

```
R1#
R1#show running-config
Building configuration...
```

Current configuration : 2692 bytes

```
!
! Last configuration change at 20:55:56 UTC Thu Jun 10 2010
! NVRAM config last updated at 20:55:57 UTC Thu Jun 10 2010
!
```

```
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
```

```
!
hostname R1
```

```
!
boot-start-marker
boot-end-marker
```

```
!
logging message-counter syslog
no logging console
enable secret 5 $1$aKZT$R06SAsRilNacGlsvRsdUg0
```

```
!
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  
  shutdown  
  no fair-queue  
  clock rate 2000000  
!  
interface Serial0/0/1  
  no ip address  
  shutdown  
!  
interface Serial0/1/0  
  no ip address  
  shutdown  
  clock rate 2000000  
!  
interface Serial0/2/0  
  no ip address  
  encapsulation frame-relay
```

```
!  
interface Serial0/2/0.12 point-to-point  
 ip address 10.1.1.1 255.255.255.252  
 ip pim sparse-dense-mode  
 ip nat inside  
 ip virtual-reassembly  
 snmp trap link-status  
 ipv6 address 2026::12:1/122  
 ipv6 enable  
 ipv6 ospf 6 area 122  
 frame-relay interface-dlci 102  
!  
interface Serial0/3/0  
 ip address 209.65.200.225 255.255.255.252  
 ip nat outside  
 ip virtual-reassembly  
 clock rate 56000  
!  
router ospf 1  
 router-id 10.1.1.1  
 log-adjacency-changes  
 redistribute connected subnets  
 redistribute static subnets  
 redistribute bgp 65001 subnets  
 network 10.1.1.1 0.0.0.0 area 12  
!  
router bgp 65001  
 no synchronization  
 bgp router-id 1.1.1.1  
 bgp log-neighbor-changes  
 neighbor 209.65.200.226 remote-as 65002  
 no auto-summary  
!  
ip forward-protocol nd  
ip http server  
no ip http secure-server  
!  
!  
ip nat inside source list 10 interface Serial0/3/0 overload  
!  
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  
!  
access-list 10 permit 10.0.0.0 0.255.255.255  
ipv6 router ospf 6  
 router-id 1.1.1.1  
 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  
  password cisco  
  login  
!  
scheduler allocate 20000 1000  
ntp master 5  
ntp peer 10.1.1.2  
ntp peer 10.1.4.6  
ntp peer 10.1.1.6  
ntp peer 10.1.4.10  
ntp peer 10.1.1.10  
ntp peer 10.2.4.13  
ntp peer 10.2.4.14  
end
```

```
R1#
```

```
R1#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 = 32/32/36 ms  
R1#
```

```
R1#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 = 32/32/36 ms
```

```
R1#
```

```
R1#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 = 64/64/68 ms  
R1#
```

```
R1#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 = 128/132/140  
ms  
R1#
```

```
R1#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 = 64/66/68 ms
```

```
R1#
```



```
R1#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 = 64/65/68 ms
```

```
R1#
```

```
R1#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 = 128/130/132
```

```
ms
```

```
R1#
```

R1#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 = 128/130/132

ms

R1#

R1#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 = 192/194/196

ms

R1#

R1#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 = 192/195/196

ms

R1#

```
R1#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 = 196/196/196
```

```
ms
```

```
R1#
```

```
R1#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 = 192/194/196
```

```
ms
```

```
R1#
```

```
R1#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 = 192/195/200
```

```
ms
```

```
R1#
```

```
R1#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 = 192/194/196  
ms  
R1#
```

```
R1#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 = 192/194/196  
ms  
R1#
```



```
R1#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 80 percent (4/5), round-trip min/avg/max = 192/194/196 ms
```

```
R1#
```

```
R1#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 = 192/195/196  
ms
```

```
R1#
```

```
R1#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 = 192/195/196  
ms
```

```
R1#
```

```
R1#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 = 192/196/204  
ms
```

```
R1#
```

```
R1#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 = 192/194/196  
ms
```

```
R1#
```

```
R1#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 = 192/194/196
```

```
ms
```

```
R1#
```

```
R1#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	administratively
down down				
Serial0/0/1	unassigned	YES	NVRAM	administratively
down down				
Serial0/1/0	unassigned	YES	NVRAM	administratively
down down				
Serial0/2/0	unassigned	YES	NVRAM	up
up				
Serial0/2/0.12	10.1.1.1	YES	NVRAM	up
up				
Serial0/3/0	209.65.200.225	YES	NVRAM	up
up				
NV10	unassigned	YES	unset	administratively
down down				

