

Running WS – Eventing Application Demo using the Filter Pipeline

Community Grids Lab, Indiana University

1. Introduction

This document explains how to run the WS Eventing application within the prototype Filter Pipeline. The following assumptions have been made for the purposes of explaining this demo. The user may appropriately change any of these values to suite their needs.

Host: localhost **port:** 19000 to 22000

Installation directory: c:\webservices\wse as a root directory for WS Eventing application.

Wse Source: - tcp://localhost:19000

Wse Subscription Manager: - tcp://localhost:20000

Wse Sink 1: - tcp://localhost:21000

Wse Sink 2: - tcp://localhost:22000

2. Running WS Eventing Web Services

2.1 Starting Wse Source on Filter Pipeline: - We are assuming host is a localhost and port number for Wse Source is 19000. Using ANT build.xml file we can run the target wse-sink by passing arguments for host name and port number where you want to run the application. Open a MS-DOS command prompt on the Windows OS and change the directory to your WSE installation directory. Execute the following command from directory.

```
C:\WebServices\wse> ant wse-source -Dwse.source.hostname=localhost -  
Dwse.source.port=19000
```

Figure 1: Source running on port 19000 depicts the Source Service running on port 19000.

```

C:\WINDOWS\system32\cmd.exe - ant wse-source -Dwse.source.hostname=localhost -Dwse....
C:\webservices\wse>ant wse-source -Dwse.source.hostname=localhost -Dwse.source.p
ort=19000
Buildfile: build.xml

prepare:

compile:

wse-source:
    [echo] Running the WSE Source Endpoint.
    [java] TopicMatchingCapability: Capabilities related to matching dialects o
f type [http://www.naradabroker.org/TopicMatching] are now available
    [java] XPathMatchingCapability: Capabilities related to matching dialects o
f type [http://www.w3.org/TR/1999/REC-xpath-19991116] are now available
    [java] XQueryMatchingCapability: Capabilities related to matching dialects
of type [http://www.w3.org/TR/2004/WD-xquery-20041029] are now available
    [java] RegularExpressionMatchingCapability: Capabilities related to matchin
g dialects of type [http://www.naradabroker.org/RegularExpressionMatching] ar
e now available
    [java] WseSourceEndpoint: Configured FilterPipeline
    [java]     WseSourceFilter=0
    [java]     CounterFilter=1
    [java]     LoggingFilter=2

    [java] Loaded TCPLinkFactory communication services
    [java] Listening to TCP communications on port [19000].
    [java] Type h for help on commands

```

Figure 1: Source running on port 19000

After successful execution of the above command then type 'h' for help at the Wse Source and you will see the options available for you to execute at the Source.

```

C:\WINDOWS\system32\cmd.exe - ant wse-source -Dwse.source.hostname=localhost ...
C:\webservices\wse>ant wse-source -Dwse.source.hostname=localhost -Dwse.source.p
ort=19000
Buildfile: build.xml

prepare:

compile:

wse-source:
    [echo] Running the WSE Source Endpoint.
    [java] TopicMatchingCapability: Capabilities related to matching dialects o
f type [http://www.naradabroker.org/TopicMatching] are now available
    [java] XPathMatchingCapability: Capabilities related to matching dialects o
f type [http://www.w3.org/TR/1999/REC-xpath-19991116] are now available
    [java] XQueryMatchingCapability: Capabilities related to matching dialects
of type [http://www.w3.org/TR/2004/WD-xquery-20041029] are now available
    [java] RegularExpressionMatchingCapability: Capabilities related to matchin
g dialects of type [http://www.naradabroker.org/RegularExpressionMatching] ar
e now available
    [java] WseSourceEndpoint: Configured FilterPipeline
    [java]     WseSourceFilter=0
    [java]     CounterFilter=1
    [java]     LoggingFilter=2

    [java] Loaded TCPLinkFactory communication services
    [java] Listening to TCP communications on port [19000].
    [java] Type h for help on commands
h
    [java] Create Link          -> cr hostname portNum
    [java] Send Data [from] [to] -> s [source] [sink]

```

Figure 2: Source with help command

Before executing any commands from this screen, first start the remaining Web Services as follows.

2.2 Starting Wse Subscription Manager on Filter Pipeline: - We are assuming host is localhost and port number for Wse Subscription Manager is 20000. Using ANT `build.xml` file we can run the target `wse-sm` by passing arguments for host name and port number where you want to run the application. Open a MS-DOS command prompt on the Windows OS and change the directory to your WSE installation directory. Execute the following command from directory.

```
C:\WebServices\wse> ant wse-sm -Dwse.submanager.hostname=localhost -Dwse.submanager.port=20000
```

Figure 3: Subscription Manager running on port 20000 depicts the Subscription Manager running on port 20000.

```
C:\WINDOWS\system32\cmd.exe - ant wse-sm -Dwse.submanager.hostname=localhost -Dws...
C:\webervices\wse>ant wse-sm -Dwse.submanager.hostname=localhost -Dwse.submanag
er.port=20000
Buildfile: build.xml

prepare:
compile:
wse-sm:
 [echo] Running the WSE SubscriptionManager Endpoint...
 [java] WseSubManagerEndpoint: Configured FilterPipeline
 [java] WseSubscriptionManagerFilter=0
 [java] CounterFilter=1
 [java] LoggingFilter=2

 [java] Loaded TCPLinkFactory communication services
 [java] Listening to TCP communications on port [20000].
 [java] Type h for help on commands
```

