

7 POINT-TO-POINT PROTOCOL

*Although HDLC is a general protocol that can be used for both point-to-point and multipoint configurations, one of the most common protocols for point-to-point access is the **Point-to-Point Protocol (PPP)**. PPP is a **byte-oriented** protocol.*

Topics discussed in this section:

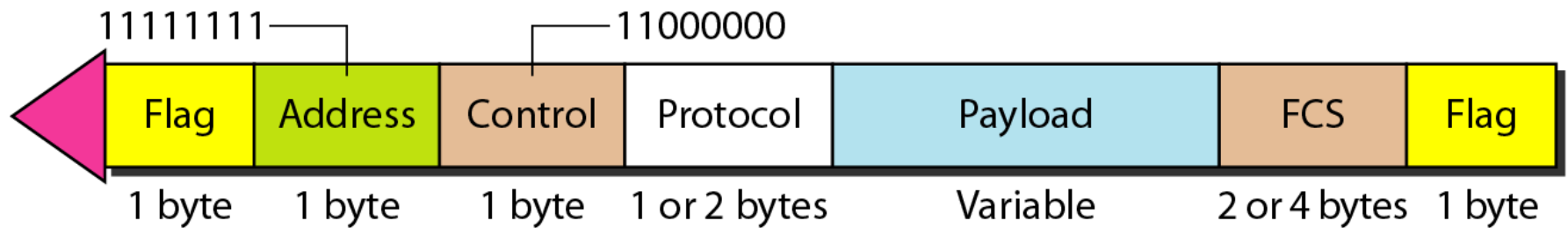
Framing

Transition Phases

Multiplexing

Multilink PPP

32 *PPP frame format*

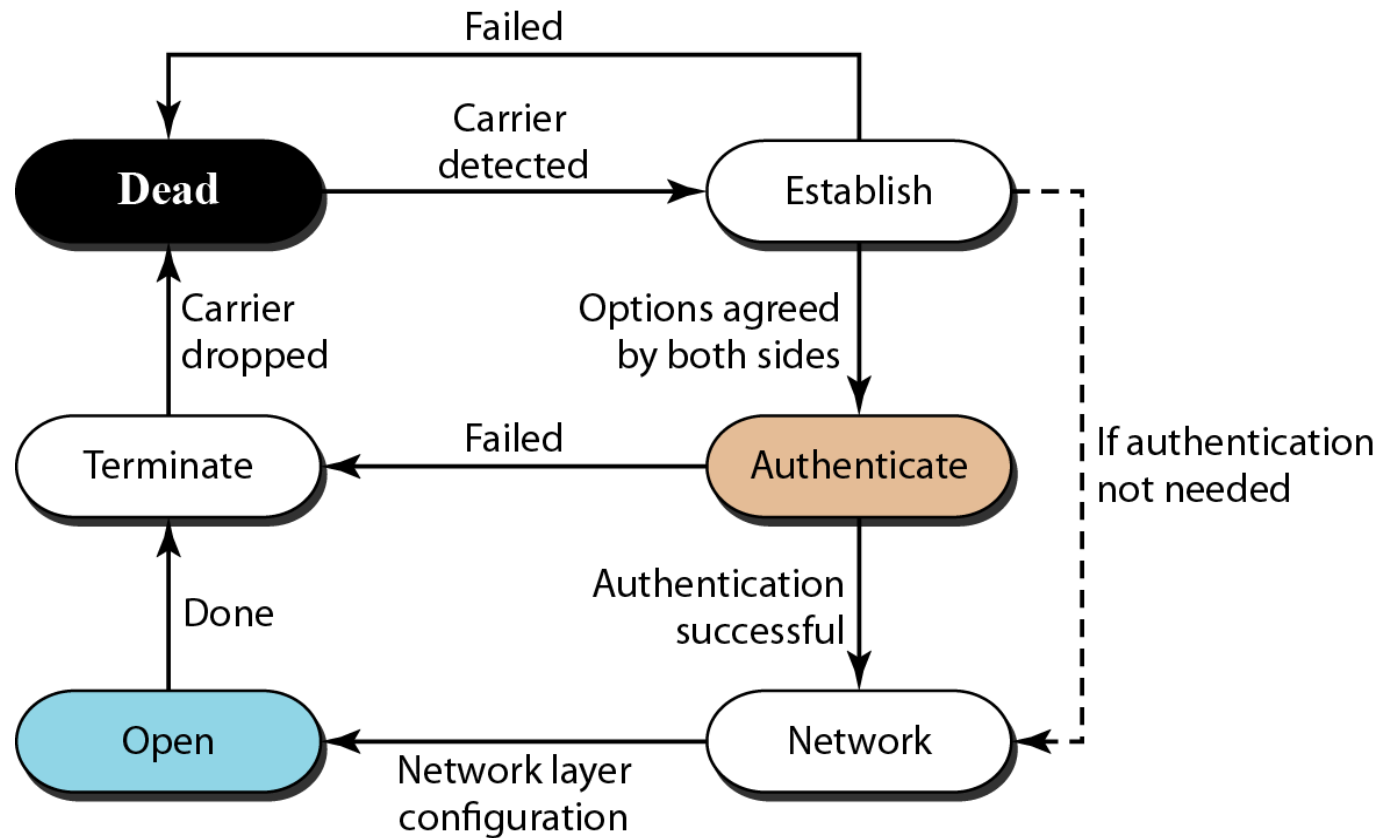




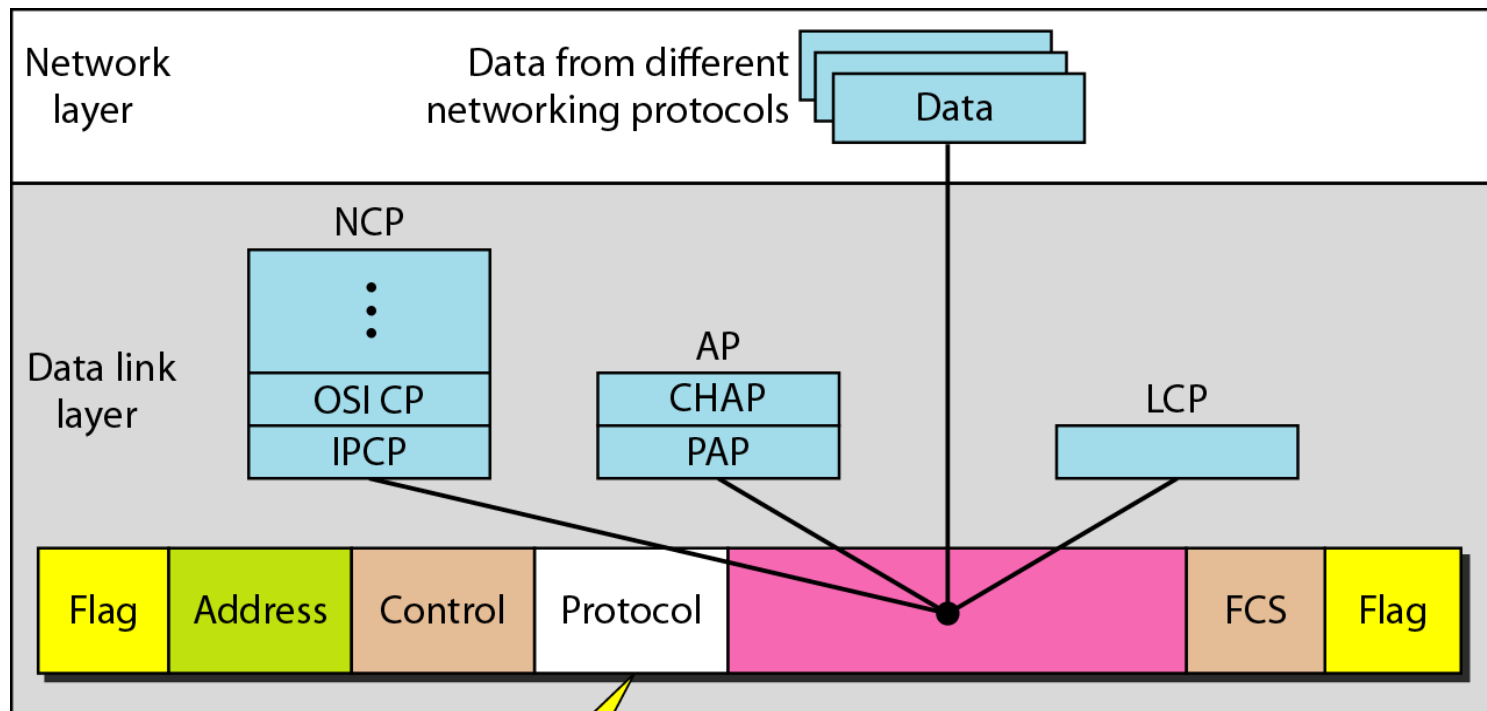
Note

PPP is a byte-oriented protocol using byte stuffing with the escape byte 01111101.

