



```
!  
!  
voice-card 0  
!  
!  
!  
!  
!  
archive  
  log config  
  hidekeys  
!  
!  
!  
!  
!  
!  
!  
!  
!  
interface FastEthernet0/0  
  no ip address  
  shutdown  
  duplex auto  
  speed auto  
!  
interface FastEthernet0/1  
  no ip address  
  shutdown  
  duplex auto  
  speed auto  
!  
interface Serial0/0/0  
  no ip address  
!  
interface Serial0/0/1  
  no ip address  
!  
interface Serial0/1/0  
  no ip address  
  ip nat outside  
  ip virtual-reassembly  
  shutdown  
  clock rate 56000  
!  
interface Serial0/2/0  
  no ip address  
  encapsulation frame-relay  
!  
interface Serial0/2/0.12 point-to-point  
  ip address 10.1.1.2 255.255.255.252  
  ip pim sparse-dense-mode  
  snmp trap link-status  
  ipv6 address 2026::12:2/122
```

```
ipv6 enable
ipv6 ospf 6 area 12
frame-relay interface-dlci 201
!
interface Serial0/2/0.23 point-to-point
 ip address 10.1.1.5 255.255.255.252
 ip pim sparse-dense-mode
 snmp trap link-status
 ipv6 address 2026::1:1/122
 ipv6 enable
 ipv6 ospf 6 area 0
 frame-relay interface-dlci 203
!
interface Serial0/3/0
 no ip address
 ip virtual-reassembly
 shutdown
 clock rate 56000
!
router ospf 1
 router-id 2.2.2.2
 log-adjacency-changes
 network 10.1.1.1 0.0.0.0 area 0
 network 10.1.1.5 0.0.0.0 area 0
 network 10.2.2.1 0.0.0.0 area 0
 network 10.0.0.0 0.255.255.255 area 12
!
ip forward-protocol nd
ip http server
no ip http secure-server
!
!
!
ip access-list standard DENY_10
 deny 10.0.0.0 0.255.255.255
 permit any
ip access-list standard DENY_ALL
 deny any
ip access-list standard PERMIT_10
 permit 10.0.0.0 0.255.255.255
ip access-list standard PERMIT_ALL
 permit any
!
ipv6 router ospf 6
 router-id 2.2.2.2
 log-adjacency-changes
!
!
!
!
!
!
!
```

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

```
R2#ping 209.65.200.241
```

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

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

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 32/34/40 ms
```

```
R2#
```

R2#

R2#ping 209.65.200.226

Type escape sequence to abort.

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

!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 32/36/56 ms

R2#

R2#

R2#ping 209.65.200.225

Type escape sequence to abort.

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

!!!!

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

R2#

```
R2#ping 10.1.1.1
```

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

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

```
!!!!!
```

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

```
ms
```

```
R2#
```

```
R2#ping 10.1.1.2
```

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

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



```
!!!!  
Success rate is 100 percent (5/5), round-trip min/avg/max = 64/66/68 ms  
R2#
```

```
R2#ping 10.1.1.5
```

```
Type escape sequence to abort.  
Sending 5, 100-byte ICMP Echos to 10.1.1.5, timeout is 2 seconds:  
!!!!  
Success rate is 100 percent (5/5), round-trip min/avg/max = 64/66/68 ms  
R2#
```

```
R2#ping 10.1.1.6
```

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

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

```
!!!!
```

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

```
R2#
```

```
R2#ping 10.1.1.9
```

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

```
Sending 5, 100-byte ICMP Echos to 10.1.1.9, timeout is 2 seconds:
```

```
!!!!
```

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

```
R2#
```

```
R2#ping 10.1.1.10
```

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

```
Sending 5, 100-byte ICMP Echos to 10.1.1.10, timeout is 2 seconds:
```

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 192/193/196  
ms
```

```
R2#
```

```
R2#ping 10.1.4.10
```

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

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

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 192/195/200  
ms
```

```
R2#
```

```
R2#ping 10.1.4.9
```

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

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

```
!!!!
```

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

```
R2#
```

```
R2#ping 10.1.4.6
```

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

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

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 192/195/200
```

```
ms
```

```
R2#
```

```
R2#ping 10.1.4.5
```

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

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

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 192/193/196
```

```
ms
```

```
R2#
```



```
R2#ping 10.2.1.1
```

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

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

