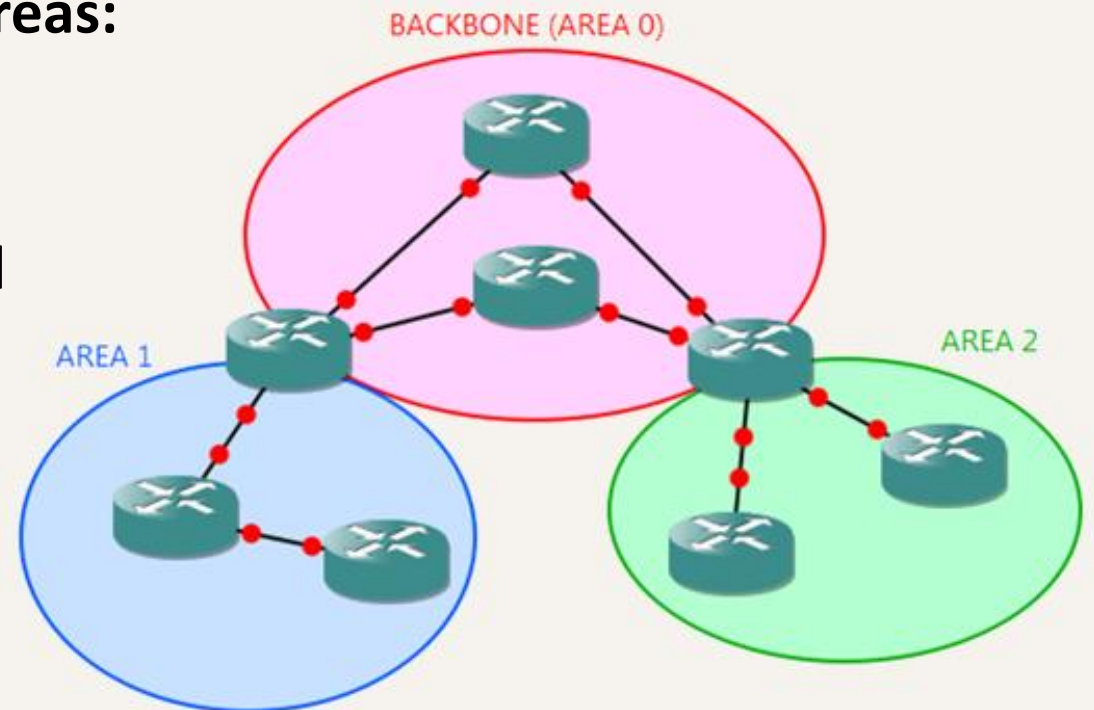# OSPF
Open Shortest Path First
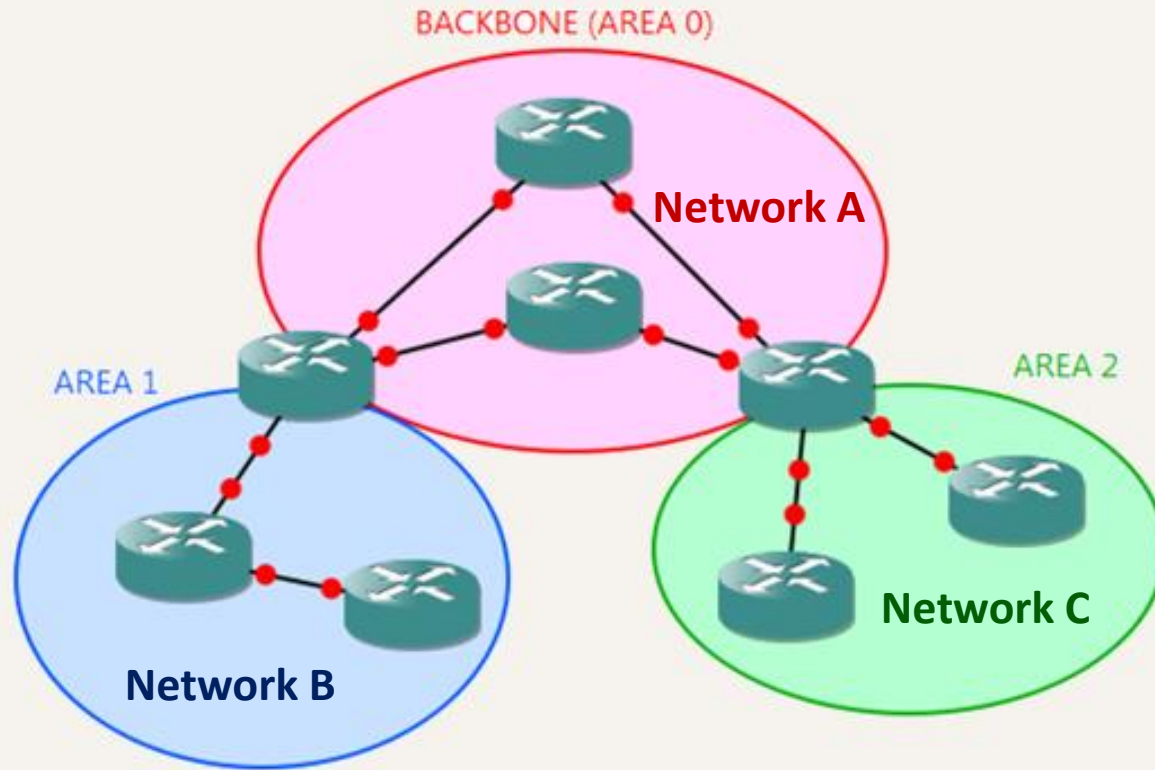
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OSPF Areas

