

Lab - Troubleshoot Redistribution (Instructor Version)

Instructor Note: Red font color or gray highlights indicate text that appears in the instructor copy only.

Answers: [17.1.2 Lab - Troubleshoot Redistribution](#)

Objectives

Troubleshoot network issues related to redistribution.

Background / Scenario

In this topology D1, R1, and R2 are implementing OSPFv2. D1 is redistributing Loopback 0 into OSPFv2 area 10. R2 and R3 are BGP neighbors in AS 64512. You will be loading configurations with intentional errors or missing configurations onto the network. Your tasks are to FIND the error(s), document your findings and the command(s) or method(s) used to fix them, FIX the issue(s) presented here, and then test the network to ensure both of the following conditions are met:

- 1) the complaint received in the ticket is resolved
- 2) full reachability is restored

Note: The routers used with CCNP hands-on labs are Cisco 4221 with Cisco IOS XE Release 16.9.4 (universalk9 image). The switches used in the labs are Cisco Catalyst 3650 with Cisco IOS XE Release 16.9.4 (universalk9 image). Other routers, switches, and Cisco IOS versions can be used. Depending on the model and Cisco IOS version, the commands available and the output produced might vary from what is shown in the labs. Refer to the Router Interface Summary Table at the end of the lab for the correct interface identifiers.

Note: Make sure that the devices have been erased and have no startup configurations. If you are unsure, contact your instructor.

Instructor Note: Refer to the Instructor Lab Manual for the procedures to initialize and reload devices.

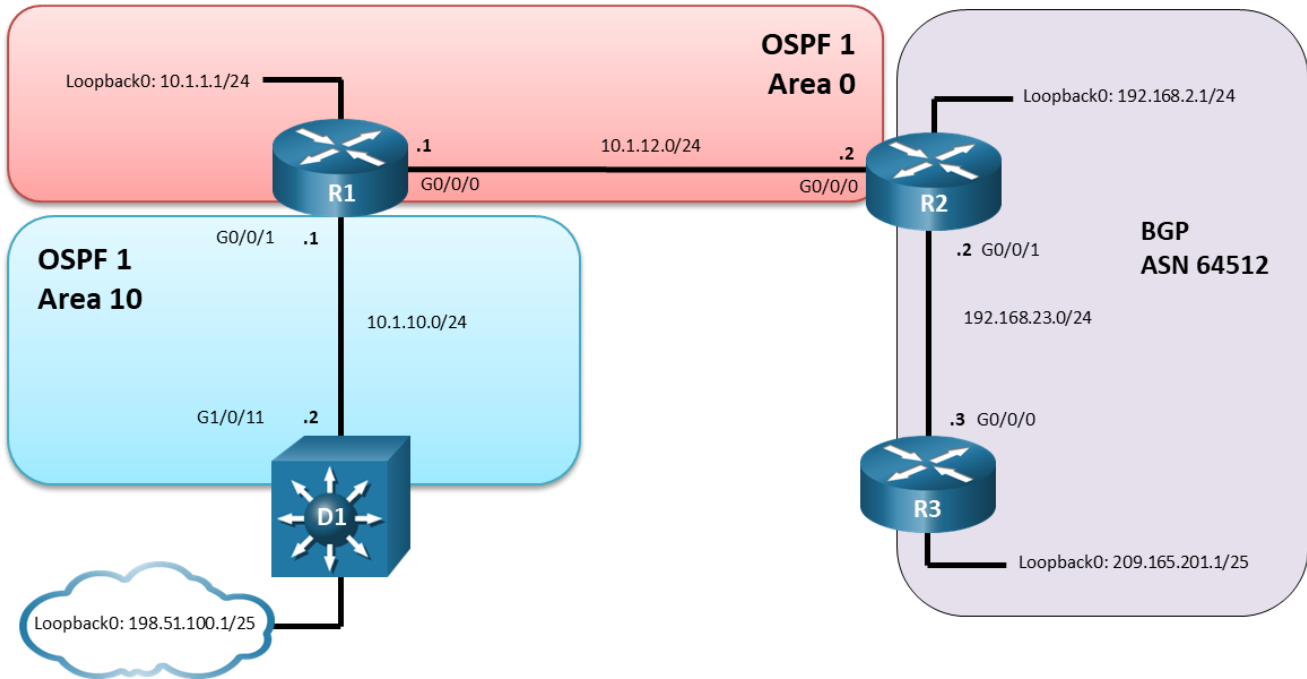
Required Resources

- 3 Routers (Cisco 4221 with Cisco IOS XE Release 16.9.4 universal image or comparable)
- 2 Switches (Cisco 3560 with Cisco IOS XE Release 16.9.4 universal image or comparable)
- 1 PC (Choice of operating system with terminal emulation program installed)
- Console cables to configure the Cisco IOS devices via the console ports
- Ethernet cables as shown in the topology

