# Oracle® Access Manager

Customization Guide

10*g* (10.1.4.2.0)

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This guide explains how to change the appearance and control operation of Oracle Access Manager by making changes to the operating system, Web server, directory server, and so on.

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Oracle Access Manager Customization Guide, 10*g* (10.1.4.2.0)

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# Preface

This Customization Guide explains how to control the way Oracle Access Manager operates and looks by making configuration changes to operating systems, to Web or directory servers, to configuration parameter files, to XML files, to stylesheets, and to directory content. It also provides an overview of the Access Manager API and the authorization and authentication plug-in APIs.

> **Note:** Oracle Access Manager was previously known as Oblix NetPoint.

This Preface covers the following topics:



## Audience

This guide intended for anyone who needs to customize Oracle Access Manager. Topics here assume that you have some prior experience using Oracle products, understand the logical connections between Identity and Access components, and have a general knowledge of directories and LDAP. You must also be comfortable manipulating files and running applications at the command line level. Techniques provided here are vulnerable to error and should be used with the utmost care.

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## Related Documents

For more information, see the following documents in the Oracle Access Manager Release 10*g* (10.1.4.0.1) documentation set:

- *Oracle Access Manager Introduction*—Provides an introduction to Oracle Access Manager, a road map to the manuals, and a glossary of terms.
- *Oracle Application Server Release Notes*—Read these for the latest Oracle Access Manager updates. The release notes are available with the platform-specific documentation. The most current version of the release notes is available on Oracle Technology Network at:
  `http://www.oracle.com/technology/documentation`
- *Oracle Access Manager Patchset Notes Release 10.1.4 Patchset 1 (10.1.4.2.0) For All Supported Operating Systems.* It provides the system requirements and instructions needed to install or de-install the Patchset itself, a list of known issues related to the patchset, a list of the platform-specific bugs fixed in this Oracle Access Manager Patchset.
- *Oracle Access Manager List of Bugs Fixed Release 10.1.4 Patchset 1 (10.1.4.2.0)* . It supplements the Patchset notes document for this release. It provides a list of all generic (common to all operating systems) Oracle Access Manager bugs that have been fixed in this Patchset, sorted by component.
- *Oracle Access Manager Installation Guide*—Describes how to install and set up the Oracle Access Manager components.
- *Oracle Access Manager Upgrade Guide*—Explains how to upgrade earlier releases to the latest major Oracle Access Manager release.
- *Oracle Access Manager Administration Guide*—Explains how to configure Identity System applications to display information about users, groups, and organizations; how to assign permissions to users to view and modify the data that is displayed in the Identity System applications; and how to configure workflows that link together Identity application functions, for example, adding basic information about a user, providing additional information about the user, and approving the new user entry, into a chain of automatically performed steps. This book also describes administration functions that are common to the Identity and Access Systems, for example, directory profile configuration, password policy configuration, logging, and auditing.

- *Oracle Access Manager Access Administration Guide*—Describes how to protect resources by defining policy domains, authentication schemes, and authorization schemes; how to allow users to access multiple resources with a single login by configuring single- and multi-domain single sign-on; and how to design custom login forms. This book also describes how to set up and administer the Access System.
- *Oracle Access Manager Deployment Guide*—Provides information for people who plan and manage the environment in which Oracle Access Manager runs. This guide covers capacity planning, system tuning, failover, load balancing, caching, and migration planning.
- *Oracle Access Manager Customization Guide*—Explains how to change the appearance of Oracle Access Manager applications and how to control operation by making changes to operating systems, Web servers, directory servers, directory content, or by connecting CGI files or JavaScripts to Oracle Access Manager screens. This guide also describes the Access Manager API and the authorization and authentication plug-in APIs.
- *Oracle Access Manager Developer Guide*—Explains how to access Identity System functionality programmatically using IdentityXML and WSDL, how to create custom WebGates (known as AccessGates), and how to develop plug-ins. This guide also provides information to be aware of when creating CGI files or JavaScripts for Oracle Access Manager.
- *Oracle Access Manager Integration Guide*—Explains how to set up Oracle Access Manager to run with third-party products such as BEA WebLogic, the Plumtree portal, and IBM Websphere.
- *Oracle Access Manager Schema Description*—Provides details about the schema.
- *Oracle Access Manager Configuration Manager Installation and Administration Guide*—Provides information about pushing configuration data changes from one Oracle Access Manager 10*g* (10.1.4.0.1), or Oracle COREid Release 7.0.4, deployment to another. For example, when pushing changes from a development deployment to a pre-production deployment. Included are considerations, prerequisites, and step-by-step instructions to help ensure your success.

# Conventions

The following text conventions are used in this document:

| Convention | Meaning |
|---|---|
| **boldface** | Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary. |
| *italic* | Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values. |
| `monospace` | Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter. |

# What's New in Oracle Access Manager?

This section describes new features of the Oracle Access Manager 10*g* (10.1.4.2) and provides pointers to additional information. Information from previous releases is also retained to help those users migrating to the current release.

The following sections describe the new features in Oracle Access Manager that are covered in this book:

- Product and Component Name Changes
- Globalization, Localization, and Multibyte Support
- Customizing PresentationXML Stylesheets Using XMLSpy
- Customizing Email Notifications
- Customizing a Self-Registration Confirmation Page
- Verifying PresentationXML XSL Files
- WebGate Updates
- Parameter Updates

> **Note:** For a comprehensive list of new features and functions in Oracle Access Manager 10*g* (10.1.4.2), and a description of where each is documented, see the chapter on Oracle Access Manager in the *Oracle Application Server Release Notes*.

## Product and Component Name Changes

The original product name, Oblix NetPoint, has changed to Oracle Access Manager. Most component names remain the same. However, there are several important changes that you should know about, as shown in the following table:

| Item | Was | Is |
|---|---|---|
| Product Name | Oblix NetPoint<br>Oracle COREid | Oracle Access Manager |
| Product Name | Oblix SHAREid<br>NetPoint SAML Services | Oracle Identity Federation |
| Product Name | OctetString Virtual Directory Engine (VDE) | Oracle Virtual Directory |

| Item | Was | Is |
|---|---|---|
| Product Release | Oracle COREid 7.0.4 | Also available as part of Oracle Application Server 10g Release 2 (10.1.2). |
| Directory Name | COREid Data Anywhere | Data Anywhere |
| Component Name | COREid Server | Identity Server |
| Component Name | Access Manager | Policy Manager |
| Console Name | COREid System Console | Identity System Console |
| Identity System Transport Security Protocol | NetPoint Identity Protocol | Oracle Identity Protocol |
| Access System Transport Protocol | NetPoint Access Protocol | Oracle Access Protocol |
| Administrator | NetPoint Administrator<br>COREid Administrator | Master Administrator |
| Directory Tree | Oblix tree | Configuration tree |
| Data | Oblix data | Configuration data |
| Software Developer Kit | Access Server SDK<br>ASDK | Access Manager SDK |
| API | Access Server API<br>Access API | Access Manager API |
| API | Access Management API<br>Access Manager API | Policy Manager API |
| Default Policy Domains | NetPoint Identity Domain<br>COREid Identity Domain | Identity Domain |
| Default Policy Domains | NetPoint Access Manager<br>COREid Access Manager | Access Domain |
| Default Authentication Schemes | NetPoint None Authentication<br>COREid None Authentication | Anonymous |
| Default Authentication Schemes | NetPoint Basic Over LDAP<br>COREid Basic Over LDAP | Oracle Access and Identity Basic Over LDAP |
| Default Authentication Schemes | NetPoint Basic Over LDAP for AD Forest<br>COREid Basic Over LDAP for AD Forest | Oracle Access and Identity for AD Forest Basic Over LDAP |
| Access System Service | AM Service State | Policy Manager API Support Mode |

All legacy references in the product or documentation should be understood to connote the new names.

## Globalization, Localization, and Multibyte Support

- Globalization, localization, and multibyte encoding schemes are discussed

Oracle Access Manager has undergone a globalization process to provide international languages, and multibyte support through the use of Unicode to enable processing of internationalized data.

**See Also:** "Stylesheet Encoding" on page 2-2 and "Multibyte Data Support" on page 4-1.

## Customizing PresentationXML Stylesheets Using XMLSpy

- To prepare your environment for modifying the PresentationXML stylesheets, you need an XML editor and local XML and image files for the Identity application function that you want to customize.

  Information has been added about preparing your work environment and using XMLSpy to test stylesheet modifications.

  **See Also:** "Setting Up Your Environment to Customize the stylesheets" on page 2-9.

## Customizing Email Notifications

- You can modify the Subject line of the default email notifications that are sent as part of a workflow step.

  **See Also:** "Customizing the Subject Line in an Email Notification" on page 5-7.

## Customizing a Self-Registration Confirmation Page

- You can customize the confirmation page that is displayed after a user completes self-registration.

  **See Also:** "Customizing the Self-Registration Confirmation Page" on page 5-5.

## Verifying PresentationXML XSL Files

- To verify that a stylesheet is coded correctly, open it in Internet Explorer. The browser will indicate the line number of any errors in the code.

  **See Also:** "Verifying XSL Files" on page 2-69.

## WebGate Updates

- WebGates have been updated to use the same code as the Access System, and WebGate configuration parameters that once existed in WebGateStatic.lst have been moved to the Access System GUI.

  After upgrading your WebGates, you can now configure such parameters as IPValidation and IPValidationExceptions from the Access System GUI. The WebGateStatic.lst file no longer exists.

  **See Also:** "Customizing to Allow Auto-Login" on page 5-1, "Denying Access to Unprotected Resources Automatically" on page 5-11, the discussion of the isBackwardCompatible flag in the globalparams.xml file in "Parameter Reference" on page B-5.

## Parameter Updates

- If you use complex stylesheets, you may want to increase the value of the `StringStack` parameter in globalparams.xml.
- In the file globalparams.xml, the `useLanguageSort` and the `sortRulesFile` options have been removed from the locale_params parameter. Information is now always sorted in a case-insensitive manner based on the language being used.
- In the file globalparams.xml, the description of the `compound_data_threshold` parameter has been revised.
- In the file globalparams.xml, two parameters—`heartbeat_ldap_connection_timeout_in_millis` and `heartbeat_enabled`—have been added to control LDAP failover.
- In the file globalparams.xml, the `samAccountNameLength` parameter enables you to increase the number of characters permitted as a `SamAccountName` attribute value.

  For Active Directory environments that are running in native mode, you may want to increase the default value for this parameter.
- In the file globalparams.xml, the `DBAuditTruncateDataToColLength` parameter enables you to determine if data is truncated according to a set number of characters or according to the column length in the auditing .
- In the file globalparams.xml, the `LDAPOperationTimeout` parameter enables you to configure the Identity Server, Access Server, and Policy Manager to fail over to a secondary directory server if the primary directory server takes too long to respond.
- In the file basedbparam.xml, the `enableAllowAccessCache` parameter turns caching of evaluated access control policies on or off.

  The cache helps when an access control policy needs to be evaluated more than once in the same request.
- In the file globalparams.xml, the `ExcludeOCsForTreeInApplet` parameters specifies what object classes to exclude from display in the Identity System Console.

  By default, the Identity System does not display every object class in the directory. This parameter enables you to expose object classes in the Identity System tree that would otherwise be hidden.
- In the file globalparams.xml, the `TurnOffNestedGroupEvaluation` parameter allows you to enable or disable searches of nested groups in the directory.

  This parameter is used by the Access System when evaluating authentication and authorization schemes that require evaluation of group membership.
- In the file globalparams.xml, the `XSLProcessor` parameter indicates the processor to use when generating a page using IdentityXML.
- In the file globalparams.xml, the `client_request_retry_attempts` parameter enables you to set a limit on the number of retries a WebPass can attempt when connecting to an Identity Server.
- In the file globalparams.xml, the `LargeStaticGroups` parameter enables you to to disable evaluation of a static group in the Identity System.

  You would set this parameter when the group has become so large that it is causing significant performance issues.

- In the file globalparams.xml, the `MigrateUserDataTo1014` parameter enables you to automatically migrate directory schema and data when upgrading to version 10.1.4.2 and higher versions.
- In the file globalparams.xml, the `LDAPMaxNoOfRetries` parameter enables you to to set a limit on the number of retries an Oracle Access Manager component can make per request to a directory server.

**See Also:** "Parameter Reference" on page B-5.

# 1

# Introduction

This book explains how to control the way Oracle Access Manager appears amd operates by making configuration changes to operating systems or Web or directory servers, editing the content of XML files, or changing directory content. It also provides an overview, from an administrator's point of view, of the Access Manager API and the authorization and authentication plug-in APIs.

Topics include:

- Designing the GUI with PresentationXML

  PresentationXML enables you to change the appearance of Identity System applications

- Customizing Portal Inserts

  Oracle Access Manager Portal Inserts provide a way to insert content generated by Oracle Access Manager into other applications without programming.

- Modifying Catalog Files

  Oracle Access Manager makes extensive use of catalog files to configure various system attributes and behaviors, for example, date displays, colors, and the text on the default login pages.

- Other Customization

  This chapter covers topics not discussed elsewhere in this guide, including configuring a self registration workflow, configuring email notifications in a workflow, and using Oracle Access Manager for authorization only.

- Customizing Access Control with Plug-Ins

  You can extend the base Oracle Access Manager functionality to applications that are outside of Oracle Access Manager, but need to interact with Oracle Access Manager for identity or access control functions.

Use the techniques discussed in this document with the utmost care. This guide assumes that you have knowledge of and experience with:

- Using Oracle Access Manager
- Logical connections between the Identity and Access systems
- General working knowledge of directories and LDAP
- Manipulating files and running applications at the command-line level

Other helpful experience includes:

- System or database administration

- Familiarity with CGI files or JavaScripts
- Familiarity with your Web server, Web browser, operating system, and configuration details

Before you begin using the information in this book, Oracle Access Manager should be installed and its operation confirmed. For details, see the *Oracle Access Manager Installation Guide*.

# 2

# Designing the GUI with PresentationXML

The Identity System combines XSL (eXtensible Style Language) stylesheets and XML (eXtensible Markup Language) data to dynamically create almost all of the pages presented to its users. This capability, called PresentationXML, provides Oracle Access Manager developers with a great deal of design flexibility and avoids the necessity of providing many pages of static HTML content along with the product.

Within the bounds described in this chapter, you can use this feature yourself to customize Identity System user application presentation to suit your own needs. For example, you can:

- Apply your organization's color schemes and other graphical style elements such as fonts, button images, and logos, to Oracle Access Manager pages.
- Add, modify, or remove particular functions on an Identity System page.
- Add hidden information which could be used by the Identity Event Plug-in API (see the *Oracle Access Manager Deployment Guide*).
- Create entirely new pages and functionality.

This chapter tells you how to use PresentationXML and includes the following topics:

- PresentationXML Operation
- Setting Up Your Environment to Customize the stylesheets
- PresentationXML Components
- PresentationXML Libraries—Provides a listing and description of some major parts of the full library of PresentationXML components.
- Customizing Oracle Access Manager—Provides an outline of one method for doing customization.
- Customizing the Identity System Pages—Gives an example you can complete to gain first-hand experience with customizing Oracle Access Manager.
- Verifying XSL Files

> **Note:** Prior experience with XSL and XML is not essential to using PresentationXML. However, you will need to learn and understand them as you delve into more complex kinds of changes. Some reference sites and brief syntax introduction are provided in Appendix A, "XML Background" on page A-1.

**Note:** Prior experience with XSL and XML is not essential to using PresentationXML. However, you will need to learn and understand them as you delve into more complex kinds of changes. Some reference sites and brief syntax introduction are provided in Appendix A, "XML Background" on page A-1.

The System Administration Console always uses the default, Classic Style.

# PresentationXML Operation

This section describes how standard PresentationXML operates, introduces some parameters that can be used to control its output, and describes a useful alternate mode of operation. The terms you will see include:

**Stylesheet**: This term identifies XSL stylesheets that describe how data sent over the Web is to be presented to the user.

**Base Stylesheet**: This term refers to several Identity System stylesheets that provide a foundation for other stylesheets:

- basic.xsl
- font.xsl
- searchform.xsl
- navbar.xsl
- title.xsl

**Wrapper**: This term identifies an XSL stylesheet file that contains only XSL include statements with pointers to other files.

**See also:** For more information, see "PresentationXML Components" on page 2-12 and "Styles" on page 2-21.

## Stylesheet Encoding

This discussion outlines the encoding schemes you will see in XSL stylesheet files, and what to specify if you customize these files.

XML must start with the following string:

```
<?xml version="1.0"?>
```

10*g* (10.1.4.0.1) supports two encoding formats for requests: ISO-8859-1 (Latin-1) and UTF-8. The response, however, will be in UTF-8 encoding only.

Within this required string you can use a tag to select an encoding specification.

With new 10*g* (10.1.4.0.1) installations, use the UTF-8 encoding tag (`encoding="UTF-8"`), as follows.

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

For backward compatibility with older plug-ins in an upgraded environment, use the Latin-1 encoding tag (`encoding="ISO-8859-1"`). For example:

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
```

**ISO-8859-1 Encoding**: For pure English text, there is no difference between ISO-8859-1 encoding and UTF-8 encoding. For this reason, the encoding scheme for English language XSL files remains ISO-8859-1 in most if not all wrapper files in the \lang*langtag*\style0 directory.

The following example shows an XSL stylesheet wrapper (style.xsl), which is the same in all language directories: English (\lang\en-us), German (\lang\de-de), Japanese (\lang\ja-jp) and so on. The only difference in these files is the language designation specified by the *langtag* item in the last line of this example, which will differ from country to country (language to language):

*IdentityServer_install_dir*\identity\oblix\lang*langtag*\style0\style.xsl

```
 <?xml version="1.0" encoding="ISO-8859-1" ?>
- <!--  Copyright (c) 1996-2005, Oracle All Rights Reserved.  -->
- <xsl:stylesheet version="1.0"
   xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
   xmlns:oblix="http://www.oblix.com/">
  <xsl:variable name="styleName">style0/</xsl:variable>
  <xsl:variable name="localeName">langtag</xsl:variable>
...
```

**UTF-8 Encoding**: To enable multibyte character support, you can explicitly define the encoding to be UTF-8. Without the encoding string, the default encoding specification is UTF-8. In global stylesheets, for example, there is no encoding specified and the default is UTF-8 as follows (*IdentityServer_install_dir*\\identity\oblix\lang\shared\style.xsl):

