

Microsoft SQL Always on High availability with optimization

Course outline

Statistics and Index Internals

- Statistics Internals and Cardinality Estimation
- Index Internals
- Columnstore Indexes

Query Execution and Query Plan Analysis

- Query execution and optimizer internals
- Query execution plans
- Analyzing query execution plans
- Adaptive query processing

Plan Caching and Recompilation

- Plan cache internals
- Troubleshooting plan cache issues
- Automatic tuning
- Query store

Extended Events

- Extended events core concepts
- Working with extended events

Protecting Data with Encryption and Auditing

- Options for auditing data access in SQL Server
- Implementing SQL Server Audit
- Managing SQL Server Audit
- Protecting Data with Encryption
- Always Encrypted
- Dynamic Data masking

Recovery Models and Backup Strategies

- Understanding Backup Strategies
- SQL Server Transaction Logs
- Planning Backup Strategies

Backing Up SQL Server Databases

- Backing Up Databases and Transaction Logs
- Managing Database Backups
- Advanced Database Options
- Backing Up Databases
- Performing Database, Differential, and Transaction Log Backups
- Performing a Partial Backup

Restoring SQL Server 2016 Databases

- Understanding the Restore Process
- Restoring Databases
- Advanced Restore Scenarios
- Point-in-Time Recovery
- Restoring a Database Backup
- Restoring Database, Differential, and Transaction Log Backups
- Performing a Piecemeal Restore

Automating SQL Server Management

- Automating SQL Server management
- Working with SQL Server Agent
- Managing SQL Server Agent Jobs
- Multi-server Management
- Create a SQL Server Agent Job
- Test a Job
- Schedule a Job
- Configure Master and Target Servers

High Availability and disaster Recovery Topics

- Introduction to Enterprise Data Architecture
- Multi-Server Configuration Management

Introduction to Cloud Data Solutions

- VM Creation in cloud
- DB creation and management in cloud
- Deployment DB from Onprem to cloud

Introduction to High Availability in SQL Server 2016/17

- High Availability Concepts and Options in SQL Server 2016
- Log Shipping

Clustering with Windows Server and SQL Server 2016/17

- Windows Server Failover Cluster configuration
- SQLServer failover Cluster configuration
- SQL Server AlwaysOn Failover Cluster Instances
- Settingup quorum Disk

AlwaysOn Availability Groups

- Introduction to AlwaysOn Availability Groups
- Working with AlwaysOn Availability Groups
- Considerations for Using AlwaysOn Availability Groups
- Describe the fundamental concepts and terminology for AlwaysOn Availability Groups.
- Explain how work with AlwaysOn Availability Groups.

Replicating Data

- SQL Server Replication
- Planning Replication
- Types of Replication