

```
R3#
R3#show running-config
Building configuration...
```

```
Current configuration : 2500 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 R3
!
boot-start-marker
boot-end-marker
!
logging message-counter syslog
enable secret 5 $1$p7Bj$JJYJbGT9E4K7craiToCfl.
!
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 Tunnel34  
  no ip address  
  ipv6 address 2026::34:1/122  
  ipv6 enable  
  ipv6 ospf 6 area 34  
  tunnel source 10.1.1.9  
  tunnel destination 10.1.1.10  
  tunnel mode ipv6ip  
!  
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  
  clock rate 2000000  
!  
interface Serial0/1/0  
  no ip address  
  shutdown  
!
```

```
interface Serial0/2/0
  no ip address
  encapsulation frame-relay
!
interface Serial0/2/0.23 point-to-point
  ip address 10.1.1.6 255.255.255.252
  ip pim sparse-dense-mode
  snmp trap link-status
  ipv6 address 2026::1:2/122
  ipv6 enable
  ipv6 ospf 6 area 0
  frame-relay interface-dlci 302
!
interface Serial0/2/0.34 point-to-point
  ip address 10.1.1.9 255.255.255.252
  ip pim sparse-dense-mode
  snmp trap link-status
  frame-relay interface-dlci 304
!
interface Serial0/3/0
  no ip address
!
router ospf 1
  router-id 3.3.3.3
  log-adjacency-changes
  area 34 nssa no-summary
  passive-interface Serial0/2/0
  network 10.1.1.2 0.0.0.0 area 0
  network 10.1.1.8 0.0.0.3 area 34
  network 10.3.3.1 0.0.0.0 area 0
  network 10.3.3.3 0.0.0.0 area 0
  network 0.0.0.0 255.255.255.255 area 0
!
ip forward-protocol nd
no 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
  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  
!  
scheduler allocate 20000 1000  
ntp peer 10.1.1.1  
ntp server 10.1.1.1  
end
```

R3#

```
R3#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 = 160/161/164  
ms
```

```
R3#
```

```
R3#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 = 160/161/164  
ms
```

```
R3#
```

```
R3#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 = 128/131/132  
ms
```

```
R3#
```

```
R3#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 = 128/129/132  
ms
```

```
R3#
```

```
R3#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
```

```
R3#
```

```
R3#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 = 64/66/68 ms
```

```
R3#
```

```
R3#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 = 128/129/132  
ms
```

```
R3#
```

```
R3#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 = 128/132/140  
ms
```

```
R3#
```

```
R3#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 = 64/66/68 ms
R3#
```

```
R3#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 = 64/66/68 ms
R3#
```

```
R3#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 = 64/65/68 ms
```

```
R3#
```

```
R3#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 = 64/66/68 ms
```

```
R3#
```

```
R3#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 = 64/65/68 ms
```

```
R3#
```

```
R3#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 = 64/65/68 ms
```

```
R3#
```

```
R3#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 = 64/67/72 ms
```

```
R3#
```

```
R3#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 = 64/64/64 ms
```

```
R3#
```

```
R3#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 = 64/66/68 ms
```

```
R3#
```

```
R3#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 = 64/65/68 ms
```

```
R3#
```

```
R3#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 = 64/64/68 ms
```

```
R3#
```

```
R3#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 = 64/64/68 ms
```

```
R3#
```

```
R3#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)
```

```
R3#
```

```
R3#show ip interface brief
```

Interface Protocol	IP-Address	OK?	Method	Status
FastEthernet0/0 down down	unassigned	YES	NVRAM	administratively
FastEthernet0/1 down down	unassigned	YES	NVRAM	administratively
Serial0/0/0 down	unassigned	YES	NVRAM	down
Serial0/0/1 down	unassigned	YES	NVRAM	down
Serial0/1/0 down down	unassigned	YES	NVRAM	administratively
Serial0/2/0 up	unassigned	YES	NVRAM	up
Serial0/2/0.23 up	10.1.1.6	YES	NVRAM	up
Serial0/2/0.34 up	10.1.1.9	YES	NVRAM	up
Serial0/3/0 down	unassigned	YES	NVRAM	down
Tunnel34 up	unassigned	YES	NVRAM	up

R3#

R3#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 10.1.1.5, 00:30:36, Serial0/2/0.23

