IBM i 6.1 ∨

Products

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Token-ring networks

A *token-ring* network is a local area network (LAN) topology that sends data in one direction throughout a specified number of locations by using a token.

The token is the symbol of authority for control of the transmission line. This token allows any sending station in the network (ring) to send data when the token arrives at that location.

Stations in a token-ring network are physically connected, typically in a star-wired ring topology, to a wiring concentrator such as the IBM® 8228 Multistation Access Unit. The concentrator serves as a logical ring around which data is transmitted at 4 million, 16 million, or 100 million bits per second (Mbps). Each station is connected to the concentrator typically by shielded twisted pair (STP) cabling.

Full-duplex token ring

In full-duplex token ring, which is also called DTR (dedicated token ring), switching hubs enable stations to send and receive data on the network simultaneously. A token-ring switching hub divides the network into smaller segments. When a station transmits its data packet, the token-ring switch reads the packet's destination address information and forwards the data directly to the receiving station. The switch then establishes a dedicated connection between the two stations, enabling data to be transmitted and received at the same time. In full-duplex token ring, the token-passing protocol is suspended. The network in effect becomes a 'tokenless' token ring. Full-duplex token ring increases sending and receiving bandwidth for connected stations, improving network performance.

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