



THE REPUBLIC UNITED OF TANZANIA

INSTITUTE OF ACCOUNTANCY ARUSHA



SHORT COURSE ANNOUNCEMENT

DATABASE ADMINISTRATION USING MS SQL & MS WINDOWS SERVER 2012R2 ADMINISTRATION:

18TH DECEMBER – 12TH JANUARY, 2018

INTRODUCTION:

This four weeks instructor-led course provides students with the knowledge and skills to maintain a Microsoft SQL Server 2014 database and MS Windows server 2012r2. The course focuses on teaching individuals how to use SQL Server 2014 product features and tools related to maintaining a database as well as Windows server 2014 products features and tools.

Note: This course is designed for customers who are interested in learning SQL Server 2012 or SQL Server 2014 and MS Windows Server 2012 r2. It covers the new features in SQL Server 2014, and Windows server 2012r2 but also the important capabilities across the SQL Server data and Windows server 2012 platform.

At course completion

After completing this course, students will be able to:

- Describe core database administration tasks and tools.
- Install and configure SQL Server 2014.
- Configure SQL Server databases and storage.
- Plan and implement a backup strategy.
- Restore databases from backups.
- Import and export data. Monitor SQL Server.
- Trace SQL Server activity.
- Manage SQL Server security.
- Audit data access and encrypt data.
- Perform ongoing database maintenance.
- Automate SQL Server maintenance with SQL Server Agent Jobs.
- Configure Database Mail, alerts and notifications.

- understand and handle installation and configuration of Microsoft Server 2012r2 Network Infrastructure
- administer Active Directory Domain Services
- Securing Windows servers (Member servers and Domain Controllers.)

Course Outline

Module 1: Introduction to SQL Server 2014 Database Administration

This module introduces the Microsoft SQL Server 2014 platform. It describes the components, editions, and versions of SQL Server 2014, and the tasks that a database administrator commonly performs for a SQL Server instance.

Lessons

- Database Administration Overview
- Introduction to the SQL Server Platform
- Database Management Tools and Techniques

Module 2: Installing and Configuring SQL Server 2014

This module explains how to assess resource requirements for SQL Server 2014 and how to install it..

Lessons

- Planning SQL Server Installation
- Installing SQL Server 2014
- Post-Installation Configuration

Module 3: Working with Databases and Storage

This module describes how data is stored in databases, how to create databases, how to manage database files, and how to move them. Other tasks related to storage, include managing the tempdb database and using fast storage devices to extend the SQL Server buffer pool cache, are also discussed.

Lessons

- Introduction to Data Storage with SQL Server
- Managing Storage for System Databases
- Managing Storage for User Databases
- Moving Database Files

- Configuring the Buffer Pool Extension

Module 4: Planning and Implementing a Backup Strategy In this module, you will consider how to create a backup strategy that is aligned with organizational needs, and learn how to perform the backup operations required by that strategy.

Lessons

- Understanding SQL Server Recovery Models
- Planning a Backup Strategy
- Backing up Databases and Transaction Logs
- Using Backup Options
- Ensuring Backup Reliability

Module 5: Restoring SQL Server 2014 Databases

In this module, you will see how to restore user and system databases and how to implement point-in-time recovery.

Lessons

- Understanding the Restore Process
- Restoring Databases
- Advanced Restore Scenarios
- Working with Point-in-Time Recovery

Module 6: Importing and Exporting Data

In this module, you will briefly explore tools and techniques so that you can import and export data to and from SQL Server.

Lessons

- Introduction to Transferring Data
- Importing and Exporting Table Data
- Copying or Moving a Database

Module 7: Monitoring SQL Server 2014 This module explains how to use three of the most commonly used tools: Activity Monitor, dynamic management views and functions (DMVs and DMFs), and Performance Monitor.

Lessons

- Introduction to Monitoring SQL Server
- Dynamic Management Views and Functions
- Performance Monitor

Module 8: Tracing SQL Server Activity

This module describes how to use SQL Server Profiler and SQL Trace stored procedures to capture information about Server, and how to use that information to troubleshoot and optimize SQL Server workloads.

