Press RETURN to get started!

\*Sep 27 20:42:51.063: %IFMGR-7-NO\_IFINDEX\_FILE: Unable to open nvram:/ifIndex-ta ble No such file or directory

\*Sep 27 20:42:51.347: %PLATFORM-3-PACONFIG: Exceeds 600 bandwidth points for slo ts 0, 1, 3 & 5

\*Sep 27 20:43:05.255: %LINEPROTO-5-UPDOWN: Line protocol on Interface VoIP-Null0 , changed state to up

\*Sep 27 20:43:05.263: %LINK-3-UPDOWN: Interface Ethernet0/0, changed state to up

\*Sep 27 20:43:05.271: %LINK-3-UPDOWN: Interface GigabitEthernet0/0, changed stat e to up

\*Sep 27 20:43:05.279: %LINK-3-UPDOWN: Interface GigabitEthernet1/0, changed stat e to up

\*Sep 27 20:43:05.287: %LINK-3-UPDOWN: Interface GigabitEthernet2/0, changed stat e to up

\*Sep 27 20:43:05.295: %LINK-3-UPDOWN: Interface GigabitEthernet3/0, changed stat e to up

\*Sep 27 20:43:06.147: %SYS-5-CONFIG\_I: Configured from memory by console

\*Sep 27 20:43:06.355: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/ 0, changed state to down

\*Sep 27 20:43:06.359: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEth ernet0/0, changed state to down

\*Sep 27 20:43:06.363: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEth ernet1/0, changed state to down

\*Sep 27 20:43:06.367: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEth ernet2/0, changed state to down

\*Sep 27 20:43:06.367: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEth ernet3/0, changed state to down

\*Sep 27 20:43:06.571: %SYS-5-RESTART: System restarted --

Cisco IOS Software, 7200 Software (C7200-ADVENTERPRISEK9-M), Version 15.2(4)M7, RELEASE SOFTWARE (fc2)

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

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Compiled Thu 25-Sep-14 10:36 by prod\_rel\_team

\*Sep 27 20:43:06.603: %SNMP-5-COLDSTART: SNMP agent on host ISP2 is undergoing a cold start

\*Sep 27 20:43:06.755: %CRYPTO-6-ISAKMP\_ON\_OFF: ISAKMP is OFF

\*Sep 27 20:43:06.755: %CRYPTO-6-GDOI\_ON\_OFF: GDOI is OFF

\*Sep 27 20:43:08.155: %LINK-5-CHANGED: Interface Ethernet0/0, changed state to a dministratively down

\*Sep 27 20:43:08.167: %LINK-5-CHANGED: Interface GigabitEthernet0/0, changed sta te to administratively down

\*Sep 27 20:43:08.175: %LINK-5-CHANGED: Interface GigabitEthernet1/0, changed sta te to administratively down

\*Sep 27 20:43:08.187: %LINK-5-CHANGED: Interface GigabitEthernet2/0, changed sta te to administratively down

\*Sep 27 20:43:08.195: %LINK-5-CHANGED: Interface GigabitEthernet3/0, changed sta te to administratively down

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#CONF T

Enter configuration commands, one per line. End with CNTL/Z.

ISP2(config)#NET

ISP2(config)#NETW

ISP2(config)#NETWork OSPF 1

^

% Invalid input detected at '^' marker.

ISP2(config)#ROUT

ISP2(config)#ROUTeR OSPF 1

ISP2(config-router)#

\*Sep 27 23:26:41.599: %OSPF-4-NORTRID: OSPF process 1 failed to allocate unique router-id and cannot start

ISP2(config-router)#^Z

ISP2#

\*Sep 27 23:26:46.827: %SYS-5-CONFIG\_I: Configured from console by console

ISP2#CONF T

Enter configuration commands, one per line. End with CNTL/Z.

