

```
R2#
R2#show running-config
Building configuration...
```

```
Current configuration : 2440 bytes
!
! No configuration change since last restart
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R2
!
boot-start-marker
boot-end-marker
!
logging message-counter syslog
enable secret 5 $1$NytN$xb8Trn0Re9vS6jGlygMvO0
!
no aaa new-model
!
dot11 syslog
ip source-route
!
!
ip cef
!
!
ip multicast-routing
ipv6 unicast-routing
ipv6 cef
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
```

```
!  
!  
!  
!  
voice-card 0  
!  
!  
!  
!  
!  
archive  
  log config  
  hidekeys  
!  
!  
!  
!  
!  
!  
!  
!  
!  
interface FastEthernet0/0  
  no ip address  
  shutdown  
  duplex auto  
  speed auto  
!  
interface FastEthernet0/1  
  no ip address  
  shutdown  
  duplex auto  
  speed auto  
!  
interface Serial0/0/0  
  no ip address  
!  
interface Serial0/0/1  
  no ip address  
!  
interface Serial0/1/0  
  no ip address  
  ip nat outside  
  ip virtual-reassembly  
  shutdown  
  clock rate 56000  
!  
interface Serial0/2/0  
  no ip address  
  encapsulation frame-relay  
!  
interface Serial0/2/0.12 point-to-point  
  ip address 10.1.1.2 255.255.255.252  
  ip pim sparse-dense-mode
```

```
snmp trap link-status
ipv6 address 2026::12:2/122
ipv6 enable
ipv6 ospf 6 area 12
frame-relay interface-dlci 201
!
interface Serial0/2/0.23 point-to-point
ip address 10.1.1.5 255.255.255.252
ip pim sparse-dense-mode
snmp trap link-status
ipv6 address 2026::1:1/122
ipv6 enable
ipv6 ospf 6 area 0
frame-relay interface-dlci 203
!
interface Serial0/3/0
no ip address
ip virtual-reassembly
shutdown
clock rate 56000
!
router ospf 1
router-id 2.2.2.2
log-adjacency-changes
network 10.1.1.1 0.0.0.0 area 0
network 10.1.1.5 0.0.0.0 area 0
network 10.2.2.1 0.0.0.0 area 0
network 10.0.0.0 0.255.255.255 area 12
!
ip forward-protocol nd
ip http server
no 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 ospf 6
router-id 2.2.2.2
log-adjacency-changes
!
!
!
!
!
!
```

```
!  
!  
control-plane  
!  
!  
!  
ccm-manager fax protocol cisco  
!  
mgcp fax t38 ecm  
mgcp behavior g729-variants static-pt  
!  
!  
!  
!  
!  
line con 0  
  exec-timeout 0 0  
  logging synchronous  
line aux 0  
line vty 0 4  
  exec-timeout 0 0  
  password cisco  
  login  
line vty 5  
  exec-timeout 0 0  
  login  
!  
scheduler allocate 20000 1000  
ntp server 10.1.1.1  
ntp peer 10.1.1.1  
end
```

R2#

```
R2#ping 209.65.200.241
```

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

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

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 96/96/100 ms
```

```
R2#
```

```
R2#ping 209.65.200.226
```

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

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

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 96/97/100 ms
```

```
R2#
```

```
R2#ping 209.65.200.225
```

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

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

```
!!!!
```

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

```
R2#
```

```
R2#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 = 64/66/68 ms
```

```
R2#
```

```
R2#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 = 128/131/132
```

```
ms
```

```
R2#
```

```
R2#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 = 128/131/132  
ms
```

```
R2#
```

R2#ping 10.1.1.6

Type escape sequence to abort.

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

!!!!

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

R2#

R2#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 = 64/67/72 ms
R2#
```

```
R2#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 = 128/129/132
ms
```

R2#

R2#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 = 128/130/132
ms

R2#

```
R2#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 = 128/129/132  
ms
```

```
R2#
```

```
R2#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 = 128/130/132  
ms
```

```
R2#
```

```
R2#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 = 128/130/132  
ms
```

```
R2#
```

```
R2#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 = 128/130/132  
ms
```

```
R2#
```

```
R2#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 = 128/130/132  
ms
```

```
R2#
```

```
R2#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 = 128/130/132  
ms
```

```
R2#
```

```
R2#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 = 128/130/132  
ms
```

```
R2#
```

```
R2#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 = 128/130/132  
ms
```

```
R2#
```

```
R2#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 = 128/129/132  
ms
```

```
R2#
```

```
R2#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 = 128/130/132  
ms
```

```
R2#
```

```
R2#ping 10.2.1.4
```

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

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

