VMware vSphere 6.7 : Install, Configure, Manage

خلاصه :

دوره VMware vSphere ICM 6.7 به جهت آشـنایی مدیران و مهندسـین شـبکه با تکنولوژی مجازی‌سـازی
سرورها توسط VMware vSphere 6 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: ۴۰ ساعت

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

- CCNA
- MCITPیاMCSE

اهداف دوره : آشنایی و تسلط بر موارد زیر:

- راه اندازی و تنظیم سرویس دهنده های ESXi 6.x وvCenter 6.x

- راه اندازی و تنظیم بستر vNetworking و vStorage بر رویVMware ESXi 6

- نصب، راه اندازی و مدیریت ماشین های مجازی

- نصب، راه اندازی و مدیریت سرویس های VMware vMotion ، VMware HA ، VMware DRS و
  VMware FTجهت ایجادHigh 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 بستر6 VMware vSphere

سرفصل دوره :

1- Course Introduction
   - Introductions and course logistics
   - Course objectives
   - Describe the content of the course
   - Gain a complete picture of the VMware certification system
   - Familiarize yourself with the benefits of the VMware Education Learning Zone
   - Identify additional resources
2- Introduction to vSphere and the Software-Defined Data Center
   - Describe how vSphere fits into the software-defined data center and the cloud infrastructure
   - Explain how vSphere interacts with CPUs, memory, networks, and storage
   - Use vSphere Client to access and manage your vCenter Server system and ESXi host
   - Compare virtual machine hardware version 14 to other versions
   - Identify the virtual network adapters, and describe the enhanced VMXNET3
   - Compare the types of virtual disk provisioning
   - Install and configure ESXi host settings
   - Identify the advantages of ESXi Quick Boot

3- Creating Virtual Machines

- Create, provision, and remove a virtual machine
- Explain the importance of VMware Tools™
- Describe how to import a virtual appliance OVF template

4- vCenter Server

- Describe the vCenter Server architecture
- Discuss how ESXi hosts communicate with vCenter Server
- Access and configure vCenter Server Appliance
- Use vSphere Client to manage the vCenter Server inventory
- Add data center, organizational objects, and hosts to vCenter Server
- Create custom inventory tags
- Describe the rules for applying permissions
- Create a custom role in vCenter Server
- Create a vCenter Server Appliance backup schedule
- Restore vCenter Server Appliance from a backup
- Monitor vCenter Server Appliance

5- Configuring and Managing Virtual Networks

- Describe, create, and manage standard switches
- Configure virtual switch security, traffic-shaping and load-balancing policies
- Compare vSphere distributed switches and standard switches
- Describe the virtual switch connection types
- Describe the new TCP/IP stack architecture
- Use VLANs with standard switches

6- Configuring and Managing Virtual Storage

- Identify storage protocols and storage device types
- Discuss ESXi hosts using iSCSI, NFS, and Fibre Channel storage
- Create and manage VMware vSphere® VMFS and NFS datastores
- Explain how multipathing works with iSCSI, NFS, and Fibre Channel storage
- Identify the advantages of VMware vSAN™

7- Virtual Machine Management

- Use templates and cloning to deploy new virtual machines
- Modify and manage virtual machines
- Create an instant clone of a virtual machine
- Identify the types of content libraries and how to deploy and use them
- Add a hot-pluggable device
- Dynamically increase the size of a virtual disk
- Use customization specification files to customize a new virtual machine
- Perform vSphere vMotion and vSphere Storage vMotion migrations
- Create and manage virtual machine snapshots

8- Resource Management and Monitoring

- Discuss CPU and memory concepts in a virtualized environment
- Describe what overcommitment of a resource means
- Identify additional technologies that improve memory usage
- Configure and manage resource pools
- Describe methods for optimizing CPU and memory usage
- Use various tools to monitor resource usage
- Create and use alarms to report certain conditions or events

9- vSphere HA, vSphere Fault Tolerance, and Protecting Data

- Explain the vSphere HA architecture
- Configure and manage a vSphere HA cluster
- Use vSphere HA advanced parameters
- Enforce infrastructural or intra-app dependencies during failover
- Describe vSphere HA heartbeat networks and datastore heartbeats
- Examine the features and functions of vSphere Fault Tolerance
- Enable vSphere Fault Tolerance on virtual machines
- Support vSphere Fault Tolerance interoperability with vSAN
- Examine enhanced consolidation of vSphere Fault Tolerance virtual machines
- Examine the features and functions of vSphere Replication

10- vSphere DRS

- Describe the functions of a vSphere DRS cluster
- Create a vSphere DRS cluster
- View information about a vSphere DRS cluster
- Configure virtual machine affinity, DRS groups, and VM-host affinity rules
- Remove a host from a vSphere DRS cluster

11- vSphere Update Manager

- Describe the architecture, components, and capabilities of vSphere Update Manager
- Use vSphere Update Manager to manage the patching of ESXi, virtual machines, and vApps
- Examine the features and functions of vSphere Update Manager EAM integration
- Integrate vSphere Update Manager with vSphere DRS

12- vSphere Troubleshooting

- Apply a troubleshooting methodology to logically diagnose faults and improve troubleshooting efficiency
- Review troubleshooting tools
- Find important log files
- Use vSphere Syslog Collector