         128.66   P2p


VLAN0020
  Spanning tree enabled protocol ieee
  Root ID    Priority    4116
             Address     000b.fd20.ba00
             This bridge is the root
             Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    4116   (priority 4096 sys-id-ext 20)
             Address     000b.fd20.ba00
             Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time 300

Interface          Role Sts Cost      Prio.Nbr Type
------------------ ---- --- --------- -------- -------------------------
-------
Po24               Desg FWD 9         128.67   P2p


VLAN0200
  Spanning tree enabled protocol ieee
  Root ID    Priority    4296
             Address     000d.bde3.6e00
             Cost        18
```

```
            Port         66 (Port-channel23)
            Hello Time    2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority      8392   (priority 8192 sys-id-ext 200)
            Address       000b.fd20.ba00
            Hello Time    2 sec  Max Age 20 sec  Forward Delay 15 sec
            Aging Time 300

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- -------------------------
-------
Po23                Root FWD 9         128.66   P2p
Po24                Altn BLK 9         128.67   P2p

DSW2#
```

```
DSW2#show interfaces status

Port       Name                 Status       Vlan      Duplex  Speed Type
```

```
Fa0/1                            connected    routed    a-full  a-100
10/100BaseTX
Fa0/2                            disabled     1          auto    auto
10/100BaseTX
Fa0/3                            notconnect   1          auto    auto
10/100BaseTX
Fa0/4                            disabled     1          auto    auto
10/100BaseTX
Fa0/5                            disabled     1          auto    auto
10/100BaseTX
Fa0/6                            disabled     1          auto    auto
10/100BaseTX
Fa0/7                            disabled     1          auto    auto
10/100BaseTX
Fa0/8                            disabled     1          auto    auto
10/100BaseTX
Fa0/9                            disabled     1          auto    auto
10/100BaseTX
Fa0/10                           disabled     1          auto    auto
10/100BaseTX
Fa0/11                           disabled     1          auto    auto
10/100BaseTX
Fa0/12                           disabled     1          auto    auto
10/100BaseTX
Fa0/13                           disabled     1          auto    auto
10/100BaseTX
Fa0/14                           disabled     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
Po12                             connected    routed    a-full  a-100
Po23                             connected    trunk     a-full  a-100
```

```
Po24                                    connected    trunk      a-full  a-100
DSW2#
```

```
DSW2#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: 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: Fa0/3
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: Fa0/4
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: Fa0/5
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: Fa0/6
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: Fa0/7
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: Fa0/8
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: Fa0/9
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: Fa0/10
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: 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: Fa0/13
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 Po24)
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 Po24)
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 Po24)
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 Po23)
```

```
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 Po23)
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 Po23)
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: Po23
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: Po24
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
DSW2#
```

```
DSW2#show interfaces trunk

Port          Mode                 Encapsulation  Status        Native vlan
Po23          on                   802.1q         trunking      1
Po24          on                   802.1q         trunking      1

Port          Vlans allowed on trunk
Po23          10,200
Po24          20,200

Port          Vlans allowed and active in management domain
Po23          10,200
Po24          20,200

Port          Vlans in spanning tree forwarding state and not pruned
Po23          10,200
Po24          20
DSW2#
```

```
DSW2#show vtp status
VTP Version                    : running VTP2
Configuration Revision         : 0
Maximum VLANs supported locally : 1005
Number of existing VLANs       : 8
VTP Operating Mode             : Transparent
VTP Domain Name                : netlearning
VTP Pruning Mode               : Disabled
VTP V2 Mode                    : Enabled
VTP Traps Generation           : Disabled
MD5 digest                     : 0x99 0xF7 0xCE 0x74 0x55 0xA6 0x6A 0xC7
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00
DSW2#
```

