



# ROUTING PROTOCOLS

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## STATIC ROUTING

## DYNAMIC ROUTING

### IGP

Interior Gateway Protocols  
Used to exchange routing info with routers  
in the same autonomous system

### EGP

Exterior Gateway Protocol  
Used to communicate between multiple  
autonomous systems

### BGP

Border Gateway Protocol  
Designed to exchange routing  
& reachability info among  
autonomous systems

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### DISTANCE VECTOR

Measures the distance by the number of  
hops & distributed Algorithm

#### ROUTING INFO PROTOCOL

RIP-V1; Classful, max hops:15, distance value:120  
broadcast & no authentication.  
RIP-V2; Classless, Subnet masks included in routing  
tables, multicasted & supports authentication

#### IGRP

Interior Gateway routing protocol  
(Cisco proprietary)

### LINK STATE

Router originates info about itself,  
connection & state of links &  
posses complete network topology

#### OSPF

Open Shortest Path First  
Used in single AS, no limit hops, load  
balancing, multicast, routing authentication &  
supports virtual links. Sends "Hello" packets,  
supports CDIR and VLSM variable subnet  
length masking

#### IS-IS

Intermediate System-IS  
No virtual links support. Operates  
over L2, more flexible than OSPF

## HYBRID

### BGP

Border Gateway Protocol  
(Designed to exchange routing  
& reachability info among  
autonomous systems)

### EIGRP

Enhanced Interior Gateway Routing Protocol  
(Cisco proprietary)  
Automates routing config & decisions on  
networks. Replaces IGRP, lack of classless IPv4