

Background: WS-Eventing does not support pause and resume of subscriptions. The workaround is to use Unsubscribe/Subscribe pattern. But this may create overhead in the Event Source and Subscription Manager, as Subscribe and Unsubscribe may require extra processing, such as authentication and authorization checks, compared to pause/resume.

We propose adding Pause(SubscriptionManager) and Resume(SubscriptionManager) operations.

Proposed Changes

1. Add the following section 3 for Pause operation.

3.x Pause

To suspend event delivery related to a subscription, the subscriber sends a request of the following form to the subscription manager:

```
<s:Envelope ...>
  <s:Header ...>
    <wsa:Action>
      http://schemas.xmlsoap.org/ws/2004/08/eventing/Pause
    </wsa:Action>
    ...
  </s:Header>
  <s:Body ...>
    <wse:Pause retain="xs:integer"?>
      xs:any
    </wse:Pause>
  </s:Body>
</s:Envelope>
```

/s:Envelope/s:Body/*/wse:Pause/@retain=0

Indicate the number of last messages to retain after pause and deliver when the subscription is resumed. Implied value is 0 indicating no message is retained. A negative value indicates all messages are to be retained.

If the request is accepted, the subscription manager MUST reply with a response of the following form:

```
<s:Envelope ...>
  <s:Header ...>
    <wsa:Action>
      http://schemas.xmlsoap.org/ws/2004/08/eventing/PauseResponse
    </wsa:Action>
    ...
  </s:Header>
```

```

<s:Body ...>
  <wse:PauseResponse retain="xs:integer"?>
    xs:any
  </wse:PauseResponse>
</s:Body>
</s:Envelope>

```

/s:Envelope/s:Body/*/wse:Pause/@retain

Indicate the maximum number of last messages the subscription manager agrees to retain. Implied value is the same in the request message.

If the subscription manager cannot pause this subscription, the request **MUST** fail, and the subscription manager **MAY** generate a wse:UnableToPause fault indicating that the pause was not accepted.

Other components of the outline above are not further constrained by this specification.

Table x lists a hypothetical request to pause the subscription created in [table 5](#) and retains only the latest message during pause.

Table x: Hypothetical request to pause the second subscription

```

(01) <s12:Envelope
(02)   xmlns:s12="http://www.w3.org/2003/05/soap-envelope"
(03)   xmlns:wsa="http://schemas.xmlsoap.org/ws/2004/08/addressing"
(04)   xmlns:wse="http://schemas.xmlsoap.org/ws/2004/08/eventing"
(05)   xmlns:ow="http://www.example.org/oceanwatch" >
(06)   <s12:Header>
(07)     <wsa:Action>
(08)       http://schemas.xmlsoap.org/ws/2004/08/eventing/Pause
(09)     </wsa:Action>
(10)     <wsa:MessageID>
(11)       uuid:bd88b3df-5db4-4392-9621-ae9160721f6
(12)     </wsa:MessageID>
(13)     <wsa:ReplyTo>
(14)       <wsa:Address>http://www.example.com/MyEventSink</wsa:Address>
(15)     </wsa:ReplyTo>
(16)     <wsa:To>
(17)       http://www.example.org/oceanwatch/SubscriptionManager
(18)     </wsa:To>
(19)     <wse:Identifier wsa:IsReferenceParamereer="true">
(20)       uuid:22e8a584-0d18-4228-b2a8-3716fa2097fa
(21)     </wse:Identifier>
(22)   </s12:Header>
(23)   <s12:Body>
(24)     <wse:Pause retain="1" />
(25)   </s12:Body>
(26) </s12:Envelope>

```

Lines (07-09) indicate this is a request to pause a subscription. Lines (16-21) indicate that the request is sent to the subscription manager for the subscription created in [table 5](#).

Table x+1 lists a hypothetical response to the request in [table x](#) .

Table x+1: Hypothetical response to pause request

```
(01) <s12:Envelope
(02)     xmlns:s12="http://www.w3.org/2003/05/soap-envelope"
(03)     xmlns:wsa="http://schemas.xmlsoap.org/ws/2004/08/addressing"
(04)     xmlns:wse="http://schemas.xmlsoap.org/ws/2004/08/eventing"
(05)     xmlns:ow="http://www.example.org/oceanwatch" >
(06)   <s12:Header>
(07)     <wsa:Action>
(08)       http://schemas.xmlsoap.org/ws/2004/08/eventing/PauseResponse
(09)     </wsa:Action>
(10)     <wsa:RelatesTo>
(11)       uuid:bd88b3df-5db4-4392-9621-ae9160721f6
(12)     </wsa:RelatesTo>
(13)     <wsa:To>http://www.example.com/MyEventSink</wsa:To>
(14)   </s12:Header>
(15)   <s12:Body>
(16)     <wse:PauseResponse />
(17)   </s12:Body>
(18) </s12:Envelope>
```

Line (16) in [table x+1](#) indicates the request is accepted.

