



Configuration Procedures for the Cisco 633

Introduction

This chapter provides instructions for configuring the Cisco 633 SDSL modem. Configuration procedures vary depending on how your Cisco 633 is configured when shipped. You must be in **enable** mode to perform these configuration procedures.



Note

Cisco recommends that only one command-line application at a time be used to configure the Cisco 633. For example, Telnet and the serial management interface should not be used simultaneously.

Checklist

Table 4-1 Checklist for Configuration

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Log on to Cisco Broadband Operating System

After connecting all the cables to the Cisco 633 and powering it on, start the terminal emulation program and press the **Enter** key until the CBOS login screen appears. When you see the welcome screen, you can log on to CBOS.

```
Hello!
Expanding CBOS image...
CBOS v2.3.5.012
```

```
User Access Verification
Password:
```



Note

If you have not set any passwords for the Cisco 633, press the **Enter** key when the system prompts you for a password to enter CBOS.

Determine the CBOS Version

After you log on to CBOS and before proceeding any further with your configuration process, check the version of CBOS to verify that the version number and date reflect the most recent firmware update:

```
cbos> show version
```

If the CBOS version is earlier than 2.2.0, get the latest version from Cisco. See the Trivial File Transfer Protocol (**tftp**) command in the *Cisco Broadband Operating System User Guide* for more information on how to update the Cisco 633 firmware. You can also update the CBOS version through the management port also.

Operation Modes

CBOS implements two operational modes: **exec** and **enable**. CBOS defaults to **exec** mode when you log in. The **exec** mode grants program execution (read-only) privileges to a user. To read or write changes to nonvolatile random-access memory (NVRAM), you must work in **enable** mode. To invoke the **enable** mode:

Step 1 At the **exec** mode command-line prompt, enter:

```
cbos> enable
```

Step 2 Enter a password when CBOS prompts you:

```
cbos> enable
Password:
```



Note


If you have not set any passwords for the Cisco 633, press the **Enter** key when the system prompts you for a password to enter CBOS. If you have not preset a password, you can still log on to CBOS.

You are now in **enable** mode. The system prompt appears:

```
cbos#
```

Configure Interworking

To translate from Frame Relay (FR) to ATM, you must first configure an IWF data path.

-
- Step 1** Close the virtual WAN port for which you are creating an IWF:
- ```
set int wan0-1 close
```
- Step 2** Configure a Data Link Connection ID (DLCI) on the FR (serial) network:
- ```
set int serial10-1 dlci 17
```
-  **Note** Enter a DLCI range between 16 and 1007.
-
- Step 3** Repeat steps 1 and 2 to create multiple IWF data paths.
- Step 4** Write the changes to Non-Volatile Read Only Memory (NVRAM):
- ```
write
```
- Step 5** Reboot the Cisco 633:
- ```
reboot
```
-

Configure the Cisco 633 for Remote Management

Remote management allows you to configure the Cisco 633.



Note The WAN0-0 and SER0-0 interfaces are reserved for remote management.

-
- Step 1** Close the WAN0-0 port:
- ```
set int wan0-0 close
```
- Step 2** Decide which side of the network you are on, either the FR network (SER0-0) or the ATM (WAN0-0) network. The following steps show configuration for the ATM network.
- Step 3** Configure an IP address for the WAN0-0 interface:
- ```
set int wan0-0 ip 10.0.1.0
```

Step 4 Configure a netmask address for the WAN0-0 interface:

```
set int wan0-0 mask 255.255.255.0
```

Step 5 Add a static IP route to and from the remote network. This allows data to pass between your Cisco 633 and the remote network.

```
set route add ip x.x.x.x gw wan0-0
```

where *x.x.x.x* is the static IP route to and from the remote network.



Note You must add a static route or you will not be able to pass data.

Step 6 To Telnet to the Cisco 633, enable the Telnet application:

```
set telnet enabled
```

Step 7 To use the Trivial File Transfer Protocol (TFTP) to transfer files to and from the Cisco 633, enable the TFTP application:

```
set tftp enabled
```

Step 8 To save your changes, enter:

```
write
```

Step 9 To reboot the CPE, enter:

```
reboot
```

The Cisco 633 is now configured for remote management. Now the FR router (for example, a Cisco 1600) needs to be configured to pass management data. See the following section for more information.