```
  <?xml version="1.0"
<!--   Copyright (c) 1996-2005, Oracle All Rights Reserved.
  -->
<xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
xmlns:oblix="http://www.oblix.com/">
<xsl:variable name="styleName">style0</xsl:variable>
<xsl:variable name="localeName">en-us</xsl:variable>
<xsl:variable name="gifPathName">../../../lang/<xsl:value-of
select="$localeName"/>/<xsl:value-of select="$styleName"/></xsl:variable>
<xsl:variable name="jsPathName">../../../lang/shared</xsl:variable>
</xsl:stylesheet>
```

> **Note:** When customizing XML and XSL files, you can choose either encoding="ISO-8859-1" or encoding="UTF-8". In either case, the Oracle Access Manager XML parser reads the encoding tag in the file for correct processing.

## Server-Side Processing

The diagram on the next page shows the default data flow for PresentationXML. This default process, called server-side processing, generates HTML and presents it to the browser. The following steps are performed.

### Process overview: Server-side processing

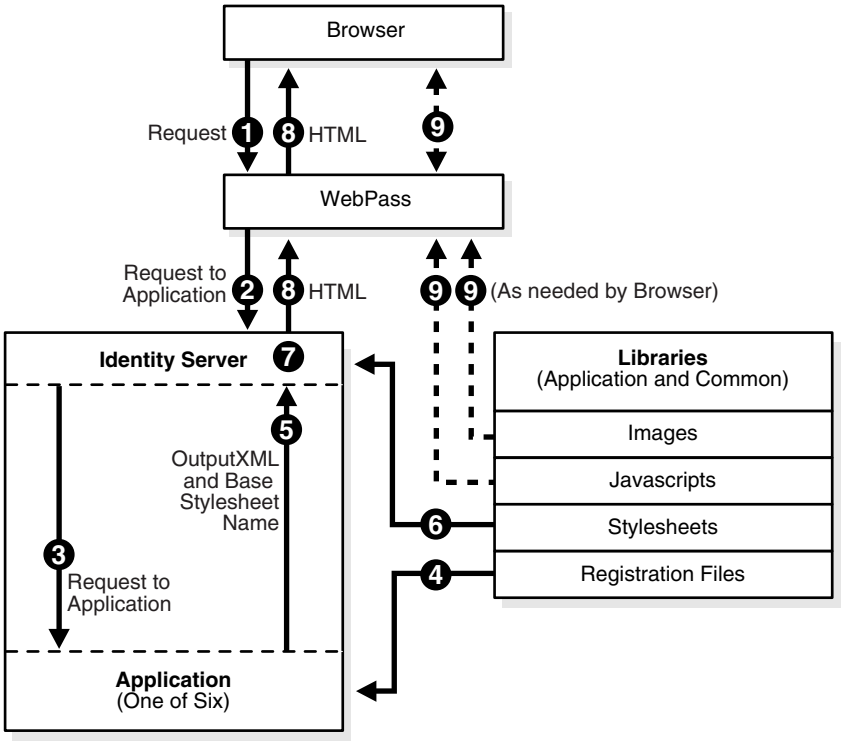
1. The browser sends a request to the URL of a Web server that includes the WebPass plug-in.

The full URL contains the location of the Web server and implicitly the application, such as the Group Manager, that is expected to service the request. The URL also usually includes information telling the application what task to perform and providing parameters that direct the task. (See more on the full syntax for the URL in "Identity System Applications" on page 2-13.)

2. WebPass takes the request, makes a few minor changes to it, and passes it to the Identity Server.
3. The Identity Server passes the request to the appropriate application. (For the sake of clarity, the diagram shows the application as if it were a separate entity, but it is actually a dynamically loaded part of the Identity Server.)
4. The application processes the request and creates an XML file named OutputXML.

   OutputXML contains information that will appear as part of the final HTML. The application also opens its registration file to get the name of the base XSL stylesheet that applies to the request that it has just satisfied, as illustrated in Figure 2–1.

***Figure 2–1 Identity Server Passing a Request to an Application***




5. The OutputXML and the name of the base stylesheet are returned to the Identity Server.
6. The Identity Server reads the text of the base stylesheet from the library. This text usually includes references to other stylesheets, which are used in common by many different types of requests. For each reference, the Identity Server reads the additional text from the stylesheet library and inserts it in-line in place of the reference, making one large stylesheet.
7. An XSLT (XSL transformer) application is part of the Identity Server. The XSLT parses and interprets the stylesheet and combines it with the OutputXML to create

HTML. The OutputXML content provides a basis for the decisions that are made as the stylesheet is interpreted and also provides data to be included in the HTML.

8. When the entire stylesheet has been processed, the resulting HTML is sent to WebPass, which returns it to the browser.
9. The browser uses WebPass to obtain GIF images and JavaScripts as needed.

## Parameters that Control Operation

You can append various parameters that control format, xsl, and style, to the URL to shape the way the XSLT works with the OutPutXML and the stylesheets.

### Format Parameter

The format parameter can be used to control the way in which the Identity Server combines the OutputXML and the stylesheet before the resulting information is passed to the browser, if this is allowed by the setting of the outputFormat parameter in the globalparams.xml parameter file. See Table B–9 on page B-13 for details.

The Identity Server checks the value that was provided for the outputFormat parameter in this file. The parameter must be set to default in the parameter file to enable use of the format parameter here in the PresentationXML URL.

The format parameter takes one of three values

- **Default**: If the parameter is not included in the URL XSLT processing is done at
- **format=xmlnoxsl**: The Identity Server returns the Output XML without doing XSLT processing; that is, the XSL stylesheet is not applied. This is a good way to generate the OutputXML. If you do this, and want to capture the result, save the displayed data as XML (if your browser supports this). The true OutputXML contains escaped characters that will be lost if you save the displayed data as a text file.

> **Note:** If the same CGI is used to handle different functionality, just appending "&format=xmlnoxsl" to the URL would result in executing the default functionality of a given CGI.

If the same CGI is used to handle different functionality, you need a way to re-submit the form request with "&format=xmlnoxsl" as part of the action. This can be achieved using the following methods.

- **Method 1**: Append "&format=xmlnoxsl" to the form action within the relevant .xsl stylesheets. While this may seem straight-forward enough, be aware that you are making changes to a stylesheet and this could have unintended consequences. After making the change, you need to either restart the Identity Server or update the globalparams.xml file to disable stylesheet caching (for example, set stylesheet caching to 1) and allow stylesheet dynamic-change updates.
- **Method 2**: Rewrite the POST request as a GET request, and add &format=xmlnoxsl. One way of rewriting the POST request as a GET request is to use a portal insert. See "Customizing Portal Inserts" on page 3-1 for details.

  It is not always possible to tell directly what parameters are being passed to the POST request.

Sometimes the action is a JavaScript that rewrites the form parameters before the form request gets submitted. In such instances, you may want to run a packet sniffer to capture the POST request as it is leaving the browser. Alternatively, you can enable debugging on the Identity Server and look at the request data. However, you may have to sift through a certain amount of non-relevant data. You then recreate the POST request as a GET request because it is easier to submit as one URL. In some rare cases, the POST data is too long and does not fit as a GET request, so you can write an HTML static form and manually fill-in the data from the POST request captured with the sniffer or from the Oracle Access Manager debug log.

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**Note:** Oracle has found certain packet sniffers useful. For example, daSniff available at `http://demosten.com/dasniff` offers a command-line interface and requires the WinPcap libraryavailable at `http://netgroup-serv.polito.it/winpcap`.

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- **format=xml**: The Identity Server returns the Output XML, with the name of the base XSL stylesheet embedded as an XML element. For this to be useful, the browser must be able to do its own XSLT processing. In that case the browser sends requests to WebPass for the content of included stylesheets, and WebPass gets them directly from the appropriate library.

The only browser currently able to do its own XSLT processing is Microsoft's Internet Explorer (IE). IE Versions 5.5 and later are compatible with PresentationXML.

Earlier versions of IE use an earlier proposed version of XSLT, based on a working draft from 1998. This is inconsistent with the current version of XSLT, which Oracle Access Manager follows. To use the `format=xml` option with the earlier versions of IE, you must either rewrite the XSL stylesheet to be consistent with the earlier draft version or download Microsoft's patch to its XSLT processor.

> **See also:** See Appendix A, "XML Background" on page A-1 for a discussion of how to download and install the patch.

### XSLProcessor

When using IdentityXML, the `XSLProcessor` parameter indicates the processor to use when generating the page.

The value `default` is the only officially supported value. This value indicates that the XDK processor should be used. The other processor types, `XALAN` and `DGXT` should be used only in non-production environments for testing XSL processor issues.

### XSL Parameter

The xsl parameter determines which XSL stylesheet is to be combined with the OutPutXML. It can take either of two values:

- **Default**: If the parameter is not included in the URL, the default is to apply the XSL stylesheet specified in the registration file.
- **xsl=stylesheet_name**: Use the specified stylesheet as the base stylesheet, in place of the one specified in the Registration File.

### Style Parameter

The style parameter indicates which style directory in the library to get the base stylesheet from. (For an explanation of styles, see "Styles" on page 2-21.) Once the style

parameter has been used in the URL, the style you chose is implicitly included in all further requests in the session for that particular browser.

- **Default**: If the parameter is not included in the URL, the default is to either: get the base stylesheet from the style0 directory (if the style parameter has not been previously used), or continue to get the base stylesheet from the style directory specified by a previous use of the style parameter).
- **style=styledirectoryname**: Get the base stylesheet from the specified style directory, and continue to do so for the rest of the session with this browser.

> **Note:** Administrators can create new style directories and set them as the default style. In the current discussion, `style0` stands for the default style directory.

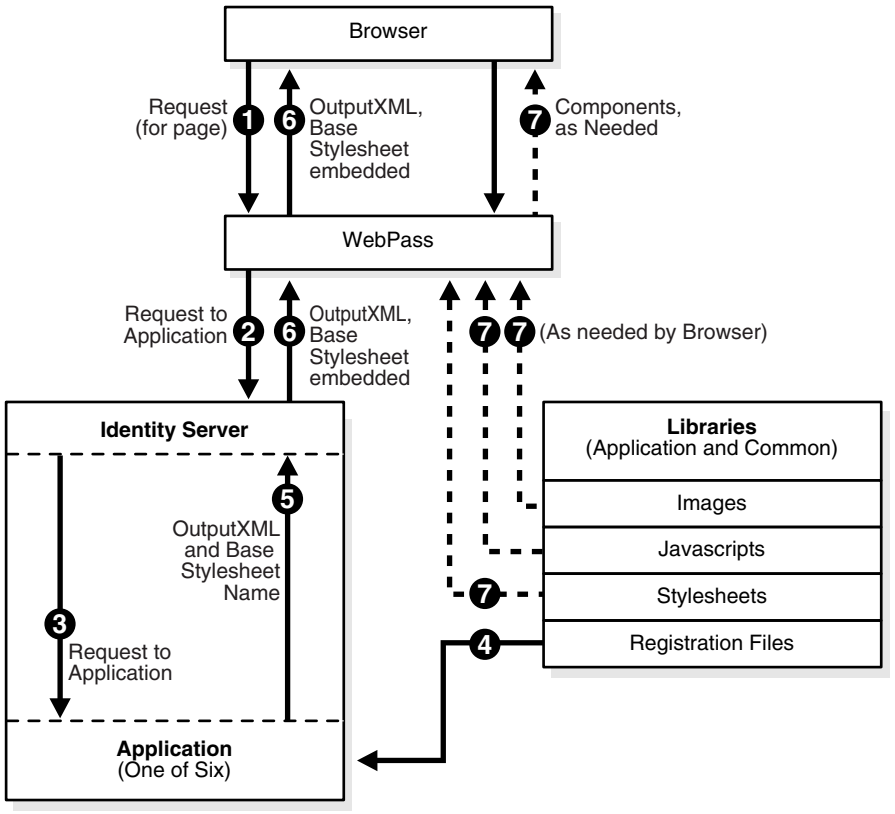
## Client-Side Processing

The diagram on the following page shows the major alternative method for using PresentationXML. This method is called client-side processing, because it presumes that the browser will generate its own HTML, given the OutPutXML and the base stylesheet. To set this up, you use the format=xml parameter as discussed earlier. In this case, the only responsibility of the Identity Server is to pass the OutPutXML, with the name of the base stylesheet embedded, through WebPass back to the browser. The browser then sends requests to WebPass for various library components as it needs them.

### Process overview: Client-side processing

1. The browser sends a request to the Web server, as in server-side processing.
2. WebPass takes the request, makes a few minor changes to it, and passes it to the Identity Server, as before.
3. The Identity Server passes the request to the appropriate application, as before.
4. The application processes the request, creates an OutPutXML file, and retrieves the base stylesheet, as before.
5. The OutputXML and base stylesheet are returned to the Identity Server, as before.
6. However, the Identity Server does no processing of the OutPutXML. Instead, it embeds the base stylesheet name into the OutPutXML and sends the result to Webpass, which passes it the browser.
7. The browser then makes requests to the Web server, as needed, for the referenced stylesheets, images and JavaScripts, as illustrated in Figure 2–2.

*Figure 2–2 Browser Making Requests to the Web Server*




## Caching Considerations

For the sake of efficiency, the Identity System maintains a cache of stylesheets, converted to a binary format. Stylesheets can be changed while the Identity System is running, but will need to be forced into this cache in order to take effect. One way to do this is to stop and start the Identity Server.

Another way is to use the XSL stylesheet control parameters provided (page 211) in the globalparams.xml parameter file:

*Identity_install_dir*\identity\oblix\apps\common\bin\globalparams.xml

where *Identity_install_dir* is the directory where the Identity Server is installed.

There are two of these:

- **XSLStylesheetLiveUpdate**: The default value for this parameter is false, which means, if the stylesheet is cached, the Identity System uses the cached binary version regardless of any changes to the original file. In a production environment, this parameter should be set to false. Setting it to true causes Oracle Access Manager to compare file stamps to see if the stylesheet has been modified in between requests. This is not desirable in a production system because it is an unnecessary overhead.

  Changing the value to true causes a check of the timestamp of the text version of the file against the timestamp for the cached version. If the cached version is older, the text file is converted to binary and replaces the older version in the cache. Note, however, that this works only for base stylesheets.

- **XSLStylesheetCacheSize**: Default value for this parameter is 200. In a development environment, you can change the value to 1 so that only one stylesheet can be cached (0 is not a legal value). Go forward one page, then return to the one you are testing. This works for stylesheets at all levels.

  **Recommendation**: In a production environment, the XSLStylesheetCacheSize parameter should be at least equal to or greater than the number of base stylesheets. The value of this should be greater than 200. To optimize performance, you should also set the XSLStyleSheetLiveUpdate parameter to false.

## Setting Up Your Environment to Customize the stylesheets

To prepare for customizing the PresentationXML stylesheets, you need to be able to preview the effect that updated stylesheets will have on the user interface. To be able to preview your changes, you must set up an XML editor and create local versions of Identity application XML files. This section discusses these topics, including a discussion of setting up the XMLSpy editor. You can use XMLSpy to test changes that you make to the stylesheets. XMLSpy is an XML development environment that enables you to transform XML documents according to definitions in XSL stylesheets.

The procedures in this section are appropriate for users who are new to XMLSpy. If you have more experience with it and with PresentationXML, you can modify the steps as needed.

The following task overview summarizes the steps to generating the XSL files that you want to customize.

### Task overview: Setting up your environment to test stylesheet customizations

1. Make local copies of your PresentationXML folders and add them to an XML editing environment.

   See "To configure PresentationXML folders in XMLSpy" on page 2-9 for details.

2. Configure PresentationXML image folders.

   See "To configure IdentityXML image folders for local testing" on page 2-10 for details.

3. Import the XML that you want to customize using the stylesheets.

   See "To import an Identity System XML file to work with its respective XSL stylesheet" on page 2-11 for details.

4. Transform the XML file with the XSL stylesheet.

   See "To transform the XML file to XSL" on page 2-12 for details.

### To configure PresentationXML folders in XMLSpy

1. Create a folder named Presentation XML, for example:

   ```
   c:\PresentationXML
   ```

   This is your working folder. You can copy the XSL for the Identity Server and WebPass, and the images into this folder.

2. Create two sub-folders under the one that you created in the previous step named "identity" and "webcomponent".

3. Copy the Identity stylesheets folder from the Web server into the "identity" folder.

   Copy from:

*Identity_Server_install_dir*\identity\oblix\lang

To:

c:\PresentationXML\identity\

The resulting directory structure should be similar to the following:

```
C:\PresentationXML
      identity
           lang
               en-us\. . .
               shared\. . .
      webcomponent
```

4. For the WebPass stylesheets, copy the entire WebComponent stylesheets folder, with its subdirectories, from the Web server where WebPass is installed into the webcomponent folder that you created, as follows:

   Copy from:

   *WebPass_install_dir*\webcomponent\oblix\lang

   To:

   C:\PresentationXML\webcomponent\

5. The resulting directory structure should be similar to the following:

```
C:\PresentationXML
      identity
           lang
               en-us\. . .
               shared\. . .
      webcomponent
           lang
               en-us\. . .
               shared\. . .
```

6. Launch XMLSpy.
7. To start a new project, click Project, then click New Project.
8. In the XMLSpy Project pane, right-click the XSL Files folder and select Add External Folder.
9. Browse to the following location:

   C:\PresentationXML\identity

   Select the identity folder and click OK.

10. Repeat the previous step for the webcomponent folder.

### To configure IdentityXML image folders for local testing

1. In XMLSpy, modify the path to the images and javascript files.

   This is required because there is a common reference to all images when running on a Web server, but not on your local drive.

   In XMLSpy or a text editor, open the following style.xsl file:

   C:\PresentationXML\identity\lang\en-us\style0

2. Change the gifPathName on line 8 as follows:

   From:

```
../../../lang
```

To:

```
C:\PresentationXML\webcomponent\lang\shared
```

3. Change the jsPathName in line 9 as follows:

   From:

   ```
   ../../../lang/shared
   ```

   To:

   ```
   C:\PresentationXML\webcomponent\lang\shared
   ```

### To import an Identity System XML file to work with its respective XSL stylesheet

1. Go to the Identity System function that you want to customize.

   For example in the Identity System, click User Manager, then click My Identity.

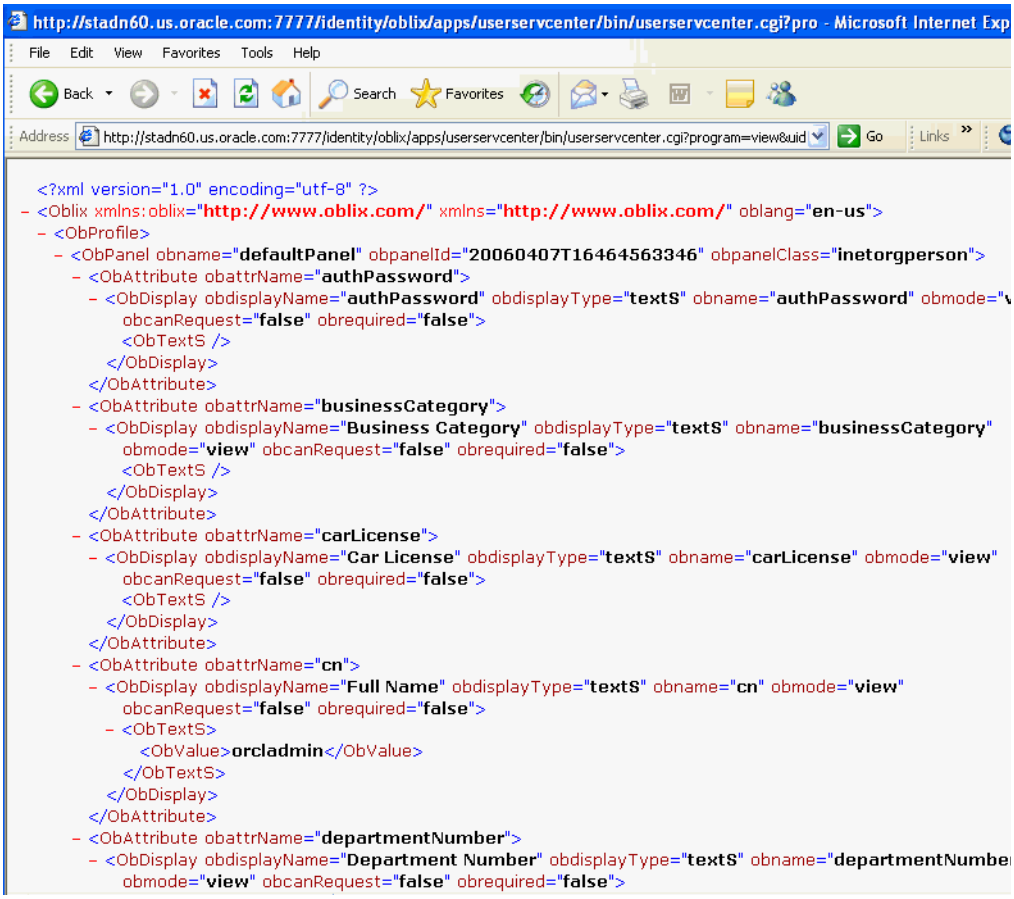
2. Append the following to the URL string used for this page:

   ```
   &format=xmlnoxsy
   ```

3. Press Enter or Go.

   As illustrated in Figure 2–3, the profile page is shown as raw XML.

***Figure 2–3 Profile Page Represented as Raw XML***



4. In your browser, save this information as a file by clicking File, then clicking Save As and providing a file name, for example, viewProfile.xml.
5. Create a folder for storing the XML files that you created using the &format=xmlnoxsl parameter, for example:

   `C:\PresentationXML\xml`
6. In XMLSpy, to add the XML folder that you created in the previous step, right-click the XML Files folder, click Add External Folder, browse for the XML folder, and click OK.
7. In XMLSpy, expand the XML Files folder in the Project pane and double-click the file that you want to transform.

   The file contents appear in the right pane.

### To transform the XML file to XSL

1. In XMLSpy, click XSL/XQuery, then click XSL Transformation.
2. Browse the XSL stylesheets, for example, to transform the My Identity page, you would navigate to the following:

   `C:\PresentationXML\identity\lang\en-us\style0\usc_profile.xsl`
3. Click Open.
4. Click OK.

   After a minute, the HTML output based on the transformation of the XML and XSL appears.
5. Modify the XSL file as described in the following sections and test the changes in XMLSpy.

## PresentationXML Components

This section describes the Identity System components that work together to create PresentationXML. These components are:

**XSL Transformer**: In addition to transferring data between WebPass and the applications, the Identity Server is usually responsible for transforming the OutPutXML (using the stylesheet as a guide) into HTML for use by the browser. To accomplish this, the Identity Server contains a built-in XSL Transformer. See "XSL Transformer" on page 2-13 for details.

**Applications**: The functional entities within the Identity Server, such as the User Manager or Lost Password Management, that handle the logic specific to each request. See "Identity System Applications" on page 2-13 for details.

**URLs**: The location information, and other parameters, that the browser provides in order to make a request through WebPass to reach a specific application. See "URLs" on page 2-13 for details.

**Output XML**: The stream of XML data created by each Identity System application. This can be captured as a file. It contains the information to be shown on the requested page. See "OutPutXML" on page 2-15 for details.

**XML Schemas**: Files that describe the type and hierarchy of data that appears in the OutPutXML. See "XML Schemas" on page 2-15 for details.

**Registration files**: Files that specify which stylesheets to use and which XML schema file describes the OutPutXML. See "Registration Files" on page 2-17 for details.

**JavaScripts**: JavaScript applications which perform specialized tasks. Pointers to these are provided within the HTML. See "JavaScripts" on page 2-20 for details.

**Styles**: Collections of data that support the generation of the HTML for the page. For each application, the data includes:

- **Stylesheets**: Files containing XSL instructions which tell the XSL transformer how to use the information provided in the OutPutXML. See "XSL Stylesheet Content" on page 2-22 for details.
- **Images**: Small graphic files referenced in the HTML, which are combined to make the final GUI presentation. See "Images" on page 2-23 for details.

## XSL Transformer

The Identity Server contains a built in XSL Transformer. The Transformer follows the logic provided in an XSL stylesheet and creates a file of text following an HTML format. The Transformer uses the content of the OutPutXML to determine branches at decision points in its logic and to get content for data to be included in the HTML.

## Identity System Applications

PresentationXML supports six applications, which are dynamically loaded and then executed from within the Identity Server. The following table lists the applications and shows the name for each application. The browser provides a URL as part of its request to the Identity Server and the application name appears as a string within the URL. The application name also appears as a directory name, under which the PresentationXML data for the particular application can be found (see "Directory Structure" on page 2-24 for details). Descriptions of each application and details for using each one are provided in the *Oracle Access Manager Introduction*.

| Application | Application Name |
|---|---|
| Group Manager | groupservcenter |
| Organization Manager | objservcenter |
| User Manager | userservcenter |
| Lost Password Management | lost_pwd_mgmt |
| Query Builder | querybuilder |
| Selector | selector |

There is an additional legal value which is used in URLs for activities that are common across applications:

| Application | Application Name |
|---|---|
| Resources used across applications | common |

## URLs

URLs that the browser provides to the Identity Server are of two basic kinds. First is the URL for the first page of each application, the one you arrive at after logging in. An example is the front page URL for User Manager:

```
http://www.domain.com/identity/oblix/apps/userservcenter/bin/
userservcenter.cgi
```

This can be divided into several parts. The first part is:

```
http://www.domain.com/
```

which is the location of the server site to which the Identity Server has been added as a plug-in. The second part:

```
http://www.domain.com/identity/oblix/
```

tells the server site that you want to work with the Identity Server. The third part is:

```
apps/userservcenter/bin/userservcenter.cgi
```

which tells the Identity server which of its applications, in this case the User Manager, you want to work with.

Formally, as discussed in the specification *Internet RFC 2396- Uniform Resource Identifiers (URI): Generic Syntax*, the following string:

```
identity/oblix/apps/userservcenter/bin/userservcenter.cgi
```

is a path to an application that can be executed.

Table 2–1 shows the path to the first page URL for each application:

***Table 2–1 URL to the First Page for Each Application***

| Application | Application Front Page URL |
|---|---|
| Group Manager | `identity/oblix/apps/groupservcenter/bin/groupservcenter.cgi` |
| Organization Manager | `identity/oblix/apps/objservcenter/bin/objservcenter.cgi` |
| User Manager | `identity/oblix/apps/userservcenter/bin/userservcenter.cgi` |
| Lost Password Management | `identity/oblix/apps/lost_pwd_mgmt/bin/lost_pwd_mgmt.cgi` |
| Query Builder | `identity/oblix/apps/querybuilder/bin/querybuilder.cgi` |
| Selector | `identity/oblix/apps/selector/bin/ selector.cgi` |

The front page in turn contains links to other pages in the application. The URL for such a link could resemble the following:

```
http://www.domain.com/identity/oblix/apps/
userservcenter/bin/userservcenter.cgi?program=view
&uid=cn%3DJohn%20Smith%2C%20ou%3DCorporate
%2C%20ou%3DCompany%2C%20c%3DUS &tab_id=Employees
```

This an extension of the content of the front page URL. The information that locates the server and specifies the application to use are as they were before. Added are several parameters, set off by the ? and & delimiters.

For PresentationXML, the most significant parameter is program, which identifies the purpose of the requested page. The program name serves as a lookup index in a registration file for each application.

> **See also:** See Chapter 3, "Customizing Portal Inserts" on page 3-1 for URL parameters.
>
> See "Registration Files" on page 2-17 for information on registration files.

## OutPutXML

OutPutXML is a structured stream of information which contains the content of a page to be created by using Presentation XML. The arrangement of this content and the choice as to how much of it will appear on the final page is determined by the stylesheet that is applied to it.

Each application generates an OutPutXML stream matching the task that it is performing. The content of this stream varies significantly with the directory content that the application is working with.

The detailed content of the OutPutXML is therefore not predictable. However, it is possible to predict the kinds of data that an OutPutXML stream will contain, because this data conforms to XML schemas which Oracle Access Manager follows for each application.

Given the application and the program name, you can locate the corresponding schema file name in the application's registration file.

## XML Schemas

The OutPutXML information generated by each program within each Identity System application is hard-coded and is not directly changeable by users. The content of the OutPutXML is not controlled by the content of the XML schema file. The file is provided only as a developer's aid, to help you design XSL stylesheets to work with the OutPutXML. XML schema files follow a standard developed by the World Wide Web Consortium. See "XML Schema" on page A-3 for the standard, and an introduction to XML syntax.

> **Note:** XML schema files do not have any effect on the PresentationXML and are located only on WebPass. Oracle recommends that you not change any of the XML schema files.

Here is an example XML schema file, the complete usc_profile.xsd file, located in `WebPass_install_dir\identity\oblix\WebServices\XMLSchema\usc_profile.xsd`:

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XMLSPY v5 rel. 3 U (http://www.xmlspy.com) by zzz (zzz) -->
<xsd:schema
      targetNamespace="http://www.oblix.com/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://www.oblix.com/"
elementFormDefault="qualified">
   <xsd:include schemaLocation="component_profile.xsd"/>
</xsd:schema>
```

The line in bold beginning with xsd:include indicates that there is more information to be included in-line in this schema definition, in the file at:

```
../..//XMLSchema/component_profile.xsd.
```

### component_profile.xsd

The complete content of the component_profile.xsd file follows. You will notice that this file includes pointers to four other schema files, such as navbar.xsd:

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema targetNamespace="http://www.oblix.com/" xmlns:xsd="http://
www.w3.org/2001/XMLSchema" xmlns="http://www.oblix.com/"
```

```
elementFormDefault="qualified">
   <xsd:include schemaLocation="navbar.xsd"/>
   <xsd:include schemaLocation="searchform.xsd"/>
   <xsd:include schemaLocation="component_panel.xsd"/>
   <xsd:include schemaLocation="component_basic.xsd"/>
   <xsd:element name="ObProfile">
      <xsd:complexType>
         <xsd:sequence>
            <xsd:element ref="ObPanel" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="ObHeaderPanel" minOccurs="0"/>
            <xsd:element ref="ObRequestInfo" minOccurs="0"/>
            <xsd:element ref="ObScripts" minOccurs="0"/>
            <xsd:element ref="ObForm" minOccurs="0"/>
            <xsd:element ref="ObDisplay" minOccurs="0"/>
            <xsd:element ref="ObTextMessage" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="ObSelectorInfoForm" minOccurs="0"/>
            <xsd:element ref="ObButton" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="ObStatus" minOccurs="0"/>
         </xsd:sequence>
      </xsd:complexType>
   </xsd:element>
   <xsd:element name="Oblix">
      <xsd:complexType>
         <xsd:sequence>
            <xsd:choice>
               <xsd:element ref="ObProfile"/>
               <xsd:element ref="ObError"/>
            </xsd:choice>
            <xsd:element ref="ObNavbar" minOccurs="0"/>
            <xsd:element ref="ObSearchForm" minOccurs="0"/>
            <xsd:element ref="ObApplicationFunc" minOccurs="0"/>
            <xsd:element ref="ObStatus" minOccurs="0"/>
         </xsd:sequence>
         <xsd:attribute name="oblang" type="xsd:string"/>
      </xsd:complexType>
   </xsd:element>
</xsd:schema>
```

This file is representative of most of the XML schema files in that:

- It begins with a set of included XML schemas, ones that are used in common across several applications.
- The lines starting with `<xsd:element name="ObProfile">` and ending with `</xsd:element>` define an element called ObProfile.
- The lines in between, starting with `<xsd:element ref=` indicate that the ObProfile element contains the nested elements `ObPanel`, `ObHeaderPanel`, and so on.

> **Note:** ObProfile in turn is referenced as part of the Oblix element, which is the root element of the entire Oracle Access Manager schema. The root element will be the starting point for the application of the XSL stylesheet.

### Schema Files

XML schema files do not have any effect on the PresentationXML and are located only on WebPass.

The following are some of the most often used schema files:

- **navbar.xsd**: Defines the Navigation Bar, which is the top two lines of each page, including the application name, help and logout buttons, and the various tabs to select other applications or modules within the application.
- **searchform.xsd**: Defines the Search Form line, which is the row of graphics shown on some pages, that starts with the graphic labeled search. This row may have other rows beneath it.
- **component_panel.xsd**: Defines the content for profiles, the sets of descriptive information for users, groups or organizations.
- **component_basic.xsd**: Defines many of the lowest level elements, and includes displaytype.xsd and error.xsd.
- **displaytype.xsd**: Defines formatting for each of the Identity System display types.
- **error.xsd**: Defines the ObError element.

Each of these files contains other nested elements, and so on. For easy reference, tables giving the names of the most commonly used schema files, the names of the elements contained within them, and a brief description of what each element is, are provided in the "XML Schema Elements Library" on page 2-37.

> **Note:** The OutPutXML information generated by each program within each Identity System application is hard-coded and is not directly changeable by users. The content of the OutPutXML is not controlled by the content of the XML schema file. The file is provided only as a developer's aid, to help you design XSL stylesheets to work with the OutPutXML. Users should not change any of the XML schema files.

## Registration Files

Each of the Identity System applications has associated with it a unique registration file. This is a text file holding information arranged as a series of XML elements. Using the ObProgram name that appears in the URL for a lookup index, the specific Identity application searches its registration file to get the name of the base stylesheet that is to be applied to the OutPutXML. As an aid to the developer, the registration file also holds the name of the XML schema that describes the OutPutXML for the program.

Table 2–2 shows the path to the registration file for each application.

***Table 2–2 Path to the Registration File for Each Application***

| Application | Registration File Location |
|---|---|
| Group Manager | *Identity_install_dir*\identity\oblix\apps\groupservcenter\bin\groupservcenterreg.xml |
| Organization Manager | *Identity_install_dir*\identity\oblix\apps\objservcenter\bin\objservcenterreg.xml |
| User Manager | *Identity_install_dir*\identity\oblix\apps\userservcenter\bin\userservcenterreg.xml |
| Lost Password Management | *Identity_install_dir*\identity\oblix\apps\lost_pwd_mgmt\bin\lostpwdmgmtreg.xml |
| Query Builder | *Identity_install_dir*\identity\oblix\apps\querybuilder\bin\querybuilderreg.xml |

*Table 2–2 (Cont.) Path to the Registration File for Each Application*

| Application | Registration File Location |
|---|---|
| Selector | *Identity_install_dir*\identity\oblix\apps\selector\bin\selectorreg.xml |

The main applications also frequently call logic from the common resource applications. When this happens the application looks for the appropriate stylesheet in the common registration file:

| Application | Application Name |
|---|---|
| Common resources | *Identity_install_dir*\identity\oblix\common\bin\oblixbasereg.xml |

### General Content of Registration Files

Registration files have the following general content. In the following example, key variable values within each registration file are indicated in italic text. Structural elements in the following example appear in **bold**.

```
<?xml version="1.0"?>
<ObProgramRegistry>
 <ObApplication name="application_name">
   <ObProgram name="a_program_name">
     <ObStyleSheet name="stylesheetname.xsl"/>
     <ObSchema name="Its_XML_schema_name.xsd"/>
   </ObProgram>
   <ObProgram name="a_program_name">
      <ObButton name="a_button_name"/>
         <ObButton name="another_button_name"/>
         <ObButton name="yet_another_button_name"/>
         <ObButton name="maybe_more_button_names"/>
         <ObStyleSheet name="stylesheetname.xsl"/>
         <ObSchema name="XML_schema_name.xsd"/>
   </ObProgram>
   <ObProgram name="and_so_on">
         ...
   </ObProgram>
         ...
 </ObApplication>
</ObProgramRegistry>
```

Each of these elements serves a particular purpose.

For example, the following element identifies the file as a registration file:

```
<ObProgramRegistry>
```

while the following element identifies the application to which this registration file applies:

```
<ObApplication name="the_application_name">
```

For example:

```
<ObApplication name="groupservcenter">
```

The program name identifies the program, or function, within the application, to which the stylesheet, buttons and schema apply:

```
<ObProgram name="a_program_name">
```

For example:

```
<ObProgram name="commonNavBar">
```

The stylesheet name identifies the base stylesheet that is associated with the program specified by ObProgram.

```
<ObStyleSheet name="stylesheetname.xsl"/>
```

For example:

```
<ObStyleSheet name="gsc_front.xsl"/>
```

The following element identifies the XML schema file that is associated with the program specified by ObProgram:

```
<ObSchema name="XML_schema_name.xsd"/>
```

For example:

```
<ObSchema name="gsc_front.xsd"/>
```

> **Note:** There is only one ObStyleSheet element and only one ObSchema element for each ObProgram element.

The following element identifies an ObButton element that is associated with the program specified by ObProgram. There may be anywhere from zero to many ObButton elements for each ObProgram element:

```
<ObButton name="a_button_name"/>
```

For example, in the program name for save, the first button is:

```
<ObButton name="groupSubscribe"/>
```

An ObButton is an Oracle Access Manager-specific construct that packages a graphic, mouseover text, and link as a unit to be built into the page.

You cannot change the content of the named button package that is provided in the Output XML. You can, however, remove the entry for the button from the registration file, in which case it does not appear in the finished page. And you can control where and whether the button is displayed using the XSL stylesheet.

> **Caution:** Oracle recommends that only experienced developers consider editing the registration file. Use extreme care if you decide to edit a registration file.

### Excerpt: User Manager Registration File

Following is an excerpt from the User Manager registration file in *Identity_install_dir*`\identity\oblix\apps\userservcenter\bin\userservcenterreg.xml` with information for the view program highlighted in **bold**.

**Note:** The XML schema file name that applies to the OutPutXML data for the view program is usc_profile.xsd and the stylesheet file to be used is `usc_profile.xsl`. In fact, the `usc_profile.xsl` stylesheet is used by several functions. For details about this stylesheet, "XSL Stylesheet Content" on page 2-22.

```
<?xml version="1.0"?>
<ObProgramRegistry>
 <ObApplication name="userservcenter">
      <ObProgram name="front">
      <ObStyleSheet name="usc_profile.xsl" />
             <ObSchema name="usc_front.xsd" />
         </ObProgram>
         <ObProgram name="commonNavbar">
             <ObStyleSheet name="usc_profile.xsl" />
             <ObSchema name="usc_front.xsd" />
         </ObProgram>
      ...
      <ObProgram name="deactivateUserArchive">
      <ObStyleSheetname=
         "Deactuser_purgearchiveconfirm.xsl"/>
      <ObButton name="wfArchivePurgeBack"/>
      <ObSchema name="usc_deactivateUserPurge.xsd"/>
      </ObProgram>
      <ObProgram name="view">
         <ObStyleSheet name="usc_profile.xsl"/>
         <ObButton name="initiateDeactivateUser"/>
         <ObButton name="userreactivate"/>
         <ObButton name="userModify"/>
         <ObSchema name="usc_profile.xsd"/>
      </ObProgram>
      <ObProgram name="modify">
         <ObStyleSheet name="usc_profile.xsl"/>
      <ObButton name="userSaveChange"/>
         <ObButton name="userCancelChange"/>
         <ObSchema name="usc_profile.xsd"/>
      </ObProgram>
      ...
   </ObApplication>
</ObProgramRegistry>
```

## JavaScripts

Because the JavaScripts are supplied by WebPass in direct response to requests from the browser, they are located in directories associated with WebPass, rather than with the Identity Server. For example:

```
WebPass_install_dir\identity\oblix\lang\shared
```

For more information, see "Directory Structure" on page 2-24.

HTML created by PresentationXML has embedded within it references to JavaScript files and functions within the files. A few of these files are associated with specific applications, but most of them are provided under WebPass.

A list of some of the most important of these files, and functions available within them, is provided at "JavaScript Library" on page 2-46.

## Styles

The manner in which Oracle Access Manager presents information, its style, is a direct result of the appearance of the graphical images used and the way in which they are combined on the page. Stylesheets control the way in which the images are combined. The images themselves can be changed, or different image names can be used in the stylesheets.

Note that for particularly complex stylesheets, the transformation engine can run out of stack space. If you run into this issue, you can modify the value of the StringStack parameter in the globalparams.xml file. See "Oracle Access Manager Parameter Files" on page B-1 for details.

### New Stylesheet Structure

Messages in stylesheets depend upon a language. With multiple-language capability, messages have been brought out of the stylesheets and defined separately as variables in msgctlg.xsl (and msgctlg.js for JavaScript files). For details about message catalogs, See"Changing Message Catalogs and MouseOver Text" on page 4-7.

In addition, each stylesheet has a corresponding language-specific thin wrapper in:

*Identity_install_dir*\identity\oblix\lang\langTag\style0

Each wrapper in \style0 includes the main language-neutral stylesheet stored in \shared:

*Identity_install_dir*\identity\oblix\lang\shared

The purpose of this new thin wrapper is to segregate the main functionality of the stylesheet template, which is language independent, from language-specific messages in the stylesheets.

#### Example: basic.xsl wrapper stylesheet

For example a typical wrapper stylesheet, basic.xsl, is located in \style0 and may be in your custom style directory:

*Identity_install_dir* \identity\oblix\lang\en-us\style0\basic.xs

*Identity_install_dir* \identity\oblix\lang\en-us*Custom*\basic.xsl

The following example shows basic.xsl content:

```
<?xml version="1.0" ?>
- <!--    Copyright (c) 1996-2005, Oracle Inc. All Rights Reserved.  -->
- <xsl:stylesheet version="1.0"
   xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
   xmlns:oblix="http://www.oblix.com/">
  <xsl:include href="./style.xsl" />
  <xsl:include href="../msgctlg.xsl" />
  <xsl:include href="../../shared/basic.xsl" />
  </xsl:stylesheet>
```

The basic.xsl wrapper stylesheet includes a pointer to:

- msgctlg.xsl, one directory up from your custom directory (in identity\oblix\lang\en-us)
- style.xsl file in your custom directory

  Due to the change in location of all image files, a new gifPathName variable is defined in style.xsl. For more information, see "Images" on page 2-23.

- basic.xsl in identity\oblix\lang\shared.

See also "XSL Stylesheet Content" on page 2-22.

### XSL Stylesheet Content

XSL stylesheets follow a standard developed by the World Wide Web Consortium. See "XSL Validation" on page 7-7 for information on the standard, and an introduction to XSL syntax.

As discussed earlier, PresentationXML uses the name of the current program as an index to its registration file, to get the name of an associated XSL stylesheet. For example, if the User Manager application is running the view program, then it locates and uses the usc_profile.xsl file as its stylesheet.

The following is partial content of the User Manager usc_profile.xsl stylesheet file. The information is shown in a compressed format in which each occurrence of <xsl:template represents many lines of XSL which for the sake of clarity are *not* shown here:

```
<?xml version="1.0" ?>
<!-- Copyright ... -->
<xsl:stylesheet version="1.0"
   xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
   xmlns:oblix="http://www.oblix.com/">
<xsl:include href=./basic.xsl" />
<xsl:include href=./selectorinfo.xsl" />
<xsl:include href=./usc_searchform.xsl" />
<xsl:include href=./usc_navbar.xsl" />
<xsl:template match="/">
...
<xsl:template match="oblix:ObProfile"> ...
<xsl:template match="oblix:ObProfile/Oblix/ObForm"> ...
<xsl:template match="/oblix:Oblix/oblix:WfActorComment">
<xsl:template match="oblix:WfActorComment/oblix:ObForm">
<xsl:template match="oblix:ObHeaderPanel">...
<xsl:template match="oblix:ObPanel">...
<xsl:template match="oblix:ObAttribute"> ...
<xsl:template name ="horizontalButton"> ...
</xsl:stylesheet>
```

The lines beginning with xsl:template match are the top level of a great many lines of XSL instructions, called a *template*, which tell the XSL Transformer how to build the output page.

For example, the line:

```
   <xsl:template match="oblix:ObProfile">
```

in effect tells the transformer to look for an occurrence of the oblix:ObProfile element in the OutPutXML and, if it finds it, to begin to apply the instructions following this line in the stylesheet.

In the case of this example stylesheet, building of the HTML begins with the line <xsl:template match="/">. Within that template, the Navigation Bar and the Search Form are built. The remaining templates go on to build the Profile information, including the Header Panel (the one including the user photo) and each of the other panels.

The lines beginning with xsl:include, shown in bold, indicate other XSL files which are to be added in-line to generate the complete XSL stylesheet. These included files can

contain references to other included files, and so on. Certain base stylesheet files are used in common by almost all of the applications.

Base stylesheets include:

- **basic.xsl:** Contains templates to define attributes and status and control display information. Contains references to the font.xsl and title.xsl files.
- **searchform.xsl:** Contains templates to create the Searchform line.
- **navbar.xsl:** Contains templates to create the Navigation Bar.
- **font.xsl:** Contains templates to define HTML size, fonts and colors for recurring text such as page headings.
- **title.xsl:** Contains the default titles for the HTML pages.

Each base stylesheet includes other nested stylesheets, and so on. For easy reference, tables giving the names of the most commonly used stylesheets, the names of the templates contained within them, and a brief description of what each template does, are provided in "Stylesheets" on page 2-31.

> **See also:** See "Customizing the Identity System Pages" on page 2-58 for an introduction to XSL stylesheets.

### Images

HTML created by PresentationXML has embedded within it references to images. The Oracle Access Manager supplies its own set of GIF images and supports any type of image that can be read by a browser. Because the images are supplied by WebPass in direct response to requests from the browser, they are located in directories associated with Webpass, as described in "Directory Structure" on page 2-24.

> **See also:** See "Image Library" on page 2-44 for the naming convention for these files.
>
> For details about incorporating custom images or styles after upgrading, see the *Oracle Access Manager Upgrade Guide*.

### gifPathName and jsPathName Variables

Due to the change in location of all image files, a new *gifPathName* variable is defined in style.xsl. In addition to style.xsl, the following file also includes the *gifPathName* variable to mention the path for image locations:

```
install_dir\oblix\lang\langTag\msgctlg.js
```

For more information about msgctlg files, see "Modifying Catalog Files" on page 4-1.

> **Note:** Stylesheets refer to the *gifPathName* variable to locate the image directory. JavaScript files refer to the *jsPathName* variable.

A language independent stylesheet picks up the images from the modified image path mentioned by the gifPathName variable, which is important for two reasons:

- It prevents hard-coding of URLs in the stylesheets and makes it easier to reuse the same stylesheet across styles.When customizing stylesheets, you should use this global variable whenever constructing a URL path to a GIF.
- It incorporates the current language and current style tag and generates the correct path.

### Example: style.xsl with variables highlighted

The style.xsl wrapper resides in \style0 and can reside in your custom directory:

*Identity_install_dir* \identity\oblix\lang\en-us\style0\style.xsl

*Identity_install_dir* \identity\oblix\lang\en-us*Custom*\style.xsl

A sample style.xsl is as follows.

