VMware vSphere: Design

Course Description

This three-day training course equips you with the knowledge, skills, and abilities to design a VMware vSphere® 7 virtual infrastructure. You follow a proven approach to design a virtualization solution that ensures availability, manageability, performance, recoverability, and security. The approach presented follows VMware best practices. This course discusses the benefits and risks of available design alternatives and provides information to support making sound design decisions.

Given a case study, you practice your design skills by working with peers on a design project.

Course Duration:

3 days

Prerequisites:

This course requires completion of the following prerequisites:

- VMware vSphere: Install, Configure, Manage [V7]
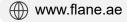- VMware vSphere: Optimize and Scale [V7]

Objectives:

By the end of the course, you should be able to meet the following objectives:

- Identify the business objectives for the vSphere environment
- Identify business requirements, constraints, assumptions, and risks for all layers in the vSphere environment
- Apply a framework to a design
- Analyze design choices and best-practice recommendations
- Create a design that ensures availability, manageability, performance, recoverability, and security
- Design the core management infrastructure for an enterprise
- Design the virtual data center for an enterprise
- Design the compute infrastructure for an enterprise
- Design the storage and networking infrastructures for an enterprise
- Design virtual machines to run applications in a vSphere infrastructure
- Design security, manageability, and recoverability features for an enterprise

Course Outline:

1. Course Introduction
   - Introductions and course logistics
   - Course objectives

2. Infrastructure Assessment
   - Follow a proven process to design a virtualization solution
   - Define customer business objectives
   - Gather and analyze business and application requirements
   - Document design requirements, constraints, assumptions, and risks
   - Use a systematic method to evaluate and document design decisions
   - Create a conceptual design

3. Core Management Infrastructure
   - Determine the number of VMware vCenter® Server Appliance™ instances to include in a design
   - Choose the appropriate single sign-on identity source
   - Choose the time synchronization method
   - Choose methods to collect log files and ESXi core dumps
   - Design a vCenter Server deployment topology that is appropriate for the size and requirements of the data center

4. Virtual Data Center Infrastructure
   - Calculate total compute capacity requirements for a virtual data center
   - Create a virtual data center cluster design that meets business and workload requirements
   - Evaluate in the virtual data center the use of several management services, such as VMware vSphere® High Availability and VMware vSphere® Distributed Resource Scheduler™
   - Evaluate the use of resource pools in the virtual data center design

5. Compute Infrastructure
   - Create a compute infrastructure design that includes the appropriate ESXi boot, installation, and configuration options
   - Choose the ESXi host hardware for the compute infrastructure

6. Storage Infrastructure
   - Calculate storage capacity and performance requirements for a design
   - Evaluate the use of different storage platforms and storage management solutions
   - Design a storage platform infrastructure and storage management architecture that meets the needs of the vSphere environment

7. Network Infrastructure
   - Evaluate the use of different network component and network management solutions
   - Design a network component architecture that includes information about network segmentation and virtual switch types
   - Design a network management architecture that meets the needs of the vSphere environment

8. Virtual Machine Design
   - Make virtual machine design decisions, including decisions about resources
   - Design virtual machines that meet the needs of the applications in the vSphere environment and follow VMware best practices

9. Infrastructure Security
   - Make security design decisions for various layers in the vSphere environment
   - Design a security strategy that meets the needs of the vSphere environment and follows VMware best practices

10. Infrastructure Manageability
    - Make lifecycle management, scalability, and capacity planning design decisions that adhere to business requirements
    - Design lifecycle management, scalability, and capacity planning strategies that meet the needs of the vSphere environment and follow VMware best practices

11. Infrastructure Recoverability
    - Make infrastructure recoverability design decisions that adhere to business requirements
    - Design an infrastructure recoverability strategy that meets the needs of the vSphere environment and follows VMware best practices

Who Should Attend

Experienced system integrators and consultants responsible for designing and deploying vSphere environments