4.7.1/Ovadenco Igor

Objectives

Part 1: Identify Physical Characteristics of Internetworking Devices

Part 2: Select Correct Modules for Connectivity

Part 3: Connect Devices

Part 4: Check Connectivity

Background

In this activity, you will explore the different options available on internetworking devices. You will also be required to determine which options provide the necessary connectivity when connecting multiple devices. Finally, you will add the correct modules and connect the devices.

Note: Scoring for this activity is a combination of Packet Tracer-automated scoring and your recorded answers to the questions posed in the instructions. See the at the end of this activity and consult with your Answers to determine your final score.

Part 1:  Identify Physical Characteristics of Internetworking Devices

Step 1:  Identify the management ports of a Cisco router.

Click the East router. The Physical tab should be active.

Zoom in and expand the window to see the entire router.

Question:

Which management ports are available?

AUX and Console ports

Step 2:  Identify the LAN and WAN interfaces of a Cisco router.

Question:

Which LAN and WAN interfaces are available on the East router and how many are there?

There are 2 WAN interfaces and 2 Gigabit Ethernet interfaces.

Click the CLI tab, press the Enter key to access the user mode prompt, and enter the following commands:

Open a configuration window

East> show ip interface brief

The output verifies the correct number of interfaces and their designation. The vlan1 interface is a virtual interface that only exists in software.

Question:

How many physical interfaces are listed?

4

Enter the following commands:

East> show interface gigabitethernet 0/0

Question:

What is the default bandwidth of this interface?

1000000 Kbit

East> show interface serial 0/0/0

Question:

What is the default bandwidth of this interface?

1544 Kbit

Note: Bandwidth on serial interfaces is used by routing processes to determine the best path to a destination. It does not indicate the actual bandwidth of the interface. Actual bandwidth is negotiated with a service provider.

Step 3:  Identify module expansion slots.

Questions:

How many expansion slots are available to add additional modules to the East router?

1

Click Switch2. How many expansion slots are available?

5 slots are available

Part 2:  Select Correct Modules for Connectivity

Step 1:  Determine which modules provide the required connectivity.

Click East and then click the Physical tab. On the left, beneath the Modules label, you see the available options to expand the capabilities of the router. Click each module. A picture and a description display at the bottom. Familiarize yourself with these options.

Questions:

1)      You need to connect PCs 1, 2, and 3 to the East router, but you do not have the necessary funds to purchase a new switch. Which module can you use to connect the three PCs to the East router?

HWIC-4ESW module

2)      How many hosts can you connect to the router using this module?

4

Click Switch2.

Question:

Which module can you insert to provide a Gigabit optical connection to Switch3?

PT-SWITCH-NM-1FGE

Step 2:  Add the correct modules and power up devices.

Click East and attempt to insert the appropriate module from Step 1a. Modules are added by clicking the module and dragging it to the empty slot on the device.

The Cannot add a module when the power is on message should display. Interfaces for this router model are not hot-swappable. The device must be turned off before adding or removing modules. Click the power switch located to the right of the Cisco logo to turn off East. Insert the appropriate module from Step 1a. When done, click the power switch to power up East.

Note: If you insert the wrong module and need to remove it, drag the module down to its picture in the bottom right corner, and release the mouse button.

Using the same procedure, insert the module that you identified in Step 1b into the empty slot farthest to the right in Switch2.

Use the show ip interface brief command on Switch2 to identify the slot in which the module was placed.

Question:

Into which slot was it inserted?

GigabitEthernet5/1