Python for Network Automation

Lecture and Lab
5 Day Course

The objective of this class is to develop skills with Python that can detangle network operations.

This class is not recommended for those who have not before worked with Python.

Python for Network Automation

- ***Recommended Prerequisite: Python Basics (5 days)***
- ***Recommended Prerequisite: Advanced Python (5 days)***

1. Paramiko
    - DOCS: http://docs.paramiko.org/en/2.4/
    - Channel
    - Client
    - Message
    - Packetizer
    - Transport
    - Authentication & keys
    - SSH agents
    - Host keys / known_hosts files
    - Key handling
    - Parent key class
    - DSA (DSS)
    - RSA
    - ECDSA
    - Ed25519
    - GSS-API authentication
    - GSS-API key exchange
    - Other primary functions
    - Configuration
    - ProxyCommand support
    - Server implementation
    - SFTP
    - Miscellany

    - Buffered pipes
    - Buffered files
    - Cross-platform pipe implementations
    - Exceptions
2. Netmiko
    - BaseConnection
    - DOCs: http://netmiko.readthedocs.io/en/latest/classes.html
3. NAPALM
    - Installation
    - Tutorials
    - Validating deployments
    - Supported Devices
    - Command Line Tool
    - NetworkDriver
    - YANG
    - napalm-logs
    - Integrations
4. Automating Ethernet and IP
    - STP
    - Trunking
        - VLAN
        - VXLAN
    - Port Channeling
    - ARP
5. Automating Routing
    - BGP
    - OSPF
6. Automating HA
    - HSRP
    - VRRP
    - GLBP
7. Automating Dynamic DNS
    - DNS Primary / Secondary
    - Naming standards