

## Day - 1

- - Course Overview
- - Module Overview
  - Understanding Container Architecture
  - Understanding OpenShift Architecture
  - Setting up the Lab Environment
- - Module Overview
  - Creating Containerized Services
  - Managing Containers
  - Managing Container Images
  - Troubleshooting Containerized Applications
  - Demo: Deploying an Apache Web Server
  - Demo: Managing an Apache Web Server Image
- - Module Overview
  - Building Custom Container Images
  - Demo: Building a Custom Apache Image
- - Module Overview
  - Use Product Documentation
  - Deploy Containerized Applications
  - Managing OpenShift Applications
  - Deploy Multi-container Applications
  - Demo: Deploy an HTTPD Service on OpenShift
  - OpenShift Projects
  - Demo: Deploy a WordPress Application on OpenShift with a Template
- - Module Overview
  - OpenShift Resources
  - Managing Resources and Investigating Logs
  - Demo: Working with OpenShift Resources
  - Demo: Working with OpenShift Logs
- - The OpenShift Web Console
  - Demo: Deploying a CakePHP App Using the Web Console

## Day - 2

- - Module Overview
  - Users in OpenShift
  - Users of Red Hat CRC
  - Demo: Accessing OpenShift Cluster
  - Identity Providers
  - Configuring HTPasswd Identity Provider
  - Demo: Configuring HTPasswd Identity
  - Demo: Deleting a User
  - Summary

- - Module Overview
  - Demo: Updating User Password
  - Manage User Permissions
  - Demo: Applying User Permissions
  - Managing User Groups
  - Demo: Creating User Groups
  - Demo: Deleting User Group Permissions
  - Summary

- - Module Overview
  - Role-based Access Control
  - Roles in OpenShift Cluster
  - Demo: Assigning Edit Privileges
  - Demo: Creating Local Roles
  - Demo: Self-provisioners
  - Customized Roles
  - Secrets in OpenShift
  - Demo: Creating Secrets in OpenShift
  - Service Accounts in OpenShift
  - Security Context Constraints
  - Demo: Modifying Security

## Day - 3

- - Module Overview
  - Demo: Setting up the Lab Environment
  - OpenShift Routes
  - Demo: Create and Edit Routes
  - Certificates
  - Demo: Create a Self-signed Certificate
  - Secure Routes
  - Demo: Creating Secure Routes
  - Software-defined Networking
  - Demo: Troubleshooting SDN
  - Control Network Ingress
  - Demo: Control Network Ingress through Policies
  - Module Summary

- - Module Overview
  - Static Persistent Storage
  - The Storage Lifecycle
  - Managing PVs and PVCs
  - Dynamic Persistent Storage
  - Demo: Working with PVs and PVCs
  - Demo: Mounting Persistent Storage
  - Demo: Working with Dynamic Persistent Storage
  - Ephemeral Storage
  - Demo: Managing Ephemeral Storage

## Day - 4

- - Module Overview
  - Pod Scheduling Using Node Selector
  - Demo: Pod Scheduling Using Node Selector
  - Pod Scheduling Using Affinity Rules
  - Demo: Pod Scheduling Using Affinity Rules
  - Pod Scheduling Using Taints and Tolerations
  - Demo: Pod Scheduling Using Taints and Tolerations
  - Module Summary

- - Module Overview
  - Manual Scaling of Pods
  - Demo: Manual Scaling
  - Auto Scaling of Pods
  - Demo: Auto Scaling of Pods
  - Module Summary

## Day - 5

- - Module Overview
  - Limits and Requests
  - Demo: Limits and Requests
  - Quotas
  - Demo: Resource Quota
  - Demo: Cluster Resource Quota
  - Limit Ranges
  - Applying Templates
  - Demo: Templates
  - Summary

- - Module Overview
  - Monitoring Node Health
  - Machine API Operator
  - Manual Cluster Scaling
  - Demo: Manual Cluster Scaling
  - Cluster Autoscaling
  - Demo: Cluster Autoscaling
  - Module Summary