Figure 3: Subscription Manager running on port 20000

After successful execution of the above command then type 'h' for help at the Wse Subscription Manager and you will see the options available for you to execute at the Subscription Manager

```
Select C:\WINDOWS\system32\cmd.exe - ant wse-sm -Dwse.submanager.hostname=localhos...
C:\webervices\wse>ant wse-sm -Dwse.submanager.hostname=localhost -Dwse.submanag
er.port=20000
Buildfile: build.xml

prepare:
compile:
wse-sm:
 [echo] Running the WSE SubscriptionManager Endpoint...
 [java] WseSubManagerEndpoint: Configured FilterPipeline
 [java] WseSubscriptionManagerFilter=0
 [java] CounterFilter=1
 [java] LoggingFilter=2

 [java] Loaded TCPLinkFactory communication services
 [java] Listening to TCP communications on port [20000].
 [java] Type h for help on commands
h
 [java] Create Link -> cr hostname portNum
 [java] Send Data [from] [to] -> s [source] [sink]
```

Figure 4: Subscription Manager with help command

2.3 Starting Wse Sink 1 on Filter Pipeline: - We are assuming host is localhost and port number for the Wse Sink 1 is 21000. Using ANT `build.xml` file we can run the target `wse-sink` by passing arguments for host name and port number where you want to run the application. Open a MS-

DOS command prompt on the Windows OS and change the directory to your WSE installation directory. Execute the following command from directory.

```
C:\WebServices\wse> ant wse-sink -Dwse.sink.hostname=localhost -Dwse.sink.port=21000 -Dwse.source.address=tcp://localhost:19000
```

Figure 5: Source running on port 21000 depicts the Sink Service running on the port 21000.

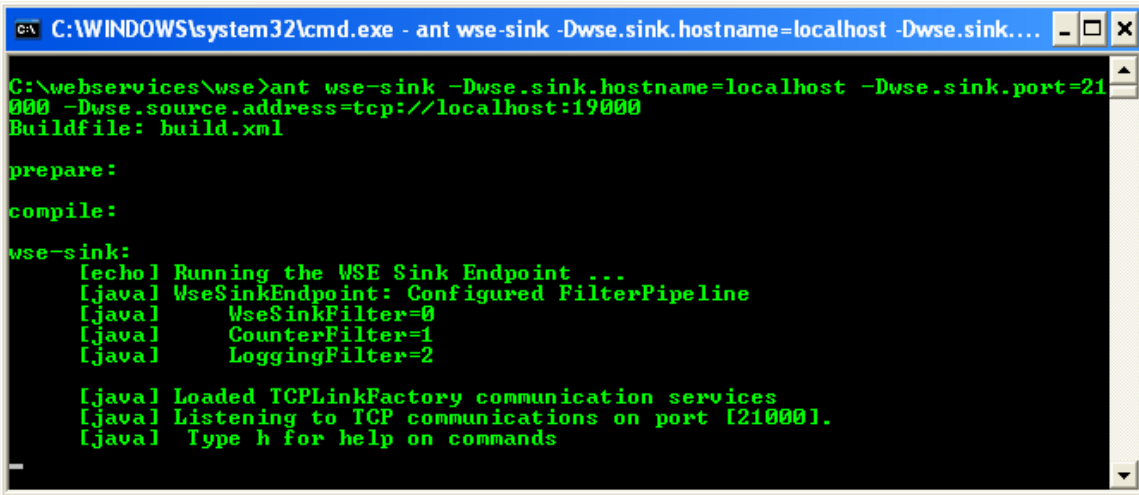


Figure 5: Source running on port 21000

After successful execution of the above command then type 'h' for help at the Wse Sink and you will see the options available for you to execute at the Sink