Instructions

Part 1: Trouble Ticket 17.1.2.1

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask
R1	G0/0/0	10.1.12.1	255.255.255.0
	G0/0/1	10.1.10.1	255.255.255.0
	Loopback 0	10.1.1.1	255.255.255.0
R2	G0/0/0	10.1.12.2	255.255.255.0
	G0/0/1	192.168.23.2	255.255.255.0
	Loopback 0	192.168.2.1	255.255.255.0
R3	G0/0/0	192.168.23.3	255.255.255.0
	Loopback 0	209.165.201.1	255.255.255.128
D1	G1/0/11	10.1.10.2	255.255.255.0
	Loopback 0	198.51.100.1	255.255.255.128

Scenario:

During a routine maintenance window, router R2 was replaced and upgraded to support gigabit interfaces. Instead of modifying the previous R2 configuration to support gigabit interfaces and loading the configuration file on R2, the network engineer decided to type the IOS commands on R2 from memory. As a result, only

Lab - Troubleshoot Redistribution

partial redistribution is occurring between OSPFv2 and BGP. The network engineer requested your help in diagnosing and resolving the issue(s) to restore full connectivity.

Use the commands listed below to load the configuration files for this trouble ticket:

Instructor Note: Commands for uploading the configuration are provided at the end of this document.

Device	Command
R1	<code>copy flash:/enarsi/17.1.2.1-r1-config.txt run</code>
R2	<code>copy flash:/enarsi/17.1.2.1-r2-config.txt run</code>
R3	<code>copy flash:/enarsi/17.1.2.1-r3-config.txt run</code>
D1	<code>copy flash:/enarsi/17.1.2.1-d1-config.txt run</code>

- Passwords on all devices are **cisco12345**. If a username is required, use **admin**.
- After you have fixed the ticket, change the MOTD on EACH DEVICE using the following command
banner motd # This is \$(hostname) FIXED from ticket <ticket number> #
- Save the configuration by issuing the **wri** command (on each device).
- Inform your instructor that you are ready for the next ticket.
- After the instructor approves your solution for this ticket, issue the **reset.now** privileged EXEC command. This script will clear your configurations and reload the devices.

Instructor Notes:

This trouble ticket contains two intentional errors:

- 1) By default, BGP only redistributes eBGP routes into an Interior Gateway Protocol, such as OSPF. To redistribute iBGP routes into OSPF requires the **bgp redistribute-internal** command.
- 2) By default, when redistributing OSPF into BGP only intra-area and inter-area OSPF routes are “matched” for redistribution. To redistribute external OSPF routes required the **redistribute ospf 1 match internal external 1 external 2** command.

The commands used to fix the first error should be:

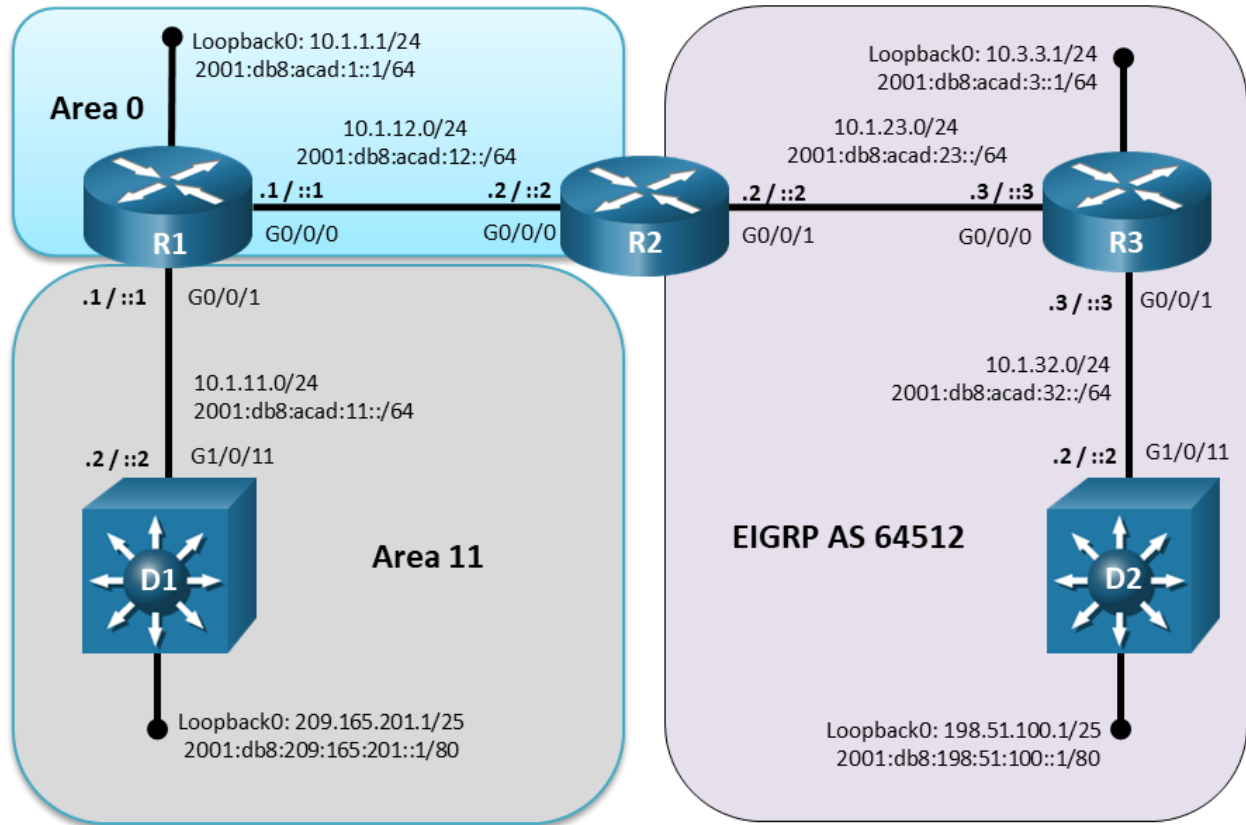
```
R2(config)# router bgp 64512
R2(config-router)# address-family ipv4
R2(config-router-af)# bgp redistribute-internal
R2(config-router-af)# end
```

