STAGE2LEARNING SOLUTIONS

ARISTA
Authorized Learning Partner

Arista Configuration & Programming Bundle

Duration:
5 days

Who should attend:
Network engineers, network operators and network administrators who are interested in understanding, configuring and testing Arista's differentiating features.

Course description:
This 5-day, instructor-led course bundle combines the Arista ACE and APE course in one week. This instructor-led, hands-on course covers an overview of Arista hardware and software (Extensible Operating System EOS), and the theory, operation and configuration of Arista differentiated features such as VM Tracer, Latency Analyzer (LANZ), Multi-Chassis Lag (MLAG) and Advanced Event Management (AEM). This course is designed to provide the student with a significant amount of meaningful hands-on lab time to support topics covered in class. Additionally it is designed to get networking people up to speed on Python with a focus on Arista's eAPI, so that they can write useful automation scripts in a short period of time.

Pre-requisites:
A basic knowledge of programming in any language (yes, even BASIC) is required, no matter how long ago you learned it.
Understanding the following question is a good test: Given the following statement in almost any programming language, what will be the value of the variable b? a = b = c = 'Arista
Candidates should be comfortable with configuring a network device through the CLI and should have a working knowledge of L2 and L3 protocols. Experience with Linux Bash and Python is a plus.

Hands-on labs:
- Lab 1: CLI & BASH
- Lab 2: Aboot
- Lab 3: Upgrade EOS
- Lab 4: EOS Architecture
- Lab 5: Zero Touch Provisioning (ZTP)
- Lab 6: Multi-Switch CLI
- Lab 7: Multi-Chassis LAG (MLAG)
- Lab 8: BGP Equal Cost Multi-Pathing (ECMP)

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Course Outline ACE

Module 1: Arista Hardware Overview
- Data Center Cloud Architecture
- Arista Fixed Form Factor Switch Overview
- Arista Modular Chassis Switch Overview
- MXP Ports and Breakout Technology
- MXP Port Configuration

Module 2: EOS Overview
- Design Principles of EOS
- SysDB Overview
- Benefits of EOS
- Interacting with EOS
- Introduction to EAPI
- EOS Naming Convention
- EOS Lifecycle

Module 3: Switch Configuration Basics
- Switch Access & CLI Introduction
- Basic Configurations
- Logging
- Interface Configuration
- VLAN and Trunk Configuration
- Portchannel & LACP Configuration
- LACP Fallback
- Basic Spanning Tree Protocol Configuration
- Linux Shell Access
- Management VRF

Module 4: Switch Maintenance
- Aboot Overview
- EOS Upgrade Procedures
- Modular Redundant Supervisor Upgrade Procedures
- Password Recovery Procedures
- Recovery Procedures

Module 5: Zero Touch Provisioning (ZTP)
- ZTP Modes
- Operation
- Requirements
- Config Files vs. Scripts
- ZTP Examples

Module 6: Multi-Switch CLI
- Feature Overview
- Use Cases
- Requirements
- AAA Integration
- Configuration and Operation
- Lab 9: Virtual Extensible LAN (VXLAN) Bridging
- Lab 10: Advanced Event Manager
- Lab 11: Latency Analyzer (LANZ)
- Lab 12: VM Tracer
- Lab 13: Advanced Mirroring
- Lab 14: Tap Aggregation
- Lab 15: Extensible API (eAPI)

Module 7: Multi-Chassis LAG (MLAG)
- Definition and Purpose
- Operation- Peerlink, Election, L2 Protocols
- Stateful Switchover (SSO)
- In-Service Software Upgrade (ISSU)
- Configuration and Verification
- MLAG and Virtual ARP (VARP)

Module 8: Virtual Extensible LAN (VXLAN) Overview
- Definition and Purpose
- Terminology
- Encapsulation
- Operation
- Head-End Replication Configuration
- Verifying VXLAN Operation

Module 9: Monitoring Topics
- Simple Network Management Protocol (SNMP)
- SFLOW
- TCPDUMP Overview
- TRACE Overview
- Port Mirroring Configuration
- Advanced Event Management (AEM) Overview
- CLI Scheduler
- Event Monitor
- Event Manager
- Latency Analyzer (LANZ)
- Digital Optical Monitoring (DOM)

Module 10: VM Tracer Overview
- Data Center Virtualization Challenges
- Supported Functions
- Operation
- Viewing VM Tracer Information
- VM Adaptive Segmentation
- Configuration

Module 11: DANZ Overview
- Agile Ports
- Advanced Mirroring
- Mirror to EOS
- Using ACLs to Filter Mirror Sessions
- Packet Truncation
- Time Stamping
- Tap Aggregation Mode

Module 12: EAPI Overview
- Understanding EAPI
- EAPI vs. Screen Scraping
- Configuration and Verification
- Using Python with EAP

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Course Outline APE

Modul 1: Python
- Python Overview
- Data Types
- User Input and Time
- Pretty Python
- Program Flow
- Functions, Modules, and Packages
- File I/O
- Exception Handling
- Miscellaneous Topics
- Example Screen Scraping

Module 2: eAPI
- Understanding eAPI
- Using eAPI
- Pyeapi

Module 3: RPM and SWIX

Module 4: EOS

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