An OSPF area is a logical grouping of contiguous networks and routers, and all routers within the same area share the same topology. Only border routers (ABRs) are aware of topologies in the two (or more) areas they're connecting.

Reasons to segment an OSPF network into areas:

- Reduces the size of routing tables
- Faster convergence
- Less calculation during route discovery and fulfillment of the routing table
  $\Rightarrow$ greater scalability
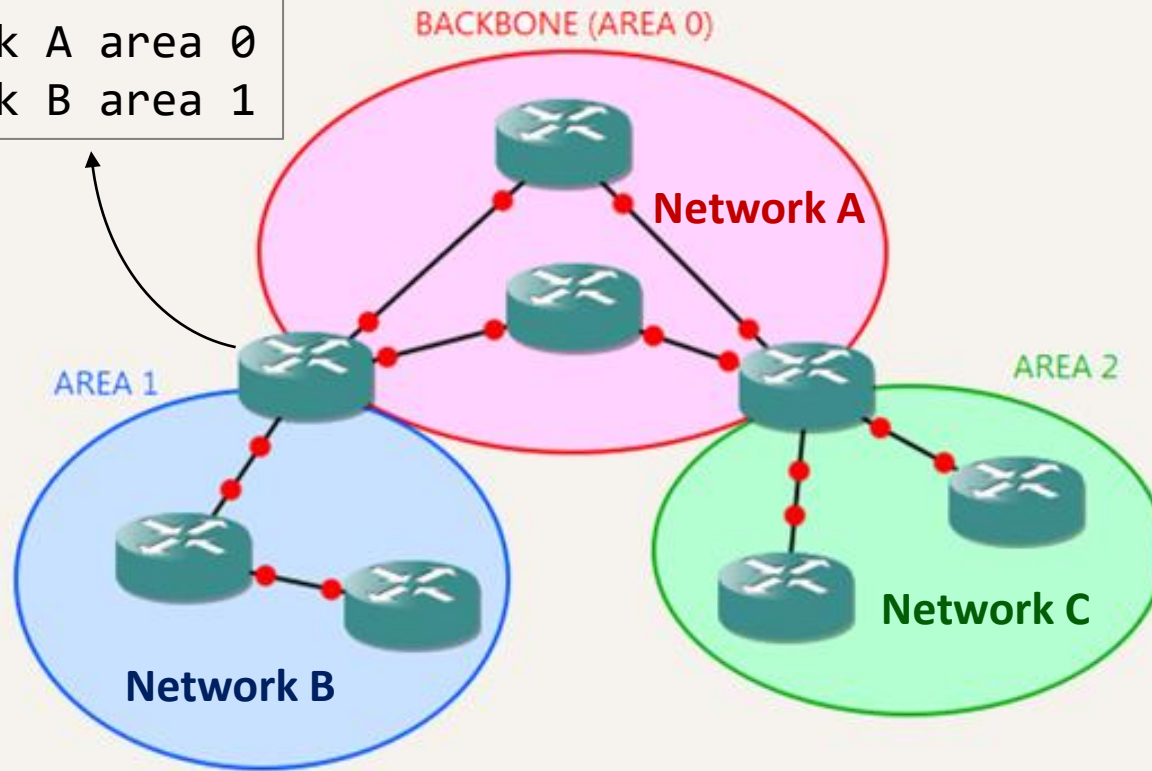- Easier to troubleshoot

