



# ETHERNET FRAMING

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|            |                               |          |
|------------|-------------------------------|----------|
| <b>A</b>   | <b>REFERENCE</b>              | <b>5</b> |
| <b>1</b>   | <b>Ethernet Framing</b>       | <b>6</b> |
| <b>1.1</b> | <b>Ethernet Framing Types</b> | <b>6</b> |
| 1.1.1      | Ethernet II                   | 6        |
| 1.1.2      | Ethernet LLC                  | 7        |
| 1.1.3      | Ethernet SNAP                 | 7        |
| 1.1.4      | Novell 802.3                  | 8        |
| 1.1.5      | Token Ring                    | 8        |



# REFERENCE

# 1 Ethernet Framing

## 1.1 Ethernet Framing Types

### 1.1.1 Ethernet II

The **en1** interface can be used for IP and IPX traffic. When using this interface, the following header information is added to the beginning of each data packet.

|   |  |  |  |
|---|--|--|--|
| <b>Destination MAC Address</b><br>(6 bytes) |  | <b>Source MAC Address</b><br>(6 bytes) |  |
| <b>Ethernet Type</b><br>(2)                 | <b>Data Field</b><br>( $\leq 500$ bytes) |  |  |
|   |  |  |  |

### 1.1.2 Ethernet LLC

The **en1-llc** interface can be used for X.25, IPX, and Bridging traffic. The following header is added to frames sent over this interface.

| Destination MAC Address<br>(6 bytes) |            |             |             | Source MAC Address<br>(6 bytes) |  |
|--------------------------------------|------------|-------------|-------------|---------------------------------|--|
| LLC Frame Length                     | Dest. LSAP | Source LSAP | LLC Control |                                 |  |
| (2)                                  | (1)        | (1)         | (1)         |                                 |  |
| Data Field<br>( $\leq 500$ bytes)    |            |             |             |                                 |  |

### 1.1.3 Ethernet SNAP

The **en1-snap** interface can be used for IP and IPX traffic. When using this interface, the following header is added to all frames.

| Destination MAC Address<br>(6 bytes) |            |             |             | Source MAC Address<br>(6 bytes) |               |  |
|--------------------------------------|------------|-------------|-------------|---------------------------------|---------------|--|
| LLC-Frame Length                     | Dest. LSAP | Source LSAP | LLC Control | 0,0,0                           | Ethernet Type |  |
| (2)                                  | (1)        | (1)         | (1)         | (3)                             | (2)           |  |
|                                      | 0xaa       | 0xaa        | 0x03        |                                 |               |  |
| Data Field<br>( $\leq 500$ bytes)    |            |             |             |                                 |               |  |

### 1.1.4 Novell 802.3

The **en1-nov802.3** interface is intended specifically for the IPX protocol. The following header is added to the beginning of IPX frames.

|   |                                       |   |  |
|---|---------------------------------------|---|--|
| <b>Destination MAC Address</b><br>(6 bytes) |                                       | <b>Source MAC Address</b><br>(6 bytes)        |  |
| <b>Frame Length</b><br>(2)                  | <b>IPX. Checksum</b><br>(1)<br>0xffff | <b>Data Field (IPX only)</b><br>(≤ 500 bytes) |  |
|   |                                       |   |  |

### 1.1.5 Token Ring

The **en1-tr** interface is intended specifically for token ring

|   |                                  |                                   |                                   |  |                             |  |
|---|----------------------------------|-----------------------------------|-----------------------------------|--|-----------------------------|--|
| <b>Destination MAC Address</b><br>(6 bytes) |                                  |                                   |                                   | <b>Source MAC Address</b><br>(6 bytes) |                             |  |
| <b>LLC-Frame Length</b><br>(2)              | <b>Dest. LSAP</b><br>(1)<br>0xaa | <b>Source LSAP</b><br>(1)<br>0xaa | <b>LLC Control</b><br>(1)<br>0x03 | <b>0,0,0</b><br>(3)                    | <b>Ethernet Type</b><br>(2) |  |
| <b>Data Field</b><br>(≤ 192 bytes)          |                                  |                                   |                                   |  |                             |  |