



Arista Cloud Engineer

CloudVision Portal (CVP) Specialist Outline



CloudVision Data Sheet
v2021.1

Description

The 3-day CloudVision Portal (CVP) Specialist course will establish sound understanding and technical proficiency required to deploy, operate, and manage CVP. Using extensive hands-on labs, this course explores how CVP is used as a turnkey solution for network-wide workload orchestration, workflow automation, and real-time visibility into network operations. This course provides hands-on activities with CloudVision, Ansible and Python to demonstrate advanced widgets and change control workflows for Data Center Day 1 and 2 operations. In addition, you will examine advanced automation and optimization using CloudVision Studios.

Topics

CloudVision Portal (CVP) Overview and Architecture

- Introduction to CloudVision
 - Multi-Function NetOps Platform
- Automation Landscape
 - Modern Networking Automation Requirements
 - Approaches to Network Automation
 - Full Automation for the NetOps Life Cycle
- Deployment Options
 - On Prem - Appliance, Virtual
 - Cloud based - CVaaS
 - CVaaS Onboarding, Authentication, Connectivity Requirements
 - Scale - Breakdown and Limits
- Portal Communication
 - Arista eAPI
 - Control over an EOS environment
 - eAPI Interfaces: Python, Ansible, Browser
 - Enabling eAPI
 - Streaming Agent - TerminAttr
 - eAPI over TerminAttr using gRPC connections
 - eAPI over TerminAttr - Caveats

CloudVision Portal - Functionality

- CloudVision Zero Touch Provisioning (ZTP)
 - Process, Models, Provisioning
 - DHCP Server on CVP Cluster
 - DHCP Configuration
 - ZTP Bootstrap with CVP
 - Zero Touch Replacement
- Initial Deployment
 - Initial Switch Deployment
 - AAA Protocols - RADIUS, TACACS
 - Creating a New Role, RBAC Roles
 - Managing Users
 - Adding EOS Images to CVP, EOS Lifecycle
- BugAlerts EOL Lifecycle
- Configlets
- Change Control Templates; Snapshots; Rollback
- Image Management
- Devices View
 - Inventory Sort and Search / Filter
 - Remove from provisioning and decommission
 - Commission and Add to Provisioning
 - SSH to Device
 - Tunnel Information in Next Hop
 - Comparison Options - VXLAN Table, Routing Table
- Labels and Tags
 - Value associated with Devices
 - Used in Topology View and Dashboards
 - Custom Labels
 - Interface Tagging UI
- Telemetry
 - State Streaming vs Polling
 - SysDB, NetDB, NetDL
 - TerminAttr - Streaming Telemetry Agent
 - Streaming Analytics
- CloudVision Topology View
 - Client-to-Cloud Visibility
 - VXLAN Overlay and Filters
 - IPSEC Tunnels
 - Cloud Hosted Device Layout
 - Third Party Devices Update
- Advanced Widgets
 - Customizable dashboards
 - Export dashboard as images for reporting
 - Browse and Create Dashboards
 - Comparing Devices
 - Create a New Widget - Inputs, Topology, AQL
 - Troubleshooting with CLI and CVP
 - Predictive Analytics
 - Flow Visibility
 - Behavioral Baselines, Deviation Notifications
 - Address Search



CloudVision Portal - Advanced Automation

- Introduction to CloudVision Studios
 - CloudVision Studios Concept
 - Studio Types - Specialized, in built, Customized / User
 - Studios - Workspaces
 - Point-and-click Workflows for DC Config Automation
 - Inventory and Topology Studio
 - L3 Leaf-Spine Fabric Studio - DC, PODs
- Ansible and CloudVision Portal
 - Ansible Basics
 - Ansible as Configuration Builder
 - Ansible & EOS Integration
 - Arista CVP Collection
 - Ansible Arista Validated Design (AVD)
 - Inventory File
 - Arista Ansible Modules, Data Structure
 - Playbooks - Scaling with Ansible
- Python
 - Python Scripting Basics
 - Python Interpreter
 - Configlet Builder with Python
 - Configlet Builder with Python for EVPN
 - Moth and Strings
 - If/Else - Making decisions
 - Loops
 - File Operations
 - Functions
 - Modules
 - Python with EOS
- Using API, Python, and Ansible with CVP
 - Access to online API Library
 - Access the REST API
 - Script CVP API commands
 - Script CVP API to Authenticate
- Creating a Configlet Builder in Python for EVPN Deployments
 - Process, Requirements, Configuration
- Python Code
 - VLAN Database, SVI/Anycast Gateway, VTI, BGP Config
- Advanced Studios
 - EVPN Services Workflow
 - Build and Submit Workspace
 - Interface Manager Workflow
 - Creating / Editing Studios
 - Creating a template
 - Configlet builder vs Jinja2 vs Mako

Labs

The CloudVision Specialist course includes diverse practical labs built on current EOS and CloudVision platforms. The labs are accessible for three weeks. One week during the instructor-led course, and two additional weeks to work on labs independently with every engineer given their own dedicated environment. Students can connect to these cloud-based labs from anywhere at any time.

Lab Activities

- Navigating CloudVision Portal
- Configlet Builder
- Dashboard and Alerts
- Using Studios
- Configlet Management
- Change Control
- Configlet Builder to Configure Interfaces from YAML
- Building Studios

Target Audience

This course is suitable for engineers with at least mid-level networking experience and have previous exposure to Python and Ansible Basics. The course is best suited for students who are in network management and automation positions, or are looking to progress into these positions.

Specialization

The CloudVision Portal Specialist certification requires a 2-hour live practical exam. Candidates must have completed the CVP course prior to attempting the exam. The candidates will log into a lab environment, similar to the one used for the course labs, and show proficiency using various CloudVision features.

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