DeviceRegistry system description (SysD)

**Abstract**

The Device Registry System is a component that stores device information in an Arrowhead local cloud. A device is a piece of hardware that interacts with other devices on a physical level.

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1. Overview

# Significant prior art

TBD

# How this system is meant to be used

The Device Registry is a central location for finding all hardware devices in an Arrowhead cloud. The Device Registry is responsible for mapping a device name to a physical address, for example a MAC-address. This system also stores authentication information for a device as part of the registration.

The Device Registry is used when a system is entering an Arrowhead cloud to provide information connecting a device name to a unique Arrowhead physical cloud address. The primary consumer of the Device Registry is a system that visualizes the content of the System of Systems on a hardware or platform level.

# System functionalities and properties

The system should be configurable whether it should use “Time to Live”-settings for services or if the responsibility of cleaning up “dead” services relies on any system out of bounds of the Device Registry.

The Device Registry services should be registered via the Service Discovery service and looked up by the system that will be registered.

# Important delimitations

None defined.

1. Services

The Device Registry should produce services for Device Discovery and Device Registry Administration.

# Produced services

The Device Registry produces the following services:

|  |  |
| --- | --- |
| Service name | SD |
| Device Discovery | SD Device Discovery |
| Device Registry Administration | SD Device Registry Administration |

# Consumed services

|  |  |
| --- | --- |
| Service name | SD |
| Service Discovery | SD Service Discovery |

1. Security

# Security Model

The device registry services can be controlled via Authorisation. Typically, all systems should be allowed to register devices and lookup other system devices.

1. Revision history

# Amendments

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Date | Version | Subject of Amendments | Author |
| 1 | 2022-06-27 | 0.1 | First version for AH 5.0. | Per Olofsson |
| 2 |  |  |  |  |

# Quality Assurance

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