```
!!!!!
```

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

```
ms
```

```
R2#
```

```
R2#ping 10.2.2.2
```

```
Type escape sequence to abort.  
Sending 5, 100-byte ICMP Echos to 10.2.2.2, timeout is 2 seconds:  
!!!!  
Success rate is 100 percent (5/5), round-trip min/avg/max = 192/194/196  
ms  
R2#
```

```
R2#ping 10.2.1.254
```

```
Type escape sequence to abort.  
Sending 5, 100-byte ICMP Echos to 10.2.1.254, timeout is 2 seconds:  
!!!!  
Success rate is 100 percent (5/5), round-trip min/avg/max = 192/195/196  
ms
```

R2#

R2#ping 10.2.4.14

Type escape sequence to abort.

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

!!!!

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

R2#

```
R2#ping 10.2.4.13
```

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

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

```
!!!!
```

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

```
R2#
```

```
R2#ping 10.2.1.2
```

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

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

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 192/196/200  
ms
```

```
R2#
```

```
R2#ping 10.2.2.1
```

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

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

```
!!!!
```

```
Success rate is 100 percent (5/5), round-trip min/avg/max = 192/195/200  
ms
```

```
R2#
```

```
R2#ping 10.2.1.4
```

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

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

```
.....
```

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

```
R2#
```

```

R2#
R2#show ip interface brief
Interface          IP-Address      OK? Method Status
Protocol
FastEthernet0/0    unassigned      YES NVRAM  administratively
down down
FastEthernet0/1    unassigned      YES NVRAM  administratively
down down
Serial0/0/0        unassigned      YES NVRAM  down
down
Serial0/0/1        unassigned      YES NVRAM  down
down
Serial0/1/0        unassigned      YES NVRAM  administratively
down down
Serial0/2/0        unassigned      YES NVRAM  up
up
Serial0/2/0.12     10.1.1.2       YES NVRAM  up
up
Serial0/2/0.23     10.1.1.5       YES NVRAM  up
up
Serial0/3/0        unassigned      YES NVRAM  administratively
down down
NVI0               unassigned      YES unset  administratively
down down
R2#

```



```
R2#show ip route
```

```
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP  
        D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area  
        N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2  
        E1 - OSPF external type 1, E2 - OSPF external type 2  
        i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS  
level-2  
        ia - IS-IS inter area, * - candidate default, U - per-user static  
route  
        o - ODR, P - periodic downloaded static route
```

```
Gateway of last resort is 10.1.1.1 to network 0.0.0.0
```

```
10.0.0.0/8 is variably subnetted, 8 subnets, 2 masks  
O E2    10.2.4.12/30 [110/20] via 10.1.1.6, 01:16:06, Serial0/2/0.23  
O IA    10.1.1.8/30 [110/128] via 10.1.1.6, 01:16:22, Serial0/2/0.23  
O E2    10.1.4.8/30 [110/20] via 10.1.1.6, 01:16:06, Serial0/2/0.23  
O E2    10.2.1.0/24 [110/20] via 10.1.1.6, 01:16:06, Serial0/2/0.23  
O E2    10.2.2.0/24 [110/20] via 10.1.1.6, 01:16:06, Serial0/2/0.23  
C       10.1.1.0/30 is directly connected, Serial0/2/0.12  
O E2    10.1.4.4/30 [110/20] via 10.1.1.6, 01:16:07, Serial0/2/0.23  
C       10.1.1.4/30 is directly connected, Serial0/2/0.23  
O*E2   0.0.0.0/0 [110/1] via 10.1.1.1, 01:16:23, Serial0/2/0.12  
R2#
```

R2#show processes cpu

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

PID	Runtime (ms)	Invoked	uSecs	5Sec	1Min	5Min	TTY	Process
1	16	75	213	0.00%	0.00%	0.00%	0	Chunk
Manager								
2	4	981	4	0.07%	0.04%	0.03%	0	Load Meter
3	1060	183	5792	0.00%	1.09%	0.31%	0	Exec
4	0	1	0	0.00%	0.00%	0.00%	0	EDDRI_MAIN
5	6604	582	11347	0.00%	0.15%	0.12%	0	Check
heaps								
6	0	1	0	0.00%	0.00%	0.00%	0	Pool
Manager								
7	0	2	0	0.00%	0.00%	0.00%	0	Timers



