

# 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

- Online courses: [academy.ripe.net](https://academy.ripe.net)
- Training Services: [www.ripe.net/support/training](https://www.ripe.net/support/training)
- Contact us: [training@ripe.net](mailto:training@ripe.net)