

# Disaster Recovery with VMware vSphere

---

## Course Details

### Course Outline

#### 1. Introduction and Overview

- SBS LAB I. Connecting to the datacenter

#### 2. What is Disaster Recovery

- Business Continuity and Types of Disaster
- Disaster Recovery

#### 3. VMware vSphere

- Using Client connections
- SBS LAB I. Connect using the vSphere Client(s)
- SBS LAB II. Connecting with SSH
- SBS LAB III. Command-line operations with VMware vSphere
- SBS LAB IV. Using Virtual Appliances

#### 4. Creating Virtual Machines for optimized Disaster Recovery

- Encapsulation of Virtual Machines
- SBS LAB I. Create a Virtual Machine for Mission Critical apps such as SQL or SAP
- SBS LAB II. Using Paravirtualized network and storage devices
- SBS LAB III. Editing Virtual Machine Properties
- SBS LAB IV. Virtual Machine files and Folders

#### 5. VMware vSphere integrated BC-DR Elements

- Understanding vSphere Storage
- Spindles, LUNs, Volume Groups and VMFS Volumes
- SBS LAB I. Understanding and Configuring vSphere High Availability (HA)
- SBS LAB II. Using vSphere Fault Tolerance (FT) to protect Virtual Machines
- SBS LAB III. Understanding and using snapshots correctly
- SBS LAB IV. Clone and copy Virtual Machine(s) for out-of-band recovery
- SBS LAB V. Edit Virtual Machine settings (memory, disk, network)

## 6. Seeding your data

- SBS LAB I. Concepts and Technologies for Seeding Data
- SBS LAB II. Virtual Machine Clones vs. Veeam Backup for Seeding Data
- Disaster Recovery Network Practices
- Maintaining replication between Protected and Recovery Sites
- Site-to-site networks: MPLS and/or VPN
- Bubble Networks for recovery
- SBS LAB I. Create a network design for Disaster Recovery
- SBS LAB II. Creating an IPsec VPN
- SBS LAB III. Create a Bubble Network for Recovery (prevent the need to re-IP)

## 7. VMware vSphere Replication

- Overview of VMware vSphere Replication
- vSphere Replication System Requirements
- SBS LAB I. Using the vSphere Web Client
- SBS LAB II. Deploy the vSphere Replication Virtual Appliance
- SBS LAB III. Configure vSphere Replication Connections
- SBS LAB IV. Configure Replication for Virtual Machines
- SBS LAB V. Failover and failback with vSphere Replication
- SBS LAB VI. Test, document and validate DR Plan with vSphere Replication
- SBS LAB VII. Troubleshooting vSphere Replication

## 8. VMware Site Recovery Manager (SRM)

- Overview of VMware Site Recovery Manager (SRM)
- VMware Site Recovery Manager (SRM) System Requirements
- SBS LAB I. Creating the Database for SRM
- SBS LAB II. Installing the SRM binaries
- SBS LAB III. Configure SRM connection pairing between Protected and Recovery vCenter
- SBS LAB IV. Configure Inventory Mappings with SRM
- SBS LAB V. Configure Protection Groups in SRM
- SBS LAB VI. Create Recovery Plan with SRM
- SBS LAB VII. Run test recovery with SRM
- SBS LAB VIII. Failover and failback with SRM
- SBS LAB IX. Test, document and validate DR Plan with SRM
- SBS LAB X. Troubleshooting SRM

## **9. Veeam Backup and Replication for Protection and Recovery of Virtual Machines**

- Overview of Veeam Backup and Replication
- SBS LAB I. Install Veeam Backup and Replication
- SBS LAB II. Add vCenter Server for Production vSphere Cluster
- SBS LAB III. Add vCenter Server for DR vSphere Cluster
- SBS LAB IV. Understand and configure Veeam Proxies
- SBS LAB V. Configure bandwidth limitation schedules with Veeam
- SBS LAB VI. Use Veeam integrated WAN Accelerator
- SBS LAB VII. Configure replication of Virtual Machines between Production and DR locations
- SBS LAB VIII. Fail-over with Veeam
- SBS LAB IX. Test failover with Veeam
- SBS LAB X. Fail-back with Veeam
- SBS LAB XI. Test, document and validate DR Plan with Veeam
- SBS LAB XII. Troubleshooting Veeam Replication

## **10. 3rd. Party tools for Disaster Reconvert**

- SBS LAB I. Using Wireshark to observe/diagnose replication traffic
- SBS LAB II. Using WinMTR to determine network availability
- SBS LAB III. Using iperf to measure available bandwidth reliably.