An Oracle White Paper
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OpenLDAP – Oracle Enterprise Gateway Integration Guide

Disclaimer

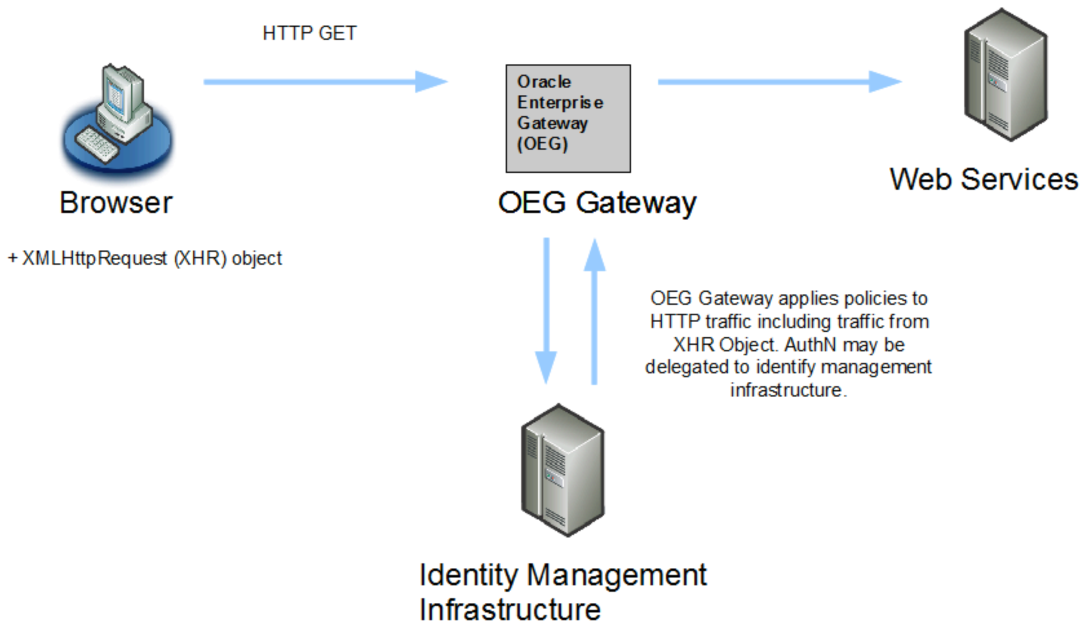
1. Introduction

1.1. Purpose

This document describes how to configure the Gateway to authenticate via an LDAP directory server and to extract attributes/roles from the LDAP repository. This will be demonstrated by the following:

1. The Gateway will be configured to authenticate a user located in a LDAP directory.
2. Upon successful authentication the Gateway will be configured to extract attributes belonging to this user from the LDAP directory.
3. A SAML Authentication Assertion will be injected into the message as proof of the authentication event, which can then be consumed by a downstream SAML-aware Web Service.

Flow of request:


HTTP GET
Browser
+ XMLHttpRequest (XHR) object
Oracle Enterprise Gateway (OEG)
OEG Gateway
Web Services
OEG Gateway applies policies to HTTP traffic including traffic from XHR Object. AuthN may be delegated to identify management infrastructure.
Identity Management Infrastructure

This guide applies to OEG software products, from version 6.x upwards.
In this guide the LDAP Server used is **OpenLDAP.**

1.2. LDAP Architecture

LDAP refers to *Lightweight Directory Access Protocol.* LDAP is based on a simplified version of X.500 directories. It is used to access a hierarchical directory of information on a directory server.

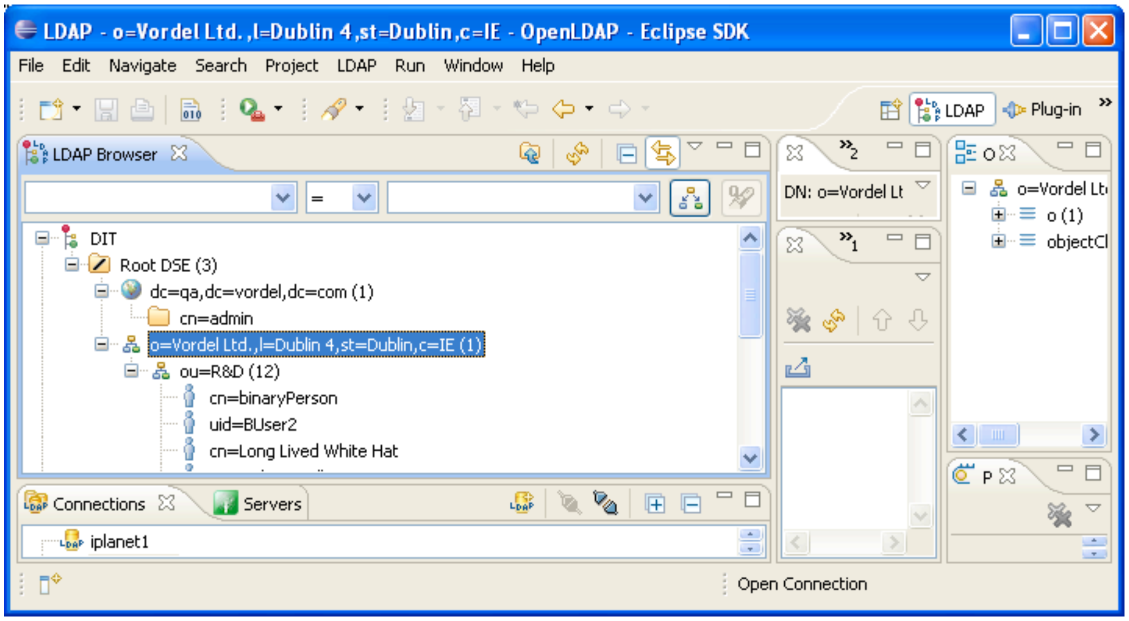
1.3. Setup Used for this Guide:

- OEG Gateway 11.1.1.x
- OpenLDAP 2.2.29 for Windows
- Apache Directory Studio (used as LDAP browser)

2. Directory Details

2.1. Directory Structure

The details of this directory are displayed here in a LDAP browser:


LDAP - o=Vordel Ltd.,l=Dublin 4,st=Dublin,c=IE - OpenLDAP - Eclipse SDK
File Edit Navigate Search Project LDAP Run Window Help
LDAP Plug-in
LDAP Browser
DN: o=Vordel Lt
o=Vordel Lt
o (1)
objectCl
Connections
Servers
Open Connection

```
DIT
  Root DSE (3)
    dc=qa,dc=vordel,dc=com (1)
      cn=admin
    o=Vordel Ltd.,l=Dublin 4,st=Dublin,c=IE (1)
      ou=R&D (12)
        cn=binaryPerson
        uid=BUser2
        cn=Long Lived White Hat
```

```
iplanet1
```

2.2. Connection Details

The connection details for this LDAP directory is as follows:

- LDAP URL: ldap://openldap.qa.vordel.com:389
- user: cn=admin,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE
- password: vordel

NOTE: The connection details will differ depending on the local implementation and is defined by the Directory Administrator. As these details are going to be used in the configuration of the Gateway, it is useful to reference them here for purpose of this guide.

3. Authenticate User with HTTP Basic HTTP Filter

3.1. Create a policy to authenticate a user in the LDAP directory

The first policy that will be created is to authenticate an existing user located in OpenLDAP. Before creating this policy it will be necessary to create a LDAP Connection and a LDAP Repository.

