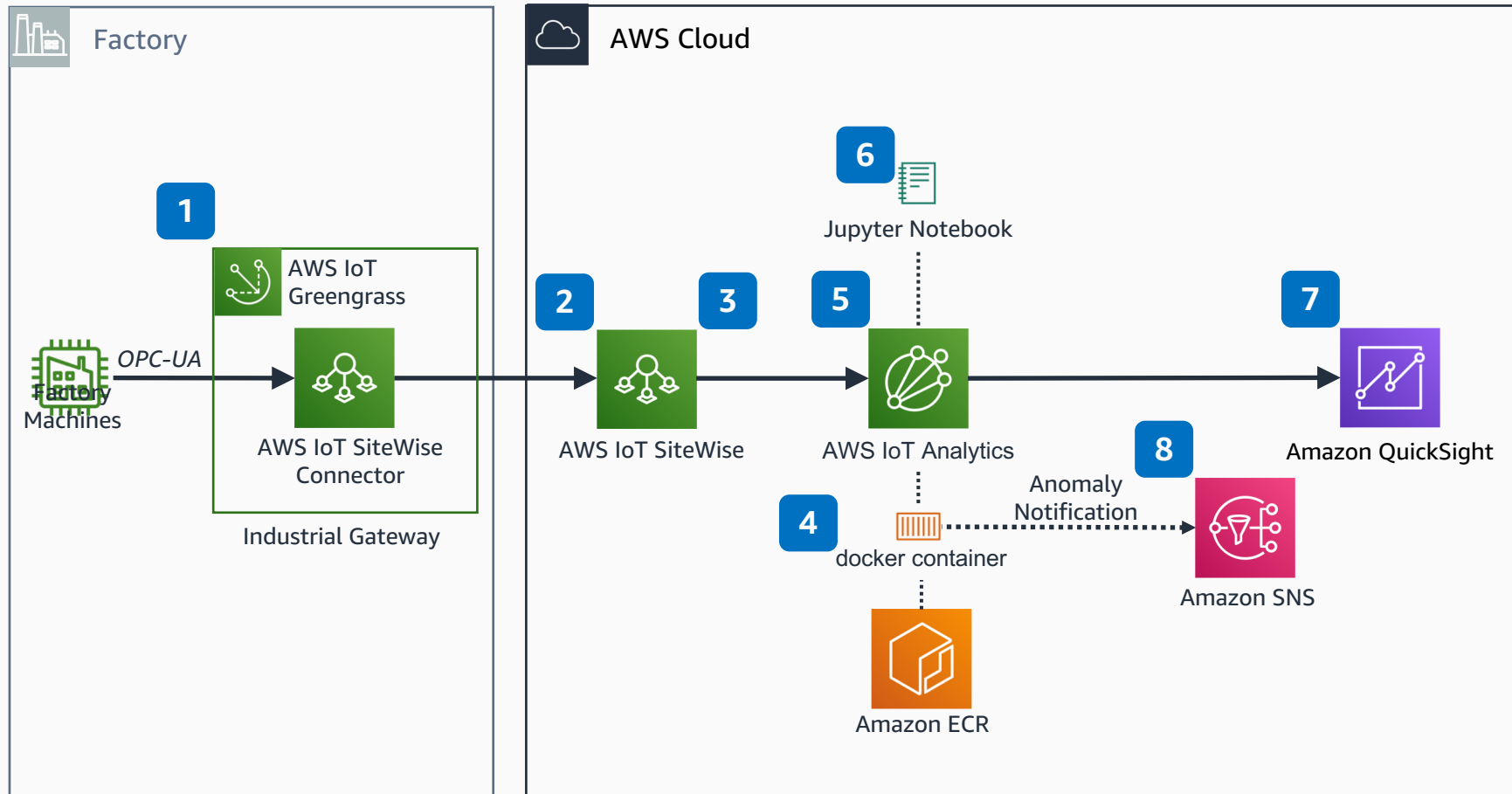


AWS Industrial Predictive Maintenance

Machine Learning Model 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.



- 1** Deploy an **AWS IoT SiteWise Gateway** to connect to the factory machines OPC-UA Servers.
- 2** Create a view in **AWS IoT SiteWise** and define the factory machines as assets.
- 3** Define the metrics to be monitored for the factory machines.
- 4** Build a **Docker** image and add it to **Amazon Elastic Container Registry (Amazon ECR)**.
- 5** In **AWS IoT Analytics**, create a container data set from the **AWS IoT SiteWise** data store and link it to your **Docker** container.
- 6** 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.
- 7** Visualize your analysis using **Amazon QuickSight** on the **AWS IoT Analytics** data source.
- 8** Create a topic for **anomaly detection** notifications in **Amazon Simple Notification Service (Amazon SNS)** and configure the trigger in your model.



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AWS Reference Architecture