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THE LEADING TRAINING PROVIDER

Information Technology

VMware vSphere Advanced Professional Design

Course Introduction

This training course is designed to provide participants with the essential design principles to develop a vSphere 7.x conceptual design given a set of customer requirements. This course will help participants determine the functional and non-functional requirements needed to create a logical design, and architect a physical design using these elements.

Training Methodology

The training course is designed to be interactive and participatory, and includes various learning tools to enable the participants to operate effectively and efficiently in a multifunctional environment. The course will use lectures and presentations, exercises, experiential and exposure to real world problems and policy choices confronting delegates.

Target Audience

1. VMware Engineer
2. Virtualization Architect
3. Cloud Engineer
4. Systems Administrator
5. IT Infrastructure Manager
6. Data Center Engineer
7. Network Administrator
8. DevOps Engineer
9. IT Consultant
10. Solutions Architect
11. Server Administrator
12. Enterprise Architect
13. IT Operations Manager

Learning Objectives

- Gain a comprehensive understanding of the different conceptual, logical and physical elements of a design.
- Recognize functional and non-functional requirements
- Know the difference between Availability, Manageability, Performance, Recoverability, Scalability and Security (AMPRSS)
- Determine risks, constraints and assumptions for a design
- Create various vSphere designs.
- Create a workload physical design based on application requirements

Course Outline

- **Day 01**

Architectures and Technologies

  ◦ Differentiate between conceptual, logical and physical elements of a design
  ◦ Differentiate between functional and non-functional requirements
  ◦ Differentiate between Availability, Manageability, Performance, Recoverability, Scalability and Security (AMPRSS)

Planning and Designing

  ◦ Gather and analyze functional requirements
  ◦ Gather and analyze service-level agreement (SLA) requirements
  ◦ Gather network, storage and compute requirements
  ◦ Gather workload design requirements
  ◦ Gather capacity and performance requirements

- ◦ Gather and analyze non-functional requirements
  - ◦ Determine security requirements for a vSphere design
  - ◦ Determine data protection requirements for a vSphere design
  - ◦ Determine business continuity requirements for a vSphere design
  - ◦ Determine disaster recovery requirements for a vSphere design
  - ◦ Determine compliance requirements for a vSphere design
  - ◦ Determine risks, constraints and assumptions for a design

- **Day 02**

  Create a vCenter Server logical design

  - ◦ Design a single-site, multi-site, multi-region deployment
  - ◦ Define a virtual data center design
  - ◦ Determine availability requirements for vCenter Server

  Create a vSphere cluster logical design

  - ◦ Differentiate between workload or management clusters
  - ◦ Define a workload cluster design

  Create a vSphere host logical design

  - ◦ Recommend compute resource requirements
  - ◦ Identify and address scalability requirements
  - ◦ Determine hypervisor deployment method

  Create a vSphere network logical design

  - ◦ Determine network protocol needs
  - ◦ Design network segregation for different traffic types
  - ◦ Determine physical and virtual networking topology

- **Day 03**

Create a vSphere storage logical design

- Determine storage topology needs (e.g., SAN, local, Hyper-Converged Infrastructure or HCI)
- Evaluate storage protocols based on a given scenario/requirements
- Determine different storage segregation techniques based on a given scenario
- Determine physical and storage connectivity topology

Create a workload logical design

- Determine workload sizing
- Determine workload placement

Create a vCenter Server physical design

- Determine the correct sizing for vCenter Server based on workload requirements
- Map clusters to logical design

- **Day 04**

Create a vSphere cluster physical design

- Determine the appropriate Distributed Resource Scheduler (DRS), Predictive Distributed Resource Scheduler (pDRS), and Distributed Power Management (DPM) configurations based on requirements
- Determine the appropriate Proactive High Availability/High Availability configurations based on requirements
- Determine the appropriate vSphere Enhanced vMotion Compatibility (EVC) configurations based on requirements
- Determine the appropriate cluster size based on requirements

Create a vSphere host physical design

- ◦ Identify the hypervisor deployment method
- ◦ Determine the appropriate host size based on requirements
- ◦ Determine the appropriate host configurations (network adapters, local storage, RAID controller) based on requirements

Create a vSphere network physical design

- ◦ Determine bandwidth needs based on requirements
- ◦ Determine NIC teaming and load balancing methods
- ◦ Design VMkernel adapters based on requirements
- ◦ Determine Network I/O Control (NIOC) configurations based on requirements
- ◦ Determine switch type (standard vs distributed) based on requirements

• **Day 05**

Create a vSphere storage physical design

- ◦ Determine storage multi-pathing and load balancing methods
- ◦ Determine the Storage DRS configuration
- ◦ Determine appropriate datastore configurations based on requirements
- ◦ Determine the physical storage design based on requirements
- ◦ Determine appropriate storage policy based on requirements

Create a workload physical design based on application requirements

- ◦ Determine workload virtual hardware (e.g., number of network interface cards (NICs) and type of NIC)
- ◦ Design content library topology

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
April 14, 2025	April 18, 2025	5 days	4250.00 $	UAE - Dubai
July 7, 2025	July 11, 2025	5 days	4950.00 $	England - London
Oct. 6, 2025	Oct. 10, 2025	5 days	4250.00 $	UAE - Dubai