Creating a policy to authenticate an existing user located in an LDAP directory:

1. Click on **External Connections** on the left hand side of **Policy Studio**
2. Expand the **External Connections** Tree on the left hand side of **Policy Studio**
3. Right Click on **LDAP Connections** and Click **Add a LDAP Connection**
4. **Name:** For this guide '**OpenLDAP'** is used
5. For the **Type** dropdown box select "Simple"
6. Enter the Connection details to connect to the LDAP directory
7. **Realm:** Leave blank
8. Click on **Test Connection** to verify that the connection to the LDAP database has been configured successfully
9. Click on **OK**
10. The new **LDAP Connection** should be visible in the **LDAP Connections** Tree
11. Within the **External Connections** Tree expand the **Authentication Repository Profiles** Tree
12. Right Click on **LDAP Repositories** and Click **Add a new Repository**
13. **Repository Name:** For this guide '**OpenLDAP'** is used
14. **LDAP Store:** For the **LDAP Directory** choose the previously created LDAP connection '**Active Directory'** from the drop down list
15. Now the **User Search Conditions needs** to be specified
16. For this guide the following details are used based on the Directory information above:
    - **Base Criteria:** ou=R&D,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE
    - **User Class: Person**
    - **User Search Attribute: cn**

17. For "**Attributes for use in subsequent filters"** the following values are used:
    - **Login Authentication Attribute: This can be left blank**
    - **Authorization Attribute: cn**
    - **Authorization Attribute Format: User Name**
18. Click on **OK**
19. The new **LDAP Repository** should now be visible in the **LDAP Repositories** Tree

20. Click on **Policies** and then Right Click on the **Policies** Tree on the left hand side of **Policy Studio**
21. Click **Add Policy** and name the Policy '**OpenLDAP'**
22. Click on the Policy and drag a "**HTTP Basic" filter** located in the "**Authentication" group** of the filter palette located on the right hand side of Policy Studio
23. Name of the filter can be left default or changed to any descriptive name.
24. **Credential Format:** select User Name from the drop down list
25. **Repository Name:** For this guide '**OpenLDAP'** is chosen from the drop down list
26. Click on **Finish**
27. The HTTP Basic filter is now properly configured and for testing purposes a "**Reflect" filter** will be added
28. Drag a reflect filter from the "**Utility" palette** and connect the HTTP Basic filter to it with a success path connector.

Explanation of values used in Step 16:

There are 2 steps involved when using the LDAP Authentication filter to authenticate a user:

1. Retrieve the user's Distinguished Name (DName) from the LDAP directory using search criteria.
2. Bind to the LDAP directory using the retrieved Distinguished Name (DName) and the user's password.

Step1: Retrieve the User's DName
The first step is to find the entry for the user in the Directory Server using search criteria. If "qauser" needs to be authenticated and the setup is used as per step 17:

- **Base Criteria:** ou=R&D,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE
- **User Class:** Person
- **User Search Attribute:** cn

The following LDAP search filter will be generated from these settings:
(&(objectclass=Person)(cn=qauser))

The search filter can be described as follows:
Look for the object in the hierarchy of type "Person", where the attribute "cn" can be used to identify the user in the hierarchy under the base object "R&D".

In general, the two fields **User Class** and **User Search Attribute** from the search criteria section are combined to create a search filter of the form:

(&(objectclass=****User Class value goes here *****)(****User Search Attribute goes here ****=****Authentication username from HTTP Header goes here ****))
If the user is found in the Directory Server, the Distinguished Name is returned, in this case:
cn=qauser,ou=R&D,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE

Step 2: Bind to the LDAP Directory
Once the user is found the second step is for the Gateway to attempt to "bind" to the Directory Server on behalf of the user, using the Distinguished Name returned from the search and the password provided by the user for authentication. If the Gateway can bind to the Directory Server on behalf of the client then the HTTP Basic authentication filter will pass otherwise it will fail.

In the "Login Authentication Attribute" dropdown field, user friendly strings map to the following:

Entry Domain Name=entrydn
Distinguished name=distinguishedName
By leaving the “Login Authentication Attribute” blank the Gateway will automatically establish the correct value by looking at the API runtime if supported.

The key to working out what to put in the "Login Authentication Attribute" field if leaving it blank does not work is to work out what attribute is storing the Distinguished Name, for example OpenLDAP stores this in the "creatorsName" attribute.

Explanation of values used in Step 17:
The Authentication Repository configuration window also has a section titled “**Attributes for use in subsequent filters**”.
For integration with OpenLDAP, this section has been configured as follows:

- Login Authentication Attribute: Distinguished Name (or can be left blank)
- Authorization Attribute: cn
- Authorization Attribute Format: User Name

In the **"Attributes for use in subsequent filters"** section, the following fields are available:

1. **Login Authentication Attribute**:
   As stated earlier, the attribute specified here is used to uniquely identify the user in the LDAP directory.Typically this attribute contains the DName of the user and is used in the “bind” operation.

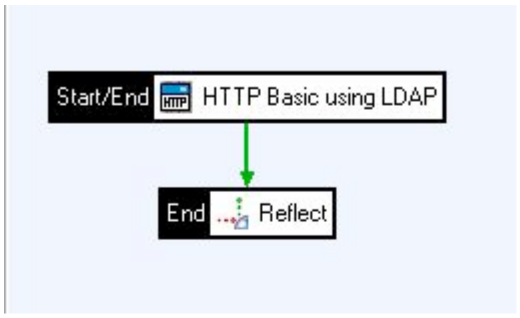
2. **Authorization Attribute:**

Once the client has been successfully authenticated, it is possible to use any one of that user's stored attributes in a subsequent Authorization Filter. In this case we simply want to use the user's Distinguished Name for an Authorization Filter, so we enter "cn" into the dropdown. However, any user attribute could be entered here, as long as the subsequent Authorization Filter supports it. The value of the LDAP attribute specified here will be stored in the authentication.subject.id Vordel message attribute.

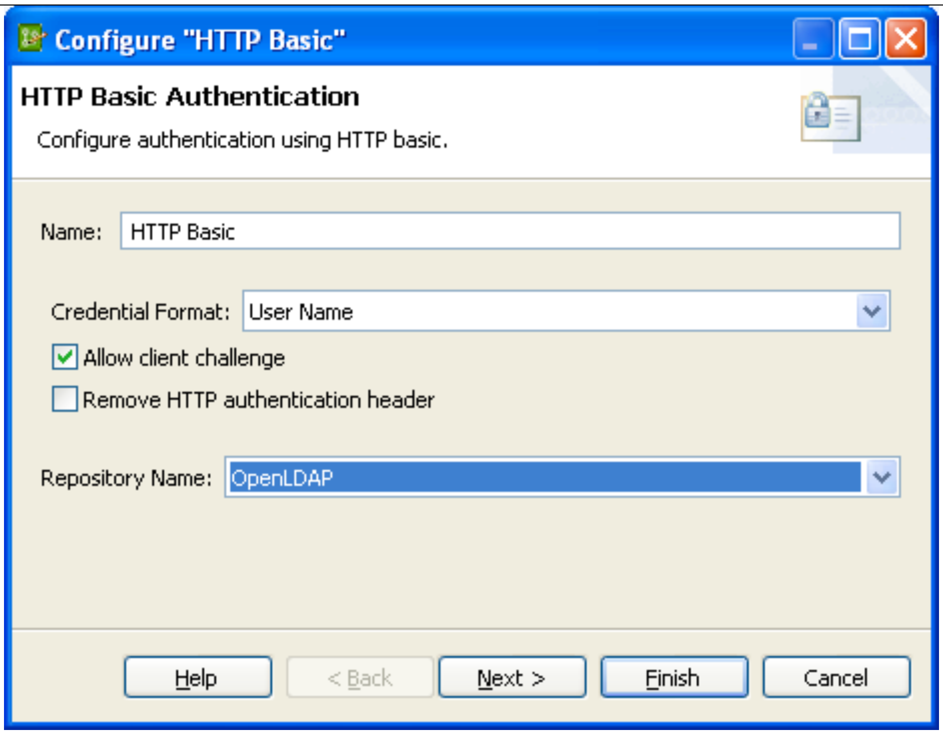
3. **Authorization Attribute Format:**
   Since any user attribute can be specified in the **Authorization Attribute** above, it is necessary to inform the Gateway of the type of this attribute. This information will be used internally by the Gateway in subsequent Authorization Filters. Simply select "User Name" from the dropdown.

