20777: Implementing Microsoft® Azure® Cosmos DB Solutions

Duration: 3 Days
Method: Instructor-Led Training (ILT) | Live Online Training

Course Description

This course teaches participants to design, build, and troubleshoot Cosmos DB solutions that meet business and technical requirements.

Target Audience

This course is intended for:
- Database Developers and Architects (IT professionals, developers, and information workers) who plan to implement big data solutions on Azure using Cosmos DB.

Prerequisites

In addition to their professional experience, candidates who want to attend this training must already have the following technical knowledge:
- Understanding of the fundamental concepts of partitioning, replication, and resource governance for building and configuring scalable applications that are agnostic of a Cosmos DB API.
- Basic working knowledge of the Cosmos DB SQL API.

Course Objectives

Upon successful completion of this course, attendees will be able to:
- Describe the purpose and architecture of Azure Cosmos DB.
- Describe how to design documents and collections to meet business requirements, and how to use the SQL API to build applications that use these documents.
- Describe how to create user-defined functions, stored procedures, and triggers.
- Describe how to tune a database, and how to monitor performance.
- Describe how to create efficient Graph database models using Cosmos DB.
- Describe how to use Azure Search, HDInsight, Azure Databricks, and Power BI with Cosmos DB to query and analyse big data.
- Describe how to use Cosmos DB as a source and sink for streaming data.

Microsoft Partner
Silver Learning

EC-Council
Accredited
Training Center

Course Topics

Module 1: Introduction to Azure Cosmos DB
- Review of NoSQL Database Structures
- Migrating Data and Applications to Cosmos DB
- Managing Data in Cosmos DB

Module 2: Designing and Implementing SQL API Database Applications
- Document Models in Cosmos DB
- Querying Data in a SQL API Database
- Querying and Maintaining Data Programmatically

Module 3: Implementing Server-Side Operations
- Server-Side Programming with Cosmos DB
- Creating and Using Stored Procedures
- Using Triggers to Maintain Data Integrity

Module 4: Optimizing and Monitoring Performance
- Optimizing Database Performance
- Monitoring the Performance of a Database

Module 5: Designing and Implementing a Graph Database
- Graph Database Models in Cosmos DB
- Designing Graph Database Models for Efficient Operation

Module 6: Querying and Analysing Big Data with Cosmos DB
- Integrating Cosmos DB with Azure Search to Optimize Queries
- Analysing Data in a Cosmos DB Database Using Apache Spark
- Visualizing Data in a Cosmos DB Database

Module 7: Implementing Stream Processing with Cosmos DB
- Working with the Cosmos DB Change Feed
- Integrating Cosmos DB into Streaming Solutions

LABS INCLUDED