Your data is our priority

aloxy
IIoT Hub

Introduction the Aloxy IIoT Hub

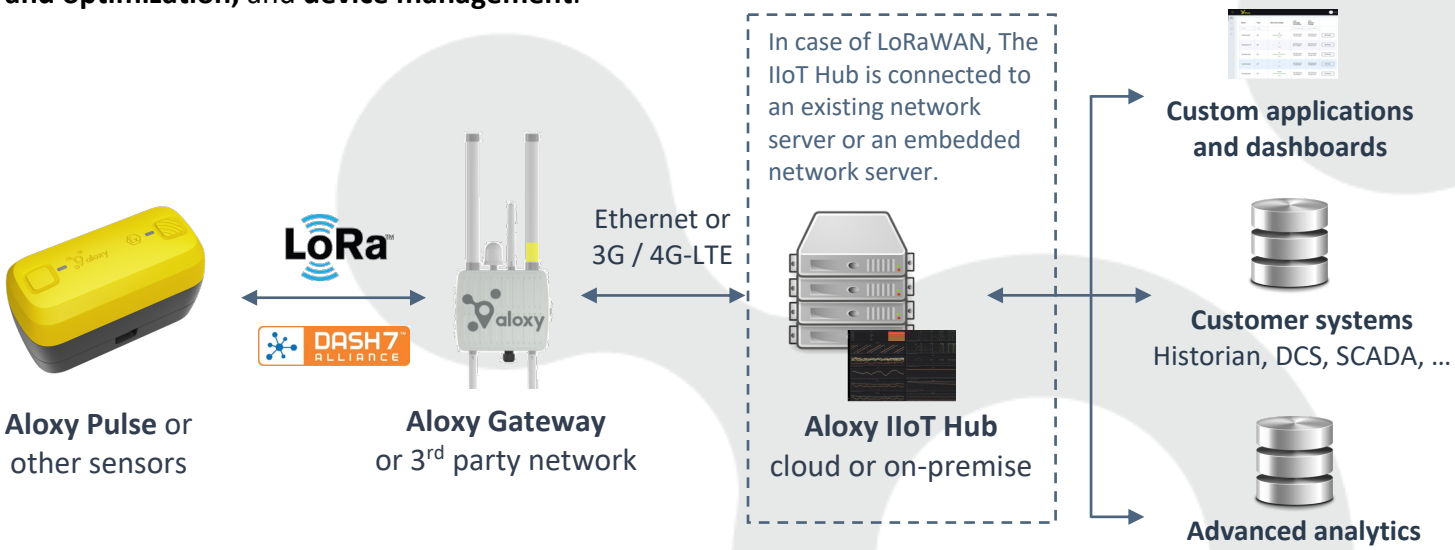
Aloxy introduces the IIoT Hub alongside the Aloxy pulse sensor used for valve position indication. As part of an end-to-end solution Aloxy believes that **quality of service** needs to be **high** in order for such application to be really beneficial to the user.
LPWAN is nondeterministic or also referred to as asynchronous which is less complex to implement but is not able to give hard real-time or throughput guarantees.
With the Aloxy IIoT Hub we create additional parameters to monitor the data and manage your network to create the **quality of service you would expect**.

IIoT Hub functionality

The Aloxy IIoT Hub is an essential part of the valve monitoring solution provided by Aloxy. The IIoT Hub is hosted in the **cloud** (public or private) or **on-premise** and is required to further process the sensor data to accurately determine the valve position and indicate to the customer system whether the sensor data is **trustworthy**!

The IIoT Hub has additional functionality that is critical for some applications. Valve positioning is often event based and not trend monitoring, therefore, it is important to monitor the sensor behavior. Beside valve positions, the system must also know if the data is reliable and how it can be optimized.

To accomplish this, the IIoT Hub is used for **network monitoring**, **data integrity**, **battery lifetime monitoring and optimization,** and **device management**.



Network monitoring

Set and monitor sensor **heartbeat interval** and **indicate** to the customer system when sensor signal is lost.

Monitor **network quality**, e.g. packet delivery rate, RSSI, gateway connectivity and spreading factor.

Device management

Configure device parameters such as angle (to define open, closed and intermediate position), type of valve (MT or QT), and wake up triggers (e.g. filter out vibration).

Schedule **OTA firmware updates** (in case of DASH7)*.

Commissioning of device and the network server.

Battery lifetime optimization and prediction

Monitor **Idle wakeup, # of transmissions, SF etc.** to predict remaining battery lifetime *.

Use the Network Quality indicators to **optimize** battery lifetime.

Data integrity

Compare earlier operations and data to detect **out of the ordinary behavior** *.

Alarm to the DCS when the valve position is not trustworthy based on sensor or network data *.

*In production or Beta testing

Built on eclipse iot