```
.....
```

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

```
R2#
```

R2#show ip interface brief

Interface	IP-Address	OK?	Method	Status
FastEthernet0/0	unassigned	YES	NVRAM	administratively
down down				
FastEthernet0/1	unassigned	YES	NVRAM	administratively
down down				
Serial0/0/0	unassigned	YES	NVRAM	down
down				
Serial0/0/1	unassigned	YES	NVRAM	down
down				
Serial0/1/0	unassigned	YES	NVRAM	administratively
down down				
Serial0/2/0	unassigned	YES	NVRAM	up
up				
Serial0/2/0.12	10.1.1.2	YES	NVRAM	up
up				
Serial0/2/0.23	10.1.1.5	YES	NVRAM	up
up				
Serial0/3/0	unassigned	YES	NVRAM	administratively
down down				
NVI0	unassigned	YES	unset	administratively
down down				

R2#

R2#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 not set

209.65.200.0/24 is variably subnetted, 2 subnets, 2 masks
O E2 209.65.200.240/29 [110/1] via 10.1.1.1, 00:23:47, Serial0/2/0.12
O E2 209.65.200.224/30 [110/20] via 10.1.1.1, 00:23:47, Serial0/2/0.12
10.0.0.0/8 is variably subnetted, 8 subnets, 2 masks
O E2 10.2.4.12/30 [110/20] via 10.1.1.6, 00:23:31, Serial0/2/0.23
O IA 10.1.1.8/30 [110/128] via 10.1.1.6, 00:23:47, Serial0/2/0.23
O E2 10.1.4.8/30 [110/20] via 10.1.1.6, 00:23:31, Serial0/2/0.23
O E2 10.2.1.0/24 [110/20] via 10.1.1.6, 00:23:32, Serial0/2/0.23
O E2 10.2.2.0/24 [110/20] via 10.1.1.6, 00:23:32, Serial0/2/0.23
C 10.1.1.0/30 is directly connected, Serial0/2/0.12
O E2 10.1.4.4/30 [110/20] via 10.1.1.6, 00:23:32, Serial0/2/0.23
C 10.1.1.4/30 is directly connected, Serial0/2/0.23
R2#

R2#show processes cpu

CPU utilization for five seconds: 1%/0%; one minute: 2%; five minutes: 2%

PID	Runtime(ms)	Invoked	uSecs	5Sec	1Min	5Min	TTY	Process
1	12	75	160	0.00%	0.00%	0.00%	0	Chunk
Manager								
2	4	346	11	0.00%	0.04%	0.02%	0	Load Meter
3	1268	621	2041	0.00%	0.19%	0.21%	0	Exec
4	0	1	0	0.00%	0.00%	0.00%	0	EDDRI_MAIN
5	2264	201	11263	0.00%	0.14%	0.12%	0	Check
heaps								
6	0	1	0	0.00%	0.00%	0.00%	0	Pool
Manager								
7	0	2	0	0.00%	0.00%	0.00%	0	Timers
8	0	1	0	0.00%	0.00%	0.00%	0	License
Client N								
9	36	701	51	0.00%	0.01%	0.00%	0	OSPF-1
Hello								
10	0	30	0	0.00%	0.00%	0.00%	0	IPC
Dynamic Cach								

11	0	1	0	0.00%	0.00%	0.00%	0	IPC Zone
Manager								
12	0	1741	0	0.07%	0.00%	0.00%	0	IPC
Periodic Tim								
13	0	1741	0	0.07%	0.00%	0.00%	0	IPC
Deferred Por								
14	0	1	0	0.00%	0.00%	0.00%	0	IPC Seat
Manager								
15	0	1	0	0.00%	0.00%	0.00%	0	IPC
BackPressure								
16	0	1	0	0.00%	0.00%	0.00%	0	OIR
Handler								
17	0	1	0	0.00%	0.00%	0.00%	0	Crash
writer								
18	0	59	0	0.00%	0.00%	0.00%	0	
Environmental mo								
19	0	1	0	0.00%	0.00%	0.00%	0	ARP Input
20	0	1821	0	0.00%	0.00%	0.00%	0	ARP
Background								
21	0	2	0	0.00%	0.00%	0.00%	0	ATM Idle
Timer								
22	0	2	0	0.00%	0.00%	0.00%	0	AAA high-
capacit								
23	0	1	0	0.00%	0.00%	0.00%	0	
AAA_SERVER_DEADT								
24	0	1	0	0.00%	0.00%	0.00%	0	Policy
Manager								
25	0	7	0	0.00%	0.00%	0.00%	0	DDR Timers
26	4	2	2000	0.00%	0.00%	0.00%	0	Entity MIB
API								
27	8	40	200	0.00%	0.00%	0.00%	0	EEM ED
Syslog								
28	0	524	0	0.00%	0.00%	0.00%	0	HC Counter
Timer								
29	4	9	444	0.00%	0.00%	0.00%	0	Serial
Backgroun								
30	0	1	0	0.00%	0.00%	0.00%	0	RO Notify
Timers								
31	0	1	0	0.00%	0.00%	0.00%	0	RMI RM
Notify Wa								
32	0	2	0	0.00%	0.00%	0.00%	0	SMART
33	0	1728	0	0.00%	0.00%	0.00%	0	GraphIt
34	0	2	0	0.00%	0.00%	0.00%	0	Dialer
event								
35	0	1	0	0.00%	0.00%	0.00%	0	SERIAL
A'detect								
36	0	2	0	0.00%	0.00%	0.00%	0	XML Proxy
Client								
37	0	1	0	0.00%	0.00%	0.00%	0	Critical
Bkgnd								
38	32	747	42	0.00%	0.00%	0.00%	0	Net
Background								
39	0	2	0	0.00%	0.00%	0.00%	0	IDB Work
40	0	31	0	0.00%	0.00%	0.00%	0	Logger

41	0	1725	0	0.00%	0.00%	0.00%	0 TTY
Background							
42	8	1744	4	0.00%	0.01%	0.00%	0 Per-Second
Jobs							
43	0	117	0	0.00%	0.00%	0.00%	0 c2800
Periodic							
44	0	1	0	0.00%	0.00%	0.00%	0 Inode
Table Dest							
45	0	1	0	0.00%	0.00%	0.00%	0 IKE HA Mgr
46	0	1	0	0.00%	0.00%	0.00%	0 IPSEC HA
Mgr							
47	8	4	2000	0.00%	0.00%	0.00%	0 rf task
48	0	15	0	0.00%	0.00%	0.00%	0 Net Input
49	0	348	0	0.00%	0.00%	0.00%	0 Compute
load avg							
50	696	30	23200	0.00%	0.04%	0.00%	0 Per-minute
Jobs							
51	0	1	0	0.00%	0.00%	0.00%	0 AggMgr
Process							
52	0	1	0	0.00%	0.00%	0.00%	0 Token
Daemon							
53	0	1	0	0.00%	0.00%	0.00%	0 Transport
Port A							
54	0	1	0	0.00%	0.00%	0.00%	0
dev_device_inser							
55	0	1	0	0.00%	0.00%	0.00%	0
dev_device_remov							
56	0	1	0	0.00%	0.00%	0.00%	0
sal_dpc_process							
57	0	1	0	0.00%	0.00%	0.00%	0 ARL Table
Manage							
58	0	2	0	0.00%	0.00%	0.00%	0 ESWPPM
59	0	2	0	0.00%	0.00%	0.00%	0 Eswilp
Storm Con							
60	4	2	2000	0.00%	0.00%	0.00%	0 ESWILPPM
61	0	2	0	0.00%	0.00%	0.00%	0 Eswilp
Storm Con							
