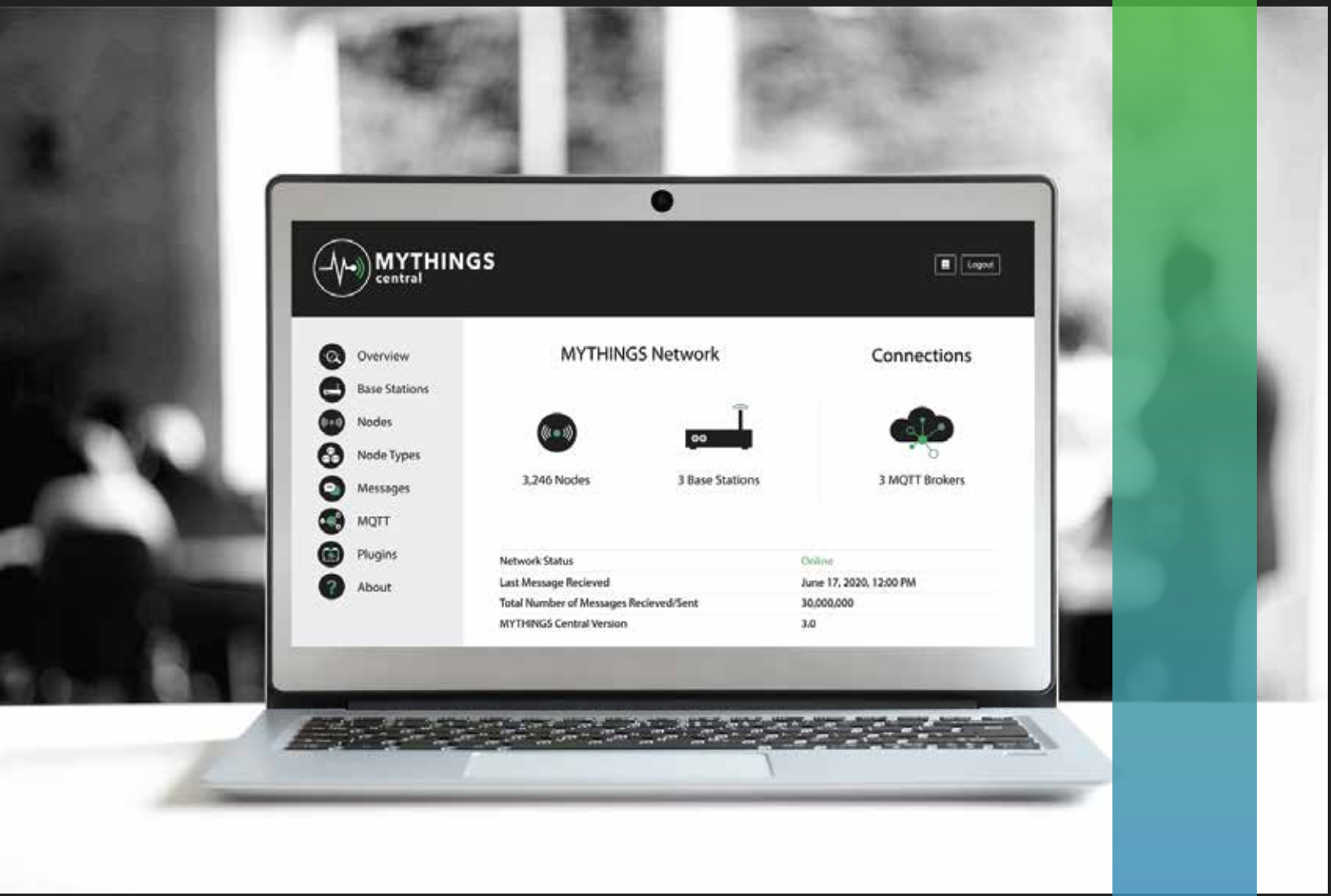
Data Sheet

MYTHINGS™ Central



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MYTHINGS Central

Datasheet

Overview

MYTHINGS Central is the only network and device management software for Low Power Wide Area Networks powered by the MIOTY™ (TS-UNB™) technology. As an all-in-one platform, MYTHINGS Central provides device on and offboarding, cloud/backend integration, and data and network monitoring. Delivering an open API-driven design, MYTHINGS Central enables you to architect your end-to-end IoT application at ease and with minimal resources.

