

# Sela.

20465C

## Designing a Data Solution with Microsoft® SQL Server® 2014

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# Designing a Data Solution with Microsoft® SQL Server® 2014

20465C - Version: 1

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## 5 days course

### Description:

The focus of this five-day instructor-led course is on planning and implementing enterprise database infrastructure solutions by using SQL Server 2014 and other Microsoft technologies. It describes how to consolidate SQL Server workloads, work with both on-premises and Microsoft Azure cloud-based solutions, and how to plan and implement high availability and disaster recovery solutions.

### Intended Audience:

This course is intended for database professionals who need who plan, implement, and manage database solutions. Primary responsibilities include:

- Planning and implementing database infrastructure.
- Planning and implementing consolidation strategies.
- Implementing SQL Server in on-premises, cloud, and hybrid IT scenarios.
- Planning and implementing high availability solutions.
- Planning and implementing disaster recovery solutions.

### Prerequisites:

- At least 2 years' experience of working with relational databases, including:
  - Planning and implementing databases
  - Managing databases
  - Querying with Transact-SQL
  - Some basic knowledge of high availability and disaster recovery
  - Some basic knowledge of Microsoft Azure technologies and concepts around cloud computing

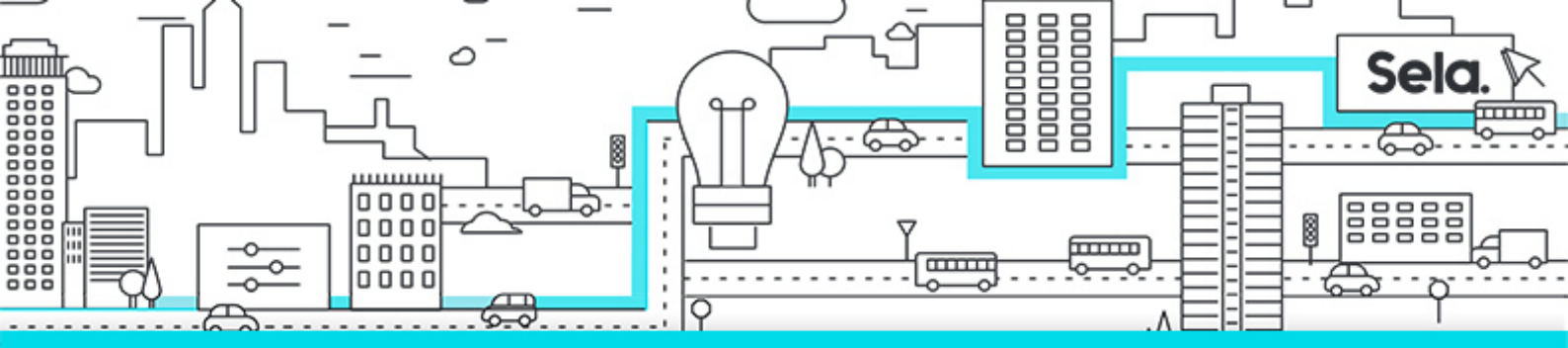


## Objectives:

- After completing this course, students will be able to:
- Assess an existing enterprise environment.
- Plan and implement Policy-Based Management.
- Describe the considerations for consolidating workloads with SQL Server 2014.
- Describe considerations for including SQL Server 2014 in a private cloud.
- Use Microsoft Azure storage with SQL Server 2014.
- Implement and configure databases in Microsoft Azure SQL Database.
- Implement and configure databases in Microsoft Azure virtual machines.
- Describe high availability technologies in SQL Server 2014 and implement log shipping.
- Describe Windows Server Failover Clustering and Implement an AlwaysOn Failover Cluster Instance.
- Implement an Always On Availability Group.
- Plan high availability and disaster recovery solutions.
- Plan and implement database replication.

