

show ip bgp

BGP table version is 5, local router ID is 1.2.3.4
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	Hop	Metric	LocPrf	Weight	Path
*>i172.17.0.0/30	2.3.4.5	0	100	0	i	
*> 172.17.0.4/30	0.0.0.0	0	32768	i		
*>i172.17.0.8/30	3.4.5.6	0	100	0	i	
*> 209.225.100.0	200.2.2.2	0	0	200	i	
* i209.225.254.0	200.1.1.1	0	100	0	200	i

show ip bgp summary

```
BGP router identifier 1.2.3.4, local AS number 20
BGP table version is 5, main routing table version 5
5 network entries using 645 bytes of memory
5 path entries using 260 bytes of memory
5/3 BGP path/bestpath attribute entries using 620 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 1549 total bytes of memory
BGP activity 12/7 prefixes, 14/9 paths, scan interval 60 secs

Neighbor V AS MsgRcvd MsgSent TblVer InQ OutQ Up/Down State/PfxRcd
2.3.4.5 4 20 110 114 5 0 0 00:36:19 2
3.4.5.6 4 20 114 114 5 0 0 00:36:21 1
200.2.2.2 4 200 32 30 5 0 0 00:24:33 1
```

show ip bgp neighbors

```
BGP neighbor is 2.3.4.5, remote AS 20, internal link
BGP version 4, remote router ID 2.3.4.5
BGP state = Established, up for 00:36:20
Last read 00:00:20, last write 00:00:20, hold time is 180, keepalive interval is 60 seconds
Neighbor capabilities:
Route refresh: advertised and received(old & new)
Address family IPv4 Unicast: advertised and received
Message statistics:
InQ depth is 0
OutQ depth is 0
Sent Rcvd
Opens: 4 4
Notifications: 0 0
Updates: 8 4
Keepalives: 102 102
Route Refresh: 0 0
Total: 114 110
Default minimum time between advertisement runs is 0 seconds
```

```
For address family: IPv4 Unicast
BGP table version 5, neighbor version 5/0
Output queue size : 0
Index 1, Offset 0, Mask 0x2
1 update-group member
Sent Rcvd
Prefix activity: ---- ----
Prefixes Current: 2 2 (Consumes 104 bytes)
Prefixes Total: 2 2
Implicit Withdraw: 0 0
Explicit Withdraw: 0 0
Used as bestpath: n/a 1
Used as multipath: n/a 0
```

```
Outbound Inbound
Local Policy Denied Prefixes: -----
Bestpath from this peer: 1 n/a
Bestpath from iBGP peer: 1 n/a
Total: 2 0
Number of NLRI in the update sent: max 1, min 0
```

```
Connections established 4; dropped 3
Last reset 00:36:23, due to User reset
Connection state is ESTAB, I/O status: 1, unread input bytes: 0
Connection is ECN Disabled, Mininum incoming TTL 0, Outgoing TTL 255
Local host: 1.2.3.4, Local port: 51110
Foreign host: 2.3.4.5, Foreign port: 179
Connection tableid (VRF): 0
```

