

# ETSI TS 102 440 V1.2.1 (2008-11)

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*Technical Specification*

## **WS-Session: Web Services for Application Session Services**

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**ETSI**

650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° 7803/88

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## Foreword

This Technical Specification (TS) has been produced by ECMA on behalf of its members and those of the European Telecommunications Standards Institute (ETSI).

---

## Introduction

[ECMA-354](#), Application Session Services, specifies XML protocols that can be used to create and manage application sessions that are independent of the transport layer protocols. The present document (WS-Session) specifies Web services for ECMA-354 [1].

The ApplicationSessionTerminated operation of the present document is an outbound asynchronous event notification. For Service Requester to receive the event notification from the Service Provider and from web services (e.g. [ECMA-348](#)) that use the present document for session management, it standardized WS-Eventing and WS-BaseNotification as two Options.

---

# 1 Scope

The present document specifies Web Services (in WSDL, in clause 5) and a SOAP binding (in clause 6) for the Application Session Services defined in ECMA-354 [1]. The Application Session Services allow Applications to create and maintain a relationship with Servers termed Application Session. The Web services specified herein, allow Service Requesters (Applications in ECMA-354 [1]) and Service Providers (Servers in ECMA-354 [1]) to create and maintain such Application Sessions.

The present document builds upon and imports the XML schema definitions from ECMA-354 [1]. The method of making the WSDL description of the specified services available to Service Provider and Requester is out of the scope of the present document.

The ApplicationSessionTerminated operation of the present document is an outbound asynchronous event notification that Service Requesters receive from the Service Provider. Service Requester may also receive the event notification from web services, e.g. [ECMA-348](#), that use the present document for session management.

Clause 7 specifies the event subscription and notification behaviours supported by the two options defined in annex A and B.

Annex A specifies the event subscription mechanism using WS-Eventing.

Annex B specifies the event subscription mechanism using WS-BaseNotification.

Annex C specifies the asynchronous subscription response Option for the two event subscription mechanisms.

Annex D shows an example WS-Session WSDL binding with SOAP/HTTP.

Annex E lists SOAP XML Templates for ECMA-354 [1] messages.

Annex F lists some SOAP XML Templates for WS-Eventing messages.

Annex G lists some SOAP XML Templates for WS-BaseNotification messages.

Annex H provides a summary of changes.

---

# 2 Conformance

The Service Requester and Service Provider conform to the Application and Server conformance specified in ECMA-354 [1], using the WSDL definitions, SOAP bindings, and event subscription and notification specified in clauses 5, 6 and 7 respectively.

The Service Provider implements at least one of the WS-Eventing and WS-BaseNotification event subscription options as specified in annexes A and B.

Service Provider's WSDL for the present document shall include the implemented operations from annex A, annex B and the WSDL specified in clause 5.

The Service Requester shall itself initiate or delegate event subscription as specified in annexes A and B.

The Service Provider supports synchronous responses to Event Subscriptions and may implement the asynchronous response Option specified in annex C.

## 3 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
  - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
  - for informative references.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

For online referenced documents, information sufficient to identify and locate the source shall be provided. Preferably, the primary source of the referenced document should be cited, in order to ensure traceability. Furthermore, the reference should, as far as possible, remain valid for the expected life of the document. The reference shall include the method of access to the referenced document and the full network address, with the same punctuation and use of upper case and lower case letters.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

### 3.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

#### Ecma references

- [1] ECMA-354: "Application Session Services, June 2004": <http://www.ecma-international.org/publications/standards/Ecma-354.htm>.

#### W3C references

- [2] SOAP 1.1: "Simple Object Access Protocol 1.1", W3C Note 08 May 2000.
- [3] WSDL 1.1 "Web Service Description Language 1.1", W3C Note 15 March 2001.
- [4] XML Schema 1.0: "XML Schema Language Part 1: Structure", W3C Recommendation 28 October 2004.  
"XML Schema Language Part 2: Data Types", W3C Recommendation 28 October 2004.
- [5] WS-Addressing 1.0: "Web Services Addressing 1.0" - Core W3C Recommendation 9 May 2006.  
Web Services Addressing 1.0 - "SOAP Binding" W3C Recommendation 9 May 2006.  
Web Services Addressing 1.0 - "Metadata", W3C Recommendation 4 September 2007.
- [6] WS-Eventing "Web Services Eventing (WS-Eventing)" W3C Member Submission 15 March 2006.
- [7] WS-BaseNotification 1.3: "Web Services Base Notification 1.3" (WS-BaseNotification) OASIS Standard, 1 October 2006.

