Case Study: IoT solution to provide a flexible and cost-effective communication platform for utility companies

The Opportunity

This utility company was facing difficulties collecting accurate metering consumption for its metering system distributed in the country. It was also challenging to know if there was an issue or defect in any specific meter. The geographical spread across the country and varied environment posed a significant challenge to reach all the meters.

The Approach

Advanced Metering Infrastructure(AMI) enables applying technologies, such as smart meters, to allow a two-way flow of information between customers and utility. It provides customers and utility with data on consumption, including time and amount of consumed energy and

electricity price. This smart metering solution and smart grid solutions are connected with a unified platform to integrate all the utilities. This information can be processed in real-time and the signals sent to manage demand. A lot of data processing is required to understand the load patterns and design good signs that enable optimal use of the distribution grid and manage reserve and frequency response. Collecting data at each meter is critical to understand electrical energy users' patterns better to elaborate market signals and understand customer behavior.

The Benefits

The smart meter is an enabler for energy management: empowering consumers to save and manage their energy consumption. Energy consumption of household gas, electrical and water equipment can be displayed on the appliance, allowing the consumer to reduce costs by increasing energy consumption during off-peak cheaper tariff periods. They monitored the generation from building renewables with notification and alerts for any defect in the meter's results in effective grid

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management. A new communication channel to customers, machine-to-machine (M2M) communication from a single platform, with multi-application IoT networks, will entice consumers to manage their consumption better and reduce usage, leading to improved service levels through richer billing information.