**The Switch**

**What is a switch?**

* Commonly used networking device that takes packets in and redirects them to their next step in the hop
  + A hop is destination network device
* A switch can have anything from 2-100+ ports
  + Modem or router are acting as switches
* Each physical port has a network medium attached with nodes on the other side

**How it works**

* Packet comes in and the switch will look at the IP header to find a dst
* If the dst IP is assigned to one of the switches other ports, it will send the packets physically down that port to the dst
  + Looks at IP and MAC for routing, like an Iptables
* If the dst IP/MAC cant be found locally, the packets will be sent down the uplink port to a higher order switch to continue to look for the dst
  + This continues until it reaches the Top of Rack (ToR) switch, which is like the master switch and will either find the dst or drop the packets