```
DSW2#show vtp password
VTP Password: cisco1
DSW2#
```

```
DSW2#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:01h:06m:45s

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:01h:06m:46s

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:01h:06m:46s

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

Port-channel: Po12
------------

Age of the Port-channel   = 0d:01h:06m:53s
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:01h:06m:46s    Fa0/24
Time since last port Un-bundled: 0d:01h:06m:48s    Fa0/24


Group: 23
----------
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 = 23            Mode = Active        Gcchange = -
Port-channel  = Po23          GC   =   -           Pseudo port-channel =
Po23
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
Fa0/19     SA       bndl      32768         0x17      0x17    0x10
0x3D


Partner's information:

                   LACP port                         Admin Oper    Port
Port
Port       Flags    Priority Dev ID          Age     key   Key     Number
State
```

```
Fa0/19    SA       32768      0015.faac.46c0   8s    0x0    0x2    0x10
0x3D

Age of the port in the current state: 0d:01h:06m:42s

Port: Fa0/20
------------

Port state    = Up Mstr Assoc In-Bndl
Channel group = 23           Mode = Active        Gcchange = -
Port-channel = Po23          GC   =   -           Pseudo port-channel =
Po23
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        0x17     0x17    0x11
0x3D

Partner's information:

                  LACP port                       Admin Oper   Port
Port
Port       Flags   Priority  Dev ID        Age    key   Key    Number
State
Fa0/20     SA      32768     0015.faac.46c0  0s    0x0   0x2    0x11
0x3D

Age of the port in the current state: 0d:01h:06m:42s

Port: Fa0/21
------------

Port state    = Up Mstr Assoc In-Bndl
Channel group = 23           Mode = Active        Gcchange = -
Port-channel = Po23          GC   =   -           Pseudo port-channel =
Po23
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        0x17      0x17     0x12
0x3D


Partner's information:

                    LACP port                    Admin  Oper   Port
Port
Port      Flags   Priority  Dev ID         Age   key    Key    Number
State
Fa0/21    SA      32768     0015.faac.46c0  6s   0x0    0x2    0x12
0x3D


Age of the port in the current state: 0d:01h:06m:43s

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


Port-channel: Po23    (Primary Aggregator)


------------

Age of the Port-channel    = 0d:01h:06m:58s
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:01h:06m:44s    Fa0/20

Group: 24
----------
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 = 24          Mode = Desirable-Sl    Gcchange = 0
Port-channel  = Po24        GC   = 0x00180001      Pseudo port-channel =
Po24
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:
                                Hello      Partner  PAgP      Learning
Group
Port          Flags State    Timers   Interval Count   Priority   Method
Ifindex
Fa0/16    SC    U6/S7     H        30s      1         128        Any        32

Partner's information:

            Partner                 Partner            Partner            Partner
Group
Port        Name                    Device ID          Port        Age  Flags
Cap.
Fa0/16    ASW2                0015.fab8.2880   Fa0/19      7s SC
10001

Age of the port in the current state: 0d:01h:06m:47s

Port: Fa0/17
------------

Port state     = Up Mstr In-Bndl
Channel group = 24          Mode = Desirable-Sl    Gcchange = 0
Port-channel  = Po24        GC   = 0x00180001      Pseudo port-channel =
Po24
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:
                                Hello      Partner  PAgP      Learning
Group
```

```
Port          Flags State   Timers  Interval Count   Priority   Method
Ifindex
Fa0/17    SC    U6/S7   H       30s      1       128        Any        32
```

Partner's information:

```
          Partner                 Partner           Partner         Partner
Group
Port      Name                    Device ID         Port        Age Flags
Cap.
Fa0/17    ASW2                    0015.fab8.2880    Fa0/20      8s SC
10001
```

Age of the port in the current state: 0d:01h:06m:48s

Port: Fa0/18

