

Comparative analysis of technical stacks:

Technical Stack Combination	Communication Protocol	Cloud Platform	Edge Computing	Data Storage	Key Features and Benefits
LoRaWAN + MQTT + AWS IoT + Cloud Storage	LoRaWAN, MQTT	AWS IoT	Not applicable	Cloud storage	- Long-range, low-power communication, lightweight messaging protocol, device management, data processing, and analytics with AWS IoT, scalable and reliable cloud storage
Bluetooth Low Energy (BLE) + MQTT + Azure IoT + Edge Computing	BLE, MQTT	Azure IoT	Edge computing	Not applicable	- Short-range communication with low power consumption, efficient and reliable messaging protocol, device management, data processing, and edge computing with Azure IoT, real-time analytics and decision-making

Technical Stack Combination	Communication Protocol	Cloud Platform	Edge Computing	Data Storage	Key Features and Benefits
					at the network edge
Thread + CoAP + Google Cloud IoT + Cloud Functions	Thread, CoAP	Google Cloud IoT	Not applicable	Cloud storage	- Low-power, mesh networking protocol for IoT devices, efficient communication with resource-constrained devices, device management, integration with Google Cloud services, serverless functions for triggering actions based on IoT data
NB-IoT + MQTT + IBM Watson IoT Platform + Blockchain	NB-IoT, MQTT	IBM Watson IoT Platform	Not applicable	Blockchain	- Wide-area coverage and low-power communication, lightweight messaging protocol, device management, data visualization, and analytics with IBM

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					Watson IoT Platform, secure and transparent transaction recording with blockchain