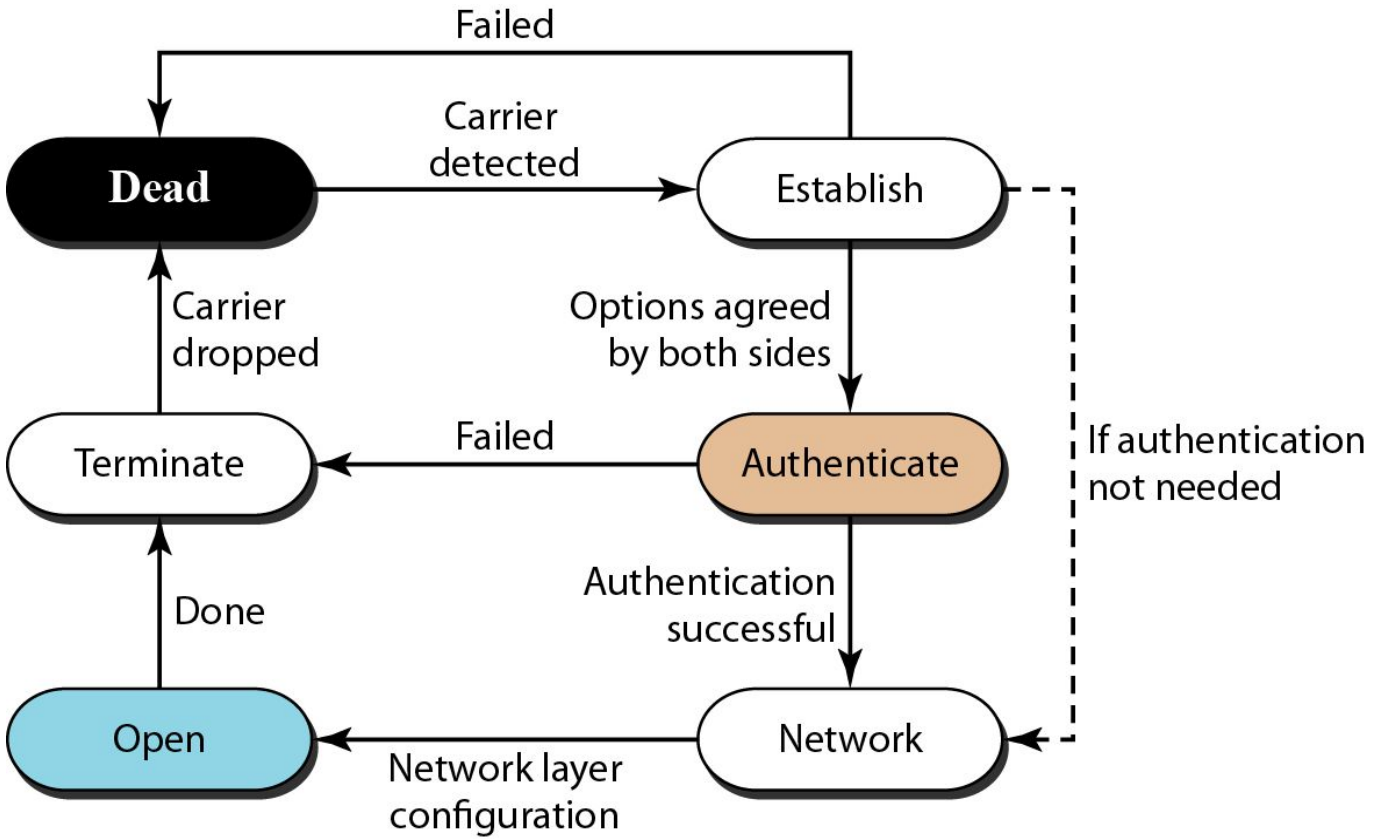
Point to point protocol

Transition Phases

- A Point to Point Protocol connection goes through different phases which can be shown in a transition phase diagram .
- Establish
- Authenticate
- Network
- Open
- Terminate
- Dead

Transition phases of PPP



Dead Phase

- In the dead phase the link is not being used. There is no active carrier (at the physical layer) and the line is quiet

Establish Phase(LCP)

- When one of the nodes starts the communication, the connection goes into this phase.
- In this phase, options are negotiated between the two parties. If the negotiation is successful, the system goes to the authentication phase (if authentication is required) or directly to the networking phase.
- The link control protocol packets, are used for this purpose.
- Several packets(11) may be exchanged here.

Authentication Phase

- Authentication phase is optional; the two nodes may decide, during the establishment phase, not to skip this phase. However, if they decide to proceed with authentication, they send several authentication packets.
- If the result is successful, the connection goes to the networking phase; otherwise, it goes to the termination phase.

Network Phase

- In the network phase, negotiation for the network layer protocols takes place.
- PPP specifies that two nodes establish a network layer agreement before data at the network layer can be exchanged.
- IPCP/Datagram services

Multiple protocols at the network layer.

- If a node is running multiple protocols simultaneously at the network layer, the receiving node needs to know which protocol will receive the data.
- **Open**. In the open phase, data transfer takes place. When a connection reaches this phase, the exchange of data packets can be started. The connection remains in this phase until one of the endpoints wants to terminate the connection.
- **Terminate**. In the termination phase the connection is terminated. Several packets are exchanged between the two ends for closing the link.