The commands used to fix the second error should be:

```
R2(config)# router bgp 64512
R2(config-router)# address-family ipv4
R2(config-router-af)# redistribute ospf 1 match internal external 1 external 2
R2(config-router-af)# end
```

Part 2: Trouble Ticket 17.1.2.2

Topology



Addressing Table

Device	Interface	IPv4 Address/Mask	IPv6 Address/Prefix	IPv6 Link Local
R1	G0/0/0	10.1.12.1/24	2001:db8:acad:12::1/64	fe80::12:1
	G0/0/1	10.1.11.1/24	2001:db8:acad:11::1/64	fe80::11:1
	Loopback 0	10.1.1.1/24	2001:db8:acad:1::1/64	fe80::1:1
R2	G0/0/0	10.1.12.2/24	2001:db8:acad:12::2/64	fe80::12:2
	G0/0/1	10.1.23.2/24	2001:db8:acad:23::2/64	fe80::23:2
R3	G0/0/0	10.1.23.3/24	2001:db8:acad:23::3/64	fe80::23:3
	G0/0/1	10.1.32.1/24	2001:db8:acad:32::3/64	fe80::32:3
	Loopback 0	10.3.3.3/24	2001:db8:acad:3::3/64	fe80::3:3
D1	G1/0/11	10.1.11.2/24	2001:db8:acad:11::2/64	fe80::11:2
	Loopback 0	209.165.201.1/25	2001:db8:209:165:201::1/80	fe80::209:1
D2	G1/0/11	10.1.32.2/24	2001:db8:acad:32::2/64	fe80::32:2
	Loopback 0	198.51.100.1/25	2001:db8:198:51:100::1/80	fe80::198:1

Scenario:

R2 is performing route redistribution between OSPFv3 AF and Named EIGRP for IPv4 and IPv6. During a routine maintenance window, router R2 was upgraded. As a result, redistribution is not occurring for IPv4 between OSPFv3 and named EIGRP.

Use the commands listed below to load the configuration files for this trouble ticket:

Device	Command
R1	<code>copy flash:/enarsi/17.1.2.2-r1-config.txt run</code>
R2	<code>copy flash:/enarsi/17.1.2.2-r2-config.txt run</code>
R3	<code>copy flash:/enarsi/17.1.2.2-r3-config.txt run</code>
D1	<code>copy flash:/enarsi/17.1.2.2-d1-config.txt run</code>
D2	<code>copy flash:/enarsi/17.1.2.2-d2-config.txt run</code>

- Passwords on all devices are **cisco12345**. If a username is required, use **admin**.
- After you have fixed the ticket, change the MOTD on EACH DEVICE using the following command:
banner motd # This is \$(hostname) FIXED from ticket <ticket number> #
- Save the configuration by issuing the **wri** command (on each device).
- Inform your instructor that you are ready for the next ticket.
- After the instructor approves your solution for this ticket, proceed to troubleshoot IPv6 redistribution.

Instructor Notes:

This IPv4 trouble ticket contains two intentional errors:

- 1) OSPFv3 routes being redistributed into EIGRP are not getting the correct seed metric within the route map.
- 2) Redistribution of EIGRP routes into OSPFv3 is configured with the wrong EIGRP AS number.