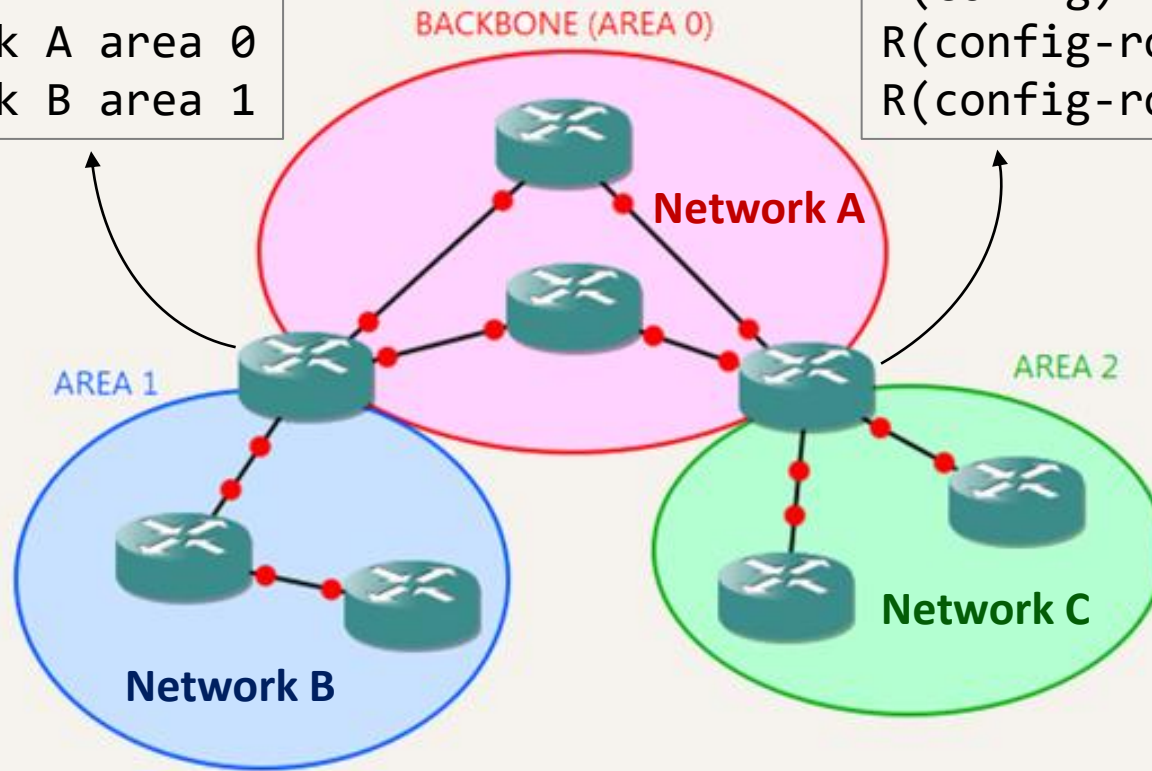# OSPF Areas Configuration

OSPF Areas Configuration

```
R(config)# router ospf 1
R(config-router)# network A area 0
R(config-router)# network B area 1
```

