

WS-Policy Interop Scenarios – Round 4

27 January 2008 14:17

Version 1.5

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Abstract

This document describes the scenarios and test cases for Round 4 of Interop tests of the WS-Policy 1.5 Framework and Attachment CR Draft specifications. This document includes test cases for attaching policies using UDDI, as described in the WS-Policy 1.5 Attachment CR Draft specification, test cases for application/wspolicy+xml media type, URI domain expression + WSDL 11 Element Identifiers, URI domain expression + IRI References for WSDL 20 Components, and negative test cases as applicable to Round 4.

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1. Introduction

This specification describes the scenarios and test cases round four of Interop testing of WS-Policy 1.5 Framework and Attachment Specifications. This document includes test cases for attaching policies to policy subjects using UDDI and for testing effective policy computations for policies attached via UDDI, as described in the WS-Policy 1.5 Attachment CR Draft specification, test cases for application/wspolicy+xml

media type, URI domain expression + WSDL 11 Element Identifiers, URI domain expression + IRI References for WSDL 20 Components, and negative test cases as applicable to Round 4.

Input and expected output or query messages for the test cases are included in this document where applicable and are also made available in Round4 directory associated.

2. Notation

2.1 XML Namespaces

Table 1 lists XML namespaces that are used in this specification. The choice of any namespace prefix is arbitrary and not semantically significant.

Table 1: Prefixes and XML Namespaces used in this specification.

Prefix	XML Namespace	Specification(s)
s11	http://schemas.xmlsoap.org/soap/envelope/	[SOAP 1.1]
s12	http://www.w3.org/2003/05/soap-envelope	[SOAP 1.2]
wSDL	http://schemas.xmlsoap.org/wSDL/	[WSDL 1.1]
wSDL20	http://www.w3.org/ns/wSDL	[WSDL 2.0 Core]
wsoap	http://www.w3.org/ns/wSDL/soap	[WSDL 2.0 Adjuncts]
wsoap12	http://schemas.xmlsoap.org/wSDL/soap12/	[WSDL 1.1, SOAP 1.2]
wsp	http://www.w3.org/ns/ws-policy	[WS-Policy, WS-PolicyAttachment]
sp	http://docs.oasis-open.org/ws-sx/ws-securitypolicy/200702	[WS-SecurityPolicy]
wsse	http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd	[WSS10]
wsu	http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd	[WSS10]
x	http://example.com/ws/2004/09/policy	This specification

2.2 Notational Conventions

The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 [[RFC 2119](#)].

3. WS-Policy Media Type Test Case

3.1 WS-Policy document retrieval

The media type test case is designed to test that the correct WS-Policy media type (application/wspolicy+xml) is used when a WS-Policy document is retrieved via HTTP

from a URL.

3.1.1 Test Case M1 - application/wspolicy+xml media type usage

- 1.Store test WS-Policy document on server.
- 2.Retrieve WS-Policy document at a given URL (e.g. http://[testmachine]/wsp-tests/policy.wspolicy) via HTTP.
- 3.Confirm via wire-trace that the media-type returned is indeed "application/wspolicy+xml".

The actual content of the document is immaterial to this test.

4. External Attachment Test cases for WSDL 1.1

These testcases are about understanding the <appliesTo> element. They are unit testcases, rather than interop testcases.

The testcases have two participants: a requestor (R) and a service end point (S). R sends a message to S containing:

- WSDL Definitions
- Policies
- Policy Attachment

S responds with a message returning the WSDL with the policies embedded within it.

The message formats follow the formats defined in the WS-Policy Scenarios document.

Test case R4W1-1:

S sends a message with the WSDL below, policies 1 and 3 and the policy attachments:

```
wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl11.binding (A11Binding)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#A11Endpoint"/>
</wsp:PolicyAttachment>
```

```
<wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl11.bindingOperation.input (A11Binding/Echo)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#AMessage"/>
</wsp:PolicyAttachment>
```

```

</wsp:PolicyAttachment>

<wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl11.bindingOperation.output (A11Binding/Echo)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#AMessage"/>
</wsp:PolicyAttachment>

```

Test case R4W1-2:

S sends a message with the WSDL below, policies 2 and 3 and the policy attachments below:

```

wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl11.binding (A12Binding)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#A12Endpoint"/>
</wsp:PolicyAttachment>

<wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl11.bindingOperation.input (A12Binding/Echo)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#AMessage"/>
</wsp:PolicyAttachment>

<wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl11.bindingOperation.output (A12Binding/Echo)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#AMessage"/>
</wsp:PolicyAttachment>

```

WSDL 1.1 Definitions for Policy Attachment Testcases

```

<wsdl:definitions xmlns:tns="http://example.com/ws/2004/09/policy"
  xmlns:sp="http://docs.oasis-open.org/ws-sx/ws-securitypolicy/200702"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:wsoap12="http://schemas.xmlsoap.org/wsdl/soap12/"
  xmlns:wsp="http://www.w3.org/ns/ws-policy"
  xmlns:wSDL="http://schemas.xmlsoap.org/wsdl/"
  xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"

```

```

targetNamespace="http://example.com/ws/2004/09/policy">
  <wsdl:types>
    <xs:schema targetNamespace="http://example.com/ws/2004/09/policy"
blockDefault="#all"
      elementFormDefault="qualified">
      <xs:element name="EchoRequest" type="xs:string"/>
      <xs:element name="EchoResponse" type="xs:string"/>
    </xs:schema>
  </wsdl:types>
  <wsdl:message name="EchoInMessage">
    <wsdl:part name="Body" element="tns:EchoRequest"/>
  </wsdl:message>
  <wsdl:message name="EchoOutMessage">
    <wsdl:part name="Body" element="tns:EchoResponse"/>
  </wsdl:message>
  <wsdl:portType name="Test">
    <wsdl:operation name="Echo">
      <wsdl:input message="tns:EchoInMessage"/>
      <wsdl:output message="tns:EchoOutMessage"/>
    </wsdl:operation>
  </wsdl:portType>
  <wsdl:binding name="A11Binding" type="tns:Test">
    <soap12:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="Echo">
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
  </wsdl:binding>
  <wsdl:binding name="A12Binding" type="tns:Test">
    <soap12:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="Echo">
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
  </wsdl:binding>

```

```
</wsdl:operation>
</wsdl:binding>
</wsdl:definitions>
```

Policy 1 for External Attachment Usecase

```
<wsp:Policy wsu:Id="AllEndpoint"
  xmlns:wsp="http://www.w3.org/ns/ws-policy"
  xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"
  xmlns:sp="http://docs.oasis-open.org/ws-sx/ws-securitypolicy/200702">
  <!-- Asymmetric Policy A11 - X509 with mutual authentication and AES
256 -->
  <sp:AsymmetricBinding>
    <wsp:Policy>
      <sp:RecipientToken>
        <wsp:Policy>
          <sp:X509Token sp:IncludeToken="http://docs.oasis-open.org/ws-
sx/ws-securitypolicy/200702/IncludeToken/Never" >
            <wsp:Policy>
              <sp:WssX509V3Token10 />
            </wsp:Policy>
          </sp:X509Token>
        </wsp:Policy>
      </sp:RecipientToken>
      <sp:InitiatorToken>
        <wsp:Policy>
          <sp:X509Token sp:IncludeToken="http://docs.oasis-open.org/ws-
sx/ws-securitypolicy/200702/IncludeToken/AlwaysToRecipient" >
            <wsp:Policy>
              <sp:WssX509V3Token10 />
            </wsp:Policy>
          </sp:X509Token>
        </wsp:Policy>
      </sp:InitiatorToken>
      <sp:AlgorithmSuite>
        <wsp:Policy>
          <sp:Basic256Rsa15 />
        </wsp:Policy>
      </sp:AlgorithmSuite>
      <sp:Layout>
        <wsp:Policy>
          <sp:Lax />
        </wsp:Policy>
      </sp:Layout>
      <sp:IncludeTimestamp />
      <sp:OnlySignEntireHeadersAndBody />
    </wsp:Policy>
  </sp:AsymmetricBinding>
  <sp:Wss10>
    <wsp:Policy>
      <sp:MustSupportRefKeyIdentifier />
      <sp:MustSupportRefIssuerSerial />
    </wsp:Policy>
  </sp:Wss10>
```

```
</wsp:Policy>
```

Policy 2 for External Attachment Usecase

```
<wsp:Policy wsu:Id="A12Endpoint"
  xmlns:wsp="http://www.w3.org/ns/ws-policy"
  xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"
  xmlns:sp="http://docs.oasis-open.org/ws-sx/ws-securitypolicy/200702">
  <!-- Asymmetric Policy A12 - X509 with mutual authentication and 3DES
-->
  <sp:AsymmetricBinding>
    <wsp:Policy>
      <sp:RecipientToken>
        <wsp:Policy>
          <sp:X509Token sp:IncludeToken="http://docs.oasis-open.org/ws-
sx/ws-securitypolicy/200702/IncludeToken/Never" >
            <wsp:Policy>
              <sp:WssX509V3Token10 />
            </wsp:Policy>
          </sp:X509Token>
        </wsp:Policy>
      </sp:RecipientToken>
      <sp:InitiatorToken>
        <wsp:Policy>
          <sp:X509Token sp:IncludeToken="http://docs.oasis-open.org/ws-
sx/ws-securitypolicy/200702/IncludeToken/AlwaysToRecipient" >
            <wsp:Policy>
              <sp:WssX509V3Token10 />
            </wsp:Policy>
          </sp:X509Token>
        </wsp:Policy>
      </sp:InitiatorToken>
      <sp:AlgorithmSuite>
        <wsp:Policy>
          <sp:TripleDesRsa15 />
        </wsp:Policy>
      </sp:AlgorithmSuite>
      <sp:Layout>
        <wsp:Policy>
          <sp:Lax />
        </wsp:Policy>
      </sp:Layout>
      <sp:IncludeTimestamp />
      <sp:OnlySignEntireHeadersAndBody />
    </wsp:Policy>
  </sp:AsymmetricBinding>
  <sp:Wss10>
    <wsp:Policy>
      <sp:MustSupportRefKeyIdentifier />
      <sp:MustSupportRefIssuerSerial />
    </wsp:Policy>
  </sp:Wss10>
</wsp:Policy>
```


