IoT Architecture Design and Business Planning

Modality: On Demand

Duration: 24 Hours

About this course:

The Internet of Things course is an integral part of the Certificate in IoT by the Microsoft Professional program.

If your organization is transitioning towards an IoT solution for a production environment or if you need a feasible architecture to submit your business documents before purchasing an expensive resource, then is course will prove to be beneficial to you. This course presents a step by step guide and an optimal solution for you to present a powerful IoT solution.

The first module of this course presents an overview of the IoT Architecture, including all the essentials such as Things, Insights and Actions. With a strong concept of fundamentals of architecture, the students will be ready to learn about the core principles and subsystems, cross-cutting concerns and basics of Reference Architecture along with the key systems.

The next module implements the Remote Monitoring Solution Accelerator to process the receipts and remote device telemetry with the context of Reference Architecture. Students here will learn how to point out the areas of alignment and where the solution leaves the reference and the deployment tools. Students will then be provided with an overview that includes reviewing options for the remote monitoring solutions and customizing them as the need arises. Students will also get an opportunity to learn about advanced accelerator solutions and ways to implement them.

The third module depends on security, scalability, availability, and disaster recovery service level agreements; these requirements are the key factors, which are used to identify and file business and system requirement documents. After requirement documentation, they are implemented and then turned into functional architecture. This architecture is then used to build a PoC system and is then evaluated according to quality measures. In the end, the candidates will provide IoT Hub Operations, Monitoring, and Security Processes and Procedures.

In the final module, students use their comprehensive knowledge to propose a solution for their business requirements according to the IoT Architecture and Azure IoT. They will be familiar with the Azure Cloud and Azure IoT architecture.

Course Objective:

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

- Discuss the advantages and key characteristics of a cloud-based architecture
- Explain Things, Insights and Actions for an IoT system
- Discuss IoT Reference Architecture Subsystems and security
- Explain in detail the key principles of software quality management

- Apply for redundancy with an IoT solution
- Set up a Remote Monitoring Solution Accelerator
- Build a customized solution accelerator
- Deploy and customize a micro-service
- Customize a reference architecture according to a scenario
- Identify and discuss all the architecture requirements
- Documentation of both business and system requirements
- Plan and design architecture according to the given scenario
- Verify an action plan for an architecture
- Point out the key attributes of an executive summary
- Explain Azure and Azure IoT
- Estimate costs attribute for an IoT solution scenario
- Complete documentation of an IoT solution architecture
- Build a business proposal for your system
- Implementation of an IoT solution
- Scaling an IoT solution with changing business demands

Audience:

The target audience for this course is:

- IoT Engineers
- IoT developers

Prerequisite:

Before enrolling for the course, candidates should have the ability to:

- Identify and discuss the IoT solutions that have supported top industries to achieve their business goals
- Work with IoT hardware including breadboard, simple circuits, sensors, etc
- Configuration and implementation of two-way communication channels between hardware and cloud
- Implementation of data analytics such as live streams etc to communicate with device management
- Construct powerful visualizations through which businesses get operations insights
- Apply the principles of machine learning for maintenance and improvement of services

Course Outline:

Understanding the Azure IoT Reference Architecture

- Architectural Overview
- Reference Architecture SubSystems and Security
- Pillars of Software Quality
- Implementing Redundancy

Exploring Solutions

- Remote Moniring Solution Accelerar
- Cusmize a Solution Accelerar
- Connected Facry and IoT
- IoT Edge

Requirements and RFPs

- Understanding Requirements
- Understanding an RFP

PoV and Rollout

- Planning a PoV
- Rollout Production
- Scaling Needs

Final Evaluation

- Final Assessments