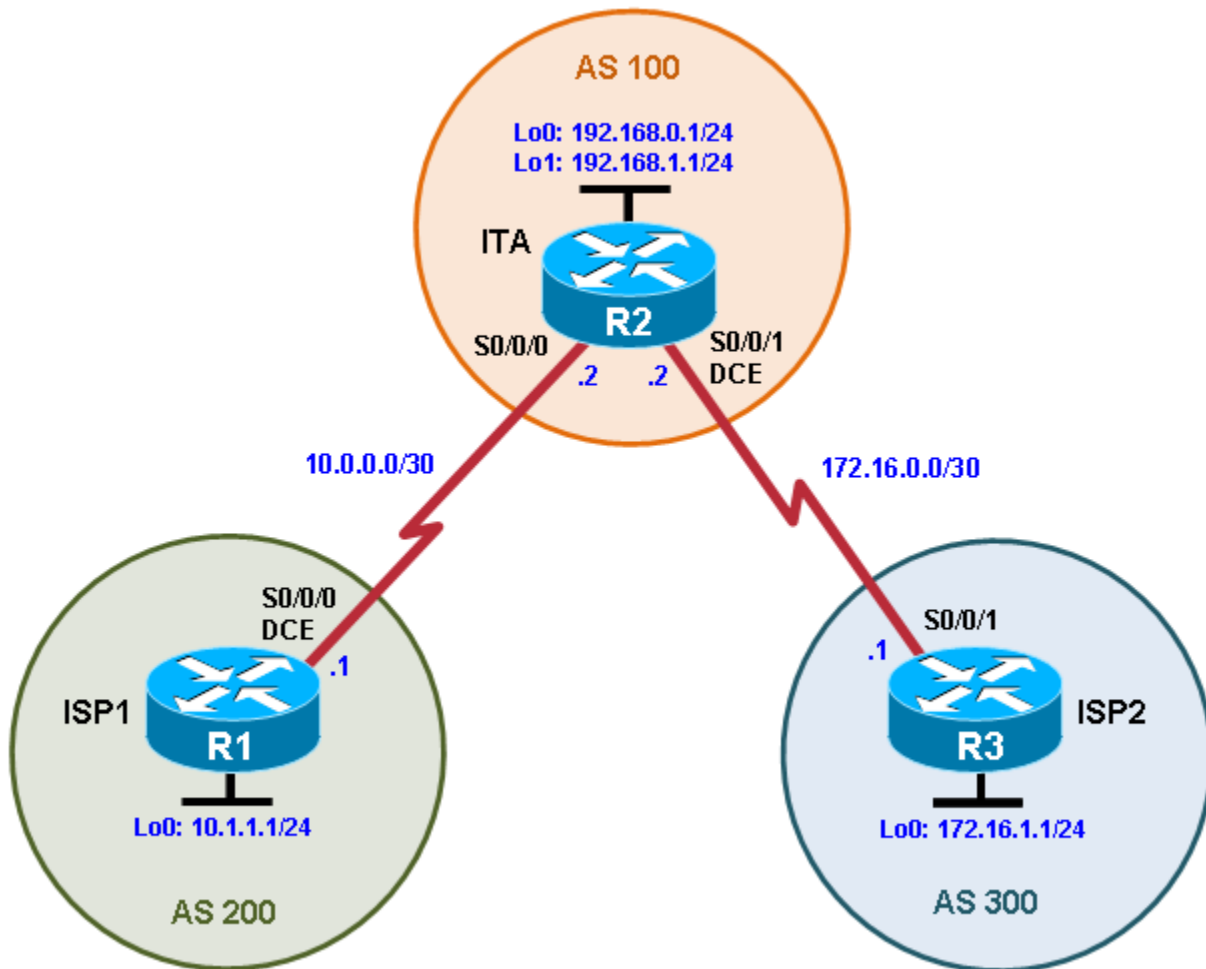


## Chapter 6 Lab 6-1, Configuring BGP with Default Routing

### Topology



### Objectives

- Configure BGP to exchange routing information with two ISPs.

