Air Quality Monitoring System

Case Study Document

Version 1.0

Prepared by

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Disclaimer

Contents

Owners and List of Contacts

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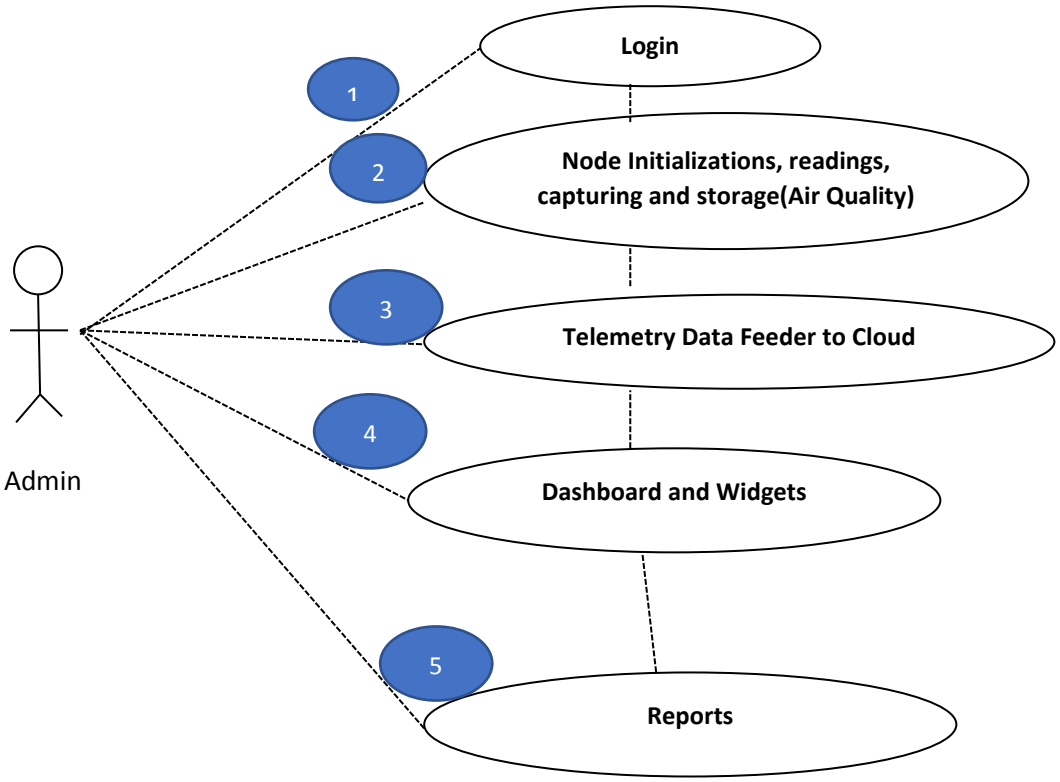
Signoffs

