

# Data AI: SQL Server on Linux

## WorkshopPLUS

**Focus Area:** Upgrade, Migration and Deployment

**Duration:** 3 days

**Difficulty:** 300-Advanced

### Overview

This course will provide you the knowledge and tools necessary to understand the capabilities and usage of running SQL Server on Linux. It also covers how to install and manage SQL Server on Linux, security, containers and availability options like failover cluster, always on.

This workshop is targeted at Data Platform staff who have knowledge of SQL Server and Linux.

### Objectives

After completing this training, students will be able to:

- Understand Architecture and Features
- Learn installation and patching
- Learn how to connect to SQL Server on Linux
- Understand SQL Server availability options for Linux deployment
- Learn how to create SQL Server Failover Cluster Instance on Linux
- Understand security and container features

### Key Takeaways

#### Course Material

- Gain a deeper understanding of implementing SQL server on Linux according to business needs, monitoring and troubleshooting, and performance and configuration guidelines.
- Experience on how to make use of the security features to protect data; implement containers and High availability and Disaster recovery techniques.

#### Hands-on Labs

- Most of the concepts covered above will be supported by hands-on labs and demos.
- Attendees have access to resources and labs for up to 6 months after workshop completion.

### Agenda

#### Day 1

- Linux and SQL
- SQL Server on Linux Administration

#### Day 2

- SQL server on Linux High Availability (HA) and Disaster Recovery (DR)

#### Day 3

- Performance and Configuration Guidelines
- Security
- Containers

Plan for three full days. Early departure on any day is not recommended.

## Course Details

### Module 1: Linux and SQL Server

- Why SQL Server on Linux
- Architecture and Features
- SQL Server Big Data Clusters

### Module 2: SQL Server on Linux Administration

- Installation and Patching
- Connecting to SQL Server
- The Linux File System
- Configure with MSSQL-CONF Tool
- Managing SQL Server

### Module 3: SQL server on Linux High Availability (HA) and Disaster Recovery (DR)

- SQL Server availability options for Linux deployment
- Introduction to Linux Cluster stack
- Creating SQL Server Failover Cluster Instance on Linux
- Creating SQL Server Availability Group on Linux
- SQL Server Availability Groups for Read Only Scale
- Cross-platform and Linux distributions interoperability

## Recommended Qualifications

- Understanding of the fundamentals of SQL Server
- Understanding of the fundamentals of Linux

## For more information

Contact your Microsoft Account Representative for further details.

### Module 4: Performance and Configuration Guidelines

- OS Configuration
- SQL Server Configuration
- Monitoring

### Module 5: Security

- Security Features
- Security Limitations

### Module 6: Containers

- Containers Overview
- SQL Server running on a Docker container
- SQL Server container in Kubernetes with Azure Kubernetes Services (AKS)

## Hardware Requirements

- An Intel Core-i5-based PC
- USB port
- Microsoft/Windows Live ID to connect to the virtual environment
- 4 GB RAM
- 128 GB HDD
- Windows 7 SP1 or later
- Office 2013 Professional Plus
- Internet access with at least 1 Mbps bandwidth per student.