### Background

The International Travel Agency (ITA) relies extensively on the Internet for sales. For this reason, the ITA has decided to create a multi-homed ISP connectivity solution and contracted with two ISPs for Internet connectivity with fault tolerance. Because the ITA is connecting to two different service providers, you must configure BGP, which runs between the ITA boundary router and the two ISP routers.

**Note:** This lab uses Cisco 1841 routers with Cisco IOS Release 12.4(24)T1 and the Advanced IP Services image c1841-advipservicesk9-mz.124-24.T1.bin. You can use other routers (such as a 2801 or 2811) and

Cisco IOS Software versions if they have comparable capabilities and features. Depending on the router or switch model and Cisco IOS Software version, the commands available and output produced might vary from what is shown in this lab.

### Required Resources

- 3 routers (Cisco 1841 with Cisco IOS Release 12.4(24)T1 Advanced IP Services or comparable)
- Serial and console cables

### Step 1: Prepare the routers for the lab.

Cable the network as shown in the topology diagram. Erase the startup configuration and reload each router to clear previous configurations.

### Step 2: Configure the hostname and interface addresses.

- Assign the routers hostnames. Using the addressing scheme in the diagram, create the loopback interfaces and apply IP addresses to these and the serial interfaces on ISP1 (R1), ISP2 (R3), and ITA (R2). The ISP loopbacks simulate real networks that can be reached through the ISP. The two loopbacks for the ITA router simulate the connections between the ITA boundary router and their core routers. Set a clock rate on the DCE serial interfaces.

You can copy and paste the following configurations into your routers to begin.

#### Router R1 (hostname ISP1)

```
hostname ISP1
!
interface Lo0
  description ISP1 Internet Network
  ip address 10.1.1.1 255.255.255.0
!
interface Serial0/0/0
  description ISP1 -> ITA
  ip address 10.0.0.1 255.255.255.252
  clock rate 128000
  no shutdown
!
end
```

#### Router R2 (hostname ITA)

```
hostname ITA
!
interface Lo0
  description Core router network link 1
  ip address 192.168.0.1 255.255.255.0
!
interface Lo1
  description Core router network link 2
  ip address 192.168.1.1 255.255.255.0
!
interface Serial0/0/0
  description ITA -> ISP1
  ip address 10.0.0.2 255.255.255.252
  no shutdown

interface Serial0/0/1
```

```
description ITA -> ISP2
ip address 172.16.0.2 255.255.255.252
clock rate 128000
no shutdown
!
end
```

### Router R3 (hostname ISP2)

```
hostname ISP2
!
interface Lo0
description ISP2 Internet Network
ip address 172.16.1.1 255.255.255.0
!
interface Serial0/0/1
description ISP2 -> ITA
ip address 172.16.0.1 255.255.255.252
no shutdown
!
end
```

- b. Use **ping** to test the connectivity between the directly connected routers. Note that router ISP1 cannot reach router ISP2.

### Step 3: Configure BGP on the ISP routers.

On the ISP1 and ISP2 routers, configure BGP to peer with the ITA boundary router and advertise the ISP loopback networks.

```
ISP1(config)# router bgp 200
ISP1(config-router)# neighbor 10.0.0.2 remote-as 100
ISP1(config-router)# network 10.1.1.0 mask 255.255.255.0

ISP2(config)# router bgp 300
ISP2(config-router)# neighbor 172.16.0.2 remote-as 100
ISP2(config-router)# network 172.16.1.0 mask 255.255.255.0
```

### Step 4: Configure BGP on the ITA boundary router.

- a. Configure the ITA router to run BGP with both Internet providers.

```
ITA(config)# router bgp 100
ITA(config-router)# neighbor 10.0.0.1 remote-as 200
ITA(config-router)# neighbor 172.16.0.1 remote-as 300
ITA(config-router)# network 192.168.0.0
ITA(config-router)# network 192.168.1.0
```

