IoT Data Analytics and Storage

Modality: On Demand

Duration: 12 Hours

About this course:

The IoT Data Analytics and Storage course is an integral part of the Certification of Microsoft Professional Program in IoT.

Internet of Things can take your business by a storm, it promises infinite benefits and it can help you discover the true potential of your business data.

This course will teach you ways to use your live-streams and business data that is being collected by the IoT sensors and devices to their full potential for the betterment of your business.

Course Objective:

At the end of the course, students will be able to:

- Explain typical telemetry data collected by the Azure IoT devices
- Describe different approaches to analyze IoT data
- Differentiate between warm and cold storage
- Way to best use each technology
- IoT Hub, Data Lake Analytics, and Data Lake Storage
- Strong concepts of query and analysis of Azure Data Lake sets
- Describe the benefits of warm storage
- Differentiate between operational and archive data sets in IoT
- Configuration and provision of Azure Cosmos Database
- Integration of Azure Cosmos Database and Azure Stream Analytics
- Warm storage using IoT data from Cosmos Database
- Query writing for Cosmos Database
- Usage of IoT Edge Devices for analysis and action on telemetry data
- Use cases for analysis on edge devices
- Edit web-based stream analysis for edge deployment
- Deployment of analytics on edge devices
- Deployment of analytics code on edge devices
- Integrating data stream with data reference data in queries
- Query writing is various types of Windows time
- Combining analytics jobs to ensure sophisticated inputs as well as results
- Employ the best strategies from warm and cold storage with edge analytics to react better to telemetry data
- Experience of finding solutions based on real-time data

Audience:

The target audience for this course is:

- IoT Engineers
- IoT developers

Prerequisite:

Students should be familiar with the following before enrolling for the test:

- How can IoT help in achieving business goals
- Ways to establish 2-way communication between real and simulated devices and IoT hub

Course Outline:

IoT Analytics and Cold Storage

- Configuring the Wind Farm Simulator
- Getting Started with Data Lake Storage and Analytics
- Module Assessments

Warm Storage

- Getting Started with Warm Storage
- Implementing Business System Integration
- Module Assessments

Analytics on the Edge

- Getting Started with IoT Edge
- Implementing Analytics on the Edge
- Deploying an Azure Function to the IoT Edge
- Module Assessments

Advanced Analytics

- Constructing Analytics Queries
- Managing Analytics Topologies
- Device Management And Analytics
- Module Assessments

Final Evaluation

- Final Assessment