

BGP Cheat Sheet

BGP Administrative Distance (Preference)

Cisco	20 (eBGP) and 200 (iBGP)
Huawei	255
Juniper	170
Nokia	170

BGP General

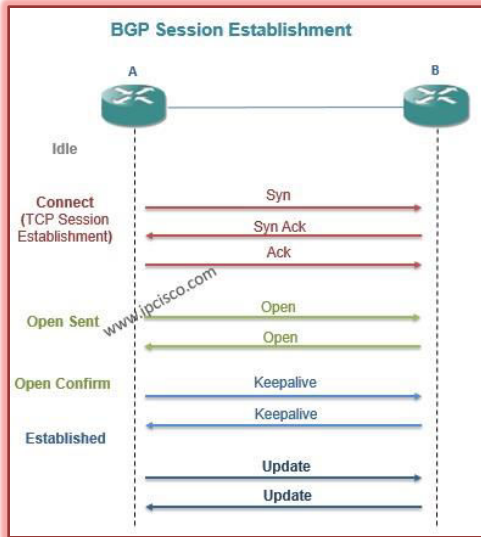
Protocol of Internet
Path Vector Protocol
TCP port 179
TCP Handshake Mechanims

BGP Message Types

Open messages
Update messages
Keepaliev messages
Notification messages

BGP Best Path Selection

1. Weight (Highest)
2. Local Preference (Highest)
3. Self-Originated
4. AS Path (Shortest)
5. Origin (IGP over EGP)
6. MED (Lowest)
7. External (eBGP over iBGP)
8. IGP Cost (Lowest)
9. Multiple paths
10. eBGP Peering (Oldest)
11. Router ID (Lowest)
12. Cluster List (Minimum)
13. Neighbor address (Lowest)



BGP Key Terms

Autonomous System	A Logical Domain under a single administration.
External BGP (eBGP)	BGP adjacency between ASs.
Internal BGP (iBGP)	BGP adjacencies within an AS.
Path Attributes	Different parameters used for directing paths.
Route Reflector(RR)	A central device used to avoid full-mesh IBGP.
BGP Confederations	Like RR, Sub AS to reduce IBGP Perrings.

BGP Path Attributes

Well-Known Mandatory	AS_PATH, Origin, Next_Hop
Well-Known Discretionary	Local-Pref, Atomic_Aggregate
Optional Transtive	Aggregator, Community
Optional Non-transitive	Multi-Exit-Discriminator (MED), Originator_ID, Cluster List

Bgp states	Events
Idle	(until a start event) configuration of a new bgp session or resetting the existing one.
Connect	Tcp 3-way-handshake, tcp connection establishment
Active	If tcp timeout occurs. Actively listening for a tcp response.
Open sent	After tcp session, originating router has generated an open message.(initial bgp handshake before advertisement.)
Open confirm	Upon receipt of open messages, neighbours generates keepalive.
Established	Receipt of the response keepalive and point-to-point connection is established.

