Configuring Voice over IP

This chapter explains how to configure voice interfaces and ports, which convert telephone voice signals for transmission over an IP network.

This chapter presents the following major topics:

Voice over IP (VoIP) enables your Cisco VG224 to carry live voice traffic (for example, telephone calls and faxes) over an IP network. VoIP offers the following benefits:

- Unified voice and data trunking
- Plain old telephone service (POTS)-Internet telephony gateways

Prerequisites

Before you can configure your Cisco VG224 to use VoIP, you must first establish a working IP network.

Configuring the Voice Interface

Whenever you install a new interface, or if you want to change the configuration of an existing interface, you must configure the interface. If you replace a module that was already configured, the Cisco VG224 recognizes it and brings up the interface in the existing configuration.

Before you configure an interface, have the following information available:

- Protocols you plan to route on the new interface
- IP addresses, subnet masks, network numbers, zones, or other information related to the routing protocol

Timesaver Obtain this information from your system administrator or network plan before you begin configuring your Cisco VG224.

To configure a voice interface, you must use configuration mode (manual configuration). In this mode, you can enter Cisco IOS commands through the command line interface (CLI).

To configure the voice interface configuration mode, follow this procedure:

Step 1 Connect a console to the Cisco VG224. If you need instructions for connecting a console, refer to the installation chapter of your Cisco VG224 installation and configuration guide.

Step 2 Power on the Cisco VG224. If the current configuration is no longer valid, after about one minute you see the following prompt:

```
Would you like to enter the initial dialog? [yes/no]:
```

Answer **no**. You now enter the normal operating mode of the Cisco VG224.

Note If the current configuration is valid, you enter the normal operating mode automatically.

Step 3 After a few seconds, you see the user EXEC prompt (`Router>`). Type **enable** and the password to enter enable mode:

```
Router> enable
Password: <password>
```

Configuration changes can be made only in enable mode. The prompt changes to the privileged EXEC (enable) prompt (`Router#`):

```
Router#
```

Step 4 Enter the **configure terminal** command to enter configuration mode:

```
Router# configure terminal
Router(config)#
```

The Cisco VG224 enters global configuration mode, indicated by the `Router(config)#` prompt.

Step 5 If you have not configured the Cisco VG224 before, or want to change the configuration, use Cisco IOS commands to configure global parameters, passwords, network management, and routing protocols. In this example, IP routing is enabled:

```
Router(config)# ip routing
```

For complete information about global configuration commands, refer to the Cisco IOS configuration guides and command references.

Step 6 If you have not already done so, configure the network module or WAN interface card that you plan to use for IP traffic. For instructions, see your Cisco VG224's hardware installation and software configuration guides or the configuration note for the network module or WAN interface card.

Step 7 To configure another interface, enter the **exit** command to return to the `Router(config)#` prompt.

Step 8 To configure the Cisco VG224 for voice traffic, refer to the VoIP references in Prerequisites, page 4-1.

Step 9 When you finish configuring interfaces, exit configuration mode and return to the enable prompt by pressing **Ctrl-Z**. To see the current operating configuration, including any changes you just made, enter the **show running-config** command:

```
Router# show running-config
```

To see the configuration currently stored in NVRAM, enter the **show startup-config** command at the enable prompt:

```
Router# show startup-config
```

Step 10 The results of the **show running-config** and **show startup-config** commands differ from each other if you have made changes to the configuration, but have not yet written them to NVRAM. To write your changes to NVRAM, making them permanent, enter the **copy running-config startup-config** command at the enable prompt:

```
Router# copy running-config startup-config
Building configuration. . .
[OK]
Router#
```

The Cisco VG224 is now configured to boot in the new configuration.

Where to Go Next

For further information on VoIP configuration procedures and debug commands, refer to the following:

- *Cisco IOS Voice Configuration Library*.