2. Add the following section 3 for Resume operation.

3.y Resume

To resume event delivery related to a paused subscription, the subscriber sends a request of the following form to the subscription manager:

```
<s:Envelope ...>
  <s:Header ...>
    <wsa:Action>
      http://schemas.xmlsoap.org/ws/2004/08/eventing/Resume
    </wsa:Action>
    ...
  </s:Header>
  <s:Body ...>
    <wse:Resume>
      xs:any
    </wse:Resume>
  </s:Body>
</s:Envelope>
```

If the request is accepted, the subscription manager MUST reply with a response of the following form:

```

<s:Envelope ...>
  <s:Header ...>
    <wsa:Action>
      http://schemas.xmlsoap.org/ws/2004/08/eventing/ResumeResponse
    </wsa:Action>
    ...
  </s:Header>
  <s:Body ...>
    <wse:ResumeResponse>
      xs:any
    </wse:ResumeResponse>
  </s:Body>
</s:Envelope>

```

If the subscription manager cannot resume this subscription, the request MUST fail, and the subscription manager MAY generate a wse:UnableToResume fault indicating that the resumption was not accepted.

Other components of the outline above are not further constrained by this specification.

Table y lists a hypothetical request to pause the subscription created in [table 5](#) and retains only the latest message during pause.

Table y: Hypothetical request to resume the second subscription

```

(01) <s12:Envelope
(02)   xmlns:s12="http://www.w3.org/2003/05/soap-envelope"
(03)   xmlns:wsa="http://schemas.xmlsoap.org/ws/2004/08/addressing"
(04)   xmlns:wse="http://schemas.xmlsoap.org/ws/2004/08/eventing"
(05)   xmlns:ow="http://www.example.org/oceanwatch" >
(06)   <s12:Header>
(07)     <wsa:Action>
(08)       http://schemas.xmlsoap.org/ws/2004/08/eventing/Pause
(09)     </wsa:Action>
(10)     <wsa:MessageID>
(11)       uuid:bd88b3df-5db4-4392-9621-ae9160721f6
(12)     </wsa:MessageID>
(13)     <wsa:ReplyTo>
(14)       <wsa:Address>http://www.example.com/MyEventSink</wsa:Address>
(15)     </wsa:ReplyTo>
(16)     <wsa:To>
(17)       http://www.example.org/oceanwatch/SubscriptionManager
(18)     </wsa:To>
(19)     <wse:Identifier wsa:IsReferenceParamereer="true">
(20)       uuid:22e8a584-0d18-4228-b2a8-3716fa2097fa
(21)     </wse:Identifier>
(22)   </s12:Header>
(23)   <s12:Body>
(24)     <wse:Resume />
(25)   </s12:Body>
(26) </s12:Envelope>

```

Lines (07-09) indicate this is a request to pause a subscription. Lines (16-21) indicate that the request is sent to the subscription manager for the subscription created in [table 5](#) .

Table y+1 lists a hypothetical response to the request in [table y](#) .

Table y+1: Hypothetical response to resume request

```
(01) <s12:Envelope
(02)   xmlns:s12="http://www.w3.org/2003/05/soap-envelope"
(03)   xmlns:wsa="http://schemas.xmlsoap.org/ws/2004/08/addressing"
(04)   xmlns:wse="http://schemas.xmlsoap.org/ws/2004/08/eventing"
(05)   xmlns:ow="http://www.example.org/oceanwatch" >
(06)   <s12:Header>
(07)     <wsa:Action>
(08)       http://schemas.xmlsoap.org/ws/2004/08/eventing/PauseResponse
(09)     </wsa:Action>
(10)     <wsa:RelatesTo>
(11)       uuid:bd88b3df-5db4-4392-9621-ae9160721f6
(12)     </wsa:RelatesTo>
(13)     <wsa:To>http://www.example.com/MyEventSink</wsa:To>
(14)   </s12:Header>
(15)   <s12:Body>
(16)     <wse:ResumeResponse />
(17)   </s12:Body>
(18) </s12:Envelope>
```

Line (16) in [table y+1](#) indicates the request is accepted.