

Werkverslag

SensorThings Hackathon

2019

Just van den Broecke
Just Objects B.V.

<https://justobjects.nl>

<https://twitter.com/justb4>

Geonovum SensorThings API Hackathon
Den Haag - 29-31 okt, 2019

Gedaan

- **Inrichting Demo Server**

<https://github.com/justb4/stademo>

<https://sta.map5.nl/gost/v1.0> GOST Endpoint

MQTT Endpoint coupled to GOST

NodeRed

- **SenseMakersAms mijnomgeving upload naar GOST**

<https://github.com/geonovum/SensorthingsAPI/tree/master/sta-data-upload/postman-mqtt>

- **Input STA Profiling Document**

<https://github.com/Geonovum/SensorthingsAPI/blob/master/README.md>

SenseMakersAms mijnomgeving upload naar GOST Steps

- **Test MQTT uplink:**

```
$ mosquitto_sub -t pipeline/# -h  
mqtt.sensemakersams.org -p 9998 -u <user> -P  
<pass>
```

- **Postman: provision STA Entities, Examples:**

https://github.com/gost/workshops/tree/master/2017_foss4g_boston

- **NodeRed: MQTT Bridge from SenseAms
mijnomgeving MQTT**

Mapping SenseMakersAms mijnomgeving Water

STA Entity	SMA Entity	Instance
Thing	Device	dev_id=357518080168982 - EC 233
Location	Locatie Device	Lat/Lon 52.2261655, 5.1745123
Sensor	Water Conductivity	WaterEC
ObservedProperty	Water Conductivity	Ohm
Observation	Waarde + Tijd	21Ohm op 2019-10-30T18:09:05
Datastream		(Verbindt T, S, OP en O)
FeatureOfInterest	N.A.	N.A.

Demo Setup

Manual
Provisioning




**SenseAms
mijnomgeving**

Dataflow

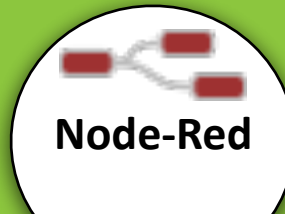


API

Process



Docker Containers



MQTTBridge

MQTT

MQTT

GOST
Dashboard

STA

GOST


Docker



Node-RED

Deploy

filter nodes

debug

complete

catch

status

link in

link out

comment

function

function

switch

change

range

template

delay

trigger

exec

rbe

network

mqtt in

mqtt out

http in

SenseMakersAms-Flow1

MQTT Input

MQTT In - SenseMakersAms-mijnomgeving

connected

Extract en Map naar STA Observation

WaterTemp In to STA Obs

Vult MQTT publish GOST STA Topic in op basis dev_id en obs_type

dev_id and obs_type to GOST Topic

MQTT output generiek naar GOST

STA GOST MQTT Out

connected

msg.payload

GOST Obs Out

msg.payload

debug

all nodes

10/30/2019, 5:12:50 PM node: 64afd058.6284c
GOST/Datastreams(5)/Observations : msg.payload : Object
object
result: 12.98
resultTime: "2019-10-30T16:12:58.000Z"
phenomenonTime: "2019-10-30T16:12:58.000Z"
parameters: object
name: "EC 211"
app_id: "mijnomgeving"
dev_id: "357518000201338"
obs_type: "waterTemperature"

10/30/2019, 5:24:48 PM node: 64afd058.6284c
GOST/Datastreams(3)/Observations : msg.payload : Object
{ result: 12.89, resultTime: "2019-10-30T16:24:43.000Z", phenomenonTime: "2019-10-30T16:24:43.000Z", parameters: object }

10/30/2019, 5:25:13 PM node: 64afd058.6284c
GOST/Datastreams(2)/Observations : msg.payload : Object
{ result: 12.45, resultTime: "2019-10-30T16:25:10.000Z", phenomenonTime: "2019-10-30T16:25:10.000Z", parameters: object }

10/30/2019, 5:27:34 PM node: 64afd058.6284c
GOST/Datastreams(5)/Observations : msg.payload : Object
{ result: 12.71, resultTime: "2019-10-30T16:27:42.000Z", phenomenonTime: "2019-10-30T16:27:42.000Z", parameters: object }

10/30/2019, 5:29:23 PM node: 64afd058.6284c
GOST/Datastreams(4)/Observations : msg.payload : Object
{ result: 19.41, resultTime: "2019-10-30T16:12:49.000Z", phenomenonTime: "2019-10-30T16:12:49.000Z", parameters: object }

10/30/2019, 5:29:25 PM node: 64afd058.6284c
GOST/Datastreams(4)/Observations : msg.payload : Object
{ result: 19.32, resultTime: "2019-10-30T16:27:22.000Z", phenomenonTime: "2019-10-30T16:27:22.000Z", parameters: object }

10/30/2019, 5:39:47 PM node: 64afd058.6284c
GOST/Datastreams(3)/Observations : msg.payload : Object
{ result: 12.62, resultTime: "2019-10-30T16:39:42.000Z", phenomenonTime: "2019-10-30T16:39:42.000Z", parameters: object }

Input STA Profiling Document

- **Conventies voor gebruik Entity velden**
bijv properties in Thing, parameters in Observation
- **Metadata Conventies**
- **Conventies op Definitions (Sensor, ObservedProp)**
- **Cascadering en Harvesting**
meerdere projecten/initiatieven bundelen via STA
- **Archivering**
- **Conformance statement via STA API /conformance**
- **Profiling op Filters**