NOTE: The settings referred to here are specific to the OpenLDAP being used for purpose of this guide and will differ from case to case.

The completed Policy will look as follows:



The configuration of the HTTP Basic filter as described above:



Configure "HTTP Basic"

HTTP Basic Authentication

Configure authentication using HTTP basic.

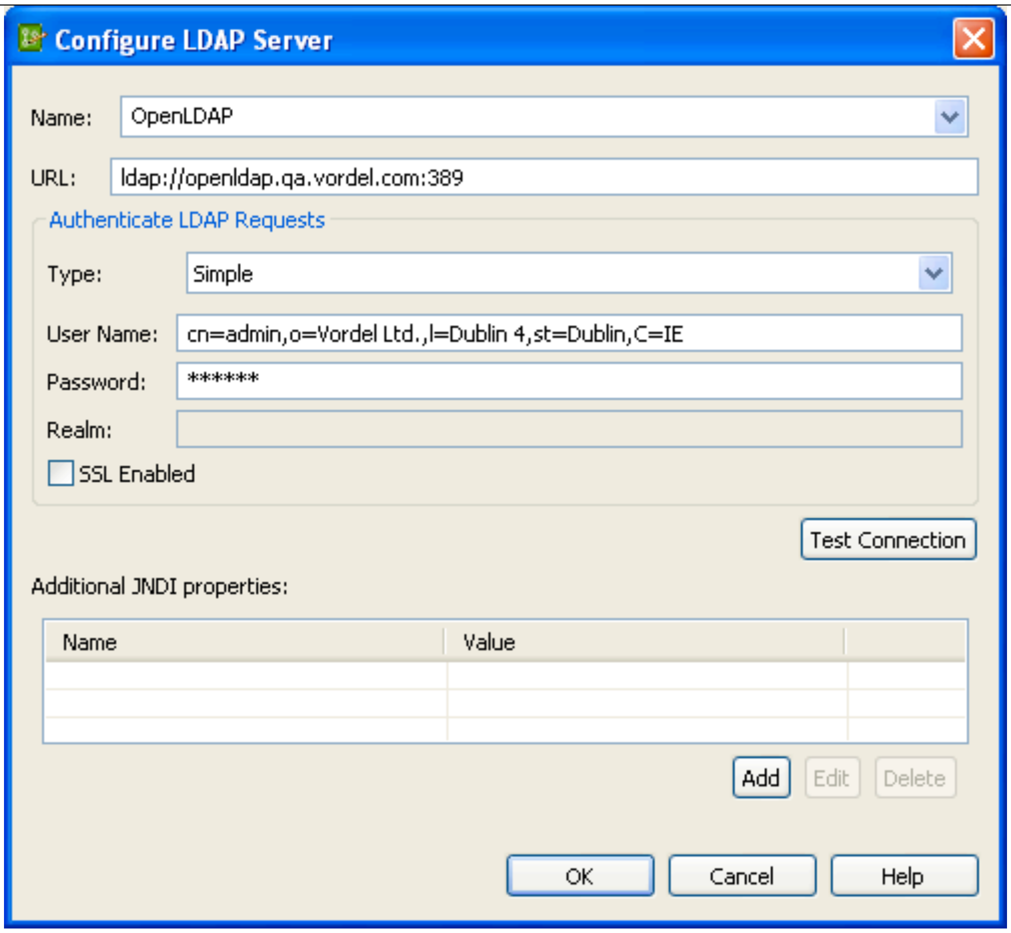
Name: HTTP Basic

Credential Format: User Name

- [✓] Allow client challenge
- [ ] Remove HTTP authentication header

Repository Name: OpenLDAP

The Connection settings for the LDAP directory:



Configure LDAP Server

Name:	OpenLDAP
URL:	ldap://openldap.qa.vordel.com:389

Authenticate LDAP Requests

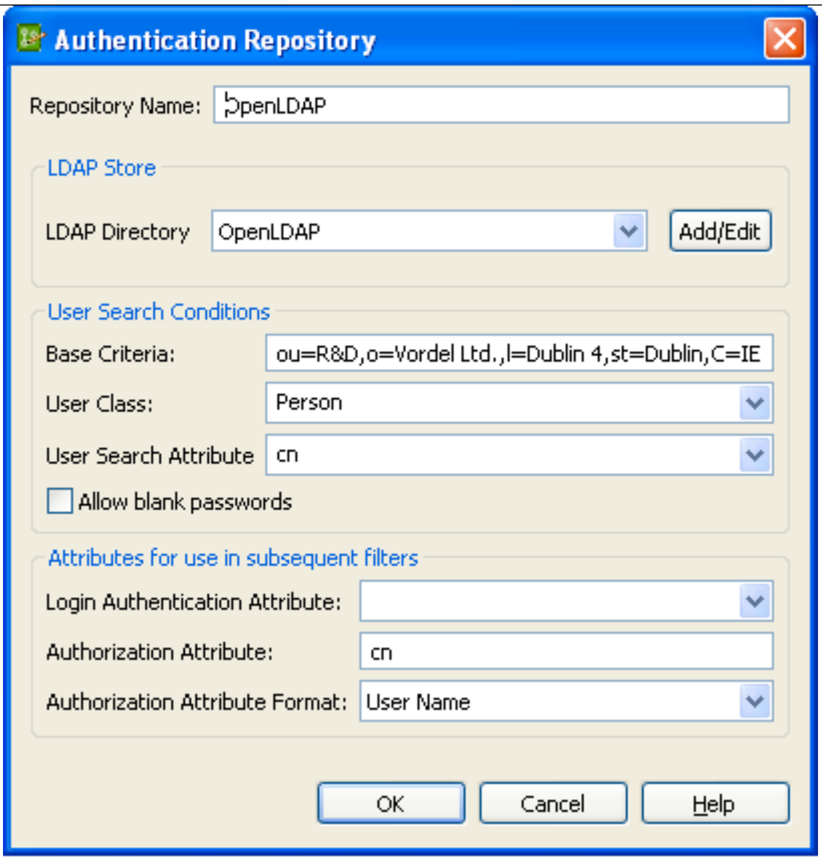
Type:	Simple
User Name:	cn=admin,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE
Password:	******
Realm:	

☐ SSL Enabled

Additional JNDI properties:

Name	Value

The Authentication Repository configuration:


Authentication Repository
LDAP Store
User Search Conditions
Attributes for use in subsequent filters
Add/Edit
OK
Cancel
Help

Repository Name: OpenLDAP

LDAP Directory: OpenLDAP

Base Criteria: ou=R&D,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE

User Class: Person

User Search Attribute: cn

[ ] Allow blank passwords

Login Authentication Attribute:

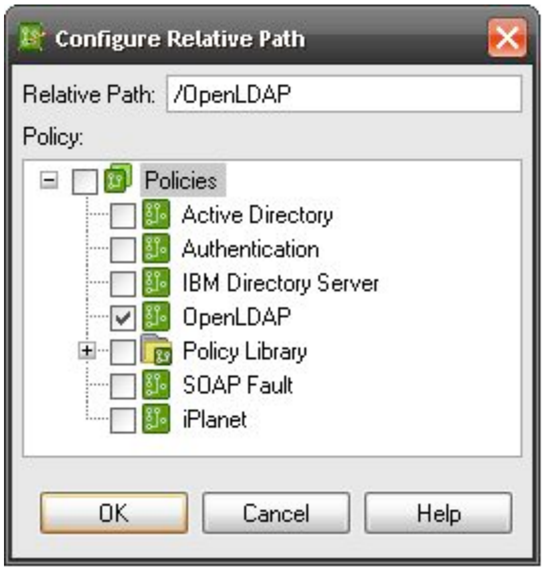
Authorization Attribute: cn

Authorization Attribute Format: User Name

3.2. Create a new relative path for the Policy

- Open **Policy Studio**
- Expand **Processes** and then **OEG Gateway**
- Right Click on **Default Services** and select "Add Relative Path"
- Name the Relative path as follows: /OpenLDAP
- Map the path to the newly created policy titled "OpenLDAP"
- Click **OK**

The Add a relative path window:



3.3. Ensure policies are updated on the Gateway

- Open the **Policy Studio**
- Click on **Settings**
- Select **Deploy** to ensure that the changes made are propagated to the live Gateway.

3.4. Test the configuration in OEG Service Explorer

To test the policy OEG Service Explorer can be used to send through a message embedded with user credentials (Username/Password)

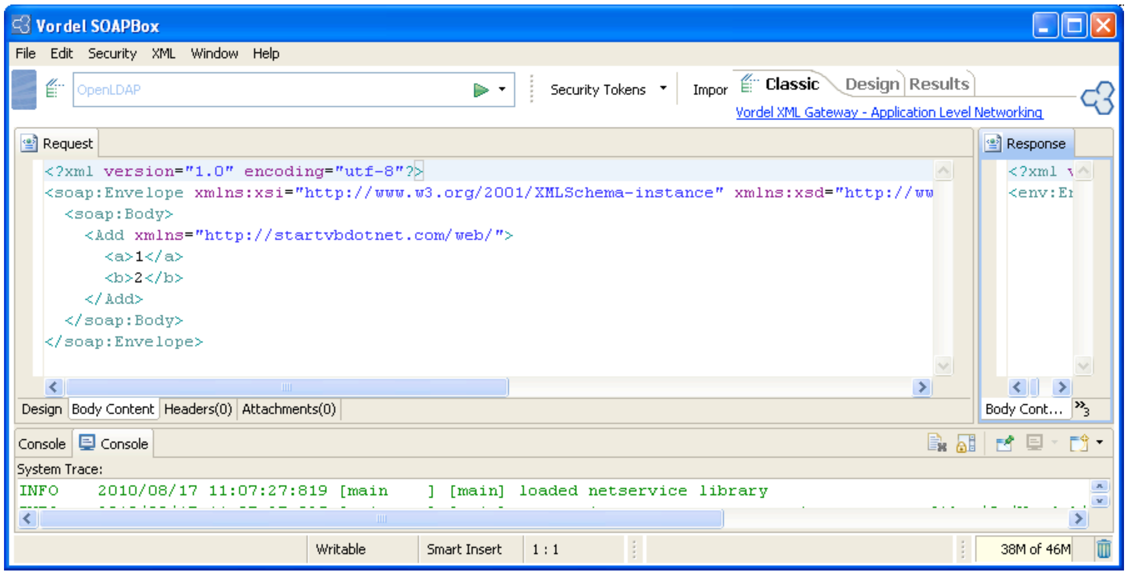
Set up a message in OEG Service Explorer

1. Open **OEG Service Explorer**
2. Load a message request
3. Click on '**Request Settings'** on the drop down list on the green '**Send Request'** button
4. Make sure that the URL is set correctly. In this case it will be http://localhost:8080/OpenLDAP
5. Click on the '**Security'** tab
6. Click on the **HTTP Authentication** tab
7. Select **HTTP Basic**
8. Enter the **Username** and **Password** of the user that will be Authenticated via LDAP
9. User Credentials:

- User: admin
- Password: vordel

10. Click on **Run**
11. The message would now have been sent through

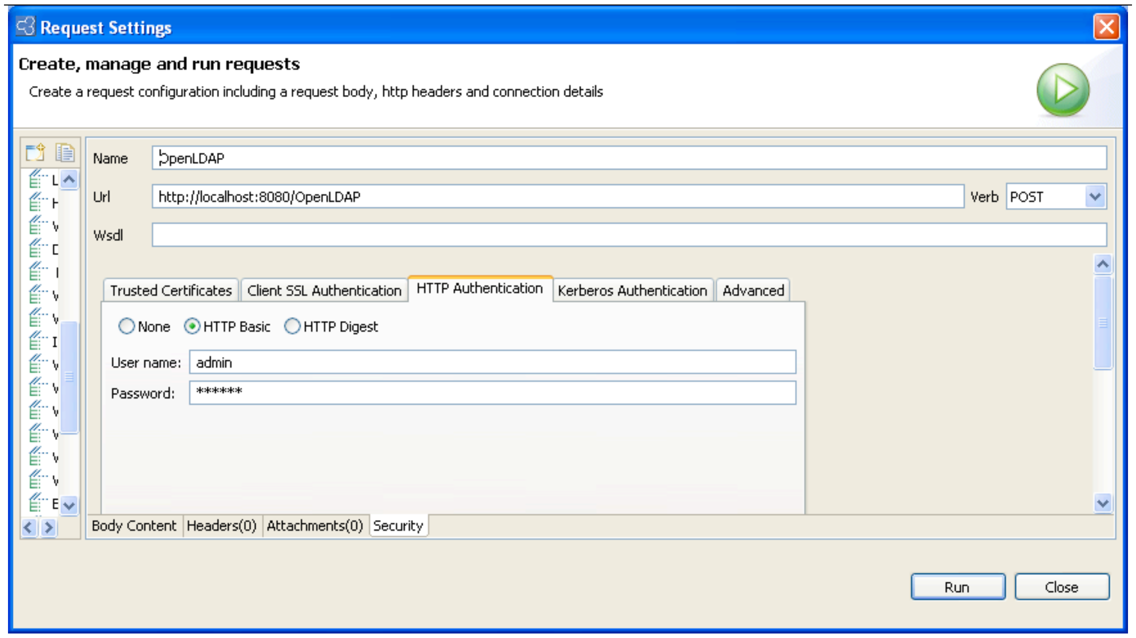
The Message loaded and Connection Settings option:



```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://ww
  <soap:Body>
    <Add xmlns="http://startvbdotnet.com/web/">
      <a>1</a>
      <b>2</b>
    </Add>
  </soap:Body>
</soap:Envelope>
```

```
INFO    2010/08/17 11:07:27:819 [main    ] [main] loaded netservice library
```

The Connection Settings Screen:



Request Settings

Create, manage and run requests

Create a request configuration including a request body, http headers and connection details