Policy 3 for External Attachment Usecase

```
<wsp:Policy wsu:Id="AMessage"
  xmlns:wsp="http://www.w3.org/ns/ws-policy"
  xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"
  xmlns:sp="http://docs.oasis-open.org/ws-sx/ws-securitypolicy/200702">
  <wsp:ExactlyOne>
    <wsp:All>
      <sp:SignedParts>
        <sp:Body />
      </sp:SignedParts>
      <sp:EncryptedParts>
        <sp:Body />
      </sp:EncryptedParts>
    </wsp:All>
  </wsp:ExactlyOne>
</wsp:Policy>
```

Correct Response for R4W1-1: WSDL 1.1 Definitions with Embedded Policies

```
<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:tns="http://example.com/ws/2004/09/policy"
  xmlns:sp="http://schemas.xmlsoap.org/ws/2005/07/securitypolicy"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:wsa="http://schemas.xmlsoap.org/ws/2004/08/addressing"
  xmlns:wsoap12="http://schemas.xmlsoap.org/wsdl/soap12/"
  xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy"
  xmlns:wSDL="http://schemas.xmlsoap.org/wsdl/" xmlns:wsu="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
  targetNamespace="http://example.com/ws/2004/09/policy">
  <wsp:Policy wsu:Id="A11Endpoint" >
    <!-- Asymmetric Policy A11 - X509 with mutual authentication and
AES 256 -->
    <sp:AsymmetricBinding>
      <wsp:Policy>
        <sp:RecipientToken>
          <wsp:Policy>
            <sp:X509Token
sp:IncludeToken="http://docs.oasis-open.org/ws-sx/ws-
securitypolicy/200702/IncludeToken/Never" >
              <wsp:Policy>
                <sp:WssX509V3Token10 />
              </wsp:Policy>
            </sp:X509Token>
          </wsp:Policy>
        </sp:RecipientToken>
        <sp:InitiatorToken>
          <wsp:Policy>
```

```

                <sp:X509Token
sp:IncludeToken="http://docs.oasis-open.org/ws-sx/ws-
securitypolicy/200702/IncludeToken/AlwaysToRecipient" >
                    <wsp:Policy>
                        <sp:WssX509V3Token10 />
                    </wsp:Policy>
                </sp:X509Token>
            </wsp:Policy>
        </sp:InitiatorToken>
        <sp:AlgorithmSuite>
            <wsp:Policy>
                <sp:Basic256Rsa15 />
            </wsp:Policy>
        </sp:AlgorithmSuite>
        <sp:Layout>
            <wsp:Policy>
                <sp:Lax />
            </wsp:Policy>
        </sp:Layout>
        <sp:IncludeTimestamp />
        <sp:OnlySignEntireHeadersAndBody />
    </wsp:Policy>
</sp:AsymmetricBinding>
<sp:Wss10>
    <wsp:Policy>
        <sp:MustSupportRefKeyIdentifier />
        <sp:MustSupportRefIssuerSerial />
    </wsp:Policy>
</sp:Wss10>
</wsp:Policy>
<wsp:Policy wsu:Id="AMessage" >
    <wsp:ExactlyOne>
        <wsp:All>
            <sp:SignedParts>
                <sp:Body />
            </sp:SignedParts>
            <sp:EncryptedParts>
                <sp:Body />
            </sp:EncryptedParts>
        </wsp:All>
    </wsp:ExactlyOne>
</wsp:Policy>
<wsdl:types>

```

```

        <xs:schema
targetNamespace="http://example.com/ws/2004/09/policy" blockDefault="#all"
elementFormDefault="qualified">
            <xs:element name="EchoRequest" type="xs:string"/>
            <xs:element name="EchoResponse" type="xs:string"/>
        </xs:schema>
    </wsdl:types>
    <wsdl:message name="EchoInMessage">
        <wsdl:part name="Body" element="tns:EchoRequest"/>
    </wsdl:message>
    <wsdl:message name="EchoOutMessage">
        <wsdl:part name="Body" element="tns:EchoResponse"/>
    </wsdl:message>
    <wsdl:portType name="Test">
        <wsdl:operation name="Echo">
            <wsdl:input message="tns:EchoInMessage"/>
            <wsdl:output message="tns:EchoOutMessage"/>
        </wsdl:operation>
    </wsdl:portType>

    <wsdl:binding name="A11Binding" type="tns:Test">
        <wsoap12:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http"/>
        <wsp:PolicyReference URI="#A11Endpoint" wsdl:required="true"/>
        <wsdl:operation name="Echo">
            <wsdl:input>
                <wsoap12:body use="literal"/>
                <wsp:PolicyReference URI="#AMessage"
wsdl:required="true"/>
            </wsdl:input>
            <wsdl:output>
                <wsoap12:body use="literal"/>
                <wsp:PolicyReference URI="#AMessage"
wsdl:required="true"/>
            </wsdl:output>
        </wsdl:operation>
    </wsdl:binding>
    <wsdl:binding name="A12Binding" type="tns:Test">
        <wsoap12:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http"/>
        <wsdl:operation name="Echo">
            <wsdl:input>
                <wsoap12:body use="literal"/>
            </wsdl:input>

```

```

        <wsdl:output>
            <wsoap12:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
</wsdl:definitions>

```

Correct Response for Testcase R4W1-2: WSDL 1.1 Definitions with Embedded Policies

```

<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:tns="http://example.com/ws/2004/09/policy"
xmlns:sp="http://schemas.xmlsoap.org/ws/2005/07/securitypolicy"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:wsa="http://schemas.xmlsoap.org/ws/2004/08/addressing"
xmlns:wsoap12="http://schemas.xmlsoap.org/wsdl/soap12/"
xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy"
xmlns:wSDL="http://schemas.xmlsoap.org/wsdl/" xmlns:wsu="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
targetNamespace="http://example.com/ws/2004/09/policy">
    <wsp:Policy wsu:Id="A12Endpoint" >
        <!-- Asymmetric Policy A12 - X509 with mutual authentication and
3DES -->
        <sp:AsymmetricBinding>
            <wsp:Policy>
                <sp:RecipientToken>
                    <wsp:Policy>
                        <sp:X509Token
sp:IncludeToken="http://docs.oasis-open.org/ws-sx/ws-
securitypolicy/200702/IncludeToken/Never" >
                            <wsp:Policy>
                                <sp:WssX509V3Token10 />
                            </wsp:Policy>
                        </sp:X509Token>
                    </wsp:Policy>
                </sp:RecipientToken>
                <sp:InitiatorToken>
                    <wsp:Policy>
                        <sp:X509Token
sp:IncludeToken="http://docs.oasis-open.org/ws-sx/ws-
securitypolicy/200702/IncludeToken/AlwaysToRecipient" >
                            <wsp:Policy>
                                <sp:WssX509V3Token10 />
                            </wsp:Policy>
                        </sp:X509Token>
                    </wsp:Policy>
                </sp:InitiatorToken>
            </wsp:Policy>
        </sp:AsymmetricBinding>
    </wsp:Policy>

```

```

        </sp:InitiatorToken>
        <sp:AlgorithmSuite>
            <wsp:Policy>
                <sp:TripleDesRsa15 />
            </wsp:Policy>
        </sp:AlgorithmSuite>
        <sp:Layout>
            <wsp:Policy>
                <sp:Lax />
            </wsp:Policy>
        </sp:Layout>
        <sp:IncludeTimestamp />
        <sp:OnlySignEntireHeadersAndBody />
    </wsp:Policy>
</sp:AsymmetricBinding>
<sp:Wss10>
    <wsp:Policy>
        <sp:MustSupportRefKeyIdentifier />
        <sp:MustSupportRefIssuerSerial />
    </wsp:Policy>
</sp:Wss10>
</wsp:Policy>
<wsp:Policy wsu:Id="AMessage" >
    <wsp:ExactlyOne>
        <wsp:All>
            <sp:SignedParts>
                <sp:Body />
            </sp:SignedParts>
            <sp:EncryptedParts>
                <sp:Body />
            </sp:EncryptedParts>
        </wsp:All>
    </wsp:ExactlyOne>
</wsp:Policy>
<wsdl:types>
    <xs:schema
targetNamespace="http://example.com/ws/2004/09/policy" blockDefault="#all"
elementFormDefault="qualified">
        <xs:element name="EchoRequest" type="xs:string"/>
        <xs:element name="EchoResponse" type="xs:string"/>
    </xs:schema>
</wsdl:types>
<wsdl:message name="EchoInMessage">

```

```

        <wsdl:part name="Body" element="tns:EchoRequest"/>
    </wsdl:message>
    <wsdl:message name="EchoOutMessage">
        <wsdl:part name="Body" element="tns:EchoResponse"/>
    </wsdl:message>
    <wsdl:portType name="Test">
        <wsdl:operation name="Echo">
            <wsdl:input message="tns:EchoInMessage"/>
            <wsdl:output message="tns:EchoOutMessage"/>
        </wsdl:operation>
    </wsdl:portType>

    <wsdl:binding name="A11Binding" type="tns:Test">
        <wsoap12:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http"/>
        <wsdl:operation name="Echo">
            <wsdl:input>
                <wsoap12:body use="literal"/>
            </wsdl:input>
            <wsdl:output>
                <wsoap12:body use="literal"/>
            </wsdl:output>
        </wsdl:operation>
    </wsdl:binding>
    <wsdl:binding name="A12Binding" type="tns:Test">
        <wsoap12:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http"/>
        <wsp:PolicyReference URI="#A12Endpoint" wsdl:required="true"/>
        <wsdl:operation name="Echo">
            <wsdl:input>
                <wsoap12:body use="literal"/>
                <wsp:PolicyReference URI="#AMessage"
wsdl:required="true"/>
            </wsdl:input>
            <wsdl:output>
                <wsoap12:body use="literal"/>
                <wsp:PolicyReference URI="#AMessage"
wsdl:required="true"/>
            </wsdl:output>
        </wsdl:operation>
    </wsdl:binding>
</wsdl:definitions>

```

5. External Attachment Testcases for WSDL 2.0

These testcases are about understanding the <appliesTo> element. They are unit testcases, rather than interop testcases.