```
  <?xml version="1.0" encoding="ISO-8859-1"?>
- <!--   Copyright (c) 1996-2005, Oracle All Rights Reserved.   -->
- <xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns:oblix="http://www.oblix.com/">
  <xsl:variable name="styleName">style0/</xsl:variable>
  <xsl:variable name="localeName">en-us</xsl:variable>
- <xsl:variable name="gifPathName">
  ../../../lang/
  <xsl:value-of select="$localeName" />
  /
  <xsl:value-of select="$styleName" />
  </xsl:variable>
  <xsl:variable name="jsPathName">../../../lang/shared</xsl:variable>
- <xsl:variable name="cssPathName">
  ../../../lang/
  <xsl:value-of select="$localeName" />
  /
  <xsl:value-of select="$styleName" />
  /coreid.css
  </xsl:variable>
  <xsl:variable name="pageLayoutDir">LTR</xsl:variable>
  </xsl:stylesheet>
```

# PresentationXML Libraries

This section treats several of the components described earlier as parts of a library of information used to implement PresentationXML as if it were a programming language. It provides more detail and pinpoints the location of the files in directories.

## Directory Structure

The Identity System can be installed starting at the root directory or in a specified subdirectory. For example:

**Default on Windows:** C:\Program Files\COREid\identity

**Default on Unix:** /opt/coreid/identity

**In this manual:** Identity_*install_dir*\identity

Prior to version 6.5, the PresentationXML library was provided under two directories and distributed depending upon how the files were likely to be used.

Version 6.5 and later versions include Language Packs that enable you to display static information to users in their native language. English is the default language for which no Language Pack is required. All Oracle Access Manager installations include a directory named with the en-us language tag (*langTag*).

When you install additional Language Packs you will see other *langTag* directories. For example, a French Language Pack results in a directory named *fr-fr*. For details about installing Language Packs, see the*Oracle Access Manager Installation Guide*.

For version 6.5 and later, the default directory structure for PresentationXML Libraries is summarized as follows:

*Identity_install_dir*\identity\oblix\apps\AppName\bin
*Identity_install_dir*\identity\oblix\apps\AppName\bin
*Identity_install_dir*\identity\oblix\lang\langTag
*Identity_install_dir*\identity\oblix\lang\langTag\style0
*Identity_install_dir*\identity\oblix\lang\shared

*WebPass_install_dir*\identity\oblix\lang\langTag
*WebPass_install_dir*\identity\oblix\lang\langTag\style0
*WebPass_install_dir*\identity\oblix\lang\shared
*WebPass_install_dir*\identity\oblix\WebServices\XMLSchema

Figure 2–4 and Figure 2–5 show a default Identity Server Directory structure. Notice that the \en-us directory and the \shared directory reside at the same level in the \lang directory. Also notice that the Identity System application-specific directories reside under \apps (userservcenter, objservcenter, groupservcenter).

***Figure 2–4 Sample Default Identity Server Directory Structure for Apps***

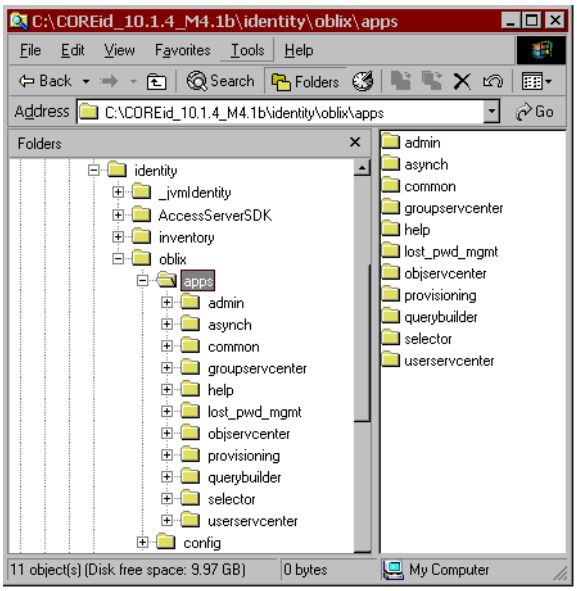
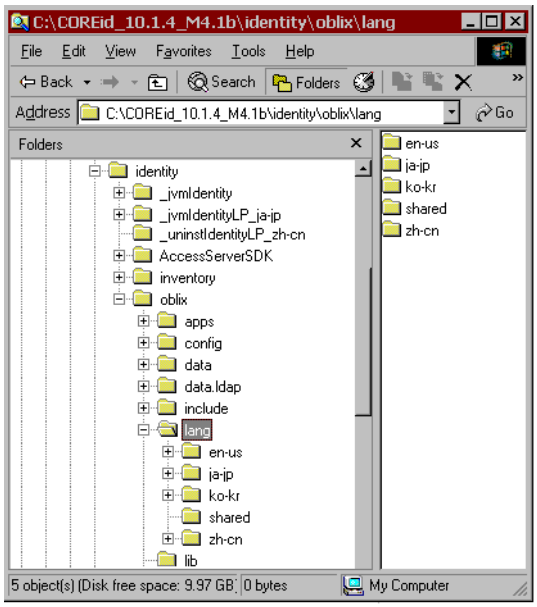


*Figure 2–5 Sample Default Identity Server Directory Structure for Lang*




**See also:** See "Directory Content" on page 2-26 for more information.

## Directory Content

The contents of default Identity System and WebPass directories are introduced here.

The contents of the default directories are outlined in Table 2–3. See the full list of applications on page 2-13, in the AppName column.

*Table 2–3 Default PresentationXML Libraries*

| Default Identity System Directories | Contents |
|---|---|
| *Identity_install_dir*\identity\oblix\apps\AppName*bin*<br>Where *AppName* can be common, groupservcenter, objservcenter, userservcenter, and so on. | Registration and parameter files specific to the application.<br>**Note:** Dynamically-loadable code for applications is included in Identity Server executables. |
| *Identity_install_dir*\identity\oblix\lang*langTag*<br>Where *langTag* represents an installed language, such as en-us (English) or fr-fr (French). | Message files for various applications. |
| *Identity_install_dir*\identity\oblix\lang*langTag*\style0 | ▪ XSL stylesheets for applications point to templates in \shared<br>▪ Common images |
| *Identity_install_dir*\identity\oblix\lang\shared | XSL stylesheet templates for various applications |

The contents of the default WebPass directories identified earlier is outlined in Table 2–4.

*Table 2–4 Default WebPass PresentationXML Libraries*

| Default WebPass Directories | Contents |
|---|---|
| *WebPass_install_dir*\identity\oblix\lang*langTag* | Contains message files for various applications. |

*Table 2–4 (Cont.) Default WebPass PresentationXML Libraries*

| Default WebPass Directories | Contents |
|---|---|
| *WebPass_install_dir*\identity\oblix\lang\langTag\style0 | ▪ Image files used in presenting the page.<br>▪ Copies of style0 stylesheets for client-side processing only. |
| *WebPass_install_dir*\identity\oblix\lang\shared | ▪ JavaScripts<br>▪ Copies of stylesheets for reference only. |
| *WebPass_install_dir*\identity\oblix\WebServices\XMLSchema | Contains XML schema files for specific applications. |

The differences between content of the Identity Server and WebPass PresentationXML directories are outlined in "Differences Between Identity Server and WebPass Directory Content" on page 2-27.

## Differences Between Identity Server and WebPass Directory Content

Summary of differences as follows:

- The XMLschema directory has no effect on PresentationXML operation and exists only on WebPass.
- JavaScripts and image files are always provided by WebPass Due to the change in location of all image files, a new gifPathName variable is defined in \identity\oblix\lang\langTag\style0\styles.xsl. A language independent stylesheet picks up images from the modified image path mentioned by the variable. Wrapper stylesheets include the styles.xsl stylesheet file. styles.xsl also contains the path for JavaScripts.
- Parameter, message, and registration files are used only by Identity applications, as part of the process that generates the OutPutXML.
- Stylesheets are available under both Identity Server and WebPass because they can be used in either:
  a. Server-side processing (the Identity Server builds the completed XSL stylesheet).
  b. Client-side processing (WebPass assists the client browser to build the final stylesheet by sending it pieces of other stylesheets to be included in-line).

For example:

**Before v6.5:** *Identity_install_dir*\identity\oblix\apps*AppName*

**Before v6.5:** *WebPass_install_dir*\identity\oblix\apps*AppName*

where *AppName* represents Group Manager (groupservcenter), Org. Manager (objservcenter), User Manager (userservcenter), and the like.

The *AppName* directory included include three significant subdirectories:

**Before v6.5:** *AppName*\bin

**Before v6.5:** *AppName*\ui

**Before v6.5:** *AppName*\xmlschema

**Note:** Oracle Access Manager includes Language Packs that allow you to display static information to users in their native language. English is the default language for which no Language Pack is required. As a result, the directory structure and location of specific files has changed.

Following discussions provide more information on the content of the directories identified in the previous paragraphs.

### *Identity_install_dir\identity\oblix\apps\AppName\bin*

The *AppName* directory refers to specific applications, including:

common

groupservcenter

objservcenter

userservcenter

and others

Each *AppName* \bin directory contains a registration file, as discussed in "Registration Files" on page 2-17. In addition, each *AppName* \bin directory contains a small number of XML files that contain parameters for the specific application. All application-specific subdirectories include the same types of information. Although, the userservcenter\bin directory also includes several certificate files.

For example, in groupservcenter\bin, you will find the following files:

- groupservcenterreg.xml: The registration file for the Group Manager application.
- groupservcenterparams.xml: This file, and other files ending in params.xml, contain parameters that are used to guide execution of the application:
  - gsc_wf_params.xml: Create workflow, remove workflow, change attribute workflow parameters. The following files duplicate this information and are needed for special handling required for the IBM SecureWay directory server:

    gsc_wf_params-base.xml gsc_wf_params-sw.xml

    gsc_wfqs_params.xml: Create group basic template parameters.
- gscaclparams.xml: Example that shows a set of parameters and their value ranges for simple access control. Sample data is included that is not meant to be used in any deployment.

**See also:** See "Oracle Access Manager Parameter Files" on page B-1 for a list of all parameter files whose content is designed to be changed by the user.

**Note:** Do not change the content of any of these files unless the named file is listed in "Oracle Access Manager Parameter Files" on page B-1, the parameter is described there, *and* the description does not forbid you to change the parameter.

**Note:** *AppName*.dll files, available before version 6.5, contained logic that the Identity Server executed for each application. Application module logic and libraries are now compiled in the Identity Server executable.

### *Identity_install_dir*\identity\oblix\lang*langTag*

To support multiple languages, Oracle Access Manager provides a specific named directory for each installed language. For example, \lang\en-us contains English language files; \lang\fr-fr contains French language files, and so on. Both the default style directory and any custom style directories you create are stored within each installed language directory.

```
Identity_install_dir\identity\oblix\lang\en-us\NewStyle
Identity_install_dir\identity\oblix\lang\en-us\style0

Identity_install_dir\identity\oblix\lang\fr-fr\NewStyle
Identity_install_dir\identity\oblix\lang\fr-fr\style0
```

Each *langTag* directory also contains message files for various applications in a specific language, such as English. A \help directory is also stored here.

You may customize messages in each langTag directory by editing specific msg.xml files.

**See also:** See "Customizing Oracle Access Manager" on page 2-54 for information on customizing a stylesheet.

### Identity_install_dir\identity\oblix\lang\langTag\style0

The \style0 directory within each *langTag* directory provides default wrapper stylesheets that are specific to each application. For example:

**gsc_** is the prefix for Group Manager wrapper stylesheets.

**osc_** is the prefix for Org Manager wrapper stylesheets.

**usc_** is the prefix for User Manager wrapper stylesheets.

**wf_** is the prefix for workflow wrapper stylesheets.

There are others.

Each default wrapper stylesheet points to default global stylesheets in the \shared directory. In addition, several common image (GIF) files are stored here. When you add a style using the Configure Styles function in the Identity System Console, and copy from the Classic Style, the contents of \style0 are duplicated in your custom directory.

When customizing a style, you may overwrite a default wrapper stylesheet in your custom directory with a copy of the \shared stylesheet that you intend to customize. No wrapper stylesheet in your custom directory should inherit from (or reference) a default global stylesheet in the \shared folder.

The giflist.xml file included in previous versions is not available.

**Note:** Oracle recommends that you retain the files in \style0 as they are in case you need to revert to the default style. See "Customizing Oracle Access Manager" on page 2-54 for more information.

### *Identity_install_dir*\identity\oblix\lang\shared

The \shared directory contains default global stylesheets that apply to various applications in all languages.

You may edit stylesheets in \shared to institute a global change for all languages. However default stylesheets in \shared, and in \style0, will be updated periodically by Oracle. A customized stylesheet in \shared or \style0 may be overwritten during product patches or upgrades. Other stylesheets may depend on the updates making it risky to overwrite an updated default stylesheet with the back up copy of a customized style. A better practice is to copy a default stylesheet from \shared into your custom directory, then customize the copy.

---

**Note:** Oracle recommends that you retain the files in \shared as they are in case you need to revert to the default style.

---

### *WebPass_install_dir*\identity\oblix\lang\langTag

This directory contains message catalog files for various applications but is not an exact duplicate of the langTag directory on the Identity side:

- Copies of several message files
- Additional message files, such as webpassmsg.xml and others
- HTML files such as ldap_personoc.html

This directory also includes a help directory, and a docs directory for Web server related files. Again, you may edit message files here and propagate changes to other WebPass hosts.

> **See also:** See "Customizing Oracle Access Manager" on page 2-54 for details.

### *WebPass_install_dir*\identity\oblix\lang\langTag\style0

Contains copies of default XSL wrapper stylesheets for various applications from *Identity_install_dir*\identity\oblix\lang*langTag*\style0.

Also included are the image files used when presenting the page, which are always provided by WebPass as direct responses to browser requests.

---

**Note:** Oracle Access Manager relies on the images provided in this directory. Oracle recommends that you do not alter default images.

---

After you add a style to Oracle Access Manager and customize stylesheets, you will create the same style-related directory structure on the WebPass. You must copy all images you intend to use into your custom directory structure on WebPass. Even if you have made no changes to images you must still:

**Copy Images From:** *WebPass_install_dir*\identity\lang\en-us\style0

**Copy Images To: WebPass_install_dir**\identity\lang\en-us*CustomStyle*

As with other default style files, images may be updated by Oracle periodically.

### WebPass_install_dir\identity\oblix\lang\shared

This directory contains default global files that WebPass uses in response to requests:

- JavaScripts used by WebPass

- Copies of XSL stylesheets in *Identity_install_dir*\identity\oblix\lang\shared directory for use with client-side processing.

As with other default style files, these may be updated by Oracle periodically. Oracle recommends that you do not alter default files.You may copy and customize JavaScripts using the same methodology as if modifying a stylesheet on the Identity Server side.

**See also:** See "Customizing Oracle Access Manager" on page 2-54.

### WebPass_install_dir\identity\oblix\WebServices\XMLSchema

This directory contains the XML schemas, as xsd files, that define elements specific to various applications. For example

gsc_... identifies Group Manager files.

osc_... identifies Org Manager files.

usc_... identifies User Manager files.

workflow... identifies Workflow files.

The XMLSchema has no affect on PresentationXML and is included only on WebPass.

As with other default style files, these may be updated by Oracle periodically.

The Oracle Access Manager system relies on these files. Oracle recommends that you retain the files in this directory as is.

## Stylesheets

As discussed in the previous sections, the default XSL stylesheets and wrapper stylesheets for various Identity System applications can be found in the following directories:

*Identity_install_dir*\identity\oblix\lang\langTag\style0 -- *wrapper stylesheets*
*Identity_install_dir*\identity\oblix\lang\shared -- *stylesheets*

*WebPass_install_dir*\identity\oblix\lang*langTag*\style0
*WebPass_install_dir*\identity\oblix\lang\shared

On WebPass, copies are included for client-side processing if that method is used.

The following base stylesheet files provide a foundation for all other stylesheets and contain relative pointers to other stylesheets:

- **basic.xsl:** Provides templates to define attributes and status and control display information, including references to the font.xsl and title.xsl files.

  For more information, see "basic.xsl" on page 2-32.

- **font.xsl:** Contains templates to define HTML size, fonts and colors for recurring text such as page headings.

  For more information, see "font.xsl" on page 2-35.

- **title.xsl:** Contains the default titles for the HTML pages.

  For more information, see "title.xsl" on page 2-36.

- **navbar.xsl:** Provides the template to define the Navigation Bar.

  For more information, see "navbar.xsl" on page 2-36.

- **searchform.xsl:** Provides templates to create the Searchform line. The following searchform.xsl files appear as well, and all point to searchform.xsl:

  gsc_searchform.xsl

  osc_searchform.xsl

  usc_searchform.xsl

  For more information, see "searchform.xsl" on page 2-37.

> **Important:** Oracle periodically updates stylesheets and recommends retaining default stylesheets to serve as a predictable stylesheet library.

## basic.xsl

The basic.xsl wrapper stylesheet in the \lang\en-us\style0 or your custom directory provides references to style.xsl, msgctlg.xsl, and to the basic.xsl stylesheet located in the \shared subdirectory.

The global, language-neutral basic.xsl file in the following directories includes the variables in Table 2–5 and the templates in Table 2–6:

```
Identity_install_dir\identity\oblix\lang\shared
WebPass_install_dir\identity\oblix\lang\shared
```

***Table 2–5 Variables Defined in basic.xsl***

| Name | Description |
|---|---|
| textSLength | The default length for a textbox. |
| textSMaxLength | The maximum length for a textbox. |
| namePrefix | Oblix internal, do not change. |
| singlequote | Defines a constant for the single quote character. This is specified as a character that needs to be handled in a special manner and is required for literal strings in JavaScript code enclosed in single quotes. |
| charsToEscape | Used in the `PrepForJS XSL` template. This is a list of characters that need to be escaped with &. |

Table 2–6 identifies actual templates available in basic.xsl.

***Table 2–6 basic.xsl Templates***

| Name | Description |
|---|---|
| oblix: ObDisplay | Each display type (for example checkbox, textbox, bitstring, and so on) is nested within the oblix:ObDisplay element. This matching template, sometimes called the Dispatcher, calls the corresponding display type template to properly generate the HTML for that display type. Additional HTML logic is added to properly include the + or - button in modify mode. |
| oblix:ObBitString | Generates the bitstring display type data as HTML text in view mode or as an HTML textbox in modify mode. |
| oblix:ObBoolean | Generates the Boolean display type data as text strings in view mode or radio buttons in modify mode. |
| oblix:ObCheckBox | Generates the checkbox display type data as text strings in view mode or an HTML checkbox in modify mode. |

***Table 2–6 (Cont.) basic.xsl Templates***

| Name | Description |
|---|---|
| oblix:ObDate | In view mode this template generates the date display type as text strings, using a format corresponding to the date type specified (ObMonthDYDate, ObDMYDate, for example). In modify mode this template generates the date display type as an HTML select box (one for year, one for month, and one for day). This template calls the ObDateValue template to generate the actual select boxes. |
| oblix:ObDateValue | In view mode this template generates one entered value of the date display type data as a text string with a format corresponding to the date type specified (for example ObMonthDYDate, ObDMYDate). In modify mode it generates an HTML select box (one for year, one for month, and one for day). |
| oblix:ObDn | In both view and modify mode, generates the dn display type as hyperlink text. The dn value will also be prepended with an image, if one is supplied from the XML. |
| oblix:ObEmail | In view mode generates the email display type as hyperlinked text in the form mailto:<email address>). In modify mode, this is an HTML text box. |
| oblix:ObFacsimile TelNum | In view mode, this template generates the facsimileTelNum display type data as a text string with the fax value first, followed by optional parameters describing whether it is TwoDimensional, FineResolution, b4Length, a3Width, b4Width, uncompressed, and unlimitedLength. In modify mode, the text string is displayed as an HTML textbox and the parameter properties are displayed as checkboxes. |
| oblix:ObGeneric Selector | Generates the generic selector display type data as hyperlinked text in both view and modify mode. If the data is for a user, a user image is prefixed. If the data is for a group, a group image is prefixed. If the data is an object, an object image is prefixed. In addition, the modify mode also generates the selector button. |
| oblix:ObGif | Generates the GIF display type data as an image using the src, width, height, and alt information from the XML, in both view and modify mode. In modify mode, a file upload box is also generated. |
| oblix:ObGifUrlText | A named template that is called by ObGifUrl. Used only in modify mode to generate the gifurl information as a textbox with the specified length and maxlength. |
| oblix:ObGifUrl | In both view and modify mode, generates the gifurl display type data as an image using ObImage's XML attributes obhref (the hyperlink), obalt (the alternate text), obwidth (the width of the image), and obheight (the height of the image). In modify mode, an additional text box is generated by calling the template ObGifUrlText. |
| oblix:ObLocationDn | Generates the location dn display type data as a link by calling the ObLink template. |
| oblix:ObMedia | Generates the media display type data as a hyperlink with an image, if one is supplied or the specified display name, if one is supplied. For modify mode, an additional file browse button is also generated. |
| oblix:ObPassword | In modify mode, generates an HTML password input box with the specified length and max length. If oboldpswd is true, then the old password is also prompted for, using a password input box. (This element is not used in view mode). |
| oblix:ObPostalAddress | In view mode, generates the postal address display type value as a text string. In modify mode, the values are presented as modifiable data in text boxes. |
| oblix:ObQueryBuilder | In modify mode, each value is displayed as modifiable data in a textbox. A querybuilder button is also generated. (This element is not used in view mode). |
| oblix:ObRadio | In view mode, generates the radio display type values as text strings. In modify mode, the values are generated as HTML radio buttons. |
| oblix:ObSelect | In view mode, generates the select display type values as text strings. In modify mode, the values are generated as HTML select boxes. |
| oblix:ObSMIMECertificate | Generates the SMIMECertficate display type as text strings. |

***Table 2–6 (Cont.) basic.xsl Templates***

| Name | Description |
|---|---|
| oblix:ObTextM | In view mode generates the textM display type value as a text string. In modify mode the values are generated as HTML multi-line text boxes with the specified columns and rows. |
| oblix:ObTextS | In view mode, generates the textS display type value as a text string. In modify mode, the values are generated as HTML single-line text boxes with a specified maxlength and length. |
| oblix:ObNumericStr | In view mode, generates the numeric string display type value as a text string. In modify mode, the value is generated in a text box with the specified maxlength and length, along with a JavaScript validation to ensure that the text field only accepts numeric values. |
| oblix:ObValue | Generates the PC Data text in the Oblix:ObValue element. |
| oblix:ObApplet | Generates an HTML applet. Information includes name, codebase, code, width, height, align, target, and archive. If the applet requires input parameters, they are specified in the oblix:ObParam element. |
| oblix:ObScripts | Calls the oblix:ObScript template for each ObScript element within the ObScripts element. |
| oblix:ObScript | Generates the script tag to allow the JavaScript specified in the Oblix:ObScript element to be referenced within the HTML. |
| oblix:ObButton | Generates a button, either a hyperlink text or image, using the information provided in the XML. Information includes the href, mouse over, and optional image. If an image is not specified the anchor text is displayed. |
| oblix:ObInput | Generates the HTML input tag using the specified information in the XML element. |
| oblix:ObLink | In view mode generates a hyperlink with the specified href and mouse over values, along with either an image or a text string. In modify mode a text box is generated. |
| oblix:ObImage | Generates an image using the specified obwidth, obheight, obalt, and href values. |
| requestLessValue | A called template that generates the proper HTML tag to enable the "request a ticket to remove an attribute" functionality. |
| requestMoreValue | A called template that generates the proper HTML tag to enable the "request a ticket to modify an attribute" functionality. |
| outputDateChoices | A called template that generates the date choices for modify mode. |
| ObDateMonth | A called template that generates the month select box in modify mode. |
| ObDateDay | A called template that generates the day select box in modify mode. |
| ObDateYear | A called template that generates the year select box (by default, 1993 - 2012) in modify mode. |
| ObDateHourOption | A called template that generates the hour select box (00 - 23) in modify mode. |
| ObDateTZHourOption | A called template that generates the hour select box (00 - 12) in modify mode. |
| ObDateMinOrSecOption | A called template that generates the minute or the hour select box (00 - 59) in modify mode. |
| requiredAttrInput | A called template that generates hidden HTML input tags, intended for internal purposes. This is called by the Oblix:ObDisplay template. |
| moreValue | A called template that generates the proper HTML tag to enable the "add more values" functionality (The + button). |
| lessValue | A called template that generates the proper HTML tag to enable the "remove a value" functionality (The - button). |
| oblix:ObDisplayProperties | A called template that adds the onX event which can be any of: onChange, onClick, onDblClick, onDragStart, onFilterChange, onHelp, onKeyDown, onKeyPress, onMouseDown, onMouseMove, onMouseOut, onMouseOver, onMouseUp, onSelectStart, or disabled. |

*Table 2–6 (Cont.) basic.xsl Templates*

| Name | Description |
|---|---|
| oblix:ObError | Generates the error message. |
| oblix:ObTextMessage | Generates the specified text message. |
| MakeHiddenObAttribute | A called template that generates hidden HTML input tags, intended for internal purposes. |
| ObDisplayPrettyPrint | A called template that generates values in a table format. |
| ObLinkPrettyPrint | A called template that generates link values in a table format. |
| ObLinkModifyPrettyPrint | A called template that generates each link values as a checkbox in a table format. |
| Makeobvarname | A called template that converts the input parameter from x to Obx, changing hyphens to underscores. |
| AddLineBreaks | A called template that adds line breaks to a string, in the places where the string contains 
 |
| oblix:PrepForJS | A called template that escapes characters in preparation for calling a JavaScript. |
| oblix:AddJavaPluginLayer | A called template that generates an error display if the Java Runtime Environment 1.3 or higher is needed but not available. |

## font.xsl

This stylesheet contains templates to define HTML size, fonts and colors for recurring text such as page headings. The font.xsl file in the following directories includes the variables in Table 2–7 and templates in Table 2–8.

*Identity_install_dir*\identity\oblix\lang\shared
*WebPass_install_dir*\identity\oblix\lang\shared

*Table 2–7 Variables Defined in font.xsl*

| Name | Description |
|---|---|
| pageHeaderSize | Defines the size of the heading for the page. |
| pageHeaderColor | Defines the color of the heading for the page. |
| pageHeaderFont | Defines the font of the heading for the page. |
| subHeadingSize | Defines the size of the subheading for the page. |
| subHeadingColor | Defines the color of the subheading for the page. |
| subHeadingFont | Defines the font of the subheading for the page. |
| contentTitleSize | Defines the size of the content title (for example the attribute display name in a profile page). |
| contentTitleColor | Defines the color of the content title. |
| contentTitleFont | Defines the font of the content title. |
| contentTextSize | Defines the size of the content text (for example the attribute value in a profile page). |
| contentTextColor | Defines the color of the content text. |
| contentTextFont | Defines the font to be used for the content text. |
| pageWarningSize | Defines the size of the warning message. |
| pageWarningColor | Defines the color of the warning message. |
| pageWarningFont | Defines the font to be used for the warning message. |
| anchorTextSize | Defines the size of the anchor text to be used with login.xsl and logout.xsl. |
| anchorTextColor | Defines the color of the anchor text for login.xsl and logout.xsl. |
| anchorTextFont | Defines the font of the anchor text for login.xsl and logout.xsl. |

Table 2–8 identifies the templates in font.xsl.

***Table 2–8 Templates Defined in font.xsl***

| Name | Description |
|---|---|
| addPageHeaderAttr | A called template that is used to set the proper color, size, and font for the page header. (for example the word Profile, which is the title of a profile page). |
| addSubHeadingAttr | A called template that is used to set the proper color, size, and font for the sub heading. (for example the Panel name in a profile page). |
| addContentTitleAttr | A called template that is used to set the proper color, size, and font for the content title. (for example the attribute display name in a profile page). |
| addContentTextAttr | A called template that is used to set the proper color, size, and font for the content text. (for example the attribute value in a profile page). |
| addPageWarningAttr | A called template that is used to set the proper color, size, and font for the page warning. |
| addAnchorTextAttr | A called template that is used to set the proper color, size, and font for the anchor text created by login.xsl and logout.xsl. |

## title.xsl

This stylesheet the default titles for the HTML pages. The title.xsl file in the following directories include the variables in Table 2–9. There are no templates in title.xsl.