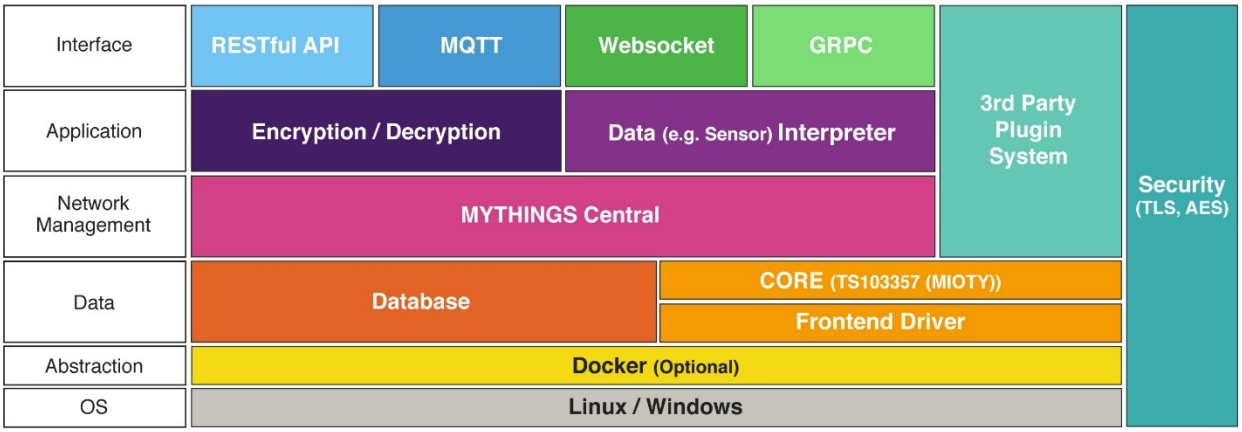
MYTHINGS Central Features

MYTHINGS Central includes a number of powerful features including:

- RESTful API-based architecture and support for open messaging protocols (MQTT, WebSocket and others).
- Transport Layer Security (TLS) communication throughout the MYTHINGS Central back end.
- Easy onboarding and offboarding of devices.
- Multi Base Station management to extend your network.
- Native Azure integration.
- Powerful Plugin system to connect to external platforms including AWS and Cumulocity.
- Built-in database.

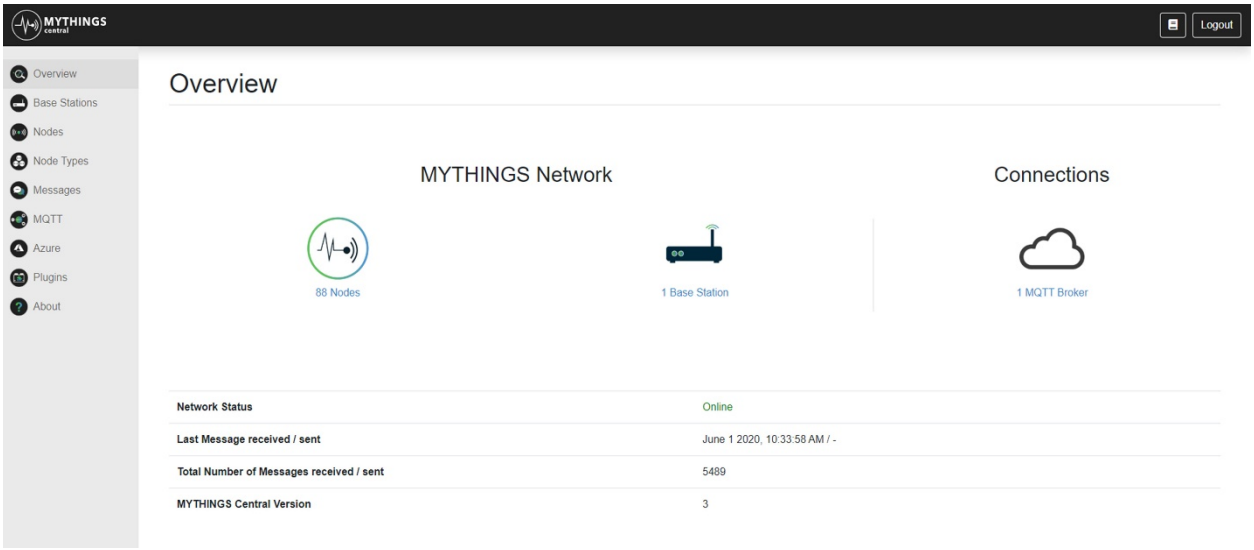
Platform Architecture

The MYTHINGS Central platform enables the seamless and secure operation of a MYTHINGS LPWA Network including the management of connected endpoints and interfaces to connect to backend systems. The MYTHINGS user interface provides organizations with an easy way to control and manage their network.