37	0	1	0	0.00%	0.00%	0.00%	0 Critical
Bkgnd							
38	32	2025	15	0.07%	0.00%	0.00%	0 Net
Background							
39	4	2	2000	0.00%	0.00%	0.00%	0 IDB Work
40	0	31	0	0.00%	0.00%	0.00%	0 Logger
41	0	4897	0	0.00%	0.00%	0.00%	0 TTY
Background							
42	4	4917	0	0.00%	0.01%	0.00%	0 Per-Second
Jobs							
43	0	328	0	0.00%	0.00%	0.00%	0 c2800
Periodic							
44	0	1	0	0.00%	0.00%	0.00%	0 Inode
Table Dest							
45	0	1	0	0.00%	0.00%	0.00%	0 IKE HA Mgr
46	0	1	0	0.00%	0.00%	0.00%	0 IPSEC HA
Mgr							
47	4	4	1000	0.00%	0.00%	0.00%	0 rf task
48	4	17	235	0.00%	0.00%	0.00%	0 Net Input
49	0	982	0	0.00%	0.00%	0.00%	0 Compute
load avg							
50	1968	83	23710	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	0	19610	0	0.07%	0.01%	0.00%	0 Netclock
Backgro							
63	0	2	0	0.00%	0.00%	0.00%	0 SM Monitor
64	0	2	0	0.00%	0.00%	0.00%	0 Bryce I2C
CMD Qu							
65	272	4	68000	0.00%	0.00%	0.00%	0 USB
Startup							
66	0	820	0	0.00%	0.00%	0.00%	0 mxt5100
67	0	2	0	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	4	2	2000	0.00%	0.00%	0.00%	0	FLEX DNLD
MAIN								
70	0	1	0	0.00%	0.00%	0.00%	0	HDV
background								
71	0	2	0	0.00%	0.00%	0.00%	0	VMI
Background								
72	0	1	0	0.00%	0.00%	0.00%	0	
RF_INTERDEV_DELA								
73	0	1	0	0.00%	0.00%	0.00%	0	
RF_INTERDEV_SCTP								
74	0	1	0	0.00%	0.00%	0.00%	0	chkpt
message ha								
75	0	4905	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	165	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	83	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	4906	0	0.00%	0.00%	0.00%	0	PI MATM
Aging Pr								
92	0	492	0	0.00%	0.00%	0.00%	0	EtherChnl
93	0	2	0	0.00%	0.00%	0.00%	0	Ethernet
CFM								
94	0	4790	0	0.00%	0.00%	0.00%	0	Ethernet
Timer C								
95	0	4920	0	0.00%	0.00%	0.00%	0	linktest









187	0	2	0	0.00%	0.00%	0.00%	0	
cpf_process_msg_								
188	0	9597	0	0.00%	0.00%	0.00%	0	FW DP
Inspect pr								
189	0	9597	0	0.07%	0.00%	0.00%	0	CCE DP
URLF cach								
190	0	2	0	0.00%	0.00%	0.00%	0	URL filter
proc								
191	0	1	0	0.00%	0.00%	0.00%	0	Select
Timers								
192	32	2	16000	0.00%	0.00%	0.00%	0	HTTP
Process								
193	0	2	0	0.00%	0.00%	0.00%	0	CIFS API
Process								
194	0	2	0	0.00%	0.00%	0.00%	0	CIFS Proxy
Proce								
195	8	3	2666	0.00%	0.00%	0.00%	0	Crypto HW
Proc								
196	0	199	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	0	2	0	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	5	0	0.00%	0.00%	0.00%	0	MPLS Auto
Mesh P								
209	0	2	0	0.00%	0.00%	0.00%	0	TPLUS
210	0	2	0	0.00%	0.00%	0.00%	0	VSP_MGR
211	0	1	0	0.00%	0.00%	0.00%	0	
FW_TEST_TRP								
212	0	1	0	0.00%	0.00%	0.00%	0	EPM MAIN
PROCESS								
213	0	3	0	0.00%	0.00%	0.00%	0	Crypto WUI
214	0	2	0	0.00%	0.00%	0.00%	0	Crypto
Support								
215	0	1	0	0.00%	0.00%	0.00%	0	IPSECv6 PS
Proc								
216	4	1	4000	0.00%	0.00%	0.00%	0	CCVPM_HTSP
217	0	2	0	0.00%	0.00%	0.00%	0	
VPM_MWI_BACKGROU								
218	0	1	0	0.00%	0.00%	0.00%	0	CCVPM_R2



