CTREC HILTON IT ACADEMY

BUILDING TRAINING SOLUTIONS FOR THE IT WORLD

Implementing and Managing Windows Server 2008 Clustering

Days:	**3**
Format:	**Instructor-Led**
Class Code	**6423**
Certification Exams:	**None**
Certification Track:	**None**

Recommended Course Sequence

Knowledge of prerequisites noted below.

Course content is subject to change without notice.

Course Description:
This three-day instructor-led course introduces Windows Server 2008 clustering and provides students with the knowledge and skills to implement, maintain, and troubleshoot clusters.

Target Student:
This course is intended for IT professional technical specialists responsible for implementing and maintaining high availability solutions utilizing clustering technologies.

Prerequisites:
Before attending this course, the student must have:

- Experience with network load balancing
- Basic knowledge of clustering theory
- Experience in an enterprise environment managing applications and network topologies
- Basic troubleshooting skills

At Course Completion:
After completing this course, students will be able to implement, maintain, and troubleshoot clusters in their enterprise environment.

Delivery Method:
Instructor led, group-paced, classroom-delivery learning model with structured hands-on activities.

Implementing and Managing Windows Server 2008 Clustering

Course Outline

Module 1: Introduction to Clusters
This module provides an overview of cluster concepts and functionality.

Lessons
▪ Overview of Clusters ▪ Benefits of Using Clusters ▪ Overview of the Windows Server 2008 High Availability Solutions
Lab: Identifying Windows Server 2008 High Availability Solutions
▪ Exercise 1: Identifying solutions for Web servers ▪ Exercise 2: Identifying solutions for database servers ▪ Exercise 3: Identifying complex solutions

Module 2: Introduction to Microsoft Windows Server 2008 Failover Clusters
This module describes key features and functionality of the Windows Server 2008

Lessons
▪ Overview of Windows Server 2008 Failover Clusters ▪ Key Windows Server 2008 Failover Cluster Features ▪ Overview of the Windows Server 2008 Quorum Models
Lab: Configuring Availability of Network Resources
▪ Exercise 1: Identifying clustered scenarios

Module 3: Preparing to Install a Failover Cluster
This module explains the prerequisite requirements and planning required to install a Windows failover cluster.

Lessons
▪ Overview of Requirements for Installing a Failover Cluster ▪ Planning the Failover Cluster Implementation ▪ Installing the Failover Cluster Feature and Validating the Cluster Configuration ▪ Installing the Failover Cluster on Windows Server 2008 Server Core
Lab: Preparing for a Cluster Installation
▪ Exercise 1: Installing the failover cluster feature ▪ Exercise 2: Validating the failover cluster

Implementing and Managing Windows Server 2008 Clustering

Module 4: Overview of Failover Cluster Storage Requirements
This module explains storage fundamentals and how to plan and implement storage solutions for failover clusters.

Lessons
Overview of Storage Technologies Introduction to Storage Area Networks Planning a Storage Solution for Failover Clusters Configuring an iSCSI Storage Connection
Lab: Preparing for a Cluster Installation
Exercise 1: Identifying fibre channel SAN components Exercise 2: Identifying iSCSI SAN components Exercise 3: Configuring iSCSI storage connections

Module 5: Configuring a Failover Cluster
This module explains how to install and manage a failover cluster.

Lessons
Creating a New Failover Cluster Managing a Failover Cluster Verifying Failover Functionality
Lab: Preparing for a Cluster Installation
Exercise 1: Creating a cluster Exercise 2: Managing a failover cluster

Module 6: Configuring Cluster Resources and Server Roles
This module explains how to configure cluster resources and how to cluster common Window Server roles and applications.

Lessons
Configuring Cluster Resources Implementing Failover Clusters for Server Roles Using Failover Cluster Management Clustering Server Roles Using Windows Server Core
Lab: Clustering Server Roles and Features
Exercise 1: Configuring cluster resources Exercise 2: Clustering the print server role using failover cluster management Exercise 3: Clustering the file server role on Windows Server core Exercise 4: Testing cluster availability

Implementing and Managing Windows Server 2008 Clustering

Module 7: Maintaining Microsoft Failover Clusters
This module explains how to maintain and troubleshoot failover clusters.

Lessons
Monitoring Failover Clusters Backing Up and Restoring Failover Clusters Troubleshooting Failover Clusters
Lab: Maintaining Failover Clusters
Exercise 1: Monitoring failover clusters Exercise 2: Backing up a failover cluster Exercise 3: Restoring a failover cluster

Module 8: Implementing Geographically Dispersed Clusters
This module explains geographically dispersed clusters and the challenges that they present. In addition, this module describes how to implement a multi-subnet cluster using Windows Server 2008.

Lessons
Overview of Geographically Dispersed Clusters Implementing Geographically Dispersed Clusters Using Windows Server 2008

Module 9: Implementing Network Load Balanced Clusters
This module explains how to install and maintain network load balanced (NLB) clusters

Lessons
Overview of Network Load Balancing Configuring a Network Load Balanced Cluster Maintaining a Network Load Balanced Clusters
Lab: Implementing an NLB cluster
Exercise 1: Preparing the NLB cluster nodes Exercise 2: Configuring an NLB cluster