

# HP OpenView Select Identity

## Web Service Developer Guide

Software Version: 3.0



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- Commons-beanutils.
- Commons-collections.
- Commons-logging.
- Commons-digester.
- Commons-httpclient.

- Element Construction Set (ecs).
- Jakarta-poi.
- Jakarta-regexp.
- Logging Services (log4j).

Additional third party software used by Select Identity includes:

- JasperReports developed by SourceForge.
- iText (for JasperReports) developed by SourceForge.
- BeanShell.
- Xalan from the Apache XML Project.
- Xerces from the Apache XML Project.
- Java API for XML Processing from the Apache XML Project.
- SOAP developed by the Apache Software Foundation.
- JavaMail from SUN Reference Implementation.
- Java Secure Socket Extension (JSSE) from SUN Reference Implementation.
- Java Cryptography Extension (JCE) from SUN Reference Implementation.
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The support web site includes:

- Downloadable documentation
- Troubleshooting information
- Patches and updates
- Problem reporting
- Training information
- Support program information



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# Introduction

HP OpenView Select Identity provides the ability to provision users in repositories. Provisioning is defined as the "automation of all steps required to manage (setup, amend, and revoke) user or system access entitlements or data relative to electronically published services." Select Identity enables you to programatically provision users in Select Identity through the Web Service.

Consider the following example:

Company X's Human Resources department relies on an enterprise resource planning (ERP) application to manage employees. When a new employee is hired, the HR department adds the employee to the system. However, the new hire will need email and network accounts and access to the systems on which he will fulfill his job responsibilities. The Select Identity Web Service enables you to automate the ERP application to send a request to provision the user. Then, Select Identity can create the necessary accounts and access privileges on Company X's systems according to the services defined for the user.

## Operations Supported by the Web Service

Specifically, the Web Service enables you to perform the following operations:

- User provisioning  
Most of the user operations provided by the Users home page of the Select Identity client can be performed using the Select Identity Web Service. These operations are initiated from an external source and the changes are made in Select Identity. Here is a list of supported operations:
  - Add a user
  - Enable a user
  - Modify user attributes and entitlements
  - Delete a user
  - Retrieve a user profile
  - Enable or disable service membership
  - Reset or changes a user's password
  - Terminate a user
- Password synchronization  
Using the Web Service, you can change a user's password on a resource then synchronize with Select Identity to change the password stored in the Select Identity repository. This is called reverse synchronization. This enables a resource to push user information to Select Identity. The agent (provided by a two-way connector) on the resource tracks changes made on the resource and synchronizes with Select Identity.

Rules identify the services that are affected when a reverse synchronization operation is issued based on the resource ID sent by the resource. Rules also specify the location of the reverse mapping that should be performed for add and modify operations, such as NT Domain Resource -> ntuser.properties. Thus, reverse synchronization can be performed only for those services with specified rules a mapping for the incoming resource ID. If rules or the mapping does not exist, the request is logged and ignored.

## Issuing Requests

External systems can send Simple Object Access Protocol (SOAP) messages to Select Identity for user provisioning, to which the Web Service will send a response. Then, Select Identity can push the users to the appropriate resources as defined by the services assigned to the users.

Select Identity has implemented the Web Service according to the OASIS SPML specification, which defines the concepts, operations, and XML schema for an XML-based provisioning request and response protocol. Refer to the specification for details about all standard elements and attributes.

To issue requests to Select Identity in order to provision users and synchronize data, the external system must send a SOAP message containing a Service Provisioning Markup Language (SPML) request. The request must be sent to the following URL:

**`http://select_identity_host:port/lmz/webservice/`**

Refer to the online help on the Select Identity CD (in the `docs/web_service/help` directory) for a client example that issues a request and handles responses.

## Elements Implemented by the Web Service

The following elements are implemented and, where possible, extended by Select Identity:

- **`<addRequest>`**
- **`<deleteRequest>`**
- **`<extendedRequest>`**
- **`<modifyRequest>`**
- **`<searchRequest>`**

Refer to the online help provided on the Select Identity CD (in the `docs/web_service/help` directory) for detailed information about each of these elements.



## SPML Examples

This chapter provides examples of SPML you must send when issuing requests. For more examples and a complete description of the elements and their attributes, refer to the online help on the Select Identity CD, in the docs/web\_service/help directory.