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

```
Event Timers (current time is 0x68CAF8):
Timer Starts Wakeups Next
Retrans 42 0 0x0
TimeWait 0 0 0x0
AckHold 38 1 0x0
SendWnd 0 0 0x0
KeepAlive 0 0 0x0
GiveUp 0 0 0x0
PmtuAger 0 0 0x0
DeadWait 0 0 0x0
Linger 0 0 0x0
ProcessQ 0 0 0x0
```

```
iss: 1399737640 snduna: 1399738542 sndnxt: 1399738542 sndwnd: 16023
irs: 178368608 rcvnxt: 178369510 rcvwnd: 16023 delrcvwnd: 361
```

```
SRTT: 299 ms, RTTO: 309 ms, RTV: 10 ms, KRTT: 0 ms
minRTT: 0 ms, maxRTT: 300 ms, ACK hold: 200 ms
Status Flags: active open
Option Flags: nagle
IP Precedence value : 6
```

```
Datagrams (max data segment is 536 bytes):
Rcvd: 79 (out of order: 0), with data: 39, total data bytes: 901
```

```
Sent: 45 (retransmit: 0, fastretransmit: 0, partialack: 0, Second Congestion: 0), with
data: 41, total data bytes: 901
Packets received in fast path: 0, fast processed: 0, slow path: 0
fast lock acquisition failures: 0, slow path: 0

BGP neighbor is 3.4.5.6, remote AS 20, internal link
BGP version 4, remote router ID 3.4.5.6
BGP state = Established, up for 00:36:25
Last read 00:00:25, last write 00:00:25, hold time is 180, keepalive interval is 60 seconds
Neighbor capabilities:
Route refresh: advertised and received(old & new)
Address family IPv4 Unicast: advertised and received
Message statistics:
InQ depth is 0
OutQ depth is 0
Sent Rcvd
Opens: 4 4
Notifications: 0 0
Updates: 8 8
Keepalives: 102 102
Route Refresh: 0 0
Total: 114 114
Default minimum time between advertisement runs is 0 seconds

For address family: IPv4 Unicast
BGP table version 5, neighbor version 5/0
Output queue size : 0
Index 1, Offset 0, Mask 0x2
1 update-group member
Sent Rcvd
Prefix activity: ---- ----
Prefixes Current: 2 1 (Consumes 52 bytes)
Prefixes Total: 2 1
Implicit Withdraw: 0 0
Explicit Withdraw: 0 0
Used as bestpath: n/a 1
Used as multipath: n/a 0

Outbound Inbound
Local Policy Denied Prefixes: -----
Bestpath from this peer: 1 n/a
Bestpath from iBGP peer: 1 n/a
Total: 2 0
Number of NLRI in the update sent: max 1, min 0

Connections established 4; dropped 3
Last reset 00:36:28, due to User reset
Connection state is ESTAB, I/O status: 1, unread input bytes: 0
Connection is ECN Disabled, Minimum incoming TTL 0, Outgoing TTL 255
Local host: 1.2.3.4, Local port: 18475
Foreign host: 3.4.5.6, Foreign port: 179
Connection tableid (VRF): 0

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

Event Timers (current time is 0x68D440):
Timer Starts Wakeups Next
Retrans 42 0 0x0
TimeWait 0 0 0x0
AckHold 38 1 0x0
SendWnd 0 0 0x0
KeepAlive 0 0 0x0
GiveUp 0 0 0x0
PmtuAger 0 0 0x0
DeadWait 0 0 0x0
Linger 0 0 0x0
ProcessQ 0 0 0x0

iss: 1807216059 snduna: 1807216961 sndnxt: 1807216961 sndwnd: 16023
irs: 3711270646 rcvnxt: 3711271489 rcvwnd: 16080 delrcvwnd: 304

SRTT: 299 ms, RTTO: 309 ms, RTV: 10 ms, KRTT: 0 ms
minRTT: 0 ms, maxRTT: 300 ms, ACK hold: 200 ms
Status Flags: active open
Option Flags: nagle
IP Precedence value : 6
```

```
Datagrams (max data segment is 536 bytes):
Rcvd: 79 (out of order: 0), with data: 39, total data bytes: 842
Sent: 45 (retransmit: 0, fastretransmit: 0, partialack: 0, Second Congestion: 0), with
data: 41, total data bytes: 901
Packets received in fast path: 0, fast processed: 0, slow path: 0
fast lock acquisition failures: 0, slow path: 0

BGP neighbor is 200.2.2.2, remote AS 200, external link
BGP version 4, remote router ID 200.2.2.2
BGP state = Established, up for 00:24:42
Last read 00:00:29, last write 00:00:41, hold time is 180, keepalive interval is 60 seconds
Neighbor capabilities:
Route refresh: advertised and received(old & new)
Address family IPv4 Unicast: advertised and received
Message statistics:
InQ depth is 0
OutQ depth is 0
Sent Rcvd
Opens: 1 1
Notifications: 0 0
Updates: 2 2
Keepalives: 27 29
Route Refresh: 0 0
Total: 30 32
Default minimum time between advertisement runs is 30 seconds

For address family: IPv4 Unicast
BGP table version 5, neighbor version 5/0
Output queue size : 0
Index 2, Offset 0, Mask 0x4
2 update-group member
NEXT_HOP is always this router
Sent Rcvd
Prefix activity: ---- ----
Prefixes Current: 3 1 (Consumes 52 bytes)
Prefixes Total: 3 1
Implicit Withdraw: 0 0
Explicit Withdraw: 0 0
Used as bestpath: n/a 1
Used as multipath: n/a 0

Outbound Inbound
Local Policy Denied Prefixes: -----
Bestpath from this peer: 1 n/a
Total: 1 0
Number of NLRI's in the update sent: max 2, min 1

Connections established 1; dropped 0
Last reset never
External BGP neighbor may be up to 10 hops away.
Connection state is ESTAB, I/O status: 1, unread input bytes: 0
Connection is ECN Disabled, Mininum incoming TTL 0, Outgoing TTL 10
Local host: 1.2.3.4, Local port: 179
Foreign host: 200.2.2.2, Foreign port: 18684
Connection tableid (VRF): 0

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

Event Timers (current time is 0x68E6C8):
Timer Starts Wakeups Next
Retrans 27 0 0x0
TimeWait 0 0 0x0
AckHold 30 26 0x0
SendWnd 0 0 0x0
KeepAlive 0 0 0x0
GiveUp 0 0 0x0
PmtuAger 0 0 0x0
DeadWait 0 0 0x0
Linger 0 0 0x0
ProcessQ 0 0 0x0

iss: 1517012863 snduna: 1517013526 sndnxt: 1517013526 sndwnd: 16270
irs: 499990591 rcvnxt: 499991275 rcvwnd: 16251 delrcvwnd: 133

SRTT: 292 ms, RTTO: 359 ms, RTV: 67 ms, KRTT: 0 ms
minRTT: 0 ms, maxRTT: 300 ms, ACK hold: 200 ms
Status Flags: passive open, gen tcbs
```