The commands used to fix the first error should be:

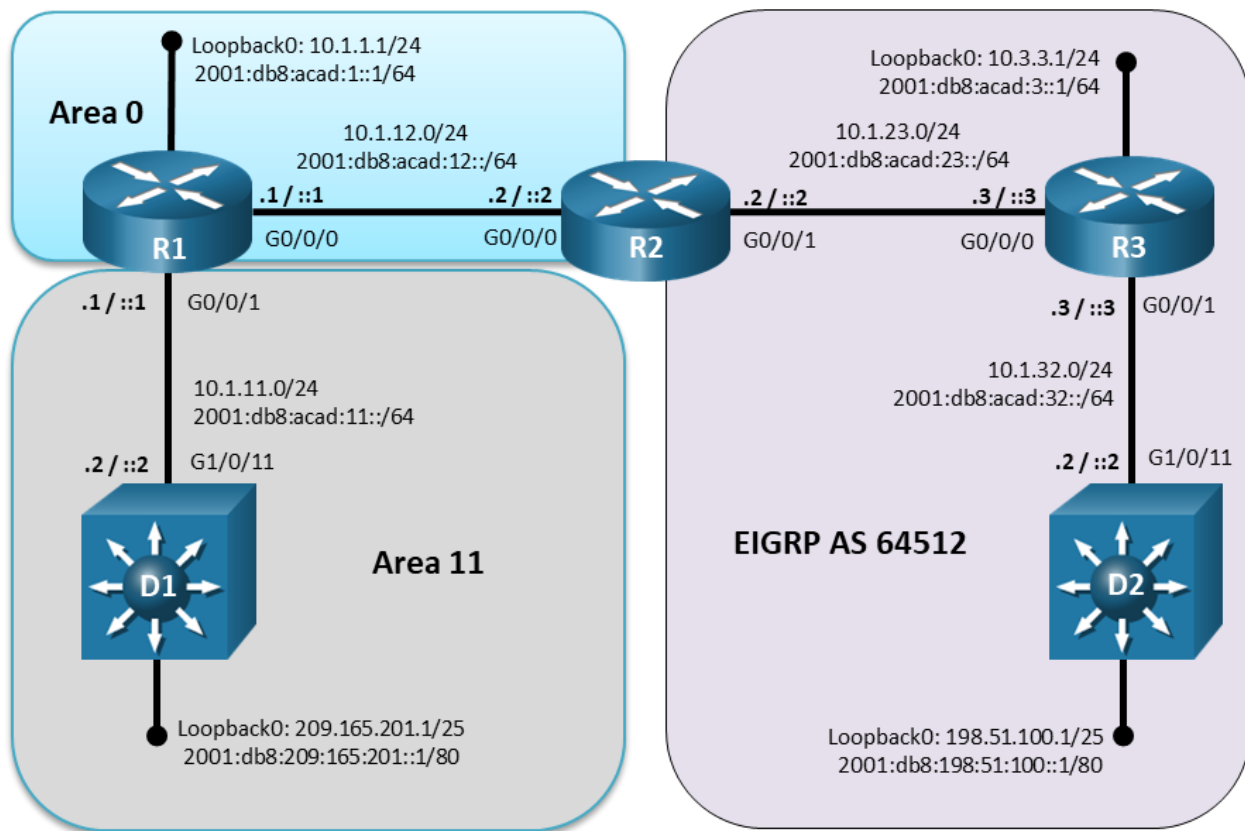
```
R2(config)# no route-map OSPF-into-EIGRP permit 10
R2(config)# route-map OSPF-into-EIGRP permit 10
R2(config-route-map)# set metric 1000000 10 255 1 1500
```

The commands used to fix the second error should be:

```
R2(config)# router ospfv3 1
R2(config-router)# address-family ipv4
R2(config-router-af)# no redistribute EIGRP 64521 metric 25 metric-type 1
R2(config-router-af)# redistribute EIGRP 64512 metric 25 metric-type 1
```

Part 3: Trouble Ticket 17.1.2.3

Topology



Addressing Table

Device	Interface	IPv4 Address/Mask	IPv6 Address/Prefix	IPv6 Link Local
R1	G0/0/0	10.1.12.1/24	2001:db8:acad:12::1/64	fe80::12:1
	G0/0/1	10.1.11.1/24	2001:db8:acad:11::1/64	fe80::11:1
	Loopback 0	10.1.1.1/24	2001:db8:acad:1::1/64	fe80::1:1
R2	G0/0/0	10.1.12.2/24	2001:db8:acad:12::2/64	fe80::12:2
	G0/0/1	10.1.23.2/24	2001:db8:acad:23::2/64	fe80::23:2
R3	G0/0/0	10.1.23.3/24	2001:db8:acad:23::3/64	fe80::23:3
	G0/0/1	10.1.32.1/24	2001:db8:acad:32::3/64	fe80::32:3
	Loopback 0	10.3.3.3/24	2001:db8:acad:3::3/64	fe80::3:3
D1	G1/0/11	10.1.11.2/24	2001:db8:acad:11::2/64	fe80::11:2
	Loopback 0	209.165.201.1/25	2001:db8:209:165:201::1/80	fe80::209:1
D2	G1/0/11	10.1.32.2/24	2001:db8:acad:32::2/64	fe80::32:2
	Loopback 0	198.51.100.1/25	2001:db8:198:51:100::1/80	fe80::198:1

Scenario:

R2 is performing route redistribution between OSPFv3 AF and Named EIGRP for IPv4 and IPv6. During a routine maintenance window router R2 was upgraded. As a result, IPv6 has limited connectivity and only partial redistribution is occurring between OSPFv3 and named EIGRP for IPv6.

