CHAPTER 24

High-Level Data Link Control

This chapter describes the level of support that Cisco ANA provides for HDLC, as follows:

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Technology Description

Please see Part 1: Cisco VNEs in this guide for information about which devices support the various technologies.

HDLC

HDLC is a group of data link (Layer 2) protocols used to transmit synchronous data packets between point-to-point nodes. Data is organized into addressable frames. This format has been used for other multipoint-to-multipoint protocols, and inspired the HDLC-like framing protocol described in RFC 1662.

HDLC uses a zero-insertion/deletion process (bit stuffing) to ensure that the bit pattern of the delimiter flag does not occur in the fields between flags. The HDLC frame is synchronous and therefore relies on the physical layer (Layer 1) to clock and synchronize frame transmission and reception.

Information Model Objects (IMOs)

This section describes the following IMO:

- HDLC Encapsulation (IEncapsulation)

HDLC Encapsulation

The data link layer HDLC Encapsulation object is bound by its Containing Termination Points attribute to an ATM/Frame Relay VC Multiplexer object. It is accessed primarily by a network layer object, such as the IP Interface bound by its Contained Connection Termination Points attribute.

Table 24-1 HDLC Encapsulation (IEncapsulation)

Attribute Name	Attribute Description	Scheme	Polling Interval
Virtual Connection	Virtual connection	Any	Configuration
Binding Information	Binding information (*User Name*, …)	Any	Configuration
Binding Status	Binding status (*Not Bound, Bound*)	Any	Configuration
IANA Type	Internet Assigned Numbers Authority (IANA) type of the sublayer	N/A	N/A
Containing Termination Points	Underlying termination points (connection or physical)	Any	N/A
Contained Connection Termination Points	Bound connection termination points	Any	N/A

Vendor-Specific Inventory and IMOs

There are no vendor-specific inventory or IMOs for this technology.

Network Topology

Cisco ANA performs discovery of HDLC topologies by searching for the local IP subnet in any one-hop-away remote sides of the HDLC interfaces. In particular, it compares the local and remote IP subnets gathered from the upper IP Network layers.

Service Alarms

There are no faults or alarms specific to this technology.