Course DP-900T00-A - Microsoft Azure Data Fundamentals

Prerequisites

Prerequisite certification is not required before taking this course.

What is Azure?

The Azure cloud platform is more than 200 products and cloud services designed to help users bring new solutions to life—to solve today's challenges and create the future. Build, run, and manage applications across multiple clouds, on-premises, and at the edge, with the tools and frameworks of your choice.

Lessons to be covered:

Relational database (25-30%)

Azure offers:

Azure SQL Database

Close to 100% compatibility to SQL Server on premises

Lots of options for provisioned and serverless databases

Pay for performance or pay for hardware

2 to 80 vCores

5 GB and 4 TB storage

Starting at $5 per month

Azure provides other database engines as a service.

PostgreSQL, MySQL and MariaDB

SQL Server in a VM

Guaranteed compatibility to SQL Server on premises

You manage everything - OS upgrades, software upgrades, backups, replication

Push the maximum performance out of the CPU through expert tweaks

No limitations (i.e. can support data above 4TB)

Pay for the server and licensing, not per DB

SQL SERVER 2008, 2012, 2014, 2017 and 2019

SQL Managed Instance

Close to 100% compatibility to SQL Server on premises

Fully-managed service

4 to 80 vCores

32 GB to 8 TB storage

RELATIONAL DATABASE STRUCTURE

How data is stored in relational database?

Relational data is stored in tables

Rows and columns

Rows => Tuples

Columns => Attributes (Characteristics of an object or entity)

Relational database table looks like an excel sheet.

Data dictionary / database schema => Structure of a database table

Every relational database table must a Primary Key(PK)

Every relational database table may have any number of Foreign Key(FK)

Indexes are used to speed up or performance of SQL (Structured Query Language) queries

VIEWS

Virtual table or a part of a database table. Data can be extracted from views.

Views are derived from a database table

A database table can have any number of views

```
CREATE VIEW EMPLOYEE_VIEW AS
SELECT emp_no, emp_nme, emp_salary
FROM EMPLOYEE;
```