## STP

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This past week I started learning about the Spanning Tree Protocol, a protocol used to eliminate Layer 2 loops in a network. The issues avoided by using Spanning Tree Protocol include MAC database instabilities, Broadcast Storms, and Multiple Frame Transmissions. MAC database instability is when a loop causes a MAC address table in a switch up MAC addresses due to the constant updates from broadcast frames. When all the bandwidth in the network is consumed due to excessive broadcast frames there is a broadcast storm. Unicast frames sent on a looped network can cause duplicate frames arriving at a destination device. The Spanning Tree Protocol aims to eliminate the chances of these issues arising. Spanning Tree Protocol works by setting different ports on a series of switches into 3 main types: Root Ports, Designated Ports, and Alternate Ports. In a spanning tree enabled network architecture a switch is designated as the Root Switch, which is used to decide the paths packets will take. The root bridge is decided by finding the switch with lowest priority ID and if there are equal priority ID's then the devices with the lowest MAC address is then chosen as the root. Then the protocol determines which ports are what type and how to make sure that the network works at max efficiency with proper load balancing. Overall learning about the protocol that allowed redundancy path to work without causing issues gave me exposure on more enterprise level network architectures; I look forward to learning about the different types of Spanning Tree Protocols.