### Adding a User

The following is an example of the **<addRequest>** element. The **<operationalAttributes>** element provides login credentials for the admin administrator, and the service for which the user is added is the Firewall Service. The **<attributes>** element specifies information about the user. These attributes are service-specific.

```
<soap:Envelope xmlns:soap='http://schemas.xmlsoap.org/soap/envelope/'>
<soap:Body>
<addRequest requestID='12345'
  execution='urn:oasis:names:tc:SPML:1:0#asynchronous'>
  <operationalAttributes>
    <attr name='urn:trulogica:concerro:2.0#serviceName'>
      <value>Firewall Service</value>
    </attr>
    <attr name='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
      <value>admin</value>
    </attr>
  </operationalAttributes>
</addRequest>
</soap:Body>
</soap:Envelope>
```

```

    </attr>
    <attr name='urn:trologica:concerro:2.0#password'>
      <value>abc123</value>
    </attr>
  </operationalAttributes>
  <attributes>
    <attr name='First Name'>
      <value>John</value>
    </attr>
    <attr name='Last Name'>
      <value>Doe</value>
    </attr>
    <attr name='Salutation'>
      <value>Mr.</value>
    </attr>
    <attr name='User Name'>
      <value>jdoe</value>
    </attr>
    <attr name='Business Phone'>
      <value>972-801-1234</value>
    </attr>
    <attr name='Domain'>
      <value>1</value>
    </attr>
    <attr name='Mail Host'>
      <value>Yahoo.com</value>
    </attr>
    <attr name='Email'>
      <value>jdoe@yahoo.com</value>
    </attr>
    <attr name='DomainKey'>
      <value>Firm ID</value>
    </attr>
  </attributes>
</addRequest>
</soap:Body>
</soap:Envelope>

```

## Modifying a User

The following is an example of the **<modifyRequest>** element. The **<operationalAttributes>** element provides login credentials for the admin administrator, for the Firewall Service. The **<identifier>** element provides the user ID of the user to modify. The **<attributes>** element specifies information to be modified for the user.

```

<soap:Envelope xmlns:soap='http://schemas.xmlsoap.org/soap/envelope/'>
<soap:Body>
<modifyRequest requestID='12345'
  execution='urn:oasis:names:tc:SPML:1:0#asynchronous'>
  <operationalAttributes>
    <attr name='urn:trologica:concerro:2.0#serviceName'>
      <value>Firewall Service</value>
    </attr>
    <attr name='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
      <value>admin</value>
    </attr>
    <attr name='urn:trologica:concerro:2.0#password'>
      <value>abc123</value>
    </attr>
  </operationalAttributes>
  <identifier
  identifierType='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
    <id>jdoe</id>
  </identifier>
  <modifications>
    <modification name='Title' operation='replace'>
      <value>Manager</value>
    </modification>
    <modification name='Business Phone' operation='replace'>
      <value>972-801-2222</value>
    </modification>
  </modifications>
</modifyRequest>
</soap:Body>
</soap:Envelope>

```

## Deleting a User

The following is an example of the **<deleteRequest>** element. The **<operationalAttributes>** element provides login credentials for the admin administrator, for the Firewall Service. The **<identifier>** element provides the user ID of the user to delete.

```

<soap:Envelope xmlns:soap='http://schemas.xmlsoap.org/soap/envelope/'>
<soap:Body>
<deleteRequest requestID='12345'
  execution='urn:oasis:names:tc:SPML:1:0#asynchronous'>
  <operationalAttributes>
    <attr name='urn:trologica:concerro:2.0#serviceName'>
      <value>Firewall Service</value>
    </attr>

```

```

    <attr name='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
      <value>dave_usa</value>
    </attr>
    <attr name='urn:trulogica:concerro:2.0#password'>
      <value>trul0glca</value>
    </attr>
  </operationalAttributes>
  <identifier
identifierType='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
    <id>jdoe</id>
  </identifier>
</deleteRequest>
</soap:Body>
</soap:Envelope>