```
R1#
```

```
R1#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  
B        209.65.200.240/29 [20/0] via 209.65.200.226, 00:10:49  
C        209.65.200.224/30 is directly connected, Serial0/3/0  
        10.0.0.0/8 is variably subnetted, 8 subnets, 2 masks  
O E2    10.2.4.12/30 [110/20] via 10.1.1.2, 00:07:37, Serial0/2/0.12  
O IA    10.1.1.8/30 [110/192] via 10.1.1.2, 00:07:43, Serial0/2/0.12  
O E2    10.1.4.8/30 [110/20] via 10.1.1.2, 00:07:37, Serial0/2/0.12  
O E2    10.2.1.0/24 [110/20] via 10.1.1.2, 00:07:37, Serial0/2/0.12  
O E2    10.2.2.0/24 [110/20] via 10.1.1.2, 00:07:38, Serial0/2/0.12  
C        10.1.1.0/30 is directly connected, Serial0/2/0.12  
O E2    10.1.4.4/30 [110/20] via 10.1.1.2, 00:07:38, Serial0/2/0.12  
O IA    10.1.1.4/30 [110/128] via 10.1.1.2, 00:07:44, Serial0/2/0.12  
R1#
```

```
R1#show processes cpu
```

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

PID	Runtime(ms)	Invoked	uSecs	5Sec	1Min	5Min	TTY	Process
1	24	81	296	0.00%	0.00%	0.00%	0	Chunk
Manager								
2	0	145	0	0.07%	0.04%	0.02%	0	Load Meter
3	1212	619	1957	0.00%	0.22%	0.20%	0	Exec
4	0	1	0	0.00%	0.00%	0.00%	0	EDDRI_MAIN
5	924	82	11268	0.00%	0.10%	0.10%	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	0	699	0	0.00%	0.00%	0.00%	0	BGP
Scheduler								

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	12	42	285	0.00%	0.00%	0.00%	0	BGP I/O
75	0	725	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	26	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
Conditi								
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	13	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	726	0	0.00%	0.00%	0.00%	0	PI MATM
Aging Pr								
92	0	74	0	0.00%	0.00%	0.00%	0	EtherChnl
93	0	2	0	0.00%	0.00%	0.00%	0	Ethernet
CFM								
94	4	708	5	0.00%	0.00%	0.00%	0	Ethernet
Timer C								
95	0	740	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	13	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	0	1	0	0.00%	0.00%	0.00%	0	ACCT
Periodic Pr								
105	20	111	180	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	4	1	4000	0.00%	0.00%	0.00%	0	IP ARP
Retry Age								
111	188	436	431	0.00%	0.01%	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	0	1	0	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	4	0	0.00%	0.00%	0.00%	0	MOP
Protocols								
119	0	3	0	0.00%	0.00%	0.00%	0	PPP Hooks
120	0	3	0	0.00%	0.00%	0.00%	0	Collection
proce								
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	10	400	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	3	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	0	2	0	0.00%	0.00%	0.00%	0 PPP IPCP
136	0	51	0	0.00%	0.00%	0.00%	0 IP
Background							
137	12	8	1500	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	0	13	0	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	15	0	0.00%	0.00%	0.00%	0 CEF
background p							
145	8	974	8	0.07%	0.01%	0.00%	0 CEF: IPv4
proces							
146	4	3	1333	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	30	0	0.00%	0.00%	0.00%	0 TCP Timer
152	0	1	0	0.00%	0.00%	0.00%	0 TCP
Protocols							
153	8	4	2000	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							

250	0	1	0	0.00%	0.00%	0.00%	0 UNICAST
REKEY AC							
251	0	755	0	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	3764	1	0.00%	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	4	2	2000	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	76	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	24	0	0.00%	0.00%	0.00%	0 Crypto
cTCP proc							
268	8	2	4000	0.00%	0.00%	0.00%	0 VLAN
Manager							
269	0	136	0	0.00%	0.00%	0.00%	0 OSPFv3-6
Hello							
270	0	1	0	0.00%	0.00%	0.00%	0 chkpt
message ha							
271	0	738	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	758	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	0	220	0	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


