Subsystems and crosscutting

Architecture overview

We recommend an architecture for IoT applications that is cloud native, microservice, and serverless based. The architecture also supports a hybrid cloud and edge compute strategy as some on-premises data processing is expected. To scale individual subsystems horizontally, we recommend use of an orchestrator, such as Azure Managed Kubernetes or Service Fabric, or PaaS services that offer built-in horizontal scale capabilities, like Azure App Services.

1. Devices send telemetry records or events to the cloud gateway.

2. The following steps happen in parallel:
   - Stream processing and rules evaluation is done for device telemetry records and events.
   - Device telemetry data is transformed (if needed).
   - Device data telemetry is stored.
   - Business process integration (such as email, CRM) is executed.
   - Device information is visualized and displayed in the UI.

Products

- Azure Active Directory
- Virtual Machine
- IoT Hub
- Cosmos DB Account
- Storage Account
- Web Application