

SWIM-SERV-014 Quality of service

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Requirement

Title	Quality of service
Identifier	SWIM-SERV-014
Requirement	<p>A service description shall include statements on the quality of service offered with regards to:</p> <ul style="list-style-type: none">• availability of the service;• response time of the service; and• throughput of the service.
Rationale	<p>This is a key criterion in deciding to use the service.</p> <p>This is key information to be included in a service level agreement and will influence the content of the SLA. It informs contract negotiations between consumers and providers.</p>
Verification	<p>Completeness: Verify that quality statements are included in the service description.</p> <p>Consistency: Not Applicable.</p> <p>Correctness: Not Applicable.</p>
Examples /Notes	<p>Note: The availability is typically expressed as a percentage representing the ratio between minimum target uptime versus maximum uptime. The service provider needs to describe the service outages he intends to mask/alleviate. The availability information needs to be expressed for various situations, e.g. planned and unplanned outages. The service provider needs to describe the schedule of planned outages.</p> <p>Example of availability: 99.95 % of Continuous Operations.</p> <p>Note: The response time expressing the delay to process a service request could include: delay in seconds, percentage of messages, message size.</p> <p>Example of response time: 2s delay for 95% of messages of average size 1MB, with no compression.</p> <p>Example of response time: max 3s response to complete a service request, measured from the time the service provider agent receives the request to the time the service provider transmits the response.</p> <p>Note: The throughput is typically expressed as a number of service requests that the service can accommodate within the given time period.</p> <p>Example of throughput: 200 service requests per minute.</p> <p>Note: It is a good practice to describe the measuring conditions of the quality of service figures given.</p>
Level of Implementation	Mandatory

Guidance

Examples

See the [Quality of Service section](#) within the [Donlon TOBT Setting Service Description](#).

Guidance for JSON service description

tentative JSON Guidance

[Guidance for JSON service descriptions](#) integrated within the [SWIM Service Description Handbook](#).

Schema

The guidance concerns JSON Schema v0.0.3 (see [Schema releases](#)).

```
    "ServiceGeneralDescription" :
    {
        "description" : "Description of the service in terms of what it provides, the
purpose and under which conditions and quality levels the service is provided.",
        "type": "object",
        "additionalProperties": false,
        "required": ["operationalNeed", "functionality", "qualityOfService",
"accessAndUseCondition", "validation"],
        "properties":
        {
            "qualityOfService":
            {
                "description" : "The degree or level of confidence that the
performance of a service meets users requirements. [SWIM-SERV-014]",
                "type" : "array",
                "items" : { "$ref":"#/definitions/QualityOfService" },
                "minItems": 1
            },
        },
    },

    "QualityOfService" :
    {
        "description" : "The degree or level of confidence that the performance of a
service meets users requirements.",
        "type": "object",
        "additionalProperties": false,
        "required": ["name", "description"],
        "properties":
        {
            "name":
            {
                "description" : "The name of the quality of service. [SWIM-SERV-
014]",
                "type" : "string",
                "minLength":1
            },
            "description":
            {
                "description" : "Description of the quality of service offered
with regards to: 1)availability of the service; 2)response time of the service; and 3)throughput of the
service (SWIM-SERV-014). It also describes less quantitative aspects suchs as 4)integrity, 5)
confidentiality and possibly any other service related qualities defined in ISO 25010",
                "type" : "string",
                "minLength":1
            }
        }
    },
},
```

Rules expressed for the cases as defined in Registry URD.

case	rules
COMPLIANT	mandatory
CANDIDATE	
DEFINITION	

Guidance

Include at least statements on the quality of service offered with regards to availability, response time and throughput of the service.

Rationale: This is a key criterion in deciding to use the service. This is key information to be included in a service level agreement and will influence the content of the SLA. It informs contract negotiations between consumers and providers.

Within field `qualityOfService` (itself within field `serviceGeneralDescription`) list **three or more** occurrences of type `QualityOfService`.

QualityOfService - Mandatory

The degree or level of confidence that the performance of a service meets users requirements.

attribute name	description	type	guidance	rule
name	The name of the quality of service.	string	Provide a clear and concise name for the quality of service, such as "Availability", "Response time", "Throughput". Consider as well describing less quantitative aspects such as "Integrity", "Confidentiality" and other service related qualities defined in ISO 25010	Mandatory
description	Description of the quality of service offered with regards to: 1) availability of the service; 2) response time of the service; and 3) throughput of the service (SWIM-SERV-014). It also describes less quantitative aspects such as 4) integrity, 5) confidentiality and possibly any other service related qualities defined in ISO 25010	string	See Notes / Examples of the requirement.	Mandatory

QoS document - Optional

Additional information may be provided as a document of type `QUALITY_OF_SERVICE_DOCUMENT`.

See [Guidance on serviceDocument](#) on how to fill in documents.

Example

```

"serviceGeneralDescription": {
  "qualityOfService": [
    {
      "name": "Availability",
      "description": "99.95 % outside the planned outages. Schedule of planned outages:
http://www.donlon-airport.com/swim/planned-outages"
    },
    {
      "name": "Capacity",
      "description": "2000 service requests per hour"
    },
    {
      "name": "Response time",
      "description": "2s delay for 95% of messages"
    }
  ],
},

```

A complete JSON example is available in page [JSON example - Donlon TOBT Setting service description](#).