Quick View into your LPWAN Network

The Overview page presents a quick overview of your LPWA network including the number of managed devices, number of Base Stations being managed, MQTT connectors and the total number of received messages.

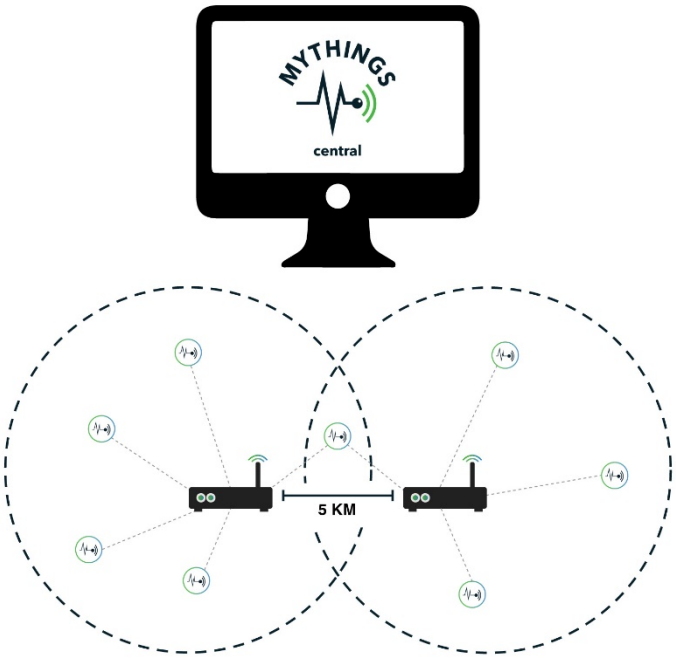


Security

TCP/IP communication throughout the MYTHINGS Central backend is secured using TLS, a security protocol providing privacy and data security between applications, servers and across the Internet. In addition to securing backend services, TLS also secures communication between MYTHINGS Central and external platforms as well as access to the MYTHINGS user interface and the MYTHINGS RESTful API.

Multi Base Station Support

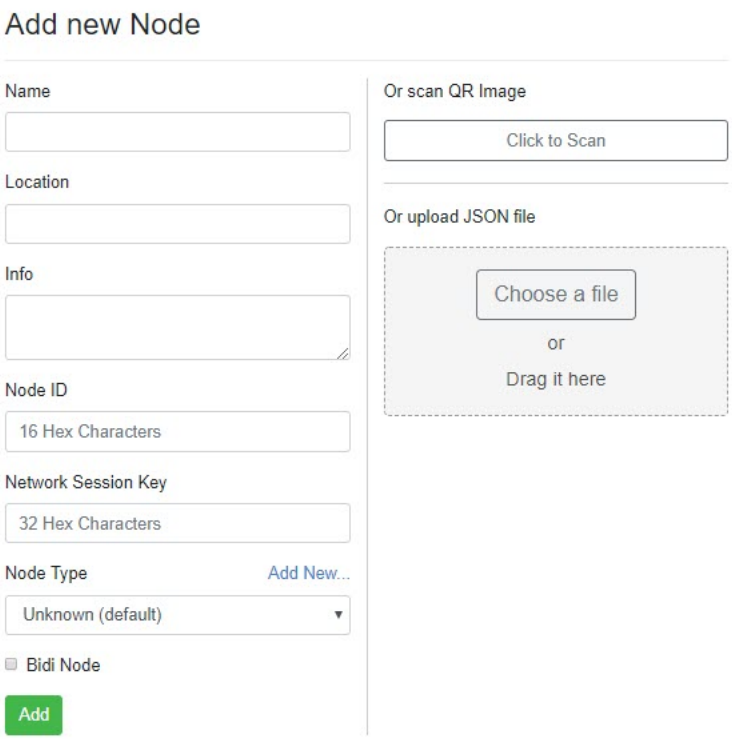
Although by default, each Base Station communicates with its local instance of MYTHINGS Central, you can manage multiple Base Stations from a single MYTHINGS Central. This feature extends the coverage of your MYTHINGS network. For example, you could manage two Base Stations located 5 kilometers apart from each other from a single instance of MYTHINGS Central. After you have configured MYTHINGS Central to manage multiple Base Stations, each time you add or delete a node from MYTHINGS Central, the changes are sent to all connected Base Stations.



Because a single MYTHINGS Central is managing both Base Stations, both will have the same registered nodes. As a result, even if a node moves beyond the range of Base Station1, provided as it is within range of Base Station2 the messages will be received by Base Station2.

