Web Services Standards Overview

Interoperability Issues

Basic Profile
1.1
WS-I
Final Specification

▲ Basic Profile – The Basic Profile 1.1 provides implementation guidelines for how related set of non-proprietary Web Service specifications should be used together for best interoperability.

Basic Profile
1.2
WS-I
Working Group Draft

▲ Basic Profile – The Basic Profile 1.2 builds on Basic Profile 1.1 by incorporating Basic Profile 1.1 errata, requirements from Simple SOAP Binding Profile 1.0, and adding support for WS-Addressing and MTOM.

Basic Profile
2.0
WS-I
Working Group Draft

▲ Basic Profile – The Basic Profile 2.0 is an update of WS-I BP that includes a profile of SOAP 1.2.

Attachments Profile
1.0
WS-I
Final Specification

▲ Attachments Profile – The Attachment Profile 1.0 complements the Basic Profile 1.1 to add support for interoperable SOAP Messages with attachments-based Web Services.

Simple SOAP Binding Profile
1.0
WS-I
Final Specification

▲ Simple SOAP Binding Profile – The Simple SOAP Binding Profile consists of those Basic Profile 1.0 requirements related to the serialization of the envelope and its representation in the message.

Basic Security Profile
1.0
WS-I
Board Approval Draft

▲ Basic Security Profile defines the WS-I Basic Security Profile 1.0, based on a set of non-proprietary Web services specifications, along with clarifications and amendments to those specifications which promote interoperability.

REL Token Profile
1.0
WS-I
Working Group Draft

▲ REL Token Profile is based on a non-proprietary Web services specification, along with clarifications and amendments to that specification which promote interoperability.

SAML Token Profile
1.0
WS-I
Working Group Draft

▲ SAML Token Profile is based on a non-proprietary Web services specification, along with clarifications and amendments to that specification which promote interoperability.

Conformance Claim Attachment Mechanism (CCAM)
1.0
WS-I
Final Specification

▲ Conformance Claim Attachment Mechanism (CCAM) catalogues mechanisms that can be used to attach WS-I Profile Conformance Claims to Web services artefacts (e.g., WSDL descriptions, UDDI registries).

Reliable Asynchronous Messaging Profile (RAMP)
1.0
WS-I
Working Draft

▲ Reliable Asynchronous Messaging Profile (RAMP) is a profile, in the fashion of the WS-I profiles, that enables, among other things, basic B2B integration scenarios using Web services technologies.

Business Process Specifications

Business Process Execution Language for Web Services 1.1
(BPEL4WS) - 1.1 · BEA Systems, IBM, Microsoft, SAP, Siebel Systems · OASIS-Standard

▲ Business Process Execution Language for Web Services 1.1(BPEL4WS) provides a language for the formal specification of business processes and business interaction protocols using Web Services.

Business Process Execution Language for Web Services 2.0
(BPEL4WS) · 2.0
OASIS, BEA Systems, IBM, Microsoft, SAP, Siebel Systems · Committee Draft

▲ Business Process Execution Language for Web Services 2.0 (BPEL4WS) provides a language for the formal specification of business processes and business interaction protocols using Web Services.

WS–Choreography Model Overview
1.0 · W3C
Working Draft

▲ WS–Choreography Model Overview defines the format and structure of the (SOAP) messages that are exchanged, and the sequence and conditions in which the messages are exchanged.

Business Process Management Language (BPML)
2.0
BPMI.org
Final Draft

▲ Business Process Management Language (BPML) provides a meta-language for expressing business processes and supporting entities.

Web Service Choreography Interface
(WSCI) · 1.0 · W3C
Sun Microsystems, SAP, BEA Systems and Intalio · Note

▲ Web Service Choreography Interface (WSCI) describes how Web Service operations can be choreographed in the context of a message exchange in which the Web Service participates.

XML Process Definition Language (XPDL)
2.0
Final

▲ XML Process Definition Language (XPDL) provides an XML file format that can be used to interchange process models between tools.

Web Service Choreography Description Language
(CDL4WS) · 1.0 · W3C
Candidate Recommendation

▲ Web Service Choreography Description Language (CDL4WS) is to specify a declarative, XML based language that defines from a global viewpoint the common and complementary observable behaviour, where message exchanges occur, and when the jointly agreed ordering rules are satisfied.