Name: OpenLDAP

Url: http://localhost:8080/OpenLDAP

Verb: POST

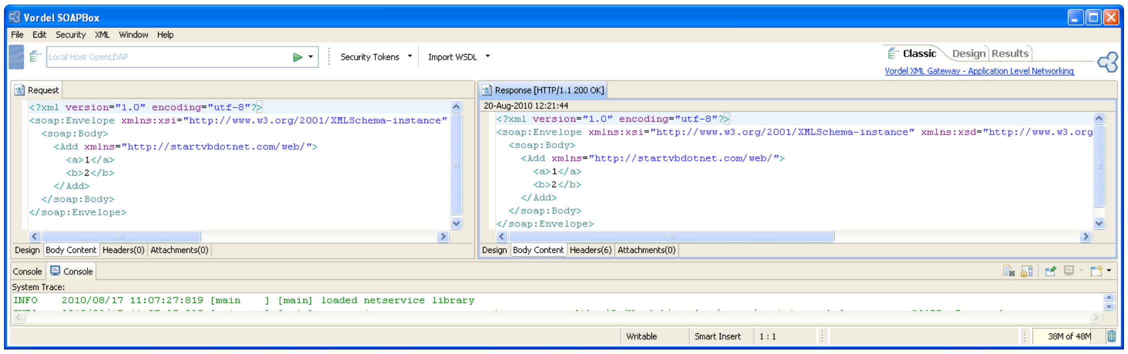
Wsdl:

HTTP Authentication: None [✓ HTTP Basic] HTTP Digest

User name: admin

Password: ******

The Message Request with Embedded User credentials was processed and authenticated successfully via LDAP:



Request

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  <soap:Body>
    <Add xmlns="http://startvbdotnet.com/web/">
      <a>1</a>
      <b>2</b>
    </Add>
  </soap:Body>
</soap:Envelope>
```

Response [HTTP/1.1 200 OK]

20-Aug-2010 12:21:44

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org
  <soap:Body>
    <Add xmlns="http://startvbdotnet.com/web/">
      <a>1</a>
      <b>2</b>
    </Add>
  </soap:Body>
</soap:Envelope>
```

System Trace:

```
INFO    2010/08/17 11:07:27:819 [main    ] [main] loaded netservice library
```

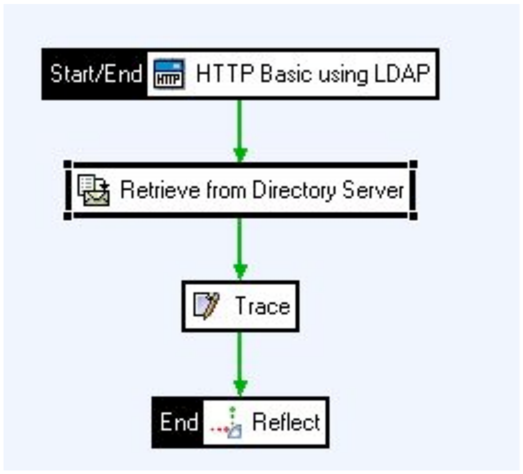
4. Adding a Retrieve from Directory Server filter

By having successfully authenticated a user from using an LDAP lookup, it is now possible to retrieve attributes from this user.

4.1. Modifying the Policy to include an "Retrieve from Directory Server" filter

1. Open **Policy Studio**
2. Click the "**OpenLDAP**" policy
3. From the "**Attributes" group** in the filter palette drag a "**Retrieve from Directory Server" filter** to the circuit
4. Also drag a "**Trace" filter** from the "**Utilities" group** of the filter palette.
5. The flow of the filters should now be, HTTP Basic->Retrieve from Directory Server->Trace->Reflect all connected with success path connectors

The modified Policy:



4.2. Configuring the Retrieve from Directory Server Filter:

1. **LDAP Directory:** (choose LDAP directory from the drop down list as configured in section 2)
2. **Retrieve Unique User Identity:** Two options are available here to choose from
   - From **Message Attribute**: select "authentication.subject.id" (as this attribute is provided by having authenticated using the Basic HTTP filter) Select this option if the user ID is stored in a message attribute. A user's credentials are stored in the `authentication.subject.id` message attribute after

authenticating to the Gateway and so this is the most likely attribute to enter in this field. Typically this will contain the Distinguished Name (DName) or username of the authenticated user. The name extracted from the selected message attribute will be used to query the directory server.
Use the Steps 3 and 4 below

- From **LDAP Search**: This option can be used to specify a search location in the directory for a required attribute.

Select this option to configure the Gateway to retrieve the user's identity from an LDAP search. Click the **Configure Directory Search** button to configure the search criteria to use to retrieve the user's identity. This option can be selected in cases where the `authentication.subject.id` attribute has not been pre-populated by an authentication filter. In this case the user's unique Distinguished Name must be retrieved from the LDAP repository.

Use the Steps 5 and 6 below

Retrieve Unique User Identity from Message Attribute:-

3. **Base Criteria:** ou=R&D,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE
4. **Search Filter:** (&(objectclass=Person)(cn=${authentication.subject.id}))

Retrieve Unique User Identity from LDAP Search:-

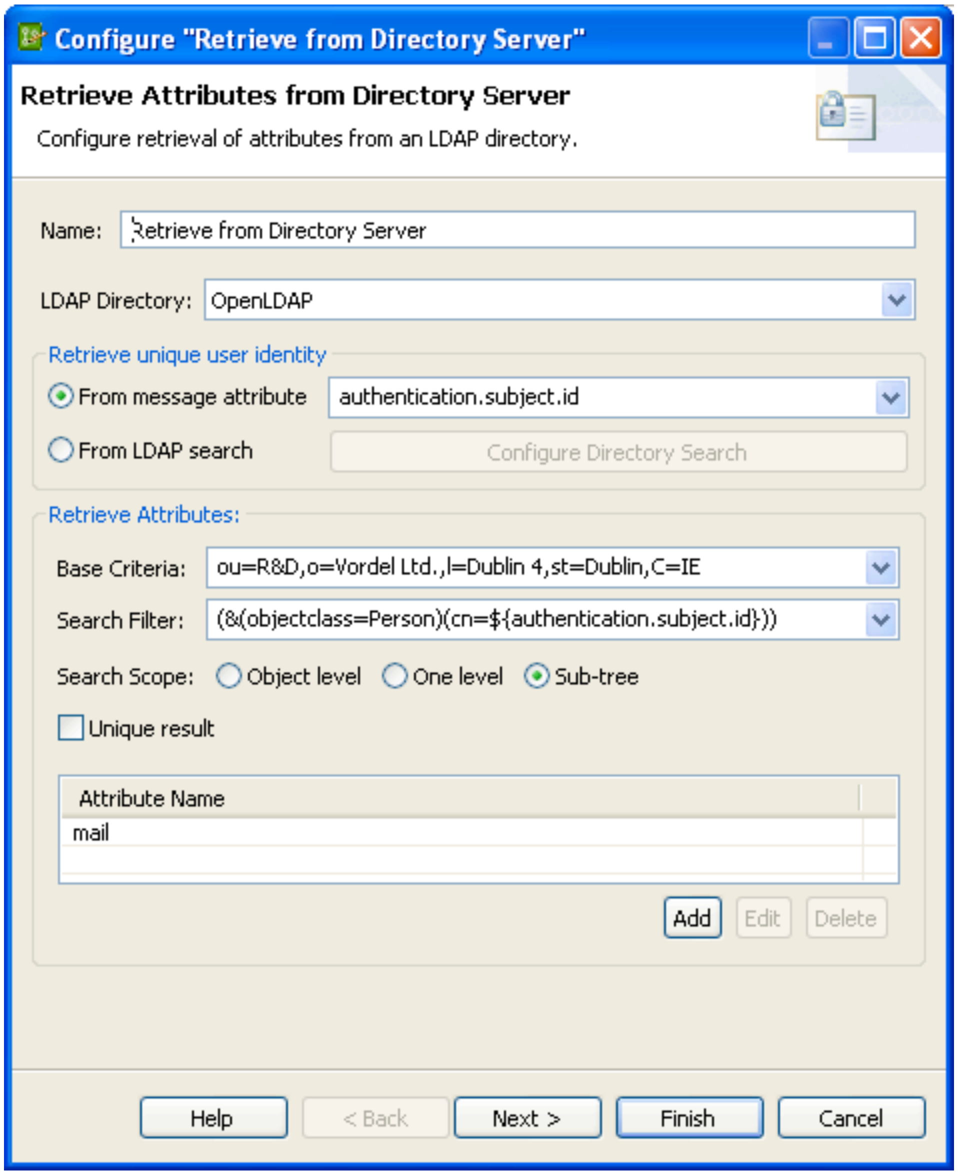
5. **Base Criteria:** ou=R&D,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE
6. **Query Search Filter:** (&(objectclass=Person)(cn=${authentication.subject.id}))
7. **Search Scope:** Sub Tree is selected
8. The **Attribute Name** table lists the attributes that the Gateway will retrieve from the user profile. If no attributes are explicitly listed here, the Gateway will extract all user attributes. In both cases, the retrieved attributes will be set to the `attribute.lookup.list` message attribute. For this guide and additional user attribute has been added:

Attribute name: mail
Value: qauser@qa.vordel.com

So the Attribute value added is "**mail**". This should return the value "**qauser@qa.vordel.com**" when the messaged is being process by the Gateway.
The search options above are using the base criteria of the directory structure as far down as the Common Name Object: User
The Query syntax used can also be validated by performing a search in an LDAP browser using the same string: (&(objectclass=Person)(CN=qauser))

NOTE: The settings referred to here are specific to the OpenLDAP setup being used for purpose of this guide and will differ from case to case.

The Retrieve from Directory Server configuration:


Configure "Retrieve from Directory Server"

Retrieve Attributes from Directory Server

Configure retrieval of attributes from an LDAP directory.

Name: Retrieve from Directory Server

LDAP Directory: OpenLDAP

Retrieve unique user identity

[✓ From message attribute] authentication.subject.id

From LDAP search

Retrieve Attributes:

Base Criteria: ou=R&D,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE

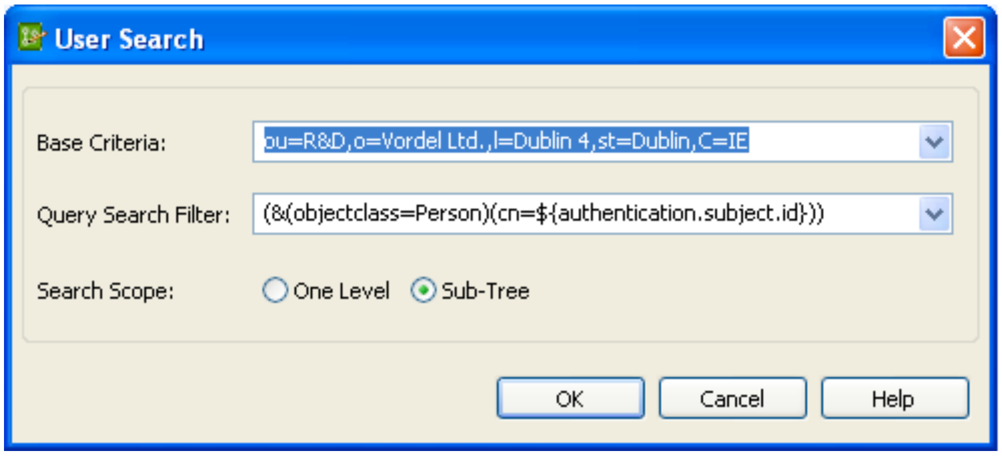
Search Filter: (&(objectclass=Person)(cn=${authentication.subject.id}))

Search Scope: Object level One level [✓ Sub-tree]

Unique result

Attribute Name
mail

The "Configure Directory Search" configuration screen:


User Search

Base Criteria: ou=R&D,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE

Query Search Filter: (&(objectclass=Person)(cn=${authentication.subject.id}))

Search Scope: One Level [✓ Sub-Tree]

4.3. Ensure policies are updated on the Gateway

- Open the **Policy Studio**
- Click on **Settings**
- Select **Deploy** to ensure that the changes made are propagated to the live Gateway

4.4. Test the configuration in OEG Service Explorer

With the "Retrieve from Directory Server" and "Trace" filter added it is worthwhile to test the Policy again using OEG Service Explorer

Set up a message in OEG Service Explorer

1. Open **OEG Service Explorer**
2. Load a message request
3. Click on '**Request Settings'** on the drop down list on the green '**Send Request'** button
4. Make sure that the URL is set correctly. In this case it will be http://localhost:8080/OpenLDAP
5. Click on **OK**
6. Click on the **HTTP Authentication** tab
7. Select **HTTP Basic**
8. Enter the **Username** and **Password** of the user that will be Authenticated via LDAP
9. User credentials:
    - Username: qauser
    - Password: vordel
10. Click on **Finish**

11. The message would now have been sent through

With the "Trace" Filter added it is also possible to view the attribute retrieval that occurred:

Extract from Trace above showing Attribute retrieval:

```
------------------------------------------------------------------------------------------
-------------------------------

DEBUG 14:03:28:101 [0d98] run filter [Retrieve from Directory Server] {
DEBUG 14:03:28:101 [0d98] Searching for a user identity with base [ou=R&D,o=Vordel
Ltd.,l=Dublin 4,st=Dublin,C=IE] and filter [(&(objectclass=Person)(cn=qauser))]
DEBUG 14:03:28:101 [0d98]   The context is created for the LDAP lookup
DEBUG 14:03:28:101 [0d98]    LdapLookup.getUserIdentity: The user's unique identity is
[cn=qauser,ou=R&D,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE]
DEBUG 14:03:28:101 [0d98]  LookupHandler.process: userIdentity:
cn=qauser,ou=R&D,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE
DEBUG 14:03:28:101 [0d98] Looking up user cache with the key:
cn=qauser,ou=R&D,o=Vordel Ltd.,l=Dublin 4,st=Dublin,C=IE
DEBUG 14:03:28:101 [0d98] User's attribute from cache: 1===> key=[mail]
name=[mail] values=[qauser@qa.vordel.com] namespace=[##nonamespace##]
namespaceForAssertion=[urn:vordel:attribute:1.0] useForAssertion=[true]

DEBUG 14:03:28:116 [0d98] Copy user attribute [mail] value=[qauser@qa.vordel.com] to
message attribute [user.mail]
DEBUG 14:03:28:116 [0d98] } = 1, in 15 milliseconds
DEBUG 14:03:28:116 [0d98] run filter [Trace] {
DEBUG 14:03:28:116 [0d98] Trace {
DEBUG 14:03:28:116 [0d98] attribute.lookup.list {
DEBUG 14:03:28:116 [0d98] Value:{mail=key=[mail] name=[mail]
values=[qauser@qa.vordel.com] namespace=[##nonamespace##]
namespaceForAssertion=[urn:vordel:attribute:1.0] useForAssertion=[true]}
DEBUG 14:03:28:116 [0d98] Type: java.util.HashMap
DEBUG 14:03:28:116 [0d98] }
DEBUG 14:03:28:116 [0d98] attribute.subject.format {
DEBUG 14:03:28:116 [0d98]  Value: Unspecified
DEBUG 14:03:28:116 [0d98] Type: java.lang.String
DEBUG 14:03:28:116 [0d98] }
DEBUG 14:03:28:116 [0d98] attribute.subject.id {
DEBUG 14:03:28:116 [0d98] Value: cn=qauser,ou=R&D,o=Vordel Ltd.,l=Dublin
4,st=Dublin,C=IE
DEBUG  14:03:28:116 [0d98] Type: java.lang.String
……………………………………….
DEBUG 14:03:28:132 [0d98] statistics {
```

```
DEBUG 14:03:28:132 [0d98] Value: com.vordel.statistics.MessageMetrics@5fe8bf
DEBUG 14:03:28:132 [0d98] Type: com.vordel.statistics.MessageMetrics
DEBUG 14:03:28:132 [0d98] }
DEBUG 14:03:28:132 [0d98] user.mail {
DEBUG 14:03:28:132 [0d98] Value: qauser@qa.vordel.com
DEBUG 14:03:28:132 [0d98] Type: java.lang.String
DEBUG 14:03:28:132 [0d98] }
DEBUG 14:03:28:132 [0d98] }
DEBUG 14:03:28:132 [0d98] } = 1, in 16 milliseconds
DEBUG 14:03:28:132 [0d98] run filter [Reflect] {
---------------------------------------------------------------------------------------
------------------------------
```

