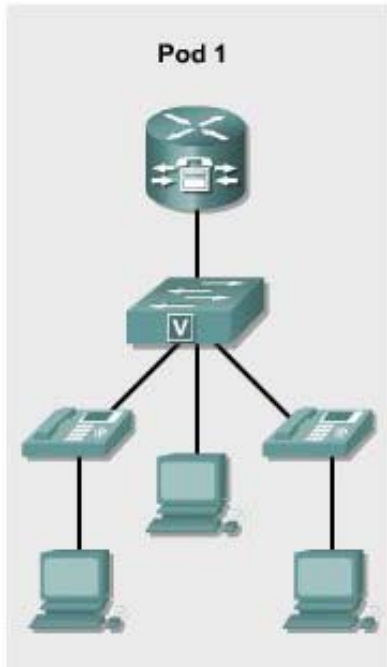


Lab 5.1.9 Configure Paging Groups



Objective

- Set up two paging groups. Each IP phone will be in a different paging group, and both paging groups will belong to yet another paging group.

Equipment Requirements

- Cisco CallManager Express (CME) capable router
- Inline power capable switch or non-inline power switch with power injectors
- Workstation with an Ethernet 10/100 NIC installed
- Two Cisco IP phones
- One analog phone

This lab relies on labs 2.1.1, 2.1.3, 3.1.1, and 4.1.1 being successfully completed and access to IP Telephony Tables 1 and 2.

In this lab the ACME.com Company wishes to configure paging groups that will use the speaker feature of the IP phones. A paging group for the sales staff and a paging group for the technical support staff are required. In addition, when an emergency page is needed, all phones in the sales paging group and all phones in the tech support group should receive the emergency page.

- Configure one IP phone in the Sales paging group
- Configure the other IP phone in the Technical Support paging group
- Configure the emergency paging group to contain all sales and technical support phones
- Test the paging feature
- Configure all pages to use multicast

Step 1 Configure paging groups

- Ensure that the two IP phones can call one another and that the analog phone can successfully dial either IP phone. Troubleshoot as necessary before proceeding. It may be necessary to undo the configurations from lab 5.18, or load the configuration from lab 5.1.7, if lab 5.1.8 used up all the available lines into one or both of the IP phones.
- Use the command **show running-config | begin tele** command to view part of the current configuration. Verify that two IP phones have registered and the MAC addresses used by the two IP phones.

CMERouterX# **show running-config | begin tele**

- What are the MAC addresses of the two IP phones? _____

- From a workstation connected to an IP phone (that can ping all router IP addresses), access the CME using a Web interface by typing **http://10.X0.0.1/ccme.html** (where **X** is the pod number). When prompted for a username and password use **ACMEadmin** and **cisco**.
- From the Web interface, click on the **Configure** menu option and select **Extensions**.
- Click on the **Add** link. In the Extension Number textbox, type **X500** (where **X** is the pod number). Select an unused sequence number. In the Extension Type dropdown box, select **Paging**. In the Name textbox, type **Sales** and in the Description textbox, type **Sales**. All other settings are left to the default.
- What sequence number was used? _____ Note that this number will be useful in future steps.
- Click on the **Add** button. When prompted if the changes are to be saved, click on **OK**. A confirmation message appears. Click **OK**.
- Using the same procedures, add a second paging extension with an extension number of **X600** (where **X** is the pod number), an Extension Type of **Paging**, an unused Sequence Number, a Name and Description of **Support**.
- What sequence number is used? This information is important for a future step. _____
- Click on the **Configure** menu option and select **Phones**. Select a MAC address link for one of the IP phones being used. Scroll down to the Paging Information section. In the Paging Extension dropdown box, select **X500** (where **X** is the pod number). Select the Unicast **Yes** radio button. Click on the **Change** button. When asked if the change is to be saved, click on the **OK** button. When the confirmation message box appears, click **OK**.
- Select the other MAC address link for the other IP phone. Set the Paging Extension to **X600** (where **X** is the pod number). Select the Unicast **Yes** radio button and save the changes.

- m. The paging function allows you to dial a number and talk to a group of IP phones. In this scenario, the X500 (where X is the pod number) represents Sales, which could be a group of Sales representatives that have IP phones. The other paging function was assigned a number of X600 that represents Support. This could be the IT support staff. A helpdesk call could come in for the mail server and three administrators can manage the mail server. The helpdesk staff can dial one number and page one of the three administrators to pick up on a particular phoneline.

Test the paging function by dialing **X500** (where **X** is the pod number) from the analog phone. Also test the paging function with the **X600** number (where **X** is the pod number) from the analog phone.

- n. Does the paging function work properly? If not, troubleshoot as necessary. _____

Step 2 Configure a combined group

- a. Access the router CLI and view the current configuration.
b. Write down all dialer numbers currently in use (ephone-dn).

- c. From global configuration mode, type the command **ephone-dn ?**.
d. How many dialer numbers are possible? _____
e. From global configuration mode, type the command **ephone-dn X** (where **X** is an unused dialer number) to create a new dialer number.
f. What dialer number was chosen? _____
g. Assign a directory number to the page using the **number X700** command (where **X** is the pod number).

```
CMERouterX(config-ephone-dn)# number X700
```

- h. Enter the **name EmergencyAll** command to assign a name.

```
CMERouterX(config-ephone-dn)# name EmergencyAll
```

- i. The **paging** command is used to specify that this dialer number is used to broadcast audio paging messages to idle IP phones. The **ip** parameter, when used with the **paging** command, specifies that multicasting is used to do the audio paging. The number that follows is the multicast group number. Note that Cisco IP phones do not support multicasting to a multicast address of 224.X.X.X. The **port** parameter followed by a number defines the UDP port number used to communicate the message to the IP phone. The number 2000 is recommended because it is already used for normal non-multicast messaging.

Enter the command **paging ip 239.1.1.1 port 2000**.

```
CMERouterX(config-ephone-dn)# paging ip 239.1.1.1 port 2000
```

- j. The **paging group** command allows multiple groups already created to be combined into one group. The group numbers that follow are separated by one or more commas. The group number is the sequence number (ephone-dn - dial numbers) configured through the Web interface earlier in the lab. Refer back to the sequence numbers used earlier in the lab. These will be the **X** and **Y** values used in the command. For example, if sequence numbers 9 and 10 were used previously, the command entered would be **paging group 9,10**.

```
CMERouterX(config-ephone-dn)# paging group X,Y
```

- k. From the privilege exec mode, use the command **show running-config | begin telephony-service** command to view the changes.

```
CMERouterX# show running-config | begin telephony-service
```

- l. What settings changed under the ephone-dn and ephone sections?

- m. Use the **copy running-config startup-config** to save the changes.

```
CMERouterX# copy running-config startup-config
```

- n. Use the analog phone to test the paging function by dialing the **X700** paging number.
- o. Does the emergency paging function work from the analog phone? If not, troubleshoot as necessary until it does. _____