You should see BGP neighbor peering messages on the console similar to the following.

```
*Mar  4 14:07:38.667: %BGP-5-ADJCHANGE: neighbor 10.0.0.2 Up
```

- b. To verify the configuration, check the ITA routing table with the **show ip route** command.

```
ITA# show ip route
<output omitted>
```

```
Gateway of last resort is not set
```

```
      172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       172.16.0.0/30 is directly connected, Serial0/0/1
```

```

B      172.16.1.0/24 [20/0] via 172.16.0.1, 00:00:32
      10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
B      10.1.1.0/24 [20/0] via 10.0.0.1, 00:00:31
C      10.0.0.0/30 is directly connected, Serial0/0/0
C      192.168.0.0/24 is directly connected, Loopback0
C      192.168.1.0/24 is directly connected, Loopback1

```

ITA has routes to the loopback networks at each ISP router.

- c. Run the following Tcl script on all routers to verify connectivity. If these pings are not successful, troubleshoot.

**Note:** The WAN subnets connecting ITA (R2) to the ISPs (R1 and R3) are not advertised in BGP, so the ISPs will not be able to ping each other's serial interface address.

```
ITA# tclsh
```

```

foreach address {
10.0.0.1
10.0.0.2
10.1.1.1
172.16.0.1
172.16.0.2
172.16.1.1
192.168.0.1
192.168.1.1
} {
ping $address }

```

### Step 5: Verify BGP on the routers.

- a. To verify the BGP operation on ITA, issue the **show ip bgp** command.

```

ITA# show ip bgp
BGP table version is 5, local router ID is 192.168.1.1
Status codes: s suppressed, d damped, h history, * valid, > best, i -
internal
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network          Next Hop           Metric LocPrf Weight Path
*> 10.1.1.0/24      10.0.0.1             0           0 200 i
*> 172.16.1.0/24    172.16.0.1           0           0 300 i
*> 192.168.0.0      0.0.0.0              0          32768 i
*> 192.168.1.0      0.0.0.0              0          32768 i

```

What is the local router ID?

Which table version is displayed?

An asterisk (\*) next to a route indicates that it is valid. An angle bracket (>) indicates that the route has been selected as the best route.

- b. To verify the operation of ISP1, issue the **show ip bgp** command.

```
ISP1# show ip bgp
BGP table version is 5, local router ID is 10.1.1.1
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           Metric LocPrf Weight Path
*> 10.1.1.0/24     0.0.0.0                 0         32768 i
*> 172.16.1.0/24   10.0.0.2                 0         0 100 300 i
*> 192.168.0.0     10.0.0.2                 0         0 100 i
*> 192.168.1.0     10.0.0.2                 0         0 100 i
```

From ISP1, what is the path to network 172.16.1.0/24?

- c. On the ISP1 router, issue the **shutdown** command on Loopback0. Then on ITA, issue the **show ip bgp** command again.

```
ITA# show ip bgp
BGP table version is 6, local router ID is 192.168.1.1
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           Metric LocPrf Weight Path
*> 172.16.1.0/24   172.16.0.1             0          0 300 i
*> 192.168.0.0     0.0.0.0                 0        32768 i
*> 192.168.1.0     0.0.0.0                 0        32768 i
```

Which table version is displayed? Why?

What happened to the route for network 10.1.1.0/24?

