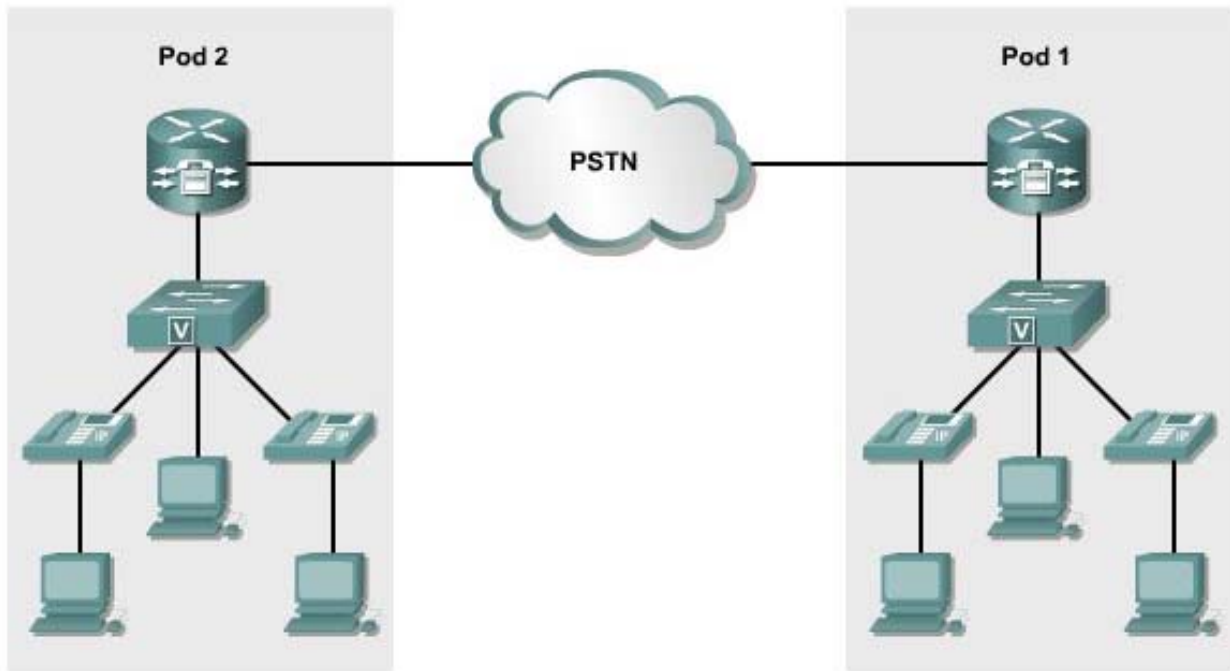


Lab 4.1.5 Configuring Class of Restriction



Objective

Configure Class of Service on the IP telephony network.

Equipment Requirements

- Two Cisco CallManager Express (CME) capable routers with a serial and PRI ports
- Two inline power capable switch or non-inline power switch with power injectors
- Adtran
- Two IP phones
- Two analog phones

This lab relies on labs 2.1.1, 2.1.3, 3.1.1, 4.1.1, 4.1.3, and 4.1.4 being successfully completed and loaded.

In this lab ACME.com wishes to implement Class of Service to restrict access to where certain IP phones can call.

- Configure the lowest numbered IP phone to be able to call over the WAN, but not over the PSTN
- Configure the highest numbered IP phone to be able to call to any destination that the router can call
- The analog phone should be able to call across the WAN or the analog PSTN
- The digital PSTN should not be available to the analog phone

Step 1 Configure Class of Restriction

- In this lab do NOT save the changes made to the router. A Class of Restriction (COR) is used to determine which incoming dial peer can use which outgoing dial peer to make a call. A dial peer can have one incoming and one outgoing COR list. The **cor** command is used to set the dial-peer COR parameter for dial peers and directory numbers. COR allows a company to deny certain call attempts on the basis of the incoming and outgoing CORs configured on the dial peers. The COR could be used to block calls to 900 numbers from company phones.

The CME admin guide from Cisco gives another excellent example of a COR.

