ROUTING INFORMATION PROTOCOL

Routing Protocols

```
Routing Protocols
├── Static
├── Default
└── Dynamic
    ├── IGP
    │   ├── Distance Vector
    │   │   ├── RIP
    │   │   └── IGRP
    │   ├── Link State
    │   │   ├── OSPF
    │   │   └── ISIS
    │   └── Hybrid
    │       └── EIGRP
    └── EGP
        └── Path Vector
            └── BGP
```
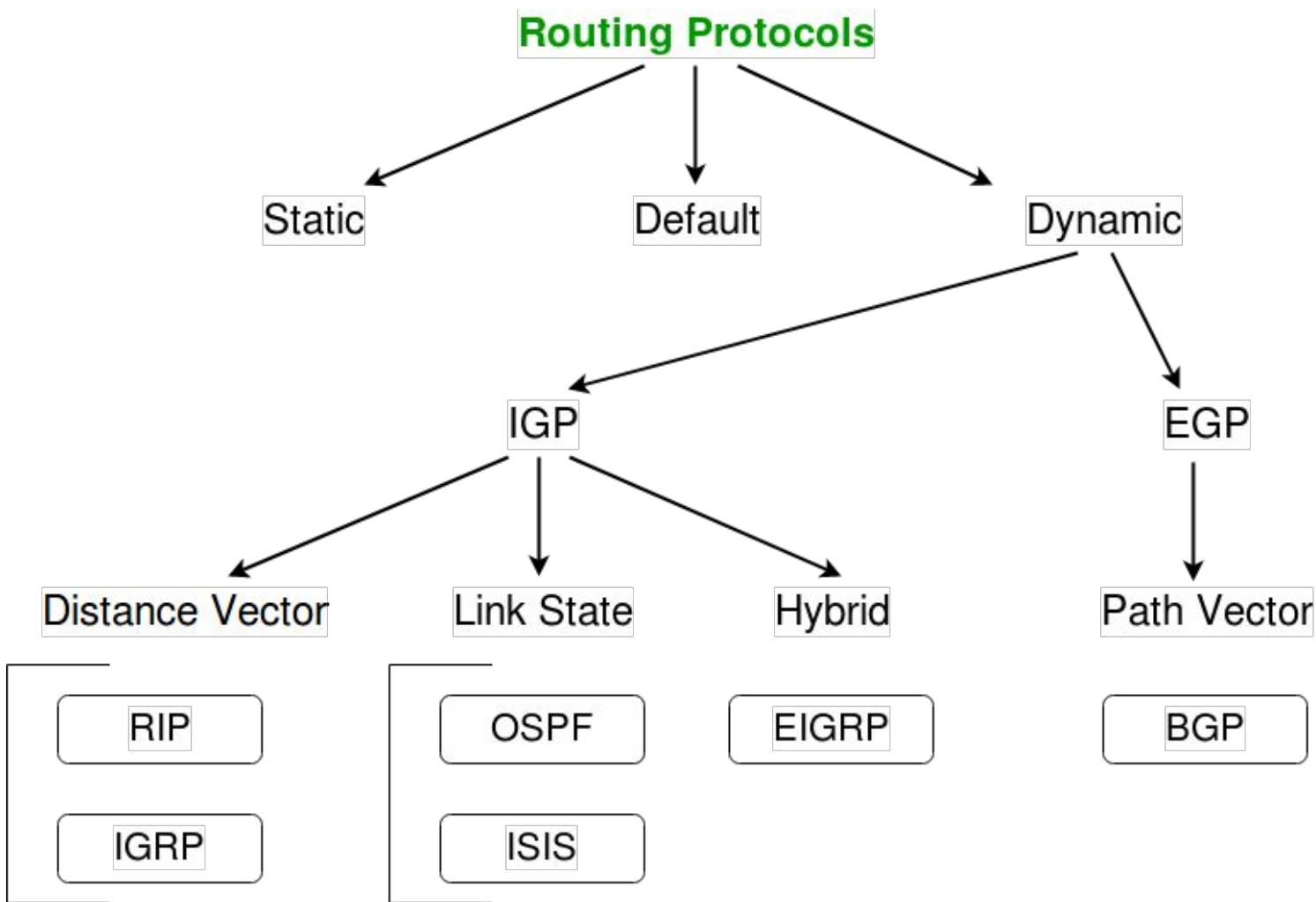
Overview

RIP (Routing Information Protocol) is one of the oldest distance vector protocol routing protocols, invented in the 1980s. It uses the hop count (the number of routers between the source and destination network) as the metric and is very simple to configure. Two versions of the protocols were developed:

- **RIP version 1** – supports only classful routing and doesn't send subnet masks in routing updates. Uses broadcasts for updates.
- **RIP version 2** – supports classless routing and sends subnet masks in routing updates. This version uses the multicast address of **224.0.0.9** to send routing updates.

