Title: BGP Protocol Network Topology

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Overview:

This document describes a BGP (Border Gateway Protocol) network topology comprising three cities: **Delhi**, **Mumbai**, and **Pune**. Each city uses BGP for inter-city communication across different Autonomous Systems (AS). Below are the detailed IP addresses, router configurations, and the relationships between the routers across different cities.

Cities and Autonomous Systems:

- **Delhi City**: AS 100
- **Mumbai City**: AS 200
- **Pune City**: AS 300

Router Configuration Summary:

Delhi City (AS 100)

- **Router3 Configuration**:
    - Interface `Fa0/0`, IP: `192.10.1.10`
    - Interface `Se0/1/0`, IP: `192.10.3.1` (BGP Neighbor: `192.10.3.2` in AS 200)
    - BGP Configuration:

      ```css
      Copy code
      router bgp 100
      network 192.10.1.0 mask 255.255.255.0
      network 192.10.3.0 mask 255.255.255.0
      neighbor 192.10.3.2 remote-as 200
      ```

- **Devices**:
    - PC0: `192.10.1.1` / 24
    - PC1: `192.10.1.2` / 24

Mumbai City (AS 200)

- **Router1 Configuration**:
    - Interface `Fa0/0`, IP: `192.10.10.1`
    - Interface `Se0/1/0`, IP: `192.10.3.2` (BGP Neighbor: `192.10.3.1` in AS 100)
    - Interface `Se0/1/1`, IP: `192.20.2.2` (BGP Neighbor: `192.20.2.1` in AS 300)
    - BGP Configuration:

    ```css
    Copy code
    router bgp 200
    network 192.10.20.0 mask 255.255.255.0
    network 192.10.30.0 mask 255.255.255.0
    network 192.10.3.0 mask 255.255.255.0
    neighbor 192.10.3.1 remote-as 100
    neighbor 192.20.2.1 remote-as 300
    ```

- **Devices**:
    - PC4: `192.10.2.1` / 24
    - PC5: `192.10.2.2` / 24

Pune City (AS 300)

- **Router11 Configuration**:
    - Interface `Se0/3/1`, IP: `192.20.2.1` (BGP Neighbor: `192.20.2.2` in AS 200)
    - BGP Configuration:

    ```css
    Copy code
    router bgp 100
    network 192.20.1.0 mask 255.255.255.0
    network 192.20.2.0 mask 255.255.255.0
    neighbor 192.20.2.2 remote-as 200
    ```

- **Devices**:
    - PC2: `192.20.1.1` / 24
    - PC3: `192.20.1.2` / 24

WAN Links:

- **BGP WAN**: Connects Delhi, Mumbai, and Pune using different Autonomous Systems for efficient routing.