Proxy Service SD

**Abstract**

This document defines the Proxy Service functionality within Arrowhead Framework generation 4.0. The proxy server is used to allow information exchange between sleepy nodes and other Arrowhead systems.

1. Service Overview

The Proxy Service provides an interface to publish and receive messages to a Local Cloud. The Proxy Service is designed so that sleepy nodes can wake up from low-power mode, publish a message containing sensor readings and return to sleep. Other Arrowhead Systems can then fetch the latest message at any time.

1. Abstract Interfaces

This Service provides two functionalities;

# Push

This method is used to push a message to the Proxy Service in a Local Cloud through the DataManager Core System.

# Fetch

This method is used to fetch a message from the Proxy Service in a Local Cloud through the DataManager Core System.

1. Abstract Information Model

Accepted data model for Push is SenML. The JSON response to this Service is optional. HTTP or CoAP responses are also used the indicate errors.

|  |  |
| --- | --- |
| **Field name** | **Description** |
| Arrowhead System | The System that generated or stored a measurement or file. |
| Base time | If set, this is the timestamp when a reading was taken. If not set, the input message was either a file or a reading taken approximately “now”. |

Table 1 - Push

|  |  |
| --- | --- |
| **Field name** | **Description** |
| Result | Result containing information if the pushed message was received correctly or not. |

Table 2 - PushResponse

1. Non-functional Requirements

The proxy service must run on a sufficiently powerful host that provides enough storage and processing capacity for the number of clients that are using it.

1. Revision history

# Amendments

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Date | Version | Subject of Amendments | Author |
| 1 | 2018-09-17 | G4.0 d1 | Initial | Jens Eliasson |
| 2 | 2018-10-30 | G4.0 d2 | Text updates | Jens Eliasson |
| 3 | 2019-03-20 | G4.0 d3 | Updated data model | Jens Eliasson |
|  |  |  |  |  |

# Quality Assurance

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