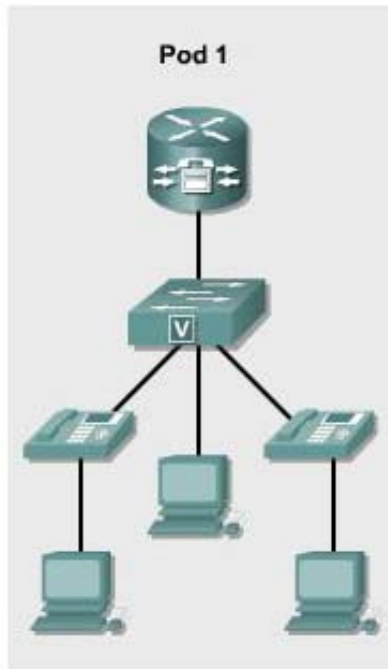


Lab 2.1.2 Installing Cisco CME Software



Objective

- Install Cisco CallManager Express (CME) software on the router

Equipment Requirements

- Cisco CallManager Express (CME) capable router
- Cisco router IOS version that supports CallManager Express
- Workstation with Ethernet 0/100 NIC installed
- TFTP server application
- Access to Table 1 IP Telephony IP Addressing and VLAN Assignment document

In this lab the ACME.com Company has configured the router with a basic configuration, but the version of IOS on the router does not support CallManager Express features. The version of IOS will need to be updated. The router should already be configured. Redo Lab 2.1.1 if necessary.

Note: This lab may not be necessary if the IPVoice IOS is already installed. Use the **show flash:** command on the router and see if the words IPVOICE appear in the name of the IOS image. This is one quick indication that can be used to determine if this lab is necessary.

Step 1 Configure the TFTP server

Note: If the router has multiple Ethernet interfaces use the lowest numbered interface. For example, if there are two Ethernet interface, 0 and 1, then 0 should be used.

- Ensure the computer that has the TFTP server application loaded on it is connected to the Ethernet port of the router. Be sure that the computer has an appropriate IP address and default gateway assigned. See the IP Telephony Table 1 for IP addressing assignment. An example IP address is 10.1.0.5 and default gateway of 10.1.0.1, where the 1 in the second octet is equal to the pod number and the number in the fourth octet is 2, 3 or any number between 5 and 254.
- Ensure that the appropriate router IOS file that supports CallManager Express is placed in the default folder for the TFTP server application. Obtain this file from the instructor.
- Open the TFTP server application.
- Console to the router. From the router ping the TFTP server. Do not proceed unless the ping is successful. Troubleshoot as necessary.
- What address is assigned to the TFTP server? _____

Step 2 Update and Install Cisco CallManager Express IOS

- From enable mode, copy the IOS image from the TFTP server to the router. The prompts may vary depending on the model and IOS.

```
CMERouterX# copy tftp: flash:
Source filename? [Enter the IOS filename. It is best to copy and
past the filename into this section.]
Address or name of remote host? [Enter the address assigned to the
TFTP server. See step 1e.]
Destination filename? [The filename should be the same as what was
placed in the source filename and Enter can be pressed.]
```

When and if prompted to overwrite enter **y** for yes.

(*Address or name of remote host* is the IP address of the TFTP server. *Source filename* is the filename of the Voice IOS located on the TFTP server. *Destination filename* is the same name as Source filename. Contact the instructor to obtain the correct router IOS that supports IP Telephony.)

An example of the process follows:

```
CMERouter1# copy tftp flash:
Address or name of remote host? 10.10.0.12
Source filename? c2800nm-ipvoice-mz.123-11.T3.bin
Destination filename? c2800nm-ipvoice-mz.123-11.T3.bin
Accessing tftp://10.10.0.12/ c2800nm-ipvoice-mz.123-11.T3.bin...
```

- Was the TFTP transfer successful? _____

If not, troubleshoot until the transfer is successful. Do not proceed without a successful transfer.

- c. Use the **show flash** command to verify that the IOS file is present in flash memory.

```
CMERouterX# show flash
```

For example:

```
-#- --length-- -----date/time----- path
1      24119024 Mar 24 2005 22:17:00 +00:00 c2800nm-ipvoice-mz.123-
11.T3.bin
32143304 bytes available (24119024 bytes used)
```

- d. The following are the steps to load new system IOS image:

```
CMERouterX# configure terminal
CMERouterX(config)# boot system flash new_system_image_filename
CMERouterX(config)# exit
CMERouterX# copy running-config startup-config
CMERouterX# reload
```

When prompted to save the system configuration, enter **no**.

When prompted to confirm the reload, enter **y**.

- e. Verify the system image file (IOS Image) is the correct one by using the **show flash** or **show version** command. The system image file should match the filename used in step 2a.

```
CMERouterX# show version
```

For example:

```
Cisco IOS Software, 2800 Software (C2800NM-IPVOICE-M), Version
12.3(11)T3, RELEASE SOFTWARE (fc4)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2005 by Cisco Systems, Inc.
Compiled Wed 26-Jan-05 02:49 by pwade
ROM: System Bootstrap, Version 12.3(8r)T7, RELEASE SOFTWARE
(fc1)
CMERouter1 uptime is 11 minutes
System returned to ROM by power-on
System image file is "flash:c2800nm-ipvoice-mz.123-11.T3.bin"
Cisco 2821 (revision 53.51) with 249856K/12288K bytes of
memory.
Processor board ID FHK0847F0QH
4 FastEthernet interfaces
2 Gigabit Ethernet interfaces
2 Serial(sync/async) interfaces
DRAM configuration is 64 bits wide with parity enabled.
239K bytes of non-volatile configuration memory.
62720K bytes of ATA CompactFlash (Read/Write)
Configuration register is 0x2102
```

- f. Is the image on the router correct? _____
If not, troubleshoot as necessary until this image is on the router.