As can be seen in the trace the attribute "description" has been retrieved as specified in the "Retrieve from Directory Server" filter with a value of "engineer". If an attribute value is not specified it will retrieve all relevant attributes for the particular user.

5. Adding an Insert SAML Authentication Assertion filter

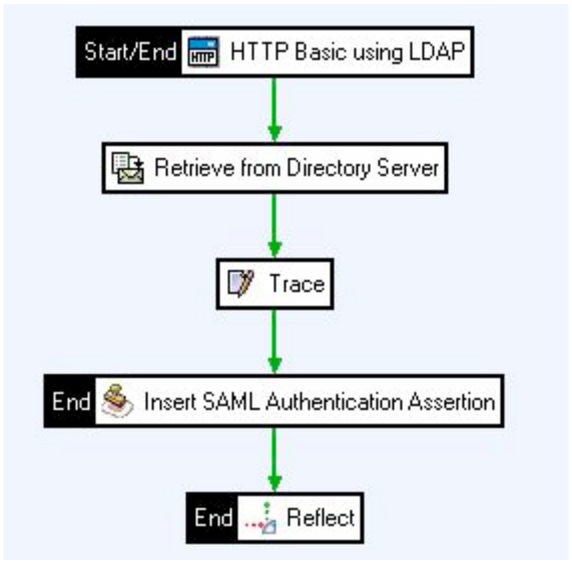
With the Basic HTTP authorization and Attribute retrieval from the directory server having been completed successfully, the policy will yet again be modified to include a SAML Assertion filter.

5.1. Add an "Insert SAML Authentication Assertion" filter

Complete the following steps to refresh the policies:

1. Open **Policy Studio**
2. Click the "**OpenLDAP**" policy
3. From the "Authentication" group in the filter palette drag a "**Insert SAML Authentication Assertion**" filter to the circuit
4. The flow of the filters should now be, HTTP Basic->Retrieve from Directory Server->Trace->Insert SAML Authentication Assertion->Reflect all connected with success path connectors

The modified Policy after having added the "Insert SAML Authentication Assertion" filter:

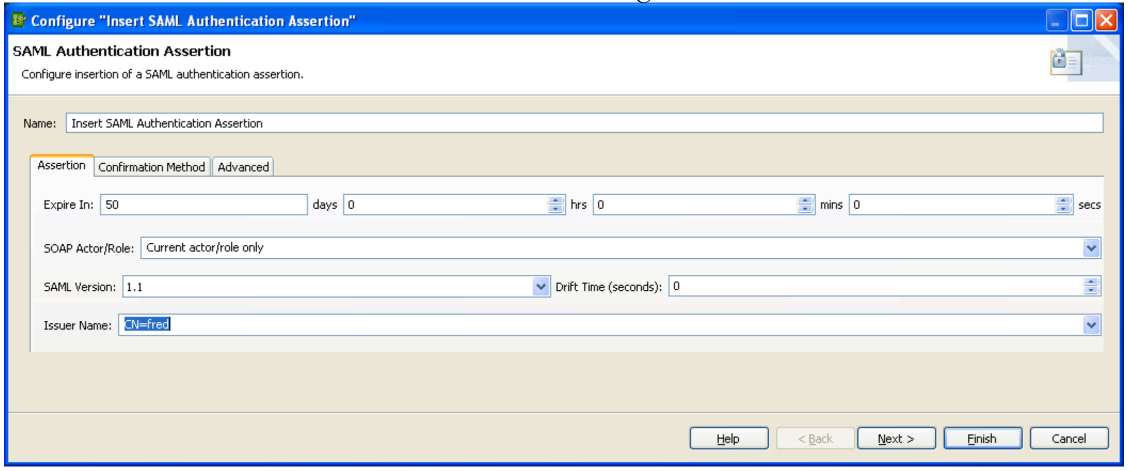

Start/End
HTTP Basic using LDAP
Retrieve from Directory Server
Trace
End
Insert SAML Authentication Assertion
End
Reflect

NOTE: The "Trace" filter here is not a prerequisite and has only been added for showing attribute retrieval in the trace output as demonstrated in section 4. This could be left out or removed from the flow above.

5.2. Configuring the “Insert SAML Authentication Assertion” filter:

1. **Expiry Date:** Set to any desired value
2. **SOAP Actor/Role:** Choose “Current Actor/Role Only” from the drop down list
3. On the **Sign Assertion** Tab select **No Signature with Assertion** and select any value from the drop down field for **Issuer Name**
4. Under Advanced Options tick **Insert SAML Attribute Statement**
5. The rest of the options could be left default.
6. Click on **Finish**

The “SAML Authentication Assertion” Filter configuration – Assertion Tab:


Configure "Insert SAML Authentication Assertion"

SAML Authentication Assertion

Configure insertion of a SAML authentication assertion.

