Data Center Automation with vRealize Orchestrator and vSphere PowerCLI

Course Overview
This five-day course teaches experienced VMware vSphere® administrators how to use the powerful automation tools that all vSphere customers have access to. Using real-world use cases and examples, you learn how to automate day-to-day administration tasks with VMware vSphere® PowerCLI™ and VMware vRealize® Orchestrator™. During class, you use these tools to automate tasks in a realistic lab environment.

Course Objectives
By the end of the course, you should be able to meet the following objectives:
• Describe the features and benefits of automation in a vSphere environment
• Understand the role of the vSphere Web Services API in automation
• Use the Managed Object Browser (MOB) to view the structure of VMware vSphere® API and VMware vCenter Server® inventory
• Use vSphere PowerCLI to deploy and manage virtual machines and virtual infrastructure
• Run and manage library vRealize Orchestrator workflows
• Design, develop, and run custom reusable vRealize Orchestrator workflows
• Incorporate JavaScript into vRealize Orchestrator workflows
• Use the vRealize Orchestrator PowerShell plug-in in a custom workflow
• Manage Guest Operations using vRealize Orchestrator and vSphere PowerCLI
• Describe VMware vSphere® Client™ code capture

Target Audience
Experienced vSphere administrators who want to use available tools to automate day-to-day tasks

Prerequisites
Completion of the following course or equivalent experience with vSphere deployments:
• VMware vSphere: Install, Configure, Manage [V7.0]

Course Delivery Options
• Classroom
• Live Online
• Onsite

Product Alignment
• VMware vSphere PowerCLI 12.0
• VMware vRealize Orchestrator 8.1
Course Modules

1 Course Introduction
   • Introductions and course logistics
   • Course objectives

2 Automation in vSphere
   • Identify the tools available to vSphere administrators for automation
   • Understand the benefits of automation
   • Understand the function of black boxes in programming

3 vSphere Web Services API
   • Identify the function of an API
   • Recognize the components of the vSphere Web Services API
   • Understand how the vSphere Web Services API is used by automation tools
   • Understand object-oriented terminology relevant to the vSphere Web Services API
   • Use the MOB to explore the vSphere object model and invoke methods

4 vSphere PowerCLI Basics
   • Describe features of vSphere PowerCLI
   • List common tasks to perform with vSphere PowerCLI
   • Connect vSphere PowerCLI to vCenter Server and VMware ESXi™ hosts
   • Define variables to use in vSphere PowerCLI
   • Use basic vSphere PowerCLI cmdlets
   • Describe features of the command pipeline
   • Examine vSphere PowerCLI objects
   • View vSphere PowerCLI object properties
   • Invoke vSphere PowerCLI object methods

5 vSphere PowerCLI Use Cases
   • Perform day-to-day management tasks
   • Manage clusters, hosts, and virtual machines
   • Display performance metrics

6 Advanced vSphere PowerCLI Concepts
   • Examine View objects with the Get-View cmdlet
   • Convert View objects to VIOObjects
   • Invoke vSphere Web Services API methods

7 vRealize Orchestrator Overview
   • Describe the vRealize Orchestrator architecture and interfaces
   • Describe the components of a workflow

8 vRealize Orchestrator basics
   • Understand inputs, outputs, and variables in workflows
   • Describe variable types: string, number, and more
   • Create variables in workflows
   • Implement variable binding in workflows

9 Invoking Scheme Elements
   • Invoke JavaScript from workflows
   • Invoke a workflow from workflows
   • Invoke an action from workflows
   • Manage user workflow inputs on the input form
   • Invoke a user interaction element from workflows

10 Branching and Looping
   • Use decision elements in workflows
   • Use switch elements in workflows
   • Create decision loops in workflows
   • Use a for-each loop in workflows

11 vRealize Orchestrator Advanced
   • Handle exceptions in workflows
   • Perform logging in workflows
   • Debug workflows

12 vRealize Orchestrator Assets
   • Use configuration elements in workflows
   • Use resource elements in workflows
   • Create, import, and export vRealize Orchestrator packages

13 vRealize Orchestrator PowerShell Plug-In
   • Add PowerShell hosts to the vCenter Server inventory
   • Invoke scripts on PowerShell hosts
   • Create custom workflows using the PowerShell plug-in
14 Guest Operations with vRealize Orchestrator and vSphere PowerCLI
- Understand the architecture of virtual machine guest operations
- Identify the requirements for using guest operations
- Perform guest operations with vRealize Orchestrator and vSphere PowerCLI

15 Leveraging vSphere Client Code Capture
- Understand how to capture code in the vSphere Client
- Use that code in a vRealize Orchestrator workflow or vSphere PowerCLI script

Contact
If you have questions or need help registering for this course, click here.