250	0	1	0	0.00%	0.00%	0.00%	0 UNICAST
REKEY AC							
251	4	4935	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	24663	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	494	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	155	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	132	2009	65	0.00%	0.00%	0.00%	0 OSPFv3-6
Hello							
271	0	4916	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	4937	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	12	218	55	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	8	3	2666	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	4	126	31	0.00%	0.00%	0.00%	0	EEM ED
Timer								
290	0	3	0	0.00%	0.00%	0.00%	0	EEM ED
Test								
291	0	3	0	0.00%	0.00%	0.00%	0	EEM ED
Config								
292	0	3	0	0.00%	0.00%	0.00%	0	EEM ED Env
293	4	17	235	0.00%	0.00%	0.00%	0	Syslog
294	0	1	0	0.00%	0.00%	0.00%	0	VPDN Test
295	0	3	0	0.00%	0.00%	0.00%	0	EEM ED RPC
296	0	2	0	0.00%	0.00%	0.00%	0	Key Proc
297	0	1	0	0.00%	0.00%	0.00%	0	tHUB
299	12	34	352	0.00%	0.00%	0.00%	0	IPv6 RIB
Event H								
300	0	2468	0	0.00%	0.00%	0.00%	0	CEF: IPv6
proces								
301	0	9618	0	0.00%	0.00%	0.00%	0	IP NAT
Ager								
302	0	1	0	0.00%	0.00%	0.00%	0	IP NAT
WLAN								
303	0	1	0	0.00%	0.00%	0.00%	0	IP VFR
proc								
304	664	946	701	0.00%	0.00%	0.00%	0	FR LMI
305	20	92	217	0.00%	0.00%	0.00%	0	FR PVC
event man								
306	8	49224	0	0.00%	0.03%	0.02%	0	FR
Broadcast Out								
307	0	84	0	0.00%	0.00%	0.00%	0	FR ARP
308	0	83	0	0.00%	0.00%	0.00%	0	FR
FRAGMENTATION								
309	0	247	0	0.00%	0.00%	0.00%	0	FR TUNNEL
310	0	1	0	0.00%	0.00%	0.00%	0	FRF9
manager								
311	0	1	0	0.00%	0.00%	0.00%	0	FRF9 timed
event								
312	0	494	0	0.00%	0.00%	0.00%	0	compute
load per								
313	0	4933	0	0.00%	0.01%	0.00%	0	IGMP Input

314	0	49232	0	0.07%	0.03%	0.02%	0 Mwheel
Process							
315	84	98773	0	0.15%	0.15%	0.15%	0 PIM
Process							
316	16	201	79	0.00%	0.00%	0.00%	0 IPv6 IDB
317	148	1122	131	0.00%	0.00%	0.00%	0 IPv6 Input
318	28	15	1866	0.00%	0.00%	0.00%	0 IPv6 ND
319	0	1	0	0.00%	0.00%	0.00%	0 IPv6
Address							
320	20	19717	1	0.00%	0.02%	0.01%	0 MLD
321	60	4942	12	0.00%	0.00%	0.00%	0 OSPFv3-6
Router							
324	0	1	0	0.00%	0.00%	0.00%	0 LICENSE
AGENT							
325	80	5065	15	0.00%	0.00%	0.00%	0 OSPF-1
Router							
R2#							

```
R2#show interfaces
FastEthernet0/0 is administratively down, line protocol is down
  Hardware is MV96340 Ethernet, address is 0016.9dfa.cab0 (bia
0016.9dfa.cab0)
  MTU 1500 bytes, BW 100000 Kbit/sec, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto Speed, 100BaseTX/FX
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes
    Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    0 unknown protocol drops
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
    0 output buffer failures, 0 output buffers swapped out
FastEthernet0/1 is administratively down, line protocol is down
  Hardware is MV96340 Ethernet, address is 0016.9dfa.cab1 (bia
0016.9dfa.cab1)
  MTU 1500 bytes, BW 100000 Kbit/sec, DLY 100 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Auto-duplex, Auto Speed, 100BaseTX/FX
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input never, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue: 0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes
    Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
    0 watchdog
    0 input packets with dribble condition detected
    0 packets output, 0 bytes, 0 underruns
```

```
0 output errors, 0 collisions, 0 interface resets
0 unknown protocol drops
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
Serial0/0/0 is down, line protocol is down
Hardware is GT96K Serial
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation HDLC, loopback not set
Keepalive set (10 sec)
CRC checking enabled
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
  Conversations 0/0/256 (active/max active/max total)
  Reserved Conversations 0/0 (allocated/max allocated)
  Available Bandwidth 1158 kilobits/sec
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 4 interface resets
  0 unknown protocol drops
  0 output buffer failures, 0 output buffers swapped out
  0 carrier transitions
DCD=down DSR=down DTR=up RTS=up CTS=down
```

```
Serial0/0/1 is down, line protocol is down
Hardware is GT96K Serial
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation HDLC, loopback not set
Keepalive set (10 sec)
CRC checking enabled
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
  Conversations 0/0/256 (active/max active/max total)
  Reserved Conversations 0/0 (allocated/max allocated)
  Available Bandwidth 1158 kilobits/sec
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
  0 packets output, 0 bytes, 0 underruns
  0 output errors, 0 collisions, 4 interface resets
```