62	0	6921	0	0.00%	0.01%	0.00%	0 Netclock
Backgro							
63	0	2	0	0.00%	0.00%	0.00%	0 SM Monitor
64	0	2	0	0.00%	0.00%	0.00%	0 Bryce I2C
CMD Qu							
65	276	4	69000	0.00%	0.00%	0.00%	0 USB
Startup							
66	4	291	13	0.00%	0.00%	0.00%	0 mxt5100
67	8	2	4000	0.00%	0.00%	0.00%	0 VNM DSPRM
MAIN							
68	0	1	0	0.00%	0.00%	0.00%	0 DSPFARM
DSP READ							
69	0	2	0	0.00%	0.00%	0.00%	0 FLEX DNLD
MAIN							
70	0	1	0	0.00%	0.00%	0.00%	0 HDV
background							

71	0	2	0	0.00%	0.00%	0.00%	0	VMI
Background								
72	0	1	0	0.00%	0.00%	0.00%	0	
RF_INTERDEV_DELA								
73	0	1	0	0.00%	0.00%	0.00%	0	
RF_INTERDEV_SCTP								
74	0	1	0	0.00%	0.00%	0.00%	0	chkpt
message ha								
75	0	1733	0	0.00%	0.00%	0.00%	0	Ether-
Switch RBC								
76	0	1	0	0.00%	0.00%	0.00%	0	IGMP
Snooping Pr								
77	0	1	0	0.00%	0.00%	0.00%	0	IGMP
Snooping Re								
78	0	59	0	0.00%	0.00%	0.00%	0	Call
Management								
79	0	1	0	0.00%	0.00%	0.00%	0	AAL2CPS
TIMER_CU								
80	0	1	0	0.00%	0.00%	0.00%	0	CES Line
Conditio								
81	0	1	0	0.00%	0.00%	0.00%	0	
CF_INTERDEV_SCTP								
82	0	1	0	0.00%	0.00%	0.00%	0	Async
write proc								
83	0	1	0	0.00%	0.00%	0.00%	0	Async
write proc								
84	0	1	0	0.00%	0.00%	0.00%	0	Async
write proc								
85	0	1	0	0.00%	0.00%	0.00%	0	Async
write proc								
86	0	30	0	0.00%	0.00%	0.00%	0	DFS flush
period								
87	0	2	0	0.00%	0.00%	0.00%	0	Dot1x Mgr
Proces								
88	0	1	0	0.00%	0.00%	0.00%	0	MAB
Framework								
89	0	1	0	0.00%	0.00%	0.00%	0	EAP
Framework								
90	0	2	0	0.00%	0.00%	0.00%	0	DTP
Protocol								
91	0	1733	0	0.00%	0.00%	0.00%	0	PI MATM
Aging Pr								
92	0	175	0	0.00%	0.00%	0.00%	0	EtherChnl
93	0	2	0	0.00%	0.00%	0.00%	0	Ethernet
CFM								
94	0	1693	0	0.00%	0.00%	0.00%	0	Ethernet
Timer C								
95	0	1748	0	0.00%	0.00%	0.00%	0	linktest
96	0	2	0	0.00%	0.00%	0.00%	0	Dot11 Mgmt
& Ass								
97	0	2	0	0.00%	0.00%	0.00%	0	Dot11 aaa
proces								
98	0	30	0	0.00%	0.00%	0.00%	0	pmkid

99	0	2	0	0.00%	0.00%	0.00%	0 Dot11 auth
Dot1x							
100	0	1	0	0.00%	0.00%	0.00%	0 Dot11 Mac
Auth							
101	0	2	0	0.00%	0.00%	0.00%	0 AAA
Dictionary R							
102	0	2	0	0.00%	0.00%	0.00%	0 AAA Server
103	0	1	0	0.00%	0.00%	0.00%	0 AAA ACCT
Proc							
104	4	1	4000	0.00%	0.00%	0.00%	0 ACCT
Periodic Pr							
105	24	261	91	0.00%	0.00%	0.00%	0 CDP
Protocol							
106	0	2	0	0.00%	0.00%	0.00%	0 Ethernet
OAM Pro							
107	0	2	0	0.00%	0.00%	0.00%	0 CEF
switching ba							
108	0	2	0	0.00%	0.00%	0.00%	0 ADJ
resolve proc							
109	0	1	0	0.00%	0.00%	0.00%	0 IP ARP
Adjacency							
110	0	1	0	0.00%	0.00%	0.00%	0 IP ARP
Retry Age							
111	120	632	189	0.00%	0.00%	0.00%	0 IP Input
112	0	1	0	0.00%	0.00%	0.00%	0 ICMP event
handl							
113	0	4	0	0.00%	0.00%	0.00%	0 TurboACL
114	0	2	0	0.00%	0.00%	0.00%	0 TurboACL
chunk							
115	4	1	4000	0.00%	0.00%	0.00%	0 IPv6 Echo
event							
116	0	1	0	0.00%	0.00%	0.00%	0 LSP Tunnel
FRR							
117	0	1	0	0.00%	0.00%	0.00%	0 MPLS Auto-
Tunnel							
118	0	5	0	0.00%	0.00%	0.00%	0 MOP
Protocols							
119	4	3	1333	0.00%	0.00%	0.00%	0 PPP Hooks
121	0	1	0	0.00%	0.00%	0.00%	0 SSS
Manager							
122	0	1	0	0.00%	0.00%	0.00%	0 SSS
Feature Mana							
123	0	1	0	0.00%	0.00%	0.00%	0 SSS
Feature Time							
124	0	2	0	0.00%	0.00%	0.00%	0 Spanning
Tree							
125	0	1	0	0.00%	0.00%	0.00%	0 X.25
Encaps Mana							
126	4	16	250	0.00%	0.00%	0.00%	0 SSM
connection m							
127	0	1	0	0.00%	0.00%	0.00%	0 AC Switch
128	0	6	0	0.00%	0.00%	0.00%	0
Authentication P							

129	0	1	0	0.00%	0.00%	0.00%	0 Auth-proxy
AAA B							
130	100	2	50000	0.00%	0.00%	0.00%	0 EAPoUDP
Process							
131	0	2	0	0.00%	0.00%	0.00%	0 IP Host
Track Pr							
132	0	2	0	0.00%	0.00%	0.00%	0 KRB5 AAA
133	0	2	0	0.00%	0.00%	0.00%	0 Ethernet
LMI							
134	0	2	0	0.00%	0.00%	0.00%	0 PPP IP
Route							
135	4	2	2000	0.00%	0.00%	0.00%	0 PPP IPCP
136	60	80	750	0.00%	0.00%	0.00%	0 IP
Background							
137	52	15	3466	0.00%	0.00%	0.00%	0 IP RIB
Update							
138	0	2	0	0.00%	0.00%	0.00%	0 Dot1x
Supplicant							
139	0	2	0	0.00%	0.00%	0.00%	0 Dot1x
Supplicant							
140	0	2	0	0.00%	0.00%	0.00%	0 Dot1x
Supplicant							
141	0	1	0	0.00%	0.00%	0.00%	0 Asy FS
Helper							
142	4	30	133	0.00%	0.00%	0.00%	0 Licensing
Auto U							
143	0	1	0	0.00%	0.00%	0.00%	0 Socket
Timers							
144	0	31	0	0.00%	0.00%	0.00%	0 CEF
background p							
145	12	2210	5	0.00%	0.00%	0.00%	0 CEF: IPv4
proces							
146	0	21	0	0.00%	0.00%	0.00%	0 ADJ
background							
147	0	2	0	0.00%	0.00%	0.00%	0 L2MM
148	0	1	0	0.00%	0.00%	0.00%	0 MRD
149	0	1	0	0.00%	0.00%	0.00%	0 IGMP SN
150	0	1	0	0.00%	0.00%	0.00%	0 L2X Data
Daemon							
151	0	1	0	0.00%	0.00%	0.00%	0 TCP Timer
152	0	1	0	0.00%	0.00%	0.00%	0 TCP
Protocols							
153	0	7	0	0.00%	0.00%	0.00%	0 HTTP CORE
154	0	1	0	0.00%	0.00%	0.00%	0 IP
Traceroute							