ISP2(config)#INT G0/0

ISP2(config-if)#IP ADD 8.1.5.2 255.255.255.252

ISP2(config-if)#NO SH

ISP2(config-if)#INT

\*Sep 27 23:27:33.011: %LINK-3-UPDOWN: Interface GigabitEthernet0/0, changed state to up

\*Sep 27 23:27:34.011: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up

ISP2(config-if)#INT G1/0

ISP2(config-if)#IP ADD 8.1.7.1 255.255.255.252

ISP2(config-if)#NO SH

ISP2(config-if)#

\*Sep 27 23:28:05.055: %LINK-3-UPDOWN: Interface GigabitEthernet1/0, changed state to up

\*Sep 27 23:28:06.055: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0, changed state to up

ISP2(config-if)#^Z

ISP2#

\*Sep 27 23:28:10.687: %SYS-5-CONFIG\_I: Configured from console by console

ISP2#CONF T

Enter configuration commands, one per line. End with CNTL/Z.

ISP2(config)#INT LOO

ISP2(config)#INT LOOpback 0

ISP2(config-if)#

\*Sep 27 23:28:25.355: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0, changed state to up

ISP2(config-if)#IP ADD 8.8.8.2 255.255.255.255

ISP2(config-if)#^Z

ISP2#S

\*Sep 27 23:29:00.643: %SYS-5-CONFIG\_I: Configured from console by console

ISP2#SH IP INT BRIEF

Interface IP-Address OK? Method Status Protocol

Ethernet0/0 unassigned YES unset administratively down down

GigabitEthernet0/0 8.1.5.2 YES manual up up

GigabitEthernet1/0 8.1.7.1 YES manual up up

GigabitEthernet2/0 unassigned YES unset administratively down down

GigabitEthernet3/0 unassigned YES unset administratively down down

Loopback0 8.8.8.2 YES manual up up

ISP2#CONF T

Enter configuration commands, one per line. End with CNTL/Z.

ISP2(config)#ROUT

ISP2(config)#ROUTeR OSPF 1

ISP2(config-router)#NETW

ISP2(config-router)#NETWork 8.8.8.2 0.0.0.0 AREA 0

ISP2(config-router)#NETWork 8.1.5.2 0.0.0.0 AREA 0

ISP2(config-router)#NETWork 8.1.5.2 0.0.0.0 AREA 0

\*Sep 27 23:30:53.191: %OSPF-5-ADJCHG: Process 1, Nbr 8.8.8.3 on GigabitEthernet0/0 from LOADING to FULL, Loading Done

ISP2(config-router)#NETWork 8.1.7.1 0.0.0.0 AREA 0

ISP2(config-router)#^Z

ISP2#SH I

\*Sep 27 23:32:01.739: %SYS-5-CONFIG\_I: Configured from console by console

ISP2#SH IP INT BREIEF

^

% Invalid input detected at '^' marker.

ISP2#SH IP INT BR

ISP2#SH IP INT BRief

Interface IP-Address OK? Method Status Protocol

Ethernet0/0 unassigned YES unset administratively down down

GigabitEthernet0/0 8.1.5.2 YES manual up up

GigabitEthernet1/0 8.1.7.1 YES manual up up

GigabitEthernet2/0 unassigned YES unset administratively down down

GigabitEthernet3/0 unassigned YES unset administratively down down

Loopback0 8.8.8.2 YES manual up up

ISP2#SH IP OSPF BRIEF

^

% Invalid input detected at '^' marker.

ISP2#SH IP OSPF BR

ISP2#SH IP OSPF BRI

ISP2#SH IP OSPF BRE

ISP2#SH IP OSPF BREI

ISP2#SH IP OSPF BRIE

ISP2#SH IP OSPF BRIEF

^

% Invalid input detected at '^' marker.

ISP2#SH IP INT OSPF BRIEF

ISP2#SH IP INT OSPF BRIEF

^

% Invalid input detected at '^' marker.

ISP2#SH IP INT OSPF

^

% Invalid input detected at '^' marker.