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

Serial0/1/0 is administratively down, line protocol is down  
Hardware is GT96K Serial  
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,  
reliability 255/255, txload 1/255, rxload 1/255  
Encapsulation HDLC, loopback not set  
Keepalive set (10 sec)  
CRC checking enabled  
Last input never, output never, output hang never  
Last clearing of "show interface" counters never  
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0  
Queueing strategy: weighted fair  
Output queue: 0/1000/64/0 (size/max total/threshold/drops)  
Conversations 0/0/256 (active/max active/max total)  
Reserved Conversations 0/0 (allocated/max allocated)  
Available Bandwidth 1158 kilobits/sec  
5 minute input rate 0 bits/sec, 0 packets/sec  
5 minute output rate 0 bits/sec, 0 packets/sec  
0 packets input, 0 bytes, 0 no buffer  
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles  
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort  
0 packets output, 0 bytes, 0 underruns  
0 output errors, 0 collisions, 3 interface resets  
0 unknown protocol drops  
0 output buffer failures, 0 output buffers swapped out  
0 carrier transitions  
DCD=down DSR=down DTR=down RTS=down CTS=down

Serial0/2/0 is up, line protocol is up  
Hardware is GT96K Serial  
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,  
reliability 255/255, txload 1/255, rxload 1/255  
Encapsulation FRAME-RELAY, loopback not set  
Keepalive set (10 sec)  
CRC checking enabled  
LMI enq sent 473, LMI stat recvd 473, 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 2700/1, interface  
broadcasts 2559  
Last input 00:00:02, output 00:00:02, output hang never  
Last clearing of "show interface" counters 01:22:23  
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, 0 packets/sec



5 minute output rate 0 bits/sec, 0 packets/sec  
3633 packets input, 316292 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  
3776 packets output, 327213 bytes, 0 underruns  
0 output errors, 0 collisions, 9 interface resets  
0 unknown protocol drops  
0 output buffer failures, 0 output buffers swapped out  
60 carrier transitions  
DCD=up DSR=up DTR=up RTS=up CTS=up

Serial0/2/0.12 is up, line protocol is up  
Hardware is GT96K Serial  
Internet address is 10.1.1.2/30  
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,  
reliability 255/255, txload 1/255, rxload 1/255  
Encapsulation FRAME-RELAY  
CRC checking enabled  
Last clearing of "show interface" counters never

Serial0/2/0.23 is up, line protocol is up  
Hardware is GT96K Serial  
Internet address is 10.1.1.5/30  
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,  
reliability 255/255, txload 1/255, rxload 1/255  
Encapsulation FRAME-RELAY  
CRC checking enabled  
Last clearing of "show interface" counters never