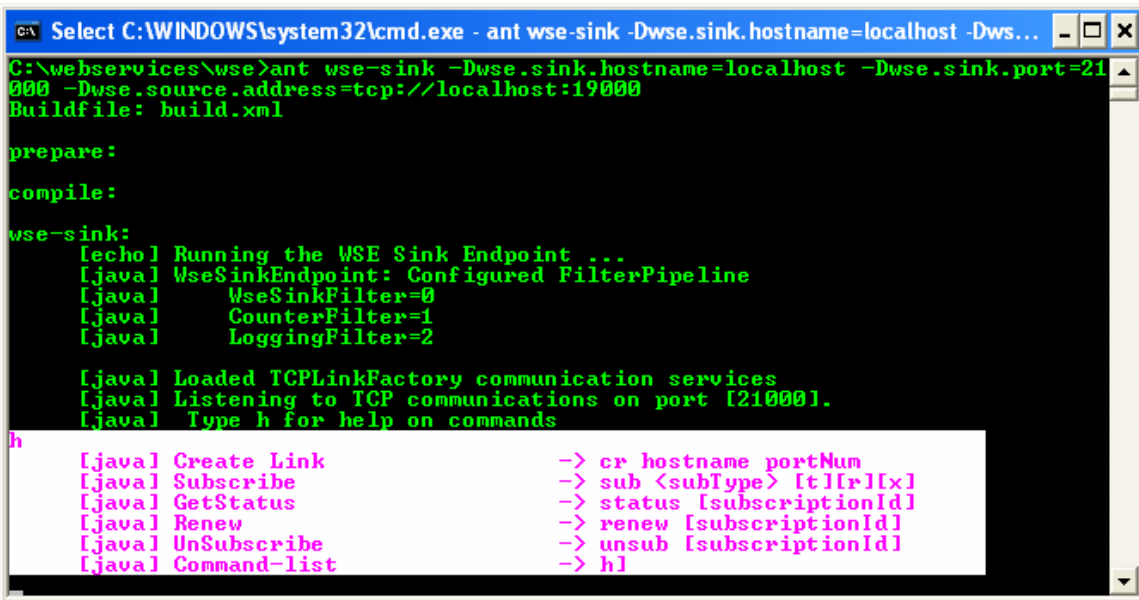


Figure 6: Source with help command

You can have multiple Sink's for demo and we are creating one more Sink as below

2.4 Starting Wse Sink 2 on Filter Pipeline: - We are assuming host is localhost and port number for the Wse Sink 2 is 22000. Using ANT **build.xml** file we can run the target **wse-sink2** by passing

arguments for host name and port number where you want to run the application. Open a MS-DOS command prompt on the Windows OS and change the directory to your WSE installation directory. Execute the following command from directory.

```
C:\webservices\wse>ant wse-sink2 -Dwse.sink2.hostname=localhost -Dwse.sink2.port=22000 -Dwse.source.address=tcp://localhost:19000
```

Figure 7: Sink2 running on port 22000 depicts the Sink2 web service running on the port 22000.

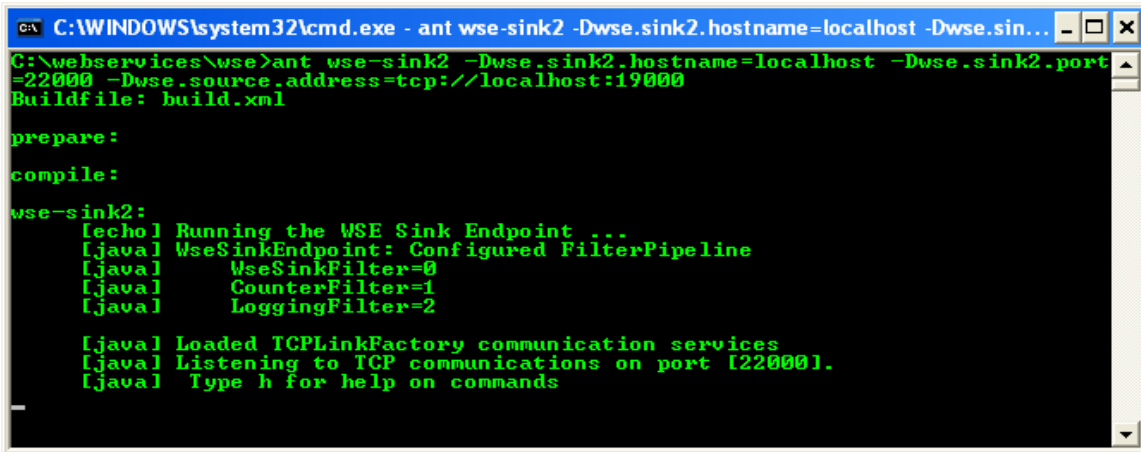


Figure 7: Sink2 running on port 22000

After successful execution of the above command then type 'h' for help at the Wse Sink 2 and you will see the options available for you to execute at the Sink 2 as shown in the Figure 8.

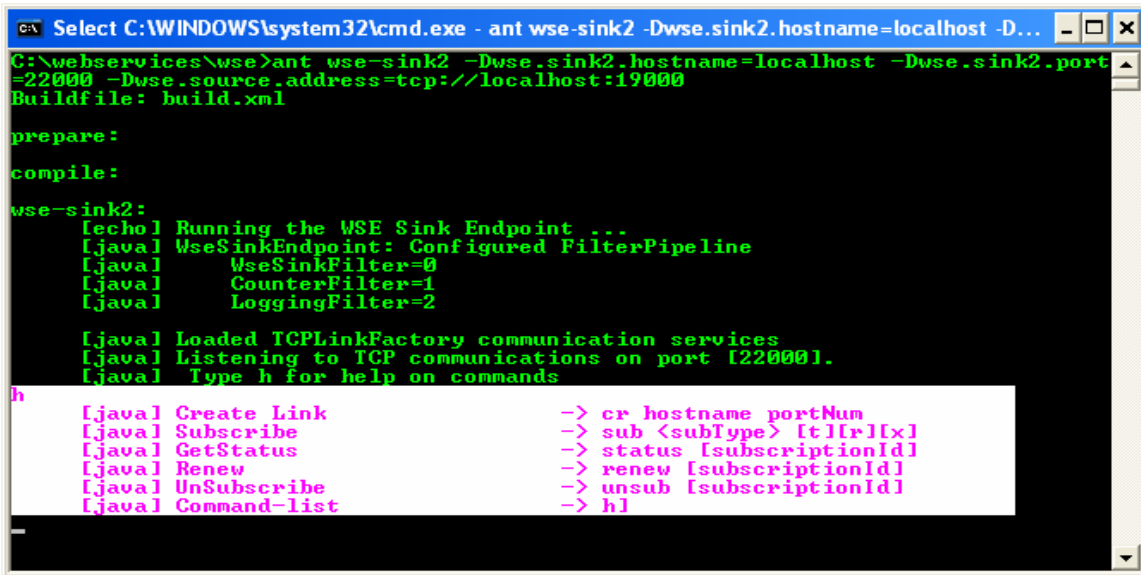


Figure 8: Sink2 with help command

Now all web services are ready on different ports and you have to create link between all web services by following demo below.

