## Azure Cosmos DB Hands-on Workshop for partners

Join us for a full-day Azure Cosmos DB Hands-on Workshop designed to equip you with the skills to build scalable, high-performance, and cost-optimized applications. This workshop blends technical deep dives with guided labs covering data modelling, full text and vector search, and real-world cost optimization strategies. You'll also explore the latest innovations in Cosmos DB, including its integration with Microsoft Fabric. Ideal for developers, architects, and data professionals looking to deepen their expertise with Cosmos DB.

**🗓 Date:** [Insert Date]  
**🕘 Time:** 9:30 AM – 5:00 PM (IST)  
**📍 Location:** [Insert Venue or Online Link]  
**🎯 Audience:** Technical Architects, Developers, Data Engineers, and AI Practitioners  
**🧠 Prerequisites:** Basic familiarity with NoSQL and Azure Portal

## Agenda

| **Time** | **Session Title & Description** |
| --- | --- |
| **09:30 – 10:15** | **Kickoff & Azure Cosmos DB Overview** Introduction to Cosmos DB’s architecture, global distribution, multi-model APIs (SQL, MongoDB, Cassandra, Gremlin, Table), and consistency models. Use cases in real-time analytics, IoT, and AI. |
| **10:15 – 11:15** | **Hands-on Lab 1: Environment Setup** Provision Cosmos DB accounts, configure indexing and partitioning, install SDKs (Node.js, .NET, Python), and validate access. |
| **11:15 – 12:00** | **Data Modeling & Optimization** Deep dive into indexing policies, partitioning strategies, schema design, and query tuning. Learn to model for access patterns and avoid common anti-patterns. |
| **12:00 – 01:00** | **Hands-on Lab 2: Data Modeling & Querying** Design partitioned data models, write SQL queries, and analyze RU consumption. Use diagnostic logs to identify performance bottlenecks. |
| **01:00 – 01:30** | **🍽️ Lunch Break** |
| **01:30 – 02:15** | **Developing AI Agents with Azure Cosmos DB** Explore how to implement AI Agents, including Full Text Search, Vector Search, Hybrid Search using Azure Cosmos DB. Learn hybrid search patterns and use cases. |
| **02:15 – 03:15** | **Hands-on Lab 3: AI-Powered Search** Build AI Agent based on Azure Cosmos DB, Vectorized the data, create vector indexes, perform full text, vector and hybrid queries with & without filters. Also optimize the search, and evaluate the data modelling techniques with it. |
| **03:15 – 04:00** | **Security & Cost Optimization** Understand RBAC, private endpoints, encryption, and cost-saving strategies like autoscale, TTL, and indexing tuning. |
| **04:00 – 05:00** | **Hands-on Lab 4: Try out Security & Cost Optimization techniques** Apply cost-saving techniques in a live Cosmos DB environment. Use diagnostic tools to monitor RU usage, simulate autoscale, and optimize indexing policies. |
| **05:00 – 05:15** | **Latest Updates in Azure Cosmos DB + Wrap-up** Explore recent feature releases (burst capacity, hierarchical partitioning, integrated vector indexing), recap key learnings, and open Q&A. |