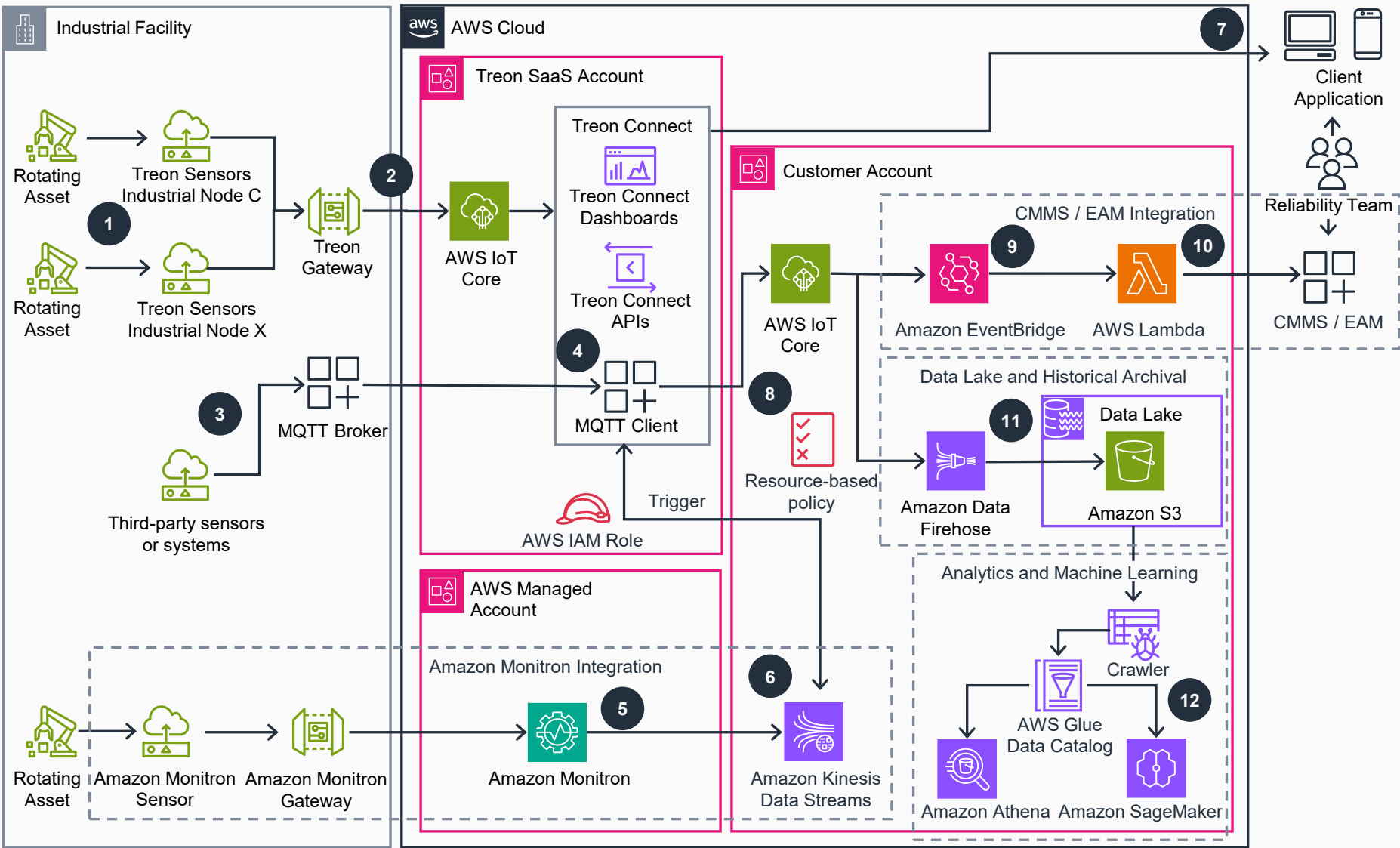


Guidance for Unified Industrial Asset Maintenance and Reliability with Treon Connect on AWS

