Module 1: Course Introduction

- Introductions and course logistics
- Course objectives

Module 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

Module 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

Module 4: Profiles and Policies

- Explain and deep dive on 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
- Deep dive on Network Profiles and Types
- Explain and configure SSL Profiles and Certificates
- Explain and Configure HTTP and DNS policies

Module 5: Pools Configuration Concepts

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

Module 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

Module 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 Sharding
- Describe Controller Sizing
- Describe Service Engine CPU and NIC Architecture
- Explain Tenants
- Deep dive and 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 SelfHealing
- Describe Service Engine as a Router
- Deep dive on Virtual Service scale out options, such as Layer 2 (Native), Layer 3 (BGP), and DNS-based
- Explain Infrastructure Upgrade process

Module 8: Introduction to Cloud Connectors

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

Module 9: Install, Configure, and Manage NSX ALB in No Access Clouds

- 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)

Module 10: Install, Configure, and Manage NSX ALB in No Access Clouds

- 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-V Access Cloud Connector
- Describe VMware NSX-T integration

Module 11: Install, Configure, and Manage NSX ALB in No Access Clouds

- Describe NSX Advanced Load Balancer Public Cloud integrations

- Explain and demonstrate AWS Public Cloud Integration
- Describe Azure Public Cloud Integration

Module 12: DNS Foundations

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

Module 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 Planebased Health Monitors
- Describe GSLB Health Monitor Proxy

Module 14: 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

Module 15: Monitoring NSX Advanced Load Balancer Solution

- 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

Module 16: Introduction to NSX ALB Programmability and Automation

- 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

- Review 3rd-party automation integrations

Module 17: 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

Module 18: Introduction to NSX Advanced Load Balancer Troubleshooting

- Explain NSX Advanced Load Balancer troubleshooting concepts
- Describe and leverage Application Logs
- Describe and leverage Application Analytics and Security Insights
- Understand and utilize Health Score concepts
- Explain and leverage metrics
- Explain and leverage packet capture and command line utilities
- Describe and leverage UI and CLI utilities to perform Control Plane troubleshooting

Module 19: Introduction to NSX Advanced Load Balancer Troubleshooting

- Describe and perform general Cloud Connector troubleshooting
- Describe and analyze VMware Cloud Connector state
- Leverage case studies to troubleshoot VMware Cloud Connector
- Describe and troubleshoot VMware NSX Cloud Connector integration
- 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

Module 20: Data Plane Infrastructure 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 Service Engine troubleshooting
- Analyze Service Engine with Tech Support utility
- Leverage CLI for advanced Datapath analysis

Module 21: Monitoring NSX Advanced Load Balancer

- Explain and configure SNMP-based monitoring
- Explain and configure REST API-based monitoring
- Describe and leverage 3rd-party REST API monitoring extensions (Grafana, Prometheus)