

# Configuring Cisco HDLC

# 21

The NMC-RX application supports High-Level Data Link Control (Cisco HDLC) on the following modules:

- CT3, CT1, and CE1
- cOC3 and cOC12
- T3-Frame and E3-Frame

Topic	Page
Overview	21-1
Creating Cisco HDLC Interfaces	21-2

## Overview

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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, or CE1 – select a DS0 bundle
  - For T3-Frame or E3-Frame – select a line interface
- 2 Right-click, select Create, and click Cisco HDLC.

The Create Cisco HDLC dialog box appears.

A screenshot of a Windows-style dialog box titled "Lab04 - Create Cisco HDLC". The dialog box has a grey background and a blue title bar. It contains several input fields and a status section. The "Location:" section has two sub-sections: "Physical:" with the text "Module: CT3-3 port, Slot: 5, Port: 0, DS1 Channel: 2" and "Logical:" with the text "DS0BUNDLE: SERIAL5/0:2/1". Below these are three empty text boxes for "Name:", "Alias:", and "Ifindex:". To the right of these is a "Status:" section with "Operational:" (empty) and "Administrative:" set to "Up" in a dropdown menu. At the bottom left, there is an "HDLC Keep Alive:" field with the value "10" and a checkbox for "Down When Looped" which is unchecked. At the bottom right, there are "OK" and "Cancel" buttons.

- 3 Set the parameters. See Table 21-1.

**Table 21-1** 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. See *NMC-RX User Guide, Vol. 2, Chapter 6, Configuring IP*, for a full discussion of IP interfaces and addresses.

