

## CCIE Enterprise Infrastructure v1.0 Bootcamp Labs - BGP

1. IGP
  - 1.1. Configure OSPF Area 0 between R1, R2, R3, R4, and R5.
  - 1.2. Advertise their Loopback0 networks into Area 0.
2. IGP
  - 2.1. Configure OSPF Area 0 between R7, R8, R9, and SW6.
  - 2.2. Advertise their Loopback0 networks into Area 0.
3. IGP
  - 3.1. Configure EIGRP between R10, R11, R12, and SW1.
  - 3.2. Advertise their Loopback0 networks into the EIGRP process.
4. iBGP Peerings
  - 4.1. Configure AS 12345 between R1, R2, R3, R4, and R5.
  - 4.2. Use R1 as the central peering point.
  - 4.3. Source the iBGP sessions from the routers' Loopback0 interfaces.
  - 4.4. Advertise the Loopback0 interfaces into BGP.
5. iBGP Peerings
  - 5.1. Configure AS 789 between R7, R8, R9, and SW6.
  - 5.2. Configure a full mesh of iBGP peerings between these devices.
  - 5.3. Advertise the Loopback0 interfaces into BGP with an Origin code of Incomplete.
6. iBGP Peerings
  - 6.1. Configure AS 10.1112 between R10, R11, R12, and SW1.
  - 6.2. SW1 should be the Route Reflector for this AS.
  - 6.3. Use a template of configuration on SW1 that can be applied to future routers added to this AS.
  - 6.4. Advertise the Loopback0 interfaces into BGP.
7. Confederation
  - 7.1. Configure R13, SW2, SW3, SW4, and SW5 in Confederation.
  - 7.2. Use the public AS 13.
  - 7.3. R13 should be in sub-AS 65013.
  - 7.4. SW2 and SW3 should be in sub-AS 65023.
  - 7.5. SW4 and SW5 should be in sub-AS 65045.
  - 7.6. Peer between R13 & SW2, SW2 & SW3, SW2 & SW4, and SW4 & SW5.
  - 7.7. Advertise the Loopback0 interfaces into BGP.

9. EBGPeerings
  - 9.1. R6 is in AS 6 and R14 is in AS 14.
  - 9.2. Peer AS 12345 to AS 6, AS 13, both connections to AS 789, and to AS 10.1112.
  - 9.3. Peer AS 13 to AS 10.1112.
  - 9.4. Peer AS 14 to AS 13 and AS 789.
  - 9.5. Advertise R6 and R14's Loopback0 interfaces into BGP.
10. BGP Security
  - 10.1. Authenticate the BGP peering between R2 and R6 with the password CISCOPBGP.
11. BGP Security
  - 11.1. Configure R8 to only accept the peering to R14 if it is verified that R14 is only 1 hop away.
12. BGP Bestpath Selection
  - 12.1. Configure AS 12345 so that it prefers to use R8 as the exit point to reach AS 789.
13. BGP Bestpath Selection
  - 13.1. Configure AS 13 so that traffic is preferred to enter from AS 10.1112.
14. BGP Aggregation
  - 14.1. Configure AS 10.1112 to advertise a single route for R10, R11, and R12's Loopback0 networks.
15. BGP Aggregation Traffic Engineering
  - 15.1. Configure AS 10.1112 so that traffic for R12's Loopback0 prefers to enter via AS 13.
  - 15.2. If this peering is down traffic should still be able to enter via AS 12345.

17. BGP Conditional Advertisement
  - 17.1. Configure AS 14 to advertise its Loopback0 interface only to R8.
  - 17.2. If the peering to R8 is down, then its Loopback0 interface should be advertised to R13.
18. BGP Outbound Route Filtering
  - 18.1. Configure BGP ORF on R2 towards R6.
  - 18.2. R6 should only have specific routes to the Loopback0 networks of AS 12345.
  - 18.3. R6 should use a default route for all other destinations.
19. BGP Communities
  - 19.1. Using BGP Communities, configure AS 789 so that SW6's Loopback0 network does not get advertised beyond AS 12345.
20. IPv6 BGP
  - 20.1. Configure IPv6 BGP peerings within AS 12345 with R1 as the Route Reflector.
  - 20.2. Advertise the IPv6 Loopback0 interfaces into BGP.
21. IPv6 BGP
  - 21.1. Configure a full mesh of IPv6 BGP peerings within AS 789.
  - 21.2. Advertise the IPv6 Loopback0 interfaces into BGP.
22. IPv6 EBGp Peerings
  - 22.1. Peer IPv6 BGP on both links between AS 12345 and AS 789.
23. IPv6 BGP Bestpath Selection
  - 23.1. Configure AS 12345 so that the preferred entry and exit point for all IPv6 traffic is via R8.
  - 23.2. If the peering to R8 is down, traffic should reroute to the peering to R7.