VMware NSX Advanced Load Balancer : Infrastructure and Application Automation

Content

1. Course Introduction

- Introductions and course logistics
- Course objectives

2. Introduction to NSX Advanced Load Balancer

- Introduce NSX Advanced Load Balancer
- Discuss NSX Advanced Load Balancer use cases and benefits
- Explain NSX Advanced Load Balancer architecture and components
- Explain the management, control, data, and consumption planes and their functions

3. Virtual Services Configuration Concepts

- Explain Virtual Service components
- Explain Virtual Service types
- Explain and configure basic virtual service components such as Application Profiles, Network Profiles, Pools, and Health Monitors

4. Pools Configuration Concepts

- Explain and deep dive into Pool configuration options
- Describe multiple load balancing algorithms
- Explain multiple Health Monitor types
- Explain multiple Persistent profiles
- Explain and configure Pool Groups

5. Leveraging NSX Advanced Load Balancer REST API

- Explain NSX Advanced Load Balancer automation vision
- Introduce NSX Advanced Load Balancer REST API
- Describe NSX Advanced Load Balancer REST API methods and capabilities
- Describe session handling properties, such as authentication, API versioning, and tenancy model
- Deep dive into NSX Advanced Load Balancer REST API Object Model
- Explain and interact with the REST API using browser and command line utilities
- Utilize tools like Postman and Curl for API interaction
- Explain Swagger-based API documentation
- Leverage NSX Advanced Load Balancer Inventory API
- Explain and leverage NSX Advanced Load Balancer methods (GET, PUT, POST, PATCH) and associated queries, filters, and parameters
- Deep dive into the PATCH method

- Explain and leverage NSX Advanced Load Balancer Analytics API
- Explain and leverage NSX Advanced Load Balancer MACRO API

6. NSX Advanced Load Balancer Software-Defined Kits (SDKs) and ControlScripts

- Introduce NSX Advanced Load Balancer SDKs
- Describe, install, and leverage the NSX Advanced Load Balancer Python SDK
- Deep dive into the Python SDK
- Describe and leverage the Golang SDK
- Utilize open-source resources (e.g., GitHub) for SDK adoption
- Describe the NSX Advanced Load Balancer Events and Alerts framework
- Introduce ControlScripts foundations
- Use ControlScripts to automate configuration changes and alerts remediation

7. Automating NSX Advanced Load Balancer Application Delivery Services with Ansible and Terraform

- Introduce NSX Advanced Load Balancer Configuration Orchestration and Management vision
- Introduce and explain Ansible foundations
- Describe Ansible capabilities with NSX Advanced Load Balancer
- Deep dive into NSX Advanced Load Balancer Ansible Core configuration modules (avinetworks/avisdk)
- Deep dive into Ansible NSX Advanced Load Balancer Declarative configuration role (avinetworks/aviconfig)
- Leverage Swagger NSX Advanced Load Balancer REST API models to develop and implement Ansible playbooks
- Explain application delivery configuration automation approaches and models
- Apply configuration automation models with Ansible
- Introduce and explain Terraform foundations
- Describe Terraform capabilities with NSX Advanced Load Balancer
- Deep dive into NSX Advanced Load Balancer Terraform Provider
- Leverage Swagger NSX Advanced Load Balancer REST API models to develop and implement Terraform plans
- Apply configuration automation models with Terraform

8. Automating NSX Advanced Load Balancer Infrastructure with Ansible and Terraform

- Introduce NSX Advanced Load Balancer infrastructure automation vision
- Describe infrastructure deployment approaches and capabilities
- Describe Ansible capabilities for NSX Advanced Load Balancer infrastructure deployment
- Describe Terraform capabilities for NSX Advanced Load Balancer deployment
- Leverage Terraform to deploy Controllers and perform system configuration (control plane cluster setup)
- Leverage Terraform to provision Cloud, Service Engine Groups, and Service Engine components
- Describe and leverage Ansible roles to deploy Controllers and perform initial system configuration

- Use Ansible declarative and core roles to provision Cloud, Service Engine Groups, and Service Engine components
- Describe and implement a combined Terraform + Ansible model to streamline NSX Advanced Load Balancer solution deployment