Phase	Name	Date	Signature
1	Venkatesh	26-June-2019	

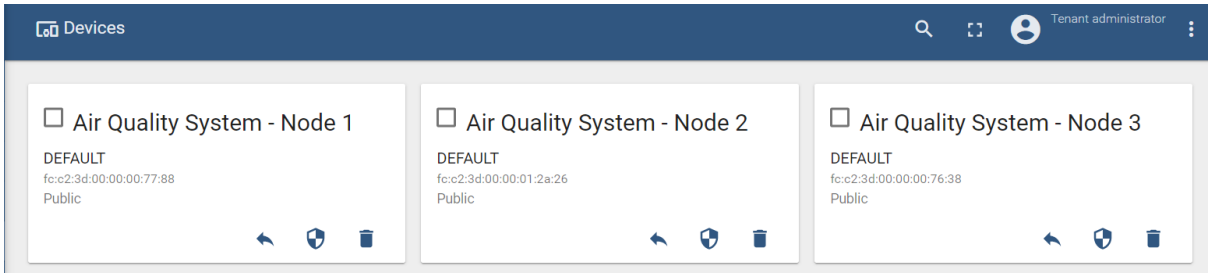
Revision History

Date	Reason For Change(s)	Author(s)
26/06/2019	Creation of document	Venkatesh

1. Air Quality Monitoring System – System Flow

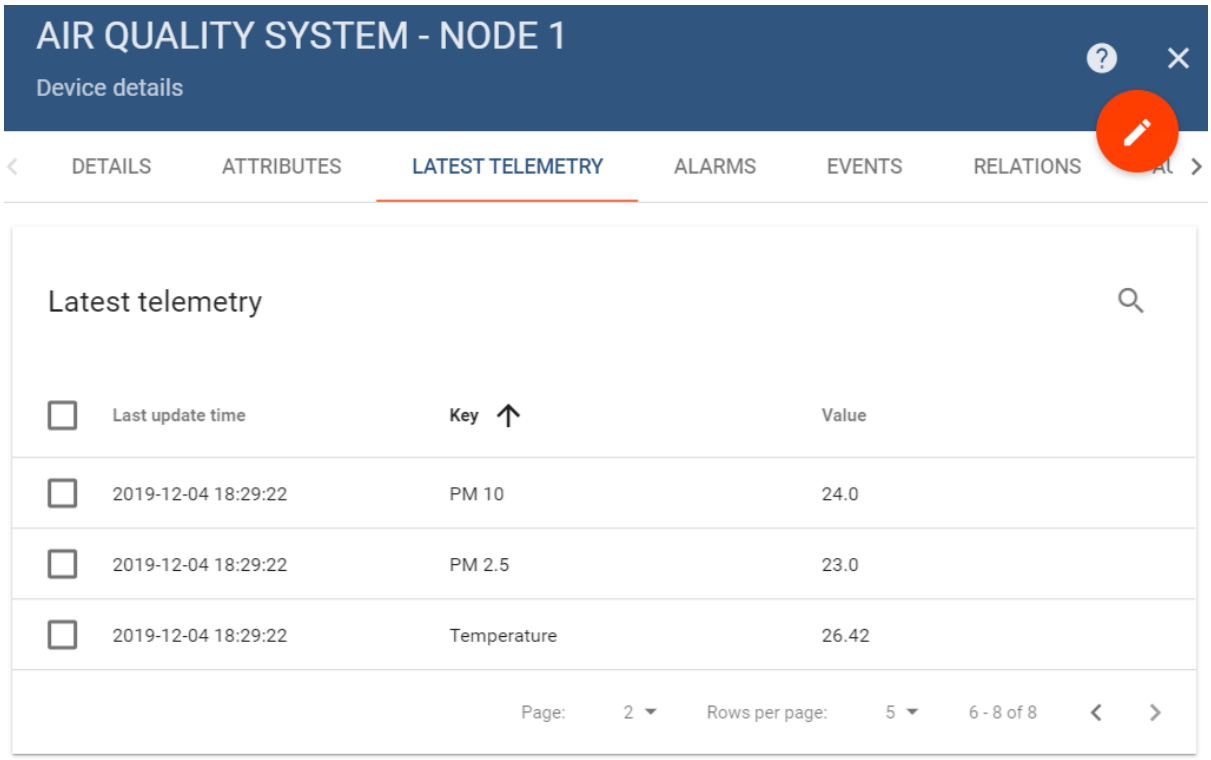


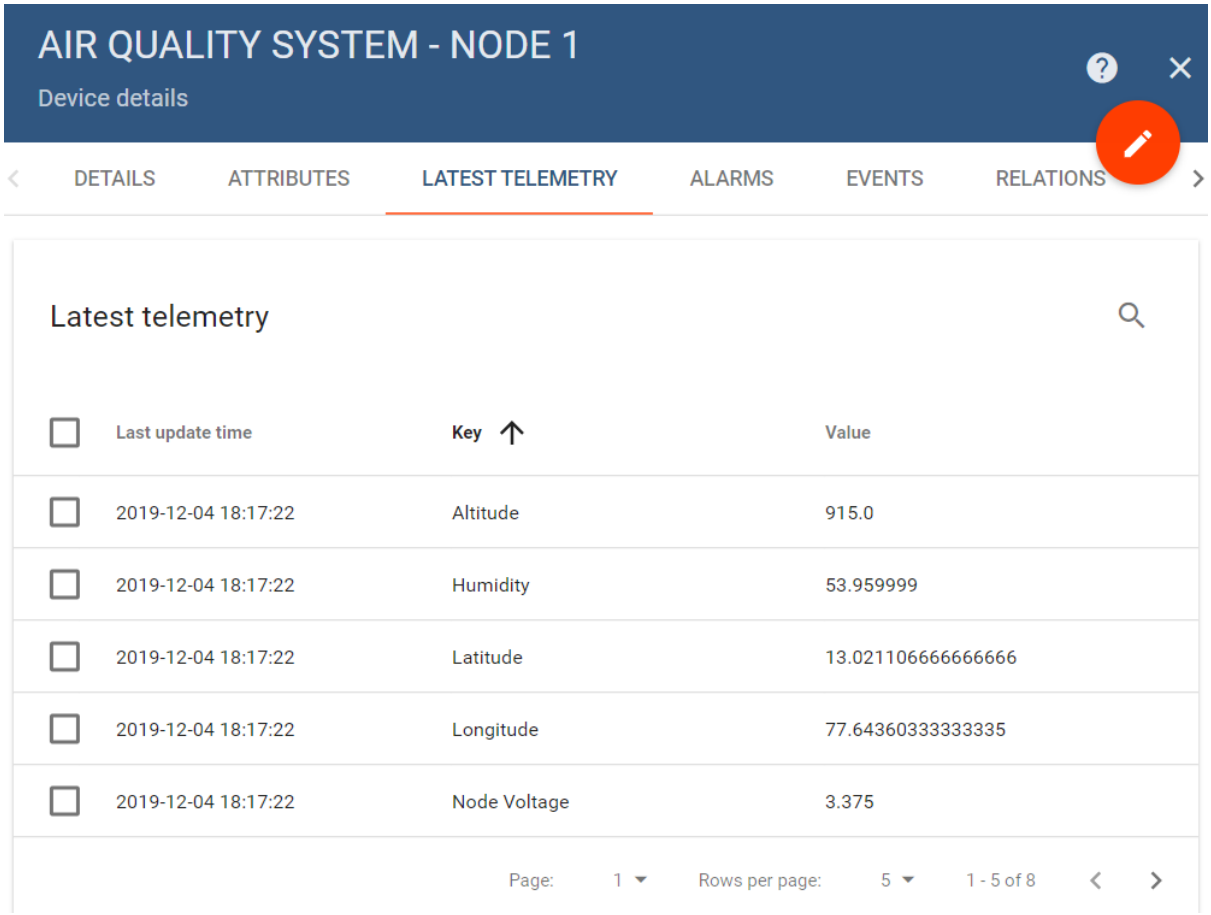
2.Air Quality - Node Device Initializations, Readings, Capturing and Storage in the cloud



Action	Air Quality Parameters readings capture and storage
Actors:	Admin
Description:	This use case program will be used to read the core parameters of the Air Quality Sensor node parameters 1. PM - Particulate Matter. 2. Temperature- temperature of the air. 3. Humidity- Humidity of the air. 4. GPS – GPS location of the node sensor installed location.
Trigger:	Gateway Device will establish the communication with the node sensor to derive the core parameters into the system.
Preconditions:	All the gateway channels to the node sensor to be established and Communications port should be open available for passing the data's.
Post Conditions:	All the Core Parameters read from the gateway should be updated in the local db of the gateway ie the pie db and those data's should be successfully sent to Platform Cloud DB.