## Topics:

- **Introduction to Enterprise Data Architecture**
  - Considerations for Enterprise Data
  - Assessing an Existing Infrastructure
  - Lab : Assessing an Existing Enterprise Data Infrastructure
- **Multi-Server Configuration Management**
  - Policy-Based Management
  - Microsoft System Center
  - Lab : Planning and Implementing Policy-Based Management
- **Consolidating Database Workloads with SQL Server 2014**
  - Considerations for Database Server Consolidation
  - Managing Resources in a Consolidated Database Infrastructure



- Lab : SQL Server Consolidation

- **Introduction to Cloud Data Solutions**

- Overview of Cloud Computing
- SQL Server in a Private Cloud
- Lab : Preparing a SQL Server Installation in a Virtual Machine Template

- **Introduction to Microsoft Azure**

- Microsoft Azure Overview
- Microsoft Azure Storage
- Lab : Using Microsoft Azure

- **Microsoft Azure SQL Database**

- Introduction to Microsoft Azure SQL Database
- Microsoft Azure SQL Database Security
- Implementing and Managing Databases
- Lab : Using Microsoft Azure SQL Database

- **SQL Server in Microsoft Azure Virtual Machines**

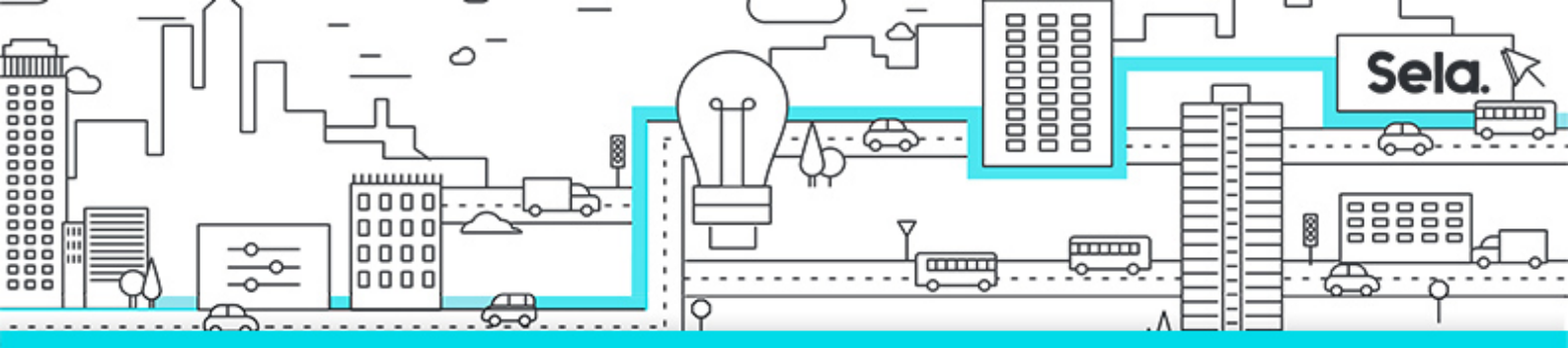
- Introduction to Microsoft Azure Virtual Machines
- Microsoft Azure Virtual Machine Connectivity and Security
- Creating Databases in a Microsoft Azure Virtual Machine
- Lab : Using Microsoft Azure Virtual Machines

- **Introduction to High Availability in SQL Server 2014**

- High Availability Concepts and Options in SQL Server 2014
- Log Shipping
- Lab : Using Log Shipping

- **Clustering with Windows Server and SQL Server 2014**

- Introduction to Windows Server Failover Clustering



- SQL Server AlwaysOn Failover Cluster Instances
- Lab : Implementing an AlwaysOn Failover Cluster Instance

- **AlwaysOn Availability Groups**

- Introduction to AlwaysOn Availability Groups
- Working with AlwaysOn Availability Groups
- Considerations for Using AlwaysOn Availability Groups
- Lab : Implementing and Testing an AlwaysOn Availability Group

- **Planning High Availability and Disaster Recovery**

- High Availability and Disaster Recovery with SQL Server 2014
- High Availability and Disaster Recovery for Databases in Microsoft Azure
- Lab : Planning High Availability and Disaster Recovery

- **Replicating Data**

- SQL Server Replication
- Planning Replication
- Lab : Planning and Implementing Replication