Arrowhead Proxy Service IDD

**Abstract**

This document defines interface design of the Proxy Service based on the REST approach within Arrowhead Framework generation 4.0.

1. Overview

This document describes the Proxy Service of G4.0 with a REST-based interface.

This interface can use HTTP, HTTPS, CoAP, and CoAPS.

1. Interfaces

As per the SD of this Service, there is two methods implemented. Table 1 describes these methods.

Table 1 Function description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Function** | **URL subpath** | **Method** | **Input** | **Output** |
| Push | “/proxy/{ systemName }” | PUT | **SensorData** | HTTP OK, BAD\_REQUEST NOT\_AUTH |
| Fetch | “/proxy/{ systemName }”” | GET | **SensorData** | HTTP OK, BAD\_REQUEST  NOT\_AUTH |

1. Information Model

The SensorData request payload contains generic sensor data. SensorData normally contains information about the unit, source system, timestamp and metadata. The default payload type is JSON-encoded SenML encapsulated in the SigML format. The response to a Store/ Retrieve request is a simple HTTP/CoAP status code (Created/Ok – request was success, No Content – request had no effect).

SigML moves the bn, bt, bu, and bver tags from SenML into the the SigML header. The SenML array of JSON objects are stored in the sml tag. The only allowed SenML tags allowed in the sml tag are “n” tags. This approach simplifies passing messages since SigML is encoded as a JSON object instead of a JSON array.

# 3.1. SensorData Store- SigML request

{“p”: 0,  
 "bn":" Temp-sensor-3624-2342",  
 "bt":1.276020076001e+09,

“bu":" degC ","bver":5,

“sml”:[

{"n":"temp", “v":22.3},

{"n":"temp", "v":22.3 “t”: -5}

]

}

# 3.2. UploadResponse

{“p”: 0,  
 "x":" 0

}

If the uploaded JSON is incorrectly constructed, then the following example response could be received.

{“p”: 0,  
 "x":" 2,

“xs”: “JSON Parse error”

}

The x tag (eXeption) value of 0 indicates “No error”. A value different than 0 must also be accompanied by an xs tag that in plain text gives a reason for the error.

1. Revision history

# Amendments

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Date | Version | Subject of Amendments | Author |
| 1 | 2018-09-17 | G4.0 | Initial | Jens Eliasson |
| 2 | 2018-10-30 | G4.0 | Text update | Jens Eliasson |
|  |  |  |  |  |

# Quality Assurance

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Date | Version | Approved by |
| 1 |  |  |  |
| 2 |  |  |  |