OSPF Areas Configuration


```
R(config)# router ospf 1
R(config-router)# network A area 0
R(config-router)# network B area 1
```

```
R(config)# router ospf 1
R(config-router)# network A area 0
R(config-router)# network C area 2
```

BACKBONE (AREA 0)

Network A

AREA 1

AREA 2

Network C
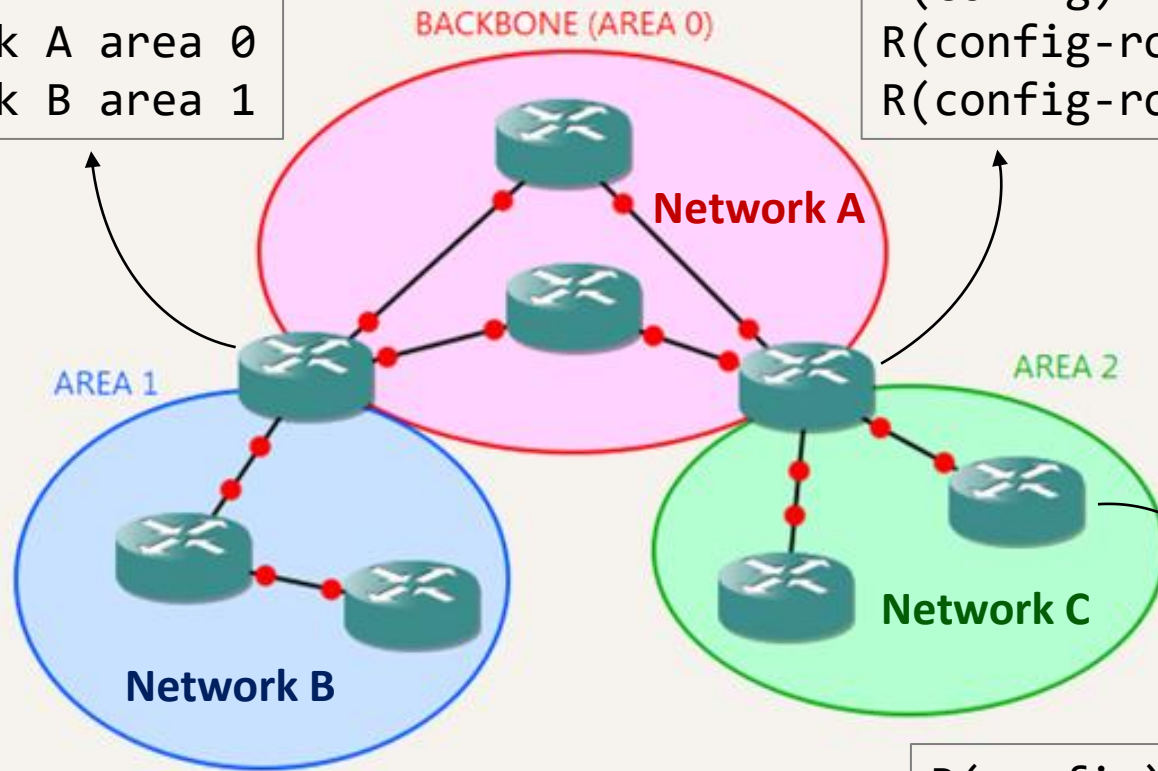
Network B

OSPF Areas Configuration

```
R(config)# router ospf 1
R(config-router)# network A area 0
R(config-router)# network B area 1
```

```
R(config)# router ospf 1
R(config-router)# network A area 0
R(config-router)# network C area 2
```

BACKBONE (AREA 0)

Network A

AREA 1

AREA 2

Network C

Network B

```
R(config)# router ospf 1
R(config-router)# network C area 2
```

OSPF
Open Shortest Path First

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