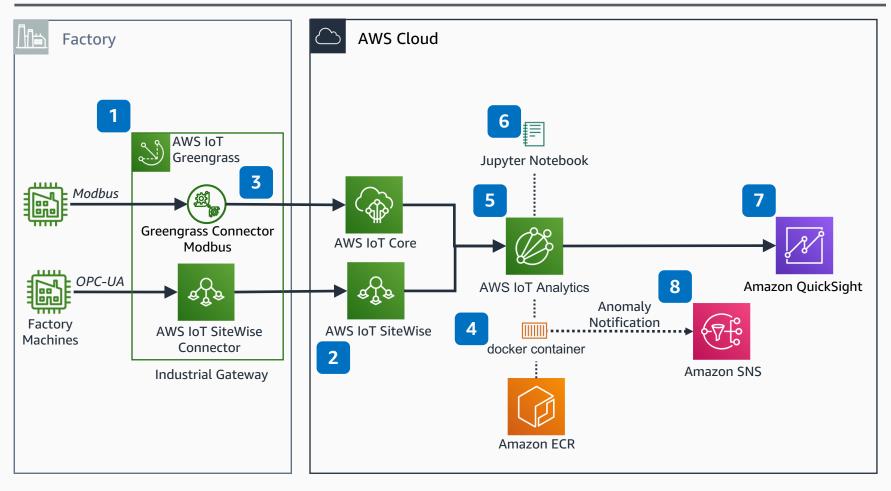
AWS Industrial Predictive Maintenance

Machine Learning Model with Modbus Communication Reference Architecture

Create a Predictive Maintenance (PdM) Machine Learning (ML) model using AWS IoT SiteWise and AWS IoT Analytics with Amazon SNS anomaly detection notifications.



- Deploy an AWS IoT SiteWise
 Gateway to connect to the factory
 machines OPC-UA Servers.
- Create a view in AWS IoT SiteWise and define the factory machines as assets. Define the Metrics to be monitored for the factory machines.
- Configure a Modbus Greengrass
 Connector on AWS IoT Greengrass
 to send Modbus data to AWS IoT
 Analytics using a rule in AWS IoT
 Core.
- Build a **Docker** image and add it to **Amazon Elastic Container Registry** (Amazon ECR).
- In AWS IoT Analytics, create a container data set from the AWS IoT SiteWise data store and link it to your Docker container.
- From AWS IoT Analytics, create a new Jupyter Notebook for the data set created from AWS IoT SiteWise to create a Predictive Maintenance (PdM) Machine Learning (ML) model.
- Visualize your analysis using Amazon
 QuickSight on the AWS IoT
 Analytics data source.
- Create a topic for anomaly detection notifications in Amazon Simple
 Notification Service (Amazon SNS)
 and configure the trigger in your model.

