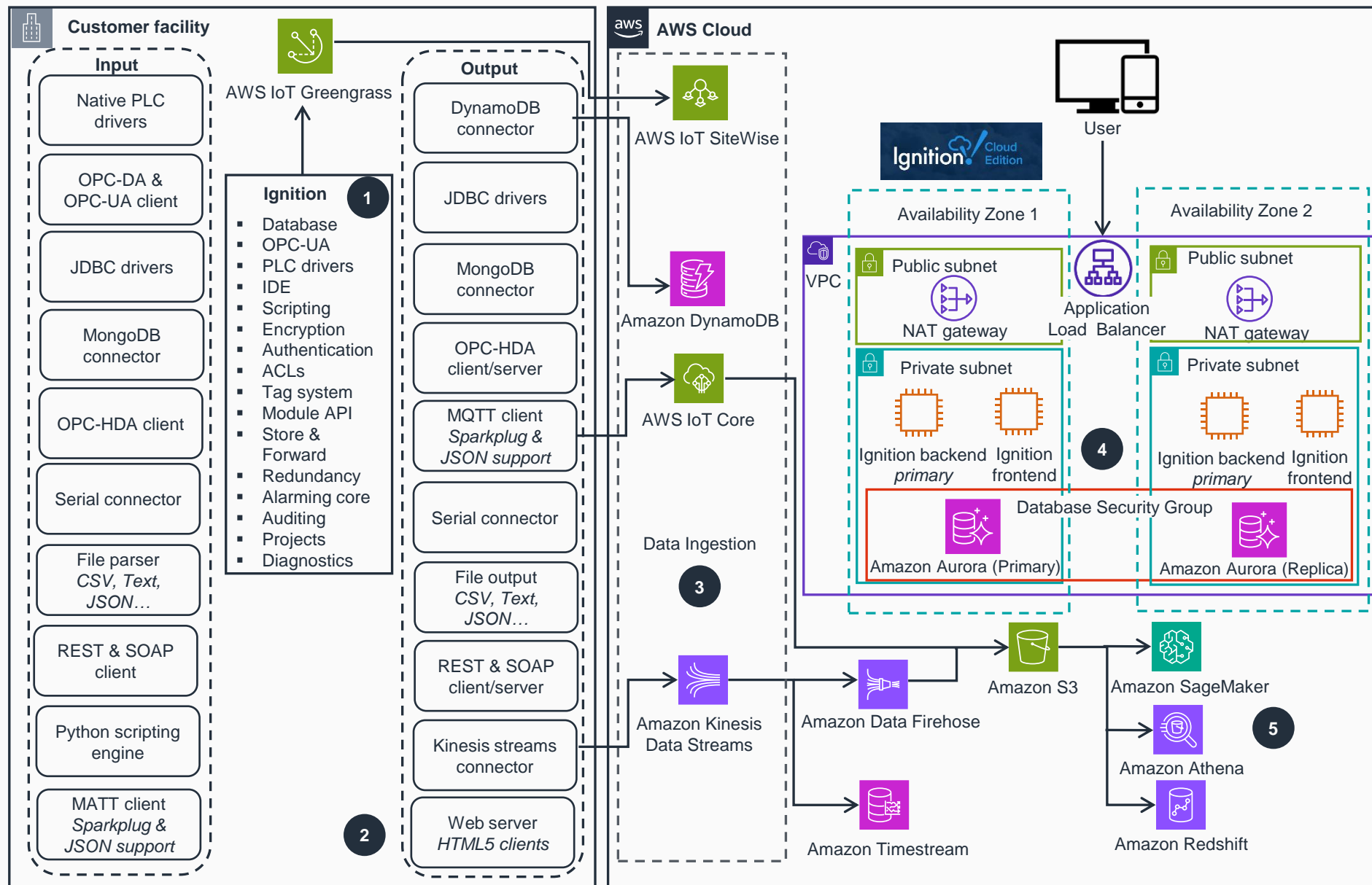


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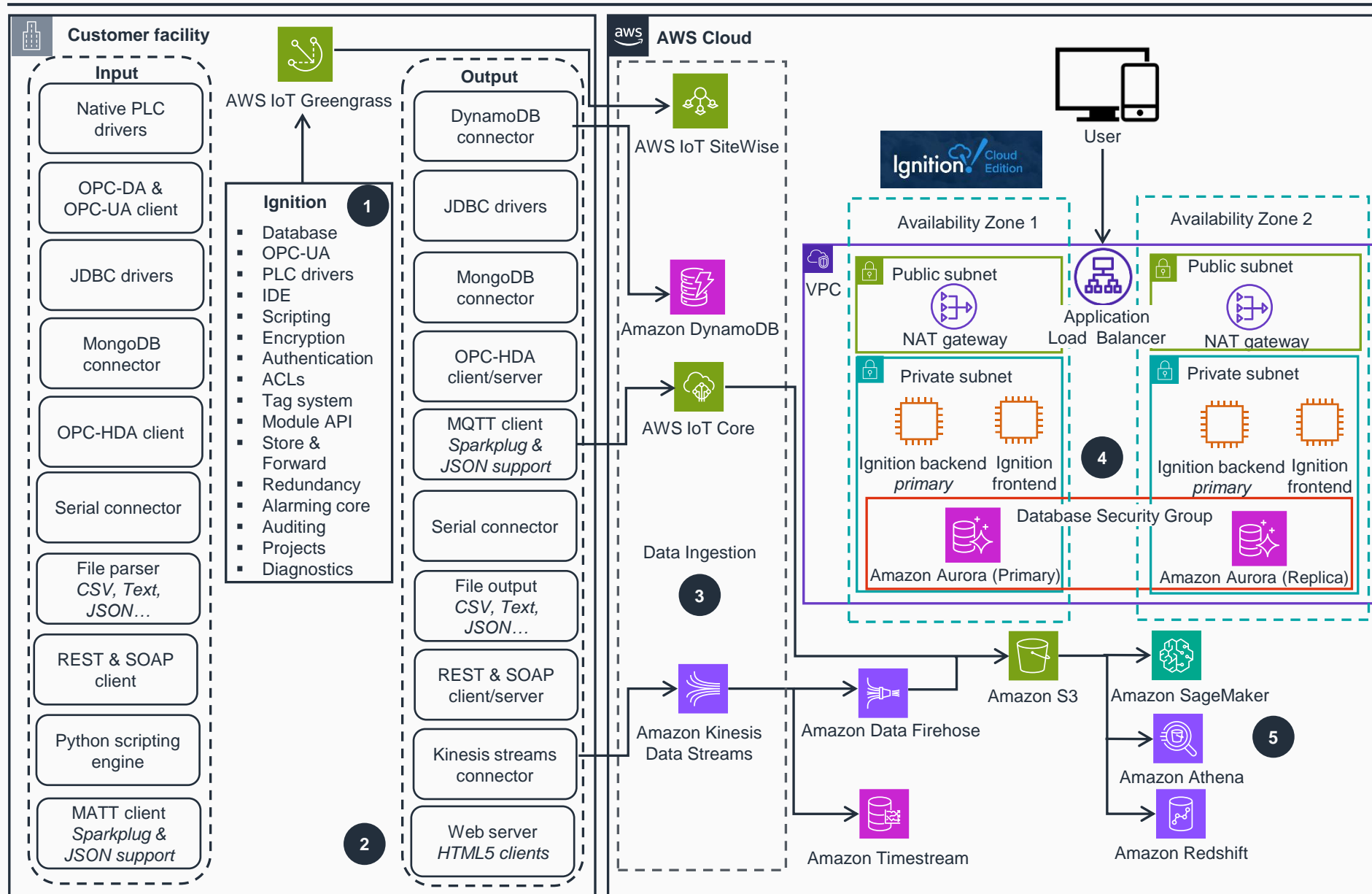
This architecture diagram illustrates a pattern for integrating Ignition SCADA software with AWS services. Steps 1-3 are outlined here and 4-5 on the next slide.



- 1 Ignition is server software that acts as the hub for comprehensive system integration. Ignition can connect to a variety of Programmable Logic Controllers (PLCs), Open Platform Communications Data Access (OPC-DA), and Open Platform Communications Unified Architecture (OPC-UA) protocols. Ignition supports connectivity to any SQL database through Java Database Connectivity (JDBC).
- 2 Ignition is bidirectional and supports a variety of outputs. Ignition can expose data through the built-in OPC-UA server. Ignition can write data to any SQL database using JDBC. Ignition can publish data to a MQTT server using a Sparkplug specification. It can expose REST endpoints for third-party applications.
- 3 During data ingestion, Ignition has direct connectors to many AWS services. It enables **AWS IoT Greengrass** integration through OPC-UA and MQTT, allowing real-time data access. Ignition publishes data directly to the MQTT server. With IoT Bridge for SiteWise available through **AWS Marketplace**, operational technology (OT) data is delivered to **AWS IoT SiteWise** seamlessly. It connects to **Amazon Kinesis Data Streams** for scalable real-time streaming. Ignition can also interact with **Amazon DynamoDB**, a NoSQL database, for storing and retrieving data.

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Steps 4-5



4 Ignition Cloud Edition, available on **AWS Marketplace**, complements the on-premises Ignition platform. It allows building enterprise apps and dashboards. It connects to **Amazon Aurora** databases using JDBC drivers, whether on-premises or the AWS Cloud. Data can directly be ingested from on-premises Ignition to Ignition Cloud Edition. It utilizes NAT gateways to enable outbound internet connectivity from the private subnets hosting Ignition.

5 Data is published to **Amazon Simple Storage Service (Amazon S3)** through **AWS IoT Core** rules or **Amazon Data Firehose** through **Kinesis Data Streams**. It reliably loads streaming data into **Amazon S3** data lakes, which can then be cataloged using **Amazon Athena**. The data can also be loaded into the **Amazon Redshift** data warehousing service for analytics purposes. Develop machine learning models with **Amazon SageMaker**, and deploy to **IoT Greengrass** for simplified edge-based deployment.