SOFTWARE
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Member of WAGO Group

IoT in Manufacturing

Overview and solution workshop: 2-Day Workshop

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IoT Technology enables a wide range of use cases such as remote monitoring of products, real-time production performance and Overall Equipment Effectiveness (OEE) visibility, automated quality inspection or predictive maintenance. In order to optimize your own and your customers competitiveness with a solution, several steps are necessary. For example, you need to create a product vision, drive development forward and obtain initial feedback from pilot customers.

We would like to accompany and support you on this journey. The first joint step is the assessment in this workshop.
In the first part of the workshop, we discuss your IoT scenario. Beginning from the high-level vision and the business model we carve out the core features and success criteria of the intended solution. As a part of this, we apply the business model canvas technique.

In the next step we introduce relevant Azure IoT technologies. Demos shall help to understand the core services and their features in detail. The technical introduction will be completed by a hands-on session. For this purpose, an industrial Edge Gateway will be used and connected to Azure via OPC UA. Within Microsoft Azure, the data will be further processed and visualized. The demo including the prototypical connection via Edge remains available for you after the end of the workshop.

Day two starts with a wrap up and an introduction to advanced services of Azure. As a part of this we provide insights in extended scenarios such as Azure Digital Twin or the Azure Industrial IoT platform. Subsequently and in close cooperation with you, we develop a solution strategy for your IoT scenario. This will provide a basis for decisions as well as for planning the upcoming steps.

Possible Edge Gateways for the workshop:

- Raspberry Pi (Link)
- WAGO PFC (Link)
- WAGO Edge Controller (Link)
- WAGO IoT Box (Link)

We will be very happy to assist you in the selection and procurement of IoT devices.

If you like to use other IoT Edge Gateways from the Azure Certified Device Catalog, please con act us.

Goal:

- Introduce, refine and discuss use-case and business model
- Design and discussion of an initial solution architecture
- Learn about Azure IoT components and capabilities
- Understand the use and added value of Azure IoT services
- Knowledge of connecting an edge device to Azure via OPC UA

Outcome:

- Workshop report including a solution strategy for your use case
- You are familiar with relevant Azure IoT services and architecture approaches
- Demo IoT Edge connectivity scenario which is available after the workshop for internal usage
- Plan for next project steps

Content

Day 1:

Part 1

- Build Business understanding
  - Introduction to vision and/or objectives
  - Customer value proposition
  - Build business model understanding
  - Feature ideation and prioritization
- Overview and Azure IoT
  - IoT Service Overview
  - PaaS and SaaS Offerings

Part 2

- Exploration of Azure IoT capabilities and demonstration of selected Azure IoT concepts. Shown scenarios depend on business understanding results and may include:
  - Device Management with Azure IoT Hub
  - Edge Computing using Azure IoT Edge
  - Device Provisioning with Azure IoT Hub and Azure Device Provisioning Service
  - Azure IoT Solution Accelerators as a customizable solution template
  - Data management and visualization technologies (e.g., Azure Data Explorer, Azure Time Series Insights, Grafana, PowerBI)
- Hands-on Sessions
  - Set up of an IoT live demo where a real device is connected to Azure via OPC UA. The data sent to Azure is visualized via Azure IoT Services.

Day 2:

- Wrap-up Day 1
- Introduction to advanced Azure IoT scenarios (only if useful for intended use case)
  - Azure Industrial IoT Platform
  - Azure Digital Twin
- Define Solution Strategy
  - Discussion of non-functional requirements and boundary conditions
  - Development and discussion of a solution strategy
- Discussion of advantages and disadvantages of the used technologies
- Plan next steps

The concrete workshop contents are flexible and can be adapted to the needs.

Technologies

- Azure IoT
- Azure IoT Edge
- Azure Industrial IoT Platform
- Azure Digital Twin
- OPC UA
- Azure Data Explorer
- Azure Time Series Insights
- Grafana
- PowerBI

Why M&M Software?

- Several years of experience in cloud software development on Azure
- Microsoft Gold Partners in Application Development, Cloud Platform, DevOps and Data Analytics
- As a project partner in IoT projects, we have many years of practical experience in connecting systems to collect and manage data
- We add to your strengths with our experience in the field of software development
- As a project partner for development services, we drive the success of our customers

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