- d. Bring ISP1 router Loopback0 back up by issuing the **no shutdown** command.
- e. On ITA, issue the **show ip bgp neighbors** command. The following is a partial sample output of the command showing neighbor 172.16.0.1.

```
BGP neighbor is 172.16.0.1, remote AS 300, external link
  BGP version 4, remote router ID 172.16.1.1
  BGP state = Established, up for 00:16:00
  Last read 00:00:54, last write 00:00:43, hold time is 180, keepalive
interval
is 60 seconds
  Neighbor capabilities:
    Route refresh: advertised and received(new)
    New ASN Capability: advertised and received
    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:	5	1
Keepalives:	15	17
Route Refresh:	0	0
Total:	21	19

Default minimum time between advertisement runs is 30 seconds

<output omitted>

Based on the output of this command, what is the BGP state between this router and ISP2?

How long has this connection been up?

### Step 6: Configure route filters.

- a. Check the ISP2 routing table using the **show ip route** command. ISP2 should have a route that belongs to ISP1, network 10.1.1.0.

ISP2# **show ip route**

<output omitted>

```
172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C    172.16.0.0/30 is directly connected, Serial0/0/1
C    172.16.1.0/24 is directly connected, Loopback0
    10.0.0.0/24 is subnetted, 1 subnets
B    10.1.1.0 [20/0] via 172.16.0.2, 00:05:22
B    192.168.0.0/24 [20/0] via 172.16.0.2, 00:17:45
B    192.168.1.0/24 [20/0] via 172.16.0.2, 00:17:45
```

If ITA advertises a route belonging to ISP1, ISP2 installs that route in its table. ISP2 might then attempt to route transit traffic through the ITA. Configure the ITA router so that it advertises only ITA networks 192.168.0.0 and 192.168.1.0 to both providers.

- b. On the ITA router, configure the following access list.

ITA(config)# **access-list 1 permit 192.168.0.0 0.0.1.255**

- c. Apply this access list as a route filter using the **distribute-list** keyword with the BGP **neighbor** statement.

ITA(config)# **router bgp 100**

ITA(config-router)# **neighbor 10.0.0.1 distribute-list 1 out**

ITA(config-router)# **neighbor 172.16.0.1 distribute-list 1 out**

- d. Check the routing table for ISP2 again. The route to 10.1.1.0, ISP1, should still be in the table.

- e. Return to ITA and issue the **clear ip bgp \*** command. Wait until the routers reach the established state, which might take several seconds, and then recheck the ISP2 routing table. The route to ISP1, network 10.1.1.0, should no longer be in the routing table for ISP2, and the route to ISP2, network 172.16.1.0, should not be in the routing table for ISP1.

```
ITA# clear ip bgp *
ITA#
*Mar  4 14:45:28.091: %BGP-5-ADJCHANGE: neighbor 10.0.0.1 Down User reset
*Mar  4 14:45:28.091: %BGP-5-ADJCHANGE: neighbor 172.16.0.1 Down User reset
*Mar  4 14:45:31.151: %BGP-5-ADJCHANGE: neighbor 172.16.0.1 Up
*Mar  4 14:45:47.095: %BGP-5-ADJCHANGE: neighbor 10.0.0.1 Up
```

**Note:** The **clear ip bgp \*** command is disruptive because it completely resets all BGP adjacencies. This is acceptable in a lab environment but could be problematic in a production network. Instead, if only a change of inbound/outbound routing policies is to be performed, it is sufficient to issue the **clear ip bgp \*** in or **clear ip bgp \* out** commands. These commands perform only a new BGP database synchronization without the disruptive effects of a complete BGP adjacency reset. All current Cisco IOS versions support the route refresh capability that replaces the inbound soft reconfiguration feature that previously had to be configured on a per-neighbor basis.

```
ISP2# show ip route
<output omitted>
```

```

      172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       172.16.0.0/30 is directly connected, Serial0/0/1
C       172.16.1.0/24 is directly connected, Loopback0
B       192.168.0.0/24 [20/0] via 172.16.0.2, 00:02:13
B       192.168.1.0/24 [20/0] via 172.16.0.2, 00:02:13
```

```
ISP1# show ip route
<output omitted>
```

```

      10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C       10.1.1.0/24 is directly connected, Loopback0
C       10.0.0.0/30 is directly connected, Serial0/0/0
B       192.168.0.0/24 [20/0] via 10.0.0.2, 00:05:06
B       192.168.1.0/24 [20/0] via 10.0.0.2, 00:05:06
```

## Step 7: Configure primary and backup routes using floating static routes.

With bidirectional communication established with each ISP via BGP, configure the primary and backup routes. This can be done with floating static routes or BGP.

- a. Issue the **show ip route** command on the ITA router.

