

LTTS Edge Management Framework



L&T Technology Services



Device Enablement : Edge Computing – Low Latency Processing, Real-Time, Automated Decision Making



Challenges

Box 3:

1. IoT Devices deployed as part of the solution likely to experience field issues which requires Software fix, OS fix or devices to be replaced. Minimizing downtime is important to ensure customer protect revenue.
2. IoT-Edge Devices are susceptible to cyberattacks with inclusion of malicious IoT or Edge Devices that could affect entire ecosystem.
3. Cloud being centralized, Pushing entire compute workload and required cloud services instances contributes to latency and cost, respectively.
4. Growing demand for autonomous/automated decision-making solution requires capabilities to execute low-latency and real time processing close to the source.

Box 6:

1. Frequent field trips to ensure uptime of IoT devices, increases overall operational cost and reduces recovery time.
2. Lack of secure and robust OTA mechanism results in huge revenue loss and credibility. [Failed Firmware Updates](#)
3. Developing solution from scratch addressing most important characteristics of Edge Management, OTA Solution that is robust and costly.
4. Customers are looking for solutions that address low-latency and real-time edge processing requirements that can deliver better insights instead of raw telemetry data



Ideal Solution

Box 4:

1. Thoughtful Device Management Solution, that simplifies managing large fleet of IoT devices connected to Edge Gateway.
2. Solution that encompasses advanced and unified security management ecosystem that protects IoT devices and cloud workload.
3. Framework that facilities edge data aggregation, filter, simple calculation and enable processing distribution .
4. Framework that supports Edge Storage and Edge Analytics

Box 7:

1. Simplify overall operations and increase asset uptime and availability.
2. Focus on core business



Desired Outcomes

Box 5:

1. Simplified and Centralized monitoring solution to remotely Manage IoT Devices.
2. Maximize asset utilization
3. Reduce failures through real-time localized processing

Box 8:

1. Improved IoT Devices Uptime and customer satisfaction.
2. Reduce overall development efforts, maintenance cost of multiple IoT devices by managing from once centralized solution.
3. Enhance efficiency of edge and make automated decisions closer to assets.



L&T Technology Services Edge Management Framework



Framework that simplifies your device management, enhances the efficiency of edge computing solution

Rich Device Management Capabilities

- Robust Over-the-air(OTA) updates
- User friendly dashboard to remotely manage and monitor Edge and Leaf Devices.
- Schedule campaigns for updates.
- Inbuilt Industrial Protocols Connectors to support disparate devices (OPC, Modbus, CAN Etc.,)
- Supports offline capabilities

Enables Edge Computing

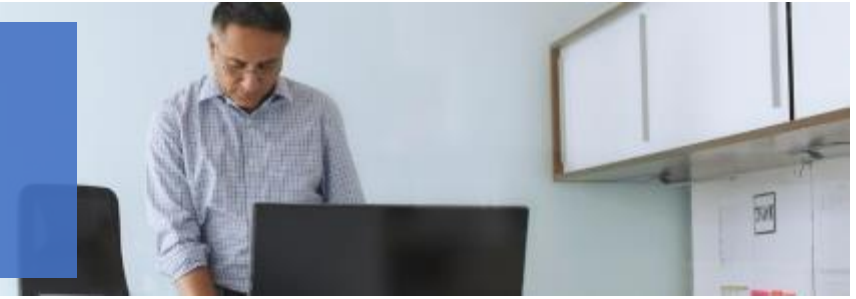
- Aggregate and analyze data at the edge in real-time.
- Support for leveraging inhouse proven Machine Learning models (CBM) for critical assets.
- Light weight configurable rule engine
- Enable automated decision making.

Architecture

- Inline with Azure IoT reference architecture.
- Leverages Azure PaaS Services.
- Integration with Azure Security Center to leverage security capabilities

Box 10: <Partner> 10-12 word statement about the value of your solution (Ideally analyst or customer. If not compelling fact about your story)

L&T Technology Services – Edge Management Platform + Microsoft - Azure



Edge Management Capabilities augmented by Azure services ensures solution meets Security, Availability, Scalability and Reliability demands.

Solution Alignment

Complies To Azure IoT Reference Architecture

Edge Management Framework architecture complies the Azure IoT Reference architecture that enable the framework to plugin to overall IoT Solution



Enhanced Security

Advanced and unified security management ecosystem that protects IoT Devices and Cloud workload.

Application is integrated with Azure Active Directory



Enhanced Scalability

The solution design as a serverless architecture leverages 2 core services i.e., Azure IoT Hub and Azure Functions enables solution to scale out based on growing demands in terms of devices connected and messages to be process.