155	0	2	0	0.00%	0.00%	0.00%	0 RLM groups
Proce							
156	0	2	0	0.00%	0.00%	0.00%	0 PPPoE Flow
Contr							
157	0	1	0	0.00%	0.00%	0.00%	0 SNMP
Timers							
158	0	2	0	0.00%	0.00%	0.00%	0 SCTP Main
Proces							

159	0	1	0	0.00%	0.00%	0.00%	0	IUA Main
Process								
160	0	1740	0	0.00%	0.00%	0.00%	0	RUDPV1
Main Proc								
161	0	1	0	0.00%	0.00%	0.00%	0	bsm_timers
162	0	1755	0	0.00%	0.00%	0.00%	0	
bsm_xmt_proc								
163	0	1	0	0.00%	0.00%	0.00%	0	CES Client
SVC R								
164	0	1	0	0.00%	0.00%	0.00%	0	COPS
165	0	2	0	0.00%	0.00%	0.00%	0	Dialer
Forwarder								
166	0	3	0	0.00%	0.00%	0.00%	0	Flow
Exporter Ti								
167	0	2	0	0.00%	0.00%	0.00%	0	ATM OAM
Input								
168	0	2	0	0.00%	0.00%	0.00%	0	ATM OAM
TIMER								
169	0	1	0	0.00%	0.00%	0.00%	0	RARP Input
170	0	1	0	0.00%	0.00%	0.00%	0	LAPB
Process								
171	0	1	0	0.00%	0.00%	0.00%	0	IPv6
Inspect Tim								
172	0	2	0	0.00%	0.00%	0.00%	0	LFDp Input
Proc								
173	0	1	0	0.00%	0.00%	0.00%	0	PAD InCall
174	0	2	0	0.00%	0.00%	0.00%	0	X.25
Background								
175	0	2	0	0.00%	0.00%	0.00%	0	PPP Bind
176	0	2	0	0.00%	0.00%	0.00%	0	PPP SSS
177	0	1	0	0.00%	0.00%	0.00%	0	MQC Flow
Event B								
178	8	434576	0	0.87%	0.84%	0.82%	0	HQF Shaper
Backg								
179	0	17380	0	0.07%	0.03%	0.02%	0	RBSCP
Background								
180	0	1	0	0.00%	0.00%	0.00%	0	VPDN call
manage								
181	4	1	4000	0.00%	0.00%	0.00%	0	CHKPT
EXAMPLE								
182	0	1	0	0.00%	0.00%	0.00%	0	CHKPT
DevTest								
183	0	1	0	0.00%	0.00%	0.00%	0	IPS
Process								
184	4	2	2000	0.00%	0.00%	0.00%	0	IPS Auto
Update								
185	0	2	0	0.00%	0.00%	0.00%	0	SDEE
Management								
186	0	3400	0	0.00%	0.00%	0.00%	0	Inspect
process								
187	0	2	0	0.00%	0.00%	0.00%	0	
cpf_process_msg_								
188	0	3400	0	0.00%	0.00%	0.00%	0	FW DP
Inspect pr								

189	0	3400	0	0.00%	0.00%	0.00%	0 CCE DP
URLF cach							
190	0	2	0	0.00%	0.00%	0.00%	0 URL filter
proc							
191	0	1	0	0.00%	0.00%	0.00%	0 Select
Timers							
192	32	2	16000	0.00%	0.00%	0.00%	0 HTTP
Process							
193	0	2	0	0.00%	0.00%	0.00%	0 CIFS API
Process							
194	0	2	0	0.00%	0.00%	0.00%	0 CIFS Proxy
Proce							
195	4	3	1333	0.00%	0.00%	0.00%	0 Crypto HW
Proc							
196	0	72	0	0.00%	0.00%	0.00%	0
CRM_CALL_UPDATE_							
197	116	2	58000	0.00%	0.00%	0.00%	0
CCVPM_HDSPRM							
198	0	4	0	0.00%	0.00%	0.00%	0 HDA DSPRM
MAIN							
199	4	2	2000	0.00%	0.00%	0.00%	0 STUN_APP
200	0	1	0	0.00%	0.00%	0.00%	0 STUN_TEST
201	0	1	0	0.00%	0.00%	0.00%	0
cpf_process_tpQ							
202	0	2	0	0.00%	0.00%	0.00%	0 AAA Cached
Serve							
203	4	2	2000	0.00%	0.00%	0.00%	0 ENABLE AAA
204	0	1	0	0.00%	0.00%	0.00%	0 EM
Background Pr							
205	0	1	0	0.00%	0.00%	0.00%	0 Key chain
liveke							
206	0	2	0	0.00%	0.00%	0.00%	0 LINE AAA
207	0	2	0	0.00%	0.00%	0.00%	0 LOCAL AAA
208	0	4	0	0.00%	0.00%	0.00%	0 MPLS Auto
Mesh P							
209	0	2	0	0.00%	0.00%	0.00%	0 TPLUS
210	0	2	0	0.00%	0.00%	0.00%	0 VSP_MGR
211	0	1	0	0.00%	0.00%	0.00%	0
FW_TEST_TRP							
212	0	1	0	0.00%	0.00%	0.00%	0 EPM MAIN
PROCESS							
213	0	3	0	0.00%	0.00%	0.00%	0 Crypto WUI
214	0	2	0	0.00%	0.00%	0.00%	0 Crypto
Support							
215	0	1	0	0.00%	0.00%	0.00%	0 IPSECv6 PS
Proc							
216	0	1	0	0.00%	0.00%	0.00%	0 CCVPM_HTSP
217	0	2	0	0.00%	0.00%	0.00%	0
VPM_MWI_BACKGROU							
218	0	1	0	0.00%	0.00%	0.00%	0 CCVPM_R2
219	0	1	0	0.00%	0.00%	0.00%	0 EPHONE MWI
Refre							
220	0	2	0	0.00%	0.00%	0.00%	0 FB/KS Log
HouseK							

221	0	2	0	0.00%	0.00%	0.00%	0 EPHONE MWI
BG Pr							
222	0	1	0	0.00%	0.00%	0.00%	0 Skinny HW
confer							
223	0	646	0	0.00%	0.00%	0.00%	0 FLEX DSPRM
MAIN							
224	0	644	0	0.00%	0.00%	0.00%	0 FLEX DSP
KEEPALI							
225	0	60	0	0.00%	0.00%	0.00%	0 VOICE REG
BG Pro							
226	0	1	0	0.00%	0.00%	0.00%	0 Presence
Process							
227	0	1	0	0.00%	0.00%	0.00%	0 CCSWVOICE
229	0	1	0	0.00%	0.00%	0.00%	0 http
client proc							
231	4	1	4000	0.00%	0.00%	0.00%	0
QOS_MODULE_MAIN							
232	0	1	0	0.00%	0.00%	0.00%	0
RPMS_PROC_MAIN							
233	0	1	0	0.00%	0.00%	0.00%	0 VoIP AAA
234	0	2	0	0.00%	0.00%	0.00%	0 Dialog
Manager							
235	0	3	0	0.00%	0.00%	0.00%	0 crypto
engine pr							
236	0	4	0	0.00%	0.00%	0.00%	0 Crypto CA
237	0	1	0	0.00%	0.00%	0.00%	0 Crypto
PKI-CRL							
238	0	1	0	0.00%	0.00%	0.00%	0 encrypt
proc							
239	0	2	0	0.00%	0.00%	0.00%	0 crypto sw
pk pro							
240	0	1	0	0.00%	0.00%	0.00%	0 Crypto INT
241	4	3	1333	0.00%	0.00%	0.00%	0 Crypto IKE
Dispa							
242	0	3	0	0.00%	0.00%	0.00%	0 Crypto
IKMP							
243	0	1	0	0.00%	0.00%	0.00%	0 IPSEC
manual key							
244	208	91	2285	0.00%	0.00%	0.00%	0 IPSEC key
engine							
245	0	2	0	0.00%	0.00%	0.00%	0 CRYPTO QoS
proce							
246	8	4	2000	0.00%	0.00%	0.00%	0 Crypto ACL
247	0	1	0	0.00%	0.00%	0.00%	0 Crypto PAS
Proc							
248	0	1	0	0.00%	0.00%	0.00%	0 GDOI GM
Process							
249	0	1	0	0.00%	0.00%	0.00%	0 UNICAST
REKEY							