```
R1#show interfaces
FastEthernet0/0 is administratively down, line protocol is down
  Hardware is MV96340 Ethernet, address is 001d.70a0.c690 (bia
001d.70a0.c690)
  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 001d.70a0.c691 (bia
001d.70a0.c691)
  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 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: 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 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
```

```
Serial0/0/1 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

Serial0/1/0 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 00:12:52, output 00:12:51, 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
5 packets input, 1026 bytes, 0 no buffer
Received 5 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
3 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out
0 carrier transitions
DCD=down DSR=down DTR=up 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 63, LMI stat recvd 61, 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 184/0, interface
broadcasts 181
Last input 00:00:00, output 00:00:00, output hang never
Last clearing of "show interface" counters 00:12:50
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, 1 packets/sec
5 minute output rate 0 bits/sec, 1 packets/sec
1047 packets input, 77260 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
961 packets output, 69678 bytes, 0 underruns
0 output errors, 0 collisions, 1 interface resets
0 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out
67 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 10.1.1.1/30
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 up, line protocol is up

Hardware is GT96K Serial
Internet address is 209.65.200.225/30
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 00:00:01, output 00:00:05, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: 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, 1 packets/sec
5 minute output rate 0 bits/sec, 1 packets/sec
648 packets input, 42831 bytes, 0 no buffer
Received 93 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
785 packets output, 53031 bytes, 0 underruns
0 output errors, 0 collisions, 5 interface resets
3 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out
5 carrier transitions
DCD=up DSR=up DTR=up RTS=up CTS=up

NV10 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
```

R1#

R1#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
R2	Ser 0/2/0.12	124	R S I	2811	Ser
R5	Ser 0/3/0	129	R S I	2811	Ser

R1#

R1#show cdp neighbors detail

```

-----
Device ID: R2
Entry address(es):
  IP address: 10.1.1.2
  IPv6 address: 2026::12:2 (global unicast)
  IPv6 address: FE80::216:9DFF:FEFA:CAB0 (link-local)
Platform: Cisco 2811, Capabilities: Router Switch IGMP
Interface: Serial0/2/0.12, Port ID (outgoing port): Serial0/2/0.12
Holdtime : 177 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>
Copyright (c) 1986-2009 by Cisco Systems, Inc.
Compiled Fri 19-Jun-09 15:34 by prod_rel_team

advertisement version: 2
VTP Management Domain: ''

Device ID: R5
Entry address(es):
 IP address: 209.65.200.226
Platform: Cisco 2811, Capabilities: Router Switch IGMP
Interface: Serial0/3/0, Port ID (outgoing port): Serial0/3/0
Holdtime : 121 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>
Copyright (c) 1986-2009 by Cisco Systems, Inc.
Compiled Fri 19-Jun-09 15:34 by prod_rel_team

advertisement version: 2
VTP Management Domain: ''