3. Running Demo WS Evening after starting:

3.1 Creating links between different services:

You have to create links between all applications to open to receive and send data across. Use 'cr' command as follows.

From Wse Sink 1

```
cr localhost 20000  
cr localhost 19000
```

From Wse Sink 2

```
cr localhost 20000  
cr localhost 19000
```

From Wse Source

```
cr localhost 20000  
cr localhost 21000  
cr localhost 22000
```

From Wse Subscription manager

```
cr localhost 19000  
cr localhost 21000  
cr localhost 22000
```

Above commands creates link between all application and you are ready to send and receive the SOAPMessages between all application.

3.2 Send SOAPMessage subscription from Sink:

From the Wse Sink, issue the following command to subscribe to 'topic'

3.2.1: Subscribing to the 'Topic'

Sub t Figure 9: SOAPMessage – Request at Sink for Subscription to the Topic.depicts the SOAPMessage generated at Sink corresponding to a topic subscription.

```

C:\ Select C:\WINDOWS\system32\cmd.exe - ant wse-sink -Dwse.sink.hostname=localhost -Dws...
sub t
[Java] CounterFilter: Number of messages from application = 1
[Java] LoggingFilter: Received SOAP Message from the APPLICATION.
[Java] <Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ad
d="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:even="http://schemas
.xmlsoap.org/ws/2004/08/eventing" xmlns:xsi="http://www.w3.org/2001/XMLSchema-ins
tance">
[Java]   <Header>
[Java]     <add:Action>http://schemas.xmlsoap.org/ws/2004/08/eventing/Subsc
ribe</add:Action>
[Java]     <add:MessageID>0dfaaed5-a73f-4083-a3b9-654a269ff02f</add:Message
ID>
[Java]     <add:From>
[Java]       <add:Address>tcp://localhost:21000</add:Address>
[Java]     </add:From>
[Java]     <add:To>tcp://localhost:19000</add:To>
[Java]   </Header>
[Java]   <Body>
[Java]     <even:Subscribe>
[Java]       <even:EndTo>
[Java]         <add:Address>tcp://localhost:21000</add:Address>
[Java]       </even:EndTo>
[Java]       <even:Delivery Mode="http://schemas.xmlsoap.org/ws/2004/08/eve
nting/DeliveryModes/Push"/>
[Java]       <even:Expires xsi:type="xs:dateTime" xmlns:xs="http://www.w3.o
rg/2001/XMLSchema">2005-05-27T09:42:29.500-05:00</even:Expires>
[Java]       <even:Filter Dialect="http://www.naradabroking.org/TopicMatc
hing"></Literature/Shakespeare</even:Filter>
[Java]       <even:NotifyTo>
[Java]         <add:Address>tcp://localhost:21000</add:Address>
[Java]       </even:NotifyTo>
[Java]     </even:Subscribe>
[Java]   </Body>
[Java] </Envelope>

```

Figure 9: SOAPMessage – Request at Sink for Subscription to the Topic

Wse Source will receive the SOAPMessage for the subscription from the Wse Sink.

Figure 10: SOAPMessage - Request at Source to the Subscription..depicts the SOAPMessage request at the Wse Source corresponding to the subscription request.

```

C:\ Select C:\WINDOWS\system32\cmd.exe - ant wse-source -Dwse.source.hostname=localhost ...
[Java] LoggingFilter: Received SOAP Message from the Network.
[Java] <Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ad
d="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:even="http://schemas
.xmlsoap.org/ws/2004/08/eventing" xmlns:xsi="http://www.w3.org/2001/XMLSchema-ins
tance">
[Java]   <Header>
[Java]     <add:Action>http://schemas.xmlsoap.org/ws/2004/08/eventing/Subsc
ribe</add:Action>
[Java]     <add:MessageID>0dfaaed5-a73f-4083-a3b9-654a269ff02f</add:Message
ID>
[Java]     <add:From>
[Java]       <add:Address>tcp://localhost:21000</add:Address>
[Java]     </add:From>
[Java]     <add:To>tcp://localhost:19000</add:To>
[Java]   </Header>
[Java]   <Body>
[Java]     <even:Subscribe>
[Java]       <even:EndTo>
[Java]         <add:Address>tcp://localhost:21000</add:Address>
[Java]       </even:EndTo>
[Java]       <even:Delivery Mode="http://schemas.xmlsoap.org/ws/2004/08/eve
nting/DeliveryModes/Push"/>
[Java]       <even:Expires xsi:type="xs:dateTime" xmlns:xs="http://www.w3.o
rg/2001/XMLSchema">2005-05-27T09:42:29.500-05:00</even:Expires>
[Java]       <even:Filter Dialect="http://www.naradabroking.org/TopicMatc
hing"></Literature/Shakespeare</even:Filter>
[Java]       <even:NotifyTo>
[Java]         <add:Address>tcp://localhost:21000</add:Address>
[Java]       </even:NotifyTo>
[Java]     </even:Subscribe>
[Java]   </Body>
[Java] </Envelope>
[Java] CounterFilter: Number of messages from network = 1

```

Figure 10: SOAPMessage - Request at Source to the Subscription.