The testcases have two participants: a requestor (R) and a service end point (S). R sends a message to S containing:

- WSDL Definitions
- Policies
- Policy Attachment

S responds with a message returning the WSDL with the policies embedded within it.

The message formats follow the formats defined in the WS-Policy Scenarios document.

Test case R4W2-1:

S sends a message with the WSDL below, policies 1 and 3 and the policy attachments:

```
<wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl.binding (A11Binding)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#A11Endpoint"/>
</wsp:PolicyAttachment>
```

```
<wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl.bindingMessageReference (A11Binding/Echo/In)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#AMessage"/>
</wsp:PolicyAttachment>
```

```
<wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl.bindingMessageReference (A11Binding/Echo/Out)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#AMessage"/>
</wsp:PolicyAttachment>
```

Test case R4W2-2:

S sends a message with the WSDL below, policies 2 and 3 and the policy attachments:

```
<wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl.binding (A12Binding)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#A12Endpoint"/>
</wsp:PolicyAttachment>

<wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl.bindingMessageReference (A12Binding/Echo/In)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#AMessage"/>
</wsp:PolicyAttachment>

<wsp:PolicyAttachment xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:AppliesTo>
    <wsp:URI>
      #wsdl.bindingMessageReference (A12Binding/Echo/Out)
    </wsp:URI>
  </wsp:AppliesTo>
  <wsp:PolicyReference URI="#AMessage"/>
</wsp:PolicyAttachment>
```

WSDL 2.0 Definitions for Policy Attachment Testcases

```
<?xml version="1.0" encoding="UTF-8"?>

<wsdl20:description
  targetNamespace="http://example.com/ws/2004/09/policy"
  xmlns:tns="http://example.com/ws/2004/09/policy"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:wsdl20="http://www.w3.org/ns/wsdl"
  xmlns:wsoap="http://www.w3.org/ns/wsdl/soap"
  xmlns:wsp="http://www.w3.org/ns/ws-policy"
  xmlns:wssu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"
  xmlns:sp="http://docs.oasis-open.org/ws-sx/ws-
securitypolicy/200702"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

  <wsdl20:types>
    <xs:schema
  targetNamespace="http://example.com/ws/2004/09/policy"
  blockDefault="#all"
```



```

        elementFormDefault="qualified">
        <xs:element name="EchoRequest" type="xs:string"/>
        <xs:element name="EchoResponse" type="xs:string"/>
    </xs:schema>
</wsdl20:types>

<wsdl20:binding name="A11Binding" interface="tns:Test"
    type="http://www.w3.org/ns/wsdl/soap"
    wsoap:protocol="http://www.w3.org/2003/05/soap/bindings/HTTP/">
    <wsdl20:operation ref="tns:Echo"
wsoap:action="http://example.com/ws/2004/09/policy/Test/EchoRequest">
        <wsdl20:input/>
        <wsdl20:output/>
    </wsdl20:operation>
</wsdl20:binding>

<wsdl20:binding name="A12Binding" interface="tns:Test"
    type="http://www.w3.org/ns/wsdl/soap"
    wsoap:protocol="http://www.w3.org/2003/05/soap/bindings/HTTP/">
    <wsdl20:operation ref="tns:Echo"
wsoap:action="http://example.com/ws/2004/09/policy/Test/EchoRequest">
        <wsdl20:input/>
        <wsdl20:output/>
    </wsdl20:operation>
</wsdl20:binding>
</wsdl20:description>

```

Policy 1 for External Attachment Usecase

```

<wsp:Policy wsu:Id="A11Endpoint"
    xmlns:wsp="http://www.w3.org/ns/ws-policy"
    xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"
    xmlns:sp="http://docs.oasis-open.org/ws-sx/ws-securitypolicy/200702">
    <!-- Asymmetric Policy A11 - X509 with mutual authentication and AES
256 -->
    <sp:AsymmetricBinding>
        <wsp:Policy>
            <sp:RecipientToken>
                <wsp:Policy>
                    <sp:X509Token sp:IncludeToken="http://docs.oasis-open.org/ws-
sx/ws-securitypolicy/200702/IncludeToken/Never" >
                        <wsp:Policy>
                            <sp:WssX509V3Token10 />
                        </wsp:Policy>
                    </sp:X509Token>
                </wsp:Policy>
            </sp:RecipientToken>
            <sp:InitiatorToken>
                <wsp:Policy>
                    <sp:X509Token sp:IncludeToken="http://docs.oasis-open.org/ws-
sx/ws-securitypolicy/200702/IncludeToken/AlwaysToRecipient" >
                        <wsp:Policy>
                            <sp:WssX509V3Token10 />
                        </wsp:Policy>
                    </sp:X509Token>
                </wsp:Policy>
            </sp:InitiatorToken>
        </wsp:Policy>
    </sp:AsymmetricBinding>

```

```

        </wsp:Policy>
        </sp:X509Token>
    </wsp:Policy>
</sp:InitiatorToken>
<sp:AlgorithmSuite>
    <wsp:Policy>
        <sp:Basic256Rsa15 />
    </wsp:Policy>
</sp:AlgorithmSuite>
<sp:Layout>
    <wsp:Policy>
        <sp:Lax />
    </wsp:Policy>
</sp:Layout>
<sp:IncludeTimestamp />
<sp:OnlySignEntireHeadersAndBody />
</wsp:Policy>
</sp:AsymmetricBinding>
<sp:Wss10>
    <wsp:Policy>
        <sp:MustSupportRefKeyIdentifier />
        <sp:MustSupportRefIssuerSerial />
    </wsp:Policy>
</sp:Wss10>
</wsp:Policy>

```

Policy 2 for External Attachment UseCase

```

<wsp:Policy wsu:Id="A12Endpoint"
  xmlns:wsp="http://www.w3.org/ns/ws-policy"
  xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"
  xmlns:sp="http://docs.oasis-open.org/ws-sx/ws-securitypolicy/200702">
  <!-- Asymmetric Policy A12 - X509 with mutual authentication and 3DES
-->
  <sp:AsymmetricBinding>
    <wsp:Policy>
      <sp:RecipientToken>
        <wsp:Policy>
          <sp:X509Token sp:IncludeToken="http://docs.oasis-open.org/ws-
sx/ws-securitypolicy/200702/IncludeToken/Never" >
            <wsp:Policy>
              <sp:WssX509V3Token10 />
            </wsp:Policy>
          </sp:X509Token>
        </wsp:Policy>
      </sp:RecipientToken>
      <sp:InitiatorToken>
        <wsp:Policy>
          <sp:X509Token sp:IncludeToken="http://docs.oasis-open.org/ws-
sx/ws-securitypolicy/200702/IncludeToken/AlwaysToRecipient" >
            <wsp:Policy>
              <sp:WssX509V3Token10 />
            </wsp:Policy>
          </sp:X509Token>
        </wsp:Policy>
      </sp:InitiatorToken>
    </wsp:Policy>
  </sp:AsymmetricBinding>

```

```

    <sp:AlgorithmSuite>
      <wsp:Policy>
        <sp:TripleDesRsa15 />
      </wsp:Policy>
    </sp:AlgorithmSuite>
    <sp:Layout>
      <wsp:Policy>
        <sp:Lax />
      </wsp:Policy>
    </sp:Layout>
    <sp:IncludeTimestamp />
    <sp:OnlySignEntireHeadersAndBody />
  </wsp:Policy>
</sp:AsymmetricBinding>
<sp:Wss10>
  <wsp:Policy>
    <sp:MustSupportRefKeyIdentifier />
    <sp:MustSupportRefIssuerSerial />
  </wsp:Policy>
</sp:Wss10>
</wsp:Policy>

```

Policy 3 for External Attachment UseCase

```

<wsp:Policy wsu:Id="AMessage"
  xmlns:wsp="http://www.w3.org/ns/ws-policy"
  xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"
  xmlns:sp="http://docs.oasis-open.org/ws-sx/ws-securitypolicy/200702">
  <wsp:ExactlyOne>
    <wsp>All>
      <sp:SignedParts>
        <sp:Body />
      </sp:SignedParts>
      <sp:EncryptedParts>
        <sp:Body />
      </sp:EncryptedParts>
    </wsp>All>
  </wsp:ExactlyOne>
</wsp:Policy>

```

Correct Response for R4W2-1: WSDL 2.0 Definitions with Embedded Policies

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<?xml version="1.0" encoding="UTF-8"?>
```

```

<wsdl20:description
targetNamespace="http://example.com/ws/2004/09/policy"
  xmlns:tns="http://example.com/ws/2004/09/policy"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:wsdl20="http://www.w3.org/ns/wsdl"
  xmlns:wsoap="http://www.w3.org/ns/wsdl/soap"
  xmlns:wsp="http://www.w3.org/ns/ws-policy"
  xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"

```

```

xmlns:sp="http://docs.oasis-open.org/ws-sx/ws-
securitypolicy/200702"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