```

## Retrieving a User Profile

The following is an example of the **<searchRequest>** element. It searches for the user identified by the sk061001 ID for the iPlanet resource.

```

<soap:Envelope xmlns:soap='http://schemas.xmlsoap.org/soap/envelope/'>
<soap:Body>
<searchRequest requestID='12345'
execution='urn:oasis:names:tc:SPML:1:0#synchronous'>
  <operationalAttributes>
    <attr name='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
      <value>concerrosa</value>
    </attr>
    <attr name='urn:trulogica:concerro:2.0#password'>
      <value>abc123</value>
    </attr>
  </operationalAttributes>
  <searchBase type='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
    <id>sk061001</id>
  </searchBase>
  <filter>
    <equalityMatch name='urn:trulogica:concerro:2.0#resourceId'>
      <value>local-iPlanet</value>
    </equalityMatch>
  </filter>
</searchRequest>
</soap:Body>
</soap:Envelope>

```



## Enabling a User

The following is an example of the `<extendedRequest>` attribute, to enable a user's account.

```
<soap:Envelope xmlns:soap='http://schemas.xmlsoap.org/soap/envelope/'>
<soap:Body>
<extendedRequest requestID='1769'
execution='urn:oasis:names:tc:SPML:1:0#asynchronous'>
  <operationalAttributes>
    <attr name='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
      <value>concerosa</value>
    </attr>
    <attr name='urn:trologica:concerosa:2.0#password'>
      <value>abc123</value>
    </attr>
  </operationalAttributes>
  <identifier type='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
    <id>sk061001</id>
  </identifier>
  <providerIdentifier providerIDType='urn:oasis:names:tc:SPML:1:0#URN'>
    <providerID>urn:trologica:concerosa:2.0</providerID>
  </providerIdentifier>
  <operationIdentifier operationIDType='urn:oasis:names:tc:SPML:1:0#URN'>
    <operationID>urn:trologica:concerosa:2.0#enable</operationID>
  </operationIdentifier>
  <attributes/>
</extendedRequest>
</soap:Body>
</soap:Envelope>
```

## Changing a User's Password

The following is an example of the `<extendedRequest>` attribute, to change a user's password.

```
<soap:Envelope xmlns:soap='http://schemas.xmlsoap.org/soap/envelope/'>
<soap:Body>
<extendedRequest requestID='1769'
execution='urn:oasis:names:tc:SPML:1:0#asynchronous'>
  <operationalAttributes>
    <attr name='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
      <value>concerosa</value>
    </attr>
```

```

    <attr name='urn:trologica:concero:2.0#password'>
      <value>abc123</value>
    </attr>
  </operationalAttributes>
  <identifier type='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
    <id>sk061001</id>
  </identifier>
  <providerIdentifier providerIDType='urn:oasis:names:tc:SPML:1:0#URN'>
    <providerID>urn:trologica:concero:2.0</providerID>
  </providerIdentifier>
  <operationIdentifier operationIDType='urn:oasis:names:tc:SPML:1:0#URN'>
    <operationID>urn:trologica:concero:2.0#changePassword</operationID>
  </operationIdentifier>
  <attributes>
    <attr name='urn:trologica:concero:2.0#resourceId'>
      <value>local-iPlanet</value>
    </attr>
    <attr name='urn:trologica:concero:2.0#newPassword'>
      <value>zzzz1234</value>
    </attr>
  </attributes>
</extendedRequest>
</soap:Body>
</soap:Envelope>

```

## Terminating a User

The following is an example of the **<extendedRequest>** attribute, to terminate a user.

```

<soap:Envelope xmlns:soap='http://schemas.xmlsoap.org/soap/envelope/'>
  <soap:Body>
    <extendedRequest requestID='1769'
      execution='urn:oasis:names:tc:SPML:1:0#asynchronous'>
      <operationalAttributes>
        <attr name='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
          <value>concerosa</value>
        </attr>
        <attr name='urn:trologica:concero:2.0#password'>
          <value>abc123</value>
        </attr>
      </operationalAttributes>
      <identifier type='urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName'>
        <id>sk061001</id>
      </identifier>
      <providerIdentifier providerIDType='urn:oasis:names:tc:SPML:1:0#URN'>

```

```
    <providerID>urn:trologica:concerro:2.0</providerID>
  </providerIdentifier>
  <operationIdentifier operationIDType='urn:oasis:names:tc:SPML:1:0#URN' >
    <operationID>urn:trologica:concerro:2.0#terminate</operationID>
  </operationIdentifier>
</extendedRequest>
</soap:Body>
</soap:Envelope>
```