```
Port state    = Up Mstr In-Bndl
Channel group = 24           Mode = Desirable-Sl    Gcchange = 0
Port-channel  = Po24         GC   = 0x00180001      Pseudo port-channel =
Po24
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:
```
                              Hello    Partner  PAgP    Learning
Group
Port       Flags State   Timers  Interval Count   Priority   Method
Ifindex
Fa0/18    SC    U6/S7   H       30s      1       128        Any        32
```

Partner's information:

```
          Partner                 Partner           Partner         Partner
Group
Port      Name                    Device ID         Port        Age Flags
Cap.
Fa0/18    ASW2                    0015.fab8.2880    Fa0/21      15s SC
10001
```

Age of the port in the current state: 0d:01h:06m:49s

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

```
Port-channel: Po24
------------

Age of the Port-channel   = 0d:01h:07m:03s
Logical slot/port   = 1/2            Number of ports = 3
GC                  = 0x00180001     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   Desirable-Sl       0
  0      00    Fa0/17   Desirable-Sl       0
  0      00    Fa0/18   Desirable-Sl       0

Time since last port bundled:    0d:01h:06m:51s    Fa0/18

DSW2#
```

```
DSW2#show standby
Vlan10 - Group 10
  State is Standby
    1 state change, last state change 01:05:58
  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 1.500 secs
  Preemption disabled
  Active router is 10.2.1.1, priority 110 (expires in 7.544 sec)
  Standby router is local
  Priority 20 (configured 20)
  IP redundancy name is "hsrp-Vl10-10" (default)
DSW2#
```

```
DSW2#show standby brief
                   P indicates configured to preempt.
                   |
Interface   Grp Prio P State    Active         Standby        Virtual
IP
Vl10        10  20      Standby  10.2.1.1       local
10.2.1.254
DSW2#
```

```
DSW2#show power inline
Available:360(w)  Used:0(w)  Remaining:360(w)

Interface Admin  Oper       Power   Device              Class Max
                            (Watts)
--------- ------ ---------- ------- ------------------- ----- ----
Fa0/1     auto   off        0.0     n/a                 n/a   15.4
Fa0/2     auto   off        0.0     n/a                 n/a   15.4
Fa0/3     auto   off        0.0     n/a                 n/a   15.4
Fa0/4     auto   off        0.0     n/a                 n/a   15.4
```

```
Fa0/5      auto    off         0.0     n/a             n/a   15.4
Fa0/6      auto    off         0.0     n/a             n/a   15.4
Fa0/7      auto    off         0.0     n/a             n/a   15.4
Fa0/8      auto    off         0.0     n/a             n/a   15.4
Fa0/9      auto    off         0.0     n/a             n/a   15.4
Fa0/10     auto    off         0.0     n/a             n/a   15.4
Fa0/11     auto    off         0.0     n/a             n/a   15.4
Fa0/12     auto    off         0.0     n/a             n/a   15.4
Fa0/13     auto    off         0.0     n/a             n/a   15.4
Fa0/14     auto    off         0.0     n/a             n/a   15.4
Fa0/15     auto    off         0.0     n/a             n/a   15.4
Fa0/16     auto    off         0.0     n/a             n/a   15.4
Fa0/17     auto    off         0.0     n/a             n/a   15.4
Fa0/18     auto    off         0.0     n/a             n/a   15.4
Fa0/19     auto    off         0.0     n/a             n/a   15.4
Fa0/20     auto    off         0.0     n/a             n/a   15.4
Fa0/21     auto    off         0.0     n/a             n/a   15.4
Fa0/22     auto    off         0.0     n/a             n/a   15.4
Fa0/23     auto    off         0.0     n/a             n/a   15.4
Fa0/24     auto    off         0.0     n/a             n/a   15.4
DSW2#
```

```
DSW2#show spanning-tree inconsistentports

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

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

DSW2#
```

```
DSW2#show spanning-tree summary
Switch is in pvst mode
Root bridge for: VLAN0020
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                      1         0        0          1          2
---------------------- -------- --------- -------- ---------- ----------