```
Identity_install_dir\identity\oblix\lang\shared
WebPass_install_dir\identity\oblix\lang\shared
```

***Table 2–9 Variables Defined in title.xsl***

| Name | Description |
|---|---|
| corpdirTitle | HTML title for all Publisher pages. |
| userservcenterTitle | HTML title for all User Manager pages. |
| groupservcenterTitle | HTML title for all Group Manager pages. |
| objservcenterTitle | HTML title for all Organization Manager pages. |
| querybuilderTitle | HTML title for all Query Builder pages. |
| selectorTitle | HTML title for all Selector pages. |
| lpmTitle | HTML title for all Lost Password Management pages. |
| defaultTitle | HTML title for all common pages shared across all applications. |
| corpdir | For internal use only; used to determine the context of the current page. |
| userservcenter | Internal use only; used to determine the context of the current page. |
| groupservcenter | Internal use only; used to determine the context of the current page. |
| objservcenter | Internal use only; used to determine the context of the current page. |

## navbar.xsl

In the \shared subdirectory, navbar.xsl provides the template to define the Navigation Bar. The following files in the \shared subdirectory also point to navbar.xsl: gsc_navbar.xsl, osc_navbarm.xsl, usc_navbar.xsl.

The navbar.xsl file in the following directories include the templates in Table 2–10. There are no variables in navbar.xsl.

```
Identity_install_dir\identity\oblix\lang\shared
WebPass_install_dir\identity\oblix\lang\shared
```

*Table 2–10 Templates Defined in Navbar.xsl*

| Name | Description |
|---|---|
| oblix:ObNavbar | Generates the Navigation Bar (Navbar) that appears at the top of every Identity System page. The navbar is made up of several significant parts: Logged in user identification, a list of selectable applications (User Manager, Organization Manager, and so on), Help/About/Logout buttons, application functionality (for example My Identity, Reports, and so on), and Tabs (if there are multiple tabs). |
| oblix:ObApps | Generates the list of selectable applications. |
| localButton | A called template that generates a button by filling in the HTML information about the href, mouseover, mouseout, and image or anchor text. |
| oblix:ObApplication/ oblix:ObTabs/oblix:ObButtons | Generates the buttons used for selecting different tabs. |
| oblix:ObApplication/ oblix:ObFunctions/oblix:ObButton | Generates the buttons used for selecting the different functionalities within the application (for example My Identity). |
| oblix:ObApplication/ oblix:ObTitle/oblix:ObButton | For internal use only, used to set the current context. |

### searchform.xsl

This template was previously distributed but now templates to create the Searchform line are located in searchform.xsl. The following searchform.xsl files appear as well, and all point to searchform.xsl:

```
gsc_searchform.xsl
osc_searchform.xsl
usc_searchform.xsl
```

The searchform.xsl file in the following directories include the templates in Table 2–11. There are no variables in searchform.xsl.

*Identity_install_dir*\identity\oblix\lang\shared
*WebPass_install_dir*\identity\oblix\lang\shared

*Table 2–11 Templates Defined in searchform.xsl*

| Name | Description |
|---|---|
| oblix:ObSearchForm | Generates the Searchform, which is located directly beneath the Navigation Bar on most pages. The Searchform may contain many SearchRows. |
| oblix:ObSearchForm/ oblix:ObSearchRow | Generates one row of the search functionality. A row consists of 2 select boxes and one text box, usually one for each search request, such as a search for "full name" "that contains" "John". |
| oblix:ObSearchForm/ oblix:ObAdvanced Search | Generates the search more, search less, and search all buttons if the advanced search capability is enabled. |

## XML Schema Elements Library

As mentioned earlier, the OutPutXML information generated by each program within each Identity System application is hard-coded and is not directly changeable by users. The content of the OutPutXML is not controlled by the content of the XML schema file. The file is provided only as a developer's aid, to help you design XSL stylesheets to work with the OutPutXML. Oracle recommends that you *not* change any of the XML schema files.

The following is presented for information only. The XMLSchema directory in *WebPass_install_dir*\identity\oblix\WebServices contains several schema files specific to each application. For example:

