

# VMware Avi Load Balancer: Plan, Configure, Troubleshoot [v31.x]

## Course Overview

This 5-day instructor-led course is designed for network engineers, system administrators, cloud architects, and virtualization professionals who need to plan, deploy, configure, manage, and troubleshoot VMware Avi Load Balancer environments. The course covers architecture, cloud integration, Service Engines, virtual services, SSL, observability, DNS/GSLB, automation, multi-tenancy, RBAC, and upgrade procedures, with a strong emphasis on hands-on labs and troubleshooting best practices.

**Duration:** 5 Days

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## Day 1

### Module 1: Course Introduction

- Introduction
- Course Agenda
- Lab Instructions
- Lab Topologies
- References
- Avi Enablement Path

### Module 2: Introduction to Avi

- VCF – The Private Cloud Platform
- Why your App needs a Load Balancer?
- Principles for Load Balancing for Private Cloud
- Avi Software Defined Architecture
- Best Application Delivery for VMware Cloud Foundation Platform

### Module 3: Avi Controller Architecture

- Controller Role
- Where to Install?
- Which Version?
- Controller High Availability

- Controller Sizing
- Single or Multiple Controller Clusters
- Cloud Console
- How to Install?
- Controller Settings
- Licensing

## **Module 4: Clouds**

- Cloud Role
- Cloud Type
- Cloud Battle card for VMware environment
- Cloud and IPAM Profile
- NSX Cloud Overlay
- NSX Cloud VLAN-Backed
- Linux Server Cloud
- Public Cloud
- Service Engine Deployment Workflow

## **Day 2**

### **Module 5: Service Engine**

- Role
- Service Engine Group
- HA Mode
- Placement
- Scaling mechanism
- Network Topology
- Sizing

### **Module 6: Server Load Balancing – Virtual Service and Associated Objects**

- General Consideration
- Main Objects: VS, VS-VIP, Pool
- Profiles
- Servers
- Health Monitor
- Fail Action
- Load Balancing Algorithm
- Application Persistence Profile
- Network Security Policy
- HTTP Policy
- DataScript

## **Day 3**

### **Module 7: SSL**

- SSL Intro
- SSL TPS
- SSL Client Side vs Server Side
- mTLS
- RSA vs ECC
- Perfect Forward Secrecy
- TLS Performance
- SNI Use Case

### **Module 8: Manage Your Applications at Scale**

#### **Metrics, Logs, Events, Alerts & Control Scripts**

- Topology
- Health Score
- Metrics
- Logs
- Traffic Capture
- Events
- Alerts
- Control Script

## **Day 4**

### **Module 9: DNS and GSLB**

- DNS Auto-register Virtual Service FQDNs
- GSLB Basics
- GSLB and DNS
- GSLB Infrastructure Dependencies
- GSLB Infrastructure Objects
- GSLB Application Objects
- GSLB Health Monitor
- GSLB Active Active
- GSLB NAT Aware Public/Private IPs

### **Module 10: Automation**

- Built-in automation
- LB as a Service

- CLI
- REST API
- vRA integration
- Ansible integration
- Terraform integration

## **Day 5**

### **Module 11: Multi-Tenants and Role-Based Access Control (RBAC)**

- Isolation Mechanisms
- Tenants
- Tenancy Mode
- Role Based Access Control

### **Module 12: Upgrade**

- Upgrade Preparation
- Dry Run
- Pre Check
- Controller Upgrade
- Service Engine Group Upgrade
- Patching