This one-day course provides an overview of the most relevant BGP routing security topics. The participant will gain insight into industry best practice and gain a high-level understanding of the most pressing BGP security concerns today. The course includes theory and hands-on exercises.

**Goals**
- Identify the causes of BGP incidents, their types and their impact
- Identify the recommended security measures for preventing accidental and intentional BGP routing incidents
- Identify the purpose of BGP filtering and how it can be used to improve BGP routing security
- Identify the purpose of the IRR and how it can be used to improve BGP routing security
- Identify the purpose of RPKI and how it can be used to improve BGP routing security
- Validate BGP announcements by using RPKI information (BGP OV)

**Pre-Requisites**
- Ability to use a CLI to configure routers
- For this course you should know about:
  - TCP/IP and IP routing
  - Classless Inter-Domain Routing (CIDR)
  - BGP protocol, BGP attributes, and BGP communities
  - BGP routing relationships: Peer, Provider, IXP peering, Customer

**Course Content**
- **Introduction**
- **The Need for BGP Security**
  - Is BGP Secure?
- **Analyse BGP Threats and Attacks**
  - Vulnerabilities of the BGP Protocol
  - Causes of BGP Incidents
- **BGP Security Measures**
  - Protection of BGP Sessions
  - *Exercise: Securing BGP Sessions*
  - Implementing Route Filtering
  - *Exercise: Creating BGP Prefix Filters*
  - *Exercise: Filtering AS-Path and number of prefixes*
  - Registering in the IRR System
  - *Exercise: Creating Route(6) Objects*
  - Implementing RPKI
  - *Exercise: Creating ROAs*
  - *Exercise: BGP Origin Validation with RPKI*
- **Next Steps for BGP Routing Security**
- **Best Practices**

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