Management Specifications

Management Using Web Services (WSDM-MUWS)
1.0
OASIS
OASIS-Standard

▲ Web Service Distributed Management: Management Using Web Services (WSDM-MUWS) defines how an IT resource connected to a network provides manageability interfaces such that the IT resource can be managed locally and from remote locations using Web services technologies.

Management Of Web Services (WSDM-MOWS)
1.0
OASIS
OASIS-Standard

▲ Web Service Distributed Management: Management Of Web Services (WSDM-MOWS) addresses management of the components that form the network, the Web services endpoints, using Web services protocols.

WS–Management
AMD, Dell, Intel, Microsoft and Sun Microsystems
Published Specification

▲ WS–Management describes a general SOAP-based protocol for managing systems such as PCs, servers, devices, Web services and other applications, and other manageable entities.

Service Modeling Language
IBM, BEA, BMC, Cisco, Dell, HP, Intel, Microsoft, Sun
Draft Specification

▲ Service Modeling Language (SML) is used to model complex IT services and systems, including their structure, constraints, policies, and best practices.

Presentation Specifications

Web Services for Remote Portlets (WSRP)
1.0
OASIS
Committee Draft

▲ Web Services for Remote Portlets (WSRP) defines a set of interfaces and related semantics which standardize interactions with components providing user-facing markup, including the processing of user interactions with that markup.

Metadata Specifications

WS–Policy
1.5
W3C
Working Draft

▲ WS–Policy describes the capabilities and constraints of the policies on intermediaries and endpoints (e.g. business rules, required security tokens, supported encryption algorithms, privacy rules).

WS–PolicyAssertions
1.1
BEA Systems, IBM, Microsoft, SAP
Public Draft

▲ WS–PolicyAssertions provides an initial set of assertions to address some common needs of Web Services applications.

WS–PolicyAttachment
1.2
W3C
W3C Member Submission

▲ WS–PolicyAttachment defines two general-purpose mechanisms for associating policies with the subjects to which they apply; the policies may be defined as part of existing metadata about the subject or the policies may be defined independently and associated through an external binding to the subject.

WS–Discovery
Microsoft, BEA Systems, Canon, Intel and webMethods

▲ WS–Discovery defines a multicast discovery protocol for dynamic discovery of services on ad-hoc and managed networks.

WS–MetadataExchange
1.1
BEA Systems, Computer Associates, IBM, Microsoft, SAP, Sun Microsystems and webMethods
Public Draft

▲ WS–MetadataExchange enables a service to provide metadata to others through a Web services interface. Given only a reference to a Web service, a user can access a set of WSDL/SOAP operations to retrieve the metadata that describes the service.

Universal Description, Discovery and Integration (UDDI)
3.0.2
OASIS
OASIS-Standard

▲ Universal Description, Discovery and Integration (UDDI) defines a set of services supporting the description and discovery of businesses, organizations, and other Web services providers, the Web services they make available, and the technical interfaces which may be used to access those services.

Web Service Description Language 2.0 SOAP Binding
2.0
W3C · Working Draft

▲ Web Service Description Language SOAP Binding describes the concrete details for using WSDL 2.0 in conjunction with SOAP 1.1 protocol.

Web Service Description Language 2.0 Core
2.0
W3C
Candidate Recommendation

▲ Web Service Description Language 2.0 Core is an XML-based language for describing Web services and how to access them. It specifies the location of the service and the operations (or methods) the service exposes.

Web Service Description Language 1.1
1.1
W3C
Note

▲ Web Service Description Language 1.1 is an XML-based language for describing Web services and how to access them. It specifies the location of the service and the operations (or methods) the service exposes.

Reliability Specifications

WS–ReliableMessaging
1.1
OASIS
Committee Draft

▲ WS–ReliableMessaging describes a protocol that allows Web services to communicate reliable in the presence of software component, system, or network failures. It defines a SOAP binding that is required for interoperability.

WS–Reliable Messaging Policy Assertion (WS–RM Policy)
1.1
OASIS
Committee Draft

▲ Web Services ReliableMessaging Policy Assertion (WS–RM Policy) describes a domain-specific policy assertion for WS–ReliableMessaging that that can be specified within a policy alternative as defined in WS-Policy Framework.

WS–Reliability
1.1
OASIS
OASIS-Standard

▲ WS–Reliability is a SOAP-based protocol for exchanging SOAP messages with guaranteed delivery, no duplicates, and guaranteed message ordering. WS-Reliability is defined as SOAP header extensions and is independent of the underlying protocol. This specification contains a binding to HTTP.

