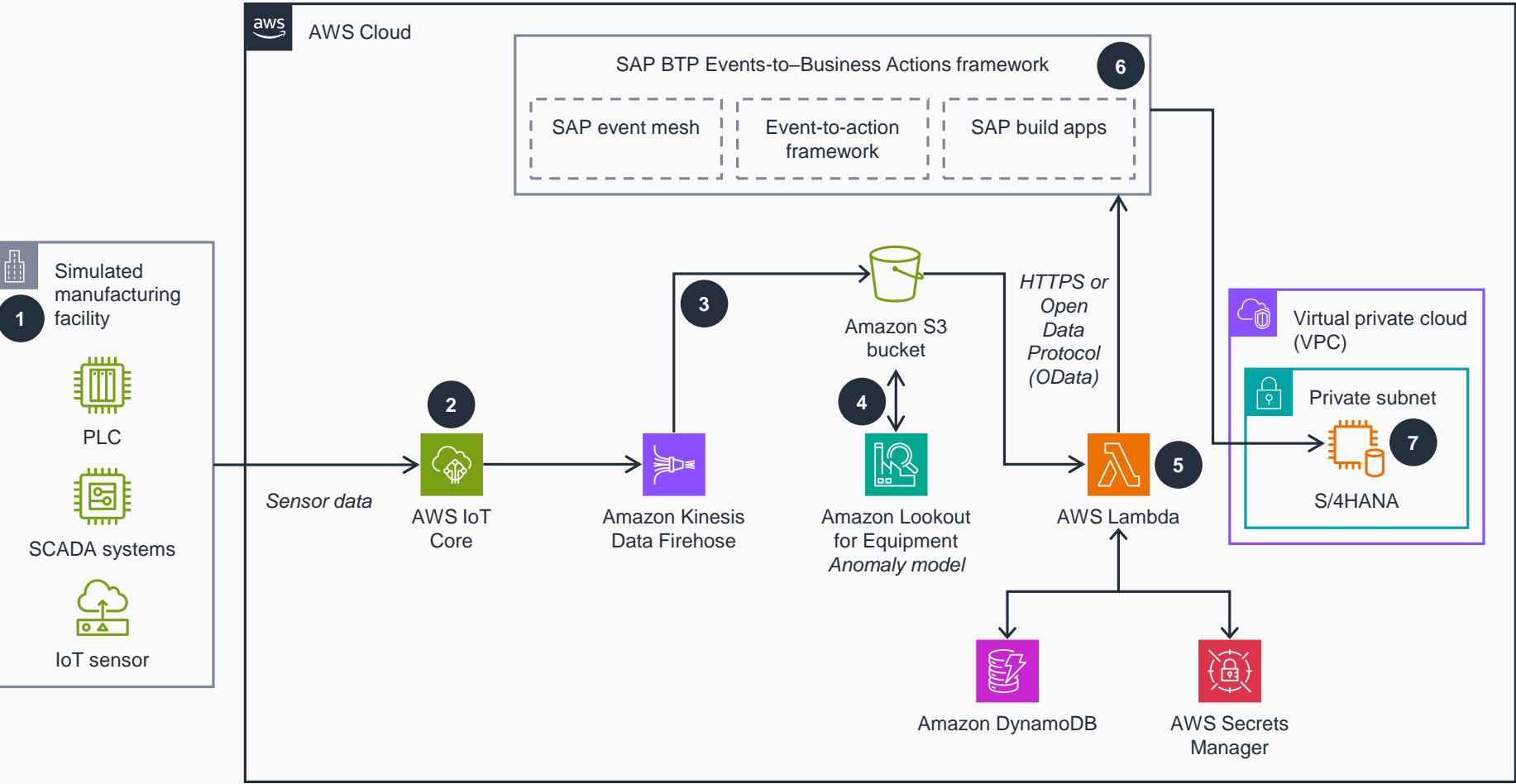


Guidance for Amazon Lookout for Equipment Integration with SAP Plant Maintenance

This architecture diagram shows how you can improve failure predictions for large equipment and complex assemblies by using Amazon Lookout for Equipment to train an anomaly model specific to your equipment.



- 1 The manufacturing facility's shop floor contains on-premises systems: a programmable logic controller (PLC), Supervisory Control and Data Acquisition (SCADA) systems, or tags that generate Internet of Things (IoT) sensor data.
- 2 **AWS IoT Core** receives the messages containing sensor data and transmits the data stream to **Amazon Kinesis Data Firehose**.
- 3 **Kinesis Data Firehose** delivers the data stream to an **Amazon Simple Storage Service (Amazon S3)** bucket.
- 4 A trained **Amazon Lookout for Equipment** anomaly model infers the data stream to predict failure or provide scheduled inferences. This model is originally trained with historical sensor and service data.
- 5 When the inferences arrive in an **Amazon S3** bucket, they invoke an **AWS Lambda** function, which checks for failure predictions at a component level. If there are predictions, the **Lambda** function calls an API endpoint hosted by SAP Business Technology Platform (SAP BTP) with SAP API Management. The **Lambda** function interfaces with **AWS Secrets Manager** and **Amazon DynamoDB** to get lookup and credential values for payload and authentication.
- 6 The SAP BTP Events-to-Business Actions framework provides a proxy endpoint to measurement documents, work orders, and notifications in the SAP system.
- 7 A service order or notification gets created in the SAP S/4HANA system.