33 *Transition phases*



34 Multiplexing in PPP



LCP: 0xC021

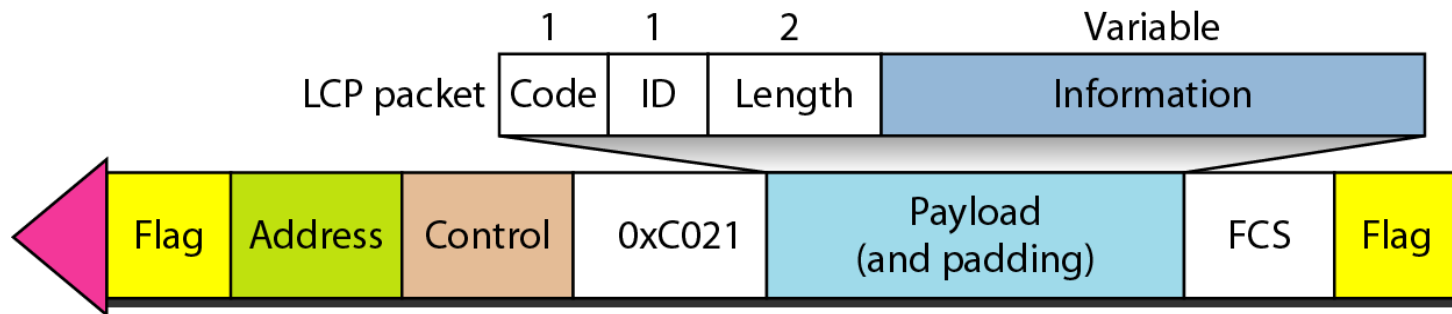
AP: 0xC023 and 0xC223

NCP: 0x8021 and

Data: 0x0021 and

LCP: Link Control Protocol
AP: Authentication Protocol
NCP: Network Control Protocol

35 *LCP packet encapsulated in a frame*



2 LCP packets

<i>Code</i>	<i>Packet Type</i>	<i>Description</i>
0x01	Configure-request	Contains the list of proposed options and their values
0x02	Configure-ack	Accepts all options proposed
0x03	Configure-nak	Announces that some options are not acceptable
0x04	Configure-reject	Announces that some options are not recognized
0x05	Terminate-request	Request to shut down the line
0x06	Terminate-ack	Accept the shutdown request
0x07	Code-reject	Announces an unknown code
0x08	Protocol-reject	Announces an unknown protocol
0x09	Echo-request	A type of hello message to check if the other end is alive
0x0A	Echo-reply	The response to the echo-request message
0x0B	Discard-request	A request to discard the packet

3 *Common options*

<i>Option</i>	<i>Default</i>
Maximum receive unit (payload field size)	1500
Authentication protocol	None
Protocol field compression	Off
Address and control field compression	Off

36 PAP packets encapsulated in a PPP frame

