



# Web Service Description Requirements

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## Abstract

This document describes the Web Services Description Working Group's requirements for the Web Services Description specification.

## Status of this Document

This is the first [W3C Working Draft](#) of the Web Services Description Requirements document. It is a [chartered](#) deliverable of the [Web Services Description Working Group \(WG\)](#), which is part of the [Web Services Activity](#). The Working Group has agreed to publish this document, although this document does not necessarily represent the consensus within the Working Group about Web Service Description requirements.

Comments on this document should be sent to [public-ws-desc-comments@w3.org](mailto:public-ws-desc-comments@w3.org) ([public archive](#)). It is inappropriate to send discussion emails to this address.

Discussion of this document takes place on the public [www-ws-desc@w3.org](mailto:www-ws-desc@w3.org) mailing list ([public archive](#)) per the email communication rules in the [Web Services Description Working Group Charter](#).

Patent disclosures relevant to this specification may be found on the Working Group's [patent disclosure page](#).

This is a public W3C Working Draft. It is a draft document and may be updated,

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## 1 Notations

The following terminology and typographical conventions have been used in this document.

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted in a manner similar to that described in [\[IETF RFC 2119\]](#) in this document are to be interpreted in a manner similar to that described in [\[IETF RFC 2119\]](#). (Changes from [\[IETF RFC 2119\]](#) are indicated with *emphasis*.)

### **MUST, REQUIRED, SHALL**

The *requirement* is an absolute requirement. The specification *produced by the WG must address this requirement*.

### SHOULD, RECOMMENDED

There may exist valid reasons *for the WG* to ignore *this requirement*, but the implications of *doing so* must be understood and weighed before doing so.

### MAY, OPTIONAL

The *requirement* is truly optional. *The WG* may choose to omit the *requirement for the sake of scope or schedule*.

For the sake of process and clarity, each requirement is annotated with meta data.

- Each requirement has an identification number. The numbers are arbitrary and do not imply any ordering or significance.
- Draft requirements are annotated to indicate their review status within the WG:

#### [Draft]

A candidate requirement the WG is actively considering but has *not* yet reached consensus on.

- To indicate their source, requirements may be annotated with the initials of the original submitter, 'Charter' (from [\[WSD Charter\]](#)), or 'WG' (from WG discussion).

## 2 Definitions

The definitions in this section are drawn primarily from [\[WSDL 1.1\]](#) and are intended to be used for purposes of discussion. They are not intended to constrain the results of the WG.

### 2.1 Non-normative definitions

#### Web Service

[Definition: A **Web Service** is a software application identified by a URI [\[IETF RFC 2396\]](#), whose interfaces and binding are capable of being defined, described and discovered by XML artifacts and supports direct interactions with other software applications using XML based messages via internet-based protocols. ]

#### Client

[Definition: A **Client** is a software that makes use of a [Web Service](#), acting as its 'user' or 'customer'.]

### 2.2 Normative definitions

## Message

[Definition: A **Message** is the basic unit of communication between a Web Service and a Client; data to be communicated to or from a Web Service as a single logical transmission.]

## Operation

[Definition: A set of Messages related to a single Web Service action is called **Operation**.]

## Interface (AKA Port Type)

[Definition: A logical grouping of operations. An **Interface** represents an abstract Web Service type, independent of transmission protocol and data format.]

## InterfaceBinding

[Definition: An association between an interface, a concrete protocol and/or a data format. An **InterfaceBinding** specifies the protocol and/or data format to be used in transmitting Messages defined by the associated Interface.]

## EndPoint (AKA Port)

[Definition: An association between a fully-specified InterfaceBinding and a network address, specified by a URI [ietf RFC 2396], that may be used to communicate with an instance of a Web Service. An **EndPoint** indicates a specific location for accessing a Web Service using a specific protocol and data format.]

## Service

[Definition: A collection of Endpoints is called **Service**.]

## 3 Relationship to WG Charter

The Web Services Description WG Charter [WSD Charter] has two sections describing what is in-scope and what is out-of-scope of the problem space defined for the WG. The WG considers all the requirements in Section 1 of [WSD Charter] to be in-scope per the Charter.

Reviewers and readers should be familiar with the Web Services Description WG Charter [WSD Charter] because it provides the critical context for the requirements and any discussion of them.

## 4 Requirements

### 4.1 General

**R001**

The description language **MUST** allow any programming model, transport, or protocol for communication between peers. (From the Charter. Last revised 23 Apr 2002.)

**R004**

The WG specification(s) **MUST** describe constructs using the [\[XML Information Set\]](#) model (similar to the SOAP 1.2 specifications [\[SOAP 1.2 Part 1\]](#)). (From JS. Last revised 21 Feb 2002.)

**R099**

Processors of the description language **MUST** support XML Schema (<http://www.w3.org/2001/XMLSchema>). See also [\[XML Schema Part 1\]](#). (From WG discussion. Last discussed 21 Feb 2002.)

**R100**

The description language **MUST** allow other type systems besides XML Schema (<http://www.w3.org/2001/XMLSchema>) via extensibility. (From WG discussion. Last discussed 21 Feb 2002.)

**R098**

The WG specification(s) schema and examples **MUST** be written in XML Schema and **SHOULD** be written in the latest public W3C XML Schema Recommendation. (From WG discussion. Last revised 28 Feb 2002.)

**R005**

The WG specification(s) **MUST** correct errors/inconsistencies in [\[WSDL 1.1\]](#). (From KL. Last revised 10 Apr 2002.)

**R007**

The WG specification(s) **MUST** provide detailed examples, including on-the-wire messages. (From KL. Last revised 10 Apr 2002.)

**R003**

The WG specification(s) **SHOULD** use available XML technologies. (From JS. Last revised 10 Apr 2002.)

**R105**

The WG specification(s) **SHOULD** support Web Services that operate on resource constrained devices. (From YF. Last discussed 10 Apr 2002.)

**R010**

The WG specification(s) **SHOULD** use consistent terminology across all

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