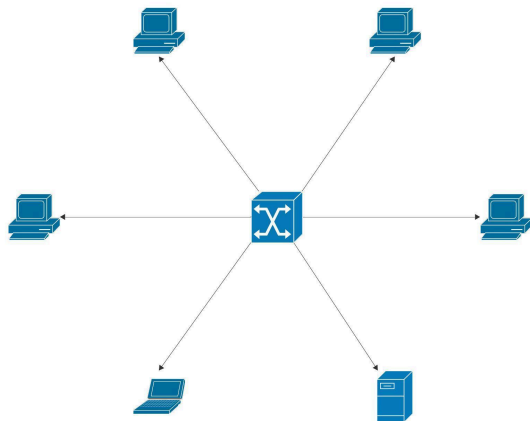


Report on LAN Topology

Local Area Network (LAN)

Connects devices within a limited geographic area, such as an office building, home, or school. LANs enable devices like computers, printers, and servers to communicate and share resources efficiently.



Star Topology

It's when all devices (nodes) are connected to a central device, typically a switch or hub. The central device manages communication between the nodes.

Explanation of LAN Topology and Benefits

1. Secure Communication:
 - The central switch controls which devices can talk to each other, ensuring only approved connections.
 - Sensitive data can be kept separate using special configurations.
 - Devices can use secure protocols like WPA3 or SSL to protect data.
2. Efficient Network Management:
 - Problems are easier to find and fix because each device connects directly to the switch.
 - Adding new devices is simple, making it easy to expand the network.
 - The switch can prioritize important tasks, ensuring the network runs smoothly.
3. Security Enhancements:
 - Each connection can be locked to specific devices to prevent unauthorized access.
 - A firewall can protect the entire network from outside threats.
 - Regular updates keep the system safe from new vulnerabilities.