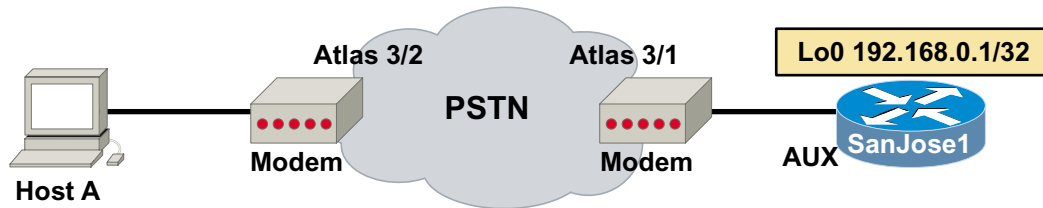


Lab 2.6.2: Configuring an Asynchronous Dialup Connection on the AUX port



Objective

In this lab, you will configure an AUX port on a Cisco router to accept dial-in connections from a workstation.

Scenario

The International Travel Agency wants you to configure their SanJose1 core router to accept dialup connections on its AUX port so it can be managed remotely in the event of a network failure. As the network administrator, you are to configure the modem to allow management sessions only. You will not be setting up DDR (Dial-On-Demand Routing).

Step 1

Before beginning this lab, it is recommended that you reload each router after erasing its startup configuration. This will prevent you from having problems caused by residual configurations. Build (cable) the network according to the above diagram. Use the Adtran Atlas 550 or similar device to simulate the PSTN. If you are using the Atlas 550, be sure the line cables from both modems are plugged into the octal FXS voice module ports of the Atlas 550 as labeled in the diagram.

Use a rollover cable and DCE modem adapter to connect the external modem to the router's AUX port.

Step 2

Configure SanJose1's AUX port for an asynchronous connection that will use authentication:

```
SanJose1(config)#line aux 0
SanJose1(config-line)#login
SanJose1(config-line)#password cisco
```

Set the line speed, flow control type, and number of stopbits:

```
SanJose1(config-line)#speed 115200
SanJose1(config-line)#flowcontrol hardware
SanJose1(config-line)#stopbits 1
```

Note that the maximum speed supported by the AUX port varies depending on the model router that you are using. On the 2600 and 3600 series routers, 115200 bps is the maximum while other platforms may only support up to 38400 bps. Typically, you should

lock the modem speed at the maximum bit-rate supported by both the router and the modem.

Next, configure the line for both incoming and outgoing calls, and allow incoming calls using all available protocols and set an enable secret password:

```
SanJose1(config-line)#modem inout
SanJose1(config-line)#transport input all
SanJose1(config-line)#exit
SanJose1(config)#enable secret cisco
SanJose1(config)#exit
```

Step 3

On SanJose1, issue the **show line** command at the router prompt. A sample output is shown below.

```
SanJose1>show line
```

	Tty	Type	Tx/Rx	A	Modem	Roty	AccO	AccI	Uses	Noise	Overruns	Int
*	0	CTY		-	-	-	-	-	1	0	0/0	-
*	65	AUX	115200/115200	-	inout	-	-	-	1	1	24/0	-
	66	VTY		-	-	-	-	-	0	0	0/0	-
	67	VTY		-	-	-	-	-	0	0	0/0	-
	68	VTY		-	-	-	-	-	0	0	0/0	-
	69	VTY		-	-	-	-	-	0	0	0/0	-
	70	VTY		-	-	-	-	-	0	0	0/0	-

Line(s) not in async mode -or- with no hardware support:

1-64

1. According to the output of this command, what is the line number for your router's AUX port?

At this point, have the router automatically configure the modem without establishing a reverse Telnet connection. Instead of using reverse Telnet to configure the modem, you will use the Cisco IOS autoconfiguration feature. The **debug confmodem** command can be used to monitor the autoconfiguration process.

Enter the following commands from Host A, as shown:

```
SanJose1#debug confmodem
SanJose1#configure terminal
SanJose1(config)#line 65
SanJose1(config-line)#modem autoconfigure discovery
```

Depending on your answer to Question #1, you may need to substitute another line number for line 65. Once you have typed the **modem autoconfigure discovery** command, you should see debug output as the router queries and configures the modem. The entire process may take approximately 30 seconds or more.

Note that, whenever possible, you should manually configure a modem or use a specific modem configuration script. The IOS modem discovery feature is unlikely to provide an optimal modem configuration.

Even though you used the modem autoconfiguration feature, you may also want to establish a reverse telnet session to the modem via the AUX port.

2. What port number would you telnet to in order to connect to the modem on the AUX port?

Step 4

In order to establish a reverse telnet session with the modem, you must first disconnect your dial-up session and return to SanJose1's console.

At SanJose1's console, enter the following commands to enable a Telnet session with password authentication and an active interface:

```
SanJose1(config)#line vty 0 4
SanJose1(config-line)#login
SanJose1(config-line)#password cisco
SanJose1(config-line)#interface loopback 0
SanJose1(config-if)#ip address 192.168.0.1 255.255.255.255
```

3. Why should you assign a password to the virtual terminals?

4. Why did you need to assign an IP address to a loopback interface?

5. Why is a 32-bit mask used with the loopback address?

Finally, you may want to take advantage of the router's host table to make starting a reverse Telnet session easier. Enter the following command to create a host table mapping that will include both the IP address and the reverse Telnet port number:

```
SanJose1(config)#ip host modem 2065 192.168.0.1
```

Once you have configured the host table mapping, you will only need to type the hostname to start a telnet session. Enter the hostname at the prompt, as shown:

```
SanJose1#modem
```

This should open a reverse Telnet session with the modem. Issue the AT&V command to verify that you are talking to the modem. Troubleshoot as necessary.

To disconnect the reverse Telnet session:

```
CTRL-SHIFT-6 then X
SanJose1#disconnect
```

Step 4

On Host A, use the modem control panel to check to see that the modem is properly installed and working. Run HyperTerminal and select the modem in the "Connect To" window. Then use HyperTerminal to dial the appropriate number. If you are using the Adtran Atlas 550, this number will be 555-6001.

If Host A successfully connects to SanJose1, you will see a password prompt. At the password prompt, enter the "cisco" password to access the router. Troubleshoot as necessary.