

BGP Advanced Lab

Goal:

All IP addresses have been preconfigured for you.

Every router has a Loopback0 interface: X.X.X.X (Where X = Router number)

1. Configure each Autonomous System (AS) with a different IGP:
AS 100: RIP
AS 300: OSPF
AS 200: EIGRP
AS 400: OSPF
 2. Do not configure the IGP on the interfaces connecting to another AS. For example; R3 should not send any RIP routing updates towards R4.
 3. Make sure the loopbacks are advertised in the IGP's.
 4. Configure BGP on every router. Configure all iBGP peers so that updates are sourced from the Loopback0 interface.
AS 300 has to be configured as a confederation. R1 has to be configured as a route-reflector for R2 and R3.
 5. Configure BGP authentication between R7 and R11, use password SECURE
- Make sure all BGP neighbor relationships are working before you continue with the next steps.**
6. Advertise all physical and loopback interfaces in BGP, you are not allowed to use the "network" command to achieve this.
- Achieve full connectivity, every IP address should be pingable. Use a TCLSH script to do this.**
7. When R4 sends a ping to the loopback interface of R1 it should choose the path through R3. You are only allowed to make changes on R2.
 8. Create another loopback interface on R1 with ip address 172.16.1.1 /24, advertise this in RIP.
 9. When R4 sends a ping to the 172.16.1.1 address it should take the path through R3, you are only allowed to make changes on R4.
 10. When R6 sends a ping towards the loopback interface on R11 it should go through AS 300.
 11. R7 should prefer the path through R11 for all external networks except for 172.16.1.1.
 12. Configure AS 300 so it is no longer advertises the 172.16.1.0/24 network to AS 200. AS 400 should not be affected.

NOTE: There are multiple ways to accomplish most of these tasks. See if you can figure them out.