O E2 209.65.200.224/30 [110/20] via 10.1.1.5, 00:30:36, Serial0/2/0.23

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

O N2 10.2.4.12/30 [110/20] via 10.1.1.10, 00:30:36, Serial0/2/0.34

C 10.1.1.8/30 is directly connected, Serial0/2/0.34

O N2 10.1.4.8/30 [110/20] via 10.1.1.10, 00:30:36, Serial0/2/0.34

O N2 10.2.1.0/24 [110/20] via 10.1.1.10, 00:30:37, Serial0/2/0.34

O N2 10.2.2.0/24 [110/20] via 10.1.1.10, 00:30:37, Serial0/2/0.34

O IA 10.1.1.0/30 [110/128] via 10.1.1.5, 00:30:47, Serial0/2/0.23

O N2 10.1.4.4/30 [110/20] via 10.1.1.10, 00:30:37, Serial0/2/0.34

C 10.1.1.4/30 is directly connected, Serial0/2/0.23

R3#

```
R3#show processes cpu
```

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

	PID	Runtime (ms)	Invoked	uSecs	5Sec	1Min	5Min	TTY	Process
Manager	1	8	69	115	0.00%	0.00%	0.00%	0	Chunk
	2	4	431	9	0.07%	0.04%	0.02%	0	Load Meter
proce	3	12	7	1714	0.00%	0.00%	0.00%	0	Collection
	4	0	1	0	0.00%	0.00%	0.00%	0	EDDRI_MAIN
heaps	5	2576	252	10222	0.00%	0.08%	0.10%	0	Check
Manager	6	0	1	0	0.00%	0.00%	0.00%	0	Pool
	7	0	2	0	0.00%	0.00%	0.00%	0	Timers
Client N	8	0	1	0	0.00%	0.00%	0.00%	0	License
Hello	9	48	888	54	0.00%	0.01%	0.00%	0	OSPF-1
Dynamic Cach	10	0	37	0	0.00%	0.00%	0.00%	0	IPC
Manager	11	0	1	0	0.00%	0.00%	0.00%	0	IPC Zone
Periodic Tim	12	4	2152	1	0.00%	0.00%	0.00%	0	IPC
Deferred Por	13	0	2152	0	0.00%	0.00%	0.00%	0	IPC

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	3	0	0.00%	0.00%	0.00%	0 Net Input
49	0	432	0	0.00%	0.00%	0.00%	0 Compute
load avg							
50	864	37	23351	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	0	2	0	0.00%	0.00%	0.00%	0 ESWILPPM
61	0	2	0	0.00%	0.00%	0.00%	0 Eswilp
Storm Con							
62	8	8610	0	0.00%	0.00%	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	360	11	0.00%	0.00%	0.00%	0 mxt5100
67	4	2	2000	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	4	2	2000	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	2155	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	73	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	36	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	2155	0	0.00%	0.00%	0.00%	0	PI MATM
Aging Pr								
92	0	217	0	0.00%	0.00%	0.00%	0	EtherChnl
93	0	2	0	0.00%	0.00%	0.00%	0	Ethernet
CFM								
94	4	2105	1	0.07%	0.00%	0.00%	0	Ethernet
Timer C								
95	0	2159	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	36	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	40	330	121	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	4	2	2000	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	200	997	200	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	4	2	2000	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	4	1	4000	0.00%	0.00%	0.00%	0 MPLS Auto-
Tunnel							
118	0	6	0	0.00%	0.00%	0.00%	0 MOP
Protocols							
119	0	3	0	0.00%	0.00%	0.00%	0 PPP Hooks
120	1260	631	1996	0.07%	0.22%	0.21%	0 Exec
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	8	30	266	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	8	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	96	2	48000	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	56	166	337	0.00%	0.00%	0.00%	0 IP
Background							
137	52	14	3714	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	37	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	4	122	32	0.00%	0.00%	0.00%	0 CEF
background p							
145	16	3283	4	0.00%	0.00%	0.00%	0 CEF: IPv4
proces							
146	0	25	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	8	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	2162	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	2165	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	4	2	2000	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	12	539138	0	0.79%	0.76%	0.77%	0 HQF Shaper
Backg							
179	0	21601	0	0.07%	0.04%	0.02%	0 RBSCP
Background							
180	0	1	0	0.00%	0.00%	0.00%	0 VPDN call
manage							
181	0	1	0	0.00%	0.00%	0.00%	0 CHKPT
EXAMPLE							
182	0	1	0	0.00%	0.00%	0.00%	0 CHKPT
DevTest							
183	4	1	4000	0.00%	0.00%	0.00%	0 IPS
Process							
184	0	2	0	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	4225	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	4225	0	0.00%	0.00%	0.00%	0 FW DP
Inspect pr							
189	0	4225	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	4	2	2000	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	88	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	0	2	0	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	4	2	2000	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	4	2	2000	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	3	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	4	803	4	0.00%	0.00%	0.00%	0 FLEX DSPRM
MAIN							