R1#

```
R1#show frame-relay map
Serial0/2/0.12 (up): point-to-point dlci, dlci 102(0x66,0x1860),
broadcast
                status defined, active
R1#
```

```
R1#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 administratively down, line protocol is down
  Internet protocol processing disabled
Serial0/0/1 is administratively 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 10.1.1.1/30
  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 enabled, interface in domain inside
  BGP Policy Mapping is disabled
  Input features: Stateful Inspection, Virtual Fragment Reassembly,
Virtual Fragment Reassembly After IPsec Decryption, MCI Check
  Output features: NAT Inside, Stateful Inspection
  WCCP Redirect outbound is disabled
  WCCP Redirect inbound is disabled
  WCCP Redirect exclude is disabled
Serial0/3/0 is up, line protocol is up
  Internet address is 209.65.200.225/30
```

```
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
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 enabled, interface in domain outside
BGP Policy Mapping is disabled
Input features: Stateful Inspection, Virtual Fragment Reassembly,
Virtual Fragment Reassembly After IPsec Decryption, NAT Outside, MCI
Check
Output features: CCE Output Classification, Post-routing NAT Outside,
Stateful Inspection
WCCP Redirect outbound is disabled
WCCP Redirect inbound is disabled
WCCP Redirect exclude is disabled
NVIO is administratively down, line protocol is down
Internet protocol processing disabled
R1#
```

```
R1#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
10.1.1.1/32	receive	Serial0/2/0.12
10.1.1.3/32	receive	Serial0/2/0.12
10.1.1.4/30	10.1.1.2	Serial0/2/0.12
10.1.1.8/30	10.1.1.2	Serial0/2/0.12
10.1.4.4/30	10.1.1.2	Serial0/2/0.12
10.1.4.8/30	10.1.1.2	Serial0/2/0.12
10.2.1.0/24	10.1.1.2	Serial0/2/0.12
10.2.2.0/24	10.1.1.2	Serial0/2/0.12
10.2.4.12/30	10.1.1.2	Serial0/2/0.12
127.0.0.0/8	drop	
209.65.200.224/30	attached	Serial0/3/0
209.65.200.224/32	receive	Serial0/3/0
209.65.200.225/32	receive	Serial0/3/0
209.65.200.227/32	receive	Serial0/3/0
209.65.200.240/29	209.65.200.226	Serial0/3/0
224.0.0.0/4	multicast	
224.0.0.0/24	receive	
240.0.0.0/4	drop	
255.255.255.255/32	receive	

```
R1#
```

```
R1#show tcp statistics
Rcvd: 32 Total, 0 no port
      0 checksum error, 0 bad offset, 0 too short
      16 packets (364 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
      16 ack packets (312 bytes)
Sent: 31 Total, 0 urgent packets
      1 control packets (including 0 retransmitted)
      15 data packets (311 bytes)
      0 data packets (0 bytes) retransmitted
      0 data packets (0 bytes) fastretransmitted
      15 ack only packets (15 delayed)
      0 window probe packets, 0 window update packets
0 Connections initiated, 1 connections accepted, 1 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
R1#
```

```
R1#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 10.1.1.1
  It is an autonomous system boundary router
  Redistributing External Routes from,
    connected, includes subnets in redistribution
    static, includes subnets in redistribution
    bgp 65001, includes subnets in redistribution
  Number of areas in this router is 1. 1 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    10.1.1.1 0.0.0.0 area 12
```


Reference bandwidth unit is 100 mbps

Routing Information Sources:

Gateway	Distance	Last Update
3.3.3.3	110	00:09:24
2.2.2.2	110	00:09:29

Distance: (default is 110)

Routing Protocol is "bgp 65001"

Outgoing update filter list for all interfaces is not set

Incoming update filter list for all interfaces is not set

IGP synchronization is disabled

Automatic route summarization is disabled

Neighbor(s):

Address	FiltIn	FiltOut	DistIn	DistOut	Weight	RouteMap
209.65.200.226						

Maximum path: 1

Routing Information Sources:

Gateway	Distance	Last Update
209.65.200.226	20	00:12:36

Distance: external 20 internal 200 local 200

R1#

```
R1#show access-lists
Standard IP access list 10
  10 permit 10.0.0.0, wildcard bits 0.255.255.255 (705 matches)
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
R1#
```

```
R1#show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address
Interface				
2.2.2.2	0	FULL/ -	00:00:39	10.1.1.2
Serial0/2/0.12				
R1#				

```
R1#show ip ospf interface
Serial0/2/0.12 is up, line protocol is up
  Internet Address 10.1.1.1/30, Area 12
  Process ID 1, Router ID 10.1.1.1, 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 00:00:05
  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 2.2.2.2
Suppress hello for 0 neighbor(s)
R1#
```

```
R1#show ip ospf database
```

```
OSPF Router with ID (10.1.1.1) (Process ID 1)
```

```
Router Link States (Area 12)
```

Link ID	ADV Router	Age	Seq#	Checksum	Link
count					
2.2.2.2	2.2.2.2	612	0x8000000C	0x00392B	2
10.1.1.1	10.1.1.1	611	0x80000003	0x00A8BF	2

