BGP Operations and Security

Border Gateway Protocol plays a central role in the functioning of the Internet. It is important to have a full understanding of the protocol and the security measures that should be deployed to prevent accidental or intentional routing disturbances.

**Goals**

- Connect enterprises and operators to the Internet
- Describe how BGP works
- List, describe and configure the main BGP attributes
- Implement and troubleshoot BGP
- Influence traffic paths with BGP
- Implement Best Current Operational Practices (BCOP) for BGP
- Implement filtering using the Internet Routing Registry (IRR) and Resource Certification (RPKI)

**Pre-requisites**

- For this course you should have:
  - Good knowledge of the TCP/IP and IP routing
  - Basic understanding of the Classless Inter-Domain Routing (CIDR)
  - Basic experience in creating and updating objects in the RIPE Database

**Course Content**

**Day 1**

- Introduction to BGP
  - Exercise: Connecting Outside
- BGP Operations
  - Exercise: Connecting Customers
- BGP Attributes
- Traffic Engineering
  - Exercise: Using Attributes
- BGP Scalability
  - Exercise: Using a Route Reflector
- Multiprotocol BGP
  - Exercise: Multiprotocol BGP

**Day 2**

- Routing Security
- Filtering
  - Exercise: Defining Filters
- IRR
  - Exercise: Describing Your Routing Policy
- RPKI and BGPSEC
  - Exercise: Enabling RPKI
- BGP Software
- Tips & Tricks

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