250	0	1	0	0.00%	0.00%	0.00%	0 UNICAST
REKEY AC							
251	4	1763	2	0.00%	0.00%	0.00%	0 Crypto
Device Up							

252	0	2	0	0.00%	0.00%	0.00%	0	Multi-ISA
Event								
253	0	1	0	0.00%	0.00%	0.00%	0	Multi-ISA
Cleanu								
254	0	1	0	0.00%	0.00%	0.00%	0	PM
Callback								
255	0	1	0	0.00%	0.00%	0.00%	0	Licensing
MIB pr								
256	4	8804	0	0.07%	0.01%	0.00%	0	Atheros
LED Ctro								
257	0	2	0	0.00%	0.00%	0.00%	0	Control-
plane ho								
258	0	1	0	0.00%	0.00%	0.00%	0	DATA
Transfer Pr								
259	0	1	0	0.00%	0.00%	0.00%	0	DATA
Collector								
260	0	2	0	0.00%	0.00%	0.00%	0	AAA SEND
STOP EV								
261	0	2	0	0.00%	0.00%	0.00%	0	EEM ED
Resource								
262	0	2	0	0.00%	0.00%	0.00%	0	EEM ED
Routing								
263	0	3	0	0.00%	0.00%	0.00%	0	EEM ED
Track								
264	0	176	0	0.00%	0.00%	0.00%	0	RMON
Recycle Pro								
265	0	2	0	0.00%	0.00%	0.00%	0	RMON
Deferred Se								
266	0	1	0	0.00%	0.00%	0.00%	0	Syslog
Traps								
267	0	56	0	0.00%	0.00%	0.00%	0	Crypto
cTCP proc								
268	4	2	2000	0.00%	0.00%	0.00%	0	VLAN
Manager								
269	36	669	53	0.00%	0.00%	0.00%	0	OSPFv3-6
Hello								
271	0	1744	0	0.00%	0.00%	0.00%	0	trunk
conditioni								
272	0	1	0	0.00%	0.00%	0.00%	0	trunk
conditioni								
273	0	1765	0	0.00%	0.00%	0.00%	0	CME
Extension Mo								
274	0	1	0	0.00%	0.00%	0.00%	0	IP SLAs
Ethernet								
275	4	219	18	0.00%	0.00%	0.00%	0	EEM Server
276	0	2	0	0.00%	0.00%	0.00%	0	EEM Policy
Direc								
277	0	3	0	0.00%	0.00%	0.00%	0	EEM ED CLI
278	0	3	0	0.00%	0.00%	0.00%	0	EEM ED
Counter								
279	0	3	0	0.00%	0.00%	0.00%	0	EM ED GOLD
280	0	3	0	0.00%	0.00%	0.00%	0	EEM ED
Interface								

281	0	3	0	0.00%	0.00%	0.00%	0 EEM ED
IOSWD							
282	0	3	0	0.00%	0.00%	0.00%	0 EEM ED
Ipsla							
283	0	3	0	0.00%	0.00%	0.00%	0 EEM ED
None							
284	0	2	0	0.00%	0.00%	0.00%	0 EEM ED Nf
285	0	3	0	0.00%	0.00%	0.00%	0 EEM ED OIR
286	0	3	0	0.00%	0.00%	0.00%	0 EEM ED RF
287	0	3	0	0.00%	0.00%	0.00%	0 EEM ED
SNMP							
288	0	2	0	0.00%	0.00%	0.00%	0 EEM ED
SNMP Noti							
289	0	49	0	0.00%	0.00%	0.00%	0 EEM ED
Timer							
290	4	3	1333	0.00%	0.00%	0.00%	0 EEM ED
Test							
291	0	3	0	0.00%	0.00%	0.00%	0 EEM ED
Config							
292	0	3	0	0.00%	0.00%	0.00%	0 EEM ED Env
293	4	17	235	0.00%	0.00%	0.00%	0 Syslog
294	0	1	0	0.00%	0.00%	0.00%	0 VPDN Test
295	0	3	0	0.00%	0.00%	0.00%	0 EEM ED RPC
296	0	2	0	0.00%	0.00%	0.00%	0 Key Proc
297	0	1	0	0.00%	0.00%	0.00%	0 tHUB
299	12	40	300	0.00%	0.00%	0.00%	0 IPv6 RIB
Event H							
300	8	882	9	0.00%	0.00%	0.00%	0 CEF: IPv6
proces							
301	4	3421	1	0.00%	0.00%	0.00%	0 IP NAT
Ager							
302	0	1	0	0.00%	0.00%	0.00%	0 IP NAT
WLAN							
303	0	1	0	0.00%	0.00%	0.00%	0 IP VFR
proc							
304	252	321	785	0.00%	0.00%	0.00%	0 FR LMI
305	44	43	1023	0.00%	0.00%	0.00%	0 FR PVC
event man							
306	8	17506	0	0.00%	0.03%	0.01%	0 FR
Broadcast Out							
307	0	34	0	0.00%	0.00%	0.00%	0 FR ARP
308	0	30	0	0.00%	0.00%	0.00%	0 FR
FRAGMENTATION							
309	0	88	0	0.00%	0.00%	0.00%	0 FR TUNNEL
310	0	1	0	0.00%	0.00%	0.00%	0 FRF9
manager							
311	0	1	0	0.00%	0.00%	0.00%	0 FRF9 timed
event							
312	4	177	22	0.00%	0.00%	0.00%	0 compute
load per							
313	8	1762	4	0.00%	0.00%	0.00%	0 IGMP Input
314	0	17511	0	0.07%	0.02%	0.02%	0 Mwheel
Process							

R2#show interfaces

FastEthernet0/0 is administratively down, line protocol is down

Hardware is MV96340 Ethernet, address is 0016.9dfa.cab0 (bia 0016.9dfa.cab0)

MTU 1500 bytes, BW 100000 Kbit/sec, DLY 100 usec,
reliability 255/255, txload 1/255, rxload 1/255

Encapsulation ARPA, loopback not set

Keepalive set (10 sec)

Auto-duplex, Auto Speed, 100BaseTX/FX

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

Received 0 broadcasts, 0 runts, 0 giants, 0 throttles

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

0 watchdog

0 input packets with dribble condition detected

0 packets output, 0 bytes, 0 underruns

0 output errors, 0 collisions, 0 interface resets

0 unknown protocol drops

0 babbles, 0 late collision, 0 deferred

0 lost carrier, 0 no carrier

0 output buffer failures, 0 output buffers swapped out

FastEthernet0/1 is administratively down, line protocol is down

Hardware is MV96340 Ethernet, address is 0016.9dfa.cab1 (bia 0016.9dfa.cab1)

MTU 1500 bytes, BW 100000 Kbit/sec, DLY 100 usec,
reliability 255/255, txload 1/255, rxload 1/255

Encapsulation ARPA, loopback not set

Keepalive set (10 sec)

Auto-duplex, Auto Speed, 100BaseTX/FX

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

Received 0 broadcasts, 0 runts, 0 giants, 0 throttles

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

0 watchdog

0 input packets with dribble condition detected

0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Serial0/0/0 is down, line protocol is down
Hardware is GT96K Serial
