

### Router configuration on R0:

```
Router(config)#router ?
  bgp      Border Gateway Protocol (BGP)
  eigrp    Enhanced Interior Gateway Routing Protocol (EIGRP)
  ospf     Open Shortest Path First (OSPF)
  rip      Routing Information Protocol (RIP)
Router(config)#router bgp
Router(config)#router bgp ?
  <1-65535> Autonomous system number
Router(config)#router bgp 300
Router(config-router)#network 192.168.1.0
Router(config-router)#network 10.0.0.0
Router(config-router)#nei
Router(config-router)#neighbor 10.0.0.2
% Incomplete command.
Router(config-router)#neighbor 10.0.0.2 remote-
Router(config-router)#neighbor 10.0.0.2 remote-as 400
Router(config-router)#neighbor 192.168.2.1 remote-as 400
Router(config-router)#exit
```

### Router configuration on R1:

```
Router(config)#router bgp 400
Router(config-router)#
Router(config-router)#network 10.0.0.0
Router(config-router)#network 192.168.2.0
Router(config-router)#nei
Router(config-router)#neighbor 10.0.0.1 remo
Router(config-router)#neighbor 10.0.0.1 remote-as 300
Router(config-router)#%BGP-5-ADJCHANGE: neighbor 10.0.0.1 Up

Router(config-router)#nei
Router(config-router)#neighbor 192.168.1.1 re
Router(config-router)#neighbor 192.168.1.1 remote-as 300
Router(config-router)#exit
```

### Display protocol details on Router R0:

```
Router#show ip route
Codes: L - local, 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, E - EGP
       i - IS-IS, 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

```
10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C    10.0.0.0/8 is directly connected, FastEthernet0/1
L    10.0.0.1/32 is directly connected, FastEthernet0/1
192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.1.0/24 is directly connected, FastEthernet0/0
L    192.168.1.1/32 is directly connected, FastEthernet0/0
B    192.168.2.0/24 [20/0] via 10.0.0.2, 00:00:00
```

```
Router#show ip pro
```

```
Router#show ip protocols
```

```
Routing Protocol is "bgp 300"
```

Outgoing update filter list for all interfaces is not set

Incoming update filter list for all interfaces is not set

IGP synchronization is disabled

Automatic route summarization is disabled

Neighbor(s):

Address	FiltIn	FiltOut	DistIn	DistOut	Weight	RouteMap
10.0.0.2						
192.168.2.1						

Maximum path: 1

Routing Information Sources:

Gateway	Distance	Last Update
10.0.0.2	20	00:00:00

Distance: external 20 internal 200 local 200

```
Router#
```

### Display protocol details on Router R1:

```
Router#show ip protocols
```

```
Routing Protocol is "bgp 400"
```

Outgoing update filter list for all interfaces is not set

Incoming update filter list for all interfaces is not set

IGP synchronization is disabled

Automatic route summarization is disabled

Neighbor(s):

Address	FiltIn	FiltOut	DistIn	DistOut	Weight	RouteMap
10.0.0.1						
192.168.1.1						

Maximum path: 1

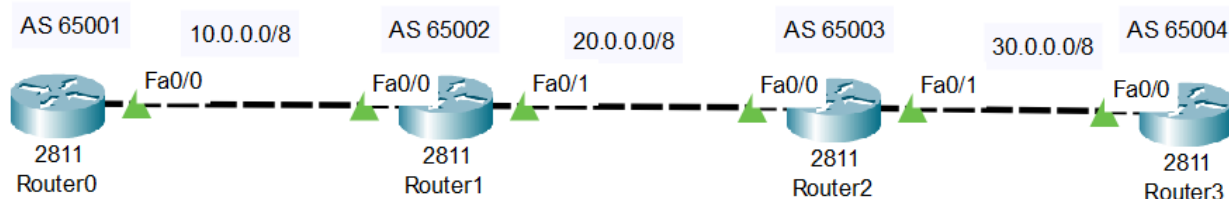
Routing Information Sources:

Gateway	Distance	Last Update
10.0.0.1	20	00:00:00

Distance: external 20 internal 200 local 200

Note: Ping computers now.

## BGP – Demo 2:



On Router R0:

```
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router bgp 65001
Router(config-router)#nei
Router(config-router)#neighbor 10.0.0.2
% Incomplete command.
Router(config-router)#neighbor 10.0.0.2 re
Router(config-router)#neighbor 10.0.0.2 remote-as 65002
Router(config-router)#net
Router(config-router)#network 10.0.0.0 mask 255.0.0.0
Router(config-router)#exit
Router(config)#^Z
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#sho
Router#show ip protocols
Routing Protocol is "bgp 65001"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  IGP synchronization is disabled
  Automatic route summarization is disabled
  Neighbor(s):
    Address          FiltIn FiltOut DistIn DistOut Weight RouteMap
    10.0.0.2
Maximum path: 1
  Routing Information Sources:
    Gateway         Distance      Last Update
  Distance: external 20 internal 200 local 200
```

On Router R1:

```
Router(config)#rou
Router(config)#router bgp 65002
Router(config-router)#nei
Router(config-router)#neighbor 10.0.0.1 remote-as 65001
Router(config-router)#%BGP-5-ADJCHANGE: neighbor 10.0.0.1 Up

Router(config-router)#nei
Router(config-router)#neighbor 20.0.0.2 remo
Router(config-router)#neighbor 20.0.0.2 remote-as 65003
Router(config-router)#
Router(config-router)#network 10.0.0.0 mask 255.0.0.0
Router(config-router)#network 20.0.0.0 mask 255.0.0.0
Router(config-router)#exit
Router(config)#^Z
Router#
```

Listing BGP Ips:

```
Router#show ip bgp
BGP table version is 4, local router ID is 20.0.0.1
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
               r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network        Next Hop           Metric LocPrf Weight Path
*> 10.0.0.0/8     0.0.0.0             0      0 32768 i
*                 10.0.0.1             0      0      0 65001 i
*> 20.0.0.0/8     0.0.0.0             0      0 32768 i
```