Summary Net Link States (Area 12)

Link ID	ADV Router	Age	Seq#	Checksum
10.1.1.4	2.2.2.2	612	0x80000001	0x00FBEB
10.1.1.8	2.2.2.2	602	0x80000001	0x00564D

Summary ASB Link States (Area 12)

Link ID	ADV Router	Age	Seq#	Checksum
3.3.3.3	2.2.2.2	602	0x80000001	0x0037B0

Type-5 AS External Link States

Link ID	ADV Router	Age	Seq#	Checksum	Tag
10.1.4.4	3.3.3.3	597	0x80000001	0x00ACC1	0
10.1.4.8	3.3.3.3	597	0x80000001	0x0084E5	0
10.2.1.0	3.3.3.3	597	0x80000001	0x00FB75	0
10.2.2.0	3.3.3.3	598	0x80000001	0x00F07F	0
10.2.4.12	3.3.3.3	598	0x80000001	0x005015	0
209.65.200.224	10.1.1.1	846	0x80000001	0x004693	0
209.65.200.240	10.1.1.1	787	0x80000001	0x0031C6	65002

R1#

```
R1#show ip route ospf
    10.0.0.0/8 is variably subnetted, 8 subnets, 2 masks
O E2   10.2.4.12/30 [110/20] via 10.1.1.2, 00:10:04, Serial0/2/0.12
O IA   10.1.1.8/30 [110/192] via 10.1.1.2, 00:10:10, Serial0/2/0.12
O E2   10.1.4.8/30 [110/20] via 10.1.1.2, 00:10:04, Serial0/2/0.12
O E2   10.2.1.0/24 [110/20] via 10.1.1.2, 00:10:04, Serial0/2/0.12
O E2   10.2.2.0/24 [110/20] via 10.1.1.2, 00:10:04, Serial0/2/0.12
O E2   10.1.4.4/30 [110/20] via 10.1.1.2, 00:10:04, Serial0/2/0.12
O IA   10.1.1.4/30 [110/128] via 10.1.1.2, 00:10:10, Serial0/2/0.12
R1#
```

```
R1#show ip bgp neighbors
BGP neighbor is 209.65.200.226, remote AS 65002, external link
    BGP version 4, remote router ID 5.5.5.5
    BGP state = Established, up for 00:14:20
```

Last read 00:00:21, last write 00:00:22, hold time is 180, keepalive interval is 60 seconds

Neighbor capabilities:

Route refresh: advertised and received(new)

Address family IPv4 Unicast: advertised and received

Message statistics:

InQ depth is 0

OutQ depth is 0

	Sent	Rcvd
Opens:	1	1
Notifications:	0	0
Updates:	0	1
Keepalives:	15	15
Route Refresh:	0	0
Total:	16	17

Default minimum time between advertisement runs is 30 seconds

For address family: IPv4 Unicast

BGP table version 2, neighbor version 2/0

Output queue size : 0

Index 1, Offset 0, Mask 0x2

1 update-group member

	Sent	Rcvd
Prefix activity:	----	----
Prefixes Current:	0	1 (Consumes 52 bytes)
Prefixes Total:	0	1
Implicit Withdraw:	0	0
Explicit Withdraw:	0	0
Used as bestpath:	n/a	1
Used as multipath:	n/a	0

	Outbound	Inbound
Local Policy Denied Prefixes:	-----	-----
Bestpath from this peer:	1	n/a
Total:	1	0

Number of NLRI in the update sent: max 0, min 0

Address tracking is enabled, the RIB does have a route to 209.65.200.226

Connections established 1; dropped 0

Last reset never

Transport(tcp) path-mtu-discovery is enabled

Connection state is ESTAB, I/O status: 1, unread input bytes: 0

Connection is ECN Disabled, Minimum incoming TTL 0, Outgoing TTL 1

Local host: 209.65.200.225, Local port: 179

Foreign host: 209.65.200.226, Foreign port: 55278

Connection tableid (VRF): 0

Enqueued packets for retransmit: 0, input: 0 mis-ordered: 0 (0 bytes)

Event Timers (current time is 0xDFC8C):