3 vlans                       1         0        0          3          4
DSW2#




DSW2#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
DSW2#
```

```
DSW2#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)
23     Po23(SU)       LACP      Fa0/19(P)   Fa0/20(P)   Fa0/21(P)
24     Po24(SU)       PAgP      Fa0/16(P)   Fa0/17(P)   Fa0/18(P)

DSW2#
```

```
DSW2#show etherchannel protocol
            Channel-group listing:
            ----------------------

Group: 12
----------
Protocol:  -  (Mode ON)

Group: 23
----------
Protocol:  LACP

Group: 24
----------
Protocol:  PAgP

DSW2#
```

```
DSW2#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:01h:08m:04s

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:01h:08m:04s


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:01h:08m:04s



Group: 23
----------
                  Ports in the group:
                  -------------------
Port: Fa0/19
------------

Port state     = Up Mstr Assoc In-Bndl
Channel group = 23            Mode = Active        Gcchange = -
Port-channel  = Po23          GC   =   -           Pseudo port-channel =
Po23
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
Fa0/19      SA       bndl     32768          0x17      0x17     0x10
0x3D

Partner's information:

                    LACP port                        Admin Oper    Port
Port
Port        Flags    Priority  Dev ID          Age      key   Key    Number
State
```

```
Fa0/19    SA       32768     0015.faac.46c0   4s    0x0    0x2    0x10
0x3D

Age of the port in the current state: 0d:01h:08m:00s

Port: Fa0/20
------------

Port state    = Up Mstr Assoc In-Bndl
Channel group = 23           Mode = Active         Gcchange = -
Port-channel = Po23          GC   =   -            Pseudo port-channel =
Po23
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        0x17     0x17    0x11
0x3D

Partner's information:

                    LACP port                    Admin  Oper   Port
Port
Port        Flags   Priority  Dev ID       Age    key    Key    Number
State
Fa0/20      SA      32768     0015.faac.46c0  24s  0x0    0x2    0x11
0x3D

Age of the port in the current state: 0d:01h:07m:59s

Port: Fa0/21
------------

Port state    = Up Mstr Assoc In-Bndl
Channel group = 23           Mode = Active         Gcchange = -
Port-channel = Po23          GC   =   -            Pseudo port-channel =
Po23
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         0x17      0x17     0x12
0x3D


Partner's information:

                     LACP port                        Admin  Oper   Port
Port
Port     Flags   Priority  Dev ID            Age      key    Key   Number
State
Fa0/21   SA      32768     0015.faac.46c0    3s       0x0    0x2   0x12
0x3D


Age of the port in the current state: 0d:01h:08m:00s



Group: 24
----------
              Ports in the group:
              -------------------
Port: Fa0/16
------------

Port state      = Up Mstr In-Bndl
Channel group = 24            Mode = Desirable-Sl    Gcchange = 0
Port-channel  = Po24          GC   = 0x00180001      Pseudo port-channel =
Po24
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:
                               Hello    Partner  PAgP     Learning
Group
Port         Flags State    Timers   Interval Count    Priority   Method
Ifindex
Fa0/16       SC    U6/S7    H        30s      1        128        Any      32

Partner's information:

             Partner                  Partner          Partner          Partner
Group
Port      Name                  Device ID        Port       Age  Flags
Cap.
```

```
Fa0/16     ASW2                    0015.fab8.2880   Fa0/19      26s SC
10001


Age of the port in the current state: 0d:01h:08m:03s


Port: Fa0/17
------------


Port state     = Up Mstr In-Bndl
Channel group = 24          Mode = Desirable-Sl    Gcchange = 0
Port-channel  = Po24        GC   = 0x00180001      Pseudo port-channel =
Po24
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:
                                Hello    Partner  PAgP     Learning
Group
Port       Flags State   Timers Interval Count    Priority Method
Ifindex