224	0	801	0	0.00%	0.00%	0.00%	0 FLEX DSP
KEEPALI							
225	0	74	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							
230	40	823	48	0.00%	0.00%	0.00%	0 OSPFv3-6
Hello							
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	0	3	0	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	196	111	1765	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	4	4	1000	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	2174	1	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	10858	0	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	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	219	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	68	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	4	1	4000	0.00%	0.00%	0.00%	0	LICENSE
AGENT								
271	0	2157	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	2176	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	8	81	98	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	58	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	33	121	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	24	62	387	0.00%	0.00%	0.00%	0 IPv6 RIB
Event H							
300	4	1088	3	0.00%	0.00%	0.00%	0 CEF: IPv6
proces							
301	20	198	101	0.00%	0.00%	0.00%	0 IPv6 IDB
302	36	480	75	0.00%	0.00%	0.00%	0 IPv6 Input
303	32	25	1280	0.00%	0.00%	0.00%	0 IPv6 ND
304	0	1	0	0.00%	0.00%	0.00%	0 IPv6
Address							
305	8	8721	0	0.07%	0.02%	0.02%	0 MLD
306	60	2282	26	0.00%	0.00%	0.00%	0 OSPFv3-6
Router							
307	300	405	740	0.07%	0.00%	0.00%	0 FR LMI
308	28	50	560	0.00%	0.00%	0.00%	0 FR PVC
event man							
309	8	21735	0	0.00%	0.03%	0.02%	0 FR
Broadcast Out							
310	0	40	0	0.00%	0.00%	0.00%	0 FR ARP
311	0	37	0	0.00%	0.00%	0.00%	0 FR
FRAGMENTATION							
312	0	109	0	0.00%	0.00%	0.00%	0 FR TUNNEL
313	0	1	0	0.00%	0.00%	0.00%	0 FRF9
manager							
314	0	1	0	0.00%	0.00%	0.00%	0 FRF9 timed
event							
315	0	219	0	0.00%	0.00%	0.00%	0 compute
load per							
316	0	2184	0	0.00%	0.00%	0.00%	0 IGMP Input
317	8	21730	0	0.00%	0.03%	0.02%	0 Mwheel
Process							
318	68	43588	1	0.07%	0.14%	0.15%	0 PIM
Process							
320	32	2235	14	0.00%	0.01%	0.00%	0 NTP

```
322          60          2301          26  0.00%  0.00%  0.00%    0 OSPF-1
Router
R3#
```

```
R3#show interfaces
FastEthernet0/0 is administratively down, line protocol is down
  Hardware is MV96340 Ethernet, address is 0016.479a.f6e8 (bia
0016.479a.f6e8)
  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 0016.479a.f6e9 (bia
0016.479a.f6e9)
  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, 5 interface resets
0 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out
0 carrier transitions
DCD=up DSR=up DTR=down RTS=down CTS=up

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 00:36:29, output 00:36:29, 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
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 203, LMI stat recvd 201, 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 1020/1, interface
broadcasts 967

Last input 00:00:00, output 00:00:00, output hang never
Last clearing of "show interface" counters 00:36:28
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 0 bits/sec, 1 packets/sec
5 minute output rate 0 bits/sec, 1 packets/sec
2159 packets input, 192791 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
2402 packets output, 216505 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

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

```
Hardware is GT96K Serial
Internet address is 10.1.1.6/30
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
Serial0/2/0.34 is up, line protocol is up
Hardware is GT96K Serial
Internet address is 10.1.1.9/30
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 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 00:35:57, output 00:36:02, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: 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
    5 packets output, 1026 bytes, 0 underruns
    0 output errors, 0 collisions, 75 interface resets
    0 unknown protocol drops
    0 output buffer failures, 0 output buffers swapped out
    8 carrier transitions
    DCD=down DSR=down DTR=up RTS=up CTS=down

