

Adopting to WSDL 2.0: Rationale and Known Issues

W3C finalized WSDL 2.0 as a W3C recommendation on June 26, 2007. From a technology adoption perspective, WSDL 2.0 expands WSDL 1.1 and builds on WS-I Basic Profile improvements in terms of core usage with HTTP/SOAP 1.2 bindings, Message exchange patterns, Fault handling and support for developing REST (Representational State Transfer) based Web applications. WSDL 2.0 also extends support for representing Semantic Annotations for WSDL (SAWSDL) and WS-Policy. More importantly, the specification is also provides conformance criteria for implementability and the interoperability of potential implementations.

New Features over WSDL 1.1

At the core, WSDL 2.0 describes a Web service in terms of sending and receiving messages and messages are described independent of a specific wire format (represented in XML Schema). Each identified operation is associated a message exchange pattern with one or more messages. The WSDL bindings specify transport and wire format details for one or more interfaces and the Web services endpoint associates a network address with a WSDL specified binding. Finally, all described services together with endpoints that implement a common interface.

There are major modifications introduced to WSDL 2.0 as features and enhancement over WSDL 1.1. In terms of changes from WSDL 1.1 to WSDL 2.0, the differences are related to the structural representation of WSDL by introducing a component-based model, support for eight message exchange patterns (WSDL 1.1 supported only four MEPs), representing Fault descriptions (based on SOAP 1.2) and addition of bindings pertaining to XML/HTTP (for REST). To support extensibility, WSDL 2.0 introduced two new extensibility mechanisms: an open content model that allows XML elements and attributes from other (non-WSDL) XML namespaces to be accepted into a WSDL document, Legacy DTDs through features and properties. Multiple services can be described in the same WSDL document.

WSDL 2.0 over WSDL 1.1 – Known issues

Adopting WSDL 2.0 will lead to interoperability issues with existing WSDL 1.1 implementations. Interoperability issues with respect to the adoption of WSDL 2.0 can arise in two ways. First, issues related to exposing already hosted services through the WSDL 2.0 specification and second, issues related to the consumption of the services from the client side using the WSDL based on the WSDL 2 specification.

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