AS (Autonomous System)

- Autonomous = Independent Entity (*Organization*)
  - University, Corporation, Governmental Agency
- Routers are usually part of an Autonomous System (AS)
  - IP routes under common control

- An **AS** is a connected group of one or more IP prefixes run by one or more network operators with a **single** and **clearly defined** routing policy (*Single Organization*)

- Important point of reference for discussing Interior Gateway Protocols (IGP) and Exterior Gateway Protocols (EGP)

IGP (Interior Gateway Protocol)

- Used within a single AS (*Your Organization*)
  - Not intended to route between Autonomous Systems
    - That's why there's Exterior Gateway Protocols (EGPs)

- IGP Protocols
  - RIP (Routing Information Protocol)
  - OSPF (Open Shortest Path First)
  - EIGRP (Enhanced Interior Gateway Routing Protocol)

EGP (Exterior Gateway Protocol)

- Used to route between Autonomous Systems
  - Internet Service Providers (ISPs)

- BGP (Border Gateway Protocol)
  - Almost all ISPs uses BGP as their EGP

EGP & IGPs Working Together