- From global configuration mode, enter the command **dial-peer cor custom** to enter the cor mode.

```
CMERouterX(config)# dial-peer cor custom
```

- Enter the first name by using the command **name Analog**.

```
CMERouterX(config-dp-cor)# name Analog
```

- Enter the second name by using the command **name PRI**.

```
CMERouterX(config-dp-cor)# name PRI
```

- Enter the final name by using the command **name WAN**.

```
CMERouterX(config-dp-cor)# name WAN
```

- Type **exit** to return to global configuration mode.

- Define a Class of Restriction (COR) list by using the command **dial-peer cor list callAnalog**.

```
CMERouterX(config)# dial-peer cor list callAnalog
```

- Put a member in the COR list with the command **member Analog**.

```
CMERouterX(config-dp-corlist)# member Analog
```

- Type **exit** to go to global configuration mode. Define a COR list by using the command **dial-peer cor list callPRI**.

```
CMERouterX(config)# dial-peer cor list callPRI
```

- Put a member in the COR list with the command **member PRI**.

```
CMERouterX(config-dp-corlist)# member PRI
```

- Type **exit** to go to global configuration mode. Define a COR list by using the command **dial-peer cor list callWAN**.

```
CMERouterX(config)# dial-peer cor list callWAN
```

- Put a member in the COR list with the command **member WAN**.

```
CMERouterX(config-dp-corlist)# member WAN
```

- m. Type **exit** to go to global configuration mode. Define a COR list by using the command **dial-peer cor list Type1**.

```
CMERouterX(config)# dial-peer cor list Type1
```

- n. Put a member in the COR list with the command **member WAN**.

```
CMERouterX(config-dp-corlist)# member WAN
```

- o. Type **exit** to go to global configuration mode. Define a COR list by using the command **dial-peer cor list Type2**.

```
CMERouterX(config)# dial-peer cor list Type2
```

- p. Put the first of two members in the COR list with the command **member WAN**.

```
CMERouterX(config-dp-corlist)# member WAN
```

Put the second of two members in the COR list with the command **member Analog**.

```
CMERouterX(config-dp-corlist)# member Analog
```

- q. Type **exit** to go to global configuration mode.

Step 2 Apply Class of Restriction to a Dial Peer

- a. Enter dial-peer voice 2 pots to enter dial peer configuration mode.

```
CMERouterX(config)# dial-peer voice 2 pots
```

- b. Assign an outbound COR list to the dial peer with the command **corlist outgoing callAnalog**.

```
CMERouterX(config-dial-peer)# corlist outgoing callAnalog
```

- c. Without making a phone call, what phone calls do you expect to work and what phone calls do you expect to not work? _____

- d. Type **exit** to go to global configuration mode. Enter **dial-peer voice 3 pots** to enter dial peer configuration mode.

```
CMERouterX(config)# dial-peer voice 3 pots
```

- e. Assign an outbound COR list to the dial peer with the command **corlist outgoing callPRI**.

```
CMERouterX(config-dial-peer)# corlist outgoing callPRI
```

- f. Type **exit** to go to global configuration mode. Enter **dial-peer voice 6 voip** to enter dial peer configuration mode.

```
CMERouterX(config)# dial-peer voice 6 voip
```

- g. Assign an outbound COR list to the dial peer with the command **corlist outgoing callWAN**.

```
CMERouterX(config-dial-peer)# corlist outgoing callWAN
```

- h. Type **exit** to go to global configuration mode. Enter ephone directory number mode by entering the command **ephone-dn 1**.

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

- i. In ephone-dn mode, enter the command **cor incoming Type1**.

```
CMERouterX(config-ephone-dn)# cor incoming Type1
```

- j. Type **exit** to go to global configuration mode. Enter **dial-peer voice 1 pots** to enter dial peer configuration mode.

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

- k. Assign an outbound COR list to the dial peer with the command **cor incoming Type2**.

```
CMERouterX(config-dial-peer)# cor incoming Type2
```

- l. Test the COR settings by attempting to dial a partner pod over the WAN, analog connection to the PSTN, and the PRI connection to the PSTN. Test on all three phones. Remember that the highest numbered IP phone should be able to call any destination the router has a dial peer. The lowest numbered IP phone should not be able to call the phone connected directly to the Adtran.
- m. Does the test work as it should? If not, perform appropriate troubleshooting. _____
- n. When the test is successful, reload the router making sure you do *not* save the configuration.