



## DP-3015: Getting Started with Cosmos DB NoSQL Development

Microsoft - Data & AI

- **Nível:** Intermediário
  - **Duração:** 7h
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### Sobre o curso

**This course teaches developers to utilize Azure Cosmos DB for NoSQL API and SDK.**

Students will learn query execution, resource configuration, SDK operations, and design strategies for non-relational data modeling and data partitioning.

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### Destinatários

Software engineers tasked with authoring cloud-native solutions that leverage Azure Cosmos DB for NoSQL and its various SDKs.

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### Pré-requisitos

Familiar with C# programming. Experience writing code that interacts with a SQL or NoSQL database platform.

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### Programa

- Introduction to Azure Cosmos DB for NoSQL
- Try Azure Cosmos DB for NoSQL
- Plan Resource Requirements
- Configure Azure Cosmos DB for NoSQL database and containers
- Use the Azure Cosmos DB for NoSQL SDK
- Configure the Azure Cosmos DB for NoSQL SDK

- Implement Azure Cosmos DB for NoSQL point operations
- Query the Azure Cosmos DB for NoSQL
- Author complex queries with the Azure Cosmos DB for NoSQL
- Implement a non-relational data model
- Design a data partitioning strategy

### **Introduction to Azure Cosmos DB for NoSQL**

- Evaluate whether Azure Cosmos DB for NoSQL is the right database for your application.
- Describe how the features of the Azure Cosmos DB for NoSQL are appropriate for modern applications.

### **Try Azure Cosmos DB for NoSQL**

- Create a new Azure Cosmos DB for NoSQL account.
- Create database, container, and item resources for an Azure Cosmos DB for NoSQL account.

### **Plan Resource Requirements**

- Evaluate various requirements of your application.

### **Configure Azure Cosmos DB for NoSQL database and containers**

- Compare the various service and throughput offerings for Azure Cosmos DB.
- Migrate between standard and autoscale throughput.

### **Use the Azure Cosmos DB for NoSQL SDK**

- Integrate the Microsoft.Azure.Cosmos SDK library from NuGet.
- Connect to an Azure Cosmos DB for NoSQL account using the SDK and .NET.

## **Configure the Azure Cosmos DB for NoSQL SDK**

- Configure the SDK for offline development.
- Troubleshoot common connection errors.
- Implement parallelism in the SDK.
- Configure logging using the SDK.

## **Implement Azure Cosmos DB for NoSQL point operations**

- Perform CRUD operations using the SDK.
- Configure TTL for a specific item.

## **Query the Azure Cosmos DB for NoSQL**

- Create and execute a SQL query.
- Project query results.
- Use built-in functions in a query.

## **Author complex queries with the Azure Cosmos DB for NoSQL**

- Implement a correlated subquery.
- Create a cross-product query.

## **Implement a non-relational data model**

- Determine access patterns for data.
- Apply data model and partitioning strategies to support an efficient and scalable NoSQL database.

## **Design a data partitioning strategy**

- Manage relationships between data entities by using advanced modeling and partitioning strategies.
- Maintain the referential integrity of your data by using change feed.
- Implement pre-aggregating and denormalizing data strategies to improve data-model performance and scaling.
- Optimize storage and compute by mixing entity types in a single container.