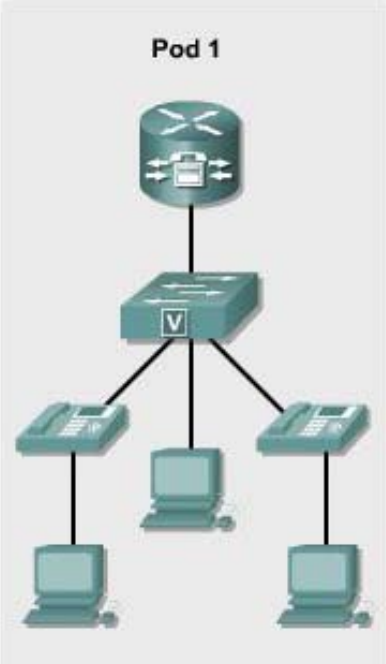
Lab 5.1.4 Configuring Call Transfer and Call Forward



Objective

- Transfer calls and set up call forwarding

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, 4.1.1, 5.1.1, and 5.1.2 being successfully completed and loaded.

In this lab the ACME.com Company currently has the system default of blind transfers and wishes to change to consultative transfers system wide. Configure CallManager Express to use consultative transfers. However, the ability to forward calls should be restricted and the user should not be able to forward calls from the IP phones.

- Configure consultative transfer
- Use the IP phone to configure call forward to the other IP phone
- Restrict the ability to forward calls from the IP phone using IOS commands

Step 1 Configure Call Transfer and Call Forward

a. Check connectivity between the analog phone and one of the IP phones. From the analog phone, dial one of the IP phones.

b. Does the phone connection work between the analog phone and the IP phone? If not, troubleshoot as necessary.

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c. Note that a softkey button on the phone is an option selected by one of the four buttons at the bottom of the IP phone display.

When the analog phone dials one of the IP phones and the IP phone is ringing, press the **Answer** softkey button followed by the **Trnsfer** softkey button. A dial tone emits. Enter the extension of the other IP phone. The other IP phone should ring.

d. Was the transfer successful? If not, troubleshoot as necessary.

_____

e. By default, the phone transfer from one IP phone to the other is blind. What is your best guess as to what the term blind transfer means?

_____

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f. Access the router CLI. From global configuration mode, enter telephony-service mode.

```
CMERouterX(config)# telephony-service
```

g. Use the command **transfer-system full-consult** to enable consultative transfers.

```
CMERouterX(config-telephony)# transfer-system full-consult
```

h. From the analog phone, dial one of the IP phones. When the IP phone starts ringing, press the **Answer** softkey button followed by the **Trnsfer** softkey button. A dial tone emits. Enter the extension of the other IP phone. The other IP phone should ring. On the other IP phone (the target IP phone) press the **Answer** softkey. Notice that the call is not automatically transferred and the only connection where a conversation can occur is between the two IP phones. In fact, the caller on the analog phone is on hold, and even if the analog phone is hung up, the call transfer between the two IP phones continues.

i. From the IP phone that initiated the transfer press the **Trnsfer** softkey button a second time to complete the transfer. Now the analog phone and the second IP phone have a connection. Hang up all phones.

j. From the second IP phone, press the **CFwdAll** softkey button then enter the number of the first IP phone followed by the # key. This forwards all calls to the other IP phone.

k. What message appears when all calls have been forwarded to another IP phone?

_____

l. From the analog phone, call the number of the second IP phone. The call should be forwarded to the first IP phone.

m. Does the first IP phone ring? If not, troubleshoot as necessary. _____

n. Press the **CFwdAll** softkey button on the second IP phone to disable the call forwarding.

Step 2 Examining Call Forward Features

a. From global configuration mode, enter **ephone-dn 1** to enter ephone-dn mode.

```
CMERouterX(config)# ephone-dn 1
```

b. Enter the command **call-forward max-length 0** to disable call forwarding from the first IP phone. Note that even though call forwarding is disabling, a phone call can still be placed to the phone and from the phone.

```
CMERouterX(config-ephone-dn)# call-forward max-length 0
```

c. List one example of when a company might disable call forwarding for an employee that has an IP phone. _____

_____

d. Examine the router configuration to determine which IP phone uses ephone-dn 1.

e. What is the phone number assigned to ephone-dn 1 based on the router configuration output?

_____

f. From the IP phone with ephone-dn 1 assigned to it, press the **CFwdAll** softkey button.

g. What is different than before? _____

h. Use the GUI Web interface as a phone user (for example, KHampton, cisco). Under the **Configure** menu option, select **Phone**. In the Line Information section click on the hyperlink for the line being configured (probably Line 1). Configure call forward busy, and call forward no-answer to forward calls to the other IP phone's number. In the timeout textbox enter 15 (18 seconds is the default). Click on the **Change** button. Then on the Configure > Phone page, scroll down to the end of the page and click on the **Save Changes** button. Click on the **OK** button to save changes, click on the **OK** button to acknowledge the changes. Notice that the user can still configure call forward settings from the GUI even though the **call-forward max-length 0** is set from the router prompt.

i. What happens to incoming calls when call forward busy and call forward no answer options are active and set to the other IP phone?_____

j. If a forwarding number was also entered into the call forward all textbox what would then happen to calls to that number?_____

_____

k. Use the analog phone to verify functionality of the call forwards.

l. Remove the call forwarding from the IP phone using any method.