ISP2#MUZG

Translating "MUZG"

Translating "MUZG"

% Bad IP address or host name

% Unknown command or computer name, or unable to find computer address

ISP2#SH IP OSPF INT

Loopback0 is up, line protocol is up

Internet Address 8.8.8.2/32, Area 0, Attached via Network Statement

Process ID 1, Router ID 8.1.5.2, Network Type LOOPBACK, Cost: 1

Topology-MTID Cost Disabled Shutdown Topology Name

0 1 no no Base

Loopback interface is treated as a stub Host

GigabitEthernet1/0 is up, line protocol is up

Internet Address 8.1.7.1/30, Area 0, Attached via Network Statement

Process ID 1, Router ID 8.1.5.2, Network Type BROADCAST, Cost: 1

Topology-MTID Cost Disabled Shutdown Topology Name

0 1 no no Base

Transmit Delay is 1 sec, State DR, Priority 1

Designated Router (ID) 8.1.5.2, Interface address 8.1.7.1

No backup designated router on this network

Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5

oob-resync timeout 40

Hello due in 00:00:03

Supports Link-local Signaling (LLS)

Cisco NSF helper support enabled

IETF NSF helper support enabled

Index 3/3, flood queue length 0

Next 0x0(0)/0x0(0)

Last flood scan length is 0, maximum is 0

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)

GigabitEthernet0/0 is up, line protocol is up

Internet Address 8.1.5.2/30, Area 0, Attached via Network Statement

Process ID 1, Router ID 8.1.5.2, Network Type BROADCAST, Cost: 1

Topology-MTID Cost Disabled Shutdown Topology Name

0 1 no no Base

Transmit Delay is 1 sec, State BDR, Priority 1

Designated Router (ID) 8.8.8.3, Interface address 8.1.5.1

Backup Designated router (ID) 8.1.5.2, Interface address 8.1.5.2

Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5

oob-resync timeout 40

Hello due in 00:00:03

Supports Link-local Signaling (LLS)

Cisco NSF helper support enabled

IETF NSF helper support enabled

Index 2/2, 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 8.8.8.3 (Designated Router)

Suppress hello for 0 neighbor(s)

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#

ISP2#SH IP OSPF INT

Loopback0 is up, line protocol is up

Internet Address 8.8.8.2/32, Area 0, Attached via Network Statement

Process ID 1, Router ID 8.1.5.2, Network Type LOOPBACK, Cost: 1

Topology-MTID Cost Disabled Shutdown Topology Name

0 1 no no Base

Loopback interface is treated as a stub Host

GigabitEthernet1/0 is up, line protocol is up

Internet Address 8.1.7.1/30, Area 0, Attached via Network Statement

Process ID 1, Router ID 8.1.5.2, Network Type BROADCAST, Cost: 1

Topology-MTID Cost Disabled Shutdown Topology Name

0 1 no no Base

Transmit Delay is 1 sec, State DR, Priority 1

Designated Router (ID) 8.1.5.2, Interface address 8.1.7.1

No backup designated router on this network

Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5

oob-resync timeout 40

Hello due in 00:00:04

Supports Link-local Signaling (LLS)

Cisco NSF helper support enabled

IETF NSF helper support enabled

Index 3/3, flood queue length 0

Next 0x0(0)/0x0(0)

Last flood scan length is 0, maximum is 0

ISP2#SH IP OSPF INT BRIEF

Interface PID Area IP Address/Mask Cost State Nbrs F/C

Lo0 1 0 8.8.8.2/32 1 LOOP 0/0

Gi1/0 1 0 8.1.7.1/30 1 DR 0/0

Gi0/0 1 0 8.1.5.2/30 1 BDR 1/1

ISP2#CONF T

Enter configuration commands, one per line. End with CNTL/Z.

ISP2(config)#ROUT

ISP2(config)#ROUTeR OSPF 1

ISP2(config-router)#NO NET

ISP2(config-router)#NO NETwork 8.1.7.1 0.0.0.0 AREA 0

ISP2(config-router)#^Z

ISP2#SH IP OSPF INT BRIEF

\*Sep 27 23:36:07.935: %SYS-5-CONFIG\_I: Configured from console by console

ISP2#SH IP OSPF INT BRIEF

Interface PID Area IP Address/Mask Cost State Nbrs F/C

Lo0 1 0 8.8.8.2/32 1 LOOP 0/0

Gi0/0 1 0 8.1.5.2/30 1 BDR 1/1

ISP2#

ISP2#SH IP OSPF NEI

ISP2#SH IP OSPF NEIghbor

Neighbor ID Pri State Dead Time Address Interface

8.8.8.3 1 FULL/DR 00:00:30 8.1.5.1 GigabitEthernet0/0

ISP2#CONF T

Enter configuration commands, one per line. End with CNTL/Z.