Serial0/3/0 is administratively down, line protocol is down  
Hardware is GT96K Serial  
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 usec,  
reliability 255/255, txload 1/255, rxload 1/255  
Encapsulation HDLC, loopback not set  
Keepalive set (10 sec)  
CRC checking enabled  
Last input 01:22:39, output 01:22:39, output hang never  
Last clearing of "show interface" counters never  
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0  
Queueing strategy: weighted fair  
Output queue: 0/1000/64/0 (size/max total/threshold/drops)  
Conversations 0/1/256 (active/max active/max total)  
Reserved Conversations 0/0 (allocated/max allocated)  
Available Bandwidth 1158 kilobits/sec

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

```
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
```

R2#

```
R2#show interfaces counters errors
```

```
R2#
```

```
R2#show cdp neighbors
```

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

Device ID	Local Intrfce	Holdtme	Capability	Platform	Port
R3	Ser 0/2/0.23	134	R S I	2811	Ser
R1	Ser 0/2/0.12	134	R S I	2811	Ser

R2#

R2#show cdp neighbors detail

-----  
Device ID: R3  
Entry address(es):  
  IP address: 10.1.1.6  
  IPv6 address: 2026::1:2 (global unicast)

IPv6 address: FE80::216:47FF:FE9A:F6E8 (link-local)  
Platform: Cisco 2811, Capabilities: Router Switch IGMP  
Interface: Serial0/2/0.23, Port ID (outgoing port): Serial0/2/0.23  
Holdtime : 126 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: R1  
Entry address(es):  
IP address: 10.1.1.1  
IPv6 address: 2026::12:1 (global unicast)  
IPv6 address: FE80::21D:70FF:FEA0:C690 (link-local)  
Platform: Cisco 2811, Capabilities: Router Switch IGMP  
Interface: Serial0/2/0.12, Port ID (outgoing port): Serial0/2/0.12  
Holdtime : 126 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: ''

R2#

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

```
R2#show arp
```

```
R2#
```

```
R2#show ip arp
```

```
R2#
```

```
R2#show ip interface
```

```
FastEthernet0/0 is administratively down, line protocol is down
```



```
Internet protocol processing disabled
FastEthernet0/1 is administratively down, line protocol is down
Internet protocol processing disabled
Serial0/0/0 is down, line protocol is down
Internet protocol processing disabled
Serial0/0/1 is down, line protocol is down
Internet protocol processing disabled
Serial0/1/0 is administratively down, line protocol is down
Internet protocol processing disabled
Serial0/2/0 is up, line protocol is up
Internet protocol processing disabled
Serial0/2/0.12 is up, line protocol is up
Internet address is 10.1.1.2/30
Broadcast address is 255.255.255.255
Address determined by non-volatile memory
MTU is 1500 bytes
Helper address is not set
Directed broadcast forwarding is disabled
Multicast reserved groups joined: 224.0.0.1 224.0.0.2 224.0.0.22
224.0.0.13
224.0.0.5
Outgoing access list is not set
Inbound access list is not set
Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP fast switching on the same interface is enabled
IP Flow switching is disabled
IP CEF switching is enabled
IP CEF switching turbo vector
IP multicast fast switching is enabled
IP multicast distributed fast switching is disabled
IP route-cache flags are Fast, CEF
Router Discovery is disabled
IP output packet accounting is disabled
IP access violation accounting is disabled
TCP/IP header compression is disabled
RTP/IP header compression is disabled
Policy routing is disabled
Network address translation is disabled
BGP Policy Mapping is disabled
Input features: MCI Check
WCCP Redirect outbound is disabled
WCCP Redirect inbound is disabled
WCCP Redirect exclude is disabled
Serial0/2/0.23 is up, line protocol is up
Internet address is 10.1.1.5/30
Broadcast address is 255.255.255.255
Address determined by non-volatile memory
```

```
MTU is 1500 bytes
Helper address is not set
Directed broadcast forwarding is disabled
Multicast reserved groups joined: 224.0.0.1 224.0.0.2 224.0.0.22
224.0.0.13
    224.0.0.5
Outgoing access list is not set
Inbound access list is not set
Proxy ARP is enabled
Local Proxy ARP is disabled
Security level is default
Split horizon is enabled
ICMP redirects are always sent
ICMP unreachable are always sent
ICMP mask replies are never sent
IP fast switching is enabled
IP fast switching on the same interface is enabled
IP Flow switching is disabled
IP CEF switching is enabled
IP CEF switching turbo vector
IP multicast fast switching is enabled
IP multicast distributed fast switching is disabled
IP route-cache flags are Fast, CEF
Router Discovery is disabled
IP output packet accounting is disabled
IP access violation accounting is disabled
TCP/IP header compression is disabled
RTP/IP header compression is disabled
Policy routing is disabled
Network address translation is disabled
BGP Policy Mapping is disabled
Input features: MCI Check
WCCP Redirect outbound is disabled
WCCP Redirect inbound is disabled
WCCP Redirect exclude is disabled
Serial0/3/0 is administratively down, line protocol is down
    Internet protocol processing disabled
NV10 is administratively down, line protocol is down
    Internet protocol processing disabled
R2#
```