<wsp:Policy wsu:Id="A11Endpoint">
  <!-- Asymmetric Policy A11 - X509 with mutual authentication
and AES 256 -->
  <sp:AsymmetricBinding>
    <wsp:Policy>
      <sp:RecipientToken>
        <wsp:Policy>
          <sp:X509Token
            sp:IncludeToken="http://docs.oasis-
open.org/ws-sx/ws-securitypolicy/200702/IncludeToken/Never">
            <wsp:Policy>
              <sp:WssX509V3Token10/>
            </wsp:Policy>
          </sp:X509Token>
        </wsp:Policy>
      </sp:RecipientToken>
      <sp:InitiatorToken>
        <wsp:Policy>
          <sp:X509Token
            sp:IncludeToken="http://docs.oasis-
open.org/ws-sx/ws-
securitypolicy/200702/IncludeToken/AlwaysToRecipient">
            <wsp:Policy>
              <sp:WssX509V3Token10/>
            </wsp:Policy>
          </sp:X509Token>
        </wsp:Policy>
      </sp:InitiatorToken>
      <sp:AlgorithmSuite>
        <wsp:Policy>
          <sp:Basic256Rsa15/>
        </wsp:Policy>
      </sp:AlgorithmSuite>
      <sp:Layout>
        <wsp:Policy>
          <sp:Lax/>
        </wsp:Policy>
      </sp:Layout>
      <sp:IncludeTimestamp/>
      <sp:OnlySignEntireHeadersAndBody/>
    </wsp:Policy>
  </sp:AsymmetricBinding>
  <sp:Wss10>
    <wsp:Policy>
      <sp:MustSupportRefKeyIdentifier/>
      <sp:MustSupportRefIssuerSerial/>
    </wsp:Policy>
  </sp:Wss10>
</wsp:Policy>
<wsp:Policy wsu:Id="AMessage">
  <sp:SignedParts>
    <sp:Body/>
  </sp:SignedParts>

```

```

        <sp:EncryptedParts>
            <sp:Body/>
        </sp:EncryptedParts>
    </wsp:Policy>

    <wsdl20:types>
        <xs:schema
targetNamespace="http://example.com/ws/2004/09/policy"
blockDefault="#all"
        elementFormDefault="qualified">
            <xs:element name="EchoRequest" type="xs:string"/>
            <xs:element name="EchoResponse" type="xs:string"/>
        </xs:schema>
    </wsdl20:types>

    <wsdl20:binding name="A11Binding" interface="tns:Test"
        type="http://www.w3.org/ns/wsdl/soap"
        wsoap:protocol="http://www.w3.org/2003/05/soap/bindings/HTTP/">
        <wsp:PolicyReference URI="#AllEndpoint"
wsdl20:required="true"/>
        <wsdl20:operation ref="tns:Echo"
wsoap:action="http://example.com/ws/2004/09/policy/Test/EchoRequest">
            <wsdl20:input>
                <wsp:PolicyReference URI="#AMessage"
wsdl20:required="true"/>
            </wsdl20:input>
            <wsdl20:output>
                <wsp:PolicyReference URI="#AMessage"
wsdl20:required="true"/>
            </wsdl20:output>
        </wsdl20:operation>
    </wsdl20:binding>

    <wsdl20:binding name="A12Binding" interface="tns:Test"
        type="http://www.w3.org/ns/wsdl/soap"
        wsoap:protocol="http://www.w3.org/2003/05/soap/bindings/HTTP/">
        <wsdl20:operation ref="tns:Echo"
wsoap:action="http://example.com/ws/2004/09/policy/Test/EchoRequest">
            <wsdl20:input/>
            <wsdl20:output/>
        </wsdl20:operation>
    </wsdl20:binding>
</wsdl20:description>

```

Correct Response for Testcase R4W2-2: WSDL 3.0 Definitions with Embedded Policies

```

<?xml version="1.0" encoding="UTF-8"?>

<wsdl20:description
targetNamespace="http://example.com/ws/2004/09/policy"
    xmlns:tns="http://example.com/ws/2004/09/policy"
    xmlns:xs="http://www.w3.org/2001/XMLSchema"

```

```

    xmlns:wsd120="http://www.w3.org/ns/wsd1"
    xmlns:wsoap="http://www.w3.org/ns/wsd1/soap"
    xmlns:wsp="http://www.w3.org/ns/ws-policy"
    xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"
    xmlns:sp="http://docs.oasis-open.org/ws-sx/ws-
securitypolicy/200702"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

<wsp:Policy wsu:Id="A12Endpoint">
<!-- Asymmetric Policy A12 - X509 with mutual authentication and 3DES -
->
    <sp:AsymmetricBinding>
        <wsp:Policy>
            <sp:RecipientToken>
                <wsp:Policy>
                    <sp:X509Token
                        sp:IncludeToken="http://docs.oasis-
open.org/ws-sx/ws-securitypolicy/200702/IncludeToken/Never">
                        <wsp:Policy>
                            <sp:WssX509V3Token10/>
                        </wsp:Policy>
                    </sp:X509Token>
                </wsp:Policy>
            </sp:RecipientToken>
            <sp:InitiatorToken>
                <wsp:Policy>
                    <sp:X509Token
                        sp:IncludeToken="http://docs.oasis-
open.org/ws-sx/ws-securitypolicy/200702/AlwaysToRecipient">
                        <wsp:Policy>
                            <sp:WssX509V3Token10/>
                        </wsp:Policy>
                    </sp:X509Token>
                </wsp:Policy>
            </sp:InitiatorToken>
            <sp:AlgorithmSuite>
                <wsp:Policy>
                    <sp:TripleDesRsa15/>
                </wsp:Policy>
            </sp:AlgorithmSuite>
            <sp:Layout>
                <wsp:Policy>
                    <sp:Lax/>
                </wsp:Policy>
            </sp:Layout>
            <sp:IncludeTimestamp/>
            <sp:OnlySignEntireHeadersAndBody/>
        </wsp:Policy>
    </sp:AsymmetricBinding>
    <sp:Wss10>
        <wsp:Policy>
            <sp:MustSupportRefKeyIdentifier/>
            <sp:MustSupportRefIssuerSerial/>
        </wsp:Policy>
    </sp:Wss10>
</wsp:Policy>

```

```

<wsp:Policy wsu:Id="AMessage">
  <sp:SignedParts>
    <sp:Body/>
  </sp:SignedParts>
  <sp:EncryptedParts>
    <sp:Body/>
  </sp:EncryptedParts>
</wsp:Policy>

<wsdl20:types>
  <xs:schema
targetNamespace="http://example.com/ws/2004/09/policy"
blockDefault="#all"
  elementFormDefault="qualified">
    <xs:element name="EchoRequest" type="xs:string"/>
    <xs:element name="EchoResponse" type="xs:string"/>
  </xs:schema>
</wsdl20:types>

<wsdl20:binding name="A11Binding" interface="tns:Test"
  type="http://www.w3.org/ns/wsdl/soap"
  wsoap:protocol="http://www.w3.org/2003/05/soap/bindings/HTTP/">
  <wsdl20:operation ref="tns:Echo"
wsoap:action="http://example.com/ws/2004/09/policy/Test/EchoRequest">
    <wsdl20:input/>
    <wsdl20:output/>
  </wsdl20:operation>
</wsdl20:binding>

<wsdl20:binding name="A12Binding" interface="tns:Test"
  type="http://www.w3.org/ns/wsdl/soap"
  wsoap:protocol="http://www.w3.org/2003/05/soap/bindings/HTTP/">
  <wsp:PolicyReference URI="#A12Endpoint"
wsdl20:required="true"/>
  <wsdl20:operation ref="tns:Echo"
wsoap:action="http://example.com/ws/2004/09/policy/Test/EchoRequest">
    <wsdl20:input>
      <wsp:PolicyReference URI="#AMessage"
wsdl20:required="true"/>
    </wsdl20:input>
    <wsdl20:output>
      <wsp:PolicyReference URI="#AMessage"
wsdl20:required="true"/>
    </wsdl20:output>
  </wsdl20:operation>
</wsdl20:binding>
</wsdl20:description>

```

6. UDDI Scenarios and Test Cases

The UDDI test cases are defined for both UDDI version 2 and UDDI version 3. Additionally the test cases fall in two different categories:

1. Tests that exercise attaching policies using UDDI

These tests employ the UDDI protocol messages to save and retrieve data from the UDDI registry. UDDI protocol messages are used to "save" tModel, businessEntity, businessService and bindingTemplate definitions with Policy attached to them as per the WS-Policy 1.5 Attachment specification, section 6 Attaching Policies Using UDDI. UDDI "find" protocol messages are used to retrieve the tModel, businessEntity, businessService and bindingTemplate definitions that were saved in the preceding step, to demonstrate that Policy was attached to them as per the WS-Policy 1.5 Attachment specification.

For these tests sample "save" and "find" protocol messages are provided. Implementers are free to change them to suit their implementation without impacting the UDDI Policy Attachment aspect, as defined in the WS-Policy 1.5 Attachment specification.

2. Tests that compute the effective policy attached via UDDI

For the second class of tests the input and expected output messages are provided. The tests for effective policy do not require interaction with the UDDI registry. Implementers may wrap these tests as JUnit / NUnit / VSTS implementations, Web service endpoints, command line executables, user interface code, etc.

6.1 Attaching Policies using UDDI v2

These test cases exercise attaching policies using UDDI v2, as defined in section 6 of the WS-Policy 1.5 – Attachment W3C specification CR Draft at:

<http://dev.w3.org/cvsweb/~checkout~/2006/ws/policy/ws-policy-attachment.html?content-type=text/html;%20charset=utf-8>

Specifically sections 6.2 and 6.3 and policy attachment aspects of section 6.1 are addressed by the following test cases. The UDDI tModels and the associated tModel keys defined in Appendix B UDDI "tModel Definitions" of the WS-Policy 1.5 Attachment specification CR Draft, are used by these test cases.

6.1.1 Test Cases for attaching remote Policy using UDDI v2

The following test cases address attaching remote policy references to UDDI entities, in a UDDI v2 compliant registry.

6.1.1.1 Test Case U2R1

Attach a remote Policy reference to businessEntity (UDDI v2)

This test case publishes an organization (businessEntity) with a remote policy reference attached. Shown below is a sample UDDI v2 save_business() protocol message, that attaches the policy at <http://www.example.com/mybusiness/policy> to the business entity.

