Service Registry Core System

System Description

Abstract
This is the template for System Description (SysD document) according to the Eclipse Arrowehad documentation structure.

Contents

1 Overview

This document describes the Service Registry Core System, which exists to enable service discovery in a Eclipse Arrowhead Local Cloud (LC). Examples of such interactions is a provider system offering some kind of Service for use by other systems in the LC. This mandatory Core System provides a database, which stores information related to the currently actively offered Services within the Local Cloud.

The rest of this document is organized as follows. In Section 1.1, we reference major prior art capabilities of the system. In Section 1.2, we the intended usage of the system. In Section 1.3, we describe fundamental properties provided by the system. In Section 1.4, we describe delimitations of capabilities of the system. In Section 2, we describe the abstract service functions consumed or produced by the system. In Section 3, we describe the security capabilities of the system.

1.1 Significant Prior Art

Describe significant prior art which provides the foundation for the system - May be omitted for simple services

1.2 How This System Is Meant to Be Used

Describe intended usage of the system. Usage scenarios shall be described. Preferable a SysML/UML blaock diagram of the System should be provided. See the SysML profile and library (github.com/eclipse-arrowhead/profile-library-sysml) for support on how such block diagram should look like. Suitable tools are Eclipse Papyrus and MagicDraw.

1.3 System functionalities and properties

Describe system functionalities and properties like e.g.:

1.3.1 Functional properties of the system

1.3.2 Configuration of the system

Available parameters

1.3.3 Data stored by the system

Brief overview of data stored to achive the functionality of the system.

1.3.4 Non functional properties

- security,
- safety,
- energy consumption,
- latency
- Power saving properties,

1.3.5 Stateful or stateless

- states preserved, functional and non-functional

1.4 Important Delimitations

Provide delimitations of the provided system. Describe what the system solve and what i does not solve.

2 Services

This section describes consumed and produced service. In particular, each subsection names a prodiuced or consumed service indicating the different capabilities and associated interfaces of the service. Reference to the appropriate SD document shall be made.

2.1 produced echo

todo

2.2 produced service-register

todo

2.3 produced service-unregister

todo

2.4 produced register-system

todo

2.5 produced unregister-system

todo

2.6 produced query

todo

2.7 produced query-multi

todo

2.8 produced query-all

todo

2.9 produced query-by-system

todo

2.10 produced query-by-system-id

todo

2.11 produced pull-system

todo

3 Security

- If the system can be started in un-secure and/or Arrowhead secure mode.
- Handling of Arrowhead compliant and non-compliant X.509 certificates.
- Implemented security model shall be described, protocol used, data protection used, system authentication capability, produced service authorisation checking, etc.

For Arrowhead certificate profile see github.com/eclipse-arrowhead/documentation

4 References

5 Revision History

5.1 Amendments

Revision history and Quality assurance as per examples below

No.	Date	Version	Subject of Amendments	Author
1	2020-12-05	4.4.0		Tanyi Szvetlin
2	2021-07-14	4.4.0	Minor updates	Jerker Delsing
3	2022-01-12	4.4.0	Minor updates	Jerker Delsing

5.2 Quality Assurance

No.	Date	Version	Approved by
1	2022-01-10	4.4.0	