VMware NSX Advanced Load Balancer: ICM plus Troubleshooting and Operations Fast Track [V20.x]

1 Course Introduction

• Introduction 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 respective 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

4 Profiles and Policies

• Explain Advanced Virtual Service creation

• Explain and deep dive on Application Profiles and Types such as L4, DNS, Syslog, and HTTP

• Explain and configure advanced application HTTP Profile options

• Recognize Network Profiles and Types

• Explain and configure SSL Profiles and Certificates

• Explain and Configure HTTP and DNS policies

5 Pools Configuration Concepts

• Explain on Pools configuration options

• Describe available Load Balancing algorithms

• Explain multiple Health Monitor types

• Explain multiple Persistence Profiles

• Explain and configure Pool Groups

6 Modifying Application Behavior

• Design and apply application solutions leveraging application profiles

• Design and apply application solutions leveraging Network and HTTP Policies and DataScripts

• Explain DataScript fundamentals

• Explain and leverage NSX Advanced Load Balancer analytics to understand application behavior

• Describe and configure Client SSL Certificate Validation

• Describe and configure Virtual Service DDoS, Rate Limiting, and Throttling capabilities

• Modify Network Profiles properties such as TCP connection properties

• Design and apply application solutions leveraging 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

• Describe Controller Process Sharing

• Describe Controller Sizing

• Describe Service Engine CPU and NIC Architecture

• Explain Tenants

• Recognize the 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

• Identify Virtual Service scale out options, such as Layer 2 (Native), Layer 3 (BGP), and DNS-based

8 Introduction to Cloud Connector

• Introduce VMware vCloud Connector®

• Review vCloud Connector integration modes

• Introduce vCloud 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

• Explain and Configure Linux Server Cloud

• Describe the 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

• Explain and configure VMware No Access Cloud Connector

• Explain and configure VMware Write Access Cloud Connector

• Describe VMware Write with NSX Access Cloud Connector

• Describe VMware NSX integration

11 AWS Cloud Configuration

• Describe NSX Advanced Load Balancer Public Cloud integrations

• Explain and demonstrate AWS Public Cloud Integration

12 DNS Foundations

• Review, discuss, 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

• Explain and configure NSX Advanced Load Balancer infrastructure

• Explain and configure DNS Virtual Service components

• Explain and configure GSLB Service Engine Group

• Describe and configure GSLB Sites

• Explain and configure basic GSLB Services to include pools and health monitors

• Describe GSLB Service Load Balancing algorithms

• Explain and configure Data and Control Plane-based Health Monitors

• Describe GSLB Health Monitor Proxy

14 Events and Alerts

• Describe NSX Advanced Load Balancer Events

• Describe and configure NSX Advanced Load Balancer Alerts

• Describe NSX Advanced Load Balancer monitoring capabilities, leveraging SNMP, Syslog, and Email

15 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, leveraging browser and command line utility

• Explain Swagger-based API documentation

16 Introduction to NSX Advanced Load Balancer Troubleshooting

• Explain NSX Advanced Load Balancer troubleshooting concepts

• Describe and leverage Virtual Service Traffic Logs

• Describe and leverage Virtual Service Security Insights

• Understand and utilize Health Score concepts

• Explain and leverage application metrics and analytics

• Explain and leverage packet capture and CLI utilities for application troubleshooting

• Leverage UI, CLI, and useful log files to perform control plane troubleshooting

17 Infrastructure Troubleshooting

• Describe and perform general vCloud Connector troubleshooting

• Describe and analyze vCloud Connector state

• Leverage case studies to troubleshoot vCloud Connector

• Describe and troubleshoot NSX Cloud Connector integration

• Leverage case studies to troubleshoot NSX Cloud Connector

• Describe and troubleshoot Linux Server Cloud Connector integration

• Describe and troubleshoot OpenStack Cloud Connector integration

• Leverage case studies to troubleshoot OpenStack Cloud Connector

• Describe and troubleshoot AWS and Azure Cloud Connector integrations

18 Troubleshooting NSX Advanced Load Balancer Service Engines and Advanced Troubleshooting

• Explain general Service Engine infrastructure

• Explain and leverage analytics, health score, and metrics for Service Engine troubleshooting

• Explain and leverage Events and Alerts for Service Engine troubleshooting

• Leverage CLI for accessing Service Engine

• Analyze Service Engine logs offline with Tech Support utility and collecting core dumps

• Leverage CLI and useful log files for Service Engine Data Plane troubleshooting

• Leverage CLI to capture packets for advanced datapath analysis

19 Monitoring NSX Advanced Load Balancer

• Explain and configure SNMP-based monitoring

• Explain and configure REST API-based monitoring

• Describe and leverage 3rd-party integration with monitoring tools like Splunk

• Leverage 3rd-party REST API monitoring extensions like Prometheus

• Describe and leverage VMware integrations like VMware vRealize® Network Insight™ for monitoring