

Chapter 23

Configuring Cisco HDLC

This chapter describes how to configure High-Level Data Link Control (Cisco HDLC) on the following modules:

- CT3, CT1, and CE1
- cOC3 and cOC12
- OC48/STM16 POS, OC3 POS, and OC12 POS
- T3-Frame and E3-Frame, HSSI, and X.21/V.35

This chapter contains the following sections:

- Overview on page 259
- Creating Cisco HDLC Interfaces on page 260

Overview

Cisco HDLC is an encapsulation protocol that governs information transfer. It is a bit-oriented synchronous data-link layer protocol that specifies a data encapsulation method on synchronous serial links using frame characters and checksums.

Cisco HDLC monitors line status on a serial interface by exchanging keepalive request messages with peer network devices. It also allows routers to discover IP addresses of neighbors by exchanging Serial Link Address Resolution Protocol (SLARP) address-request and address-response messages with peer network devices.

Cisco HDLC is compatible with Cisco Systems Cisco-HDLC protocol, the default protocol for all Cisco serial interfaces.

Creating Cisco HDLC Interfaces

You can create an IP interface with its IP address on top of the Cisco HDLC interface.



NOTE: Cisco HDLC configuration is the same for all modules.

To create a Cisco HDLC interface:

1. Navigate to the appropriate level in the system's configuration to set Cisco HDLC encapsulation on an interface:
 - For CT3, CT1, CE1, cOC3, or cOC12—Select a DS0 bundle.
 - For T3-Frame, E3-Frame, X.21/V.35, or HSSI—Select a line interface.
 - For OC48/STM16 POS, OC3/OC12 POS—Select a packet over SONET (POS) interface.
2. Right-click, select Create, and click Cisco HDLC.

The Create Cisco HDLC dialog box appears.

The screenshot shows a dialog box titled "Lab04 - Create Cisco HDLC". It has the following fields and options:

- Location:**
 - Physical:** Module: CT3-3 port, Slot: 5, Port: 0, DS1 Channel: 2
 - Logical:** DS0BUNDLE: SERIAL5/0/2/1
- Name:** [Empty text box]
- Alias:** [Empty text box]
- Ifindex:** [Empty text box]
- HDLC Keep Alive:** 10
- Down When Looped
- Status:**
 - Operational:** [Empty text box]
 - Administrative:** Up (dropdown menu)
- Buttons:** OK, Cancel

3. Set the parameters (Table 75).

Table 75: Cisco HDLC Parameters

Parameter	Description
Name	Identifies the interface; generated automatically
Alias	Description of the interface; 0–15 characters; default: blank
IfIndex	Identifies the interface on the particular line interface; generated automatically
Operational	Current operational status of the interface
Administrative	Desired status of the interface: Up/Down; default: Up
HDLC Keep Alive	Specifies the keepalive timeout value; both endpoints need to have the same value for keepalive; range 0–6553
Down When Looped	Enables loopback detection on the interface

4. When you have finished, click OK to save the settings.

Once you have created a Cisco HDLC interface, you can create an IP interface and an IP address on top of it. For more information about IP interfaces and addresses, see *NMC-RX User Guide, Vol. 2, Chapter 6, Configuring IP*.