```
<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_business xmlns="urn:uddi-org:api_v2" generic="2.0">
<!-- AUTHTOKEN-->
  <businessEntity businessKey="" authorizedName="admin">
    <name xml:lang="en">My Consumer Org</name>
```



```

<description xml:lang="en">My Consumer Organization</description>
<contacts>
  <contact>
    <personName>Krazy Rudy</personName>
    <phone useType="OFFICE">1111-111-1111111-111</phone>
    <email>krudy@cons.com</email>
    <address tModelKey="uuid:48eb2518-c1bd-354f-92c9-21a53b0ff2b1">
      <addressLine keyName="StreetPrefix1"
keyValue="170">13thcross</addressLine>
      <addressLine keyName="Street"
keyValue="60">14thstreet</addressLine>
      <addressLine keyName="City"
keyValue="40">NewYork</addressLine>
      <addressLine keyName="State or Province"
keyValue="30">Washington</addressLine>
      <addressLine keyName="Country" keyValue="20">United
States</addressLine>
      <addressLine keyName="CityPostalCode"
keyValue="120">11111</addressLine>
    </address>
  </contact>
</contacts>
<categoryBag>
  <keyedReference tModelKey="uuid:2ea5f9d3-9b84-39f9-b334-
e9d5f535b4c1" keyName="Policy Expression for an organization"
keyValue="http://www.example.com/mybusiness/policy"/>
</categoryBag>
</businessEntity>
</save_business>
</soap-env:Body>
</soap-env:Envelope>

```

Retrieve the businessEntity published above, and make sure the remote policy reference is attached.

Specifically utilize the remote policy reference to retrieve the business entity details.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<find_business generic="2.0" xmlns="urn:uddi-org:api_v2">
  <findQualifiers>
    <findQualifier>caseSensitiveMatch</findQualifier>
  </findQualifiers>
  <categoryBag>

```

```

    <keyedReference tModelKey="uuid:2ea5f9d3-9b84-39f9-b334-
e9d5f535b4c1" keyName="Policy Expression for an organization"
keyValue="http://www.example.com/mybusiness/policy"/>
  </categoryBag>
</find_business>
</soap-env:Body>
</soap-env:Envelope>

```

Verify that the returned business entity information contains the UDDI remote policy attachment, for the business entity published above.

6.1.1.2 Test Case U2R2

Attach a remote Policy reference to businessService (UDDI v2)

This test case publishes a service (businessService) with a remote policy reference attached. Shown below is a sample UDDI v2 save_service() protocol message, that attaches the policy at <http://www.example.com/mybusiness/policy> to the business service.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_service xmlns="urn:uddi-org:api_v2" generic="2.0" >
<!-- AUTHTOKEN-->
  <businessService serviceKey="" businessKey="221f820e-5dd5-40f1-9769-
dbd3ael137a74">
    <name xml:lang="en">My web service</name>
    <description xml:lang="en">My web service referencing a remote
policy</description>
    <bindingTemplates>
      <bindingTemplate bindingKey="" serviceKey="">
        <description xml:lang="en">wsdl:type representing
port</description>
        <accessPoint
URLType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
        <tModelInstanceDetails/>
      </bindingTemplate>
    </bindingTemplates>
    <categoryBag>
      <keyedReference tModelKey="uuid:2ea5f9d3-9b84-39f9-b334-
e9d5f535b4c1" keyName="Policy Expression for a web service"
keyValue="http://www.example.com/mybusiness/policy"/>
    </categoryBag>
  </businessService>
</save_service>
</soap-env:Body>
</soap-env:Envelope>

```

Retrieve the businessService published above, and make sure the remote policy reference is attached.

Specifically utilize the remote policy reference to retrieve the business service details.

```
<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<find_service generic="2.0" xmlns="urn:uddi-org:api_v2">
<findQualifiers>
  <findQualifier>exactNameMatch</findQualifier>
</findQualifiers>
  <categoryBag>
    <keyedReference tModelKey="uuid:2ea5f9d3-9b84-39f9-b334-
e9d5f535b4c1" keyName="Policy Expression for a web service"
keyValue="http://www.example.com/myservice/policy"/>
  </categoryBag>
</find_service>
</soap-env:Body>
</soap-env:Envelope>
```

Verify that the returned business service information contains the UDDI remote policy attachment, , for the business service published above.

6.1.1.3 Test Case U2R3

Attach a remote Policy reference to bindingTemplate (UDDI v2)

This test case publishes a bindingTemplate with a remote policy reference attached. Shown below is a sample UDDI v2 save_binding() protocol message, that attaches the policy at <http://www.example.com/myservice/policy> to a binding template.

```
<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_binding xmlns="urn:uddi-org:api_v2" generic="2.0">
<!-- AUTHTOKEN-->
<authInfo>urn:uuid:595c9edf-003e-4ed0-8cc5-55a6ad8f3f0d</authInfo>
  <bindingTemplate bindingKey="" serviceKey="85d29d43-419d-4bad-8b3d-
8f8496c63c2b">
    <description xml:lang="en">wsdl:type representing
port</description>
    <accessPoint
URLType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
    <tModelInstanceDetails>
```

```

    <tModelInstanceInfo tModelKey="uuid:2ea5f9d3-9b84-39f9-b334-
e9d5f535b4c1">
      <instanceDetails>
<instanceParms>http://www.example.com/myService/policy</instanceParms>
      </instanceDetails>
    </tModelInstanceInfo>
  </tModelInstanceDetails>
</bindingTemplate>
</save_binding>
</soap-env:Body>
</soap-env:Envelope>

```

Retrieve the bindingTemplate published above, and make sure the remote policy reference is attached.

Specifically utilize the remote policy reference to retrieve the binding template details.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<find_binding serviceKey="bdf5b86c-edc8-44e4-b08c-ed793f46269e"
xmlns="urn:uddi-org:api_v2" generic="2.0" >
  <findQualifiers>
    <findQualifier>orAllKeys</findQualifier>
  </findQualifiers>
<tModelBag>
  <tModelKey>uuid:2ea5f9d3-9b84-39f9-b334-e9d5f535b4c1</tModelKey>
</tModelBag>
</find_binding>
</soap-env:Body>
</soap-env:Envelope>

```

Verify that the returned binding template information contains the UDDI remote policy attachment, for the binding template published above.

6.1.2 Test Cases for Reusable Policy expressions using UDDI v2

The following test cases address registering reusable policy expressions and in turn attaching them to UDDI entities, in a UDDI v2 compliant registry.

6.1.2.1 Test Case U2L1

Register a reusable Policy expression as a tModel (UDDI v2)

This test case registers a reusable policy expression as a tModel in a UDDI v2 compliant registry. Shown below is a sample UDDI v2 save_tModel() protocol message, that registers a reusable policy expression as a tModel.

```

<?xml version="1.0" encoding="utf-8"?>

```

```

<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_tModel xmlns="urn:uddi-org:api_v2" generic="2.0">
<!-- AUTHTOKEN-->
<tModel tModelKey="">
  <name>Sample Policy Expression</name>
  <description xml:lang="EN">This tModel references a sample
policy</description>
  <overviewDoc>
    <description xml:lang="EN">Web Services Policy
Expression</description>
    <overviewURL>http://www.example.com/myservice/policy</overviewURL>
  </overviewDoc>
  <categoryBag>
    <keyedReference keyName="Reusable Policy Expression" keyValue="
policy" tModelKey="uuid:90eda65e-ffd7-33df-965f-98ebb1c2a941"/>
    <keyedReference keyName="Policy Expression for an organization"
keyValue="http://www.example.com/myservice/policy" tModelKey="
uuid:2ea5f9d3-9b84-39f9-b334-e9d5f535b4c1"/>
  </categoryBag>
</tModel>
</save_tModel>
</soap-env:Body>
</soap-env:Envelope>

```

Record the tModelKey returned from the “saved tModel” above. This tModelkey is returned in the response tModelDetail successful response. This tModelKey is used with the subsequent policy attachment calls below. The tests below use the tentative tModelKey value “**uuid:04cfa...**”

6.1.2.2 Test Case U2L2

Attach reusable Policy defined above to businessEntity (UDDI v2)

This test case publishes an organization (businessEntity) with the locally defined reusable policy attached. Shown below is a sample UDDI v2 save_business() protocol message, that attaches the policy to the business entity.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_business xmlns="urn:uddi-org:api_v2" generic="2.0">
<!-- AUTHTOKEN-->
  <businessEntity businessKey="b72444ed-86f6-4d0d-b778-5aa2d766da45"
authorizedName="admin">
    <name xml:lang="en">My Provider Org</name>
    <description xml:lang="en">My Provider Organization</description>

```

