GlobalServiceDiscovery Service SD

**Abstract**

This document defines the GlobalServiceDiscovery Service functionality within Arrowhead generation 4.0.

1. Service Description Overview

The GlobalServiceDiscovery Service provides two functionalities, facilitating the first part of the inter-Cloud orchestration.

1. Abstract Interfaces

This Service provides two functionalities.

# Init GSD

Orchestrator initiates inter-Cloud orchestration by sending a GSDRequestForm to the local Gatekeeper. The GSDRequestForm contains the ArrowheadService the consumer Application System asked for, and a search parameter of other ArrowheadClouds (more specifically Gatekeepers) to contact.

# GSD Poll

The local Gatekeeper queries a list of other Gatekeepers for the needed ArrowheadService. Besides the needed ArrowheadService, the request containts the local Gatekeeper information. The other Gatekeepers check with their Authorization and Service Registry.

1. Abstract Information Model

A GSDRequestForm contains the following information, as presented in Table 1.

Table 1 GSDRequestForm type description

|  |  |
| --- | --- |
| **Field** | **Description** |
| RequestedService: ArrowheadService | The Service requested by the Consumer (from the Orchestrator). |
| SearchPerimeter: List<ArrowheadCloud> | A list of ArrowheadClouds that need to be contacted, to see if that Cloud can provide the Service. This list is extracted from the Service Request Form preferences, and if it is null, than the NeighborCloud database table entries will be contacted instead. |
| RegistryFlags: Map<String, Boolean> | The OrchestrationFlags copied from the ServiceRequestForm, that concern the Service Registry. |

A GSDPoll contains the following information, as presented in Table 2.

Table 2 GSDPoll type description

|  |  |
| --- | --- |
| **Field** | **Description** |
| RequestedService: ArrowheadService | The Service requested by the Consumer from the remote Cloud. |
| RequesterCloud: ArrowheadCloud | The remote Cloud initiating the Service discovery process. |
| RegistryFlags: Map<String, Boolean> | The OrchestrationFlags copied from the ServiceRequestForm, that concern the Service Registry. |

1. Non-functional Requirements
2. Revision history

# Amendments

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Date | Version | Subject of Amendments | Author |
| 1 | 2017-09-29 | M2 | Initial | Csaba Hegedűs |
| 2 | 2018-02-14 | M3 | Updating document to M3 | Csaba Hegedűs |
| 3 | 2018-05-23 | G4.0 | Updated document to G4.0 | Zoltán Umlauf |

# Quality Assurance

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