```
ITA# show ip route
<output omitted>
```

Gateway of last resort is not set

```

      172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       172.16.0.0/30 is directly connected, Serial0/0/1
B       172.16.1.0/24 [20/0] via 172.16.0.1, 00:06:58
      10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
B       10.1.1.0/24 [20/0] via 10.0.0.1, 00:06:58
C       10.0.0.0/30 is directly connected, Serial0/0/0
C       192.168.0.0/24 is directly connected, Loopback0
C       192.168.1.0/24 is directly connected, Loopback1
```

Notice that there is no gateway of last resort defined. This is a problem because ITA is the border router for the corporate network.

- b. Configure static routes to reflect the policy that ISP1 is the primary provider and that ISP2 acts as the backup by specifying a lower distance metric for the route to ISP1 (210) as compared to the backup route to ISP2 (distance metric 220).

```
ITA(config)# ip route 0.0.0.0 0.0.0.0 10.0.0.1 210
ITA(config)# ip route 0.0.0.0 0.0.0.0 172.16.0.1 220
```

- c. Verify that a default route is defined using the **show ip route** command.

```
ITA# show ip route
<output omitted>
```

```
Gateway of last resort is 10.0.0.1 to network 0.0.0.0
```

```

    172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       172.16.0.0/30 is directly connected, Serial0/0/1
B       172.16.1.0/24 [20/0] via 172.16.0.1, 00:11:41
    10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
B       10.1.1.0/24 [20/0] via 10.0.0.1, 00:11:41
C       10.0.0.0/30 is directly connected, Serial0/0/0
C       192.168.0.0/24 is directly connected, Loopback0
C       192.168.1.0/24 is directly connected, Loopback1
S*     0.0.0.0/0 [210/0] via 10.0.0.1
```

- d. Test this default route by creating an unadvertised loopback on the router for ISP1.

```
ISP1# config t
ISP1(config)# interface loopback 100
ISP1(config-if)# ip address 192.168.100.1 255.255.255.0
```

- e. Issue the **show ip route** command to ensure that the newly added 192.168.100.0 /24 network does not appear in the routing table.

```
ITA# show ip route
<output omitted>
```

```
Gateway of last resort is 10.0.0.1 to network 0.0.0.0
```

```

    172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       172.16.0.0/30 is directly connected, Serial0/0/1
B       172.16.1.0/24 [20/0] via 172.16.0.1, 00:16:24
    10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
B       10.1.1.0/24 [20/0] via 10.0.0.1, 00:01:47
C       10.0.0.0/30 is directly connected, Serial0/0/0
C       192.168.0.0/24 is directly connected, Loopback0
C       192.168.1.0/24 is directly connected, Loopback1
S*     0.0.0.0/0 [210/0] via 10.0.0.1
```

- f. In extended ping mode, ping the ISP1 loopback 1 interface 192.168.100.1 with the source originating from the ITA loopback 1 interface 192.168.1.1.

```
ITA# ping
Protocol [ip]:
Target IP address: 192.168.100.1
Repeat count [5]:
Datagram size [100]:
Timeout in seconds [2]:
Extended commands [n]: y
```



```
Source address or interface: 192.168.1.1
Type of service [0]:
Set DF bit in IP header? [no]:
Validate reply data? [no]:
Data pattern [0xABCD]:
Loose, Strict, Record, Timestamp, Verbose[none]:
Sweep range of sizes [n]:
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.100.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 32/32/36 ms
```

**Note:** You can bypass extended ping prompted mode and ping while specifying a source address using one of these abbreviated commands:

```
ITA# ping 192.168.100.1 source 192.168.1.1
```

or

```
ITA# ping 192.168.100.1 source Lo1
```

**Note:** Testing the default route by creating an unadvertised network on ISP1 and pinging it works only because the default route also points toward ISP1. If the preferred default route pointed toward ISP2, the ping to that unadvertised network on ISP1 would not succeed. If the link to ISP1 failed, the default route to ISP2 would become active, but the pings would be successful only if ISP1 and ISP2 have another working interconnection and appropriate BGP peering between them, which is currently not the case.

### Step 8: Configure primary and backup routes using a default network and a static route.

Another method for configuring primary and backup routes is to use the **ip default-network** command instead of a 0.0.0.0/0 route.

- a. Remove the floating static routes configured in Step 7.

```
ITA(config)# no ip route 0.0.0.0 0.0.0.0 10.0.0.1 210
ITA(config)# no ip route 0.0.0.0 0.0.0.0 172.16.0.1 220
```

- b. The network that was added in Step 7, 192.168.100.0/24, should now be advertised on the ISP1 router. You might need to wait a few moments for BGP to advertise the new network.

```
ISP1(config)# router bgp 200
ISP1(config-router)# network 192.168.100.0
ISP1(config-router)# end
```

- c. Make sure that the classful network 192.168.100.0 /24 appears in the ITA routing table.

```
ITA# show ip route
<output omitted>
```

Gateway of last resort is not set

```
172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C    172.16.0.0/30 is directly connected, Serial0/0/1
B    172.16.1.0/24 [20/0] via 172.16.0.1, 00:30:10
10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
B    10.1.1.0/24 [20/0] via 10.0.0.1, 00:02:33
C    10.0.0.0/30 is directly connected, Serial0/0/0
C    192.168.0.0/24 is directly connected, Loopback0
C    192.168.1.0/24 is directly connected, Loopback1
B    192.168.100.0/24 [20/0] via 10.0.0.1, 00:02:33
```

- d. On the ITA router, configure the **ip default-network** statement to reestablish a gateway of last resort.

```
ITA(config)# ip default-network 192.168.100.0
```

**Note:** The behavior of this command is oriented toward legacy classful protocols and should be used only with classful networks.

- e. Wait a few moments and then reexamine the routing table on ITA.

```
ITA# show ip route
```

<output omitted>

Gateway of last resort is 10.0.0.1 to network 192.168.100.0

```
      172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C      172.16.0.0/30 is directly connected, Serial0/0/1
B      172.16.1.0/24 [20/0] via 172.16.0.1, 00:32:55
      10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
B      10.1.1.0/24 [20/0] via 10.0.0.1, 00:05:19
C      10.0.0.0/30 is directly connected, Serial0/0/0
C      192.168.0.0/24 is directly connected, Loopback0
C      192.168.1.0/24 is directly connected, Loopback1
B*    192.168.100.0/24 [20/0] via 10.0.0.1, 00:05:19
```

This establishes ISP1 as the only default route.

- f. Make ISP2 the backup ISP by adding a backup route on ITA to ISP2 serial 0/0/1 interface 172.16.0.1.

```
ITA(config)# ip route 0.0.0.0 0.0.0.0 172.16.0.1 220
```

EBGP learned routes have an administrative distance of 20 and are preferred over any routes with an administrative distance greater than 20, such as the default route defined above with an administrative distance of 220. The default route acts as a backup if the 192.168.100.0 /24 network is unavailable because of a fault or misconfiguration, or during the short period after a **clear ip bgp 10.0.0.1** command is issued.

- g. Verify that this newly added route establishes a consistent default route while the BGP conversation between ITA and ISP1 reestablishes. Notice that the routing table includes two candidate default routes (\*), only one of which is used because of different administrative distances.