```

    <contacts>
      <contact>
        <personName>David Boon</personName>
        <phone useType="OFFICE">1111-111-1111111-111</phone>
        <email>keviepieterson@prov.com</email>
        <address tModelKey="uuid:48eb2518-c1bd-354f-92c9-21a53b0ff2b1">
          <addressLine keyName="StreetPrefix1"
keyValue="170">13thcross</addressLine>
          <addressLine keyName="Street"
keyValue="60">14thstreet</addressLine>
          <addressLine keyName="City"
keyValue="40">NewYork</addressLine>
          <addressLine keyName="State or Province"
keyValue="30">Washington</addressLine>
          <addressLine keyName="Country" keyValue="20">United
States</addressLine>
          <addressLine keyName="CityPostalCode"
keyValue="120">11111</addressLine>
        </address>
      </contact>
    </contacts>
    <categoryBag>
      <keyedReference tModelKey="uuid:5da4fc61-a302-35ad-91d3-
775150429035" keyName="Policy Expression for an organization"
keyValue="uuid:04cfa..." />
    </categoryBag>
  </businessEntity>
</save_business>
</soap-env:Body>
</soap-env:Envelope>

```

Retrieve the businessEntity published above, and make sure the policy is attached.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
  <find_business generic="2.0" xmlns="urn:uddi-org:api_v2">
    <findQualifiers>
      <findQualifier>caseSensitiveMatch</findQualifier>
    </findQualifiers>
    <categoryBag>
      <keyedReference tModelKey="uuid:5da4fc61-a302-35ad-91d3-
775150429035" keyName="Policy Expression for an organization"
keyValue="uuid:04cfa..." />
    </categoryBag>
  </find_business>
</soap-env:Body>

```

```
</soap-env:Envelope>
```

6.1.2.3 Test Case U2L3

Attach the reusable Policy reference to businessService (UDDI v2)

This test case publishes a service (businessService) with the locally defined reusable policy attached. Shown below is a sample UDDI v2 save_service() protocol message, that attaches the policy to the business service.

```
<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_service xmlns="urn:uddi-org:api_v2" generic="2.0" >
<!-- AUTHTOKEN-->
  <businessService serviceKey="" businessKey="b72444ed-86f6-4d0d-b778-
5aa2d766da45">
    <name xml:lang="en">My Provider web service</name>
    <description xml:lang="en">My Provider Organization web
service</description>
    <bindingTemplates>
      <bindingTemplate bindingKey="" serviceKey="">
        <description xml:lang="en">wsdl:type representing
port</description>
        <accessPoint
URLType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
        <tModelInstanceDetails/>
      </bindingTemplate>
    </bindingTemplates>
    <categoryBag>
      <keyedReference tModelKey="uuid:5da4fc61-a302-35ad-91d3-
775150429035" keyName="Policy Expression for a web service"
keyValue="uuid:04cfa..."/>
    </categoryBag>
  </businessService>
</save_service>
</soap-env:Body>
</soap-env:Envelope>
```

Retrieve the businessService published above, and make sure the policy is attached.

```
<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<find_service xmlns="urn:uddi-org:api_v2" generic="2.0">
<findQualifiers>
  <findQualifier>caseSensitiveMatch</findQualifier>
```

```

</findQualifiers>
  <categoryBag>
    <keyedReference tModelKey="uuid:5da4fc61-a302-35ad-91d3-
775150429035" keyName="Policy Expression for an organization"
keyValue="uuid:04cfa..." />
  </categoryBag>
</find_service>
</soap-env:Body>
</soap-env:Envelope>

```

6.1.2.4 Test Case U2L4

Attach a reusable Policy reference to bindingTemplate (UDDI v2)

This test case publishes a bindingTemplate with the locally defined reusable policy attached. Shown below is a sample UDDI v2 save_binding () protocol message, that attaches the policy to a binding template.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_binding xmlns="urn:uddi-org:api_v2" generic="2.0">
<!-- AUTHTOKEN-->
  <bindingTemplate bindingKey="" serviceKey="a12d9cbf-b10c-49e3-9d5e-
d0afd5c85941">
    <description xml:lang="en">wsdl:type representing
port</description>
    <accessPoint
URLType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
    <tModelInstanceDetails>
      <tModelInstanceInfo tModelKey="uuid:5da4fc61-a302-35ad-91d3-
775150429035">
        <instanceDetails>
          <instanceParms>uuid:04cfa...</instanceParms>
        </instanceDetails>
      </tModelInstanceInfo>
    </tModelInstanceDetails>
  </bindingTemplate>
</save_binding>
</soap-env:Body>
</soap-env:Envelope>

```

Retrieve the bindingTemplate published above, and make sure the policy is attached.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>

```



```

<find_binding serviceKey="a12d9cbf-b10c-49e3-9d5e-d0afd5c85941"
xmlns="urn:uddi-org:api_v2" generic="2.0" >
  <findQualifiers>
    <findQualifier>orAllKeys</findQualifier>
  </findQualifiers>
<tModelBag>
  <tModelKey>uuid:5da4fc61-a302-35ad-91d3-775150429035</tModelKey>
</tModelBag>
</find_binding>
</soap-env:Body>
</soap-env:Envelope>

```

6.2 Attaching Policies using UDDI v3

These test cases exercise attaching policies using UDDI v3, as defined in section 6 of the WS-Policy 1.5 – Attachment W3C specification CR Draft at:

<http://dev.w3.org/cvsweb/~checkout~/2006/ws/policy/ws-policy-attachment.html?content-type=text/html;%20charset=utf-8>

Specifically section 6.4 is used to revise 6.2 and 6.3 to be applicable to UDDI v3 and is addressed by the following test cases. The UDDI tModels and the associated tModel keys defined in Appendix B UDDI “tModel Definitions” of the WS-Policy 1.5 Attachment specification CR Draft, are used by these test cases.

6.2.1 Test Cases for attaching Remote Policy using UDDI v3

The following test cases address attaching remote policy references to UDDI entities, in a UDDI v3 compliant registry.

6.2.1.1 Test Case U3R1

Attach a remote Policy reference to businessEntity (UDDI v3)

This test case publishes an organization (businessEntity) with a remote policy reference attached. Shown below is a sample UDDI v3 save_business() protocol message, that attaches the policy at <http://www.example.com/mybusiness/policy> to the business entity.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_business xmlns="urn:uddi-org:api_v3">
<!-- AUTHTOKEN-->
  <businessEntity businessKey="">
    <name xml:lang="en">My Sample Org</name>
    <description xml:lang="en">My Sample Organization</description>
    <contacts>
      <contact>
        <personName xml:lang="en">Ian Fletcher</personName>
        <phone useType="OFFICE">1111-111-1111111-111</phone>

```

```

    <email>fletcher@sampl.com</email>
    <address tModelKey="uddi:uddi.org:ubr:postaladdress">
      <addressLine keyName="StreetPrefix1"
keyValue="170">13thcross</addressLine>
      <addressLine keyName="Street"
keyValue="60">14thstreet</addressLine>
      <addressLine keyName="City"
keyValue="40">NewYork</addressLine>
      <addressLine keyName="State or Province"
keyValue="30">Washington</addressLine>
      <addressLine keyName="Country" keyValue="20">United
States</addressLine>
      <addressLine keyName="CityPostalCode"
keyValue="120">11111</addressLine>
    </address>
  </contact>
</contacts>
<categoryBag>
<keyedReference keyName="Policy Expression for an organization"
keyValue="http://www.example.com/mybusiness/policy"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
</categoryBag>
</businessEntity>
</save_business>
</soap-env:Body>
</soap-env:Envelope>

```

Retrieve the businessEntity published above, and make sure the remote policy reference is attached.

Specifically utilize the remote policy reference to retrieve the business entity details.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<find_business listHead="1" maxRows="50" xmlns="urn:uddi-org:api_v3">
<!-- AUTHTOKEN-->
<findQualifiers>
<findQualifier>approximateMatch</findQualifier>
</findQualifiers>
<categoryBag>
  <keyedReference keyName="Policy Expression for an organization"
keyValue="http://www.example.com/mybusiness/policy"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
</categoryBag>
</find_business>
</soap-env:Body>

```

```
</soap-env:Envelope>
```

Verify that the returned business entity information contains the UDDI remote policy attachment, for the business entity published above.

6.2.1.2 Test Case U3R2

Attach a remote Policy reference to businessService (UDDI v3)

This test case publishes a service (businessService) with a remote policy reference attached. Shown below is a sample UDDI v3 save_service() protocol message, that attaches the policy at <http://www.example.com/myservice/policy> to the business service.

```
<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_service xmlns="urn:uddi-org:api_v3" >
<!-- AUTHTOKEN-->
<businessService serviceKey="" businessKey="uddi:29286ef8-19a0-4d85-
a61a-7bd18614c36b">
  <name xml:lang="en">My remote service</name>
  <description xml:lang="en">My remote web service</description>
  <bindingTemplates>
    <bindingTemplate serviceKey="" bindingKey="">
      <description xml:lang="en">wsdl:type representing
port</description>
      <accessPoint
useType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
    </bindingTemplate>
  </bindingTemplates>
<categoryBag>
  <keyedReference keyName="Policy Expression for a web service"
keyValue="http://www.example.com/myservice/policy"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
</categoryBag>
</businessService>
</save_service>
</soap-env:Body>
</soap-env:Envelope>
```

Retrieve the businessService published above, and make sure the remote policy reference is attached.

Specifically utilize the remote policy reference to retrieve the business service details.

```
<?xml version="1.0" encoding="utf-8"?>
```

```

<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<find_service listHead="1" maxRows="100" xmlns="urn:uddi-org:api_v3">
<!-- AUTHTOKEN-->
<findQualifiers>
  <findQualifier>approximateMatch</findQualifier>
</findQualifiers>
<categoryBag>
<keyedReference keyName="Policy Expression for a Web service"
keyValue="http://www.example.com/myservice/policy"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
</categoryBag>
</find_service>
</soap-env:Body>
</soap-env:Envelope>

```

Verify that the returned business service information contains the UDDI remote policy attachment, for the business service published above.