R2#show ip cef

Prefix	Next Hop	Interface
0.0.0.0/0	10.1.1.1	Serial0/2/0.12
0.0.0.0/8	drop	
0.0.0.0/32	receive	
10.1.1.0/30	attached	Serial0/2/0.12
10.1.1.0/32	receive	Serial0/2/0.12
10.1.1.2/32	receive	Serial0/2/0.12
10.1.1.3/32	receive	Serial0/2/0.12
10.1.1.4/30	attached	Serial0/2/0.23
10.1.1.4/32	receive	Serial0/2/0.23
10.1.1.5/32	receive	Serial0/2/0.23
10.1.1.7/32	receive	Serial0/2/0.23
10.1.1.8/30	10.1.1.6	Serial0/2/0.23
10.1.4.4/30	10.1.1.6	Serial0/2/0.23
10.1.4.8/30	10.1.1.6	Serial0/2/0.23
10.2.1.0/24	10.1.1.6	Serial0/2/0.23
10.2.2.0/24	10.1.1.6	Serial0/2/0.23
10.2.4.12/30	10.1.1.6	Serial0/2/0.23
127.0.0.0/8	drop	
224.0.0.0/4	multicast	
224.0.0.0/24	receive	
240.0.0.0/4	drop	
255.255.255.255/32	receive	

R2#

```
R2#show tcp statistics
Rcvd: 0 Total, 0 no port
      0 checksum error, 0 bad offset, 0 too short
      0 packets (0 bytes) in sequence
      0 dup packets (0 bytes)
      0 partially dup packets (0 bytes)
      0 out-of-order packets (0 bytes)
      0 packets (0 bytes) with data after window
      0 packets after close
      0 window probe packets, 0 window update packets
      0 dup ack packets, 0 ack packets with unsend data
      0 ack packets (0 bytes)
Sent: 0 Total, 0 urgent packets
      0 control packets (including 0 retransmitted)
      0 data packets (0 bytes)
```

```
    0 data packets (0 bytes) retransmitted
    0 data packets (0 bytes) fastretransmitted
    0 ack only packets (0 delayed)
    0 window probe packets, 0 window update packets
0 Connections initiated, 0 connections accepted, 0 connections
established
0 Connections closed (including 0 dropped, 0 embryonic dropped)
0 Total rxmt timeout, 0 connections dropped in rxmt timeout
0 Keepalive timeout, 0 keepalive probe, 0 Connections dropped in
keepalive
R2#
```

```
R2#show ip protocols
Routing Protocol is "ospf 1"
```

```
Outgoing update filter list for all interfaces is not set
Incoming update filter list for all interfaces is not set
Router ID 2.2.2.2
It is an area border router
Number of areas in this router is 2. 2 normal 0 stub 0 nssa
Maximum path: 4
Routing for Networks:
  10.1.1.1 0.0.0.0 area 0
  10.1.1.5 0.0.0.0 area 0
  10.2.2.1 0.0.0.0 area 0
  10.0.0.0 0.255.255.255 area 12
Reference bandwidth unit is 100 mbps
Routing Information Sources:
  Gateway          Distance      Last Update
  3.3.3.3           110           01:18:43
  10.1.1.1          110           01:18:59
Distance: (default is 110)
```

R2#

```
R2#show access-lists
Standard IP access list DENY_10
  10 deny 10.0.0.0, wildcard bits 0.255.255.255
  20 permit any
Standard IP access list DENY_ALL
  10 deny any
Standard IP access list PERMIT_10
  10 permit 10.0.0.0, wildcard bits 0.255.255.255
Standard IP access list PERMIT_ALL
  10 permit any
R2#
```