Security Specifications

WS–Security
1.1
OASIS
OASIS-Standard

▲ WS–Security is a communications protocol providing a means for applying security to Web Services.

WS–SecurityPolicy
1.1
IBM, Microsoft, RSA Security, VeriSign
Public Draft

▲ WS–SecurityPolicy defines how to describe policies related to various features defined in the WS-Security specification.

WS–Security: SOAP Message Security
1.1
OASIS
Public Review Draft

▲ WS–Security: SOAP Message Security describes enhancements to SOAP messaging to provide message integrity and confidentiality. Specifically, this specification provides support for multiple security token formats, trust domains, signature formats and encryption technologies. The token formats and semantics for using these are defined in the associated profile documents.

WS–Security: Username Token Profile
1.1
OASIS
Public Review Draft

▲ WS–Security: Username Token Profile describes how a Web Service consumer can supply a Username Token as a means of identifying the requestor by username, and optionally using a password (or shared secret, etc.) to authenticate that identity to the Web Service producer.

WS–Security: Kerberos Binding
1.0
Microsoft, IBM, OASIS
Working Draft

▲ WS–Security: Kerberos Binding defines how to encode Kerberos tickets and attach them to SOAP messages. As well, it specifies how to add signatures and encryption to the SOAP message, in accordance with WS-Security, which uses and references the Kerberos tokens.

WS–Federation
1.0
IBM, Microsoft, BEA Systems, RSA Security, and VeriSign
Initial Draft

▲ WS–Federation describes how to manage and broker the trust relationships in a heterogeneous federated environment including support for federated identities.

WS–Security: SAML Token Profile
1.1
OASIS
Public Review Draft

▲ WS–Security: SAML Token Profile defines the use of Security Assertion Markup Language (SAML) v1.1 assertions in the context of WSS: SOAP Message Security including for the purpose of securing SOAP messages and SOAP message exchanges.

WS–Trust
1.1
BEA Systems, Computer Associates, IBM, Layer 7 Technologies, Microsoft, Netegrity, Oblix, OpenNetwork, Ping Identity Corporation, Reactivity, RSA Security, VeriSign and Westbridge Technology · Initial Draft

▲ WS–Trust describes a framework for trust models that enables Web services to securely interoperate. It uses WS-Security base mechanisms and defines additional primitives and extensions for security token exchange to enable the issuance and dissemination of credentials within different trust domains.

WS–Security: X.509 Certificate Token Profile
1.1
OASIS
Public Review Draft

▲ WS–Security: X.509 Certificate Token Profile describes the use of the X.509 authentication framework with the WS–Security: SOAP Message Security specification.

WS–SecureConversation
BEA Systems, Computer Associates, IBM, Layer 7 Technologies, Microsoft, Netegrity, Oblix, OpenNetwork, Ping Identity Corporation, Reactivity, RSA Security, VeriSign and Westbridge Technology · Public Draft

▲ WS–SecureConversation specifies how to manage and authenticate message exchanges between parties including exchanging context and establishing and deriving session keys.

Transaction Specifications

WS–Coordination
1.1
OASIS
Working Draft

▲ WS–Coordination describes an extensible framework for providing protocols that coordinate the actions of distributed applications.

WS–Business Activity
1.1
OASIS
Working Draft

▲ WS–Business Activity provides the definition of the business activity coordination type that is to be used with the extensible coordination framework described in the WS-Coordination specification.

WS–Atomic Transaction
1.1
OASIS
Committee Draft

▲ WS–Atomic Transaction defines protocols that enable existing transaction processing systems to wrap their proprietary protocols and interoperate across different hardware and software vendors.

WS–Composite Application Framework (WS–CAF)
1.0 · Arjuna Technologies, Fujitsu, IONA, Oracle and Sun Microsystems
Committee Draft

▲ WS–Composite Application Framework (WS–CAF) is a collection of three specifications aimed at solving problems that arise when multiple Web Services are used in combination. It proposes standard, interoperable mechanisms for managing shared context and ensuring business processes achieve predictable results and recovery from failure.

WS–Context (WS–CTX)
1.0 · Arjuna Technologies, Fujitsu, IONA, Oracle and Sun Microsystems
Committee Draft

▲ WS–Context (WS–CTX) is envisaged as a lightweight mechanism for allowing multiple Web Services to share a common context.