6.2.1.3 Test Case U3R3

Attach a remote Policy reference to bindingTemplate (UDDI v3)

This test case publishes a bindingTemplate with a remote policy reference attached. Shown below is a sample UDDI v3 save_binding() protocol message, that attaches the policy at <http://www.example.com/myservice/policy> to a binding template.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_binding xmlns="urn:uddi-org:api_v3">
<!-- AUTHTOKEN-->
  <bindingTemplate serviceKey="uddi:95baa47a-d58e-4111-96cf-
bcf84f65f5ed" bindingKey="">
    <description xml:lang="en">wsdl:type representing
port</description>
    <accessPoint
useType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
    <categoryBag>
      <keyedReference keyName="Policy Expression for a binding template"
keyValue="http://www.example.com/myservice/policy"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
    </categoryBag>
  </bindingTemplate>

```

```
</save_binding>
</soap-env:Body>
</soap-env:Envelope>
```

Retrieve the bindingTemplate published above, and make sure the remote policy reference is attached.

Specifically utilize the remote policy reference to retrieve the binding template details.

```
<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<find_binding xmlns="urn:uddi-org:api_v3">
<!-- AUTHTOKEN-->
<findQualifiers>
<findQualifier>approximateMatch</findQualifier>
</findQualifiers>
<categoryBag>
<keyedReference keyName="Policy Expression for binding templates"
keyValue="http://www.example.com/myservice/policy"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
</categoryBag>
</find_binding>
</soap-env:Body>
</soap-env:Envelope>
```

Verify that the returned binding template information contains the UDDI remote policy attachment, for the binding template published above.

6.2.2 Test Cases for Reusable Policy expressions using UDDI v3

The following test cases address registering reusable policy expressions and in turn attaching them to UDDI entities, in a UDDI v3 compliant registry.

6.2.2.1 Test Case U3L1

Register a reusable Policy expression as a tModel (UDDI v3)

This test case registers a reusable policy expression as a tModel in a UDDI v3 compliant registry. Shown below is a sample UDDI v3 save_tModel() protocol message, that registers a reusable policy expression as a tModel.

```
<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_tModel xmlns="urn:uddi-org:api_v3">
<!-- AUTHTOKEN-->
```

```

<tModel tModelKey="uddi:sample.com:mybusiness:policy">
  <name>Sample Policy Expression</name>
  <description xml:lang="EN">This tModel references a sample
policy</description>
  <overviewDoc>
    <description xml:lang="EN">Web Services Policy
Expression</description>
    <overviewURL>http://www.example.com/myservice/policy</overviewURL>
  </overviewDoc>
  <categoryBag>
    <keyedReference keyName="Reusable Policy Expression"
keyValue="policy" tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:policytypes"/>
    <keyedReference keyName="Policy Expression for an organization"
keyValue="http://www.example.com/myservice/policy"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
  </categoryBag>
</tModel>
</save_tModel>
</soap-env:Body>
</soap-env:Envelope>

```

This tModelKey **"uddi:sample.com:mybusiness:policy"** specified above is used with the subsequent policy attachment calls below.

6.2.2.2 Test Case U3L2

Attach reusable Policy defined above to businessEntity (UDDI v3)

This test case publishes an organization (businessEntity) with the locally defined reusable policy attached. Shown below is a sample UDDI v3 save_business() protocol message, that attaches the policy to the business entity.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
  <save_business xmlns="urn:uddi-org:api_v3">
<!-- AUTHTOKEN-->
    <businessEntity businessKey="">
      <name xml:lang="en">My Admin Org</name>
      <description xml:lang="en">My Admin Organization</description>
      <contacts>
        <contact>
          <personName xml:lang="en">David Boon</personName>
          <phone useType="OFFICE">1111-111-1111111-111</phone>
          <email>kewit@admin.com</email>
          <address tModelKey="uddi:uddi.org:ubr:postaladdress">

```

```

    <addressLine keyName="StreetPrefix1"
keyValue="170">13thcross</addressLine>
    <addressLine keyName="Street"
keyValue="60">14thstreet</addressLine>
    <addressLine keyName="City"
keyValue="40">NewYork</addressLine>
    <addressLine keyName="State or Province"
keyValue="30">Washington</addressLine>
    <addressLine keyName="Country" keyValue="20">United
States</addressLine>
    <addressLine keyName="CityPostalCode"
keyValue="120">11111</addressLine>
    </address>
  </contact>
</contacts>
<categoryBag>
<keyedReference
keyName="Policy Expression for an organization"
keyValue="uddi:sample.com:mybusiness:policy" tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:localpolicyreference"/>
</categoryBag>
</businessEntity>
</save_business>
</soap-env:Body>
</soap-env:Envelope>

```

Retrieve the businessEntity published above, and make sure the policy is attached.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<find_business listHead="1" maxRows="50" xmlns="urn:uddi-org:api_v3">
<!-- AUTHTOKEN-->
<findQualifiers>
  <findQualifier>approximateMatch</findQualifier>
</findQualifiers>
<categoryBag>
<keyedReference keyName="Policy Expression for an organization"
keyValue="uddi:sample.com:mybusiness:policy" tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:localpolicyreference"/>
</categoryBag>
</find_business>
</soap-env:Body>
</soap-env:Envelope>

```

6.2.2.3 Test Case U3L3

Attach the reusable Policy reference to businessService (UDDI v3)

This test case publishes a service (businessService) with the locally defined reusable policy attached. Shown below is a sample UDDI v3 save_service() protocol message, that attaches the policy to the business service.

```
<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_service xmlns="urn:uddi-org:api_v3" >
<!-- AUTHTOKEN-->
<businessService serviceKey="" businessKey="uddi:67712523-a9e9-419d-
b317-934e7037dc04">
  <name xml:lang="en">My Admin web service</name>
  <description xml:lang="en">My Admin Organization web
service</description>
  <bindingTemplates>
    <bindingTemplate serviceKey="" bindingKey="">
      <description xml:lang="en">wsdl:type representing
port</description>
      <accessPoint
useType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
    </bindingTemplate>
  </bindingTemplates>
<categoryBag>
<keyedReference
keyName="Policy Expression for a web service"
keyValue="uddi:sample.com:mybusiness:policy" tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:localpolicyreference"/>
</categoryBag>
  </businessService>
</save_service>
</soap-env:Body>
</soap-env:Envelope>
```

Retrieve the businessService published above, and make sure the policy is attached.

```
<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<find_service listHead="1" maxRows="100" xmlns="urn:uddi-org:api_v3">
<!-- AUTHTOKEN-->
<findQualifiers>
  <findQualifier>approximateMatch</findQualifier>
```



```

</findQualifiers>
  <categoryBag>
    <keyedReference keyName="Policy Expression for a web service"
keyValue="uddi:sample.com:mybusiness:policy" tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:localpolicyreference"/>
  </categoryBag>
</find_service>
</soap-env:Body>
</soap-env:Envelope>

```

6.2.2.4 Test Case U3L4

Attach a reusable Policy reference to bindingTemplate (UDDI v3)

This test case publishes a bindingTemplate with the locally defined reusable policy attached. Shown below is a sample UDDI v3 save_binding () protocol message, that attaches the policy to a binding template.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<save_binding xmlns="urn:uddi-org:api_v3">
<!-- AUTHTOKEN-->
  <bindingTemplate serviceKey="uddi:61dc57a6-c822-405f-8561-
858625e3a58b" bindingKey="">
    <description xml:lang="en">wsdl:type representing
port</description>
    <accessPoint
useType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
    <categoryBag>
      <keyedReference keyName="Policy Expression for binding template"
keyValue="uddi:sample.com:mybusiness:policy" tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:localpolicyreference"/>
    </categoryBag>
  </bindingTemplate>
</save_binding>
</soap-env:Body>
</soap-env:Envelope>

```

Retrieve the bindingTemplate published above, and make sure the policy is attached.

```

<?xml version="1.0" encoding="utf-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
<soap-env:Header/>
<soap-env:Body>
<find_binding xmlns="urn:uddi-org:api_v3">
<!-- AUTHTOKEN-->
  <findQualifiers>

```

```

<findQualifier>approximateMatch</findQualifier>
  </findQualifiers>
  <categoryBag>
    <keyedReference keyName="Policy Expression for binding template"
keyValue="uddi:sample.com:mybusiness:policy" tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:localpolicyreference"/>
  </categoryBag>
</find_binding>
</soap-env:Body>
</soap-env:Envelope>

```

6.3 Computing Effective Policy – UDDI Policy Attachment

This section describes Test Cases for Computing Effective Policy. Input and expected output data for these test cases are included in this section. These are WS-Policy unit test cases. These are not interop test cases. Implementers may wrap these tests as JUnit / NUnit / VSTS implementations, Web service endpoints, command line executables, user interface code, etc.

6.3.1 Test Cases for Effective Policy using UDDI V2

The following test cases address effective policy computation when using UDDI v2 compliant registry.

