# 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.

## Course Content

### Day 1

- Introduction to BGP
  - Exercise: Your First BGP Session

- Running BGP
  - Exercise: Connecting BGP Customers

- BGP Attributes

- Traffic Engineering
  - Exercise: Using Attributes

- iBGP Scalability
  - Exercise: Using a Route Reflector

- Multiprotocol BGP
  - Exercise: Multiprotocol BGP

### Day 2

- Routing Security

- Internet Routing Registry (IRR)
  - Exercise: Create Route(6) Objects

- Filtering
  - Exercise: Defining Filters

- RPKI
  - Exercise: Creating ROAs
  - Exercise: Adding More Specific ROAs
  - Exercise: Running Validators
  - Exercise: Setting up BGP Origin Validation
  - Exercise: Announcing a ROA-Validated prefix

- What else?

- BGP Tips & Tricks

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## 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

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