Python for Network Engineers

Duration 3 Days

COURSE DESCRIPTION

This course introduces the student to the Python language. Upon completion of this class, the student will be able to write non-trivial Python programs dealing with a wide variety of subject matter domains. Topics include language components, working with a professional IDE, control flow constructs, strings, I/O, collections, classes, modules, and regular expressions. The course is supplemented with many hands-on labs, solutions, and code examples.

COURSE OBJECTIVES

After completing this course, you should be able to:

- Describe use cases and examples of the value of network programmability.
- Develop Python applications to automate redundant tasks such as remotely connect to multiple network devices, read, write, and/or save configuration changes simultaneously, and backing up configuration files to a centralized location.
- Use Python to communicate to individual network devices, using examples of real-world networking communication and operations.
- Gaining knowledge about Python and adapt to the advanced Python training courses or real-world working.

COURSE OUTLINE

1) Basic Programming in Python
   - Installing and Preparing Environment
   - String and Console Output
   - Variable and Data type
   - Operators
   - Decosopm & Loop
   - Functions
   - Modules & Package
   - File I/O
   - Error & Exception
   - Regular Expression

2) Python Design
   - Object-Oriented in Python
   - Class
   - Encapsulation
   - Inheritance
   - Polymorphism

3) Python Module for Network Engineer
- Python network library
- Telnetlib
- Paramiko
- Netmiko
- CISCOCONFPARSE
- JINJA2
- Python and REST API

PREREQUISITES

Optimally, students will have experience with at least one programming or scripting language e.g., C, C++, Java, etc. Python is a great first language very approachable and easy to learn.

WHO SHOULD ATTEND

Anyone who needs to learn how to write programs in Python or wants solid exposure to Python as their first programming language, Network Engineers, Network Architects and everyone who's interested in Python or want to study Python as a second-language programming.