ISP2(config)#ROUTER BGP 65001

ISP2(config-router)#NEI

ISP2(config-router)#NEIghbor 8.8.8.3 REM

ISP2(config-router)#NEIghbor 8.8.8.3 REMoT

ISP2(config-router)#NEIghbor 8.8.8.3 REMoTe-as 65001

ISP2(config-router)#NEIghbor 8.8.8.3

\*Sep 27 23:39:39.699: %BGP-5-ADJCHANGE: neighbor 8.8.8.3 Up

ISP2(config-router)#NEIghbor 8.8.8.3 UPD

ISP2(config-router)#NEIghbor 8.8.8.3 UPDate-source LOO

ISP2(config-router)#NEIghbor 8.8.8.3 UPDate-source LOOpback 0

ISP2(config-router)#NEIghbor 8.1.8.2 REM

ISP2(config-router)#NEIghbor 8.1.8.2 REMoT

ISP2(config-router)#NEIghbor 8.1.8.2 REMoTe-as 65002

ISP2(config-router)#^Z

ISP2#

\*Sep 27 23:40:52.343: %SYS-5-CONFIG\_I: Configured from console by console

ISP2#SH IP BGP SUM

ISP2#SH IP BGP SUMmary

BGP router identifier 8.8.8.2, local AS number 65001

BGP table version is 11, main routing table version 11

10 network entries using 1480 bytes of memory

10 path entries using 640 bytes of memory

3/3 BGP path/bestpath attribute entries using 408 bytes of memory

2 BGP rrinfo entries using 48 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 2600 total bytes of memory

BGP activity 10/0 prefixes, 10/0 paths, scan interval 60 secs

Neighbor V AS MsgRcvd MsgSent TblVer InQ OutQ Up/Down State/PfxRcd

8.1.8.2 4 65002 0 0 1 0 0 never Idle

8.8.8.3 4 65001 10 5 11 0 0 00:01:19 10

ISP2#ROUT

ISP2#CONF T

Enter configuration commands, one per line. End with CNTL/Z.

ISP2(config)#ROUTER BGP 65001

ISP2(config-router)#NO NEIghbor 8.1.8.2 REMoTe-as 65002

ISP2(config-router)#NEIghbor 8.1.7.2 REMoTe-as 65002

ISP2(config-router)#^Z

ISP2#

\*Sep 27 23:42:26.019: %SYS-5-CONFIG\_I: Configured from console by console

ISP2#SH IP BGP SUMmary

BGP router identifier 8.8.8.2, local AS number 65001

BGP table version is 11, main routing table version 11

10 network entries using 1480 bytes of memory

10 path entries using 640 bytes of memory

3/3 BGP path/bestpath attribute entries using 408 bytes of memory

2 BGP rrinfo entries using 48 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 2600 total bytes of memory

BGP activity 10/0 prefixes, 10/0 paths, scan interval 60 secs

Neighbor V AS MsgRcvd MsgSent TblVer InQ OutQ Up/Down State/PfxRcd

8.1.7.2 4 65002 0 0 1 0 0 never Active

8.8.8.3 4 65001 12 7 11 0 0 00:02:53 10

ISP2#SH IP BGP

BGP table version is 11, local router ID is 8.8.8.2

Status codes: s suppressed, d damped, h history, \* valid, > best, i - internal,

r RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter,

x best-external, a additional-path, c RIB-compressed,

Origin codes: i - IGP, e - EGP, ? - incomplete

RPKI validation codes: V valid, I invalid, N Not found

Network Next Hop Metric LocPrf Weight Path

\*>i 8.1.1.0/30 8.8.8.1 0 100 0 i

\*>i 8.1.2.0/30 8.8.8.4 0 100 0 i

r>i 8.1.3.0/30 8.8.8.3 0 100 0 ?