R2#

R2#show ip ospf neighbor

Neighbor ID	Pri	State	Dead Time	Address
Interface				
3.3.3.3	0	FULL/ -	00:00:35	10.1.1.6
Serial0/2/0.23				
10.1.1.1	0	FULL/ -	00:00:39	10.1.1.1
Serial0/2/0.12				

R2#



```
R2#show ip ospf interface
Serial0/2/0.23 is up, line protocol is up
  Internet Address 10.1.1.5/30, Area 0
  Process ID 1, Router ID 2.2.2.2, Network Type POINT_TO_POINT, Cost: 64
  Transmit Delay is 1 sec, State POINT_TO_POINT
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:07
  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 2, maximum is 2
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 1, Adjacent neighbor count is 1
    Adjacent with neighbor 3.3.3.3
  Suppress hello for 0 neighbor(s)
Serial0/2/0.12 is up, line protocol is up
  Internet Address 10.1.1.2/30, Area 12
  Process ID 1, Router ID 2.2.2.2, Network Type POINT_TO_POINT, Cost: 64
  Transmit Delay is 1 sec, State POINT_TO_POINT
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:01
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 1/2, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 3, maximum is 4
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 1, Adjacent neighbor count is 1
    Adjacent with neighbor 10.1.1.1
  Suppress hello for 0 neighbor(s)
R2#
```

R2#show ip ospf database

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

Router Link States (Area 0)

Link ID count	ADV Router	Age	Seq#	Checksum	Link
2.2.2.2	2.2.2.2	777	0x8000000C	0x00C09D	2
3.3.3.3	3.3.3.3	806	0x8000000C	0x0066F0	2

Summary Net Link States (Area 0)

Link ID	ADV Router	Age	Seq#	Checksum
10.1.1.0	2.2.2.2	777	0x80000003	0x0020C9
10.1.1.8	3.3.3.3	806	0x80000003	0x00B12C

Summary ASB Link States (Area 0)

Link ID	ADV Router	Age	Seq#	Checksum
10.1.1.1	2.2.2.2	777	0x80000003	0x001ACA

Router Link States (Area 12)

Link ID count	ADV Router	Age	Seq#	Checksum	Link
2.2.2.2	2.2.2.2	777	0x8000000C	0x00392B	2
10.1.1.1	10.1.1.1	739	0x80000005	0x00A4C1	2

Summary Net Link States (Area 12)

Link ID	ADV Router	Age	Seq#	Checksum
10.1.1.4	2.2.2.2	777	0x80000003	0x00F7ED
10.1.1.8	2.2.2.2	778	0x80000003	0x00524F

Summary ASB Link States (Area 12)

Link ID	ADV Router	Age	Seq#	Checksum
3.3.3.3	2.2.2.2	778	0x80000003	0x0033B2

Type-5 AS External Link States

Link ID	ADV Router	Age	Seq#	Checksum	Tag
0.0.0.0	10.1.1.1	986	0x80000003	0x00C7DB	1
10.1.4.4	3.3.3.3	807	0x80000003	0x00A8C3	0
10.1.4.8	3.3.3.3	807	0x80000003	0x0080E7	0
10.2.1.0	3.3.3.3	807	0x80000003	0x00F777	0
10.2.2.0	3.3.3.3	807	0x80000003	0x00EC81	0
10.2.4.12	3.3.3.3	807	0x80000003	0x004C17	0

R2#

```
R2#  
R2#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 10.1.1.6, 01:19:28, Serial0/2/0.23  
O IA    10.1.1.8/30 [110/128] via 10.1.1.6, 01:19:44, Serial0/2/0.23  
O E2    10.1.4.8/30 [110/20] via 10.1.1.6, 01:19:28, Serial0/2/0.23  
O E2    10.2.1.0/24 [110/20] via 10.1.1.6, 01:19:28, Serial0/2/0.23  
O E2    10.2.2.0/24 [110/20] via 10.1.1.6, 01:19:28, Serial0/2/0.23  
O E2    10.1.4.4/30 [110/20] via 10.1.1.6, 01:19:28, Serial0/2/0.23  
O*E2 0.0.0.0/0 [110/1] via 10.1.1.1, 01:19:44, Serial0/2/0.12  
R2#
```