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation HDLC, loopback not set
Keepalive set (10 sec)
CRC checking enabled
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: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
Conversations 0/0/256 (active/max active/max total)
Reserved Conversations 0/0 (allocated/max allocated)
Available Bandwidth 1158 kilobits/sec
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 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 4 interface resets
0 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out
0 carrier transitions
DCD=down DSR=down DTR=up RTS=up CTS=down

Serial0/0/1 is down, line protocol is down
Hardware is GT96K Serial
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation HDLC, loopback not set
Keepalive set (10 sec)
CRC checking enabled
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: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
Conversations 0/0/256 (active/max active/max total)
Reserved Conversations 0/0 (allocated/max allocated)
Available Bandwidth 1158 kilobits/sec
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 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
0 packets output, 0 bytes, 0 underruns

0 output errors, 0 collisions, 4 interface resets
0 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out
0 carrier transitions
DCD=down DSR=down DTR=up RTS=up CTS=down

Serial0/1/0 is administratively down, line protocol is down

Hardware is GT96K Serial
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation HDLC, loopback not set
Keepalive set (10 sec)
CRC checking enabled
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: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
Conversations 0/0/256 (active/max active/max total)
Reserved Conversations 0/0 (allocated/max allocated)
Available Bandwidth 1158 kilobits/sec
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 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
0 packets output, 0 bytes, 0 underruns
0 output errors, 0 collisions, 3 interface resets
0 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out
0 carrier transitions
DCD=down DSR=down DTR=down RTS=down CTS=down

Serial0/2/0 is up, line protocol is up

Hardware is GT96K Serial
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation FRAME-RELAY, loopback not set
Keepalive set (10 sec)
CRC checking enabled
LMI enq sent 161, LMI stat recvd 159, LMI upd recvd 0, DTE LMI up
LMI enq recvd 0, LMI stat sent 0, LMI upd sent 0
LMI DLCI 1023 LMI type is CISCO frame relay DTE
FR SVC disabled, LAPF state down
Broadcast queue 0/64, broadcasts sent/dropped 1098/0, interface
broadcasts 1055
Last input 00:00:00, output 00:00:00, output hang never
Last clearing of "show interface" counters 00:29:35
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
Conversations 0/4/256 (active/max active/max total)
Reserved Conversations 0/0 (allocated/max allocated)
Available Bandwidth 1158 kilobits/sec

5 minute input rate 1000 bits/sec, 1 packets/sec
5 minute output rate 1000 bits/sec, 0 packets/sec
1838 packets input, 160497 bytes, 0 no buffer
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
2085 packets output, 183436 bytes, 0 underruns
0 output errors, 0 collisions, 6 interface resets
0 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out
64 carrier transitions
DCD=up DSR=up DTR=up RTS=up CTS=up

Serial0/2/0.12 is up, line protocol is up

Hardware is GT96K Serial
Internet address is 10.1.1.2/30
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation FRAME-RELAY
CRC checking enabled
Last clearing of "show interface" counters never

Serial0/2/0.23 is up, line protocol is up

Hardware is GT96K Serial
Internet address is 10.1.1.5/30
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation FRAME-RELAY
CRC checking enabled
Last clearing of "show interface" counters never

Serial0/3/0 is administratively down, line protocol is down

Hardware is GT96K Serial
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation HDLC, loopback not set
Keepalive set (10 sec)
CRC checking enabled
Last input 00:29:51, output 00:29:51, 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: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
Conversations 0/1/256 (active/max active/max total)
Reserved Conversations 0/0 (allocated/max allocated)
Available Bandwidth 1158 kilobits/sec

5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
1 packets input, 24 bytes, 0 no buffer
Received 1 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
1 packets output, 24 bytes, 0 underruns
0 output errors, 0 collisions, 3 interface resets
0 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out
3 carrier transitions
DCD=down DSR=down DTR=down RTS=down CTS=down