Use the previously loaded 17.1.2.2 configuration files for trouble ticket 17.1.2.3:

- Passwords on all devices are **cisco12345**. If a username is required, use **admin**.
- After you have fixed the ticket, change the MOTD on EACH DEVICE using the following command
banner motd # This is \$(hostname) FIXED from ticket <ticket number> #
- Save the configuration by issuing the **wri** command (on each device).
- Inform your instructor that you are ready for the next ticket.
- After the instructor approves your solution for this ticket, issue the **reset.now** privileged EXEC command. This script will clear your configurations and reload the devices.

Instructor Notes:

This IPv6 trouble ticket contains two intentional errors:

- 1) OSPFv3 routes being redistributed into named EIGRP require a seed metric.
- 2) The Loopback 0 ipv6 address on S2 is being filtered during redistribution into OSPFv3.

The commands used to fix the first error should be:

```
R2(config)# router eigrp CISCO
R2(config-router)# address-family ipv6 autonomous-system 64512
R2(config-router-af)# topology base
R2(config-router-af-topology)# default-metric 1000000 10 255 1 1500
```

or

```
R2(config-router-af-topology)# redistribute ospf 1 metric 1000000 10 255 1 1500 include-connected
```

The commands used to fix the second error should be:

```
R2(config)# ipv6 prefix-list EIGRP-into-OSPF seq 10 permit 2001:DB8::/32 ge 80 le 80
```

or

```
R2(config)# no ipv6 prefix-list EIGRP-into-OSPF seq 5 permit 2001:DB8::/32 ge 64 le 64
R2(config)# ipv6 prefix-list EIGRP-into-OSPF seq 5 permit 2001:DB8::/32 ge 64 le 80
```

Router Interface Summary Table

Router Model	Ethernet Interface #1	Ethernet Interface #2	Serial Interface #1	Serial Interface #2
1800	Fast Ethernet 0/0 (F0/0)	Fast Ethernet 0/1 (F0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
1900	Gigabit Ethernet 0/0 (G0/0)	Gigabit Ethernet 0/1 (G0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
2801	Fast Ethernet 0/0 (F0/0)	Fast Ethernet 0/1 (F0/1)	Serial 0/1/0 (S0/1/0)	Serial 0/1/1 (S0/1/1)

Router Model	Ethernet Interface #1	Ethernet Interface #2	Serial Interface #1	Serial Interface #2
2811	Fast Ethernet 0/0 (F0/0)	Fast Ethernet 0/1 (F0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
2900	Gigabit Ethernet 0/0 (G0/0)	Gigabit Ethernet 0/1 (G0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
4221	Gigabit Ethernet 0/0/0 (G0/0/0)	Gigabit Ethernet 0/0/1 (G0/0/1)	Serial 0/1/0 (S0/1/0)	Serial 0/1/1 (S0/1/1)
4300	Gigabit Ethernet 0/0/0 (G0/0/0)	Gigabit Ethernet 0/0/1 (G0/0/1)	Serial 0/1/0 (S0/1/0)	Serial 0/1/1 (S0/1/1)

Note: To find out how the router is configured, look at the interfaces to identify the type of router and how many interfaces the router has. There is no way to effectively list all the combinations of configurations for each router class. This table includes identifiers for the possible combinations of Ethernet and Serial interfaces in the device. The table does not include any other type of interface, even though a specific router may contain one. An example of this might be an ISDN BRI interface. The string in parenthesis is the legal abbreviation that can be used in Cisco IOS commands to represent the interface.

Uploading Configuration Files

Use the commands below to create the configuration files on the lab devices for each trouble ticket in this lab. The TCL script commands help create and copy the configurations. However, the configuration commands could also be copied and pasted directly into global config mode on each device. Simply remove the TCL script commands, enter the **enable** and **configure t** commands on the device, and copy and paste the configuration commands.

Important: The device requires a folder in flash named **enarsi**. Use the **dir** command to verify. If the folder is missing, then create it using the **mkdir flash:/enarsi** privileged EXEC command. For all switches, make sure the **vlan.dat** file is set to the default. Use the **delete vlan.dat** privileged EXEC command, if necessary.

Reset scripts

These TCL scripts will completely clear and reload the device in preparation for the next ticket. Copy and paste the appropriate script to the appropriate device.