Wse Source will process the SOAPMessage received from the Wse Sink and store the SOAPMessage in memory and will send the same information to the Wse Subscription Manager.

Figure 11: SOAPMessage response to the subscription at Subscription Manager from Source. depicts the SOAPMessage received from the Wse Source at the Wse Subscription Manager.

```

C:\ Select C:\WINDOWS\system32\cmd.exe - ant wse-sm -Dwse.submanager.hostname=localhos...
[java] LoggingFilter: Received SOAP Message from the Network.
[java] <Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ad
d="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:even="http://schemas
.xmlsoap.org/ws/2004/08/eventing" xmlns:xsi="http://www.w3.org/2001/XMLSchema-ins
tance">
[java]   <Header>
[java]     <add:Action>http://schemas.xmlsoap.org/ws/2004/08/eventing/Subsc
ribeResponse</add:Action>
[java]     <add:MessageID>c45aa73c-6966-45b4-99b2-519549f6d643</add:Message
ID>
[java]     <add:From>
[java]       <add:Address>tcp://localhost:19000</add:Address>
[java]     </add:From>
[java]     <add:To>tcp://localhost:20000</add:To>
[java]   </Header>
[java]   <Body>
[java]     <even:Subscribe xmlns="http://schemas.xmlsoap.org/soap/envelope/
" xmlns:add="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:even="http:
//schemas.xmlsoap.org/ws/2004/08/eventing" xmlns:xsi="http://www.w3.org/2001/XML
Schema-instance">
[java]       <even:EndTo>
[java]         <add:Address>tcp://localhost:21000</add:Address>
[java]       </even:EndTo>
[java]       <even:Delivery Mode="http://schemas.xmlsoap.org/ws/2004/08/eve
nting/DeliveryModes/Push"/>
[java]       <even:Expires xsi:type="xs:dateTime" xmlns:xs="http://www.w3.o
rg/2001/XMLSchema">2005-05-27T09:42:29.500-05:00</even:Expires>
[java]       <even:Filter Dialect="http://www.naradabrokering.org/TopicMatc
hing"/><Literature/Shakespeare</even:Filter>
[java]       <even:NotifyTo>
[java]         <add:Address>tcp://localhost:21000</add:Address>
[java]       </even:NotifyTo>
[java]     </even:Subscribe>
[java]     <even:SubscribeResponse>
[java]       <even:SubscriptionManager>
[java]         <add:Address>tcp://localhost:20000</add:Address>
[java]         <add:ReferenceParameters>
[java]           <even:Identifier>6b73fd37-f31e-4c3e-a54b-1ebff4396fde</eve
n:Identifier>
[java]         </add:ReferenceParameters>
[java]       </even:SubscriptionManager>
[java]       <even:Expires xsi:type="xs:dateTime" xmlns:xs="http://www.w3.o
rg/2001/XMLSchema">2005-05-27T09:42:29.500-05:00</even:Expires>
[java]     </even:SubscribeResponse>
[java]   </Body>
[java] </Envelope>
[java] CounterFilter: Number of messages from network = 1
  
```

Figure 11: SOAPMessage response to the subscription at Subscription Manager from Source.

Wse Source also sends response back to the Wse Sink saying Subscription is received and you can see the response in the SOAPMessage received at the Wse Sink as below in Figure 12: SOAPMessage response at Sink to the subscription to the topic..

```

C:\WINDOWS\system32\cmd.exe - ant wse-sink -Dwse.sink.hostname=localhost -Dws...
[java] LoggingFilter: Received SOAP Message from the Network.
[java] <Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ad
d="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:even="http://schemas
.xmlsoap.org/ws/2004/08/eventing" xmlns:xsi="http://www.w3.org/2001/XMLSchema-ins
tance">
[java]   <Header>
[java]     <add:Action>http://schemas.xmlsoap.org/ws/2004/08/eventing/Subsc
ribeResponse</add:Action>
[java]     <add:RelatesTo>0dfaaed5-a73f-4083-a3b9-654a269ff02f</add:Relates
To>
[java]     <add:MessageID>f5b265ed-f083-4e90-889f-d5bd01cc34e0</add:Message
ID>
[java]     <add:From>
[java]       <add:Address>tcp://localhost:19000</add:Address>
[java]     </add:From>
[java]     <add:To>tcp://localhost:21000</add:To>
[java]   </Header>
[java]   <Body>
[java]     <even:SubscribeResponse>
[java]       <even:SubscriptionManager>
[java]         <add:Address>tcp://localhost:20000</add:Address>
[java]         <add:ReferenceParameters>
[java]           <even:Identifier>6b73fd37-f31e-4c3e-a54b-1ebff4396fde</eve
n:Identifier>
[java]         </add:ReferenceParameters>
[java]       </even:SubscriptionManager>
[java]       <even:Expires xsi:type="xs:dateTime" xmlns:xs="http://www.w3.o
rg/2001/XMLSchema">2005-05-27T09:42:29.500-05:00</even:Expires>
[java]     </even:SubscribeResponse>
[java]   </Body>
[java] </Envelope>
[java] CounterFilter: Number of messages from network = 1
[java] WseSinkFilter: Processing SOAP Context received from the Network.
  