Timer	Starts	Wakeups	Next
Retrans	17	0	0x0

TimeWait	0	0	0x0
AckHold	17	16	0x0
SendWnd	0	0	0x0
KeepAlive	0	0	0x0
GiveUp	0	0	0x0
PmtuAger	0	0	0x0
DeadWait	0	0	0x0
Linger	0	0	0x0
ProcessQ	0	0	0x0

iss: 1157726143 snduna: 1157726474 sndnxt: 1157726474 sndwnd:
16054
irs: 3958078028 rcvnxt: 3958078412 rcvwnd: 16001 delrcvwnd:
383

SRTT: 269 ms, RTTO: 516 ms, RTV: 247 ms, KRTT: 0 ms
minRTT: 20 ms, maxRTT: 300 ms, ACK hold: 200 ms
Status Flags: passive open, gen tcbs
Option Flags: nagle, path mtu capable
IP Precedence value : 6

Datagrams (max data segment is 1460 bytes):
Rcvd: 34 (out of order: 0), with data: 17, total data bytes: 383
Sent: 33 (retransmit: 0, fastretransmit: 0, partialack: 0, Second
Congestion: 0), with data: 16, total data bytes: 330
Packets received in fast path: 0, fast processed: 0, slow path: 0
fast lock acquisition failures: 0, slow path: 0

R1#


```
R1#show ip bgp summary
BGP router identifier 1.1.1.1, local AS number 65001
BGP table version is 2, main routing table version 2
1 network entries using 132 bytes of memory
1 path entries using 52 bytes of memory
2/1 BGP path/bestpath attribute entries using 296 bytes of memory
1 BGP AS-PATH entries using 24 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
0 BGP filter-list cache entries using 0 bytes of memory
BGP using 504 total bytes of memory
BGP activity 1/0 prefixes, 1/0 paths, scan interval 60 secs

Neighbor      V    AS MsgRcvd MsgSent   TblVer  InQ  OutQ  Up/Down
State/PfxRcd
209.65.200.226 4 65002     17     16       2    0    0 00:14:33
1
R1#
```

```
R1#show ip bgp
BGP table version is 2, local router ID is 1.1.1.1
Status codes: s suppressed, d damped, h history, * valid, > best, i -
internal,
                r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network          Next Hop           Metric LocPrf Weight Path
*> 209.65.200.240/29
                        209.65.200.226           0                0 65002 i
R1#
```

```
R1#show ip route bgp
    209.65.200.0/24 is variably subnetted, 2 subnets, 2 masks
B       209.65.200.240/29 [20/0] via 209.65.200.226, 00:13:55
R1#
```

```
R1#show ip nat translations
Pro Inside global      Inside local      Outside local      Outside
global
icmp 209.65.200.225:1  10.2.1.4:1        209.65.200.241:1
209.65.200.241:1
R1#
```

```
R1#show ip nat statistics
Total active translations: 1 (0 static, 1 dynamic; 1 extended)
Peak translations: 18, occurred 00:10:04 ago
Outside interfaces:
  Serial0/3/0
Inside interfaces:
  Serial0/2/0.12
Hits: 1458 Misses: 0
CEF Translated packets: 1322, CEF Punted packets: 136
Expired translations: 35
Dynamic mappings:
-- Inside Source
  [Id: 1] access-list 10 interface Serial0/3/0 refcount 1
Appl doors: 0
Normal doors: 0
Queued Packets: 0
R1#
```

```
R1#
R1#show ipv6 interface brief
FastEthernet0/0      [administratively down/down]
    unassigned
FastEthernet0/1      [administratively down/down]
    unassigned
Serial0/0/0          [administratively down/down]
    unassigned
Serial0/0/1          [administratively down/down]
    unassigned
Serial0/1/0          [administratively down/down]
    unassigned
Serial0/2/0          [up/up]
    unassigned
Serial0/2/0.12       [up/up]
    FE80::21D:70FF:FEA0:C690
    2026::12:1
Serial0/3/0          [up/up]
    unassigned
NV10                 [up/up]
    unassigned
R1#
```

```
R1#ping ipv6 2026::12:1
```

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

```
Sending 5, 100-byte ICMP Echos to 2026::12:1, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/4 ms
```

```
R1#
```

```
R1#ping ipv6 2026::12:2
```

