Arista ACE & APE

Arista ACE

Course outline

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

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 EAPI

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)

• 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)

Arista APE

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

eAPI

- Understanding eAPI

- Using eAPI

- pyeapi

- RPM and SWIX

- EOS SDK