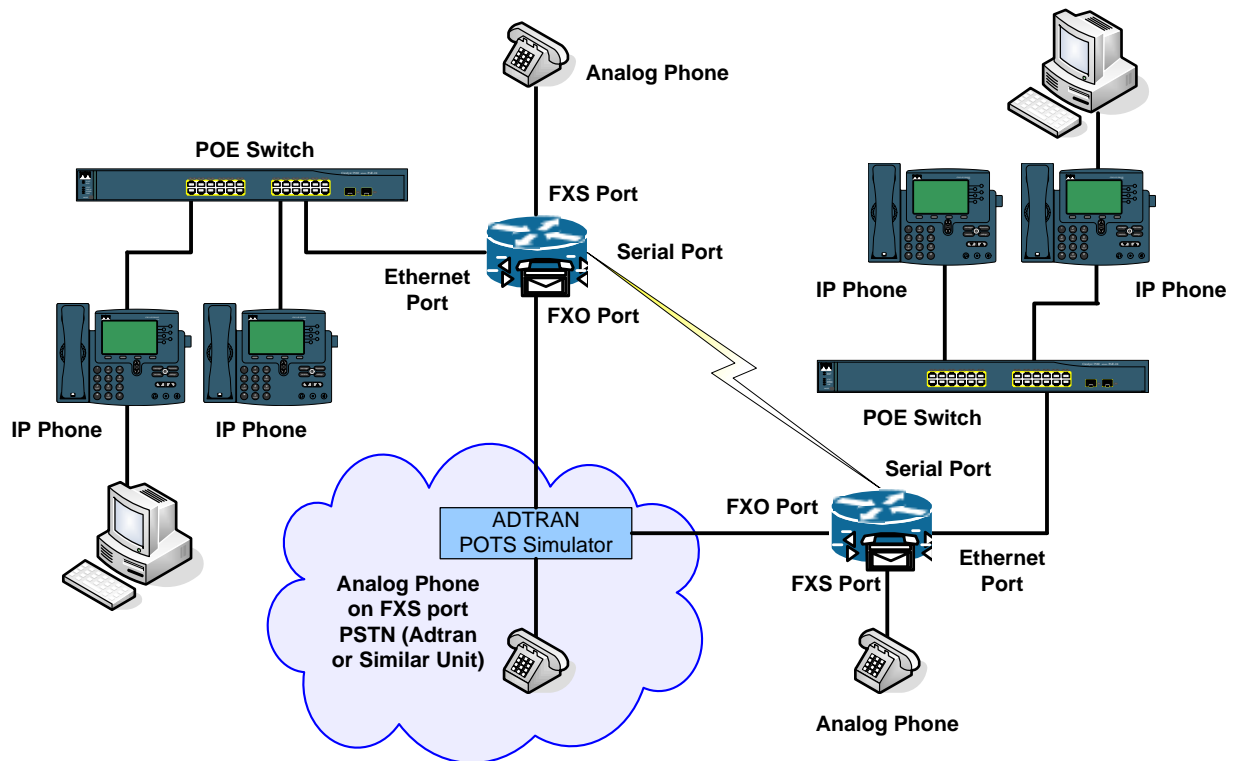


# VoIP Case Study

## IT Company



### Objectives:

1. Configure two (2) CME (Call Manager Express or Unity Express) routers that allow connectivity between Cisco IP Phones to an analog phone connected to the Adtran (or similar unit) and to an analog phone connected to the Foreign Exchange Station (FXS) port.
2. Configure GUI administration access.
3. Configure translation rules
4. Configure an intercom between two IP Phones
5. Configure phone monitoring
6. Configure speed dialing
7. Configure DHCP
8. Configure Data Network

## Tasks:

- **Task 1** - Create an IP addressing scheme using 172.30.x.x, and place it in a spreadsheet or table.
- **Task 2** - Create a dial plan (and phone numbers) and configure using the **telephony-service setup** program.
- **Task 3** - Provide a dial peer summary that lists every dial peer and dial peer number and configuration command in an organized manner. You cannot use the same dial peer numbers that were used in the labs!
- **Task 4** - Configure all Cisco IP Phones so that they communicate with each other using a four-digit (4) extension. The CODEC to be used between sites is G729.
- **Task 5** - Configure an analog phone that connects to the first FXS port so that the IP Phones can reach it using four-digit dialing. The analog phone should be able to reach the Cisco IP Phones using four-digit dialing as well. Do this on both CME routers.
- **Task 6** - Configure each CME router so that the Cisco IP Phones and the analog phone connected to the FXS port can communicate with the analog phone located outside the company (connected to an FXS port on the Adtran or similar unit). The CME router reaches this phone using an FXO port.
- **Task 7** - Configure two (2) PC's to connect to the data VLAN, and connect the PC's directly to the IP Phone PC port. The PC's should receive DHCP addresses from their CME router and when configured should be able to communicate (Ping) with each other.
- **Task 8** - Enable GUI phone administration on one CME router, and protect it by enabling HTTPS.
- **Task 9** - On the CME router NOT configured for GUI administration, configure activity monitoring, and send the results to the syslog (Kiwi) server located on the attached PC. Save and print the log of at least two (2) phone calls.
- **Task 10** - Using the CLI on the CME router NOT configured for GUI administration, configure an intercom system between two IP phones. Assign a button on each Cisco IP Phone, and label it with the word "Intercom". Test the intercom.

- **Task 11** - Using the CLI on the router configured for GUI administration, configure one speed dial on one of the Cisco IP Phones to reach the other Cisco IP Phone. Place a label on the speed dial button, and test the speed dial.
- **Task 12** - On the CME router configured for GUI administration, the CEO has a Cisco IP Phone that has four digits, like every other Cisco IP Phone. However, the CEO wants everyone to dial BOSS-MAN (267-7626) when they call him. Create a translation rule that makes this happen on the phone that simulates the CEO's phone.
- **Task 13** - On the CME router NOT configured for GUI administration, there is a LAN with top-secret projects. This LAN has one phone. No one should ever know the number assigned to this phone. Employees should dial "SECRET" (732738) to reach this phone. Create a translation rule that makes this happen on the phone that simulates the top-secret phone.
- **Task 14** - On both CME routers MOH (Music on Hold) should be configured for when a call is placed on hold. An appropriate music selection should be used for this purpose.