## 3.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Not applicable.

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## 4 Definitions

Consult ECMA-354 [1] for Application Session Services specific terms.

The present document refers to these Web services terms:

### 4.1 Service Requester

Web Service equivalent of Application in ECMA-354 [1]

### 4.2 Service Provider

Web Service equivalent of Server in ECMA-354 [1]

### 4.3 Namespaces

The present document uses these Ecma prefixes and namespaces:

- 1) **aps** ([http://www.ecma-international.org/standards/ecma-354/appl\\_session](http://www.ecma-international.org/standards/ecma-354/appl_session)): The present document imports all XML messages defined in ECMA-354 [1] from the **aps** namespace.
- 2) **wss** (<http://www.ecma-international.org/standards/ecma-366/ws-session/ed2>): The WSDL target namespace for the present document.
- 3) **gsk** ([http://www.ecma-international.org/standards/ecma-366/ws-session/ed2/generic\\_sink](http://www.ecma-international.org/standards/ecma-366/ws-session/ed2/generic_sink)): The target namespace of the wrapped sink WSDL.

The present document refers to these other prefixes and namespaces:

- 1) **wSDL** (<http://schemas.xmlsoap.org/wSDL>): This contains the W3C WSDL 1.1 schema [3].
- 2) **xs** (<http://www.w3.org/2001/XMLSchema>): This contains the W3C XML Schema definition [4].
- 3) **S** (<http://schemas.xmlsoap.org/wSDL/soap>): This contains the W3C SOAP bindings for WSDL 1.1 [3].
- 4) **wsa** (<http://www.w3.org/2005/08/addressing>): The namespace for WS-Addressing 1.0 [5]
- 5) **wse** (<http://schemas.xmlsoap.org/ws/2004/08/eventing>): The target namespace for WS-Eventing Web Service [6]
- 6) **wsnt** (<http://docs.oasis-open.org/wsn/b-2.xsd>): The target namespace for WS-BaseNotification 1.3 [7]



## 5 Service Provider WSDL Abstract Definitions

This clause specifies the abstract WSDL definitions to support the services specified in ECMA-354 [1].

```

<definitions
  xmlns="http://schemas.xmlsoap.org/wsdl/"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:aps="http://www.ecma-international.org/standards/ecma-354/appl_session"
  xmlns:wss="http://www.ecma-international.org/standards/ecma-366/ws-session/ed2"
  targetNamespace="http://www.ecma-international.org/standards/ecma-366/ws-session/ed2">
  <types>
    <xs:schema>
      <xs:import namespace="http://www.ecma-international.org/standards/ecma-354/appl_session"
        schemaLocation="http://www.ecma-international.org/standards/ecma-354/appl_session/start-application-session.xsd"/>
      <xs:import namespace="http://www.ecma-international.org/standards/ecma-354/appl_session"
        schemaLocation="http://www.ecma-international.org/standards/ecma-354/appl_session/stop-application-session.xsd"/>
      <xs:import namespace="http://www.ecma-international.org/standards/ecma-354/appl_session"
        schemaLocation="http://www.ecma-international.org/standards/ecma-354/appl_session/reset-application-session-timer.xsd"/>
      <xs:import namespace="http://www.ecma-international.org/standards/ecma-354/appl_session"
        schemaLocation="http://www.ecma-international.org/standards/ecma-354/appl_session/application-session-terminated.xsd"/>
    </xs:schema>
  </types>
  <message name="startApplicationSession">
    <part name="parameter" element="aps:StartApplicationSession"/>
  </message>
  <message name="startApplicationSessionPosResponse">
    <part name="parameter" element="aps:StartApplicationSessionPosResponse"/>
  </message>
  <message name="startApplicationSessionNegResponse">
    <part name="parameter" element="aps:StartApplicationSessionNegResponse"/>
  </message>
  <message name="stopApplicationSession">
    <part name="parameter" element="aps:StopApplicationSession"/>
  </message>
  <message name="stopApplicationSessionPosResponse">
    <part name="parameter" element="aps:StopApplicationSessionPosResponse"/>
  </message>
  <message name="stopApplicationSessionNegResponse">
    <part name="parameter" element="aps:StopApplicationSessionNegResponse"/>
  </message>
  <message name="resetApplicationSessionTimer">
    <part name="parameter" element="aps:ResetApplicationSessionTimer"/>
  </message>
  <message name="resetApplicationSessionTimerPosResponse">
    <part name="parameter" element="aps:ResetApplicationSessionTimerPosResponse"/>
  </message>
  <message name="resetApplicationSessionTimerNegResponse">
    <part name="parameter" element="aps:ResetApplicationSessionTimerNegResponse"/>
  </message>
  <message name="applicationSessionTerminated">
    <part name="parameter" element="aps:ApplicationSessionTerminated"/>
  </message>