```
NVIO is administratively down, line protocol is down
  Hardware is NVI
  MTU 1514 bytes, BW 56 Kbit/sec, DLY 5000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation UNKNOWN, loopback not set
  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
  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 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    0 unknown protocol drops
    0 output buffer failures, 0 output buffers swapped out
R2#
```

```
R2#show cdp neighbors
```

```
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge  
S - Switch, H - Host, I - IGMP, r - Repeater
```

Device ID	Local Intrfce	Holdtme	Capability	Platform	Port
ID					
R3	Ser 0/2/0.23	167	R S I	2811	Ser
0/2/0.23					
R1	Ser 0/2/0.12	167	R S I	2811	Ser
0/2/0.12					

R2#show cdp neighbors detail

Device ID: R3

Entry address(es):

IP address: 10.1.1.6

IPv6 address: 2026::1:2 (global unicast)

IPv6 address: FE80::216:47FF:FE9A:F6E8 (link-local)

Platform: Cisco 2811, Capabilities: Router Switch IGMP

Interface: Serial0/2/0.23, Port ID (outgoing port): Serial0/2/0.23

Holdtime : 160 sec

Version :

Cisco IOS Software, 2800 Software (C2800NM-ADVIPSERVICESK9-M), Version 12.4(22)T2, RELEASE SOFTWARE (fc4)

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

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Compiled Fri 19-Jun-09 15:34 by prod_rel_team

advertisement version: 2

VTP Management Domain: ''

Device ID: R1

Entry address(es):

IP address: 10.1.1.1

IPv6 address: 2026::12:1 (global unicast)

IPv6 address: FE80::21D:70FF:FEA0:C690 (link-local)

Platform: Cisco 2811, Capabilities: Router Switch IGMP

Interface: Serial0/2/0.12, Port ID (outgoing port): Serial0/2/0.12

Holdtime : 159 sec

Version :

Cisco IOS Software, 2800 Software (C2800NM-ADVIPSERVICESK9-M), Version 12.4(22)T2, RELEASE SOFTWARE (fc4)

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

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advertisement version: 2

VTP Management Domain: ''

R2#

```
R2#show frame-relay map
Serial0/2/0.12 (up): point-to-point dlci, dlci 201(0xC9,0x3090),
broadcast
                    status defined, active
Serial0/2/0.23 (up): point-to-point dlci, dlci 203(0xCB,0x30B0),
broadcast
                    status defined, active
R2#
```

```
R2#show ip interface
FastEthernet0/0 is administratively down, line protocol is down
  Internet protocol processing disabled
FastEthernet0/1 is administratively down, line protocol is down
  Internet protocol processing disabled
Serial0/0/0 is down, line protocol is down
  Internet protocol processing disabled
Serial0/0/1 is down, line protocol is down
  Internet protocol processing disabled
Serial0/1/0 is administratively down, line protocol is down
  Internet protocol processing disabled
Serial0/2/0 is up, line protocol is up
  Internet protocol processing disabled
Serial0/2/0.12 is up, line protocol is up
  Internet address is 10.1.1.2/30
  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
    224.0.0.5
Outgoing access list is not set
Inbound access list is not set
Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP fast switching on the same interface is enabled
IP Flow switching is disabled
IP CEF switching is enabled
IP CEF switching 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
Policy routing is disabled
Network address translation is disabled
BGP Policy Mapping is disabled
Input features: MCI Check
WCCP Redirect outbound is disabled
WCCP Redirect inbound is disabled
WCCP Redirect exclude is disabled
Serial0/2/0.23 is up, line protocol is up
Internet address is 10.1.1.5/30
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
    224.0.0.5
Outgoing access list is not set
Inbound access list is not set
Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP fast switching on the same interface is enabled
```

IP Flow switching is disabled
IP CEF switching is enabled
IP CEF switching 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
Policy routing is disabled
Network address translation is disabled
BGP Policy Mapping is disabled
Input features: MCI Check
WCCP Redirect outbound is disabled
WCCP Redirect inbound is disabled
WCCP Redirect exclude is disabled
Serial0/3/0 is administratively down, line protocol is down
 Internet protocol processing disabled
NVI0 is administratively down, line protocol is down
 Internet protocol processing disabled
R2#

```

R2#show ip cef
Prefix          Next Hop          Interface
0.0.0.0/0       no route
0.0.0.0/8       drop
0.0.0.0/32      receive
10.1.1.0/30     attached         Serial0/2/0.12
10.1.1.0/32     receive         Serial0/2/0.12
10.1.1.2/32     receive         Serial0/2/0.12
10.1.1.3/32     receive         Serial0/2/0.12
10.1.1.4/30     attached         Serial0/2/0.23
10.1.1.4/32     receive         Serial0/2/0.23
10.1.1.5/32     receive         Serial0/2/0.23
10.1.1.7/32     receive         Serial0/2/0.23
10.1.1.8/30     10.1.1.6        Serial0/2/0.23
10.1.4.4/30     10.1.1.6        Serial0/2/0.23
10.1.4.8/30     10.1.1.6        Serial0/2/0.23
10.2.1.0/24     10.1.1.6        Serial0/2/0.23
10.2.2.0/24     10.1.1.6        Serial0/2/0.23
10.2.4.12/30    10.1.1.6        Serial0/2/0.23
127.0.0.0/8     drop
209.65.200.224/30 10.1.1.1        Serial0/2/0.12
209.65.200.240/29 10.1.1.1        Serial0/2/0.12
224.0.0.0/4     multicast
224.0.0.0/24     receive
240.0.0.0/4     drop
255.255.255.255/32 receive
R2#

```

