orchestration-qos-confirm-reservation

Service Description

Abstract
This document provides service description for the **orchestration-qos-confirm-reservation** service.

Contents

1 Overview

This document describes the **orchestration-qos-confirm-reservation** service that enables to the requester system to extend one from a group of temporary provider locks while releasing all the others immediately.

The rest of this document is organized as follows. In Section 2, we describe the abstract message functions provided by the service. In Section 3, we end the document by presenting the data types used by the mentioned functions.

1.1 How This Service Is Meant to Be Used

The given system should consume the Service Registry Core System's **query** service to get information about the **orchestration-qos-confirm-reservation** service. Using this information the system can request the **orchestration-qos-confirm-reservation** service with a confirm request which contains information about the original requester, its orchestration results and the selected result.

1.2 Important Delimitations

If the Quality-of-Service support is not enabled, this service does nothing.

1.3 Access policy

This service is only available for the Gatekeeper Core System.

2 Service Interface

This section describes the interfaces to the service. The **orchestration-qos-confirm-reservation** service is used to keep and extend one of the provider locks while releasing all the others. The various parameters are representing the necessary system and service input information. In particular, each subsection names an interface, an input type and an output type, in that order. The input type is named inside parentheses, while the output type is preceded by a colon. Input and output types are only denoted when accepted or returned, respectively, by the interface in question. All abstract data types named in this section are defined in Section 3.

The following interfaces are available.

2.1 interface HTTP/TLS/JSON (QoSReservationRequest) : void

Profile type	Type	Version
Transfer protocol	HTTP	1.1
Data encryption	TLS	1.3
Encoding	JSON	RFC 8259 [1]
Compression	N/A	-

Table 1: HTTP/TLS/JSON communication details.

3 Information Model

Here, all data objects that can be part of the **orchestration-qos-confirm-reservation** service provides to the hosting System are listed in alphabetic order. Note that each subsection, which describes one type of object, begins with the *struct* keyword, which is used to denote a collection of named fields, each with its own data type. As a complement to the explicitly defined types in this section, there is also a list of implicit primitive types in Section 3.8, which are used to represent things like hashes and identifiers.

3.1 struct QoSReservationRequest

Field	Type	Mandatory	Description
requester	System	yes	The consumer system on whose behalf the confirm request is sent.
orList	List<OrchestrationResult>	yes	A result list of an orchestration request. The providers in the list were the subjects of a temporary lock.
selected	OrchestrationResult	yes	The selected result from the *orList*.

3.2 struct System

Field	Type	Mandatory	Description
address	Address	yes	Network address of the system.
authenticationInfo	String	no	X.509 public key of the system.
metadata	Metadata	no	Additional information about the system.
port	PortNumber	yes	Port of the system.
systemName	Name	yes	Name of the system.

3.3 struct Metadata

An Object which maps String key-value pairs.

3.4 struct OrchestrationResult

Field	Type	Mandatory	Description
authorizationTokens	Metadata	no	Tokens to use the service instance (one for every supported interface). Only filled if the security type is `TOKEN`.
interfaces	List<ServiceInterfaceRecord>	no	List of interfaces the service instance supports.
metadata	Metadata	no	Service instance metadata.
provider	SystemRecord	yes	Descriptor of the provider system record.
secure	SecureType	no	Type of security the service instance uses.
service	ServiceDefinitionRecord	yes	Descriptor of the service definition record.
serviceUri	String	no	Path of the service on the provider.
version	Version	no	Version of the service instance.
warnings	List<OrchestratorWarning>	no	List of warnings about the provider and/or its service instance.

3.5 struct ServiceInterfaceRecord

Field	Type	Mandatory	Description
createdAt	DateTime	no	Interface instance record was created at this UTC timestamp.
id	Number	no	Identifier of the interface instance.
interfaceName	Interface	no	Specified name of the interface.
updatedAt	DateTime	no	Interface instance record was modified at this UTC timestamp.

3.6 struct SystemRecord

Field	Type	Mandatory	Description
address	Address	no	Network address of the system.
authenticationInfo	String	no	X.509 public key of the system.
createdAt	DateTime	no	System instance record was created at this UTC timestamp.
id	Number	yes	Identifier of the system instance.
metadata	Metadata	no	Additional information about the system.
port	PortNumber	no	Port of the system.
systemName	Name	no	Name of the system.
updatedAt	DateTime	no	System instance record was modified at this UTC timestamp.

3.7 struct ServiceDefinitionRecord

Field	Type	Mandatory	Description
createdAt	DateTime	no	Service definition instance record was created at this UTC timestamp.
id	Number	yes	Identifier of the service definition instance.
serviceDefinition	Name	no	Name of the service definition.
updatedAt	DateTime	no	Service definition instance record was modified at this UTC timestamp.

3.8 Primitives

Types and structures mentioned throughout this document that are assumed to be available to implementations of this service. The concrete interpretations of each of these types and structures must be provided by any IDD document claiming to implement this service.

Type	Description
Address	A string representation of the address.
DateTime	Pinpoints a specific moment in time.
Object	Set of primitives and possible further objects.
Interface	Any suitable type chosen by the implementor of service
List<A>	An *array* of a known number of items, each having type A.
Name	A string identifier that is intended to be both human and machine-readable.
Number	Decimal number
OrchestratorWarning	A potentially interesting information about a provider and/or its service instance.
PortNumber	A Number between 0 and 65535.
SecureType	Any suitable type chosen by the implementor of service
String	A chain of characters.
Version	Specifies a service version.
void	Special 'type' to indicate when a service does not return anything (except some indication that the operation was a success or not).

4 References

[1] T. Bray, “The JavaScript Object Notation (JSON) Data Interchange Format,” RFC 8259, Dec. 2017. [Online]. Available: https://rfc-editor.org/rfc/rfc8259.txt

5 Revision History

5.1 Amendments

No.	Date	Version	Subject of Amendments	Author
1	YYYY-MM-DD	4.6.0		Xxx Yyy

5.2 Quality Assurance

No.	Date	Version	Approved by
1	YYYY-MM-DD	4.6.0	