```

```
<portType name="ApplicationSessionServicesPortType">
  <operation name="StartApplicationSessionOp">
    <input message="wss:startApplicationSession"/>
    <output message="wss:startApplicationSessionPosResponse"/>
    <fault name="StartFault" message="wss:startApplicationSessionNegResponse"/>
  </operation>
  <operation name="StopApplicationSessionOp">
    <input message="wss:stopApplicationSession"/>
    <output message="wss:stopApplicationSessionPosResponse"/>
    <fault name="StopFault" message="wss:stopApplicationSessionNegResponse"/>
  </operation>
  <operation name="ResetApplicationSessionTimerOp">
    <input message="wss:resetApplicationSessionTimer"/>
    <output message="wss:resetApplicationSessionTimerPosResponse"/>
    <fault name="ResetFault" message="wss:resetApplicationSessionTimerNegResponse"/>
  </operation>
  <operation name="ApplicationSessionTerminatedOp">
    <output message="wss:applicationSessionTerminated"/>
  </operation>
</portType>
</definitions>
```

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## 6 Service Provider WSDL SOAP Binding

This clause specifies the binding template of the abstract WSDL definitions in clause 5 with SOAP Messages without a specific transport protocol. Any SOAP binding to transport shall contain elements and attributes in this binding template.

```

<definitions
  xmlns="http://schemas.xmlsoap.org/wsdl/"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:aps="http://www.ecma-international.org/standards/ecma-354/appl_session"
  xmlns:wss="http://www.ecma-international.org/standards/ecma-354/ws-session/ed2"
  targetNamespace="http://www.ecma-international.org/standards/ecma-366/ws-session/ed2">
  <import namespace="http://www.ecma-international.org/standards/ecma-366/ws-session/ed2"
    location="http://www.ecma-international.org/standards/ecma-366/ws-session/ed2/ws-session-wsdl-abstract-
definitions.wsd" />
  <binding name="xs:nmtoken" type="wss:ApplicationSessionServicesPortType">
    <soap:binding style="document" transport="xs:anyURI"/>
    <operation name="StartApplicationSessionOp">
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="StartFault">
        <soap:fault name="StartFault" use="literal"/>
      </fault>
    </operation>
    <operation name="StopApplicationSessionOp">
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="StopFault">
        <soap:fault name="StopFault " use="literal"/>
      </fault>
    </operation>
    <operation name="ResetApplicationSessionTimerOp">
      <input>
        <soap:body use="literal"/>
      </input>
      <output>
        <soap:body use="literal"/>
      </output>
      <fault name="ResetFault">
        <soap:fault name="ResetFault " use="literal"/>
      </fault>
    </operation>
    <operation name="ApplicationSessionTerminatedOp">
      <output>
        <soap:body use="literal"/>
      </output>
    </operation>
  </binding>
</definitions>

```