Node Management

On-boarding and off-boarding of devices is easy with MYTHINGS Central. Simply input the device's unique node ID, 128-bit network key and node type. You can enter this information manually, import from a JSON file, or copy the information from the node's QR tag. MYTHINGS Central even includes the ability to scan a QR tag directly into the interface by pointing the QR code into your device's camera. You can also assign a friendly name, device location and description for easy identification.

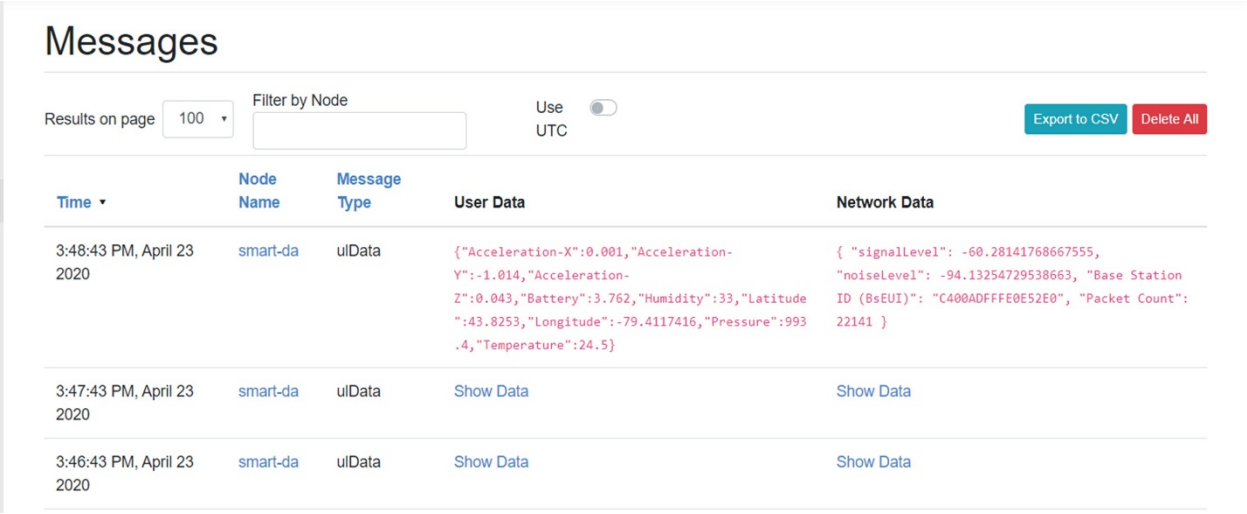


Device Interpretation

MYTHINGS Central features a device interpreter, known as Node Types, that allows the system to interpret a device's messages and then display the data in a user-friendly format. MYTHINGS Central includes a Node Type file for the MYTHINGS Smart Sensor. You can also build your own node type files. For more information about building a node type file, contact support@behrtech.com

Viewing Messages

Messages from in-range MYTHINGS-enabled devices are received by the Base Station, and then passed to MYTHINGS Central. Message data including telemetry and network data (radio signal strength and noise levels) are displayed on the Messages page. Simply click Show Data to view the message data. Messages are listed from newest to oldest and the page refreshes automatically when a message is received.



From the Messages page you can filter by node, export some or all messages to a csv file, and choose the number of messages to be displayed. All node messages are sent to the built-in database. Upon reception, MYTHINGS Central also checks to see whether any messages need to be forwarded to an MQTT broker or a cloud platform.

MQTT Support

MQTT is a TCP/IP-based publish/subscribe lightweight messaging protocol designed for low-bandwidth, high-latency, or unreliable networks. As such, MQTT is an excellent protocol for sending high volume messages to cloud and other analytics platforms. In addition to supporting MQTT over TLS for secure connections, MYTHINGS Central supports many advanced settings to allow you to connect with a large variety of platforms that require MQTT.