Attention Back-to-Back Connection Users

The back-to-back configuration between two Cisco 633 units allows one Cisco 633 to act as CO equipment and terminate traffic initiated by another Cisco 633.

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- Step 1** Cable the two Cisco 633s. See the “Back-to-Back Cabling (Cisco 633 and Cisco 673 only)” section on page 2-5 for cabling information.
- Step 2** Set one Cisco 633 to central office (CO) mode, so that it terminates the traffic that the Cisco 633 in customer premises equipment (CPE) mode initiates.



Note The Cisco 633 ships with a default setting of CPE mode.

To set the Cisco 633 to CO mode:

```
set int wan0 mode co
```

- Step 3** Set up an IWF data path between the Cisco 633s. See the “Configure Interworking” section on page 4-3 for more information.
- Step 4** Verify that both Cisco 633s are in either RFC 1483 bridging or RFC 1483 routing mode only, not PPP (Point-to-Point Protocol) routing or bridging mode. See the sections below for either bridging or routing procedures.
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Configuring External Routers

Please consult the user documentation for your router to connect the Cisco 633 to routers on the FR and ATM networks. The Cisco 633 can pass traffic that uses the following protocols:

- RFC 1483 bridging
- PPP bridging

Upgrade Software through Serial Download

You can upgrade software on your CPE using the serial interface:



Note Changes to your CPE must be coordinated with the central office equipment.

- Step 1** Enter the following settings through a serial console connected to your system:
38.4 Kbaud
No parity
8 data bits
1 stop bit
No flow control
- Step 2** To turn debug monitor on, enter:
`debug monitor on`
- Step 3** To save your changes, enter:
`write`
- Step 4** To reboot the device, enter:
`reboot`
- After the modem reboots, press Enter twice. The prompt should change to =>.
- Step 5** To erase sector 0, enter:
`es 0`
- Repeat this step for sectors 1 through 5.
- Step 6** To start serial download, enter:
`df 10008000`
- Step 7** Use a terminal emulation application, such as Hyperterminal, to start an Xmodem download of a new Cisco 67x image.
- Step 8** When the download is complete, the following message appears:
`Transferred xxxxxxxx bytes`
- Record the number of bytes transferred.
- Step 9** To program the area of memory to Flash, enter:
`pb 10008000 fef00000 xxxxxxxx`
- where `xxxxxxx` is the value recorded in Step 6.
- Step 10** To turn debug monitor off, enter:
`m0`

Step 11 To reboot, enter:

```
rb
```

Update the CBOS Prompt

The default Cisco 633 system prompt is `cbos>`. The command prompt is limited to 8 characters. You can change this prompt to a unique subscriber identifier as shown in the following example.

Step 1 Log on to CBOS using either the serial or Telnet interfaces.

Step 2 To change the default prompt to 4412883 as the subscriber identifier, enter:

```
cbos# set prompt 4412883
4412883#
```

Step 3 To save your changes, enter:

```
4412883# write
```

Step 4 To exit CBOS, enter:

```
4412883# quit
```

Set Passwords

After you have configured your system, you should pick new passwords for both the **enable** and **exec modes**. Keep in mind that the **enable** mode provides all the functionality of a system administrator for the CPE. Examples of good and bad passwords are:

- Good Password—77ta99y (Do not use the sample password.)
- Bad Passwords—Passwords such as your name; or your street address, or home telephone number are too predictable.

Use the **set password** command to change both the enable and exec passwords as in the following:

Step 1 To change the password enter:

```
cbos# set password mode new password
```

Example: **set password enable 33Low44PassMe**

Step 2 To save your changes, enter:

```
cbos# write
```

Step 3 To exit the CBOS, enter:

```
cbos# quit
```

Save Configuration Changes

Use the **write** command to save any changes you have made during provisioning to the NVRAM configuration file:

```
cpe627# write
```



Caution

If you do not use the **write** command after changes, all the changes you made during your current session will be lost when you reboot the Cisco 633.
