

SWIM-SERV-018 TI Profile and bindings

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Requirement

Title	SWIM TI Profile and interface bindings
Identifier	SWIM-SERV-018
Requirement	<p>A service description shall include for each service interface,</p> <ul style="list-style-type: none">• the selected SWIM TI Profile and its version;• a reference to a service interface binding as specified in the selected SWIM TI Profile;• a reference to a network interface binding as specified in the selected SWIM TI Profile; and• reference to additionally supported requirements as specified in the selected SWIM TI Profile.
Rationale	<p>To support the concept of interoperability between the service provider and service consumer, the SWIM TI Profiles only allow a certain set of technical solutions, which can be chosen by the service designer.</p> <p>This is used by technical experts to assess feasibility to implement.</p>
Verification	<p>Completeness: Verify that the reference information is provided for each provider side and consumer side interface.</p> <p>Consistency: Verify that the selected service interface binding, network interface binding and additionally supported requirements are consistent with the selected SWIM TI Profile and version.</p> <p>Correctness: Not Applicable.</p>
Examples /Notes	<p>Note: If configuration options are available in the service interface binding, it is best practice to document them (e.g. use of GZIP compression, Message Transmission Optimization Mechanism (MTOM) encoding).</p> <p>Example additionally supported requirements:</p> <ul style="list-style-type: none">• "SWIM-TIYP-0092, SWIM-TIYP-0098".
Level of Implementation	Mandatory

Guidance

Examples

See the [TI Profile and interface bindings 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](#)).

```

"Interface" :
{
  "description" : "The means by which the underlying capabilities of a service are
accessed. [SWIM-SERV-016]",
  "type": "object",
  "additionalProperties": false,
  "required": ["name", "description", "interfaceProvisionSide",
"tiPrimitiveMessageExchangePattern", "endPoint", "serviceInterfaceBinding", "networkInterfaceBinding",
"interfaceBindingDescription", "operation", "behaviour"],
  "properties":
  {
    "serviceInterfaceBinding":
    {
      "description" : "An interface binding that enables services to
exchange data with consuming applications. [SWIM-SERV-018]",
      "$ref" : "#/definitions/CodeServiceInterfaceBindingType"
    },
    "networkInterfaceBinding":
    {
      "description" : "An interface binding that enables the SWIM TI
to exchange data with the network. [SWIM-SERV-018]",
      "$ref" : "#/definitions/CodeNetworkInterfaceBindingType"
    },
    "interfaceBindingDescription":
    {
      "description" : "Complementary description of the protocols and
other specifications used by the interface complementing the selected bindings, or any additional
requirement specified in a SWIM TI Profile that is supported by the interface. [SWIM-SERV-018], [SWIM-
SERV-019]",
      "type" : "string",
      "minLength":1
    },
  },
},
},

```

Rules expressed for the cases as defined in Registry URD.

case	rules
COMPLIANT	mandatory
CANDIDATE	
DEFINITION	

Guidance



Additional attributes to Interface type as described in [SWIM-SERV-016 Service interfaces](#).

Rationale: To support the concept of interoperability between the service provider and service consumer, the SWIM TI Profiles only allow a certain set of technical solutions, which can be chosen by the service designer.

The TI profile and version are embedded within the selected code value for field serviceInterfaceBinding.

