eBGP Cheat Sheet for Cisco Beginners

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This is a generic cheat sheet and not for a specific use case.

What is eBGP?

External BGP (eBGP) is used to exchange routing information between different Autonomous Systems (AS). It's the protocol that runs the internet, connecting ISPs and organizations.

Basic eBGP Configuration

Enable BGP Process

```
Router(config)# router bgp [local-AS-number]
```

Configure eBGP Neighbor

```
Router(config-router)# neighbor [neighbor-ip] remote-as [remote-AS-number]
```

Advertise Network

```
Router(config-router)# network [network] mask [subnet-mask]
```

Complete Basic Example

Router A (AS 100)

```
Router(config)# router bgp 100
Router(config-router)# neighbor 203.0.113.2 remote-as 200
Router(config-router)# network 192.168.1.0 mask 255.255.255.0
Router(config-router)# network 10.1.1.0 mask 255.255.255.0
```

Router B (AS 200)

```
Router(config)# router bgp 200
Router(config-router)# neighbor 203.0.113.1 remote-as 100
Router(config-router)# network 172.16.1.0 mask 255.255.255.0
Router(config-router)# network 10.2.2.0 mask 255.255.255.0
```

Essential Show Commands

View BGP Neighbors

```
Router# show ip bgp neighbors
Router# show ip bgp summary
```

View BGP Table

```
Router# show ip bgp
```

View BGP Routes

```
Router# show ip route bgp
```

Key Points

- **AS Numbers**: Must be different for eBGP neighbors

- **Direct Connection**: eBGP neighbors are usually directly connected

- **Administrative Distance**: eBGP routes have AD of 20

- **Network Command**: Only advertises networks that exist in routing table

- **Route Code**: BGP routes show as "B" in routing table

Basic Verification

Check Neighbor Status

```
Router# show ip bgp summary
```

Look for "Established" state

Verify Advertised Networks

```
Router# show ip bgp
```

Look for ">" symbol indicating best path

Remember: eBGP neighbors must have different AS numbers and the advertised networks must exist in the routing table!