```
gsc_administrationMain.xsd ...
osc_administrationMain.xsd ...
usc_administrationMain.xsd ...
and others ...
```

If you look at these files, you will see that some contain element definitions that exist only within that file, and many contain references to other schema files.

If you trace nested references deeply enough, you will come to the following six files, which are provided under the XMLSchema directory for the common application:

- **navbar.xsd:** Defines the content for the Navigation Bar, the top two lines of each page, including the application name, help and logout buttons, and the various tabs to select other modules within the application.
- **searchform.xsd:** Defines the SearchForm line, the line available on some pages, that starts with the graphic labeled search. It may include additional lines for more complex search combinations.
- **component_panel.xsd:** Defines the content for profiles, the sets of descriptive information for users, groups or organizations.
- **component_basic.xsd:** Defines many of the lowest level elements, and includes displaytype.xsd and error.xsd.
- **displaytype.xsd:** Defines formatting for each of the Oracle Access Manager display types.
- **error.xsd:** Defines the ObError element.

The rest of this section describes the elements that are defined within each of these files.

> **Note:** It is strongly recommended that you leave the content of these files untouched, to serve as a predictable template library.

### displaytype.xsd

The displaytype.xsd file in *WebPass_install_dir*\identity\oblix\WebServices\XMLSchema contains the elements described in Table 2–12. All elements in this file are in the Oblix namespace.

***Table 2–12 displaytype.xsd Schemas***

| Name | Description |
|---|---|
| ObDisplay | An element that contains information about a value (or set of values) being generated. This element usually maps to one of the display types such as email or date. This element may contain two children: the element ObDisplayProperties, which is optional, and a required element whose name maps to the display type (for example, ObCheckBox or ObDate). This element contains the following required attributes:<br>**obname:** The name, usually the attribute name, for the value being generated.<br>**obdisplayName:** The display name/user friendly name/printed name.<br>**obdisplayType:** The display type for this value.<br>**obsemanticType:** The semantic type for this value).<br>**obmode:** One of the list: view, modify, or plain.<br>**obshowLabel:** True or false, indicating whether to show the display name when outputting this value.<br>**obrequired:** True or false, indicating whether this is a required value, meaning there must be at least one value entered by the user in modify mode).<br>**obcardinality:** SingleValued or multiValued, indicating whether this is a single-valued or multi-valued attribute.<br>**obcanRequest:** True or false, indicating whether the user can change this value in modify mode. |
| ObDisplay Properties | Contains zero or more ObDisplayProperty elements. |
| ObDisplayProperty | Contains the necessary display property for an onX event, which can be onChange, onClick, onDblClick, onDragStart, onFilterChange, onHelp, onKeyDown, onKeyPress, onMouseDown, onMouseMove, onMouseOut, onMouseOver, onMouseUp, onSelectStart, or disabled. The XML attribute obname contains the onX event name and the XML attribute obvalue contains the value for the onX event. |
| ObBitString | Describes the BitString display type. Contains zero or more ObValue elements, each corresponding to a value. In addition, there are two optional XML attributes: oblength, for the length of the textbox and obmaxLength for the maximum length of the textbox. |
| ObBoolean | Describes the Boolean display type. Contains a required XML attribute obvalue which contains the value true or false. |
| ObButton | Describes a button. A button contains six optional XML attributes:<br>**obaction:** The action.<br>**obmouseover:** The mouse over message.<br>**obhref:** The href.<br>**obimageUrl:** The location of the image for the button.<br>**obanchorText:** The alternate text if there is no image.<br>**target:** Provided for future use and currently not used. |
| ObCheckBox | Describes the checkbox display type. Contains zero or more ObChoice elements. |
| ObChoice | Describes a choice. Usually nested within a display type that permits a choice, such as ObCheckBox.<br>Contains an optional XML attribute obselected. Possible values for obselected are true or false. The default value when this attribute is not specified is false. If a value is selected, it means that the value is one that has been chosen by the user. If a value is not selected, that means it is a possible choice but not one actually chosen by the user.<br>In addition the ObChoice element contains a required XML attribute obdisplayName corresponding to the display name (the user friendly name) for this choice. |

***Table 2–12 (Cont.) displaytype.xsd Schemas***

| Name | Description |
|---|---|
| ObDate | Describes the date display type. Contains zero or more ObDateValue elements. In addition, it contains the following optional attributes: obseparator, the string separating the parts of the date. If this is not specified, the default value is /.<br>**obformat:** The format in which the date is to be presented. If not specified, the default value is USStandard. Possible values include USStandardFull, EUSStandard, EUSStandardFull, and USStandard.<br>**obdateType:** The manner in which the date is carried as data. Possible values include ObIntegerDate, ObMDYDate, ObDMYDate, ObDMonthYDate, ObISO8601Date, and ObUnknownDate). |
| ObDateValue | Describes a date value. Contains the following required XML attributes:<br>**obmonth:** A text string that represents the month.<br>**obday:** A text string that represents the day.<br>**obyear:** A text string that represents the year.<br>In addition an optional XML attribute obbadDate describes whether the given date is malformed. The default value for the obbadDate attribute is false meaning the date is not malformed. Possible values are true and false. |
| ObDn | Describes the dn display type. Contains zero or more obLink elements. |
| ObEmail | Describes the email display type. Contains zero or more ObValue elements. In addition, the ObEmail element may contain two optional XML attributes:<br>**oblength:** The actual length of the textbox.<br>**obmaxLength:** The maximum allowed length of the textbox. |
| ObFacsimileTelNum | Describes the facsimile telephone number display type. Contains zero or more ObValue elements and zero or more ObFaxParam elements. |
| ObFaxParam | Contains an XML attribute obdisplayName. |
| ObForm | Contains information for generating a form. Contains zero or more ObInput elements. In addition, it contains:<br>**obname:** The required XML attribute providing the name of the form.<br>**obaction:** An optional XML attribute providing the action to take when the form is submitted.<br>**obenctype:** An optional XML attribute providing the encryption type for the form.<br>**obmethod:** An optional XML attribute specifying the method, either post or get, for this form. The default method is post. |
| ObGenericSelector | Describes the generic selector display type. Contains zero or more ObLink elements and at most one optional ObButton element. |
| ObGif | Describes the GIF display type. Contains zero or more ObImage elements. |
| ObGifUrl | Describes the gifurl display type. Contains zero or more ObImage elements. In addition it contains two optional XML attributes:<br>**oblength:** The length of the textbox<br>**obmaxLength:** The maximum length of the textbox. |
| ObLocationDn | Describes the location dn display type. Contains zero or more ObLink elements. |
| ObMedia | Describes the media display type. Contains zero or more ObLink elements. |
| ObMime | Describes the mime display type. Contains a required XML attribute obtype, and an optional XML attribute obfileExt (used to define file extensions). |
| ObPassword | Contains zero or more ObValue elements. Additionally, it may contain three optional XML attributes:<br>**oblength:** The length of the textbox.<br>**obmaxLength:** The maximum length of the textbox.<br>**oboldpsw:** Which indicates whether to display information about the old password. Possible values for the oboldpsw attribute are true and false. |

***Table 2–12 (Cont.) displaytype.xsd Schemas***

| Name | Description |
|---|---|
| ObPostalAddress | Contains zero or more ObPostalValue elements. Contains two optional XML attributes:<br>**oblength:** The length of the textbox.<br>**obmaxLength:** The maximum length of the textbox. |
| ObPostalSubString | PC Data containing the postal sub string. |
| ObPostalValue | Contains zero or more ObPostalSubString elements. |
| ObSelect | Describes the select display type. Contains zero or more ObChoice elements. In addition, it contains two optional XML attributes:<br>**obmultiple:** True or false; the default value is false.<br>**obsize:** The size of the select box. |
| ObTextM | Describes the textM display type. Contains zero or more ObValue elements. In addition, it may contain three optional attributes:<br>**obrows:** The number of rows for the multi-line textbox.<br>**obwrap:** Indicates whether the text should wrap, and takes the values true and false.<br>**obcols:** The number of columns for the multi-line textbox). |
| ObTextMessage | PC Data describing a text message. Usage for this element is context dependent. One frequent use is to output an error message. |
| ObTextS | Describes the textS display type. Contains zero or more ObValue elements and zero or more ObTextMessage elements. In addition, it may contain two optional attributes:<br>**oblength:** The length of the textbox.<br>**obmaxLength:** The maximum length of the textbox. |
| ObQueryBuilder | Describes the query builder display type. Contains zero or more ObValue elements and an optional ObButton element. In addition, it may contain two optional attributes:<br>**oblength:** The length of the textbox.<br>**obmaxLength:** The maximum length of the textbox. |
| ObRadio | Describes the radio display type. Contains zero or more ObChoice elements. |
| ObSMIMECertificate | Contains zero or more ObSMIMEValue elements. In addition, it contains three optional ObButton elements. |
| ObSMIMEValue | Contains zero or more ObNameValuePair elements and two optional ObButton elements. |
| ObNameValuePair | Contains two required XML attributes:<br>**obcertinfo:** Which has three possible values: issuer, validfrom, and validto.<br>**obcertvalue:** Which is the value that is described by this ObNameValuePair. |
| ObScript | Contains information for including a script. The name of the script is described by the required XML attribute obname. |
| ObScripts | Contains one or more ObScript elements. |
| ObValue | PC Data containing a value. |
| ObImage | Contains one required XML attribute:<br>**obhref:** The href<br>Also contains three optional XML attributes:<br>**obalt:** The alt text.<br>**obwidth:** The width of the image.<br>**obheight:** The height of the image. |

*Table 2–12 (Cont.) displaytype.xsd Schemas*

| Name | Description |
|---|---|
| ObInput | Contains the information required to generate an HTML input tag. Contains up to three XML attributes:<br>obtype: The type of input (required).<br>obname: The name of the input (required).<br>obvalue: The value of the input (optional). |
| ObLink | Contains zero or more ObImage elements and zero or more ObMime elements. In addition, it contains up to three XML attributes:<br>**obhref:** The href (required).<br>**obmouseOver:** The mouse over message for the link (optional).<br>**obdisplayName:** The display name for the hyperlink (optional). |
| ObNumericStr | Contains zero or more ObValue elements. In addition, it may contain two optional XML attributes:<br>**oblength:** The length of the textbox.<br>**obmaxLength:** The maximum length of the textbox. |
| ObApplet | Contains information describing an applet. Contains zero or more ObParam elements, each describing a parameter for the applet. In addition, it contains the one optional XML attribute obarchive and the required XML attributes obname, obtarget, obcodeBase, obcode, obwidth, obheight, and obalign, all of which map to information required in the HTML applet tag. |
| ObParam | Contains the name and value for a parameter, in the form of two required attributes: obname and obvalue. |

## component_basic.xsd

The component_basic.xsd file in *WebPass_install_dir*\identity\oblix\WebServices\XMLSchema contains the elements described in Table 2–13. All elements in this file are in the oblix namespace.

*Table 2–13 component_basic.xsd Schemas*

| Name | Description |
|---|---|
| ObRequestInfo | Internal use only. |
| ObStatus | Contains the returned status value, either 0 or 1, for the request. |
| ObVariableText | Contains one ObDisplay element. |
| ObAttribute | Contains zero or more ObDisplay elements and an optional ObTextMessage element. In addition, an optional XML attribute obattrName may be used to specify the attribute name. |

## navbar.xsd

The navbar.xsd file in *WebPass_install_dir*\identity\oblix\WebServices\XMLSchema contains the elements described in Table 2–14. All elements in this file are in the oblix namespace.

*Table 2–14 navbar.xsd Schemas*

| Name | Description |
|---|---|
| ObTabs | Consists of zero or more buttons used for describing the different tabs configured for the current application. |
| ObNavbar | Describes the navigation bar. It may contain up to 8 optional elements: ObRequestInfo, ObScripts, ObMisc, ObApps, ObForm, ObApplication, ObFunctionsButton, and ObStatus. In addition, a required XML attribute obbgcolor specifies the color of the background for this page. |

*Table 2–14 (Cont.) navbar.xsd Schemas*

| Name | Description |
|---|---|
| ObMisc | Describes the buttons that will be used for help, about, and logout. |
| ObApps | Contains zero or more ObApplication elements. Each ObApps element describes an application, such as User Manager or Organization Manager. |
| ObApplication | Describes the details of a specific application, usually nested within ObApps. Contains any of the following four elements:<br>**ObButtons:** Specifies the URL/button information to get to that application. This information is only filled in if the user is not in that application.<br>**ObFunctions:** Specifies the functions available for this page.<br>**ObTabs:** Specifies the tabs to be used on this page, if any.<br>**ObTitle:** Specifies the title image for this application. |
| ObFunctions | Describes the functions available on the current page. Consists of:<br>**ObButtons:** For example, non-workflow and administrative functionality such as configure proxy, deactivate user or create user. There are zero or more of these.<br>**ObWorkflowFunctions:** For example, workflow incoming request, workflow outgoing request or workflow ticket search form.<br>**ObAdminFunctions:** Administrative functions, such as delegated administration or workflow definition. |
| ObAdminFunctions | Describes the administrative functionality such as workflow definition and delegated administration. |
| ObWorkflow Functions | Describe the workflow functionality such as workflow incoming request, workflow outgoing request or workflow ticket search form. |
| ObTitle | Consists of zero or more buttons that describe the image that applies to the current application. |
| ObApplicationFunc | Provides further context defining where the user is in screen navigation. This element is not used unless the user is past first level navigation. An example is the navigation information that will be contained here after the user clicks on "Configuration" |

## searchform.xsd

The searchform.xsd file in WebPass_install_dir\identity\oblix\WebServices\XMLSchema contains the elements described in Table 2–15. All elements in this file are in the oblix namespace.

*Table 2–15 searchform.xsd schemas*

| Name | Description |
|---|---|
| ObSearchForm | Describes a search form which consists of zero or more of the following elements: ObHelpContext, ObRequestInfo, ObScripts, ObForm, ObDisplay, ObButton, ObAdvancedSearch, ObSearchRow, and ObStatus. |
| ObSearchRow | Describes each row of the search form, consisting of zero or more ObDisplay elements. The SearchRow contains the information required to output a table row which contains 3 fields: a text box, and two select boxes. |
| ObAdvancedSearch | Indicates if the advanced search capability is enabled through inclusion of and the value set for the optional XML attribute obadvancedSearchOn. |
| ObHelpContext | PC Data containing information about the context of the page, used for online help. |

### component_panel.xsd

The searchform.xsd file in *WebPass_install_dir*\identity\oblix\WebServices\XMLSchema contains the elements described in Table 2–16. All elements in this file are in the oblix namespace.

***Table 2–16 component_panel.xsd schemas***

| Name | Description |
|---|---|
| ObHeaderPanel | Describes the header panel, which contains a number of LDAP attributes described by zero or more ObAttribute elements. In addition, a panel is described with a number of optional XML attributes, those specified by the administrator during panel configuration in the Identity System Console. A profile page can have a number of panels but only one header panel. |
| ObPanel | Describes a panel, which contains a number of LDAP attributes described by zero or more ObAttribute elements. In addition, a panel is described with a number of optional XML attributes, those specified by the administrator during panel configuration in the Identity System Console. A profile page can have a number of panels but only one header panel. |

### error.xsd

The searchform.xsd file in *WebPass_install_dir*\identity\oblix\WebServices\XMLSchema contains the elements described in Table 2–17. All elements in this file are in the oblix namespace.

***Table 2–17 error.xsd schemas***

| Name | Description |
|---|---|
| ObError | Describes an error, including an error message contained in the ObTextMessage element. |

## Image Library

Oracle Access Manager provides default GIF files used in presenting the page and supports any type of image the browser supports. These are always provided by WebPass as direct responses to browser requests and are located in *WebPass_install_dir*\identity\oblix\lang*langTag*\style0, as described in "Directory Structure" on page 2-24.

> **Important:** Oracle Access Manager relies on these images files and Oracle recommends that you copy the files to your custom directory, make changes, then include the updated copies in stylesheets. See "Customizing Oracle Access Manager" on page 2-54. On rare occasions, if your custom image does not appear but the default does, you may need to change the default image.

Most of the filenames conform to a standard naming convention. Understanding this convention will help you avoid referencing the wrong image in your stylesheets. An image name includes three elements: <*ImagePrefix*><*DescriptiveName*><*ImageState*>. For example:

2FTABgeneratereport2.gif

***ImagePrefix:*** In the previous example, *2FTAB* is the ImagePrefix. This part of the GIF image name describes the way in which the image is used. See the following table for a list and description of the various values for the ImagePrefix.

***DescriptiveName:*** In the example, *generatereport* is the DescriptiveName. This part of the GIF image name is an attempt to provide a user friendly description of the function, tab, content, or navigation feature with which the image is associated.

***ImageState:*** This part of the GIF image name indicates whether the image shows as active or inactive. Active means that the function, tab, content or navigation feature matches what is currently displayed on the page. Inactive means that it does not; the image represents an alternative that could be selected. The images are usually identical, except that the active image is in a darker color. The difference in naming is:

- **Active Images:** ImageState is set to 2 to represent active images.
- **Inactive Images:** ImageState is omitted for inactive images.

The following is an image for 2FTABgeneratereport2.gif. This is the active image.


The following is an image for 2FTABgeneratereport.gif, the inactive image, shown for comparison.


Table 2–18 lists the possible ImagePrefix values for image files:

***Table 2–18 ImagePrefix Types***

| Image Type | ImagePrefix Value | Description |
|---|---|---|
| Content Buttons | CBUTTON | Associated with activities that select certain subsets of the available data, such as selecting a certain user or adding data. |
| Content Buttons (Small) | 2CBUTTON | Smaller versions of the same. |
| Content Image | CIMAGE | Descriptive images, not associated with a choice. |
| Content Tabs | CTAB | Used to select major categories of data, such as a group type. |
| Content Tabs (Small) | 2CTAB | Smaller versions of the same. |
| Function Tab | FTAB | Associated with activities that the user wants the Identity System to perform, such as creating a group, or generating a report. |
| Function Tabs (Small) | 2FTAB | Smaller versions of the same. |
| Login Screen Images | LOGIN | These are not for customer use. |
| Page Navigation | NAV | Used to indicate a change to a different screen, usually with no modification to data. |
| Page Navigation (Small) | 2NAV | Smaller versions of the same. |

## JavaScript Library

Most JavaScript files are located as described in "Directory Structure" on page 2-24, in *WebPass_install_dir*\identity\oblix\lang\shared.

JavaScript files refer to the jsPathName variable to locate the image directory. For details, see "gifPathName and jsPathName Variables" on page 2-23.

Language-specific messages are referred to through variables in message catalog files. See "Changing Message Catalogs and MouseOver Text" a on page 4-7 for details.

There are too many JavaScript files to document the content of all of them here. However, this section provides a list of functions and what they do, for some of the most frequently used Javascript files. You may find a function in this Library that you want to use at a non-standard place in the stylesheet, or the function might serve as a starting point for a new one of your own.

---

**Note:** Again, Oracle recommends that you retain files in \shared as a reliable default. You may, however, copy the files in \shared to a custom directory, change the content in the copy, then write your stylesheets to include the new JavaScript files and functions. See "Customizing Oracle Access Manager" on page 2-54.

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### Confirm.js

Located in WebPass_install_dir\identity\oblix\lang\shared, confirm.js includes the functions described in Table 2–19.

***Table 2–19 Confirm.js***

| Function Name | Description |
|---|---|
| myConfirm | Takes a message and a URL as arguments. A confirmation window will appear with the message. If the user presses okay the browser takes the user to the URL. |
| confirmDelete | Confirmation of a delete action in the form of a confirmation window appears. If the user presses okay the browser takes the user to another Web page whose href uses most of the href of the original URL, but replaces the program information with the argument URL. |
| confirmClear | Outputs a Windows confirmation box asking if the user wants to clear x where x is the argument name. If so, the browser takes the user to a new URL based on the information provided in the argument URL. |

### Customizeresults.js

Located in WebPass_install_dir\identity\oblix\lang\shared, Customizeresults.js includes the functions described in Table 2–20.

***Table 2–20 Customizeresults.js***

| Function Name | Description |
|---|---|
| configureCustomizeresults FormAndSubmit | Takes no arguments; validates the browse results columns selected before submitting the form. Validation restrictions include requiring at least one attribute to be selected, no attribute shall be selected twice, and selected attributes must not be separated by blank selections. |

*Table 2–20 (Cont.) Customizeresults.js*

| Function Name | Description |
|---|---|
| cancelCustomizeresults FormAndSubmit | Resets the customizeResultsForm such that no validation is performed. |

## Deactivateuser.js

Located in *WebPass_install_dir*\identity\oblix\lang\shared, Deactivateuser.js includes the functions described in Table 2–21.

*Table 2–21 Deactivateuser.js*

| Function Name | Description |
|---|---|
| startSearchAndSubmit | Submit the monitor search form. |
| DeactContinueSearch | Provides the logic for pressing previous/next in the deactivate search results page. The argument *subprogram* signals whether this is for previous or next. For next, if this is already the last set of search results, an error message pops up saying so. For previous, if this is the first page, an error message indicatse this. |
| submitresults | Submit the deactivate search form with validation. If validation succeeds the function submits the argument URL to the Identity Server. |
| toggleselect | Toggle the search results form checkboxes from false to true. |
| sortDeactivatedUsers (sortBy, sortOrder) | Set the sort information in the deactivate search results page using the argument information. |

## Groupsubscription.js

Located in *WebPass_install_dir*\identity\oblix\lang\shared, Groupsubscription.js includes the functions described in Table 2–22.

*Table 2–22 Groupsubscription.js*

| Function Name | Description |
|---|---|
| resetsubscription | Reset the ObGroupsToSubscribeForm form. |
| submitresults(URL) | Submit the ObGroupsToSubscribeForm form after formulating the required information for the Identity Server. |

## Helpcommon.js

Located in *WebPass_install_dir*\identity\oblix\lang\shared, Helpcommon.js includes the functions described in Table 2–23.

*Table 2–23 Helpcommon.js*

| Function Name | Description |
|---|---|
| ObHelp | Build the help URL by appending to the argument *helpUrl* using the current page's help context. |
| SetHelpContext | Set the help context of the current page using the information provided from the arguments. |
| BuildParameter | Helper function used by *ObHelp* to build the name value pair parameters into the form &name=value. |

### Horizontalprofile.js

Located in *WebPass_install_dir*\identity\oblix\lang\shared, Horizontalprofile.js includes the functions described in Table 2–24.

***Table 2–24 Horizontalprofile.js***

| Function Name | Description |
|---|---|
| toggleImage | Change the image with the argument imageNam e to use the image from the argument srcName. This is a helper function for the change function. |
| change | Change the image specified by the arguments oldName, oldIndex to a new image specified by the argument newName, newIndex. |
| showPanel | Show the panel with the argument panel id name newPanel and argument panel id index newPanelIdx. In addition, the function hides the current panel. |
| initDynamicAuxClasses | Initializes the values of valuesOldName. Iterates through the elements in profileForm and stores the values of the named element oldName in the array valuesOldName. The argument oldName is the name of the element that stores the initial state of the set of auxiliary classes prior to the request. (The name used is ObOldAuxClasses). |
| diffAuxClassSet | Determine whether there is a difference in content between firstSet (the first argument) and secondSet (the second argument). Returns true if there is a difference, false otherwise. |
| isAuxClassChange | Determines whether or not a group type has been newly selected or removed. The current state of group types is stored in ObAuxClasses. The initial state is in ObOldAuxClasses. The method iterates over the elements of the profileForm and stores the values of any named newName elements if selected. It stores these values in valuesNewName. The method then compares valuesNewName to valuesOldName. If there is an element in valuesNewName not in valuesOldName or vice versa, then the state of auxiliary classes has changed. This method is used to determine the toggle state of the save image (either 'save' or 'update'). The argument newName is the name of the element that stores the current state of the set of auxiliary classes (the name used is ObAuxClasses). Returns true if there is a change in the state of the selected group types, false otherwise. |
| doSaveRequest | Does the save request action. This action can result in either the data being saved, or a request for the same page, if the user selected auxiliary classes whose attributes are not visible in the display. The argument oldName is the name of the element that stores the original state of the auxiliary classes. The argument newName is the name of the element that stores the current state of the auxiliary classes. The argument saveAction is the name of the action that will result in the entry being saved. The argument moreAction is the name of the action that will result in a request for the same page with new attributes. |

*Table 2–24 (Cont.) Horizontalprofile.js*

| Function Name | Description |
|---|---|
| doToggle | This method toggles the image of the save button if the state of auxiliary classes has changed. It dynamically determines the source of the save button by looking up imageSave in the set of images in the document. It then re-sources the image by assigning a new image source to the save button element. The method looks up the image by comparing the value of its source. The argument oldName is the name of the element that stores the original state of the auxiliary classes. The argument newName is the name of the element that stores the current state of the auxiliary classes. The argument imageSave is the name of the save button image. The argument `imageMore` is the name of the more button image. |

## Misc.js

Located in *`WebPass_install_dir`*`\identity\oblix\lang\shared`, Misc.js includes the functions described in Table 2–25.

> **Note:** Oracle strongly recommends that you do not change mics.js. This is a system level file. It is contained in almost every stylesheet as an include file. Errors in this file will affect most every stylesheet that the system uses. This becomes an insidious problem to solve. Custcare will not know if this file has been modified, and indeed, the customer may not know either. Changing this file can cause hidden problems, or problems down the road.

*Table 2–25 Misc.js*

| Function Name | Description |
|---|---|
| obDetectBrowser | Detects the browser version of the client and set the proper variable. |
| submitFormAfterConfirm | Submits the form after the argument confirmation message is displayed. |
| submitLoginForm | Used for submitting the login form. Checks first to ensure the password is entered and then forms the proper URL for the next page - one that will bring the user to the application selected. |
| checkPasswordEnterKey | Enable feature for allowing users to submit the login form when they press enter (or any other event specified in the argument). (For example, use this if you want to submit the login form when the user presses enter). |
| onUserType | For login form, reload the page when the user selects a different user type. |
| onApplication | For login form, if the user selected Publisher and optional authenticated view is disabled, then take the user to Publisher after the application selection. |
| setFocusToFirstTextElement | Set the focus of the argument form to the first element. |
| submitForm | Submit the first form in the page. |
| submitSpecifiedForm | Submit the form whose name is specified in the argument formName. |

*Table 2–25 (Cont.) Misc.js*

| Function Name | Description |
|---|---|
| submitFormAfterUser Action | Submit the form with the action equal to the argument form. If the form action is activateForm, then additional confirmation messages will be displayed. |
| submitFormCheckProfil eAttributes | Function used for checking whether the same profile attribute has been selected more than once. The application's logging policy modification screen uses this. |
| submitFormCheckCommon LogParams | Function used for checking whether numeric value is entered for log file maximum size. |
| isInteger | General purpose function to determine if the value entered is an integer. |
| IsNumeric | General purpose function to determine if the value entered is composed of digits. |
| isFloat | General purpose function to determine if the value entered is float. |
| isNonNullInteger | General purpose function to determine if the value entered is composed of integers. The difference between this function and the isInteger function is that this function does NOT return false if the input value is empty. |
| sendtotop | Set the current page to top. |
| IsStringOblix Compliant | Check to make sure the argument element is a non-empty string that does not contain , or ; or \. If it does, then an error message using the argument message is displayed. |
| isEmpty | Check if the argument string is empty or contains white space. |
| denyWithAlert | Display an alert message using the argument message. |
| checkAndSubmitForm | Submit the form if the argument does not equal "login". If the argument equals "passwd", then time out. |
| validateInput | Validate the following inputs:<br>**rootDN:** ensure it is not empty.<br>**ldapRootPasswd:** ensure it is not empty.<br>**machineNo:** ensure it is not empty.<br>**portNo:** ensure it is an integer.<br>**searchBase:** ensure it is not empty.<br>If all validation succeeds, pop up a final confirmation box for the change and submit the form. |
| validateSearch | Ensure that the display field record is a valid integer and that it is not empty. |
| checkSearchKey | Submit the form and perform proper validation for the forms deactUserSearchForm, searchForm, ObSearchGroupMembersForm, viewGroupMembers, and monitorsearchform. |
| validateSearchAndSubmit | Used by start search, more fields and less fields in the search functionality to do submit the form. For start search, validation (of the minimum number of characters for the search criteria values) is performed. For more field and less field, calculations of the number of rows required is calculated and then the form is submitted. |

***Table 2–25 (Cont.) Misc.js***

| Function Name | Description |
|---|---|
| continueSearch | Used by the next and back buttons in the search functionality to submit the form. For next, it ensures that this is not already the last set of records. For back, it ensures that this is not already the beginning of the records. |
| continueSelectorSearch | Used by selector search next and back buttons. Submit the form after calculating the startFrom value. |
| doSearch | Submit the search form after assigning the proper values for sortBy and sortOrder, which are both provided as input arguments. |
| appendElementsTo BackUrl | Append a set of element_name=value pairs to the backUrl. The argument backUrl is the back URL string. The argument elements is the set of elements to append. |
| startTrim | Trim the beginning whitespace in the argument string. |
| endTrim | Trim the trailing whitespace in the argument string. |
| createBackUrl | Create and return the portion of the back URL that contains the forms elements. Append element/value pairs from all forms in the HTML document including those within layers. |
| PersonSelector | Used to launch the selector. The argument gotoUrl is the (selector) URL we're about to go to. The argument returnUrl is the URL we need to use to get back to the page that invoked the selector. |
| QueryBuilder | Used to launch query builder. The argument gotoUrl is the (selector) URL we're about to go to. The argument returnUrl is the URL we need to use to get back to the page that invoked the selector. |
| sendBookmark | Used for sending the search results as a bookmark. |
| validateLicenseKeys | Ensures that the form values are not empty. If the form values are empty, pops up an error message saying you must enter the license key. |
| validateLicenseKeysAnd Submit | Ensures that the form values (expected to be the license key values) are not empty and then submits the form. |
| lostPassword | Invokes the lost password functionality after ensuring that the login field is not empty. |
| certLicenseMessage | Pops up a message to warn the user to install the certificate management license file before any function is enabled. |
| installIECert | Calls a Virtual Basic Script function to install an x509 certificate. If we are using Netscape, it will contact the common server and get a stream of binary certificate. |
| extractCert | Calls a Virtual Basic Script function to install an x509 certificate. |
| performOCSP | Calls back to the modify profile page to use OCSP (Online Certificate Status Protocol) for certificate online checking. Before the URL is directed, it will pop up an alert to warn the users that the OCSP checking will take a while. |
| validateDeactivatedUser Search | Ensures that the display record for the deactUserSearchForm is a non-empty integer. |
| validateGroupMember SearchAndSubmit | Validates group member search by calling validateGroupMemberSearch. If this is an update member functionality, a pop up message shows to confirm the changes before the form is submitted. |

*Table 2–25 (Cont.) Misc.js*

| Function Name | Description |
|---|---|
| validateGroupMember Search | Do validation for group member search, such as ensuring that the minimum number of characters for each search value is satisfied and that the display record is a non-empty integer. |
| cancelWorkflow | Terminate the current workflow. Upon confirmation, go to the argument URL. |
| GetCookie | Retrieve the value of the cookie with the argument name. |
| setFocusToOKButton | Set the focus to the form element that is equal to javascript:top.close() for Internet Explorer 4 and Netscape 6. |
| submitFeedBack | Submit the feedback form. |
| checkJavaPlugin | Check to make sure that the proper java plug-in is installed. |
| EnableDetectJava PluginLayer | Enable the layer called "DetectJavaPlugin". |
| EnableJavaPlugin VersionLayer | Enable the layer called "DetectJavaPluginVersion". |
| DetectPluginForApplets | Verify that Java plug-ins are installed. |
| getParameterValue | Retrieve the value of the parameter in the URL with the argument name. |

## Miscsc.js

Located in *`WebPass_install_dir`*`\identity\oblix\lang\shared`, Miscsc.js includes the functions described in Table 2–26.

> **Important:** Oracle strongly recommends that you do not change Miscsc.js. This is a system level file. It is contained in almost every stylesheet as an include file. Errors in this file will affect most of the stylesheets. This becomes an insidious problem to solve. Support will not know if this file has been modified, and you may not know, either.

*Table 2–26 Miscsc.js*

| Function Name | Description |
|---|---|
| SCConfirm | Submit the profile form. The argument value program will be assigned to the profileForm program field by default or, if an argument message is not empty, then upon confirmation from the user through the pop up confirmation message. |
| SCRequestChangeAnd Submit | Submit the profile form after setting the program field to workflowChangeAttributeRequest. The argument attr determines the attribute for the change attribute request and the argument action determines whether this is a remove or change request. |
| SCRequiredValuesAlert | Provide an alert to the user saying that the required number of values (specified by the argument num_req) for the field ob_name (another argument) is not met. |
| SCPasswordNoConfirm | Alert the user that the password values specified by the argument ob_name do not match. |

*Table 2–26 (Cont.) Miscsc.js*

| Function Name | Description |
|---|---|
| SCCheckSingleForm | Perform validation for each field within the form and alert the user if the validation is not satisfied. Otherwise return true. Sample validation includes checking that password matches, number of required values are met, and so on. |
| SCCheckForm | Check all forms on the page to make sure they satisfy the validation requirements. |
| SCSwitchProfile | Switch between horizontal and vertical modify profile by switching stylesheets. |
| SCSubmit | Submit the form by first performing all the validation. For the different types of actions (for example, save, less_values), additional logic is applied, such as pop up messages displayed and additional information sent back to the Identity Server. |
| getElementIndex | Returns the index of the element elementName in the form, or -1 if elementName is not found. |
| CopyElements | Assigns the value of elements in formFrom to the element of the same name in formTo. |
| hasKeyGenForm | Make sure the NavGenKeyform form is present. |
| InvokeKeyGen | A helper function that submits the NavGenKeyform. |
| AppendFormElements | Appends all the elements from all forms in all layers within the document to the input parameter form. form is in most cases the profileForm which is the form that is submitted. This method assigns the value of each element of each form within each layer to the identically named element in form. This method does not yet handle all special case display types; currently only checkbox is handled. |

### Monitorwf.js

Located in *WebPass_install_dir*\identity\oblix\lang\shared, Monitorwf.js includes the functions described in Table 2–27.

*Table 2–27 Monitorwf.js*

| Function Name | Description |
|---|---|
| startSearchAndSubmit | Validate the monitorsearchform and then submit it. |
| continueSearch | Called when the user clicks the back and next buttons in monitor search results. If next is pressed, first checks if we are on the last record set, if so signals an error, otherwise, submits the form. If back is pressed, first checks if we are on the first set of records, if so signals that we are already at the beginning, otherwise, submits the form. |
| doSearchAndSort | Called to sort the search results for monitor search results using the arguments sortBy and sortOrder to perform the sorting. |
| submitresults | Called to purge/archive/unlock a workflow. |
| toggleselect | Toggle the search results form checkboxes from false to true. |

## Unspecified Program Names

For some screens, usually the most basic ones, the URL may not contain the program name. The program name can always be determined by generating and capturing the

OutPutXML using format=XML. The stylesheet name will be included, at the top of the resulting file.

Behavior with the result will vary with different versions of Microsoft Internet Explorer. For consistency, use Netscape Communicator and save the output as a text file, using an xml extension. You can then view this file with any text editor to get the stylesheet name.

# Customizing Oracle Access Manager

XSL stylesheets give you the ability to place almost any component or piece of data almost anywhere on a page. This is more of an art than a science, and this Guide does not attempt to give precise instructions for getting the presentation you want. Instead, the following discussions outline the recommended approach for a minor change using the default Classic Style as a foundation.

### Task overview: Customizing styles

1. Complete the "Prerequisites to Customizing Styles" on page 2-54.
2. Review the "Customization Facts" on page 2-54.
3. Review the "Customization Guidelines" on page 2-56.
4. Familiarize yourself with the "Customization Methodology Checklist" on page 2-56.
5. Complete the task "Customizing the Identity System Pages" on page 2-58 to gain first-hand experience with customization and testing to debug your process.
6. See also, Chapter 4, "Modifying Catalog Files" on page 4-1.

## Prerequisites to Customizing Styles

Be sure to complete the following prerequisites before you start to customize a style. This enables you to keep the original Classic Style (\style0) intact for reference and in case you need to return to it as a last resort.

### To prepare to customize styles

1. As an Identity Administrator, add your own style as described in the *Oracle Access Manager Administration Guide*.

   The original style stays in effect until an Identity Administrator makes your style the new system default.
2. As an Identity Administrator, select the new style as the default style so that you can see the effect of any changes you make.

## Customization Facts

**Style Updates and Maintenance:** Default wrapper files in \style0 and default global stylesheets in \shared are periodically updated to instantiate improvements through patches and product upgrades.

The Release Notes will notify you when such updates occur so you can propagate the changes to your custom styles. You will need to compare the new file with your custom file and propagate any changes to your custom styles. It is risky to overwrite a default style with a customized style that bears the same name.

Be sure to record the changes you make and the files that are involved so you can more quickly update custom stylesheets when you update default styles.

**Custom Directory:** Stylesheet customization should occur only within your custom directory. Customized stylesheets must reside in your custom directory and relative pointers in all files must point to the files in your custom directory, *not* to files in \shared.

**Registration Files:** As discussed in "General Content of Registration Files" on page 2-18, a common registration file and each application's registration file contain the names of the stylesheets and schema files needed to present pages for the application. For example, when you look at the User Manager registration file in identity\oblix\apps\userservcenter\userservcenterreg.xml, you can see the application name and the names of the stylesheets the application calls during the completion of various functions.

Also, given the application and the program name, you can locate the corresponding schema file name in the application's registration file.

Oracle recommends that only experienced developers using extreme care consider editing a registration file. Registration files are covered in more detail at "Registration Files" on page 2-17.

**Pointers:** All wrapper files and stylesheets contain pointers as include statements that call another file. Most of these pointers are relative pointers that indicate where within the directory structure the file is without providing an absolute path name.

For example, when you look at the usc_profile.xsl stylesheet called by User Manager functions, you can see that it contains include statements with relative pointers that call the following files:

```
./basic.xsl
```

```
./selectorinfo.xsl
```

```
./usc_searchform.xsl
```

```
./usc_navbar.xsl
```

When you change the location of a file (place a copy of a stylesheet in your custom directory for customization), pointers to this file (whether relative or absolute) must be changed to reflect the new location in every file that calls it. All relative pointers in a stylesheet should point to files in your custom directory.

In addition, many stylesheets contain relative pointers to object files. If Oracle Access Manager cannot instantiate an object when the page is loaded, unexpected behavior may result. All relative pointers to object files should be absolute pointers, as discussed in "Editing Stylesheets" on page 2-65.

**Wrapper Files:** Wrapper files include pointers to actual stylesheets in \shared. However, you cannot be assured that a wrapper file will be called before the stylesheet because both the common registration file and the application's own registration file call stylesheets according to an internal ordering. For this reason, all wrapper files in your custom directory must be overwritten by a copy of the corresponding default stylesheet from the \shared directory.

---

**Important:** Customizing stylesheets is an iterative process. Attempting to copy the entire contents of \shared into your custom directory at one time will produce an error.

---

Rather than copying all stylesheets at once, you start by investigating registration files to learn which functions (programs) call which stylesheets. You then selectively copy base stylesheets and a function-related stylesheet into your custom directory to overwrite their wrapper files, as discussed in "Copying Stylesheets to Your Custom Directory" on page 2-61. You then customize and test the style for that function. When this returns satisfactory results you repeat the process to customize another function.

## Customization Guidelines

The following guidelines should help ensure a successful customization.

- Retain all original files in the \style0 and \shared directories in pristine condition and store them safely for future use. Also, make a backup copy of your customized style files so that patches won't disrupt your customization.
- Record all changes you make and the files that are affected.
- Customize and test your new styles in a non-production environment before migrating them to your production environment.

> **Important:** Oracle recommends that you do not modify original style files in the \shared or \style0 directories. These may be overwritten by patch updates and product upgrades or you may want to refer to them later.

- When you use only one style, consider breaking the dependence on stylesheets in the \shared directory (again, to prevent patch\release updates to \style0 and \shared from disrupting customizations). This means that no stylesheet in your custom directory should inherit from or reference a stylesheet in \shared or \style0.
- When you use multiple custom styles, consider the pros and cons of sharing customizations between multiple custom styles with implementing individual customizations for each custom style. For example:
  - **Two styles that share the same stylesheet:** When two custom styles (custom_style1 and custom_style2) can share the same stylesheet you may be tempted to customize the stylesheet in the \shared directory despite the risk of having your custom style overwritten by an updated stylesheet in a product patch or upgrade.
  - **Two individual styles:** When two custom styles (custom_style1 and custom_style2) require their individually customized stylesheets you use the standard methodology and overwrite the wrapper files in your custom directory with the corresponding stylesheets in \shared.
- Consider using parameter stylesheet files for a custom style collection, rather than using hard-coded values (tab id's, attribute names, table/link properties, and so on); this is similar to how program code is written using header files.

## Customization Methodology Checklist

As mentioned earlier, customization is an iterative process and more of an art than a science. This Guide does not attempt to give precise instructions for getting the presentation you want. Instead, this section outlines the recommended approach for a minor change.

**Important:** Oracle recommends that you focus on stylesheets for one function at a time. Attempting to copy all stylesheets from \shared into your custom style directory will result in an error.

***Table 2–28 Customization Methodology Checklist***

| Check | Action | Description |
|---|---|---|
| | Add a New Style | See the *Oracle Access Manager Administration Guide* for details about adding a style and selecting your new style as the default. |
| | Choose a Function to Customize | Decide which function you will customize first. Oracle recommends that you customize stylesheets related to one function at a time. |
| | Copy Selected Stylesheets into Your Custom Directory | Copy selected stylesheets from \shared to your custom directory to overwrite corresponding wrapper stylesheets:<br>■ Base stylesheets<br>■ Stylesheets included in base stylesheets<br>■ A function-related stylesheet identified in application registration file<br>■ Function-related stylesheets identified in oblixbasereg.xml |
| | Customize Stylesheets in Your Custom Directory | ■ Change relative pointers in copied stylesheets to point to files in your custom directory.<br>■ Change relative pointers to objects to absolute pointers.<br>■ Complete other changes to implement the function's customization. |
| | Record Your Work | Keep a record of the files you change and the changes you make. |
| | Copy Your Custom Directory Structure to WebPass | Build a custom directory structure on WebPass and copy customized styles and images into it.<br>**Note:** On WebPass, stylesheets are used only for client-side processing and are not required for server-side processing. |
| | Test Your Customized Style | ■ Test the customized style and make any alterations you need to the stylesheets in your custom directory.<br>■ Record the changes. |
| | Customize Another Function | Repeat this process on a function by function basis:<br>■ Choose a function.<br>■ Copy related stylesheets from \shared to your custom directory.<br>■ Customize pointers and styles.<br>■ Record and test your work. |
| | Propagate the Customized Style | When you have copied and customized all stylesheets for the application, copy the custom style directory to all Identity Servers and WebPass hosts in your environment. |

# Customizing the Identity System Pages

This example shows a method for changing the way a page looks, without changing what it does. The change is a simple font color alteration for a specific page in one application. After making the change you will verify that the change is successful. When you finish this functional customization, you will create the same custom style directory structure on WebPass and copy all image files into it so WebPass can display the appropriate images in response to queries. You then test the implementation.

The following topics demonstrate one sequence in the "Customization Methodology Checklist" on page 2-56. You can complete the following procedures to gain first-hand experience:

### Task overview: Customizing Identity System pages includes

1. Completing Prerequisites
2. Choosing a Function to Customize
3. Copying Stylesheets to Your Custom Directory
4. Editing Stylesheets
5. Copying Images and Styles to WebPass
6. Testing Your Customized Style
7. Propagating Styles

> **See also:** For details about localizing messages, see "Localizing XSL Files" on page 2-69.

## Completing Prerequisites

A prerequisite to customizing a style is to add a style and select the new style as the default, as described in the *Oracle Access Manager Administration Guide*. The resulting files and file structure provide the foundation for your customization.

Suppose you added a new style named Pastel in a directory named Pastel and requested files be copied from Classic Style (in directory \style0).

### To confirm the results of adding a new style

1. Add a style and select it as the default, as described in the *Oracle Access Manager Administration Guide*.

   **New Custom Directory:** Oracle Access Manager creates a directory that duplicates \style0 for the default language, English. If you have installed a Language Pack for French, Oracle Access Manager also creates a directory that duplicates \style0 in the French language directory.

2. Locate your new custom directory.

   For example:

   *Identity_install_dir* \identity\oblix\lang\en-us*Pastel*

   *Identity_install_dir* \identity\oblix\lang\fr-fr*Pastel*

   **Wrapper Stylesheets:** Your custom directory contains wrapper stylesheets that point to actual stylesheets in another directory. If you selected the Classic Style to copy from, your custom directory duplicates the content of the \style0 directory.

3. Open a wrapper stylesheet in your new custom directory, basic.xsl, and review the files that it includes.

For this example:

*Identity_install_dir*\identity\oblix\lang\en-us\Pastel\basic.xsl

```
<?xml version="1.0" ?>
- <!--    Copyright (c) 1996-2005, Oracle Inc. All Rights Reserved.
  -->
- <xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
xmlns:oblix="http://www.oblix.com/">
  <xsl:include href="./style.xsl" />
  <xsl:include href="../msgctlg.xsl" />
  <xsl:include href="../../shared/basic.xsl" />
  </xsl:stylesheet>
```

The basic.xsl wrapper stylesheet includes the following three files:

- style.xsl file in your custom directory
- msgctlg.xsl, one directory up from your custom directory (in identity\oblix\lang\en-us)
- basic.xsl in identity\oblix\lang\shared

4. Locate and review the content of the basic.xsl stylesheet in \shared.

   For example:

   Identity_install_dir\identity\oblix\lang\shared\basic.xsl

```
<?xml version="1.0" ?>
- <!--   Copyright (c) 1996-2002, Oblix Inc. All Rights Reserved. -->
- <xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
xmlns:oblix="http://www.oblix.com/">
  <xsl:include href="obstringutil.xsl" />
- <!--  xsl:output indent="no"/ -->
  <xsl:include href="font.xsl" />
  <xsl:include href="title.xsl" />
...
```

   The basic.xsl stylesheet in the \shared directory includes additional files (font.xsl, title.xsl, obstringutil.xsl) and provides templates to define attributes and status and control display information. See "basic.xsl" on page 2-32 for more information.

   During your customization process, you will copy selected stylesheets from the \shared directory into your custom directory. This will overwrite wrapper files with corresponding stylesheets you can then edit in your custom directory.

   **New Custom XML Document:** In addition to the custom directory structure, when you select the new custom style as the default style, Oracle Access Manager creates an XML document (a duplicate of style0.xml) named after the directory you created.

5. Locate and open the custom xml document that was created when you added the new style.

   For this example:

   *Identity_install_dir**identity*\oblix\config\style*Pastel*.xml

```
<?xml version="1.0" ?>
- <ParamsCtlg xmlns="http://www.oblix.com" CtlgName="style0">
- <ValNameList ListName="">
<NameValPair ParamName="styleReady" Value="TRUE" />
```

```
</ValNameList>
</ParamsCtlg>
```

This new file, stored with style0.xml, provides the status of your custom style and the location of the original style directory from which wrapper files were copied. For example, if your custom style directory is named Pastel and you copied from Classic Style, the *Pastel.xml* file is created when you select Pastel as the default style.

You do not need to edit this file. The original style0.xml remains unchanged. Also, there is a .lck version, Pastel.xml.lck, which is a lock file. No other new files are created when you add a new style.

**Updated styles.xml:** The styles.xml file is updated to include a new NameValPair that provides both the directory and style names you supplied when creating the style.

6. Locate and open the styles.xml file to confirm it was updated with your new style information.

   For example:

   *Identity_install_dir*\identity\oblix\config\style\styles.xml

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
- <ValNameList xmlns="http://www.oblix.com" ListName="styles.xml">
<NameValPair ParamName="style0" Value="Classic Style" />
<NameValPair ParamName="Pastel" Value="Pastel" />
</ValNameList>
```

   In this example, both the default Classic Style and new custom *Pastel style* are identified. You do not need to edit this file.

   After confirming your custom directory structure, new and updated files, you are ready to choose a function and begin your customization.

## Choosing a Function to Customize

The first step in the customization process is to choose a function to customize. For this example, suppose you want to change the font color to red on a specific page of the User Manager without changing anything else.

### To identify the function and source information

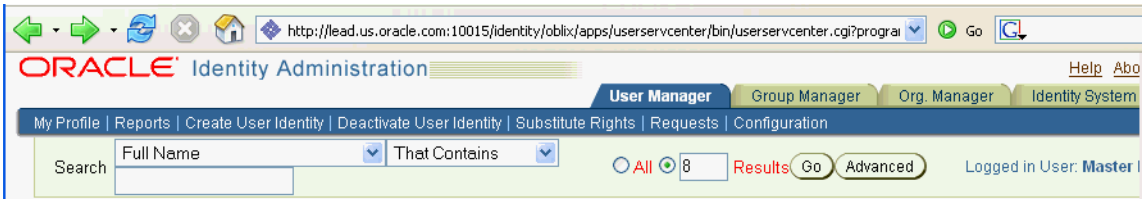
1. Log in to the Identity System, as usual.
2. Navigate to the desired page.

   For this example, click:

   **Identity System Console**, **User Manager**, and then click **My Identity**

   The page appears, as shown in Figure 2–6.

***Figure 2–6 Customization Example: A User Manager Page Displays Red Text***



The following information on each Identity System application page is useful for customizing styles:

- **Application Name:** The application name, User Manager, appears on a highlighted tab in the top left area of the screen.

  Each application's \bin directory contains the registration file that you need to identify functions. See "Registration Files" on page 2-17.

- **Page Name:** The page name, in this example it is My Profile, is the first page that you want to customize so you can see text in a red font color.

- **Registration File Path:** The URL for each page includes a path to the application page, for example, identity\oblix\apps\userservcenter\bin\userservcenter.cgi. You can use this to locate the relevant registration file on the Identity Server.

- **Function Name:** The URL for each page also includes a segment, *program=view* in this case, that you can use to locate the relevant stylesheet name for the function in the registration file.

3. Record the required information to assist you during the customization.

   For this example:

   **Application:** User Manager

   **Page:** User Profile

   **Registration File Path:**
   *Identity_install_dir*\identity\oblix\apps\userservcenter\bin\

   **Function:** program=view

## Copying Stylesheets to Your Custom Directory

Once you have identified the function you want to customize, your next task in any customization is to copy relevant stylesheets into your custom directory from the \shared directory. This will overwrite wrapper files in your custom directory with copies of stylesheets you can customize. This also retains the original stylesheets in \shared as well as the original default wrappers in \style0.

Locating and copying relevant stylesheets is an iterative process in itself. In the following procedure you will locate and copy:

- Base stylesheets
- Stylesheets *included* in base stylesheets
- The specific function-related stylesheet identified for the program in the application's registration file, in this case the stylesheet associated with program=view
- Stylesheets *included* in the function-related stylesheet

Eventually your custom directory will contain all stylesheets, including those identified in the application's registration file and in oblixbasereg.xml. Even if you do not need to edit a stylesheet, it must be copied to your custom directory.

---

**Important:** Copying stylesheets is an iterative process that must be done in a selective manner. Attempting to copy all stylesheets from \shared to you custom directory at one time will result in an error.

---

### To locate and copy relevant stylesheets

1. Copy the *base* stylesheets to your custom style directory from \shared to *overwrite* the default wrappers with stylesheets you can customize.

   For example:

   **Copy from:**
   *Identity_install_dir*\identity\oblix\lang\en-us\shared\
   basic.xsl, font.xsl, searchform.xsl, navbar.xsl, title.xsl

   **Copy to:**
   *Identity_install_dir*\identity\oblix\lang\en-us*Pastel*\

   This retains the original base stylesheets in \shared as well as the original default wrappers in \style0.

2. Open each base stylesheet in your custom style directory and locate include statements that point to other stylesheets you need to copy, as well as any style information you need to customize.

   For this example, see Table 2–29:

***Table 2–29 Base Stylesheet Pointers and Items to Customize***

| Base Stylesheets in Custom Directory | Pointers to Related Stylesheets and Items to Customize |
|---|---|
| basic.xsl | Contains implied relative include pointers to other stylesheets you need in your local custom directory:<br><xsl:include href="obstringutil.xsl" /><br><xsl:include href="font.xsl" /><br><xsl:include href="title.xsl" /><br><br>Record the names of additional stylesheets you need to copy into your custom directory from \shared. In this case, obstringutil.xsl. |
| font.xsl | Does not contain include pointers to other files.<br>Does contain color information you will customize:<br><xsl:variable name="subHeadingColor">#006699...<br><xsl:variable name="contentTitleColor">#000000...<br><xsl:variable name="contentTextColor">#000000... |
| searchform.xsl | Does not contain include pointers to other files.<br>Does not contain color information you will customize. No changes needed to this stylesheet in your custom directory. |
| navbar.xsl | Does not contain include pointers to other files.<br>Does contain color information you may customize later. |
| title.xsl | Does not contain include pointers to other files.<br>Does contain color information you may customize later. No changes needed to this stylesheet in your custom directory. |

3. Copy stylesheets *included* in base stylesheets to your custom directory from \shared.

   For this example, obstringutil.xsl:

   **Copy from:**
   *Identity_install_dir*\identity\oblix\lang\en-us\shared\
   obstringutil.xsl

**Copy to:**
*Identity_install_dir*\identity\oblix\lang\en-us\Pastel\obstringutil.xsl

4. Record the stylesheets you have copied from \shared to your custom directory so you can track your work.

5. Locate the required registration files.

   For this example, oblixbasereg.xml and userservcenterreg.xml:

   *Identity_install_dir*\identity\oblix\apps\common\bin\oblixbasereg.xml
   *Identity_install_dir*\identity\oblix\apps\userservcenter\bin\userservcenterreg.xml

   At some point, you typically need stylesheets included in the common registration file oblixbasereg.xml. However, stylesheets included in oblixbasereg.xml are not needed for this example.

   For this example, you need to locate only the function-related stylesheet in the userservcenterreg.xml file.

6. Open the application's registration file and locate the function-related stylesheet you need.

   For this example, locate ObProgram name="view":

```
   <?xml version="1.0" ?>
- <ObProgramRegistry>
   - <ObApplication name="userservcenter">
      - <ObProgram name="front">
          <ObStyleSheet name="usc_profile.xsl" />
          <ObSchema name="usc_front.xsd" />
      </ObProgram>
      - <ObProgram name="commonNavbar">
           <ObStyleSheet name="usc_profile.xsl" />
           <ObSchema name="usc_front.xsd" />
        </ObProgram>
...
   - <ObProgram name="view">
      <ObStyleSheet name="usc_profile.xsl" />
      <ObButton name="initiateDeactivateUser" />
      - <!-- ObButton name="manageSubscriptions"/ -->
      <ObButton name="userreactivate" />
      <ObButton name="wfTicketDelete" />
      <ObButton name="userModify" />
      <ObSchema name="usc_profile.xsd" />
   </ObProgram>
...
```

   You can see in the registration file that the usc_profile.xsl stylesheet is associated with the function you want to customize (ObProgram name="view"). The usc_profile.xsl stylesheet is also associated with a number of other functions.

7. Copy the function-related stylesheet, usc_profile.xsl, to your custom style directory from \shared and record the stylesheet name.

   For this example:

   **Copy From:**
   *Identity_install_dir*\identity\oblix\lang\en-us\shared\usc_profile.xsl

**Copy To:**
*Identity_install_dir*\identity\oblix\lang\en-us\Pastel\usc_profile.xsl

8. Open the function-related stylesheet and locate include statements that point to other stylesheets you need to copy, record any information you need to customize.

   For this example, usc_profile.xsl:

***Table 2–30 usc_profile.xsl Pointers and Items to Customize***

| usc_profile.xsl in Custom Directory | Pointers to Related Stylesheets and Items to Customize |
|---|---|
| usc_profile.xsl | This main stylesheet for the User Manager includes stylesheets that need to be copied to your custom directory:<br>`<xsl:include href="./basic.xsl" />`<br>`<xsl:include href="./selectorinfo.xsl" />`<br>`<xsl:include href="./usc_searchform.xsl" />`<br>`<xsl:include href="./usc_navbar.xsl" />`<br><br>**Note:** selectorinfo.xsl, usc_searchform.xsl and usc_navbar.xsl should be copied.<br>Also record pointers to objects that should be customized:<br>`<object id="cenroll" classid= ...`<br>`codebase="../../common/bin/xenroll.cab" />`<br><br>and<br>`<script src="../../common/bin/installCert.vbx" ...` |

9. Repeat steps to copy relevant stylesheets, then record their names and details you need to change.

   For this example:

   **Copy From:**

   *Identity_install_dir*\identity\oblix\lang\en-us\shared\selectorinfo.xsl

   *Identity_install_dir*\identity\oblix\lang\en-us\shared\usc_searchform.xsl

   *Identity_install_dir*\identity\oblix\lang\en-us\shared\usc_navbar.xsl

   **Copy To:**

   *Identity_install_dir*\identity\oblix\lang\en-us\Pastel\selectorinfo.xsl
   *Identity_install_dir*\identity\oblix\lang\en-us\Pastel\usc_searchform.xsl
   *Identity_install_dir*\identity\oblix\lang\en-us\Pastel\usc_navbar.xsl

   These stylesheets do not contain include statements, other stylesheet names, nor parameters you need to change.

   You have collected, copied, and recorded relevant stylesheets for this example.

## Editing Stylesheets

After copying relevant stylesheets, you may need to edit them. As described in Table 2–29 the information that needs to be customized for this example includes:

- Font colors defined in the base stylesheet font.xsl should be changed to red.
- Pointers to objects defined in usc_profile.xsl should change from a relative path to an absolute path.

> **Note:** To help streamline development and testing, consider implementing XSL stylesheet control parameters. See "Caching Considerations" on page 2-8.

### To edit stylesheets for a simple font color change

1. Open the font.xsl stylesheet in your custom directory in a text editor.

   For example,

   *Identity_install_dir*\identity\oblix\lang\en-us*Pastel*\font.xsl

2. Edit the stylesheet to change all colors from the default color to red (FF0000), then save the change.

   For example,

   **Change all Default Font Colors From:**

   ```
   ... <xsl:variable name="pageHeaderColor">#006699</xsl:variable>
   <xsl:variable name="subHeadingColor">#006699</xsl:variable>
   <xsl:variable name="contentTitleColor">#000000</xsl:variable>
   <xsl:variable name="contentTextColor">#000000</xsl:variable>
   and others ...
   ```

   **To Red (#FF0000):**

   ```
   ... <xsl:variable name="pageHeaderColor">#FF0000</xsl:variable>
   <xsl:variable name="subHeadingColor">#FF0000</xsl:variable>
   <xsl:variable name="contentTitleColor">#FF0000</xsl:variable>
   <xsl:variable name="contentTextColor">#FF0000</xsl:variable>
   and others ...
   ```

3. Record your changes to this file.

   If you restarted the Identity Server now you would not yet see your changes. This is because you have not yet customized the function-related stylesheet that identifies where to apply the changes.

4. Edit the basic.xsl stylesheet in your custom directory as follows to add required include statements that were in the original basic.xml (but were lost when you copied over the basic.xsl from the shared folder).

   a. Locate the line containing the following:

      ```
      <xsl:include href="obstringutil.xsl"/>
      ```

   b. Add the following information so that it precedes the line identified in a):

      ```
      <xsl:include href="./style.xsl" />
      <xsl:include href="../msgctlg.xsl" />
      ```

5. Edit the usc_profile.xsl stylesheet in your custom directory to change the relative path to objects, as shown in the following, then save the changes.

   For example:

   **Change From a Relative Path:**

```
- <head>
...<object id="cenroll" classid="clsid:43F8F289-7A20-11D0-8F06-00C04FC295E1"
codebase="../../common/bin/xenroll.cab" />
... <script src="../../common/bin/installCert.vbx" language="VBScript" />
</head>
```

   **Change To an Absolute Path:**

```
- <head>
... <object id="cenroll" classid="clsid:43F8F289-7A20-11D0-8F06-00C04FC295E1"
codebase="/identity/oblix/apps/common/bin/xenroll.cab" />
... <script src="/identity/oblix/apps/common/bin/installCert.vbx"
language="VBScript" />
</head>
```

   This concludes the specific function-related change for this example.

6. Ensure that file system access control for new custom style directories and files is set to match the ownership and permissions of \style0.

7. Restart the Identity Server.

   If you log in to the Identity System now and view the My Identity page, you will see the red font color. However, the images supplied by WebPass won't appear until they are included in a corresponding custom style directory structure on the WebPass host.

## Copying Images and Styles to WebPass

Images and JavaScript are served by the Web server that the WebPass is installed against, not by the Identity Server. When a style refers to an image, the image is served by WebPass. If the image does not exist in the WebPass file hierarchy, the image will appear as a broken link. To avoid this, you need to create a custom style directory on WebPass and include all images in this structure, whether you are adding new images or using default images.

### To copy images to WebPass

1. Copy your custom style directory from the Identity Server to WebPass.

   For example:

   **Copy From:**
   *Identity_install_dir*\identity\oblix\lang\en-us*Pastel*

   **Copy To:** *Identity_install_dir*\identity\oblix\lang\en-us*Pastel*

   **Note:** Stylesheets are included on WebPass for use with client-side processing only. Stylesheets are not required on WebPass for server-side processing.

2. Copy all image files from \style0 on WebPass to your custom directory on WebPass, whether you are using default images or adding new images.

For example:

**Copy images From:**
*WebPass_install_dir*\identity\oblix\lang\en-us\style0

**Copy images To:**
*WebPass_install_dir*\identity\oblix\lang\en-us*Pastel*

---

**Note:** This example does not include new images. Only default images called by the new custom style. If custom images are included, copy those to the custom directory as well.

---

3. Restart WebPass.

You are ready to test your customized style.

## Testing Your Customized Style

You are ready to test your customized style and make any changes needed to achieve satisfactory results.

For testing purposes, the `XSLProcessor` parameter indicates the processor to use when generating the page. See "XSLProcessor" on page 2-6 for details.

---

**Note:** To help simplify development and testing, you may want to implement XSL stylesheet control parameters, as discussed in"Caching Considerations" on page 2-8. You may use an XML editing environment to allow testing stylesheet customizations offline, as discussed in Chapter 7, "Useful Tools" on page 7-1.

