

SQL 2016 Always On High Availability (MOC 55246)

Überblick

In diesem Workshop lernen die Teilnehmer die Konzepte von SQL AlwaysOn und High Availability kennen. Dieser Kurs verwendet SQL 2016, es werden aber auch die Unterschiede zu SQL 2012- SQL 2014 erklärt.



Dauer:
3 Tage



Preis:
1.790,00 € (2.130,10 € inkl. MwSt.)

Kursinhalt

Introduction

- Course introduction

Always-on and High-Availability Concepts and Terminology

- Concepts and Terminology
- Table of Availability
- High Availability
- Causes of Downtime
- Planned downtime
- Unplanned downtime
- Disaster Recovery
- Recovery Time Objective (RTO)
- Recovery Point Objective (RPO)
- Recovery Level Objective (RLO)
- Storage Area Networks (SAN)
- Edition Changes from SQL 2012
- SQL Server 2014 Changes
- SQL Server 2016 Changes
- Legacy Solutions prior to Always On
- Failover Cluster Instances
- Log Shipping
- A Typical Log Shipping Configuration
- Monitor Server
- Replication
- Database Mirroring
- Database Mirroring Terminology
- Principle
- Mirror
- Witness (red box in image above)
- Database Snapshots
- Limitations of legacy solutions:

- What do we mean by Always On?
- Table of Always On Comparison

Windows Server 2016 Failover Clustering

- Understanding Failover Clustering in Server 2016
- Statefull High Availability Solution
- Supported in both Standard and Datacenter
- Servers should run similar hardware
- Should run same edition
- Hyper-V best with datacenter
- Certified for Windows server logo
- Shared Storage
- Quorums
- Node Majority
- Node and Disk Majority configuration:
- Node and File Share Majority
- No Majority
- Configuration
- Cluster Networks Best Practices
- Connection to nodes to shared storage
- Private network for internal cluster
- Public network for client connections
- Cluster Aware Updating
- Virtual Machine Failover Clustering
- Preferred Owners
- Failover Failback
- Resources
- Dependences
- Heartbeat

SQL 2016 Failover Cluster Instances

- Failover Cluster Instance
- As A FCI Appears To A Client

SQL 2016 Always-on Availability Groups

- Availability Groups and Replicas
- Primary Replica
- Secondary Replicas
- Availability Group Listener
- Availability Mode
- Synchronous Commit Mode
- Asynchronous Commit Mode
- Failover Modes
- Automatic Failover Without Data Loss
- Automatic Failover Requirements:
- Manual
- Manual Failover Requirements
- Common Topologies

The Dashboard

- The Dashboard

- How to view logs
- Using replication with Logins
- Using partially contained databases

Active Secondary Availability Group Actions

- Reporting with Secondary Replicas
- Configuring a Readable secondary
- Read-Only Routing
- Load Balancing
- Lab: Configure a Read-Only Secondary
- Database Backups with Secondary
- Steps of Backup Using secondary
- Backup Preference Options

Maintenance

- DBCC Checks
- Database Adding and Removing

Monitoring and Troubleshooting Availability Groups

- The Dashboard in Depth
- Events
- Policy Based Managemnt for Availability Groups

Voraussetzungen

Erfahrung in der SQL Datenbankadministration

Zielgruppe

Dieser Kurs richtet sich an Datenbankadministratoren und Datenbankarchitekten.

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