Option Flags: nagle

IP Precedence value : 6

Datagrams (max data segment is 536 bytes):

Rcvd: 58 (out of order: 0), with data: 31, total data bytes: 683

Sent: 55 (retransmit: 0, fastretransmit: 0, partialack: 0, Second Congestion: 0), with data: 27, total data bytes: 662

Packets received in fast path: 0, fast processed: 0, slow path: 0

fast lock acquisition failures: 0, slow path: 0

show running-config

Current configuration : 1536 bytes

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

hostname POP_Carrier2_VIX

boot-start-marker
boot-end-marker

no logging buffered
no logging console
no logging monitor

no aaa new-model

resource policy

ip cef

voice-card 0

interface Loopback0
ip address 1.2.3.4 255.255.255.255

interface FastEthernet0/0
description TO-POP_ISP2_VIX
ip address 172.17.0.6 255.255.255.252
duplex auto
speed auto

interface FastEthernet0/1
description TO-Carrier2
ip address 10.2.0.1 255.255.255.0
duplex auto
speed auto

interface Serial0/1/0
no ip address
shutdown
clock rate 2000000

interface Serial0/1/1
no ip address
shutdown
clock rate 2000000

router bgp 20
no synchronization
bgp log-neighbor-changes
network 172.17.0.4 mask 255.255.255.252
neighbor 2.3.4.5 remote-as 20
neighbor 2.3.4.5 update-source Loopback0
neighbor 3.4.5.6 remote-as 20
neighbor 3.4.5.6 update-source Loopback0
neighbor 200.2.2.2 remote-as 200
neighbor 200.2.2.2 ebgp-multihop 10
neighbor 200.2.2.2 update-source Loopback0
neighbor 200.2.2.2 next-hop-self
no auto-summary

ip route 2.3.4.5 255.255.255.255 FastEthernet0/1
ip route 3.4.5.6 255.255.255.255 FastEthernet0/1
ip route 200.2.2.2 255.255.255.255 FastEthernet0/0

no ip http server
no ip http secure-server

control-plane

line con 0
line aux 0
```

```
line vty 0 4
login

scheduler allocate 20000 1000
end
```


show ip interface brief

```
Interface IP-Address OK? Method Status Protocol
FastEthernet0/0 172.17.0.6 YES manual up up
FastEthernet0/1 10.2.0.1 YES manual up up
Serial0/1/0 unassigned YES NVRAM administratively down down
Serial0/1/1 unassigned YES NVRAM administratively down down
Loopback0 1.2.3.4 YES manual up up
```

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

1.0.0.0/32 is subnetted, 1 subnets
C 1.2.3.4 is directly connected, Loopback0
2.0.0.0/32 is subnetted, 1 subnets
S 2.3.4.5 is directly connected, FastEthernet0/1
3.0.0.0/32 is subnetted, 1 subnets
S 3.4.5.6 is directly connected, FastEthernet0/1
200.2.2.0/32 is subnetted, 1 subnets
S 200.2.2.2 is directly connected, FastEthernet0/0
172.17.0.0/30 is subnetted, 3 subnets
B 172.17.0.8 [200/0] via 3.4.5.6, 00:36:04
C 172.17.0.4 is directly connected, FastEthernet0/0
B 172.17.0.0 [200/0] via 2.3.4.5, 00:36:04
10.0.0.0/24 is subnetted, 1 subnets
C 10.2.0.0 is directly connected, FastEthernet0/1
B 209.225.100.0/24 [20/0] via 200.2.2.2, 00:24:51