

WorkshopPLUS – SQL Server: Features and Administration

WorkshopPLUS

Duration: 3 Day [Remote / Onsite]

Difficulty Level: 300 - Advanced

Description

Review key principles of fulfilling the role of an enterprise Database Administrator. Learn to manage and monitor a SQL Server environment to meet Service Level Agreements (SLAs). Reinforce lessons and provide hands-on experience working with SQL Server 2022, Windows Server 2022, Windows Clustering, and SQL in a Linux environment. Focus will cover three core responsibilities of high availability and disaster recovery, performance, and security.

Objectives

- Learn different strategies for meeting HA/DR SLAs with SQL Server
- Understand the benefits of SQL Server Failover Clustering and SQL Server availability groups.
- Learn Benchmarking and Baselining strategies.
- Monitoring performance with extended events and performance monitor.
- Discuss SQL Server performance enhancements.
- Learn SQL Service Account best practices.
- Understand SQL Server encryption features including Always Encrypted.
- Learn about the different platforms available to SQL Server

Outcomes

- Management of SQL Server in the enterprise to build appropriate SLAs to help ensure that IT projects meet business goals and needs by using the tools within SQL Server.
- Learn in-depth expertise, tools, and hands on experience to manage and monitor SQL Server instances across the enterprise

Methodology

Learn by example - Learn with presentations, demonstrations and group discussion.

Requirements

Participants

- Database Administrators
- Data Engineers
- Business Analysts

Skill Requirements - Recommended

- General experience with data
- Basic knowledge of SQL Server

Delivery Requirements

- Computer with Windows 10 or later, audio equipment, internet access.
- Modern browser and at least 1-Mbps bandwidth per participant.
- Microsoft/Windows Live ID to connect to the virtual environment.
- Microsoft Teams for remote delivery.

Delivery Outline

The scope of this engagement will be agreed based on your specific needs. Final agenda will be determined in the scoping call.

Delivery Details

SQL Server Configuration and Database Maintenance

- Windows Server Configuration
- SQL Server Configuration
- Database Configuration
- Database Maintenance

Monitoring And Troubleshooting

- Monitoring Tools
- Waits Methodology to Monitor Performance
- Execution Plans
- Query Store

Performance Features

- In-Memory OLTP
- Columnstore Indexes
- Intelligent Query Processing
- Automatic Tuning

Security - General

- SQL Server Service Accounts Best Practices
- Dynamic Data Masking
- Row Level Security
- Data Discovery/Classification

Security - Encryption

- Backup Encryption
- Transparent Data Encryption (TDE)
- Column Level Encryption
- Overview of Always Encrypted

SQL Server High Availability

- Introduction to Failover Cluster Instances
- Introduction to Availability Groups
- What's new with Availability Groups
- Availability Group Best Practices

SQL Server High Availability

- Basic Disaster Recovery
- Backups
- Restores
- Backup Features

Cloud Connected

- Azure Arc-Enabled SQL Server
- Microsoft Azure Purview
- Azure Synapse Link

SQL Server Platform Choices

- SQL Server Editions
- SQL Server on Linux
- SQL Server on Containers
- SQL Server in Microsoft Azure

For more information: Contact your Microsoft Representative for more details.