Router Reset Script

```
tclsh
puts [ open "flash:/enarsi/reset.tcl" w+ ] {
typeahead "\n"
copy running-config startup-config
typeahead "\n"
erase startup-config
puts "Reloading the router"
typeahead "\n"
reload
}
tclquit
```

D1/D2 (Cisco 3650) Reset Script - The default 3650 SDM template supports IPv6 by default, so it is not set by this script.

```
tclsh
puts [ open "flash:/enarsi/reset.tcl" w+ ] {
```



```
typeahead "\n"
copy running-config startup-config
typeahead "\n"
erase startup-config
delete /force vlan.dat
puts "Reloading the switch"
typeahead "\n"
reload
}
tclquit
```

R1 Configuration File Scripts

!R1 - Trouble Ticket # 1

```
tclsh
puts [ open "flash:/enarsi/17.1.2.1-r1-config.txt" w+ ] {
hostname R1
no ip domain lookup
banner motd # This is R1, Trouble Ticket 17.1.2.1 #
enable secret cisco12345
username admin privilege 15 algorithm-type scrypt secret cisco12345
interface g0/0/0
ip address 10.1.12.1 255.255.255.0
no shutdown
exit
interface g0/0/1
ip address 10.1.10.1 255.255.255.0
no shutdown
exit
inter lo 0
ip add 10.1.1.1 255.255.255.0
ip ospf network point-to-point
no shutdown
exit
router ospf 1
router-id 1.1.1.1
network 10.1.1.0 0.0.0.255 area 0
network 10.1.10.0 0.0.0.255 area 10
network 10.1.12.0 0.0.0.255 area 0
exit
line con 0
exec-timeout 0 0
logging synchronous
exit
alias exec reset.now tclsh flash:/enarsi/reset.tcl
end
```

```
}  
tclquit
```

!R1 - Trouble Ticket # 2 and 3

```
!R1 - Trouble Ticket # 2 and 3  
tclsh  
puts [ open "flash:/enarsi/17.1.2.2-r1-config.txt" w+ ] {  
hostname R1  
no ip domain lookup  
banner motd # This is R1, Trouble Ticket 17.1.2.2 #  
enable secret cisco12345  
username admin privilege 15 algorithm-type scrypt secret cisco12345  
ipv6 unicast-routing  
hostname R1  
router ospfv3 1  
  router-id 1.1.1.1  
  exit  
interface Loopback0  
  ip address 10.1.1.1 255.255.255.0  
  ipv6 address FE80::1:1 link-local  
  ipv6 address 2001:DB8:ACAD:1::1/64  
  ospfv3 network point-to-point  
  ospfv3 1 ipv4 area 0  
  ospfv3 1 ipv6 area 0  
  no shutdown  
  exit  
interface GigabitEthernet0/0/0  
  ip address 10.1.12.1 255.255.255.0  
  negotiation auto  
  ipv6 address FE80::12:1 link-local  
  ipv6 address 2001:DB8:ACAD:12::1/64  
  ospfv3 1 ipv6 area 0  
  ospfv3 1 ipv4 area 0  
  no shutdown  
  exit  
interface GigabitEthernet0/0/1  
  ip address 10.1.11.1 255.255.255.0  
  negotiation auto  
  ipv6 address FE80::11:1 link-local  
  ipv6 address 2001:DB8:ACAD:11::1/64  
  ospfv3 1 ipv4 area 11  
  ospfv3 1 ipv6 area 11  
  no shutdown  
  exit  
router ospfv3 1  
  address-family ipv4 unicast
```

```
    passive-interface Loopback0
  exit-address-family
  address-family ipv6 unicast
    passive-interface Loopback0
  exit-address-family
exit
line con 0
  exec-timeout 0 0
  logging synchronous
  exit
alias exec reset.now tclsh flash:/enarsi/reset.tcl
end
}
tclquit
```

R2 Configuration File Scripts

!R2 - Trouble Ticket # 1

```
tclsh
puts [ open "flash:/enarsi/17.1.2.1-r2-config.txt" w+ ] {
hostname R2
no ip domain lookup
banner motd # This is R2, Trouble Ticket 17.1.2.1 #
enable secret cisco12345
username admin privilege 15 algorithm-type scrypt secret cisco12345
interface g0/0/0
ip address 10.1.12.2 255.255.255.0
no shutdown
exit
interface g0/0/1
ip address 192.168.23.2 255.255.255.0
no shutdown
exit
inter lo 0
ip add 192.168.2.1 255.255.255.0
no shut
exit
router ospf 1
  router-id 2.2.2.2
  redistribute bgp 64512 subnets
  network 10.1.12.2 0.0.0.0 area 0
router bgp 64512
  bgp router-id 2.2.2.2
  bgp log-neighbor-changes
  no bgp default ipv4-unicast
  neighbor 192.168.23.3 remote-as 64512
```

```
address-family ipv4
  network 192.168.2.0
  network 192.168.23.0
  redistribute ospf 1
  neighbor 192.168.23.3 activate
exit-address-family exit
line con 0
  exec-timeout 0 0
  logging synchronous
  exit
alias exec reset.now tclsh flash:/enarsi/reset.tcl
end
}
```