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

```
Sending 5, 100-byte ICMP Echos to 2026::12:2, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 64/66/68 ms
```

```
R1#
```

```
R1#ping ipv6 2026::1:1
```

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

```
Sending 5, 100-byte ICMP Echos to 2026::1:1, timeout is 2 seconds:
```

```
% No valid route for destination
```

```
Success rate is 0 percent (0/1)
```

```
R1#
```



```
R1#ping ipv6 2026::1:2
```

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

```
Sending 5, 100-byte ICMP Echos to 2026::1:2, timeout is 2 seconds:
```

```
% No valid route for destination
```

```
Success rate is 0 percent (0/1)
```

```
R1#
```

```
R1#ping ipv6 2026::34:1
```

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

```
Sending 5, 100-byte ICMP Echos to 2026::34:1, timeout is 2 seconds:
```

```
% No valid route for destination
```

```
Success rate is 0 percent (0/1)
```

```
R1#
```

```
R1#ping ipv6 2026::34:2
```

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

```
Sending 5, 100-byte ICMP Echos to 2026::34:2, timeout is 2 seconds:
```

```
% No valid route for destination
```

```
Success rate is 0 percent (0/1)
```

```
R1#
```

```
R1#ping ipv6 2026::2:1
```

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

```
Sending 5, 100-byte ICMP Echos to 2026::2:1, timeout is 2 seconds:
```

```
% No valid route for destination
```

```
Success rate is 0 percent (0/1)
```

```
R1#
```

```
R1#ping ipv6 2026::2:2
```

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

```
Sending 5, 100-byte ICMP Echos to 2026::2:2, timeout is 2 seconds:
```

```
% No valid route for destination
```

```
Success rate is 0 percent (0/1)
```

```
R1#
```

```
R1#ping ipv6 2026::3:1
```

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

```
Sending 5, 100-byte ICMP Echos to 2026::3:1, timeout is 2 seconds:
```

```
% No valid route for destination
```

```
Success rate is 0 percent (0/1)
```

```
R1#
```

```
R1#ping ipv6 2026::3:2
```

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

```
Sending 5, 100-byte ICMP Echos to 2026::3:2, timeout is 2 seconds:
```

```
% No valid route for destination
Success rate is 0 percent (0/1)
R1#
```

```
R1#show ipv6 route
IPv6 Routing Table - Default - 3 entries
Codes: C - Connected, L - Local, S - Static, U - Per-user Static route
        B - BGP, M - MIPv6, R - RIP, I1 - ISIS L1
        I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary, D - EIGRP
        EX - EIGRP external
        O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1, OE2 - OSPF ext
2
        ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2
C  2026::12:0/128 [0/0]
    via Serial0/2/0.12, directly connected
L  2026::12:1/128 [0/0]
    via Serial0/2/0.12, receive
L  FF00::/8 [0/0]
```

via Null0, receive
R1#

```
R1#show ipv6 ospf
Routing Process "ospfv3 6" with ID 1.1.1.1
SPF schedule delay 5 secs, Hold time between two SPFs 10 secs
Minimum LSA interval 5 secs. Minimum LSA arrival 1 secs
LSA group pacing timer 240 secs
Interface flood pacing timer 33 msec
Retransmission pacing timer 66 msec
Number of external LSA 2. Checksum Sum 0x01092F
Number of areas in this router is 1. 1 normal 0 stub 0 nssa
Reference bandwidth unit is 100 mbps
  Area 122
    Number of interfaces in this area is 1
    SPF algorithm executed 2 times
    Number of LSA 3. Checksum Sum 0x01B44E
    Number of DCbitless LSA 0
    Number of indication LSA 0
```

Number of DoNotAge LSA 0
Flood list length 0

R1#

```
R1#show ipv6 ospf interface
Serial0/2/0.12 is up, line protocol is up
  Link Local Address FE80::21D:70FF:FEA0:C690, Interface ID 18
  Area 122, Process ID 6, Instance ID 0, Router ID 1.1.1.1
  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
    Hello due in 00:00:05
  Index 1/1/1, flood queue length 0
  Next 0x0(0)/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 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
```


R1#

R1#show ipv6 ospf neighbor

R1#