Fa0/17     SC    U6/S7   H       30s      1        128      Any     32


Partner's information:

            Partner                 Partner          Partner          Partner
Group
Port       Name                    Device ID        Port       Age Flags
Cap.
Fa0/17     ASW2                    0015.fab8.2880   Fa0/20      25s SC
10001


Age of the port in the current state: 0d:01h:08m:04s


Port: Fa0/18
------------


Port state     = Up Mstr In-Bndl
Channel group = 24          Mode = Desirable-Sl    Gcchange = 0
Port-channel  = Po24        GC   = 0x00180001      Pseudo port-channel =
Po24
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:
                                Hello    Partner  PAgP     Learning
Group
Port        Flags State   Timers Interval Count   Priority  Method
Ifindex
Fa0/18      SC    U6/S7   H      30s      1       128       Any      32

Partner's information:

            Partner               Partner          Partner          Partner
Group
Port        Name                  Device ID        Port      Age Flags
Cap.
Fa0/18      ASW2                  0015.fab8.2880   Fa0/21    12s SC
10001

Age of the port in the current state: 0d:01h:08m:06s


DSW2#
```

```
DSW2#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

DSW2#
```

```
DSW2#show etherchannel port-channel
              Channel-group listing:
```

```
                  ---------------------

Group: 12
----------
                Port-channels in the group:
                ------------------------

Port-channel: Po12
------------

Age of the Port-channel   = 0d:01h:08m:33s
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:01h:08m:25s    Fa0/24
Time since last port Un-bundled: 0d:01h:08m:27s    Fa0/24

Group: 23
----------
                Port-channels in the group:
                --------------------------

Port-channel: Po23     (Primary Aggregator)

------------

Age of the Port-channel   = 0d:01h:08m:34s
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:01h:08m:20s    Fa0/20
```

```
Group: 24
----------
                Port-channels in the group:
                ---------------------------

Port-channel: Po24
------------

Age of the Port-channel   = 0d:01h:08m:34s
Logical slot/port   = 1/2          Number of ports = 3
GC                  = 0x00180001      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   Desirable-Sl        0
  0     00     Fa0/17   Desirable-Sl        0
  0     00     Fa0/18   Desirable-Sl        0

Time since last port bundled:    0d:01h:08m:22s     Fa0/18

DSW2#
```

```
DSW2#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 24 neighbors
          Partner                Partner            Partner            Partner
Group
Port      Name                   Device ID          Port       Age  Flags
Cap.
Fa0/16    ASW2                   0015.fab8.2880     Fa0/19        1s SC
10001
Fa0/17    ASW2                   0015.fab8.2880     Fa0/20       24s SC
10001
Fa0/18    ASW2                   0015.fab8.2880     Fa0/21       10s SC
10001
DSW2#
```

```
DSW2#show lacp neighbor
Flags:  S - Device is requesting Slow LACPDUs
        F - Device is requesting Fast LACPDUs
        A - Device is in Active mode        P - Device is in Passive mode

Channel group 23 neighbors

Partner's information:

                  LACP port                        Admin  Oper  Port
Port
Port       Flags  Priority  Dev ID          Age    key    Key   Number
State
Fa0/19     SA     32768     0015.faac.46c0  19s    0x0    0x2   0x10
0x3D
Fa0/20     SA     32768     0015.faac.46c0   6s    0x0    0x2   0x11
0x3D
Fa0/21     SA     32768     0015.faac.46c0  14s    0x0    0x2   0x12
0x3D
DSW2#
```

```
DSW2#show port-security
Secure Port  MaxSecureAddr  CurrentAddr  SecurityViolation  Security
Action
              (Count)        (Count)       (Count)
-----------------------------------------------------------------------
--
-----------------------------------------------------------------------
--
Total Addresses in System (excluding one mac per port)     : 0
Max Addresses limit in System (excluding one mac per port) : 5120
DSW2#
```

```
DSW2#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
DSW2#
```