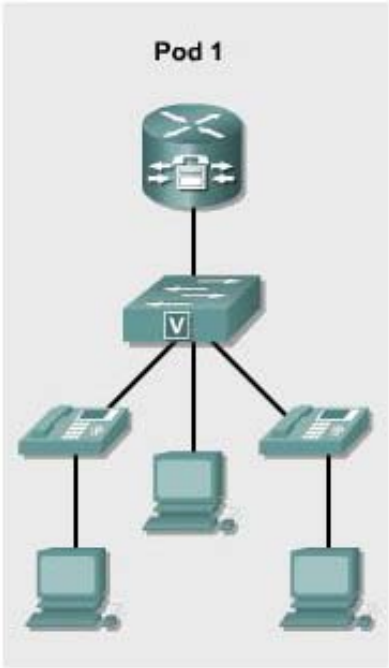
Lab 4.1.1 Configuring a FXS Port



Objective

Configure a router FXS port for an analog phone

Equipment Requirements

- Cisco CallManager Express (CME) capable router with a FXS port
- Inline power capable switch or non-inline power switch with power injectors
- One analog phone with RJ-11 cable
- One IP phone

In this lab the ACME.com Company wants to be able to reuse an analog phone for emergency calls. The analog phone plugs into the router FXS port. A similar configuration could be done for an analog fax machine or another analog device.

- Configure the router for FXS capability

This lab relies on labs 2.1.1, 2.1.3, and 3.1.1 being successfully completed and loaded.

Step 1 Verify FXS interface

a. Power on the router and switch.

b. Connect the IP phones. Test them by calling from one phone to another.

c. Use the **show hardware** privileged mode command to verify a FXS interface is installed in a router.

d. How many FXS interfaces are installed based on the command output? _____

e. Look at the router and notice how the slots where WICs are installed are numbered. On a 2800 series router the slots are numbered to the side of the cards. On a 1760 or 2600 series router, the slots are numbered below the WIC slot.

f. What slot is the FXS card installed into the router? _____

g. Use the **show voice port summary** command to see a brief summary of the voice ports installed on a router. The Ports column shows the slot that the FXS WIC is installed in the router. The Ports column shows the WIC in a *slot*/*subunit*/*port* format.

h. How are numbers shown for the FXS WIC in the Ports column of the command output?

_____

i. Use the **show voice port *slot*/*subunit*/*port*** command to see detailed information about the FXS card. For example, if the FXS WIC lists as 0/3/0 and 0/3/1 in the Ports column, the command would be **show voice port 0/3/0** or **show voice port 0/3/1**.

j. What is the Operation State of the voice port? _____

k. What is the Administrative State of the voice port? _____

l. Use the **show running-config | begin voice-port** command to see the section of the configuration that deals with the voice ports. Notice that the syntax following **voice-port** is the same as the previous **show** commands.

m. Using the **show running-config** command, can you determine whether the voice card is a FXS or FXO card? _____

Step 2 Connect Analog Phone

a. Connect an analog phone to FXS **port 0** on the router using a phone cable. The FXS ports are labeled with a 0 or a 1. Reference the photo below.

b. Access global configuration mode on the router and configure the FXS port for connectivity. The first step is to configure a dial-peer for POTS connectivity.

```
CMERouterX(config)# dial-peer voice 1 pots
```

c. The **destination-pattern *number*** command defines the phone number that can be used to reach the analog phone. Use Table 2 Router FXS Port 0 column to locate a number that corresponds to the appropriate pod. (For example, Pod 3 would use the command: **destination-pattern 5555088**.) Note that the **destination-pattern** command can be used in other, more flexible scenarios.

```
CMERouterX(config-dial-peer)# destination-pattern number
```

d. The **port *X*/*X*/0** command associates a dial peer with a specific voice port. Another way of looking at this is that when someone dials the number listed in the **destination-pattern** command, the call is routed to the voice port referenced in this command. The first ***X*** is the slot, the second ***X*** is the voice interface subunit, and the 0 is the port number. This slot, subunit, and port numbers are the same numbers researched in previous questions.

```
CMERouterX(config-dial-peer)# port X/X/X
```

e. Save the router configuration.

f. From the analog phone dial the four digits extension of either IP phones. The IP phone should ring. Troubleshoot if necessary until the IP phone rings.

g. What number shows on the IP phone when the analog phone rings? _____

h. From the IP phone, dial the seven digits for the analog phone. This number is the number that showed on the IP phone display in the previous step.

i. Does the analog phone ring? If not, troubleshoot as necessary. _____