6.3.1.1 Test Case U2E1

Service Provider Policy Subject Effective Policy (UDDI v2)

The input for effective-policy computation is listed below:

```

<businessEntity businessKey="221f820e-5dd5-40f1-9769-dbd3ae137a74">
  <name xml:lang="en">My Consumer Org</name>
  <description xml:lang="en">My Consumer Organization</description>
  <contacts>
    <contact>
      <personName>Krazy Rudy</personName>
      <phone useType="OFFICE">1111-111-1111111-111</phone>
      <email>krudy@cons.com</email>
      <address tModelKey="uuid:48eb2518-c1bd-354f-92c9-21a53b0ff2b1">
        <addressLine keyName="StreetPrefix1"
keyValue="170">13thcross</addressLine>
        <addressLine keyName="Street"
keyValue="60">14thstreet</addressLine>
        <addressLine keyName="City"
keyValue="40">NewYork</addressLine>
        <addressLine keyName="State or Province"
keyValue="30">Washington</addressLine>
        <addressLine keyName="Country" keyValue="20">United
States</addressLine>
        <addressLine keyName="CityPostalCode"
keyValue="120">11111</addressLine>
      </address>
    </contact>
  </contacts>
</businessEntity>

```

```

    </contacts>
    <categoryBag>
      <keyedReference tModelKey="uuid:2ea5f9d3-9b84-39f9-b334-
e9d5f535b4c1" keyName="Policy Expression P1 for an organization"
keyValue="http://www.example.com/policies/P1"/>
      <keyedReference tModelKey="uuid:2ea5f9d3-9b84-39f9-b334-
e9d5f535b4c1" keyName="Policy Expression P2 for an organization"
keyValue="http://www.example.com/policies/P2"/>
    </categoryBag>
  </businessEntity>

```

The expected effective policy expression in normal form is shown below:

```

<wsp:Policy xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:ExactlyOne>
    <wsp:All>
      <wsp:PolicyReference URI="http://www.example.com/policies/P1"/>
      <wsp:PolicyReference URI="http://www.example.com/policies/P2"/>
    </wsp:All>
  </wsp:ExactlyOne>
</wsp:Policy>

```

6.3.1.2 Test Case U2E2

Service Policy Subject Effective Policy (UDDI v2)

The input for effective-policy computation is listed below:

```

<businessService serviceKey="85d29d43-419d-4bad-8b3d-8f8496c63c2b"
businessKey="221f820e-5dd5-40f1-9769-dbd3ae137a74">
  <name xml:lang="en">My web service</name>
  <description xml:lang="en">My web service referencing a remote
policy</description>
  <bindingTemplates>
    <bindingTemplate bindingKey="" serviceKey="">
      <description xml:lang="en">wsdl:type representing
port</description>
      <accessPoint
URLType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
      <tModelInstanceDetails/>
    </bindingTemplate>
  </bindingTemplates>
  <categoryBag>
    <keyedReference tModelKey="uuid:2ea5f9d3-9b84-39f9-b334-
e9d5f535b4c1" keyName="Policy Expression for a web service"
keyValue="http://www.example.com/policies/P3"/>
    <keyedReference tModelKey="uuid:2ea5f9d3-9b84-39f9-b334-
e9d5f535b4c1" keyName="Policy Expression for a web service"
keyValue="http://www.example.com/policies/P4"/>
  </categoryBag>
</businessService>

```

The expected effective policy expression in normal form is shown below:

```

<wsp:Policy xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:ExactlyOne>
    <wsp:All>
      <wsp:PolicyReference URI="http://www.example.com/policies/P3"/>
      <wsp:PolicyReference URI="http://www.example.com/policies/P4"/>
    </wsp:All>
  </wsp:ExactlyOne>
</wsp:Policy>

```

6.3.1.3 Test Case U2E3

Endpoint Policy Subject Effective Policy (UDDI v2)

The input for effective-policy computation is listed below:

```

<bindingTemplate bindingKey="" serviceKey="85d29d43-419d-4bad-8b3d-
8f8496c63c2b">
  <description xml:lang="en">wsdl:type representing
port</description>
  <accessPoint
URLType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
  <tModelInstanceDetails>
    <tModelInstanceInfo tModelKey="uuid:2ea5f9d3-9b84-39f9-b334-
e9d5f535b4c1">
      <instanceDetails>
<instanceParms>http://www.example.com/policies/P5</instanceParms>
      </instanceDetails>
    </tModelInstanceInfo>
    <tModelInstanceInfo tModelKey="uuid:2ea5f9d3-9b84-39f9-b334-
e9d5f535b4c1">
      <instanceDetails>
<instanceParms>http://www.example.com/policies/P6</instanceParms>
      </instanceDetails>
    </tModelInstanceInfo>
  </tModelInstanceDetails>
</bindingTemplate>

```

The expected effective policy expression in normal form is shown below:

```

<wsp:Policy xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:ExactlyOne>
    <wsp:All>
      <wsp:PolicyReference URI="http://www.example.com/policies/P5"/>
      <wsp:PolicyReference URI="http://www.example.com/policies/P6"/>
    </wsp:All>
  </wsp:ExactlyOne>
</wsp:Policy>

```

6.3.2 Test Cases for Effective Policy using UDDI V3

The following test cases address effective policy computation when using UDDI v3 compliant registry.

6.3.2.1 Test Case U3E1

Service Provider Policy Subject Effective Policy (UDDI v3)

The input for effective-policy computation is listed below:

```
<businessEntity businessKey="uddi:29286ef8-19a0-4d85-a61a-7bd18614c36b">
  <name xml:lang="en">My Sample Org</name>
  <description xml:lang="en">My Sample Organization</description>
  <contacts>
    <contact>
      <personName xml:lang="en">Ian Fletcher</personName>
      <phone useType="OFFICE">1111-111-1111111-111</phone>
      <email>fletcher@sampl.com</email>
      <address tModelKey="uddi:uddi.org:ubr:postaladdress">
        <addressLine keyName="StreetPrefix1"
keyValue="170">13thcross</addressLine>
        <addressLine keyName="Street"
keyValue="60">14thstreet</addressLine>
        <addressLine keyName="City"
keyValue="40">NewYork</addressLine>
        <addressLine keyName="State or Province"
keyValue="30">Washington</addressLine>
        <addressLine keyName="Country" keyValue="20">United
States</addressLine>
        <addressLine keyName="CityPostalCode"
keyValue="120">11111</addressLine>
      </address>
    </contact>
  </contacts>
  <categoryBag>
    <keyedReference keyName="Policy Expression for an organization"
keyValue="http://www.example.com/policies/P1"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
    <keyedReference keyName="Policy Expression for an organization"
keyValue="http://www.example.com/policies/P2"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
  </categoryBag>
</businessEntity>
```

The expected effective policy expression in normal form is shown below:

```
<wsp:Policy xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:ExactlyOne>
    <wsp:All>
      <wsp:PolicyReference URI="http://www.example.com/policies/P1"/>
      <wsp:PolicyReference URI="http://www.example.com/policies/P2"/>
    </wsp:All>
  </wsp:ExactlyOne>
```

```
</wsp:Policy>
```

6.3.2.2 Test Case U3E2

Service Policy Subject Effective Policy (UDDI v3)

The input for effective-policy computation is listed below:

```
<businessService serviceKey="" businessKey="uddi:29286ef8-19a0-4d85-
a61a-7bd18614c36b">
  <name xml:lang="en">My remote service</name>
  <description xml:lang="en">My remote web service</description>
  <bindingTemplates>
    <bindingTemplate serviceKey="" bindingKey="">
      <description xml:lang="en">wsdl:type representing
port</description>
      <accessPoint
useType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
    </bindingTemplate>
  </bindingTemplates>
<categoryBag>
  <keyedReference keyName="Policy Expression for a web service"
keyValue="http://www.example.com/policies/P3"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
<keyedReference keyName="Policy Expression for a web service"
keyValue="http://www.example.com/policies/P4"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
</categoryBag>
</businessService>
</save_service>
```

The expected effective policy expression in normal form is shown below:

```
<wsp:Policy xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:ExactlyOne>
    <wsp:All>
      <wsp:PolicyReference URI="http://www.example.com/policies/P3"/>
      <wsp:PolicyReference URI="http://www.example.com/policies/P4"/>
    </wsp:All>
  </wsp:ExactlyOne>
</wsp:Policy>
```

6.3.2.3 Test Case U3E3

Endpoint Policy Subject Effective Policy (UDDI v3)

The input for effective-policy computation is listed below:

```
<bindingTemplate serviceKey="uddi:95baa47a-d58e-4111-96cf-bcf84f65f5ed"
bindingKey="">
  <description xml:lang="en">wsdl:type representing
port</description>
```

```

<accessPoint
useType="http">http://ws.strikeiron.com/StrikeIron/GlobalAddressLocator
/GlobalAddressInteractiveVerification</accessPoint>
  <categoryBag>
    <keyedReference keyName="Policy Expression for a binding template"
keyValue="http://www.example.com/policies/P5"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
      <keyedReference keyName="Policy Expression for a binding
template" keyValue="http://www.example.com/policies/P6"
tModelKey="uddi:w3.org:ws-
policy:v1.5:attachment:remotepolicyreference"/>
    </categoryBag>
  </bindingTemplate>

```

The expected effective policy expression in normal form is shown below:

```

<wsp:Policy xmlns:wsp="http://www.w3.org/ns/ws-policy">
  <wsp:ExactlyOne>
    <wsp:All>
      <wsp:PolicyReference URI="http://www.example.com/policies/P5"/>
      <wsp:PolicyReference URI="http://www.example.com/policies/P6"/>
    </wsp:All>
  </wsp:ExactlyOne>
</wsp:Policy>

```

7. Negative Test Cases

The Round 4 Negative Test directory contains a set of non-conformant policy expressions. These are WS-Policy unit test cases. Implementations are expected to attempt to normalize these expressions and detect non-conformance. A detected non-conformance is considered to be a successful outcome.

Appendix A – Change Log

Date	Editor	Description
20070219	PY	First draft.
20070228	PY	Checked into WS-Policy CVS
20070228	PY	Added all editors to the list, inserted W3C license, reorg'ed the doc to be suitable for all round 4 tests, updated introduction etc. accordingly. Numbered test cases, fixed document date
20070305	FJH	Added media type test case
20070314	FJH	Editorial action 202, indicate content of policy document immaterial to media type test case. Remove mention of option of using imported document, as such test not mentioned elsewhere.
20070315	ASV	Added timestamp (save date) – editorial action 185
20070316	PY	Converted to use the new tModel keys for v2 and V3. Editors AI 182 (issue 4389)

20070321	ASV	Fixed a bug in the expected outcomes for external policy attachment 4 WSDL 11 test cases. Editors' action 219.
20070424	TIB	Added Section 7 to implement Action 276
20070607	ASV	Implemented the resolution for issue 4568 – editorial action 271
20070612	ASV	Updated external policy attachment test files with the latest from CVS
20080127	ASV	Implemented the resolution for issue 5299 .