

Windows 2000 Clustering Services Administration



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4 Sessions –

12 Hours of Interactive Training

In this MCSE elective course from LearnKey, industry expert Michael Storm begins with basic concepts of clustering and proceeds step-by-step through installation, configuration, monitoring, troubleshooting, and optimizing Clustered Services. At the conclusion of this course you will understand how to install, configure, and manage Microsoft Clustering Services using Windows 2000 Advanced Server and will be prepared for exam #70-223.

About The Author

For the past 16 years, **Michael Storm** has managed the design, security and implementation of enterprise networks for Fortune 100 companies around the globe. As the founder of Brainstorm International, Inc., Storm specializes in InfoSec Security and Internetwork Solutions Architectures. He is currently the Director of Network Engineering and Security Officer for Interface Technical Training of Phoenix, AZ and creator of the 'Hard Hat' learning process, used by countless Cisco and Microsoft Professionals for achieving technical mastery. Storm holds many IT certifications, including the Cisco CCIE Security, CCNP/CCSP/CCDP, NSA/CNSS CISSP, MCSE and MCT.

Session 1

Section A: Introduction to Clustering

- Clustering Objectives
- Reliability vs. Availability
- Clustering Types
- Network Load Balancing & Two Node Cluster
- NLB Services
- Cluster Services
- Component Load Balancing Services

Section B: Key Clustering Elements

- Clustering Principles
- Clustering Models
- Cluster Components
- Component Interactions

Section C: Physical Cluster Components

- Cluster Disks
- Quorum Resource
- Quorum Ownership
- Cluster Communication

Section D: Logical Cluster Components

- Groups
- Resources
- Resource Dependencies
- Resource Dependency Tree
- Resource Dependency Rules
- Virtual Server Usage
- Client Access
- Virtual Server Environment
- Name Resolution
- Failover & Failback

Section E: Clustering Methods

- Active/Passive
- Hybrid Configuration
- Single Node Virtual Server

Section F: Pre-Installation/Hardware

- Requirement
- Lab Configuration
- Cluster Communication
- Network Cards
- Configure Network Cards
- Private Network
- Public & Mixed Network

Session 2

Section A: Cluster Disks

- Disk Configuration
- Verify with Disk Manager
- Configure Partitions on Node 1
- Rename Partitions on Node 2
- Create Partition on Node 2

Section B: Cluster Disk Optimization

- Hardware Consideration
- SCSI vs. Fiber Channel
- SCSI Hardware
- Fiber Channel Hardware
- Network Routing Devices

Section C: Pre -

Installation/Software

- Requirements
- Assign IP Addresses
- Assigning Names
- Computer Accounts
- User Accounts
- Existing Services & Applications

Section D: Installation

- 1st Node Install
- Installation Wizard
- Configure Cluster Network
- Assign IP Addresses
- Verify Cluster Administrator
- 2nd Node Install
- Verify Nodes/State

Section E: Post-Installation

- Task
- Directory Structure
- Troubleshooting Tools
- Network Connections
- SCSI Configurations

Section F: Cluster Administration

- Cluster Administrator
- Cluster Properties
- Group Properties
- Multiple Groups
- Cluster Configuration
- Nodes
- Failover & Failback
- Create Groups
- Create Resource
- Create Application with Wizard
- Create Resource with Wizard
- View & Bring on Line New Group
- CLUSTER.EXE

Section G: Failover & Failback

- Manual Failover
- Setup Failback
- Auto Failover & Failback

Session 3

Section A: Adding File & Print Services

- File & Print Server
- Print Share Issue
- Configure Print Server
- Add Resource
- Create TCP/IP Printers
- View
- Distributed File Systems

Section B: Adding Network Services

- DHCP/WINS
- Add WINS Resource
- Group & Resource
- Troubleshooting

Section C: Adding Backoffice Applications

- Cluster-aware Applications
- Add IIS Resource

Section D: Network Load Balancing

- Port Rules
- Manage Utility
- NLB Process
- Setup NLB
- Configure NLB

Section E: Cluster Unaware Applications

- Generic Service
- Configure Generic Service
- Generic Application

Section F: Testing Failover

- IIS Verification
- Setup Website
- Website Failover
- WINS Failover

Section G: Rolling Upgrade Introduction

- Rolling Upgrades
- Upgrade Terminology
- Rolling Upgrade Requirements
- Limitations

Session 4

Section A: Rolling Upgrade Process

- Supported Applications
- Unsupported Applications
- Upgrade Process: Phases 1 & 2
- Upgrade Process: Phases 3 & 4

Section B: Rolling Upgrade Troubleshooting

- Prepare for Upgrade
- Upgrade
- Verify Failover & Failback
- Troubleshooting Techniques

Section C: Disaster Recovery

- Planning for Backup
- Backup Utility
- Restore Procedures
- Restore Cluster Disks
- Restore Cluster Configuration Files
- Restore Remaining Nodes & Test

Section D: Cluster Maintenance & Management

- Repairing the Quorum
- CLUSTER.LOG
- Viewing CLUSTER.LOG
- Evicting Nodes
- Add Physical Disk Resource
- Resource Monitor

Section E: Optimizing Cluster Performance

- Cluster Performance
- Server Capacity Testing
- Determine Requirements
- Cluster Limitations
- Software RAID