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SQL Server 2008: Failover Clustering

Overview

The SQL Server 2008: Failover Clustering WorkshopPLUS course provides database administrators the knowledge and skill on how to install, administer, and troubleshoot Microsoft SQL Server 2008 Failover Clustering on Windows Server 2008 R2. The workshop introduces the new features available in SQL Server 2008 Failover Clustering and includes various hands-on labs designed to provide the students with the practical experience and confidence required to manage SQL Server 2008 Failover Clusters in a daily work environment.

The workshop contains Level 300 content. Please review the Target Audience information, and contact your Microsoft Services representative to ensure that this workshop is appropriate to the student's experience and technical expertise.

Technical Highlights

- Covers SQL Server 2008 Failover Clustering on Windows Server 2008 R2
- SQL Server High Availability Options
- Microsoft Windows Server 2008 Failover Clustering Basics
- Configuring Microsoft Distributed Transaction Coordinator
- Planning
- Implementing and Upgrading
- Maintaining
- Troubleshooting
- Best Practices

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Target Audience

This workshop is intended for SQL Server database administrators (DBAs) or database developers who are working with SQL Server and require a deeper understanding of SQL Server Failover Clustering. To ensure the high-quality knowledge transfer expected by the attendees of this three-day workshop, class size is limited to a maximum of 16 students who have some basic knowledge of Windows Failover Cluster and at least 1-2 years of experience working with SQL Server as database administrators (DBAs) or database developers. Other common target audience job titles include:

- SQL Server Database Administrator
- Database Architect
- Capacity Planning Specialist
- Quality Assurance Tester
- Senior Help Desk Specialist
- Database Application Developers
- ISV Program Managers

Syllabus

This workshop runs a full 3 days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: SQL Server High Availability Options. This module focuses on the various SQL Server 2008 High Availability (HA) options. After completing this module, you will have a good understanding of SQL Server 2008 Failover Clustering, Database Mirroring, Log Shipping and Replication. You will be able to compare the available HA options and understand which HA option/s best suit your business needs.

Module 2: Clustering Windows Server 2008 R2. This module introduces you to Microsoft Failover Cluster technology. You will learn some cluster terminology and the main components of Microsoft Windows server 2008 R2 Failover Cluster. This module will give you a foundation and basics of Microsoft Windows Server 2008 R2 Failover Cluster and allow you to work with Failover Cluster effectively as a SQL Server expert. At the end of the module, you will create a two node Windows Server 2008 R2 Failover Cluster.

Module 3: Configuring Microsoft Distributed Transaction Coordinator. This module introduces you to Microsoft Distributed Transaction Coordinator (MSDTC). It covers step by step details for configuring MSDTC as a clustered resource, best practices and troubleshooting techniques for MSDTC on a Windows Server 2008 R2 Failover Cluster.

Module 4: Planning SQL Server 2008 Failover Clustering Basics. This module introduces you to SQL Server 2008 Failover Clustering basics. You will learn the new enhancements of SQL Server 2008 Failover Clustering, how it works and understand the different topologies This module takes a deep dive in planning SQL Server 2008 Failover Clustering. It covers software, hardware and security requirements and discusses all the following considerations - scalability, memory, processor, instance names, network, storage, Windows on Windows (WOW) mode, side-by-side clustered instances and best practices.

Module 5: Implementing a SQL Server Failover Cluster. This module covers the different ways to install SQL Server 2008 failover cluster, prerequisites, slipstreaming and post-installation tasks. At the end of the module you will install a two node SQL Server 2008 failover cluster using slipstream on Windows Server 2008 R2.

Module 6: Rolling Upgrade to SQL Server 2008. This module introduces the new Rolling Upgrade and Update features of SQL Server 2008. Both of these features minimize downtime. This module explains how to perform a rolling upgrade from a previous version of SQL Server. It also explains how to perform a rolling update on a clustered instance of SQL Server 2008. At the end of the module you will perform a rolling upgrade of a clustered instance of SQL Server 2005.

Module 7: Maintaining and Troubleshooting a SQL Server 2008 Failover Cluster. This module covers the common SQL Server 2008 Failover Clustering maintenance. It also provides you with troubleshooting techniques with installation and post installation of SQL Server 2008 Failover Clustering. It covers the most common reasons for a clustered instance of SQL Server 2008 to fail and discusses some common failover cluster problems