

NETWORK SWITCHES

Network switches store data in a table called a MAC address table, also known as a Content Addressable Memory (CAM) table. The table maps the MAC addresses of connected devices to the switch ports they're connected to.

Process

When a switch receives a data packet, it reads the source address and maps the port number to the MAC address in the source field. It then checks the MAC address table to see if the destination MAC address is connected to the same switch. If it is, the switch forwards the data packet to the destination device's port. If not, the switch forwards the packet to a router, which then forwards it to its destination.

Benefits

Using MAC address tables improves network performance by directing data packets more efficiently