

What is IGP and EGP?

Routing protocols are classified based on **where they are used**:

IGP (Interior Gateway Protocol)

Used **within a single organization or autonomous system (AS).

An **Autonomous System (AS)** is a network (or group of networks) under one administrative control (like a company or university).

Key Points:

- Works **inside** a network (intra-domain)
- Fast convergence, lower complexity
- Designed for **enterprise LANs or WANs**

◆ Examples of IGPs:

Protocol	Type	Description
RIP	Distance Vector	Simple, old, max 15 hops
OSPF	Link State	Uses cost metric, fast, scalable
EIGRP	Hybrid (Cisco)	Combines best of RIP and OSPF
IS-IS	Link State	Used in large ISPs and service nets

EGP (Exterior Gateway Protocol)

Used to route between different autonomous systems (AS).

Think of it as routing **between** large networks — like ISPs talking to each other.

Key Points:

- Works **between networks** (inter-domain)
- Needed for **internet-scale routing**
- More complex and scalable

◆ Main EGP:

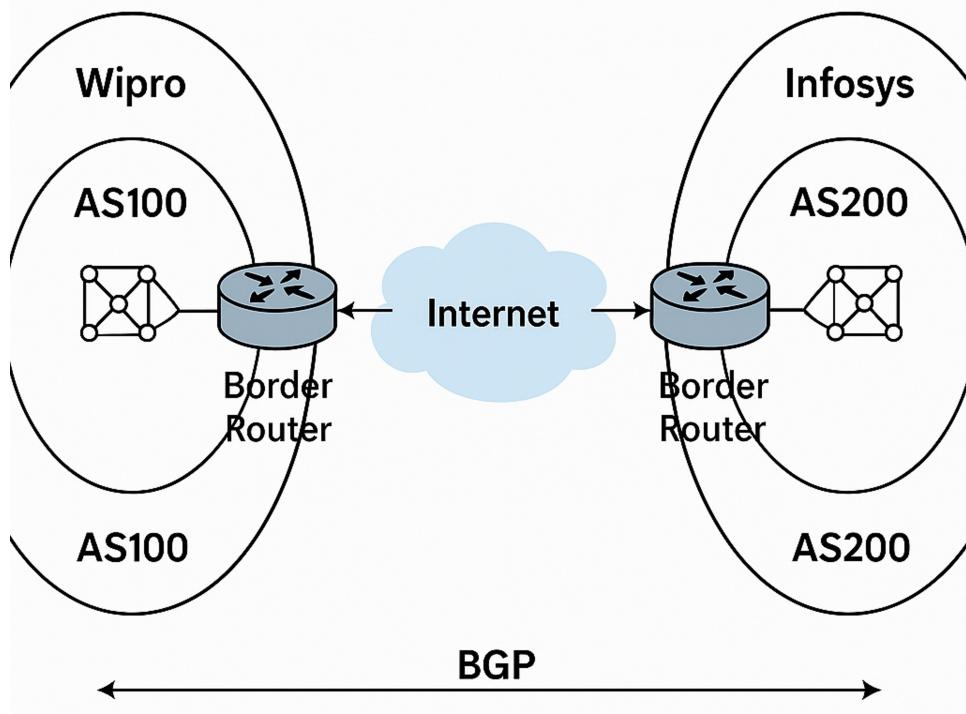
Protocol	Description
BGP (Border Gateway Protocol)	The only EGP in use today. Manages routing between ISPs and large organizations on the internet . Uses path attributes instead of metrics.

EGP Example: Wipro ↔ Infosys Communication

Wipro

Infosys

EGP Example: Wipro ↔ Infosys Communication



IGP vs EGP Summary

Feature	IGP	EGP
Scope	Inside one organization	Between organizations
Example Protocols	RIP, OSPF, EIGRP, IS-IS	BGP
Speed	Fast convergence	Slower convergence
Use Case	Enterprise routing	Internet/ISP routing



Real World Analogy:

- IGP = Local delivery trucks managing packages **within a city**
- EGP = National logistics company routing packages **between cities**