Tunnel34 is up, line protocol is up
Hardware is Tunnel
MTU 17920 bytes, BW 100 Kbit/sec, DLY 50000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation TUNNEL, loopback not set
Keepalive not set
Tunnel source 10.1.1.9, destination 10.1.1.10
Tunnel protocol/transport IPv6/IP
Tunnel TTL 255
Tunnel transport MTU 1480 bytes
Tunnel transmit bandwidth 8000 (kbps)
Tunnel receive bandwidth 8000 (kbps)
```

Last input 00:00:06, output 00:00:04, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 22
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
218 packets input, 31892 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
295 packets output, 29328 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 output buffer failures, 0 output buffers swapped out

R3#

```
R3#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					
R2	Ser 0/2/0.23	126	R S I	2811	Ser
0/2/0.23					
R4	Ser 0/2/0.34	122	R S I	1841	Ser
0/1/0.34					

```
R3#
```

R3#show cdp neighbors detail

Device ID: R2

Entry address(es):

IP address: 10.1.1.5

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

IPv6 address: FE80::216:9DFF:FEFA:CAB0 (link-local)

Platform: Cisco 2811, Capabilities: Router Switch IGMP

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

Holdtime : 179 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: R4

Entry address(es):

IP address: 10.1.1.10

Platform: Cisco 1841, Capabilities: Router Switch IGMP

Interface: Serial0/2/0.34, Port ID (outgoing port): Serial0/1/0.34

Holdtime : 175 sec

Version :

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

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

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advertisement version: 2

VTP Management Domain: ''

R3#

```
R3#show frame-relay map
Serial0/2/0.23 (up): point-to-point dlci, dlci 302(0x12E,0x48E0),
broadcast
                    status defined, active
Serial0/2/0.34 (up): point-to-point dlci, dlci 304(0x130,0x4C00),
broadcast
                    status defined, active
R3#
```

```
R3#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
Serial0/2/0.23 is up, line protocol is up
  Internet address is 10.1.1.6/30
  Broadcast address is 255.255.255.255
  Address determined by non-volatile memory
  MTU is 1500 bytes
  Helper address is not set
  Directed broadcast forwarding is disabled
  Multicast reserved groups joined: 224.0.0.1 224.0.0.2 224.0.0.22
  224.0.0.13
    224.0.0.5
  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
Serial0/2/0.34 is up, line protocol is up
Internet address is 10.1.1.9/30
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 down, line protocol is down
Internet protocol processing disabled
Tunnel34 is up, line protocol is up
Internet protocol processing disabled
R3#

R3#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	10.1.1.5	Serial0/2/0.23
10.1.1.4/30	attached	Serial0/2/0.23
10.1.1.4/32	receive	Serial0/2/0.23
10.1.1.6/32	receive	Serial0/2/0.23
10.1.1.7/32	receive	Serial0/2/0.23
10.1.1.8/30	attached	Serial0/2/0.34
10.1.1.8/32	receive	Serial0/2/0.34
10.1.1.9/32	receive	Serial0/2/0.34
10.1.1.11/32	receive	Serial0/2/0.34
10.1.4.4/30	10.1.1.10	Serial0/2/0.34
10.1.4.8/30	10.1.1.10	Serial0/2/0.34
10.2.1.0/24	10.1.1.10	Serial0/2/0.34
10.2.2.0/24	10.1.1.10	Serial0/2/0.34
10.2.4.12/30	10.1.1.10	Serial0/2/0.34
127.0.0.0/8	drop	
209.65.200.224/30	10.1.1.5	Serial0/2/0.23
209.65.200.240/29	10.1.1.5	Serial0/2/0.23
224.0.0.0/4	multicast	
224.0.0.0/24	receive	
240.0.0.0/4	drop	
255.255.255.255/32	receive	

R3#