```

Figure 12: SOAPMessage response at Sink to the subscription to the topic.

3.2.2 Status on Existing Subscription:

Now you are subscribed to the 'topic' and you can check the status from the Wse Sink on the existing subscription by issuing following command below.

NOTE: First get the Subscription Identifier from the response received from the Wse Source at Wse Sink.

Status 6b73fd37-f31e-4c3e-a54b-1ebff4396fde (replace it with your own identifier)

```

C:\WINDOWS\system32\cmd.exe - ant wse-sink -Dwse.sink.hostname=localhost -Dws...
status 6b73fd37-f31e-4c3e-a54b-1ebff4396fde
[java] WseSinkEndpoint: The CREATED GetStatus Request is
[java] <Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ad
d="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:even="http://schemas
.xmlsoap.org/ws/2004/08/eventing">
[java]   <Header>
[java]     <add:Action>http://schemas.xmlsoap.org/ws/2004/08/eventing/GetSt
atus</add:Action>
[java]     <add:MessageID>f3f27b8e-7941-4e76-a1dc-086b9f7726bb</add:Message
ID>
[java]     <add:From>
[java]       <add:Address>tcp://localhost:21000</add:Address>
[java]     </add:From>
[java]     <add:To>tcp://localhost:20000</add:To>
[java]     <even:Identifier>6b73fd37-f31e-4c3e-a54b-1ebff4396fde</even:Iden
tifier>
[java]   </Header>
[java]   <Body>
[java]     <even:GetStatus/>
[java]   </Body>
[java] </Envelope>
  
```

Figure 13: SOAPMessage request at Sink to the status on subscription.

Figure 14: SOAPMessage response at Sink to the status request depicts the status response received from the Wse Subscription Manager.

```

C:\ Select C:\WINDOWS\system32\cmd.exe - ant wse-sink -Dwse.sink.hostname=localhost -Dws...
[java] LoggingFilter: Received SOAP Message from the Network.
[java] <Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ad
d="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:even="http://schemas
.xmlsoap.org/ws/2004/08/eventing" xmlns:xsi="http://www.w3.org/2001/XMLSchema-in
stance">
[java]   <Header>
[java]     <add:Action>http://schemas.xmlsoap.org/ws/2004/08/eventing/GetSt
atusResponse</add:Action>
[java]     <add:RelatesTo>f3f27b8e-7941-4e76-a1dc-086b9f7726bb</add:Relates
To>
[java]     <add:MessageID>b3ebee83-ed54-4718-abe4-cb11bdaf0cef</add:Message
ID>
[java]     <add:From>
[java]       <add:Address>tcp://localhost:20000</add:Address>
[java]     </add:From>
[java]     <add:To>tcp://localhost:21000</add:To>
[java]   </Header>
[java]   <Body>
[java]     <even:GetStatusResponse>
[java]       <even:Expires xsi:type="xs:dateTime" xmlns:xs="http://www.w3.o
rg/2001/XMLSchema">2005-05-27T09:42:29.500-05:00</even:Expires>
[java]     </even:GetStatusResponse>
[java]   </Body>
[java] </Envelope>
  
```

Figure 14: SOAPMessage response at Sink to the status request

3.2.3 Renew Existing Subscription:

You can renew the subscription from the Wse Sink on the existing subscription by issuing following command below.

NOTE: First get the Subscription Identifier from the response received from the Wse Source at the Wse Sink.

renew 6b73fd37-f31e-4c3e-a54b-1ebff4396fde (replace it with your own identifier)

Figure 15: SOAPMessage response at Sink to renew request depicts response received from the Wse Subscription Manager for renew request at the Wse Sink.

```

C:\ Select C:\WINDOWS\system32\cmd.exe - ant wse-sink -Dwse.sink.hostname=localhost -Dws...
[java] WseSinkFilter: Processing SOAP Context received from the Network.
[java] WseSinkFilter: <Envelope xmlns="http://schemas.xmlsoap.org/soap/enve
lope/" xmlns:add="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:even="
http://schemas.xmlsoap.org/ws/2004/08/eventing" xmlns:xsi="http://www.w3.org/200
1/XMLSchema-instance">
[java]   <Header>
[java]     <add:Action>http://schemas.xmlsoap.org/ws/2004/08/eventing/Renew
Response</add:Action>
[java]     <add:RelatesTo>438f8009-07e9-4a4d-98b8-eb08e2e1b866</add:Relates
To>
[java]     <add:MessageID>3fe68353-5adb-4348-beb6-2edf0d4729b9</add:Message
ID>
[java]     <add:From>
[java]       <add:Address>tcp://localhost:20000</add:Address>
[java]     </add:From>
[java]     <add:To>tcp://localhost:21000</add:To>
[java]   </Header>
[java]   <Body>
[java]     <even:RenewResponse>
[java]       <even:Expires xsi:type="xs:dateTime" xmlns:xs="http://www.w3.o
rg/2001/XMLSchema">2005-06-27T09:49:47.890-05:00</even:Expires>
[java]     </even:RenewResponse>
[java]   </Body>
[java] </Envelope>
  
```

Figure 15: SOAPMessage response at Sink to renew request

3.2.4 Unsubscribe Existing Subscription:

You can unsubscribe to the subscription from the Wse Sink on the existing subscription by issuing following command below.

