

Distinguish, differentiate, compare and explain what is the main difference between Datagram and Virtual circuit Subnet in the switching system. Comparison and Differences.

Difference between Datagram and Virtual circuit Subnet

1. In datagram, circuit setup is not needed. In the virtual-circuit subnet, circuit setup is required.
2. Each packet contains the full source and destination address in the datagram. Each packet contains a short VC number State information in the virtual circuit.
3. Routers do not hold state information about connections in the datagram. Each VC requires router table space per connection in the virtual circuit.
4. In datagram subnet, each packet is routed independently. In virtual circuit subnet, a route chosen when VC is set up; all packets follow it.
5. There is no effect of router failures except for packets lost during the crash. All VCs that passed through the failed router are terminated in virtual circuit subnet.
6. The Quality of service is difficult in datagram subnet. The Quality of service is easy in the virtual circuit if enough resources can be allocated in advance for each VC.
7. Congestion control is difficult in the datagram. Congestion control is easy if enough resources can be allocated in advance for each Virtual circuit.