```
ITA# show ip route
```

<output omitted>

Gateway of last resort is 10.0.0.1 to network 192.168.100.0

```
      172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C      172.16.0.0/30 is directly connected, Serial0/0/1
B      172.16.1.0/24 [20/0] via 172.16.0.1, 00:35:42
      10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
B      10.1.1.0/24 [20/0] via 10.0.0.1, 00:08:05
C      10.0.0.0/30 is directly connected, Serial0/0/0
C      192.168.0.0/24 is directly connected, Loopback0
C      192.168.1.0/24 is directly connected, Loopback1
B*    192.168.100.0/24 [20/0] via 10.0.0.1, 00:08:05
S*    0.0.0.0/0 [220/0] via 172.16.0.1
```

```
ITA# clear ip bgp 10.0.0.1
```

```
ITA# show ip route
```

<output omitted>

Gateway of last resort is 172.16.0.1 to network 0.0.0.0

```

    172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C    172.16.0.0/30 is directly connected, Serial0/0/1
B    172.16.1.0/24 [20/0] via 172.16.0.1, 00:36:46
    10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
B    10.1.1.0/24 [20/0] via 10.0.0.1, 00:00:00
C    10.0.0.0/30 is directly connected, Serial0/0/0
C    192.168.0.0/24 is directly connected, Loopback0
C    192.168.1.0/24 is directly connected, Loopback1
B    192.168.100.0/24 [20/0] via 10.0.0.1, 00:00:00
S*  0.0.0.0/0 [220/0] via 172.16.0.1

```

ITA# **show ip route**

<output omitted>

Gateway of last resort is 10.0.0.1 to network 192.168.100.0

```

    172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C    172.16.0.0/30 is directly connected, Serial0/0/1
B    172.16.1.0/24 [20/0] via 172.16.0.1, 00:38:05
    10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
B    10.1.1.0/24 [20/0] via 10.0.0.1, 00:01:19
C    10.0.0.0/30 is directly connected, Serial0/0/0
C    192.168.0.0/24 is directly connected, Loopback0
C    192.168.1.0/24 is directly connected, Loopback1
B*  192.168.100.0/24 [20/0] via 10.0.0.1, 00:01:19
S*  0.0.0.0/0 [220/0] via 172.16.0.1

```

As expected, while the BGP conversation was down between ITA and ISP1, the route to ISP2 was added as the gateway of last resort. However, when BGP reestablished the conversation between ITA and ISP1, the default route of 192.168.100.0 was again set as the gateway of last resort on ITA.

- h. Run the following Tcl script on router ITA to verify connectivity.

ITA# **tclsh**

```

foreach address {
10.0.0.1
10.0.0.2
10.1.1.1
172.16.0.1
172.16.0.2
172.16.1.1
192.168.0.1
192.168.1.1
192.168.100.1
} {
ping $address }

```

Should ISP1 and ISP2 be able to ping all networks in the topology?

**Note:** Another option for setting up default routing is to inject a default route via BGP. The following example configures the ISP1 router to inject a default route to itself that can be used by the ITA router:

```
ISP1(config)# router bgp 200  
ISP1(config-router)# neighbor 10.0.0.2 default-originate
```

## Router Interface Summary Table

Router Interface Summary				
Router Model	Ethernet Interface #1	Ethernet Interface #2	Serial Interface #1	Serial Interface #2
1700	Fast Ethernet 0 (FA0)	Fast Ethernet 1 (FA1)	Serial 0 (S0)	Serial 1 (S1)
1800	Fast Ethernet 0/0 (FA0/0)	Fast Ethernet 0/1 (FA0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
2600	Fast Ethernet 0/0 (FA0/0)	Fast Ethernet 0/1 (FA0/1)	Serial 0/0 (S0/0)	Serial 0/1 (S0/1)
2800	Fast Ethernet 0/0 (FA0/0)	Fast Ethernet 0/1 (FA0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
<b>Note:</b> 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. Rather than list all 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 might contain one. For example, for an ISDN BRI interface, the string in parenthesis is the legal abbreviation that can be used in Cisco IOS commands to represent the interface.				