NOTE: First get the Subscription Identifier from the response received from the Wse Source at the Wse Sink.

unsub 6b73fd37-f31e-4c3e-a54b-1ebff4396fde (replace it with your own identifier)

```

C:\ Select C:\WINDOWS\system32\cmd.exe - ant wse-sink -Dwse.sink.hostname=localhost -Dws...
unsub 6b73fd37-f31e-4c3e-a54b-1ebff4396fde
[Java] WseSinkEndpoint: The CREATED Unsubscribe Request is
[Java] <Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ad
d="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:even="http://schemas
.xmlsoap.org/ws/2004/08/eventing">
[Java]   <Header>
[Java]     <add:Action>http://schemas.xmlsoap.org/ws/2004/08/eventing/Unsub
scribe</add:Action>
[Java]   <add:MessageID>096eff20-f9a3-45e0-ae85-b79b1eae0c94</add:Message
ID>
[Java]   <add:From>
[Java]     <add:Address>tcp://localhost:21000</add:Address>
[Java]   </add:From>
[Java]   <add:To>tcp://localhost:20000</add:To>
[Java]   <even:Identifier>6b73fd37-f31e-4c3e-a54b-1ebff4396fde</even:Iden
tifier>
[Java]   </Header>
[Java]   <Body>
[Java]     <even:Unsubscribe/>
[Java]   </Body>
[Java] </Envelope>
    
```

Figure 16: SOAPMessage request at Sink to unsubscribe

Figure 17: SOAPMessage request at Subscription Manager from Sink to unsubscribe depicts the response received at the Wse Subscription Manager for renew request from the Wse Sink.

```

C:\ Select C:\WINDOWS\system32\cmd.exe - ant wse-sink -Dwse.sink.hostname=localhost -Dws...
[Java] LoggingFilter: Received SOAP Message from the APPLICATION.
[Java] <Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ad
d="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:even="http://schemas
.xmlsoap.org/ws/2004/08/eventing">
[Java]   <Header>
[Java]     <add:Action>http://schemas.xmlsoap.org/ws/2004/08/eventing/Unsub
scribe</add:Action>
[Java]   <add:MessageID>096eff20-f9a3-45e0-ae85-b79b1eae0c94</add:Message
ID>
[Java]   <add:From>
[Java]     <add:Address>tcp://localhost:21000</add:Address>
[Java]   </add:From>
[Java]   <add:To>tcp://localhost:20000</add:To>
[Java]   <even:Identifier>6b73fd37-f31e-4c3e-a54b-1ebff4396fde</even:Iden
tifier>
[Java]   </Header>
[Java]   <Body>
[Java]     <even:Unsubscribe/>
[Java]   </Body>
[Java] </Envelope>
    
```

Figure 17: SOAPMessage request at Subscription Manager from Sink to unsubscribe

Wse Subscription Manager will responds to Unsubscribe request from the Wse Sink shown in Figure 18.

```

C:\ Select C:\WINDOWS\system32\cmd.exe - ant wse-sm -Dwse.submanager.hostname=localhost...
[java] WseSubscriptionManagerProcessor: Trying to unsubscribe subscriptionID =>6b73fd37-f31e-4c3e-a54b-1ebff4396fde
[java] SubscriptionManagement: Deleted entry corresponding to [6b73fd37-f31e-4c3e-a54b-1ebff4396fde]
[java] CounterFilter: Number of messages from application = 4
[java] LoggingFilter: Received SOAP Message from the APPLICATION.
[java] <Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ad
d="http://schemas.xmlsoap.org/ws/2004/08/addressing">
[java]   <Header>
[java]     <add:Action>http://schemas.xmlsoap.org/ws/2004/08/eventing/Unsub
scribeResponse</add:Action>
[java]     <add:RelatesTo>096eff20-f9a3-45e0-ae85-b79b1eae0c94</add:Relates
To>
[java]     <add:MessageID>75fc59ec-6f7a-49eb-938b-d9264c57f3d9</add:Message
ID>
[java]     <add:From>
[java]       <add:Address>tcp://localhost:20000</add:Address>
[java]     </add:From>
[java]     <add:To>tcp://localhost:21000</add:To>
[java]   </Header>
[java]   <Body/>
[java] </Envelope>

[java] NBNetworkSubstrate: Will send SOAPMessage to [tcp://localhost:21000]

```

Figure 18: SOAPMessage response at Sink for unsubscribe request

Wse Subscription Manager will send Unsubscribe response to the Wse Sink and notifies the Wse Source that, subscription will be deleted as per the request from the Wse Sink.