Lessons

- Tracing SQL Server Workload Activity
- Using Traces

Module 9: Managing SQL Server Security

In this module, you will be learn about the core concepts on which the SQL Server security architecture is based, and how to manage security at the server and database levels.

Lessons

- Introduction to SQL Server Security
- Managing Server-Level Security
- Managing Database-Level Principals
- Managing Database Permissions

Module 10: Auditing Data Access and Encrypting Data

This module describes the available options for auditing in SQL Server, how to use and manage the SQL Server audit feature, and how to implement encryption.

Lessons

- Auditing Data Access in SQL Server
- Implementing SQL Server Audit
- Implementing SQL Server Audit

Module 11: Performing Ongoing Database Maintenance

This module describes common database maintenance tasks that a DBA must perform, and demonstrates how to automate these tasks using maintenance plans.

Lessons

- Ensuring Database Integrity

- Maintaining Indexes
- Automating Routine Database Maintenance

Module 12: Automating SQL Server 2014 Management

This module describes how to use SQL Server Agent to automate jobs, how to configure security contexts for jobs, and how to implement multi-server jobs.

Lessons

- Automating SQL Server Management
- Implementing SQL Server Agent Jobs
- Managing SQL Server Agent Jobs
- Managing Job Step Security Contexts
- Managing Jobs on Multiple Servers

Module 13: Monitoring SQL Server 2014 by Using Alerts and Notifications

This module covers the configuration of database mail, alerts, and notifications.

Lessons

- Monitoring SQL Server Errors
- Configuring Database Mail
- Configuring Operators, Alerts, and Notifications

Module 14: Install Windows Server 2012 R2

Lessons

- Features and Advantages of Windows Server 2012 and Server 2012 R2
- Planning the Windows Server 2012 R2 Installation
- Understanding Features on Demand
- Storage in Windows Server 2012 R2

Module 15: Configure Network Services

Lessons

- Introducing DNS
- Introducing DNS Database Zones
- Introducing DNS Record Types
- Configuring DNS
- Monitoring and Troubleshooting DNS

- Overview of DHCP
- Installing and Authorizing DHCP
- Creating and Managing DHCP Scopes

Module 16: Plan and Install Active Directory

Lessons

- Verifying the File system
- Verifying Network Connectivity
- Basic Connectivity Tests
- Understanding Domain and Forest Functionality
- Planning the Domain Structure
- Installing Active Directory
- Verifying Active Directory Installation
- Configuring DNS Integration with Active Directory

Module 17: Configure and Manage Active Directory

Lessons

- Active Directory Security Overview
- Implementing Active Directory Security
- Using Group Policy for Security
- Maintain Active Directory

Module 18: Administer Active Directory

Lessons

- An Overview of OUs
- Planning the OU Structure
- Creating OUs
- Managing OUs
- Creating and Managing Active Directory Objects
- Using the Command Prompt for Active Directory Configuration

Module 19: Configure Windows Server 2012 R2

Lessons

- Understanding File Servers
- Configuring File Servers
- Configuring Disk Quotas
- Configuring Print Services
- Configuring Remote Management

Module 20: Manage Security

Lessons

- Managing Security
- Implementing an Audit Policy
- Configuring Windows Firewall Options

TARGET GROUP:

The course is intended for Database Managers, Database Administrators, systems Administrators, IT Professionals, Information Systems Analysts, Network and Database Administrators, Information Systems Auditors, IT Support Staff, Head of ICT Departments and any other interested parties.

METHODOLOGY

The course will be achieved through discussions, case studies, and practices/exercises. Participants will receive all course materials, and at the end of the course participants will receive a certificate of completion.

COURSE FEE:

The fee for the course is **TZS 4,928,000/= (Four million nine hundred twenty eight thousand only)** for **four weeks** to cover for course materials, tea/coffee, and lunch. It does not include accommodation and transport cost. Payment may be in cash, cheque or TISS paid directly to our Bank Account No. 014103007130 in the name of Institute of Accountancy Arusha, NBC, Arusha Branch.

DATE, DURATION, AND VENUE:

This course will be conducted from 18th December, 2017 -12th January 2018 at the Institute of Accountancy Arusha – Njiro Hill.

FOR MORE DETAILS, YOU MAY CONTACT THE FOLLOWING:

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