!R2 - Trouble Ticket # 2 and 3

```
tclsh
puts [ open "flash:/enarsi/17.1.2.2-r2-config.txt" w+ ] {
hostname R2
no ip domain lookup
banner motd # This is R2, Trouble Ticket 17.1.2.2 #
enable secret cisco12345
username admin privilege 15 algorithm-type scrypt secret cisco12345
no ip domain lookup
ipv6 unicast-routing
router ospfv3 1
  router-id 2.2.2.2
  exit
interface GigabitEthernet0/0/0
  ip address 10.1.12.2 255.255.255.0
  negotiation auto
  ipv6 address FE80::12:2 link-local
  ipv6 address 2001:DB8:ACAD:12::2/64
  ospfv3 1 ipv4 area 0
  ospfv3 1 ipv6 area 0
  no shut
  exit
interface GigabitEthernet0/0/1
  ip address 10.1.23.2 255.255.255.0
  negotiation auto
  ipv6 address FE80::23:2 link-local
  ipv6 address 2001:DB8:ACAD:23::2/64
  no shut
router eigrp CISCO
  address-family ipv4 unicast autonomous-system 64512
  af-interface default
```

```
    shutdown
  exit-af-interface
  af-interface GigabitEthernet0/0/1
    no shutdown
  exit-af-interface
  topology base
    redistribute ospfv3 1 route-map OSPF-into-EIGRP
  exit-af-topology
  network 10.1.23.0 0.0.0.255
  eigrp router-id 2.2.2.2
  exit-address-family
  address-family ipv6 unicast autonomous-system 64512
  af-interface default
    shutdown
  exit-af-interface
  af-interface GigabitEthernet0/0/1
    no shutdown
  exit-af-interface
  topology base
    redistribute ospf 1 include-connected
  exit-af-topology
  exit-address-family
  router ospfv3 1
  address-family ipv4 unicast
    redistribute eigrp 64521 metric 25 metric-type 1
  exit-address-family
  address-family ipv6 unicast
    distribute-list prefix-list EIGRP-into-OSPF out eigrp 64512
    redistribute eigrp 64512 include-connected
  exit-address-family
  exit
  ipv6 prefix-list EIGRP-into-OSPF seq 5 permit 2001:DB8::/32 ge 64 le 64
  route-map OSPF-into-EIGRP permit 10
    set metric 100
  exit
  line con 0
    exec-timeout 0 0
    logging synchronous
  exit
  alias exec reset.now tclsh flash:/enarsi/reset.tcl
  end
}
```

tclquit

R3 Configuration File Scripts

!R3 - Trouble Ticket # 1

```
tclsh
puts [ open "flash:/enarsi/17.1.2.1-r3-config.txt" w+ ] {
hostname R3
no ip domain lookup
banner motd # This is R3, Trouble Ticket 17.1.2.1 #
enable secret cisco12345
username admin privilege 15 algorithm-type scrypt secret cisco12345
interface g0/0/0
ip address 192.168.23.3 255.255.255.0
no shutdown
exit
interface loopback 0
ip address 209.165.201.1 255.255.255.128
exit
router bgp 64512
  bgp router-id 3.3.3.3
  no bgp default ipv4-unicast
  neighbor 192.168.23.2 remote-as 64512
address-family ipv4
  network 209.165.201.0 mask 255.255.255.128
  neighbor 192.168.23.2 activate
exit-address-family
exit
line con 0
  exec-timeout 0 0
  logging synchronous
  exit
alias exec reset.now tclsh flash:/enarsi/reset.tcl
end
}
tclquit
```

!R3 - Trouble Ticket # 2 and 3

```
tclsh
puts [ open "flash:/enarsi/17.1.2.2-r3-config.txt" w+ ] {
hostname R3
no ip domain lookup
enable secret cisco12345
username admin privilege 15 algorithm-type scrypt secret cisco12345
ipv6 unicast-routing
interface Loopback0
  ip address 10.3.3.3 255.255.255.0
  ipv6 address FE80::3:3 link-local
```

```
ipv6 address 2001:DB8:ACAD:3::3/64
no shut
exit
interface GigabitEthernet0/0/0
ip address 10.1.23.3 255.255.255.0
negotiation auto
ipv6 address FE80::23:3 link-local
ipv6 address 2001:DB8:ACAD:23::3/64
no shut
exit
interface GigabitEthernet0/0/1
ip address 10.1.32.3 255.255.255.0
negotiation auto
ipv6 address FE80::32:3 link-local
ipv6 address 2001:DB8:ACAD:32::3/64
no shut
exit
router eigrp CISCO
address-family ipv4 unicast autonomous-system 64512
  af-interface default
    shutdown
  exit-af-interface
  af-interface GigabitEthernet0/0/0
    no shutdown
  exit-af-interface
  af-interface GigabitEthernet0/0/1
    no shutdown
  exit-af-interface
  af-interface Loopback0
    no shutdown
  exit-af-interface
  topology base
  exit-af-topology
  network 10.1.23.0 0.0.0.255
  network 10.1.32.0 0.0.0.255
  network 10.3.3.0 0.0.0.255
  eigrp router-id 3.3.3.3
exit-address-family
address-family ipv6 unicast autonomous-system 64512
  af-interface default
    shutdown
  exit-af-interface
  af-interface GigabitEthernet0/0/0
    no shutdown
  exit-af-interface
```

```
af-interface GigabitEthernet0/0/1
  no shutdown
exit-af-interface
af-interface Loopback0
  no shutdown
exit-af-interface
topology base
exit-af-topology
eigrp router-id 3.3.3.3
exit-address-family
exit
line con 0
  exec-timeout 0 0
  logging synchronous
exit
alias exec reset.now tclsh flash:/enarsi/reset.tcl
end
}
tclquit
```