```
R2#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
R2#
```

```
R2#show ip protocols
Routing Protocol is "ospf 1"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Router ID 2.2.2.2
  It is an area border router
  Number of areas in this router is 2. 2 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    10.1.1.1 0.0.0.0 area 0
    10.1.1.5 0.0.0.0 area 0
```

```
10.2.2.1 0.0.0.0 area 0
10.0.0.0 0.255.255.255 area 12
Reference bandwidth unit is 100 mbps
Routing Information Sources:
  Gateway          Distance      Last Update
  3.3.3.3           110          00:25:39
  10.1.1.1          110          00:25:55
Distance: (default is 110)
```

R2#

R2#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
R2#
```

```
R2#show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address
Interface				
3.3.3.3	0	FULL/ -	00:00:35	10.1.1.6
Serial0/2/0.23				
10.1.1.1	0	FULL/ -	00:00:30	10.1.1.1
Serial0/2/0.12				

R2#

```
R2#show ip ospf interface
Serial0/2/0.23 is up, line protocol is up
Internet Address 10.1.1.5/30, Area 0
```

```
Process ID 1, Router ID 2.2.2.2, Network Type POINT_TO_POINT, Cost: 64
Transmit Delay is 1 sec, State POINT_TO_POINT
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  oob-resync timeout 40
  Hello due in 00:00:04
Supports Link-local Signaling (LLS)
Cisco NSF helper support enabled
IETF NSF helper support enabled
Index 1/1, flood queue length 0
Next 0x0(0)/0x0(0)
Last flood scan length is 1, maximum is 1
Last flood scan time is 0 msec, maximum is 0 msec
Neighbor Count is 1, Adjacent neighbor count is 1
  Adjacent with neighbor 3.3.3.3
  Suppress hello for 0 neighbor(s)
Serial0/2/0.12 is up, line protocol is up
Internet Address 10.1.1.2/30, Area 12
Process ID 1, Router ID 2.2.2.2, Network Type POINT_TO_POINT, Cost: 64
Transmit Delay is 1 sec, State POINT_TO_POINT
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  oob-resync timeout 40
  Hello due in 00:00:07
Supports Link-local Signaling (LLS)
Cisco NSF helper support enabled
IETF NSF helper support enabled
Index 1/2, flood queue length 0
Next 0x0(0)/0x0(0)
Last flood scan length is 3, maximum is 3
Last flood scan time is 0 msec, maximum is 0 msec
Neighbor Count is 1, Adjacent neighbor count is 1
  Adjacent with neighbor 10.1.1.1
  Suppress hello for 0 neighbor(s)
R2#
```

R2#show ip ospf database

OSPF Router with ID (2.2.2.2) (Process ID 1)

Router Link States (Area 0)

Link ID count	ADV Router	Age	Seq#	Checksum	Link
2.2.2.2	2.2.2.2	1597	0x8000000C	0x00C09D	2
3.3.3.3	3.3.3.3	1598	0x8000000C	0x0066F0	2

Summary Net Link States (Area 0)

Link ID	ADV Router	Age	Seq#	Checksum
10.1.1.0	2.2.2.2	1597	0x80000001	0x0024C7
10.1.1.8	3.3.3.3	1598	0x80000001	0x00B52A

Summary ASB Link States (Area 0)

Link ID	ADV Router	Age	Seq#	Checksum
10.1.1.1	2.2.2.2	1587	0x80000001	0x001EC8

Router Link States (Area 12)

Link ID count	ADV Router	Age	Seq#	Checksum	Link
2.2.2.2	2.2.2.2	1597	0x8000000C	0x00392B	2
10.1.1.1	10.1.1.1	1598	0x80000007	0x00A0C3	2

Summary Net Link States (Area 12)

Link ID	ADV Router	Age	Seq#	Checksum
---------	------------	-----	------	----------

10.1.1.4	2.2.2.2	1597	0x80000001	0x00FBEB
10.1.1.8	2.2.2.2	1589	0x80000001	0x00564D

Summary ASB Link States (Area 12)

Link ID	ADV Router	Age	Seq#	Checksum
3.3.3.3	2.2.2.2	1589	0x80000001	0x0037B0

Type-5 AS External Link States

Link ID	ADV Router	Age	Seq#	Checksum	Tag
10.1.4.4	3.3.3.3	1574	0x80000001	0x00ACC1	0
10.1.4.8	3.3.3.3	1573	0x80000001	0x0084E5	0
10.2.1.0	3.3.3.3	1573	0x80000001	0x00FB75	0
10.2.2.0	3.3.3.3	1573	0x80000001	0x00F07F	0
10.2.4.12	3.3.3.3	1573	0x80000001	0x005015	0
209.65.200.224	10.1.1.1	1833	0x80000001	0x004693	0
209.65.200.240	10.1.1.1	1774	0x80000001	0x0031C6	65002

R2#

R2#show ip route ospf

209.65.200.0/24 is variably subnetted, 2 subnets, 2 masks

O E2 209.65.200.240/29 [110/1] via 10.1.1.1, 00:26:37, Serial0/2/0.12

O E2 209.65.200.224/30 [110/20] via 10.1.1.1, 00:26:37, Serial0/2/0.12

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

O E2 10.2.4.12/30 [110/20] via 10.1.1.6, 00:26:21, Serial0/2/0.23

O IA 10.1.1.8/30 [110/128] via 10.1.1.6, 00:26:37, Serial0/2/0.23

O E2 10.1.4.8/30 [110/20] via 10.1.1.6, 00:26:21, Serial0/2/0.23

O E2 10.2.1.0/24 [110/20] via 10.1.1.6, 00:26:21, Serial0/2/0.23

O E2 10.2.2.0/24 [110/20] via 10.1.1.6, 00:26:21, Serial0/2/0.23

O E2 10.1.4.4/30 [110/20] via 10.1.1.6, 00:26:21, Serial0/2/0.23

R2#

