

DP-203: Data Engineering in Microsoft Azure, Part 1 of 7: Azure Cloud and Data Engineer

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Meet the expert: Eshant Garg has 16 years of extensive professional experience with expertise in Database and Business Intelligence Solutions, Advanced Analytics, Design and Solution Architect, Reporting, and Cloud Computing Technologies (Azure & AWS).

As a developer and architect, he has worked closely with customers, users, and colleagues to support business solutions across a variety of industries including healthcare, insurance, finance, and government ranging from small companies to fortune 500 companies.

Prerequisites: AZ-900 Azure Fundamentals is very helpful but not required. A Candidate for the exam must have strong knowledge of data processing languages such as SQL, Python, or Scala, and they need to understand parallel processing and data architecture patterns.

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Course description: The DP-203 Exam is measured in Four domains: Design and implement data storage (40-45%), Design and develop data processing (25-30%), Design and implement data security (10-15%), and Monitor and optimize data storage and data processing (10-15%).

This course covers an introduction to Data Engineering, as well as Data Storage with Non-Relational Data Stores.

Course outline:

Course Overview

- Introduction
- Course Introduction
- DP-203 Exam Info
- How to use Azure Portal for Free
- Summary

Create Azure Free Subscription

- Introduction
- Create Azure Free Subscription
- Azure Portal Overview
- Delete Resources And Set Budget
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What is a Data Engineer?

- Introduction
- How Did Data Engineer Profile Evolve
- Data Engineer Role And Responsibility
- Data Engineer Technologies
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Azure Storage Services

Overview

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- Learning Objectives
- Azure Storage Services Overview
- Demo: Provision Azure Storage Account
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Data Redundancy Options

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- Blob Storage

- Access Tiers
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Table Storage

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- Table Storage
- Queue Storage
- File Share Storage
- Demo: File Share Storage
- Disk Storage And Demo
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Cosmos DB

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- How Cosmos Db Evolved
- Cosmos Db Features
- Cosmos Db Multi-Model APIs
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Provision Cosmos DB Account

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- Provision Cosmosdb Account
- Database Containers And Items
- Throughput And Request Units
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Horizontal Scalability

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- What Is Partitioning And Partition Key
- Dedicated Vs Shared Throughput
- Dedicated vs. Shared Throughput

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Partitioning

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- Avoiding Hot Partition
- Single Partition Vs Cross Partition
- Composite Key
- Partition Key Best Practice
- Demo: Insert And Query Data In Your Cosmos Db
- Summary

Time to Live

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- Time To Live
- Globally Distribution
- Multi-Master
- Manual vs. Automatics Failover
- Manual Vs Automatics Failover
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Manual vs. Automatic Failover

- Introduction
- Manual Vs Automatics Failover
- Manual vs. Automatics Failover
- 5 Consistent Level
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Cosmos DB Security

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- Cosmos Db Security

- What Is Data Lake
- How Data Lake Gen 2 Evolved
- Blob Vs Lake
- Data Lake Security
- Summary

High Availability and Disaster Recovery

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- HA and DR
- Azure Storage - HA and DA Options
- Cosmos Db - HA and DA Options
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