```
R3#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
R3#
```

```
R3#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 3.3.3.3
  It is an area border and autonomous system boundary router
  Redistributing External Routes from,
  Number of areas in this router is 2. 1 normal 0 stub 1 nssa
  Maximum path: 4
  Routing for Networks:
    10.1.1.2 0.0.0.0 area 0
    10.1.1.8 0.0.0.3 area 34
    10.3.3.1 0.0.0.0 area 0
    10.3.3.3 0.0.0.0 area 0
    0.0.0.0 255.255.255.255 area 0
  Reference bandwidth unit is 100 mbps
```

Passive Interface(s):

Serial0/2/0

Routing Information Sources:

Gateway	Distance	Last Update
4.4.4.4	110	00:32:25
2.2.2.2	110	00:32:35
10.1.1.1	110	00:32:25

Distance: (default is 110)

R3#

R3#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
R3#
```

```
R3#show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address
Interface				
2.2.2.2	0	FULL/ -	00:00:37	10.1.1.5
Serial0/2/0.23				
4.4.4.4	0	FULL/ -	00:00:33	10.1.1.10
Serial0/2/0.34				

R3#

```
R3#show ip ospf interface
Serial0/2/0.23 is up, line protocol is up
Internet Address 10.1.1.6/30, Area 0
```

```
Process ID 1, Router ID 3.3.3.3, 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 4, maximum is 4
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)
Serial0/2/0.34 is up, line protocol is up
Internet Address 10.1.1.9/30, Area 34
Process ID 1, Router ID 3.3.3.3, 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 00:00:08
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 4.4.4.4
  Suppress hello for 0 neighbor(s)
R3#
```

R3#show ip ospf database

OSPF Router with ID (3.3.3.3) (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	41	0x8000000D	0x00BE9E	2
3.3.3.3	3.3.3.3	0	0x8000000D	0x0064F1	2

Summary Net Link States (Area 0)

Link ID	ADV Router	Age	Seq#	Checksum
10.1.1.0	2.2.2.2	41	0x80000002	0x0022C8
10.1.1.8	3.3.3.3	0	0x80000002	0x00B32B

Summary ASB Link States (Area 0)

Link ID	ADV Router	Age	Seq#	Checksum
10.1.1.1	2.2.2.2	41	0x80000002	0x001CC9

Router Link States (Area 34)

Link ID count	ADV Router	Age	Seq#	Checksum	Link
3.3.3.3	3.3.3.3	0	0x8000000E	0x00CE71	2
4.4.4.4	4.4.4.4	101	0x80000010	0x0067D2	2

Summary Net Link States (Area 34)

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

0.0.0.0 3.3.3.3 0 0x80000002 0x00DC4C

Type-7 AS External Link States (Area 34)

Link ID	ADV Router	Age	Seq#	Checksum	Tag
10.1.4.4	4.4.4.4	102	0x80000005	0x00F16A	0
10.1.4.8	4.4.4.4	102	0x80000005	0x00C98E	0
10.2.1.0	4.4.4.4	102	0x80000003	0x00451C	0
10.2.2.0	4.4.4.4	102	0x80000003	0x003A26	0
10.2.4.12	4.4.4.4	102	0x80000003	0x0099BB	0

Type-5 AS External Link States

Link ID	ADV Router	Age	Seq#	Checksum	Tag
10.1.4.4	3.3.3.3	1	0x80000002	0x00AAC2	0
10.1.4.8	3.3.3.3	1	0x80000002	0x0082E6	0
10.2.1.0	3.3.3.3	1	0x80000002	0x00F976	0
10.2.2.0	3.3.3.3	1	0x80000002	0x00EE80	0
10.2.4.12	3.3.3.3	1	0x80000002	0x004E16	0
209.65.200.224	10.1.1.1	196	0x80000002	0x004494	0
209.65.200.240	10.1.1.1	196	0x80000002	0x002FC7	65002

R3#

R3#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 10.1.1.5, 00:33:05, Serial0/2/0.23
- O E2 209.65.200.224/30 [110/20] via 10.1.1.5, 00:33:05, Serial0/2/0.23

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

- O N2 10.2.4.12/30 [110/20] via 10.1.1.10, 00:33:05, Serial0/2/0.34
 - O N2 10.1.4.8/30 [110/20] via 10.1.1.10, 00:33:05, Serial0/2/0.34
 - O N2 10.2.1.0/24 [110/20] via 10.1.1.10, 00:33:05, Serial0/2/0.34
 - O N2 10.2.2.0/24 [110/20] via 10.1.1.10, 00:33:05, Serial0/2/0.34
 - O IA 10.1.1.0/30 [110/128] via 10.1.1.5, 00:33:15, Serial0/2/0.23
 - O N2 10.1.4.4/30 [110/20] via 10.1.1.10, 00:33:05, Serial0/2/0.34
- R3#

