

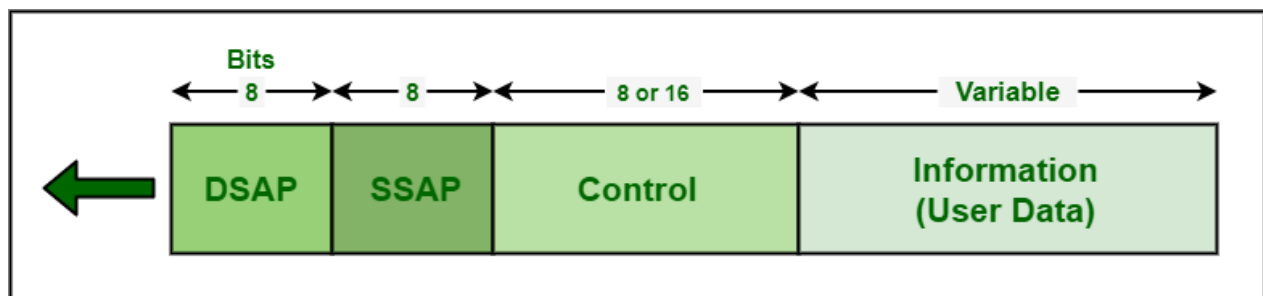


Logical Link Control (LLC) Protocol Data Unit

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Logical Link Control (LLC) is a sublayer that generally provides the logic for the data link as it controls the synchronization, multiplexing, flow control, and even error-checking functions of [DLL \(Data Link Layer\)](#). DLL is divided into two sublayers i.e. LLC sublayer and [MAC \(Medium Access Control\)](#) sublayer.

The basic model of LLC protocols is modeled after the [HDLC \(High-Level Data Link Control\)](#). These protocols are unacknowledged connectionless service, Connection-oriented service, and acknowledged connectionless service. All of these protocols use the same PDU (Protocol Data Unit) format as shown –



PDU Format



This PDU format basically contains 4 different fields given below –

1. Destination Service Access Point (DSAP) Field –

DSAP is generally an 8-bit long field that is used to represent the logical addresses of the network layer entity meant to receive the message. It indicates whether this is an individual or group address.

2. Source Service Access Point (SSAP) Field –

SSAP is also an 8-bit long field that is used to represent the logical addresses of the network layer entity meant to create a message. It indicates whether this is a command or response PDU. It simply identifies the SAP that has started the PDU.

3. Information Field –

This field generally includes data or information.

4. Control Field –

This field identifies and determines the specific PDU and also specifies various control functions. It is an 8 or 16-bit long field, usually depending on the identity of the PDU. It is used for flow and error control. There are basically three types of PDU. Each PDU has a different control field format. These are given below –

- **Information (I) –**

It generally includes 7-bit sequence number (N(S)) and also a

piggybacked sequence number (N(R)). It is used to carry data or information.

- **Supervisory (S) –**

It generally includes an acknowledgment sequence number (N(R)) and also a 2-bit S field for three different PDU formats i.e. RNR (Receive Not Ready), RR (Receive Ready), and REJ (Reject). It is generally used for flow and error control.

- **Unnumbered (U) –**

It is generally a 5-bit M bit that is used to indicate the type of PDU. It is used for various protocol PDUs.

Some functions of LLC Sublayer are –

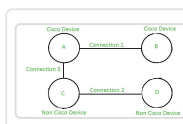
- It is responsible to manage and to ensure the integrity of data transmissions.
- They provide the logic for the data link.
- It also controls the synchronization, multiplexing, error checking or correcting functions, flow control of the DLL.
- It also allows multipoint communication over a range of computer networks.

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Last Updated : 17 Jun, 2021

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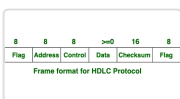
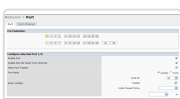

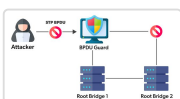




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