IPv4 to IPv6 Transition

- IPv6 is not natively backward compatible with IPv4.
- To aid in the transition, as well as to allow IPv4 and IPv6 to co-exist, there are two transition technologies you need to know:
  - Dual IP Stack
  - Tunneling

IPv4 to IPv6 Compatibility

Dual IP Stack

- When both IPv4 and IPv6 protocols co-exist within an operating system.

- Can be used independently or together.

Tunneling

- Tunneling is when we encapsulate IPv4 into IPv6 data and vice versa:

    o 4to6

    o 6in4

    o Teredo

    o Miredo

Tunneling Protocols

- **4to6:** Encapsulates IPv4 data into an IPv6 Tunnel
- **6in4:** Encapsulates IPv6 data into an IPv4 Tunnel and can traverse IPv4 NAT.
- **Teredo:** Microsoft Windows IPv6 tunneling protocol similar to 6in4 that supports NAT.
- **Miredo:** A Linux and Unix-based open-source version of Teredo.

IPv4 and IPv6 Supported | Only IPv4 or IPv6 Supported | IPv4 and IPv6 Supported

Tunnel