SOAPMessage received at the Wse Source from the Wse Subscription Manager as follows at Source Endpoint.

```

C:\ Select C:\WINDOWS\system32\cmd.exe - ant wse-source -Dwse.source.hostname=localhost ...
[java] WseSourceFilter: Processing SOAP Context received from the Network.
[java] WseSourceFilter: <Envelope xmlns="http://schemas.xmlsoap.org/soap/en
velope/" xmlns:even="http://schemas.xmlsoap.org/ws/2004/08/eventing" xmlns:add="
http://schemas.xmlsoap.org/ws/2004/08/addressing">
[java]   <Header>
[java]     <even:Identifier>6b73fd37-f31e-4c3e-a54b-1ebff4396fde</even:Iden
tifier>
[java]     <add:Action>http://schemas.xmlsoap.org/ws/2004/08/eventing/Unsub
scribeResponse</add:Action>
[java]     <add:MessageID>005029b6-c310-4203-8f96-7bf6d7cec5a9</add:Message
ID>
[java]     <add:From>
[java]       <add:Address>tcp://localhost:20000</add:Address>
[java]     </add:From>
[java]     <add:To>tcp://localhost:19000</add:To>
[java]   </Header>
[java]   <Body/>
[java] </Envelope>
[java] WseSourceProcessor: Trying to unsubscribe subscriptionID =>6b73fd37-
f31e-4c3e-a54b-1ebff4396fde
[java] SubscriptionManagement: Deleted entry corresponding to [6b73fd37-f31
e-4c3e-a54b-1ebff4396fde]
[java] FilterPipelineImpl: Processing being terminated at position <0> with
in the input filter pipeline

```

Figure 19: SOAPMessage response at Souce to unsubscribe request

3.4 Send Notification SOAPMessage from Source:

After successful subscriptions, you can send Notifications from the Wse Source to registered Sink's by issuing following command from Source.

'S' will send topic matching Notifications to the Wse Sink's as follows. SOAPMessage generated at the Wse Source as follows.

```

C:\> Select C:\WINDOWS\system32\cmd.exe - ant wse-source -Dwse.source.hostname=localhost ...
h
  [java] Create Link      -> cr hostname portNum
  [java] Send Data [from] [to] -> s [source] [sink]
$
  [java] WseSourceFilter: Processing SOAP Context received from the APPLICATION.
  [java] WseSourceFilter: <Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/" xmlns:top="http://www.naradabrokering.org/TopicMatching" xmlns:add="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:eas="http://openuri.org/easyp" xmlns:cat="http://www.naradabrokering.org/catalog" xmlns:nar="http://www.naradabrokering.org">
  [java]   <Header>
  [java]     <top:Topic>/Literature/Shakespeare</top:Topic>
  [java]     <add:MessageID>db123c8a-7713-429a-9ee2-83a5dabaaa9d</add:MessageID>
  [java]     <add:From>
  [java]       <add:Address>tcp://localhost:19000</add:Address>
  [java]     </add:From>
  [java]   </Header>
  [java]   <eas:purchase-order>
  [java]     <eas:line-item>
  [java]       <eas:price>300</eas:price>
  [java]     </eas:line-item>
  [java]   </eas:purchase-order>
  [java]   <Body>
  [java]     <cat:catalog>
  [java]       <cat:cd>
  [java]         <cat:price>11.90</cat:price>
  [java]         <nar:Application-Content>Tracker :1
  [java]         The quick brown fox jumps upon the lazy dog</nar:Application-Content>
  [java]       </cat:cd>
  [java]     </cat:catalog>
  [java]   </Body>
  [java] </Envelope>
  
```

Figure 20: SOAPMessage Notification generated at Source

Notification SOAPMessage received at the Wse Sink as follows.

```

C:\> Select C:\WINDOWS\system32\cmd.exe - ant wse-sink -Dwse.sink.hostname=localhost -Dws...
  [java] WseSinkFilter: Processing SOAP Context received from the Network.
  [java] WseSinkFilter: <Envelope xmlns="http://schemas.xmlsoap.org/soap/envelope/" xmlns:top="http://www.naradabrokering.org/TopicMatching" xmlns:add="http://schemas.xmlsoap.org/ws/2004/08/addressing" xmlns:eas="http://openuri.org/easyp" xmlns:cat="http://www.naradabrokering.org/catalog" xmlns:nar="http://www.naradabrokering.org">
  [java]   <Header>
  [java]     <add:To>tcp://localhost:21000</add:To>
  [java]     <top:Topic>/Literature/Shakespeare</top:Topic>
  [java]     <add:MessageID>db123c8a-7713-429a-9ee2-83a5dabaaa9d</add:MessageID>
  [java]     <add:From>
  [java]       <add:Address>tcp://localhost:19000</add:Address>
  [java]     </add:From>
  [java]   </Header>
  [java]   <eas:purchase-order>
  [java]     <eas:line-item>
  [java]       <eas:price>300</eas:price>
  [java]     </eas:line-item>
  [java]   </eas:purchase-order>
  [java]   <Body>
  [java]     <cat:catalog>
  [java]       <cat:cd>
  [java]         <cat:price>11.90</cat:price>
  [java]         <nar:Application-Content>Tracker :1
  [java]         The quick brown fox jumps upon the lazy dog</nar:Application-Content>
  [java]       </cat:cd>
  [java]     </cat:catalog>
  [java]   </Body>
  [java] </Envelope>
  
```

Figure 21: SOAPMessage notification received at Sink