



VIO- VMware Integrated OpenStack v5.X

INTRODUCTION

V5

The VIO – VMware Integrated OpenStack course provides you the most direct hands-on experience course in the industry. Learn from instructors with real world experience how things are really done through back to back labs. If you are looking to truly walk away with product knowledge, design, enterprise architecture, troubleshooting skills and plenty of hands on, this VIO course is for you. Learn product knowledge covering VMware vSphere integration of VIO. VIO is installed and managed differently than other implementations of OpenStack. Learn how to install, configure and manage a VMware deployment.

MODULE 1 – OPENSTACK & VIO

Learning Objectives - learn the concepts of virtualization and how it's used on the cloud. Once you understand the relationship between virtualization and the cloud, you will learn more about the cloud, OpenStack and VIO along with its ecology and components. We will also learn about projects and introduce OpenStack terminology.

Topics - Basics of virtualization, Relationship: Virtualization & Cloud Computing, Introduction to cloud and cloud models, Introduction to OpenStack, OpenStack ecology and OpenStack services, and VMware Integrated OpenStack. Learn what products integrate with VIO.

MODULE 2 - INSTALLATION, CONFIGURATION AND ARCHITECTURE OF VIO

Learning Objectives - In this module, we will install OpenStack for VMware.

Topics – Requirements and deployment of VIO. Learn what VM's are deployed and the roles they play for VIO. We will also cover the vSphere requirements needed to support VIO.

MODULE 3 - KEYSTONE (OPENSTACK AUTHENTICATION SYSTEM)

Learning Objectives - In this module, you will learn about the concept of authentication and identity system for the Keystone service.

Topics - OpenStack Identity, Users, Credentials, Tokens, Identity Management, Service Catalog, Role Based Access Control (RBAC), Keystone Internal Architecture, Token Validation - API, Setting up Keystone as a part of the Controller node.



MODULE 4 - NOVA (OPENSTACK COMPUTE SERVICE)

Learning Objectives -In this module, you will understand the OpenStack compute service and how we utilize virtualization to successfully run Nova.

Topics - OpenStack Compute Service Architecture, Nova internals, KVM based Architecture, Instances, Images and Nova-Network usage, setting up the Nova node.

MODULE 5 - CINDER (OPENSTACK BLOCK SERVICE)

Learning Objectives - In this module, you will learn about the OpenStack block service and utilize it along with Nova.

Topics - A deep dive into OpenStack, Cinder Internals, Cinder backends, Industry implementations, Installation of Cinder, Manage\troubleshoot Cinder

MODULE 6 - GLANCE (OPENSTACK IMAGE SERVICE)

Learning Objectives - In this module, you will learn about the OpenStack Image service and how to leverage it for image uploads and downloads.

Topics - OpenStack Glance Architecture, Glance internals, Installation of Glance, Best practices on Glance store backend, Image uploads and downloads.

MODULE 7: NEUTRON (OPENSTACK NEUTRON SERVICE)

Learning Objectives - Here, we learn about Neutron and successfully implementing it. Neutron is an OpenStack project to provide "networking as a service" between interface devices (e.g., vNICs) managed by other OpenStack services (e.g., nova).

Topics - Deep-dive on the OpenStack Neutron Architecture, ML2, ML3 plugins, Installation of Neutron, Network creation, bridging, router creation, Core Neutron plugins and network configuration.

MODULE 8 - HORIZON (OPENSTACK DASHBOARD SERVICE)

Learning Objectives - In this module, we will cover the VMware GUI for OpenStack.

Topics - Introduction to Horizon, GUI walkthrough.



MODULE 9 - TROUBLESHOOTING

Learning Objectives - In this module, we will look at folders, files and services used during the installation of VIO to better understand how to troubleshoot and support VIO. We will also look at common problems encountered with VIO.

Topics – deep dive into the appliance to support VIO.

MODULE 10 - VIO OPERATORS GUIDE (DAY TO DAY OPERATIONS TO SUPPORT VIO)

Learning Objectives - In this module, we will be performing break & fix operations to the VIO OpenStack environment.

Topics - Real-time problem resolutions, Real-time operations of OpenStack environment, Troubleshooting scenarios and resolutions.

MODULE 11 - CENTRAL LOGGING

Learning Objectives - In this module, we will look at OpenStack logs and push them to a central logging server.

Topics – Look at the logs and tools to help understand how logs can be used to support VIO.