VMware NSX Advanced Load Balancer : Install, Configure, Manage (V21.x)

Content

1. Course Introduction

- **Introduction and Course Logistics**
- **Course Objectives**

2. Introduction to NSX Advanced Load Balancer

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

3. Virtual Services Configuration Concepts

- Explain Virtual Service components
- Explain Virtual Service types
- Explain and configure basic Virtual Service components (Application Profiles, Network Profiles)

4. Profiles and Policies

- Deep dive on Advanced Virtual Service creation
- Explore Application Profiles and Types (L4, DNS, Syslog, and HTTP)
- Configure advanced application HTTP Profile options
- Deep dive on Network Profiles and Types
- Configure SSL Profiles and Certificates
- Configure HTTP and DNS policies

5. Pools Configuration Concepts

- Deep dive on Pools configuration options
- Describe available Load Balancing algorithms
- Explain multiple Health Monitor types
- Explain multiple Persistence Profiles
- Configure Pool Groups

6. Modifying Application Behavior

- Design and apply application solutions leveraging application profiles
- Apply application solutions using Network and HTTP Policies and DataScripts
- Explain DataScript fundamentals

- Leverage NSX Advanced Load Balancer analytics to understand application behavior
- Configure Client SSL Certificate Validation
- Configure Virtual Service DDoS, Rate Limiting, and Throttling capabilities
- Modify Network Profiles properties (TCP connection properties)
- Design and apply application solutions using Persistence Profiles

7. NSX Advanced Load Balancer Infrastructure Architecture

- Deep dive on the management, control, data, and consumption planes and functions
- Describe Control Plane Clustering and High Availability
- Explain Controller Process Sharding
- Describe Controller Sizing
- Explain Service Engine CPU and NIC Architecture
- Explain Tenants
- Configure properties of Service Engine Groups
- Explain Service Engine Group High Availability Modes
- Describe and configure Active/Standby High Availability Mode
- Describe and configure Elastic HA High Availability Mode (Active/Active, N+M)
- Explain Service Engine Failure Detection and Self-Healing
- Describe Service Engine as a Router
- Explore Virtual Service scale-out options (Layer 2, Layer 3, and DNS-based)

8. Introduction to Cloud Connector

- Introduce Cloud Connectors
- Review Cloud Connector integration modes
- Introduce Cloud Connector types

9. Install, Configure, and Manage NSX Advanced Load Balancer in No-Access Cloud

- Explain No Access Cloud concepts
- Configure No Access Cloud integration
- Configure Linux Server Cloud
- Describe Advanced Configuration options available in Bare-Metal (Linux Server Cloud)

10. Install, Configure, and Manage NSX Advanced Load Balancer in VMware Environment: Cloud Configuration

- Introduce VMware integration options
- Configure VMware No Access Cloud Connector
- Configure VMware Write Access Cloud Connector
- Describe VMware Write with NSX-V Access Cloud Connector
- Describe VMware NSX-T integration

11. AWS Cloud Configuration

- Describe NSX Advanced Load Balancer Public Cloud integrations
- Explain and demonstrate AWS Public Cloud Integration

12. DNS Foundations

- Review and explain DNS fundamentals
- Describe NSX Advanced Load Balancer DNS and IPAM providers

13. Global Server Load Balancing

- Introduce Global Server Load Balancing concepts and benefits
- Configure NSX Advanced Load Balancer infrastructure
- Configure DNS Virtual Service components
- Configure GSLB Service Engine Group
- Describe and configure GSLB Sites
- Configure basic GSLB Services (pools and health monitors)
- Describe GSLB Service Load Balancing algorithms
- Configure Data and Control Plane-based Health Monitors
- Describe GSLB Health Monitor Proxy

14. NSX Advanced Load Balancer: Troubleshooting

- Introduce Infrastructure and Application Troubleshooting Concepts
- Describe Control Plane and Data Plane-based Troubleshooting
- Explain Application Analytics and Logs
- Describe client logs analysis
- Explain Headers troubleshooting and Packet Capture mechanism
- Leverage CLI for detailed data plane troubleshooting
- Explain Service Engine Logs
- Explain Health Monitors troubleshooting
- Explain BGP session troubleshooting
- Describe Control Plane Troubleshooting, Clustering, and Cloud Connector issues

15. Events and Alerts

- Describe NSX Advanced Load Balancer Events
- Configure NSX Advanced Load Balancer Alerts
- Describe monitoring capabilities leveraging SNMP, Syslog, and Email

16. Introduction to NSX Advanced Load Balancer REST API

- Introduce NSX Advanced Load Balancer REST API interface
- Describe REST API Object Schema
- Explain and interact with REST API interface using browser and command line utility
- Explain Swagger-based API documentation