RIP has a default **administrative distance** of **120**. It sends the entire routing table every **30 seconds**, which can consume a lot of network bandwidth. The hop count limit is **15**. Any route with a higher hop count will be marked as unreachable.
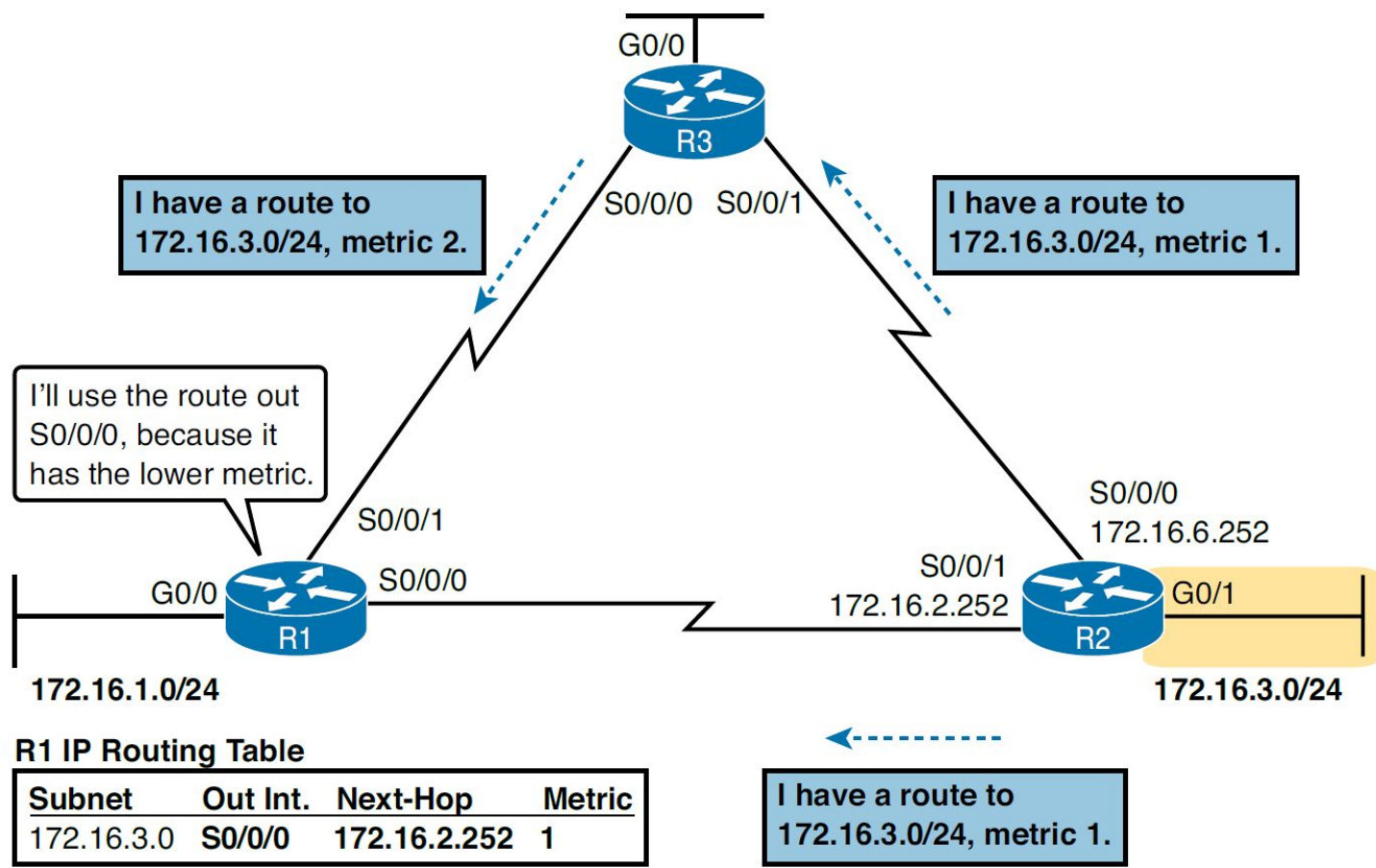
Figure 17-1 *Three of the Four Basic Functions of Routing Protocols*