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COURSE OUTLINE

Microsoft Solutions Partner
Data & AI
Azure
Training Services

Course Code: DP-420T00

Course Name: Designing and Implementing Cloud-Native Applications Using Microsoft Azure Cosmos DB

DURATION	SKILL LEVEL	DELIVERY METHOD	TRAINING CREDITS	TECHNOLOGY
4 days	Intermediate	VILT/ILT	N/A	Azure

Course Overview

This course teaches developers how to create application using the SQL API and SDK for Azure Cosmos DB. Students will learn how to write efficient queries, create indexing policies, manage and provisioned resources, and perform common operations with the SDK.

Target Audience

Software engineers tasked with authoring cloud-native solutions that leverage Azure Cosmos DB SQL API and its various SDKs. They are familiar with C#, Python, Java, or JavaScript. They also have experience writing code that interacts with a SQL or NoSQL database platform.

Job role:	Exam Requirements
Developer	DP-300

Prerequisites

Before starting this learning path, you should already have:

- Familiarity with Azure and the Azure portal.
- Experience programming with C#. If you have no previous programming experience, we recommend you complete the Take your first steps with C# learning path before starting this one.

Topics

Module 1: Get started with Azure Cosmos DB for NoSQL.

Learn about the Azure Cosmos DB for NoSQL and how to get started with your first account, database, and container.

This learning path helps prepare you for Exam DP-420: Designing and Implementing Cloud-Native Applications Using Microsoft Azure Cosmos DB.

Module 2: Plan and implement Azure Cosmos DB for NoSQL

Plan for configuration options and provisioning choices with a new Azure Cosmos DB for NoSQL account.

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Module 3: Connect to Azure Cosmos DB for NoSQL with the SDK

Use the Microsoft.Azure.Cosmos library from NuGet to connect to an Azure Cosmos DB for NoSQL account from a .NET application.

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Module 4: Access and manage data with the Azure Cosmos DB for NoSQL SDKs

Use the .NET SDK for Azure Cosmos DB for NoSQL to perform common operations on databases, containers, and items.

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Module 5: Execute queries in Azure Cosmos DB for NoSQL

Create SQL queries for the Azure Cosmos DB for NoSQL using the Data Explorer and the .NET SDK

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Module 6: Define and implement an indexing strategy for Azure Cosmos DB for NoSQL

Create custom indexing policies for Azure Cosmos DB for NoSQL containers.

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Module 7: Integrate Azure Cosmos DB for NoSQL with Azure services

Integrate Azure Cosmos DB for NoSQL with Azure Cognitive Search, Azure Functions, and your own solutions.

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Module 8: Implement a data modeling and partitioning strategy for Azure Cosmos DB for NoSQL

In this learning path, you'll learn how Azure Cosmos DB uses partitioning to scale containers and how spending some time thinking about your data model helps to meet the performance needs of your applications.

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Module 9: Design and implement a replication strategy for Azure Cosmos DB for NoSQL

Plan and implement techniques to replicate data across the globe in Azure Cosmos DB for NoSQL.

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Module 10: Optimize query and operation performance in Azure Cosmos DB for NoSQL

Optimize the performance of your queries and operations using Azure Cosmos DB for NoSQL.

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Module 11: Monitor and troubleshoot an Azure Cosmos DB for NoSQL solution

Review the common Cosmos DB administrative tasks of monitor, performance metrics, backup and security used in Azure.

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Module 12: Manage an Azure Cosmos DB for NoSQL solution using DevOps practices Use the command line and Azure Resource Manager to automate common management tasks for Azure Cosmos DB for NoSQL.

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Module 13: Create server-side programming constructs in Azure Cosmos DB for NoSQL Read and Use JavaScript to author server-side stored procedures, user-defined functions, and triggers.

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Exams and Certifications

No associated Exams. A Certificate of completion is issued at the end of the Course.

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