D1 Configuration File Scripts

!D1 - Trouble Ticket # 1

```
tclsh
puts [ open "flash:/enarsi/17.1.2.1-d1-config.txt" w+ ] {
hostname D1
ip routing
no ip domain lookup
banner motd # This is D1, Trouble Ticket 17.1.2.1 #
enable secret cisco12345
username admin privilege 15 algorithm-type scrypt secret cisco12345
interface range g1/0/1 - 24
  shutdown
  exit
interface g1/0/11
  no switchport
  ip address 10.1.10.2 255.255.255.0
  no shutdown
  exit
interface Loopback0
  ip address 198.51.100.1 255.255.255.128
  exit
router ospf 1
  router-id 11.11.11.11
  redistribute connected subnets tag 110
  network 10.1.10.0 0.0.0.255 area 10
```



```
exit
line con 0
  exec-timeout 0 0
  logging synchronous
  exit
alias exec reset.now tclsh flash:/enarsi/reset.tcl
end
}
tclquit
```

!D1 - Trouble Ticket # 2 and 3

```
tclsh
puts [ open "flash:/enarsi/17.1.2.2-d1-config.txt" w+ ] {
hostname D1
no ip domain lookup
ip routing
ipv6 unicast-routing
banner motd # This is D1, Trouble Ticket 17.1.2.2  #
enable secret cisco12345
username admin privilege 15 algorithm-type scrypt secret cisco12345
interface range g1/0/1-24
  switchport mode access
  shutdown
  exit
interface g1/0/11
  no switchport
  ip address 10.1.11.2 255.255.255.0
  ipv6 address FE80::11:2 link-local
  ipv6 address 2001:DB8:ACAD:11::2/64
  no shutdown
  exit
interface loopback 0
  ip address 209.165.201.1 255.255.255.128
  ipv6 address fe80::209:1 link-local
  ipv6 address 2001:db8:209:165:201::1/80
  no shutdown
  exit
router ospfv3 1
  router-id 11.11.11.11
  address-family ipv4 unicast
    passive-interface loopback 0
    default-information originate
  address-family ipv6 unicast
    passive-interface loopback 0
    default-information originate
  exit
```

```
exit
interface g1/0/11
  ospfv3 1 ipv6 area 11
  ospfv3 1 ipv4 area 11
exit
ip route 0.0.0.0 0.0.0.0 loopback 0
ipv6 route ::/0 loopback 0
line con 0
  logging synchronous
  exec-timeout 0 0
exit
line vty 0 4
  login local
  transport input telnet
  exec-timeout 5 0
exit
alias exec reset.now tclsh flash:/enarsi/reset.tcl
end
}
tclquit
```

D2 Configuration File Scripts - Not Used In Trouble Ticket 1

!D2 - Trouble Ticket # 2 and 3

```
tclsh
puts [ open "flash:/enarsi/17.1.2.2-d2-config.txt" w+ ] {
hostname D2
no ip domain lookup
banner motd # This is D2, Trouble Ticket 17.1.2.2 #
ip routing
ipv6 unicast-routing
interface GigabitEthernet1/0/11
  no switchport
  ip address 10.1.32.2 255.255.255.0
  ipv6 address FE80::32:2 link-local
  ipv6 address 2001:DB8:ACAD:32::2/64
no shut
exit
interface Loopback0
  ip address 198.51.100.1 255.255.255.128
  ipv6 address FE80::198:2 link-local
  ipv6 address 2001:DB8:198:51:100::1/80
no shut
exit
router eigrp CISCO
address-family ipv4 unicast autonomous-system 64512
```

```
af-interface default
  shutdown
exit-af-interface
af-interface Loopback0
  no shutdown
  passive-interface
exit-af-interface
af-interface GigabitEthernet1/0/11
  no shutdown
exit-af-interface
topology base
exit-af-topology
network 10.1.32.0 0.0.0.255
network 198.51.100.0 0.0.0.127
eigrp router-id 22.22.22.22
exit-address-family
address-family ipv6 unicast autonomous-system 64512
  af-interface default
    shutdown
  exit-af-interface
  af-interface Loopback0
    no shutdown
    passive-interface
  exit-af-interface
  af-interface GigabitEthernet1/0/11
    no shutdown
  exit-af-interface
topology base
exit-af-topology
eigrp router-id 22.22.22.22
exit-address-family
exit
line con 0
  exec-timeout 0 0
  logging synchronous
  exit
alias exec reset.now tclsh flash:/enarsi/reset.tcl
end
}
tclquit
```

A1 Configuration File Scripts - Not Used In This Lab