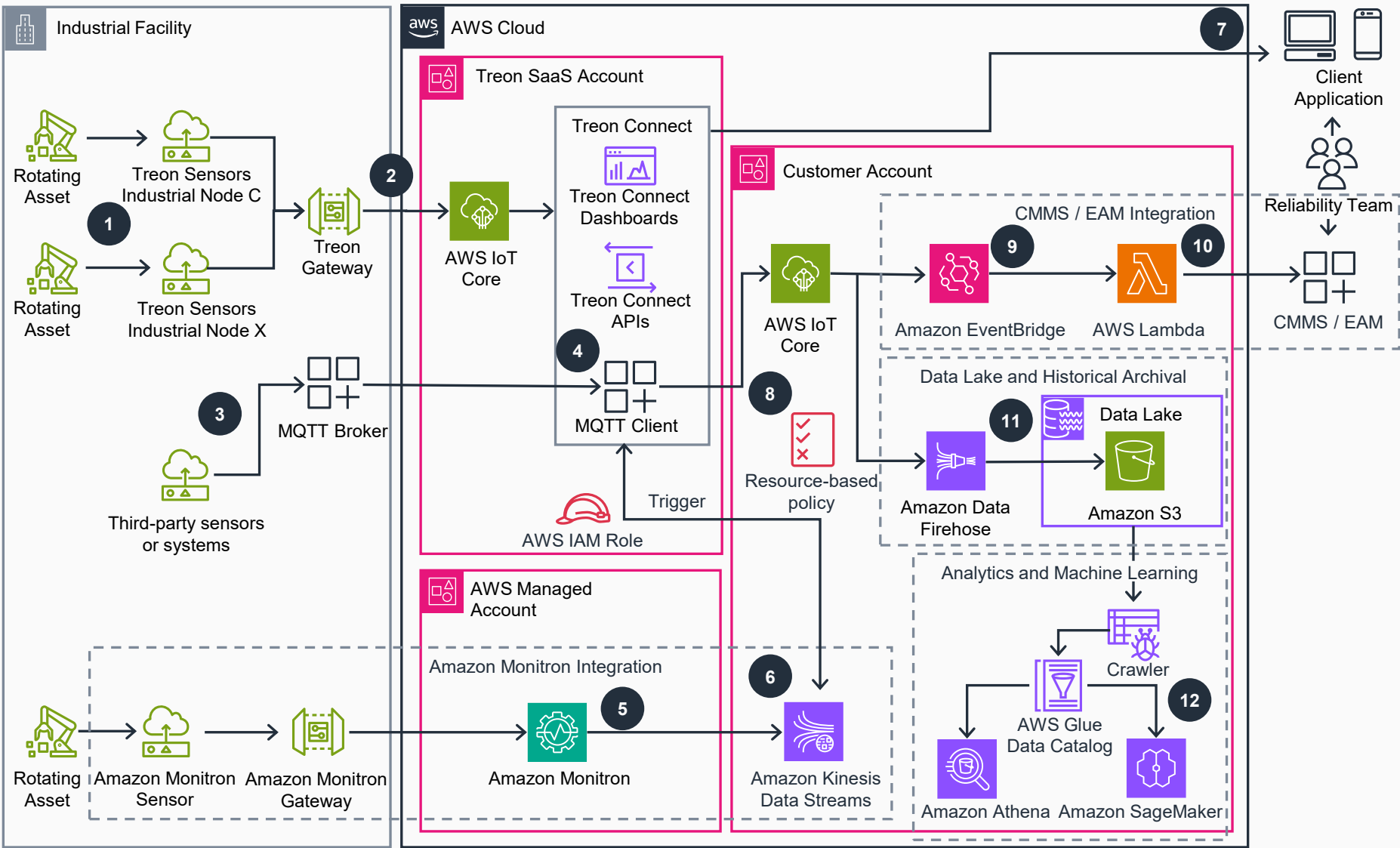
This architecture diagram illustrates how to integrate existing Amazon Monitron sensors with Treon Connect and extend capabilities through advanced analytics to deliver an end-to-end asset reliability solution.



- 1 Install Treon Industrial Node C (based on **Amazon Monitron** technology) or Treon Industrial Node X on rotating equipment. The sensors connect to the Treon Gateway via Bluetooth Low Energy (Industrial Node C) or Wirepas Mesh (Industrial Node X).
- 2 The gateway connects securely to the Treon Connect platform via **AWS IoT Core** using Wi-Fi, LAN, or cellular network through its preconfigured settings.
- 3 Integrate data from other sensors or systems by exposing them in an MQTT broker.
- 4 Treon Connect MQTT Client connects to the external MQTT broker and captures this data to make it available for analysis.
- 5 Enable **Amazon Monitron** data export to start a live data export to a new or existing **Amazon Kinesis Data Streams** stream to expose measurement data and inference results once an hour.
- 6 Add a resource-based policy on the **Kinesis** stream to grant cross-account read access to the Treon Connect **AWS Identity and Access Management (AWS IAM)** role provided. When the **Amazon Monitron** data is available in the **Kinesis** stream, Treon Connect captures it for further analysis.
- 7 Maintenance and reliability teams use the Treon Connect application to perform deeper diagnosis and get a unified snapshot of asset health from both Treon sensors and **Amazon Monitron**.
- 8 Treon Connect sends measurements and inference results (insights) with its MQTT Client to **AWS IoT Core** via MQTT v5.
- 9 AWS IoT rules routes predicted anomaly events to **Amazon EventBridge**, which applies retry logic and invokes an **AWS Lambda** function.
- 10 The **Lambda** function transforms the anomaly data and creates work orders using the REST API of the target enterprise asset management (EAM) or computerized maintenance management system (CMMS).

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11 An AWS IoT rule routes device MQTT messages to **Amazon Data Firehose**, which buffers and batches the data before delivering it to **Amazon Simple Storage Service (Amazon S3)**, which serves as the storage foundation for an industrial data lake.

12 **AWS Glue** crawler catalogs the industrial data in **Amazon S3** and populates the **AWS Glue Data Catalog** with schema metadata. **Amazon Athena** queries the cataloged data using standard SQL for ad-hoc analysis and reporting, while **Amazon SageMaker** accesses the same cataloged data to train custom machine learning models.