Name: Insert SAML Authentication Assertion

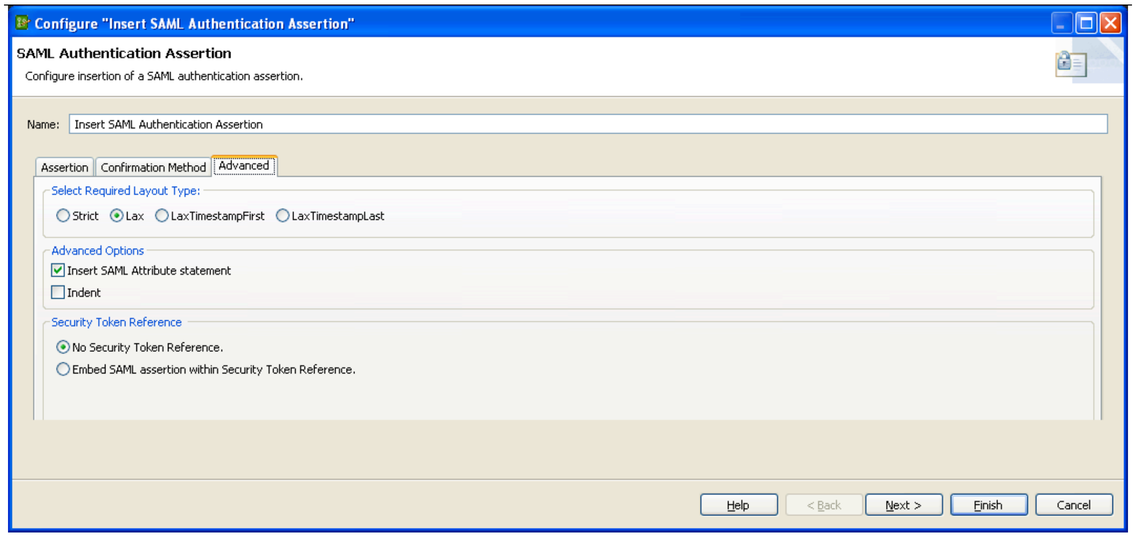
Expire In: 50 days 0 hrs 0 mins 0 secs

SOAP Actor/Role: Current actor/role only

SAML Version: 1.1 Drift Time (seconds): 0

Issuer Name: CN=fred

The “SAML Authentication Assertion” Filter configuration – Advanced Tab:


Configure "Insert SAML Authentication Assertion"

SAML Authentication Assertion

Configure insertion of a SAML authentication assertion.

Name: Insert SAML Authentication Assertion

Assertion | Confirmation Method | Advanced

Select Required Layout Type:

Strict [✓ Lax] LaxTimestampFirst LaxTimestampLast

Advanced Options

[✓] Insert SAML Attribute statement

[ ] Indent

Security Token Reference

[✓ No Security Token Reference.]

Embed SAML assertion within Security Token Reference.

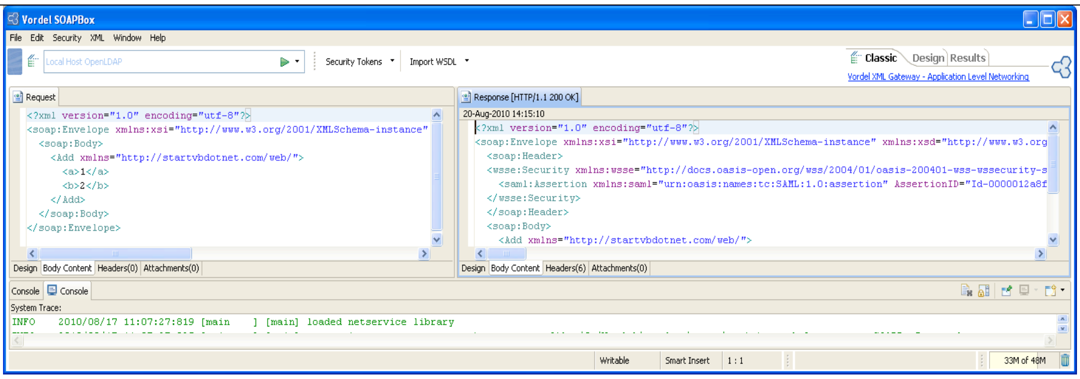
5.3. Test the configuration in OEG Service Explorer

With the "Insert SAML Authentication Assertion" filter added to the policy OEG Service Explorer will be used to verify the configuration.

Set up a message in OEG Service Explorer

1. Open **OEG Service Explorer**
2. Load a message request
3. Click on '**Request Settings'** on the drop down list on the green '**Send Request'** button
4. Make sure that the URL is set correctly. In this case it will be http://localhost:8080/LDAP
5. Click on **OK**
6. Click on the **HTTP Authentication** tab
7. Select **HTTP Basic**
8. Enter the **Username** and **Password** of the user that will be Authenticated via LDAP
9. User Credentials:
   - Username: qauser
   - Password: vordel
10. Click on **Finish**
11. The message would now have been sent through

The Message can be seen having gone through successfully with the SAML Authentication Assertion embedded in the message:


Vordel SOAPBox
File Edit Security XML Window Help
Local Host OpenLDAP
Security Tokens
Import WSDL
Classic Design Results
Vordel XML Gateway - Application Level Networking
Request
Response [HTTP/1.1 200 OK]
Design Body Content Headers(0) Attachments(0)
Design Body Content Headers(6) Attachments(0)
Console Console
Writable Smart Insert 1 : 1
33M of 48M

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  <soap:Body>
    <Add xmlns="http://startvbdotnet.com/web/">
      <a>1</a>
      <b>2</b>
    </Add>
  </soap:Body>
</soap:Envelope>
```

20-Aug-2010 14:15:10

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org
  <soap:Header>
  <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-s
    <saml:Assertion xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion" AssertionID="Id-0000012a8f
  </wsse:Security>
  </soap:Header>
  <soap:Body>
    <Add xmlns="http://startvbdotnet.com/web/">
```

System Trace:

```
INFO    2010/08/17 11:07:27:819 [main    ] [main] loaded netservice library
```

A snippet of the SAML Assertion after successfully sending message:

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Header>
  <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-
wss-wssecurity-secext-1.0.xsd">
   <saml:Assertion xmlns:saml="urn:oasis:names:tc:SAML:1.0:assertion"
AssertionID="Id-0000012a8fa37a8d-0000000000c461b6-7" IssueInstant="2010-08-
20T13:15:09Z" Issuer="CN=AAA Certificate Services, O=Comodo CA Limited,
L=Salford, ST=Greater Manchester, C=GB" MajorVersion="1"
MinorVersion="1"><saml:Conditions NotBefore="2010-08-20T13:15:09Z"
NotOnOrAfter="2010-10-19T13:15:09Z"/><saml:AuthenticationStatement
AuthenticationMethod="urn:oasis:names:tc:SAML:1.0:am:password"
AuthenticationInstant="2010-08-20T13:15:09Z"><saml:Subject><saml:NameIdentifier
Format="urn:oasis:names:tc:SAML:1.1:nameid-
format:unspecified">qauser</saml:NameIdentifier><saml:SubjectConfirmation><saml:
ConfirmationMethod>urn:oasis:names:tc:SAML:1.0:cm:sender-
vouches</saml:ConfirmationMethod></saml:SubjectConfirmation></saml:Subject><
/saml:AuthenticationStatement><saml:AttributeStatement><saml:Subject><saml:Name
Identifier Format="urn:oasis:names:tc:SAML:1.1:nameid-
format:unspecified">qauser</saml:NameIdentifier><saml:SubjectConfirmation><saml:
ConfirmationMethod>urn:oasis:names:tc:SAML:1.0:cm:sender-
vouches</saml:ConfirmationMethod></saml:SubjectConfirmation></saml:Subject><s
aml:Attribute AttributeName="mail"
AttributeNamespace="urn:vordel:attribute:1.0"><saml:AttributeValue>qauser@qa.vorde
l.com</saml:AttributeValue></saml:Attribute></saml:AttributeStatement></saml:Ass
ertion>
  </wsse:Security>
  </soap:Header>
  <soap:Body>
   <Add xmlns="http://startvbdotnet.com/web/">
     <a>1</a>
     <b>2</b>
    </Add>
  </soap:Body>
</soap:Envelope>
```

6. Conclusion

This document is a simplistic demonstration on how to setup the connection and authenticate from a OEG Gateway to a LDAP directory, in this case OpenLDAP.
This configuration can be part of a larger policy, including features such as XML threat detection and conditional routing, features which are out of the scope of this document but are covered in other documents which can be obtained from Oracle at http://www.oracle.com.

Oracle is committed to developing practices and products that help protect the environment

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