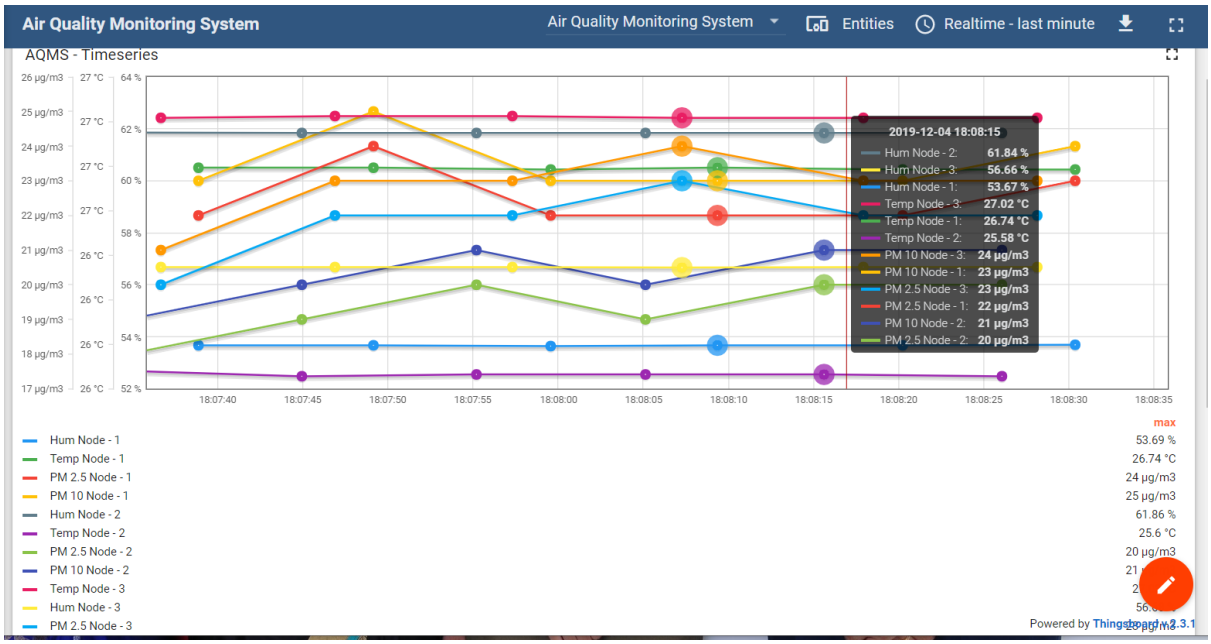
3. Telemetry Data Feeder to Cloud

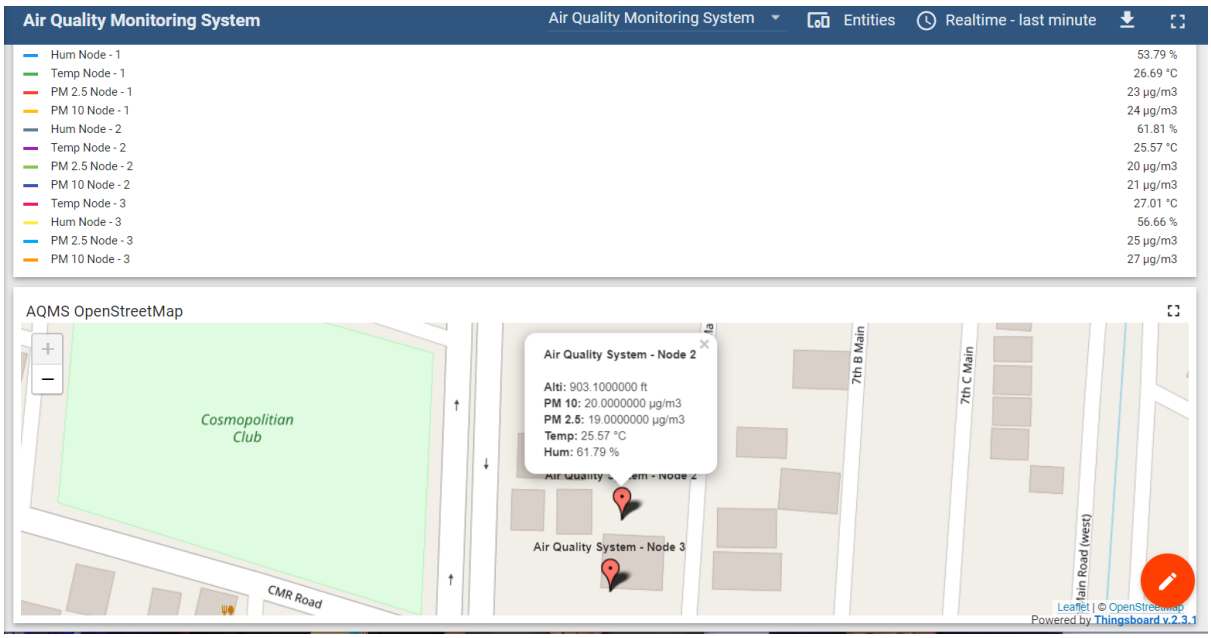




Action	Air Quality Telemetry Data feeder module
Actors:	Self automated
Description:	This use case is used to read the telemetry data parameters from the Air quality Sensor Nodes received from the Gateway and store in the Gateway DB and then update back to IOT Cloud and sotre in the cloud DB.
Trigger:	Gateway Device will establish the communication with the node sensor to derive the core parameters into the system.
Preconditions:	All the gateway channels to the node sensor to be established and Communications port should be open available for passing the data's.
Post Conditions:	Once the Telemetry datas are synched in the cloud System should be able to provide the Dashboard and widgets modules based on the data received and stored successfully in the Cloud IoT Platform.
Notes and Issues:	

4. Dashboard and Reports





Action	Air Quality Data Reports Module
Actors:	Users
Description:	The Report module comprises of two basic types of report 1. Tabular. 2. Graphical.

Trigger:	
Preconditions:	It is assumed that the use case **UC_Telemetry_Feeder_cloud** is completed successfully and the core readings required for the reporting system is successfully captured and stored in the Cloud Database.
Post Conditions:	