r>i 8.1.4.0/30 8.8.8.3 0 100 0 ?

r>i 8.1.5.0/30 8.8.8.3 0 100 0 ?

r>i 8.1.6.0/30 8.8.8.3 0 100 0 ?

r>i 8.8.8.1/32 8.8.8.1 0 100 0 i

r>i 8.8.8.3/32 8.8.8.3 0 100 0 ?

r>i 8.8.8.4/32 8.8.8.4 0 100 0 i

\*>i 17.1.1.0/30 8.1.1.1 0 100 0 65000 i

ISP2#sh run | sec bgp

router bgp 65001

bgp log-neighbor-changes

neighbor 8.1.7.2 remote-as 65002

neighbor 8.8.8.3 remote-as 65001

neighbor 8.8.8.3 update-source Loopback0

ISP2#conf t

Enter configuration commands, one per line. End with CNTL/Z.

ISP2(config)#rou

ISP2(config)#router bgp 65001

ISP2(config-router)#net

ISP2(config-router)#network 8.8.8.2 mask 255.255.255.255

ISP2(config-router)#network 8.1.5.0 mask 255.255.255.252

ISP2(config-router)#network 8.1.7.0 mask 255.255.255.252

ISP2(config-router)#^Z

ISP2#sh

\*Sep 27 23:45:59.775: %SYS-5-CONFIG\_I: Configured from console by console

ISP2#sh run | sec bgp

router bgp 65001

bgp log-neighbor-changes

network 8.1.5.0 mask 255.255.255.252

network 8.1.7.0 mask 255.255.255.252

network 8.8.8.2 mask 255.255.255.255

neighbor 8.1.7.2 remote-as 65002

neighbor 8.8.8.3 remote-as 65001

neighbor 8.8.8.3 update-source Loopback0

ISP2#sh ip bgp

BGP table version is 14, local router ID is 8.8.8.2

Status codes: s suppressed, d damped, h history, \* valid, > best, i - internal,

r RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter,

x best-external, a additional-path, c RIB-compressed,

Origin codes: i - IGP, e - EGP, ? - incomplete

RPKI validation codes: V valid, I invalid, N Not found

Network Next Hop Metric LocPrf Weight Path

\*>i 8.1.1.0/30 8.8.8.1 0 100 0 i

\*>i 8.1.2.0/30 8.8.8.4 0 100 0 i

r>i 8.1.3.0/30 8.8.8.3 0 100 0 ?

r>i 8.1.4.0/30 8.8.8.3 0 100 0 ?

\*> 8.1.5.0/30 0.0.0.0 0 32768 i

\* i 8.8.8.3 0 100 0 ?

r>i 8.1.6.0/30 8.8.8.3 0 100 0 ?

\*> 8.1.7.0/30 0.0.0.0 0 32768 i

r>i 8.8.8.1/32 8.8.8.1 0 100 0 i

\*> 8.8.8.2/32 0.0.0.0 0 32768 i

r>i 8.8.8.3/32 8.8.8.3 0 100 0 ?

r>i 8.8.8.4/32 8.8.8.4 0 100 0 i

\*>i 17.1.1.0/30 8.1.1.1 0 100 0 65000 i

ISP2#ping 17.1.1.1

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to 17.1.1.1, timeout is 2 seconds:

!!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 80/91/120 ms

ISP2#tra

ISP2#traceroute 17.1.1.1

Type escape sequence to abort.

Tracing the route to 17.1.1.1

VRF info: (vrf in name/id, vrf out name/id)

1 8.1.5.1 24 msec 20 msec 20 msec

2 8.1.3.1 40 msec 44 msec 20 msec

3 8.1.1.1 32 msec 32 msec 28 msec

4 17.1.1.1 [AS 65000] 64 msec 80 msec 80 msec

ISP2#wr

Warning: Attempting to overwrite an NVRAM configuration previously written

by a different version of the system image.

Overwrite the previous NVRAM configuration?[confirm]

Building configuration...

[OK]

ISP2#

\*Sep 28 00:18:56.167: %BGP-5-ADJCHANGE: neighbor 8.1.7.2 Up

ISP2#