Interface - additional attributes

attribute name	description	type	guidance	rule

<p>serviceInterfaceBinding</p>	<p>An interface binding that enables services to exchange data with consuming applications.</p>	<p>A code listing the interface bindings that enable services to exchange data with consuming applications.</p> <table border="1" data-bbox="740 205 1024 1182"> <tr> <td>SWIM_TL_YP_1_0_WS_LIGHT</td> <td>See chapter 3.1.1.1 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>SWIM_TL_YP_1_0_WS_SOAP</td> <td>See chapter 3.1.1.2 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>SWIM_TL_YP_1_0_WS_SOAP_WITH_BASIC_MESSAGE_SECURITY</td> <td>See chapter 3.1.1.3 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>SWIM_TL_YP_1_0_WS_SOAP_WITH_MESSAGE_SECURITY</td> <td>See chapter 3.1.1.4 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>SWIM_TL_YP_1_0_WS_SOAP_WITH_FEDERATED_SECURITY</td> <td>See chapter 3.1.1.5 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>SWIM_TL_YP_1_0_WS-N_SOAP</td> <td>See chapter 3.1.1.6 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>SWIM_TL_YP_1_0_WS-N_SOAP_WITH_BASIC_MESSAGE_SECURITY</td> <td>See chapter 3.1.1.7 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>SWIM_TL_YP_1_0_WS-N_SOAP_WITH_MESSAGE_SECURITY</td> <td>See chapter 3.1.1.8 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>SWIM_TL_YP_1_0_WS-N_SOAP_WITH_FEDERATED_SECURITY</td> <td>See chapter 3.1.1.9 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>SWIM_TL_YP_1_0_AMQP_MESSAGING</td> <td>See chapter 3.1.1.10 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> </table>	SWIM_TL_YP_1_0_WS_LIGHT	See chapter 3.1.1.1 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	SWIM_TL_YP_1_0_WS_SOAP	See chapter 3.1.1.2 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	SWIM_TL_YP_1_0_WS_SOAP_WITH_BASIC_MESSAGE_SECURITY	See chapter 3.1.1.3 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	SWIM_TL_YP_1_0_WS_SOAP_WITH_MESSAGE_SECURITY	See chapter 3.1.1.4 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	SWIM_TL_YP_1_0_WS_SOAP_WITH_FEDERATED_SECURITY	See chapter 3.1.1.5 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	SWIM_TL_YP_1_0_WS-N_SOAP	See chapter 3.1.1.6 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	SWIM_TL_YP_1_0_WS-N_SOAP_WITH_BASIC_MESSAGE_SECURITY	See chapter 3.1.1.7 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	SWIM_TL_YP_1_0_WS-N_SOAP_WITH_MESSAGE_SECURITY	See chapter 3.1.1.8 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	SWIM_TL_YP_1_0_WS-N_SOAP_WITH_FEDERATED_SECURITY	See chapter 3.1.1.9 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	SWIM_TL_YP_1_0_AMQP_MESSAGING	See chapter 3.1.1.10 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	<p>Select the appropriate code value.</p> <p>Rationale: To support the concept of interoperability between the service provider and service consumer, the SWIM TI Profiles only allow a certain set of technical solutions, which can be chosen by the service designer.</p> <div data-bbox="1040 254 1401 447" style="border: 1px solid black; padding: 5px;"> <p> The code value includes the TI profile and version.</p> <ul style="list-style-type: none"> Eg The part "SWIM_TL_YP_1_0" means "EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile version 1.0". </div>	<p>Mandatory</p>
SWIM_TL_YP_1_0_WS_LIGHT	See chapter 3.1.1.1 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.																							
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<p>networkInterfaceBinding</p>	<p>An interface binding that enables the SWIM TI to exchange data with the network.</p>	<p>A code listing the interface bindings that enable the SWIM TI to exchange data with the network.</p> <table border="1" data-bbox="740 1350 1024 1703"> <tr> <td>IPV4_UNICAST</td> <td>See chapter 3.1.2.1 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>IPV4_SECURE_UNICAST</td> <td>See chapter 3.1.2.2 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>IPV6_UNICAST</td> <td>See chapter 3.1.2.3 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> <tr> <td>IPV6_SECURE_UNICAST</td> <td>See chapter 3.1.2.4 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.</td> </tr> </table>	IPV4_UNICAST	See chapter 3.1.2.1 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	IPV4_SECURE_UNICAST	See chapter 3.1.2.2 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	IPV6_UNICAST	See chapter 3.1.2.3 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	IPV6_SECURE_UNICAST	See chapter 3.1.2.4 of the EUROCONTROL Specification for SWIM Technical Infrastructure (TI) Yellow Profile.	<p>Select the appropriate code value.</p>	<p>Mandatory</p>												
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<p>interfaceBindingDescription</p>	<p>Complementary description of the protocols and other specifications used by the interface complementing the selected bindings, or any additional requirement specified in a SWIM TI Profile that is supported by the interface. [SWIM-SERV-018], [SWIM-SERV-019]</p>	<p>string</p>	<p>Provide here a textual description of additionally supported requirements as specified in the selected SWIM TI Profile, if any.</p> <div data-bbox="1040 1801 1401 1927" style="border: 1px solid black; padding: 5px;"> <p> This field is used as well by requirement S WIM-SERV-019 Protocols and data format to list the service interface protocols.</p> </div>	<p>Mandatory</p>																				

Example

```
"serviceInterface": [  
  {  
    "serviceInterfaceBinding": "SWIM_TI_YP_1_0_WS-N_SOAP",  
    "networkInterfaceBinding": "IPV4_UNICAST",  
    "interfaceBindingDescription": "XML requests and replies embedded into SOAP  
messages, themselves embedded into HTTP requests and responses. Operation names are associated to SOAP  
requests. The interface does not use compression or message transmission optimization mechanism (MTOM).",  
  }  
],
```

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