SQL Server on Linux - MOC On Demand (MS-10999)

Modality: On Demand

Duration: 2 Days

SATV Value: 2

About this course:

A great relational database management system, Microsoft SQL Server that supports a wide range of business intelligence, transaction processing, and analytics applications in the environments of corporate IT. It's one of the three market-driving technologies of the database, alongside IBM's DB2 and Oracle Database. With this course, we will find out about key components and features under Linux and will have the option to deploy SQL Server on Linux and configure and install extra optional components. Other subjects incorporate the management and connectivity of the images of SQL Server under Linux, the database and database framework relocation under Linux to the SQL Server, the configuration of high availability and the provision of disaster recovery.

Salary Estimate:

The normal compensation for Database Administrator with the skills of Microsoft SQL Server is $74,885 every year.

Course Objective:

At the time of completing this course, you will be able to:

1. Explain the process to manage and connect the images of SQL Server on Linux
2. Explore the way to deploy SQL Server on Linux
3. Define key components and capabilities of SQL Server on Linux
4. Explain the way to migrate databases from other database frameworks to SQL Server on Linux and deliver disaster recovery
5. Explain the process to configure SQL Server on Linux
6. Explore the way to install the other optional components to the Server of SQL
7. Define the high availability SQL Server features on Linux

Targeted Audience:

This course is proposed for:

Existing professionals of the database with experience of database systems running on Linux.

Prerequisites:

- Understanding with Linux database systems
- Knowledge of SQL language
- Awareness with the operating system Red Hat, SUSE, or network and Ubuntu.

Suggested prerequisites courses:

- Red Hat System Administration I - RH124
- Essentials of Linux System Administration - LFS201

Course Outline:

Module 1: Introduction to SQL Server on Linux

Describe key capabilities and components of SQL Server on Linux.

Lessons

- Why is SQL Server on Linux?
- SQL Server on Linux capabilities
- Containers
- Linux SQL Server VM in Azure

After completing this module, students will be able to:

- Explain why SQL Server is on Linux and it?s capabilities
- Describe containers
- Describe the SQL Server on Linux VM

Module 2: Deploying SQL Server on Linux

This module examines deploying SQL Server to a number of common Linux instances.

Lessons

- Deploying SQL Server on Ubuntu
- Deploying SQL Server on SUSE
- Deploying SQL Server on Red Hat
- Deploying SQL Server containers on Docker

Lab : Deploying SQL Server on Linux

- Installing SQL Server
- Installing command line tools
- Creating a database
- Create a SQL Server 2017 Docker container

After completing this module, students will be able to:

- Deploy and configure SQL Server 2017 on Ubuntu servers.
- Deploy and configure SQL Server 2017 on SUSE servers.
- Deploy and configure SQL Server 201y in Red Hat servers.
- Pull and run a SQL Server 2017 image in a Docker Container.

Module 3: Installing additional components

When you install the SQL Server on Linux with the mssql-server package, only the core database engine is installed. Additional components, such as SQL Server Agent, Full-Text Search and SQL Server Integration Services must be installed from separate packages. This module covers the installation process for these additional components.

Lessons

- SQL Server agent
- SQL Server full-text search
- SQL Server integration services

Lab : Installing additional components

- SQL Server agent
- SQL Server full-text search
- SQL Server integration services
- Remove the Azure virtual machine

After completing this module, students will be able to:

- Install SQL Server Agent on RHEL, SLES, and Ubuntu.
- Install SQL Server Full-Text Search on RHEL, SLES, and Ubuntu.
- Install SQL Server Integration Services on RHEL and Ubuntu.

Module 4: Configuring SQL Server on Linux

Once a Microsoft SQL Server on Linux instance is installed, you must configure it. Since SQL Server on Linux does not include a Linux-native GUI tool for configuring SQL Server settings, you must use command-line tools and options to configure aspects of the SQL Server behavior. This module covers configuring SQL Server on Linux and SQL Server on Linux Docker containers.

Lessons

- Configuring SQL Server with mssql-conf
- Configure a SQL Server on Linux Docker image

After completing this module, students will be able to:

- Configure SQL Server on Linux with mssql-conf
- Configure SQL Server on Linux Docker containers

Module 5: Managing Database Solutions for SQL Server for Linux

Once you have installed and configured Microsoft SQL Server on Linux, you need to know how to

connect to your SQL Server on Linux instance, both to manage SQL Server and to connect your applications to SQL Server. In this module, you will learn about several ways that developers and administrators can connect to SQL Server instances running on Linux.

Lessons

- Connecting to SQL Server on Linux
- Managing SQL Server on Linux

Lab : Managing SQL Server on Linux

- Connect to SQL Server on Linux
- Manage SQL Server on Linux

After completing this module, students will be able to:

- Describe different ways to connect to SQL Server on Linux
- Describe how to manage SQL Server on Linux

Module 6: Migrating Databases to SQL Server on Linux and Disaster Recovery

Once you are familiar with the basic operation of Microsoft SQL Server on Linux, you are likely to need to import data. The data you import might take the form of whole databases that you are migrating to SQL Server on Linux from SQL Server on Windows, or from another RDBMS. You might also need to import data to or export data from individual tables or groups of tables in your databases. This module introduces various techniques for moving data and databases to and from SQL Server on Linux.

Lessons

- Backup and restore
- Database export and import
- SQL Server migration assistant
- Bulk copy program
- SQL Server integration services

Lab : Migrating databases

- Migrate a database with backup and restore
- Migrate a database with SQL Server migration assistant

After completing this module, students will be able to:

- Move SQL Server databases with backup and restore.
- Move SQL Server databases with database import and export.
- Use SQL Server Migration Assistant to import databases from other RDBMS platforms to SQL Server.
- Use the Bulk Copy Program to import and export data.

- Use SQL Server Integration Services to import and export data.

Module 7: High Availability

SQL Server on Linux can power mission-critical database systems with high-availability technologies at several different granularities. Log shipping provides high availability for single databases. Failover clustering provides automatic failover and redundancy for SQL Server instances. Availability groups provide high availability, disaster recovery, and read load balancing for groups of databases. This module covers configuring these technologies for SQL Server on Linux.

Lessons

- Log shipping
- Failover clustering
- Availability groups

Lab : High availability

- Configure log shipping
- Create a read-scale availability group

After completing this module, students will be able to:

- Configure log shipping.
- Configure failover clustering.
- Configure availability groups.