Case Study

Contents

Saviant Consulting

Saviant is 'The Intelligent Solutions company' and the Gold Cloud Platform & Gold Data Analytics Partner for Microsoft. We have pioneered innovative solutions leveraging Cloud, Mobility, Analytics and IoT to help Enterprises transform and modernize their business. We work with enterprises globally to define their technology road map & implementation strategy using multi-tenant SaaS applications, Native Mobile Apps, Big Data Analytics, IoT solutions & Azure PaaS Development.

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About the client

Our client strives to provide the best possible customer services with reliable, clean and safe electricity and water.

They deliver electricity to about 366,000 customers and water to almost 305,000 customers in Gulf. Their contribution to the economic development of Gulf has been an important factor in rapid rise in the world 's commercial and industrial scene.

Business Need

For Utilities across the world, it is becoming increasingly difficult to manage metering data (AMI data) from large number of Water, Electricity and Gas meters, along with their multiple MDM systems & ERP/CRM systems in the backend.

Such a multitude of data systems doesn't allow one view of the energy data coming in from all the different metering devices and storage systems. That makes it practically impossible to extract Energy analytics from meters, in order to send alerts and notifications to users, field agents and Utility management, to promote awareness & actions on consumption and enforcing energy conservation.

Our POC Solution

Our POC Solution provided the customer an analytics platform to drive real-time intelligence by enabling intelligent actions and insights from their existing head-end systems, MTUs, DCUs, and other data sources.
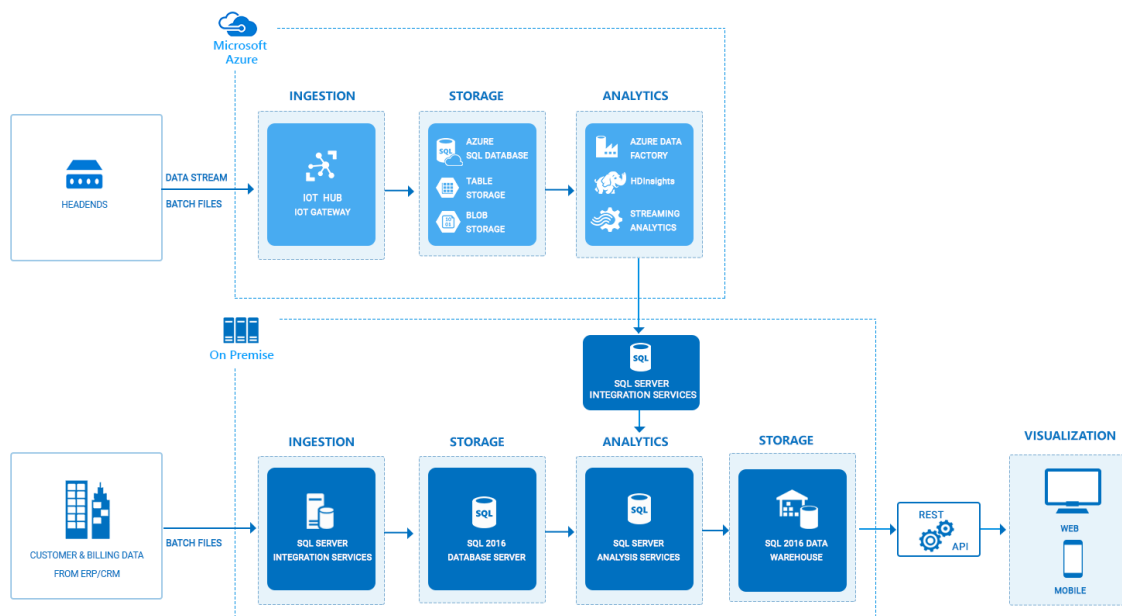
Solution Overview

- Data provided from Multiple sources or MDM in the form of batch or stream.
- The batch processing supports CSV format as input for the ingestion engine.
- MS SQL Server 2016 Integration Services (SSIS) used to ingest the data into SQL Server 2016.
- For Head-End system the data ingested using Azure IoT Hub/ IoT Gateway
- Data cleaning done using VEE process (Validation, Estimation, Edit).
- Big Data, Real Time analytics on the Customer and Information data.
- The analytics use cases discussed and agreed with the customer.
- The output of Analytics engine stored in SQL Data warehouse with Nodes storing the required data.
- This reporting data used to present to end user via reporting services (SSRS) or Power BI.

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- Developed REST API which can be consumed by Mobile applications developed by the customer.
- Disaster Recovery of IaaS deployment was not factored and done based on requirements.

SEAP Architecture

Business Benefits:

- Ingest data from existing Head-End systems, SCADA system of the manufacturer.
- Handle data – AMI/ AMR data, Sensor data, Customer data, Billing data
- Manage data collection interval – 1-minute, 5-minutes, 15-minutes, hourly, daily, monthly.
- Manage data cleaning using VEE (Validation, Estimation, Edit) process.
- Enable real-time visibility of Usage data, billing data, Usage pattern and comparative analysis to measure exact ROI and revenue gains
- Real-time alerts & notifications on most important consumer KPIs
- Predictive Analytics for future energy consumption, leakage detection, predictive maintenance, meter health, to name a few
- Embedded GIS – for field force analytics