凱風電腦有限公司 |Gallant Computer Company Ltd.
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(20764B) – Administering a SQL Database Infrastructure

OBJECTIVE

This instructor-led course provides students who administer and maintain SQL Server databases with the knowledge and skills to administer a SQL server database infrastructure. Additional it will be of use to individuals who develop applications that deliver content from SQL Server databases.

COURSE TOPICS

Module 1: SQL Server Security

- Authenticating connections to SQL Server
- Authorizing logins to access databases
- Authorization across servers
- Partially contained databases

Module 2: Assigning Server and Database Roles

- Working with server roles
- Working with Fixed database roles
- Creating user-defined database roles

Module 3: Authorizing Users to Access Resources

- Authorizing user access to objects
- Authorizing users to execute code
- Configuring permissions at the schema level

Module 4: 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

Module 5: Recovery Models and Backup Strategies

- Backup strategies
- Understanding SQL Server transaction login
- Planning a SQL Server backup strategy

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Module 6: Back up of SQL Server Databases

- Backing up databases and transaction logs
- Managing database backups
- Working with backup options

Module 7: Restoring SQL Server 2016 Databases

- Understanding the restore process
- Restoring databases
- Working with point-in-time recovery
- Restoring system databases and individual files

Module 8: Automating SQL Server Management

- Automating SQL Server management
- Working with SQL Server agent
- Managing SQL Server agent jobs
- Multi-server management

Module 9: Configuring Security for SQL Server Agent

- Understanding SQL Server Agent Security
- Configuring credentials
- Configuring proxy accounts

Module 10: Monitoring SQL Server with Alerts and Notifications

- Configuration of database mail
- Monitoring SQL Server errors
- Configuring operators, alerts, and notifications
- Alerts in Azure SQL database

Module 11: Introduction to Managing SQL Server by using PowerShell

- Getting Started with Windows PowerShell
- Configure SQL Server using PowerShell
- Administer and Maintain SQL Server with PowerShell
- Managing Azure SQL Databases using PowerShell

Module 12: Tracing Access to SQL Server with Extended events

- Extended Events Core Concepts
- Working with Extended Events

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Module 13: Monitoring SQL Server

- Monitoring activity

- Capturing and managing performance data

- Analyzing collected performance data

- SQL Server utility

Module 14: Troubleshooting SQL Server

- A Trouble Shooting Methodology for SQL Server

- Resolving Service Related Issues

- Resolving Connectivity and Log-in issues

Module 15: Importing and Exporting Data

- Transferring data to/from SQL Server

- Importing and exporting table data

- Using BCP and BULK INSERT to import data

- Deploying and upgrading data-tier applications

PREREQUISITES

In addition to their professional experience, students who attend this training should already have the following technical knowledge:

- Basic knowledge of the Microsoft Windows operating system and its core functionality.
- Working knowledge of Transact-SQL.
- Working knowledge of relational databases.
- Some experience with database design.

TRAINING APPROACH

This course includes lectures, course notes, exercises and hands-on practice.

COURSE DURATION

24 Hours (in 3 days)

Time: 9:00am to 6:00pm

Lunch Time: 1:00pm to 2:00pm

CERTIFICATION COMPLETION

A certificate of completion is provided for all trainees attending the course

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