BLUEMARK ACADEMY

Network Automation with Python Fundamentals

Duration: 3 Days · **Training format:** Virtual Classroom / Online

Description

This 3-day course provides a comprehensive, hands-on introduction to network automation using Python. In addition to leveraging REST APIs, the course covers how to work with data formats such as YAML and JSON, as well as the basics of Python programming.

Delegates will learn

- Pulling data from your network devices
- Automating interface error reports
- Create your own subnet calculator
- Understand the inner workings of Python objects
- Using REST APIs to collect network data
- Working with JSON and YAML data formats in your Python scripts
- Running automated code quality checks, including syntax and security verification

Outline

Introduction to Network Automation

- Network automation
- Principles of network automation

Python

- Introduction to Python
- Installing packages
- Virtual environments
- Scripts, modules, packages, and libraries
- Python data types
- Conditional statements
- Loop/Iteration
- User logins
- Exceptions

- Context managers
- Functions
- Classes
- Network libraries (ipaddr, rich and netmiko)
- Data Frames
- Best practices
- Linting and formatting

APIs

- Introduction to APIs
- Introduction to REST APIs
- HTTP methods, responses, authentication
- Introduction to Python requests module

Data Types

- YAML
- JSON