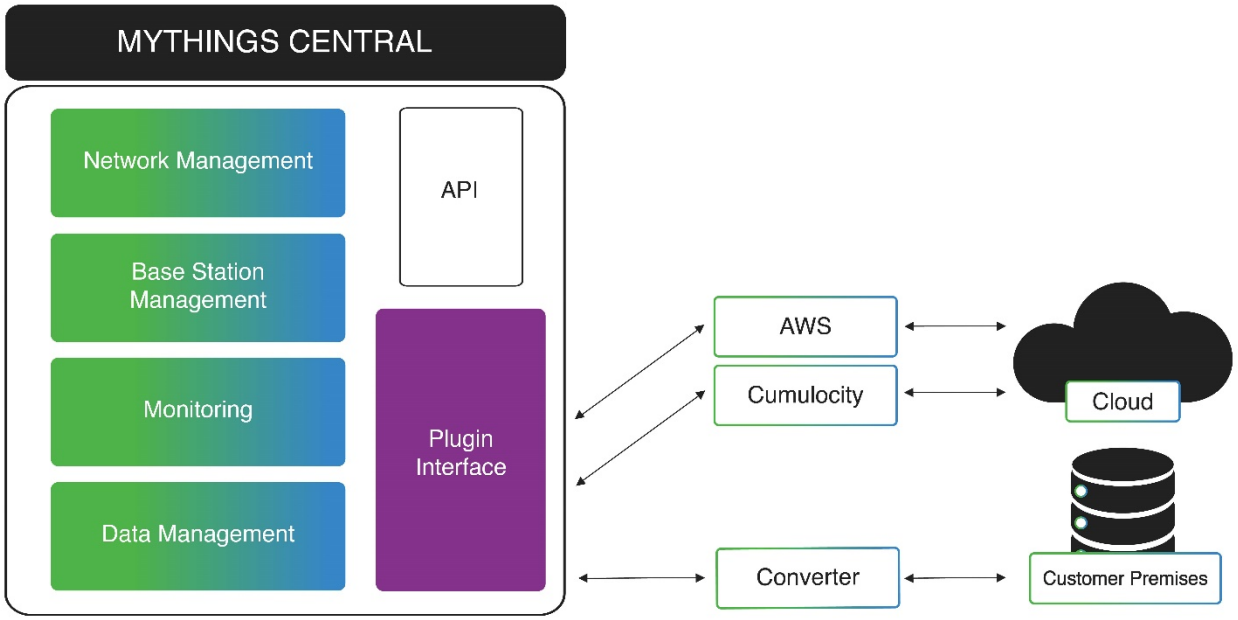
Native Azure Connector

MYTHINGS Central supports Microsoft Azure cloud integration out of the box. Through Azure resources such as the IoT Hub, customers can ingest large amounts of data and perform business analysis to gain key insight into the business and monitor thousands of devices.

After creating an Azure mapping for the node in MYTHINGS Central, MYTHINGS Central forwards the received message to the IoT hub in the Azure cloud, where it can be analyzed and visualized using a back-end application.

Plugin System

MYTHINGS Central includes a plugin system that extends system functionality. In addition to the built-in plugins, developers can create new plugins. The plugin architecture is based on gRPC, an open source report procedure call (RPC) initially developed at Google. To create a new plugin for MYTHINGS Central, contact support@behrtech.com.



AWS Bridge Plugin

MYTHINGS Central supports connectivity with AWS IoT Core though our aws bridge plugin. After mapping nodes in MYTHINGS Central, node messages received by the Base Station are forwarded to the IoT Core in the AWS cloud where the data can be analyzed and visualized using a back-end application. Communication between the plugin and AWS IoT is secured using the X.509 public key infrastructure and X.509 digital certificates to associate a public key with an identity in the certificate.

Cumulocity Plugin

Using the Cumulocity Plugin, MYTHINGS Central provides integration with Cumulocity IoT for visibility and control over your IoT assets in Cumulocity. After mapping nodes in MYTHINGS Central, when the Base Station receives messages from a node, the data is forwarded to Cumulocity IoT cloud, where it can be analyzed and visualized.

Ericsson IoT Accelerator Plugin

MYTHINGS Central provides the Ericsson IoT Accelerator plugin upon request to help users easily deploy a highly functional and scalable LPWAN – 5G hybrid architecture. The Ericsson IoT Accelerator is a global IoT platform built to connect and manage cellular devices from various telecom network services worldwide. With the plugin, you can relay MYTHINGS data to the Ericsson backend to seamlessly manage all devices and data across both LPWAN and cellular networks via a unified platform/UI. This hybrid wireless architecture empowers users to address a broader spectrum of IoT use cases and quickly scale their deployment at much reduced complexity.

Obtaining Updates

Behr Technologies Inc. (BehrTech) continuously develops new functionality and enhancements for its solutions. BehrTech regularly releases updates that include changes to the products. Provided a customer's products are under an active maintenance services contract with BehrTech Customer Care, the customer is entitled to these releases.

Note: The MYTHINGS Central service, running on the Base Station, gets updated automatically, provided the service is connected to the Internet.

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