

DAY 11 - Routing Fundamental

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Routing Fundamental

What is Routing

1. Routing is the process that routers use to determine the path that IP packets should take over a network to reach their destination.
 - (a) Routers store routes to all of their known destinations in a **Routing Table**.
 - (b) When routers receive packets, they look in their **Routing Table** to find the best route to forward that packet.
2. There are *two* main routing methods (methods that routers use to learn routes):
 - (a) **Dynamic Routing**: Routers use Dynamic Routing Protocols (eg. **OSPF**) to share routing information with each other automatically and build their routing tables.
 - (b) **Static Routing**: A network engineer/admin manually configures routes on the router.
3. A route tells the router: **To send a packet to Destination X** , **it should send the packet to Next Hop Y** .
 - (a) Or, if the destination is directly connected to the router, send the packet directly to the **Destination**.
 - (b) Or, if the destination is the router's own IP address, then **Receive the Packet for Yourself** (and don't forward).

Example Topology: