

RX-M - Network Automation with Python

Code:	CN2-Python-NA
Length:	4 days
URL:	View Online

This intensive four day hands on course is designed to provide networking engineers with a start to finish introduction to Python application programming for networking and network equipment. Attendees will leave with a clear understanding of Python networking features and how to code with a wide range of third party and vendor specific libraries for controlling networking and network equipment. Students will gain hands on experience with Python and network systems applications. Upon completion of the course attendees will have the skills and information necessary to begin developing purpose built Python applications to integrate with and control networking systems in an enterprise setting.

Skills Gained

- This course is designed to help network engineers unlock the power of Python in combination with the programmability of modern networking systems.

Who Can Benefit

- Network engineers

Prerequisites

- Each attendee will require the ability to run a 64 bit virtual machine (provided with the course). Attendees must also have experience with networks and networking systems, as well as some programming experience.

Course Details

Network Automation with Python

- Day 1 - Python
 1. Python Overview (console I/O, data types, conditionals and loops)
 2. Creating Programs (program structure, command line arguments)
 3. Functions and Classes (functions, classes and methods)
 4. Python I/O (disk and network I/O)
- Day 2 - Git, Github, Python and CI

1. Version control with Git (installing, configuring and using Git and GitHub)
2. Working with Git (working with branches and distributed code management on GitHub)
3. Writing Python automated tests
4. Travis CI

- Day 3 - Python Packages and Network Systems

1. Python Networking Packages (telenetlib, pysnmp, TextFSM, paramiko, pexpect, netmiko)
2. Cisco IOS operations (ssh and ciscoconfparse)
3. VMware NSX operations (REST API and nsxramlclient)
4. Arista EOS operations (JSON RPC eAPI and pyeapi)

- Day 4 - Ansible for Networks

1. Ansible Overview
2. Configuring devices with Ansible
3. Ansible Network Modules (ios and eos command, config and template modules)
4. Writing Ansible modules

Schedule (as of 4)

Date	Location
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