Historian Service SD

**Abstract**

This document defines the Historian Service functionality within Arrowhead generation 4.0. The Historian provides methods for storage, retrieval, export and filtering of sensor data. It also has features for storage of generic files such as text documents, images, reports etc.

One of the main design goals of the Historian is to provide storage capabilities for sensor and actuator devices, basic data analytics, and export for human operators.

1. Service Description Overview

The Historian Service provides one interface to store and retrieve sensor data and/or files.

1. Abstract Interfaces

This Service provides two functionalities, Store and Retrieve, that is used to either store sensor data (or upload files) to the Historian servicer or to retrieve sensor data or download files. The interfaces can optionally support a number of commonly used semantics formats in order to allow heterogenous systems to

# Store

The Store interface provides methods for storing sensor data as well as generic files.

# Retrieve

The Retrieve interface provides methods for fetching sensor data as well as generic files. The Retrieve interface also provides methods for data export, where data can be aggregated and exported in different formats and semantics.

1. Abstract Information Model

A sensor data message contains, (at least), the following information, as presented in Table 1. This abstract model is not based on any standardized format. Instead there any formats that support this type of information.

Table 1 Sensor data type description

|  |  |
| --- | --- |
| **Field** | **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”. |

1. Non-functional Requirements

The Historian 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 | Initial | Jens Eliasson |
|  |  |  |  |  |

# Quality Assurance

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