VMware vSphere 8 (ICM)

خلاصه دوره:

دوره 8 ICM vSphere VMware به جهت آشنایی مدیران و مهندسین شبکه با تکنولوژی مجازی سازی سرورها توسط8 vSphere VMware طراحی شده است. در این دوره دانشجویان با نصب و راه اندازی سرویس دهنده های VMware ESXi و VMware vCenter و به صورت عملی آشنا خواهند شد.

مدت دوره:

40 ساعت

پیش نیاز دوره :

دارا بودن تجربه عملی در زمینه مدیریت یک سیستم عامل Server ، آشنایی با مدیریت بستر شبکه و یا گذراندن دوره های زیر:

- CCNA
- MCSA

اهداف دوره:

آشنایی و تسلط بر موارد زیر:

- راه اندازی و تنظیم سرویس دهنده های ESXi 7.x وvCenter 7.x
- راه اندازی و تنظیم بستر vNetworking و vStorage بر روی7 VMware ESXi
- نصب، راه اندازی و مدیریت ماشین های مجازی

- نصب، راه اندازی و مدیریت سرویس های VMware vMotion ، VMware HA ، VMware DRS و VMware FT جهت ایجاد High Availability

- استفاده از vCenter Converter جهت تبدیل سرویس دهندهای فیزیکی به ماشین های مجازی (P2V Conversion)

- نصب و راه اندازی (VDR) VMware Data Recovery جهت Backup و Restore کردن ماشین های مجازی

- استفاده از vCenter جهت مدیریت منابع ماشین های مجازی

- مدیریت دسترسی کاربران سیستم به بستر VMware vSphere 7

سرفصل دوره:

1. Course Introduction

• Introductions and course logistics

• Course objectives

2. vSphere and Virtualization Overview

• Explain basic virtualization concepts

• Describe how vSphere fits in the software-defined data center and the cloud infrastructure

• Recognize the user interfaces for accessing vSphere

• Explain how vSphere interacts with CPUs, memory, networks, storage, and GPUs

3. Installing and Configuring ESXi

• Install an ESXi host

• Recognize ESXi user account best practices

• Configure the ESXi host settings using the DCUI and VMware Host Client

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4. Deploying and Configuring vCenter

• Recognize ESXi hosts communication with vCenter

• Deploy vCenter Server Appliance

• Configure vCenter settings

• Use the vSphere Client to add and manage license keys

• Create and organize vCenter inventory objects

• Recognize the rules for applying vCenter permissions

• View vCenter logs and events

5. Configuring vSphere Networking

• Configure and view standard switch configurations

• Configure and view distributed switch configurations

• Recognize the difference between standard switches and distributed switches

• Explain how to set networking policies on standard and distributed switches

6. Configuring vSphere Storage

• Recognize vSphere storage technologies

• Identify types of vSphere datastores

• Describe Fibre Channel components and addressing

• Describe iSCSI components and addressing

• Configure iSCSI storage on ESXi

• Create and manage VMFS datastores

• Configure and manage NFS datastores

7. Deploying Virtual Machines

• Create and provision VMs

• Explain the importance of VMware Tools

• Identify the files that make up a VM

• Recognize the components of a VM

• Navigate the vSphere Client and examine VM settings and options

• Modify VMs by dynamically increasing resources

• Create VM templates and deploy VMs from them

• Clone VMs

• Create customization specifications for guest operating systems

• Create local, published, and subscribed content libraries

• Deploy VMs from content libraries

• Manage multiple versions of VM templates in content libraries

8. Managing Virtual Machines

• Recognize the types of VM migrations that you can perform within a vCenter instance and across vCenter instances

• Migrate VMs using vSphere vMotion

• Describe the role of Enhanced vMotion Compatibility in migrations

• Migrate VMs using vSphere Storage vMotion

• Take a snapshot of a VM

• Manage, consolidate, and delete snapshots

• Describe CPU and memory concepts in relation to a virtualized environment

• Describe how VMs compete for resources

• Define CPU and memory shares, reservations, and limits

9. Deploying and Configuring vSphere Clusters

• Create a vSphere cluster enabled for vSphere DRS and vSphere HA

• View information about a vSphere cluster

• Explain how vSphere DRS determines VM placement on hosts in the cluster

• Recognize use cases for vSphere DRS settings

• Monitor a vSphere DRS cluster

• Describe how vSphere HA responds to various types of failures

• Identify options for configuring network redundancy in a vSphere HA cluster

• Recognize vSphere HA design considerations

• Recognize the use cases for various vSphere HA settings

• Configure a vSphere HA cluster

• Recognize when to use vSphere Fault Tolerance

10. Managing the vSphere Lifecycle

• Enable vSphere Lifecycle Manager in a vSphere cluster

• Describe features of the vCenter Update Planner

• Run vCenter upgrade prechecks and interoperability reports

• Recognize features of VMware vSphere® Lifecycle ManagerTM

• Distinguish between managing hosts using baselines and managing hosts using images

• Describe how to update hosts using baselines

• Describe ESXi images

• Validate ESXi host compliance against a cluster image and update ESXi hosts

• Update ESXi hosts using vSphere Lifecycle Manager

• Describe vSphere Lifecycle Manager automatic recommendations

• Use vSphere Lifecycle Manager to upgrade VMware Tools and VM hardware