WS–Coordination Framework (WS–CF)
1.0 · Arjuna Technologies, Fujitsu, IONA, Oracle and Sun Microsystems
Committee Draft

▲ WS–Coordination Framework (WS–CF) allows the management and coordination in a Web Services interaction of a number of activities related to an overall application.

WS–Transaction Management (WS–TXM)
1.0 · Arjuna Technologies, Fujitsu, IONA, Oracle and Sun Microsystems
Committee Draft

▲ WS–Transaction Management (WS–TXM) defines a core infrastructure service consisting of a Transaction Service for Web services.

Resource Specifications

Web Services Resource Framework (WSRF)
1.2
OASIS
OASIS-Standard

▲ Web Services Resource Framework (WSRF) defines a family of specifications for accessing stateful resources using Web Services.

WS–BaseFaults (WSRF)
1.2
OASIS
Working Draft

▲ WS–BaseFaults (WSRF) defines a base set of information that may appear in fault messages. WS-BaseFaults defines an XML schema type for base faults, along with rules for how this base fault type is used and extended by Web Services.

WS–ServiceGroup (WSRF)
1.2
OASIS
Working Draft

▲ WS–ServiceGroup (WSRF) defines a means by which Web Services and WS-Resources can be aggregated or grouped together for a domain specific purpose.

WS–ResourceProperties (WSRF)
1.2
OASIS
Working Draft

▲ WS–ResourceProperties specifies the means by which the definition of the properties of a WS-Resource may be declared as part of the Web Service interface. The declaration of the WS-Resource properties represents a projection of or a view on the WS-Resource state.

WS–ResourceLifetime (WSRF)
1.2
OASIS
Working Draft

▲ WS–ResourceLifetime is to standardize the terminology, concepts, message exchanges, WSDL and XML needed to monitor the lifetime of, and destroy WS-Resources. Additionally, it defines resource properties that may be used to inspect and monitor the lifetime of a WS-Resource.

WS–Transfer
W3C
W3C Member Submission

▲ WS–Transfer describes a general SOAP-based protocol for accessing XML representations of Web service-based resources.

Resource Representation SOAP Header Block (RRSHB)
1.0
W3C
Recommendation

▲ Resource Representation SOAP Header Block (RRSHB) complements MTOM by defining mechanisms for describing and conveying non-XML resource representations in a SOAP 1.2 message.

Messaging Specifications

WS–Notification
1.3
OASIS
OASIS-Standard

▶ WS–Notification is a family of related white papers and specifications that define a standard Web services approach to notification using a topic-based publication/subscribe pattern.

WS–BrokeredNotification
1.3
OASIS
OASIS-Standard

▶ WS–BrokeredNotification defines the interface for the NotificationBroker. A NotificationBroker is an intermediary, which, among other things, allows publication of messages from entities that are not themselves service providers.

WS–BaseNotification
1.3
OASIS
OASIS-Standard

▶ WS–BaseNotification standardizes the terminology, concepts, operations, WSDL and XML needed to express the basic roles involved in Web services publish and subscribe for notification message exchange.

WS–Eventing
W3C
Public Draft

▶ WS–Eventing defines a baseline set of operations that allow Web services to provide asynchronous notifications to interested parties.

WS–Addressing – Core
1.0
W3C
Recommendation

▶ WS–Addressing – Core provides transport-neutral mechanisms to address Web services and messages. This specification defines XML elements to identify Web service endpoints and to secure end-to-end endpoint identification in messages.

SOAP
1.2
W3C
Recommendation

▶ SOAP Message Transmission Optimization Mechanism (MTOM) is described as an abstract feature for optimizing the transmission and/or wire format of a SOAP message.

WS–Enumeration
Systinet, Microsoft, Sonic Software, BEA Systems and Computer Associates
Public Draft

▶ WS–Enumeration describes a general SOAP-based protocol for enumerating a sequence of XML elements that is suitable for traversing logs, message queues, or other linear information models.

WS–Topics
1.3
OASIS
OASIS-Standard

▶ WS–Topics defines three topic expression dialects that can be used as subscription expressions in subscribe request messages and other parts of the WS-Notification system.

WS–Addressing – WSDL Binding
1.0
W3C
Candidate Recommendation

▶ WS–Addressing – WSDL Binding defines how the abstract properties defined in Web Services Addressing – Core are described using WSDL.

