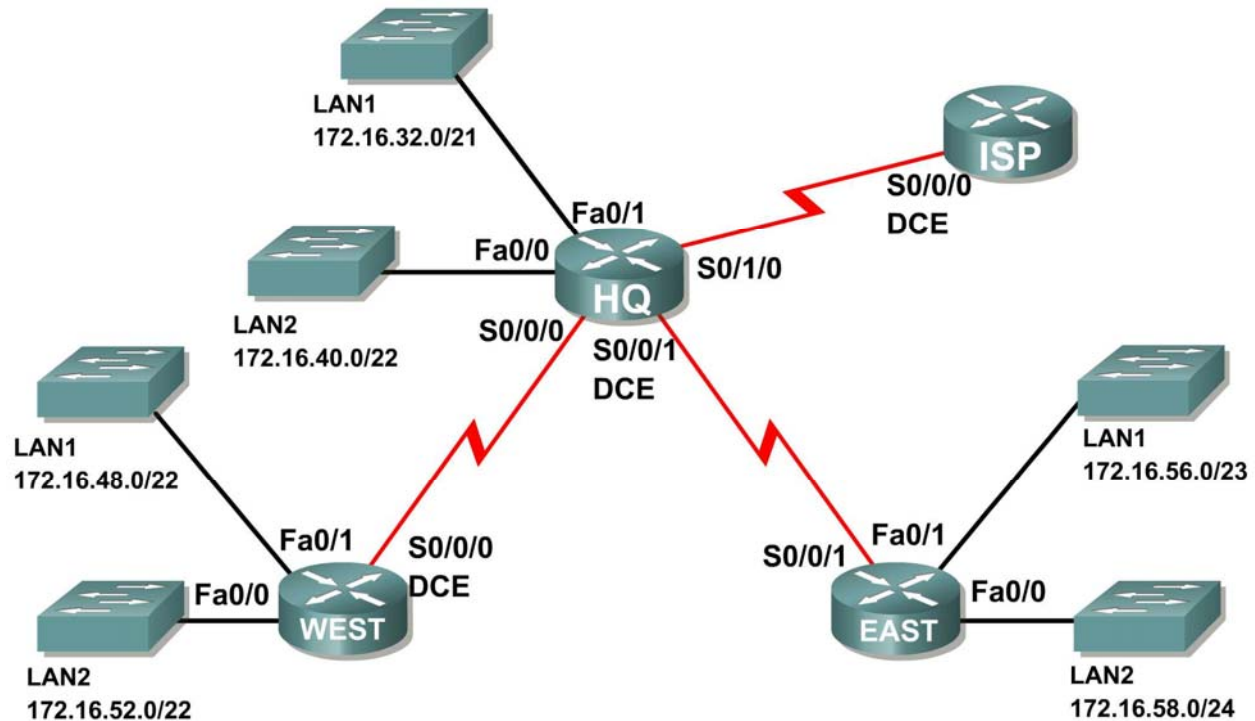


## Activity 6.4.6: Troubleshooting Route Summarization

### Topology Diagram



Addressing Table

Router	Summary Route	Network Address
HQ	WEST LANs	172.16.52.0/21
HQ	EAST LANs	172.16.56.0/23
WEST	HQ LANs	172.16.32.0/19
WEST	EAST LANs	172.16.58.0/23
EAST	HQ LANs	172.16.30.0/20
EAST	WEST LANs	172.16.48.0/21
ISP	HQ, WEST, and EAST LANs	172.16.32.0/18

### Learning Objectives:

- Discover errors in route summarization.
- Propose solutions for summarized routes.
- Document the corrected summarized routes.

## Scenario

In this activity, the LAN IP addressing has already been completed for the network shown in the Topology Diagram. VLSM has been used to subnet the address space. The summary routes that are shown in the Addressing Table below the Topology Diagram are incorrect. You will need to troubleshoot the summary routes that have been assigned to determine where errors are present and determine the correct summary routes where needed.

### Task 1: Examine the Summary Routes on the HQ Router.

Examine the summary routes on the HQ router and answer the questions below.

1. What is the summary route for the WEST LANs? \_\_\_\_\_
2. Is this summary route correct? \_\_\_\_\_
3. If the route is not correct, what is the correct summary route for the WEST LANs?  
\_\_\_\_\_
4. What is the summary route for the EAST LANs? \_\_\_\_\_
5. Is this summary route correct? \_\_\_\_\_
6. If the route is not correct, what is the correct summary route for the EAST LANs?  
\_\_\_\_\_

### Task 2: Examine the Summary Routes on the WEST Router.

Examine the summary routes on the WEST router and answer the questions below.

1. What is the summary route for the HQ LANs? \_\_\_\_\_
2. Is this summary route correct? \_\_\_\_\_
3. If the route is not correct, what is the correct summary route for the HQ LANs?  
\_\_\_\_\_
4. What is the summary route for the EAST LANs? \_\_\_\_\_
5. Is this summary route correct? \_\_\_\_\_
6. If the route is not correct, what is the correct summary route for the EAST LANs?  
\_\_\_\_\_

### Task 3: Examine the Summary Routes on the EAST Router.

Examine the summary routes on the EAST router and answer the questions below.

1. What is the summary route for the WEST LANs? \_\_\_\_\_
2. Is this summary route correct? \_\_\_\_\_
3. If the route is not correct, what is the correct summary route for the WEST LANs?  
\_\_\_\_\_
4. What is the summary route for the HQ LANs? \_\_\_\_\_
5. Is this summary route correct? \_\_\_\_\_
6. If the route is not correct, what is the correct summary route for the HQ LANs?  
\_\_\_\_\_

### Task 4: Examine the Summary Route on the ISP Router.

Examine the summary route on the ISP router and answer the questions below.

1. What is the summary route for the HQ, WEST, and EAST LANs?  
\_\_\_\_\_
2. Is this summary route correct? \_\_\_\_\_
3. If the route is not correct, what is the correct summary route for the HQ, WEST, and EAST LANs?  
\_\_\_\_\_

### Task 5: Document the Corrected Summary Routes.

Record the corrected summary routes in the Addressing Table below.

Router	Summary Route	Network Address
HQ	WEST LANs	
HQ	EAST LANs	
WEST	HQ LANs	
WEST	EAST LANs	
EAST	HQ LANs	
EAST	WEST LANs	
ISP	HQ, WEST, and EAST LANs	