WS–Addressing – SOAP Binding
1.0
W3C
Recommendation

▶ WS–Addressing – SOAP Binding provides transport-neutral mechanisms to address Web services and messages.

SOAP
1.1
W3C
Note

▶ SOAP is a lightweight, XML-based protocol for exchange of information in a decentralized, distributed environment.

SOAP

SOAP Message Transmission Optimization Mechanism (MTOM)
1.0 · W3C
Recommendation

XML Specifications

XML 1.1
1.1
W3C
Recommendation

▶ XML – Extensible Markup Language is a parent-down version of SGML, designed especially for Web documents. It allows one to create own customized tags, enabling the definition, transmission, validation, and interpretation of data between applications and between organizations.

XML 1.0
1.0
W3C
Recommendation

▶ XML – Extensible Markup Language is a parent-down version of SGML, designed especially for Web documents. It allows one to create own customized tags, enabling the definition, transmission, validation, and interpretation of data between applications and between organizations.

Namespaces in XML
1.1
W3C
Recommendation

▶ Namespaces in XML provides a simple method for qualifying element and attribute names used in XML documents by associating them with namespaces identified by URI references.

XML Information Set
1.0
W3C
Recommendation

▶ XML Information Set is an abstract data set to provide a consistent set of definitions for use in other specifications that need to refer to the information in a well-formed XML document.

XML Schema
1.1
W3C
Working Draft

▶ XML Schema – XML Schema Definition Language is an XML language for describing and constraining the content of XML documents.

XML binary Optimized Packaging (XOP)
1.0
W3C
Recommendation

▶ XML binary Optimized Packaging (XOP) is an XML language for describing and constraining the content of XML documents.

Describing Media Content of Binary Data in XML (DMCBDX)
W3C
Note

▶ Describing Media Content of Binary Data in XML (DMCBDX) specifies how to indicate the content-type associated with binary element content in an XML document used to specify, in XML Schema, the expected content-type(s) associated with binary element content.

Dependencies

Messaging Specifications

	Resource	Security	Metadata
SOAP 1.1			
SOAP 1.2			
SOAP Message Transmission Optimization Mechanism			
WS–Notification			
WS–Topics			
WS–BrokeredNotification			
WS–BaseNotification			
WS–Addressing – Core			
WS–Addressing – WSDL Binding			
WS–Addressing – SOAP Binding			
WS–Eventing			
WS–Enumeration			

Metadata Specifications

	Security	Messaging
WS–Policy		
WS–PolicyAssertions		
WS–PolicyAttachment		
WS–Discovery		
WS–MetadataExchange		
Universal Description, Discovery and Integration		
Web Service Description Language 1.1		
Web Service Description Language 2.0 Core		
Web Service Description Language 2.0 SOAP Binding		

Security Specifications

	Reliability	Messaging	Metadata
WS–Security			
WS–Security: SOAP Message Security			
WS–Security: Kerberos Binding			
WS–Security: SAML Token Profile			
WS–Security: X.509 Certificate Token Profile			
WS–Security: Username Token Profile			
WS–SecurityPolicy			
WS–Trust			
WS–Federation			
WS–SecureConversation			

Reliability Specifications

	Transaction	Basic Profile	Security	Metadata
WS–ReliableMessaging				
WS–Reliability				
WS–Reliable Messaging Policy Assertion				

Resource Specifications

	Transaction	Security	Messaging
Web Services Resource Framework			
WS–BaseFaults			
WS–ServiceGroup			
WS–ResourceProperties			
WS–ResourceLifetime			
WS–Transfer			
Resource Representation SOAP Header Block			

Management Specifications

	Resource	Mes.	Messaging
WS–Management			
Management Of Web Services			
Management Using Web Services			
Service Modeling Language			

Business Process Specifications

	Reliability	Security	Transaction
Business Process Execution Language for Web Services			
Web Service Choreography Description Language			
Web Service Choreography Interface			
WS–Choreography Model Overview			
Business Process Management Language			
Business Process Execution Language for Web Serv. 2.0			
XML Process Definition Language			

Transaction Specifications

	Metadata	Messaging	Security
WS–Business Activity			
WS–Atomic Transaction			
WS–Coordination			
WS–Composite Application Framework			
WS–Transaction Management			
WS–Context			
WS–Coordination Framework			

Presentation Specifications

	Reliab.	Secur.	Mess.
Web Services for Remote Portlets			