---

If you don't obtain the desired result, check the items in "Troubleshooting Customization Issues" on page 2-68.

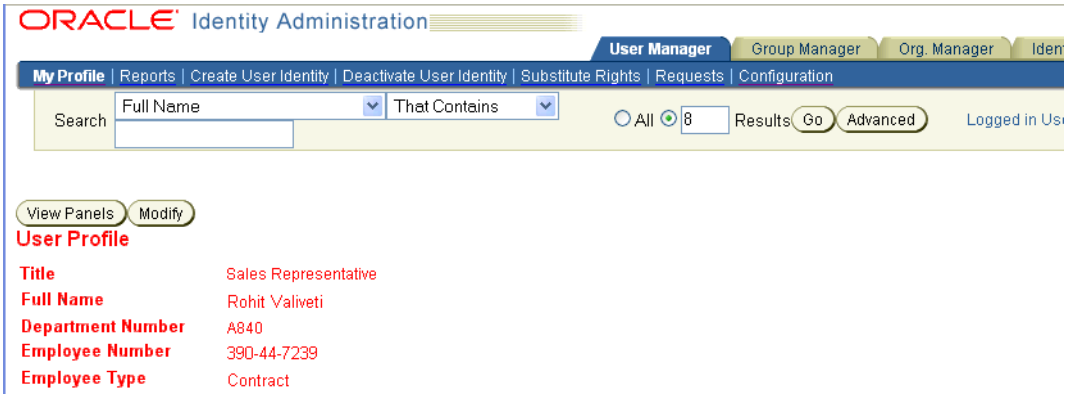
### To test your style

1. Log in to the Identity System, as usual.
2. Navigate to the page you customized.

   For example:

   Click **User Manager**, and then click **My Identity**
3. Confirm that the font color now displays in red, as shown in Figure 2–7.

*Figure 2–7 Customization Example: A User Manager Page Displays Red Text*




## Propagating Styles

When you know your style is working, you can push this out to other Oracle Access Manager systems.

### To propagate styles

1. Copy your custom style directory from the Identity Server to all other Identity Servers.
2. Restart each Identity Server.
3. Copy your custom style directory from the WebPass host to all other WebPass hosts.
4. Restart each WebPass.

## Troubleshooting Customization Issues

If you obtain unexpected results, check the following items to ensure that you have completed all tasks correctly.

- Have you added a new style and selected this as the default style?
- Have you identified and copied relevant stylesheets to your custom directory from \shared (see application and common registration files):
  - Base stylesheets
  - Stylesheets *included* in base stylesheets
  - The specific function-related stylesheet identified in the application's registration file.
  - Stylesheets *included* in the function-related stylesheet?
  - Relevant stylesheets in the common registration file?
- Have you made appropriate changes to stylesheets in your custom style directory?
  - Relative pointers to stylesheets
  - Relative pointers that should be absolute pointers to objects
  - Other customization details
- Have you created a duplicate custom style directory structure on WebPass?

- Have you copied images to your custom style directory structure on WebPass?

  **Note:** Oracle Access Manager relies on these images. Oracle recommends that you copy the files to your custom directory. On rare occasions that your custom image does not appear but the default does, you may need to change the default image.

- Have you restarted the Identity Server and WebPass?

  **See also:** For more information, see "Troubleshooting Example" on page 7-7.

## Localizing XSL Files

As discussed elsewhere, multiple languages are available for use with version 7.0 and higher. Messages that were once in stylesheets are language dependent and are now defined separately as variables in message catalogs. The new directory structure consolidates all message catalogs for JavaScript files, XSL, and HTML.

- Any language-specific files will be located in \lang*langTag*.
- Any non-language specific objects are located within \lang\shared.

All the stylesheets have a language-specific wrapper in \lang\langTag\style0 which includes the main language-neutral version stylesheet in \lang\shared. This new wrapper segregates the main stylesheet functionality, which is language independent, from language-specific messages.

Language-specific messages are referred to through variables in message catalog files, as discussed in:

Display names for the Identity applications are stored in the stylesheet. For localization, these display names must be translated for the each language that your organization supports.

For example, the display name User Profile is stored as an XSL variable "MUserProfile" in:

*Identity_install_dir*\identity\oblix\lang\en-us\msgctlg.xsl file

The XSL variables are stored in the XSL stylesheet, for example usc_profile.xsl, located in *Identity_install_dir*/identity/oblix/lang/shared.

### To localize XSL files

1. Store the display name text strings in a separate file as XSL variables.
2. Reference them in the stylesheet.

# Verifying XSL Files

To verify that a stylesheet is coded correctly, open it in Internet Explorer. The browser will indicate the line number of any errors in the code.

# 3

# Customizing Portal Inserts

Oracle Access Manager Portal Inserts provide a way to insert content generated by Oracle Access Manager into other applications without programming. The typical use of this is to build a subset of Oracle Access Manager functionality into your own Web application. You can, for instance, use the Identity System's search feature to add a company directory search to your site.

This chapter describes how portal inserts work and how to implement them with your installation, including:

- The generic method for using Portal Inserts, including the URL format to be used.
- A method that provides a quick return to the calling portal.
- The Identity applications that use Portal Inserts and the functions that each one supports.
- The parameters used by the functions.
- An example for using Portal Inserts.

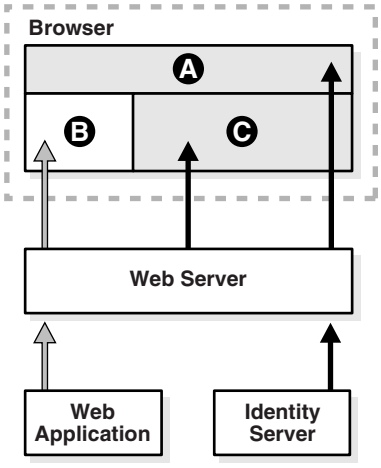
The following topics are discussed



## Overview of Portal Inserts

The following diagram illustrates how you might construct a Web application with the help of Portal Inserts:

*Figure 3–1 Using Portal Inserts in a Web Application*




In this scenario, the Web application uses three HTML frames (A, B and C) to lay out its content. Frame A might provide a search function, the search controls themselves being provided by a Portal Insert. Frame B might contain an unrelated report using non-identity information, generated by the application itself.

Frame C might contain detailed information about a particular identity, such as you see in User Manager's profile page. The contents of this frame could be provided entirely by a second Portal Insert requested from the search function in frame A. The Portal Insert may optionally be combined with a custom stylesheet to display the page in a way that better suits the Web application's look and feel. This kind of customization is described in "Designing the GUI with PresentationXML" on page 2-1.

---

**Note:** The application may also use Oracle Access Manager to generate the data contained in frame B, through the IdentityXML interface for instance. That page may contain links that can be used to request a new Portal Insert (with or without a custom stylesheet) for frame C.

---

# Using Portal Inserts

To use Portal Inserts, you typically begin by identifying a Oracle Access Manager feature that you want to integrate into your application. Before accessing a function as a Portal Insert, it is a good idea to verify that you can access it as an Oracle Access Manager user.

When you have constructed the URL that generates the content you require, you add the request to your application wherever you want the content displayed. For instance, in a Web application, you might specify the URL as the target of a link, or as the source document for a frame.

WebPass receives the HTTP request when the Portal Insert page is to be displayed. WebPass interprets the URL with its additional parameters as a portal request. If the URL contains invalid data, access is denied. Otherwise, an HTTP response is returned, typically providing much the same interactive HTML GUI as the base Oracle Access Manager system provides.

The URL format for Portal Inserts conforms to Internet RFC 2396 - *Uniform Resource Identifiers (URI): Generic Syntax*. The text of the RFC is located at

http://www.ietf.org/rfc/rfc2396.txt

Specifically, the URL for a Portal Insert looks like this:

`http://host:port/appname.cgi?param1=value1&param2=value2...`

### Note the following components

1. The Identity Server location.

   This is the `http://host:port/` part of the entry. It is exactly the same location you would use to login in to Oracle Access Manager as a user.

   **Note:** The *http* scheme may be *https* if a secure connection is used.

2. The application location.

   This is the appname.cgi part of the entry. You point to the exact application, such as User Manager, that you want to use. A list of locations for each application is provided in "Identity System Applications and Portal Inserts" on page 3-6. These are the "portals" to the functions that you want to carry out.

3. One or more sets of parameter name and value pairs.

   These are provided in the form param=value. The first set immediately follows the application choice and starts with a ?. The second and any additional sets start with a &. The parameters can be provided in any order.

   Remember that this text is being received as a URL and any non-URI characters, such as spaces and punctuation, that appear in parameter values must be encoded as discussed in the RFC.

   Table 3–1 lists some common characters and their URI-safe encoded equivalents:

***Table 3–1 URI-Safe Character Encodings***

| Character Name | Character | URI-encoded Equivalent |
|---|---|---|
| space | | %20 |
| exclamation mark | ! | %21 |
| apostrophe | ' | %27 |
| open parentheses | ( | %28 |
| close parentheses | ) | %29 |
| comma | , | %2C |
| colon | : | %3A |
| equals | = | %3D |

The following is an example URL to access a portal insert, first as one long string and then with the parts broken out for discussion:

```
http://domain.com:81/identity/oblix/apps/userservcenter/bin/
userservcenter.cgi?program=search&tab_
id=employees&comp=true&STy1=cn&SLk1=OSM&SSt1=john
```

The following is the meaning of each part:

- **http://domain.com:81/**: The server location.

- **identity/oblix/apps/userservcenter/bin/userservcenter.cgi**: The User Manager application location.
- **?program=search**: The first parameter, which in this case requests a search. The program parameter is always required. A good convention is to have it always be the first parameter. You can then quickly identify what function the request is expected to perform.

> **Note:** The leading ? separates the resource from the parameter list. Only the first parameter starts with ?. If there are subsequent parameters, they are delimited by the & character.

- **&tab_id=employees**: A second parameter, in this case requesting that the search be done under the employees tab.
- **&comp=true**: A third parameter, in this case comp, which specifies that only the requested information (and not the Oracle Access Manager navigation controls) is to be displayed.
- **&STy1=cn**: The first (indicated by the 1) search criterion is that the search is against the cn attribute.

> **Note:** You may specify further search criteria by passing more than one group of (STYn, SLkn, SStn) parameters. The n is always a number, used to group parameters together that belong to the same search criterion. See "Parameter Reference" on page 3-14 for more details, in particular the description of the `noOfFields` parameter.

- **&SLk1=OSM**: The search type is to be a substring match.
- **&SSt1=john**: The data containing the string john.

## Portal ID and BackURL

Portal inserts provide a way to embed Oracle Access Manager functionality into user Web applications. Once the goal is accomplished, the user may be several layers deep in Oracle Access Manager product pages. The user could return to the calling page by clicking the browser back button several times. Another way is to use the Portal ID feature. This inserts a back button on the Oracle Access Manager pages. Clicking this button returns the user to the calling portal or to any other user-specified URL.

To use this feature you append the portalid parameter to the URL, provided at the calling portal, and specify a label for the return URL. The portalid parameter value persists, meaning that its value is known to all successive screens, all of which will contain the appropriate back button. The example URL provided earlier is easily modified to use the portalid parameter:

```
http://domain.com:81/identity/oblix/apps/userservcenter/bin/user
servcenter.cgi?program=search&tab_
id=employees&comp=true&STy1=cn&SLk1=OSM&SSt1=john&portalid=
mychoice
```

In this example, mychoice is a label for the precise URL that the portal designer wants to return to. The portal designer associates the label with the actual URL by changing the content of the Portal Inserts Caller Identification Parameter File (PICI Parameter

File), portalidparams.xml. A generic version of this file is provided as part of the Identity installation, in the following location:

identity/oblix/apps/common/bin/portalidparams.xml

The content of this file is as follows:

```
<?xml version="1.0"?>
<ParamsCtlg xmlns="http://www.oblix.com"
                  CtlgName="portalidparams">
<CompoundList ListName="">
        <ValNameList ListName="oblix1" >
            <NameValPair ParamName="portalIdBackUrl"
                Value="http://www.oblix.com"/>
            <NameValPair ParamName="portalIdBackButton"
                Value="../../common/ui/style0/
                NAVportalreturn1.gif"/>
            <NameValPair ParamName=
                "portalIdBackButtonMouseOver"
                 Value="Click here to go to oblix mainpage..1"/>
        </ValNameList>
<ValNameList ListName="oblix2" >
          <NameValPair ParamName="portalIdBackUrl"
               Value="http://www.oblix.com"/>
          <NameValPair ParamName="portalIdBackButton"
                Value="../../common/ui/style0/
                NAVportalreturn2.gif"/>
          <NameValPair ParamName=
                "portalIdBackButtonMouseOver"
                Value="Click here to go to oblix main
                page..2"/>
          </ValNameList>
</CompoundList>
</ParamsCtlg>
```

**Note:** The example contains two portalids, `oblix1` and `oblix2`. You may add more.

The information provided for each ValNameList item in the file associates a user-created label with the return URL, the image of a back button, and mouseover text to be associated with the button. All four of these items can be changed by the user, as shown in Table 3–2:

***Table 3–2 ValNameList items***

| Parameter | Description |
|---|---|
| ListName | A unique id for the calling portal. This is any user defined label, mychoice in the earlier example. The id value none is reserved; it has special meaning to Identity. (See the discussion of the "Portal ID and BackURL" on page 3-4.). |
| Value for portalIDBackURL | A back URL. This could be the URL of the calling portal, or any other user specified URL. |
| Value for portalIDBackButton | The file path to the image to display for the back button. The button image is presented at the top of the page. When the user clicks on this button, the browser will return to the location specified in the value for the portalIDBackURL. The path can be relative to the *Identity_install_dir*/identity/oblix/apps/bin directory, or a fully specified URL. |

*Table 3–2 (Cont.) ValNameList items*

| Parameter | Description |
|---|---|
| Value for portalIDBackButton MouseOver | The mouse-over message for this button, that is displayed when the user puts the mouse cursor over the button. |

The PICI Parameter file is loaded when Oracle Access Manager starts. If its content is subsequently changed, the user should reload the file in order to make the changes usable. Rather than stopping and starting Oracle Access Manager, you reload the file by entering the following URL to your browser:

`http://host:port/identity/oblix/apps/admin/bin/genconfig.cgi?program=flushCache&cachetype=portalid`

## Identity System Applications and Portal Inserts

The following are applications that respond to portal requests. For each application, the text shown replaces the appname.cgi information in the URL format.

For Group Manager: identity/oblix/apps/groupservcenter/bin/groupservcenter.cgi

For Lost Password Management: identity/oblix/apps/lost_pwd_mgmt/bin/lost_pwd_mgmt.cgi

For Organization Manager: identity/oblix/apps/objservcenter/bin/objservcenter.cgi

For User Manager: identity/oblix/apps/userservcenter/bin/userservcenter.cgi

## Portal Insert Services

Each application provides one or more functions that can be accessed by URL parameters. These functions are also referred to as services. The functions fall into three major categories:

- **Present:** These services present standard Oracle Access Manager pages, for user interaction.
- **Get**: These services show current directory content, but do not change it.
- **Set:** These services change current directory content or perform an action, such as logging out.

All available functions are listed in the sections that follow, grouped under the Present, Get, and Set categories. For each function, the following are provided:

- **Name**: This is the name of the program that carries out the function. It is good practice to use this parameter first, in the form program=xxxx, before appending other parameters.
- **Description**: An explanation of the function
- **Works with**: A list of applications with which the function works. Note that many of the functions work with more than one application.
- **Parameters**: A table of parameters that either must (REQ) or may (OPT) be used in a URL that invokes the function. If you fail to specify a required parameter in the URL, an error page is returned. If you specify any parameter name but no value, or an invalid value, an error page is returned.

The parameters themselves are described in detail starting at "Parameter Reference" on page 3-14.

In the following function descriptions, required parameters are listed first, followed by optional parameters. In the URL, you can specify parameters in any order you prefer, but because these URLs can become unwieldy, it is a good idea to follow a guideline such as *function*, followed by *required parameters*, followed by *optional parameters*.

The *Note* column calls attention to any issues that you should keep in mind while using the parameter with a particular function, but that are not part of the parameter's description *per se*.

> **Note:** You must have the appropriate rights assigned to you in order to use a function. Your searchbase must include the information you want to view or change. You require read rights for any attributes you expect to view, or tabs whose configured attributes you expect to view. You require write rights for any information you expect to change.

## Functions to Present Pages

Following is a list of functions that present interactive pages.

### delete

**Description**: Use this function to generate a page, including a delete button, from which you can delete a group or an organization. See "workflowDeactivateUser" on page 3-10 to generate a page from which you can remove a user.

**Works with**: Group Manager, Organization Manager

| Parameter | REQ/OPT |
|---|---|
| uid | REQ |
| comp | OPT |

### modify

**Description**: Use this function to present an interactive page from which data can be changed.

**Works with**: Group Manager, Organization Manager, User Manager

| Parameter | REQ/OPT |
|---|---|
| uid | REQ |
| comp | OPT |

### modifyLocation

**Description**: Use this function to display a page from which you can change the location of an individual or organization.

**Works with**: Organization Manager, User Manager

| Parameter | REQ/OPT |
|---|---|
| locId | REQ |
| uid | REQ |
| comp | OPT |

| Parameter | REQ/OPT |
|---|---|
| locObjClass | OPT |
| rectangle | OPT |
| scopeResolved | OPT |
| tab_id | OPT |

### passwordChallengeResponse

**Description**: Two URLs have been configured for your system, one to be used for password changes and the other for challenge response. This function sends the user to the challenge-response page, and from there, if the response is correct, to the password change page. From there, the function sends the user to the page specified by the backUrl.

**Works with**: Lost Password Management

| Parameter | REQ/OPT |
|---|---|
| login | REQ |
| backurl | OPT |
| target | OPT |

### predefinedReports

**Description**: Use this function to present an interactive page showing a set of predefined reports.

**Works with**: Group Manager, Organization Manager, User Manager

| Parameter | REQ/OPT | Note |
|---|---|---|
| comp | OPT | |
| tab_id | OPT | Default varies by application. |

### proxyAdmin

**Description**: Use this function to present an interactive page from which proxy administration can be done.

**Works with**: User Manager

| Parameter | REQ/OPT |
|---|---|
| comp | OPT |

### redirectforchangepwd

**Description**: A URL will have been configured for your system, to be used for password changes. This function sends the user to the password change page. From there, the function sends the user to the page specified by the backUrl.

**Works with**: Lost Password Management

| Parameter | REQ/OPT |
|---|---|
| login | REQ |

| Parameter | REQ/OPT |
|---|---|
| backurl | OPT |
| target | OPT |

### searchPage

**Description**: Use this function to present an interactive search page, where you can enter search parameters.

**Works with**: Group Manager, Organization Manager and User Manager

| Parameter | REQ/OPT | Note |
|---|---|---|
| advSearch | OPT | |
| comp | OPT | |
| tab_id | OPT | Default varies by application. |

### subscribe

**Description**: Use this function to present an interactive page from which you can subscribe to a group.

**Works with**: Group Manager

| Parameter | REQ/OPT |
|---|---|
| uid | REQ |
| comp | OPT |

### viewLocations

**Description**: Use this function to get a page from which you can view the location of an organization or user.

**Works with**: Organization Manager, User Manager

| Parameter | REQ/OPT |
|---|---|
| locId | REQ |
| uid | REQ |
| comp | OPT |
| coords | OPT |
| locObjClass | OPT |
| rectangle | OPT |
| scopeResolved | OPT |
| show_all | OPT |
| tab_id | OPT |

### workflowCreateProfile

**Description**: Use this function to present an interactive page from which a new entry can be created using a workflow.

**Works with**: Group Manager, Organization Manager, User Manager

| Parameter | REQ/OPT | Note |
|---|---|---|
| comp | OPT | |
| tab_id | OPT | Default varies by application. |

### workflowDeactivateUser

**Description**: Use this function to present a page from which you can deactivate a user.

**Works with**: User Manager

| Parameter | REQ/OPT | Note |
|---|---|---|
| uid | REQ | DN of the user who is to be deactivated. |
| ObWorkflowName | REQ | |
| comp | OPT | |

### workflowSelfRegistration

**Description**: Use this function to present a page from which you can add yourself to an organization, or as a user.

**Works with**: Organization Manager, User Manager

| Parameter | REQ/OPT | Note |
|---|---|---|
| ObDomainName | REQ | |
| ObWorkflowName | REQ | |
| comp | OPT | |
| ObWfComment | OPT | |
| tab_id | OPT | Default varies by application. |

### workflowTicketSearchForm

**Description**: Use this function to present an interactive search page, where you can enter search parameters for specific tickets.

**Works with**: Group Manager, Organization Manager, User Manager

| Parameter | REQ/OPT |
|---|---|
| requestType | REQ |
| comp | OPT |

### unsubscribe

**Description**: Use this function to present an interactive page from which you can unsubscribe from a group.

**Works with**: Group Manager

| Parameter | REQ/OPT |
|---|---|
| uid | REQ |

| Parameter | REQ/OPT |
|---|---|
| comp | OPT |

## Functions to Get Data

Following is a list of all those functions that return data.

### myGroupsProfile

**Description**: Use this function to get the profiles for groups you are a member, owner, or administrator of.

**Works with**: Group Manager

| Parameter | REQ/OPT | Note |
|---|---|---|
| attrName | OPT | |
| comp | OPT | |
| showAdministratorOfGroups | OPT | At least one of the parameters names starting with show must be used. |
| showDynamicGroups | OPT | |
| showMemberOfGroups | OPT | |
| showNestedGroups | OPT | |
| showOwnerOfGroups | OPT | |
| showStaticGroups | OPT | |

### search

**Description**: Use this function to present the result of a search.

**Works with**: Group Manager, Organization Manager, and User Manager

| Parameter | REQ/OPT | Note |
|---|---|---|
| SLkn | REQ | |
| SStn | REQ | |
| SStn | REQ | At least one of the parameters names starting with show must be used. |
| comp | OPT | |
| noOfFields | OPT | |
| noOfRecords | OPT | |
| showAllResults | OPT | |
| sortBy | OPT | |
| sortOrder | OPT | |
| startFrom | OPT | |
| tab_id | OPT | Default varies by application. |

### view

**Description**: Use this function to view selected attributes for a group, organization, or user.

**Works with**: Group Manager, Organization Manager, and User Manager

| Parameter | REQ/OPT | Note |
|---|---|---|
| uid | REQ | DN of the user, group or organization whose attributes are to be viewed, depending upon the application.<br>For User Manager only, this is optional. If no uid is specified, the profile of the logged in user will be shown. |
| attrName | OPT | If you do not use this parameter, then all attributes for the uid, that you are authorized to see, are returned. To get values for more than one attribute, use this parameter multiple times, once for each named attribute. |
| comp | OPT | |

### viewGroupMembers

**Description**: Use this function to view the members of a group.

**Works with**: Group Manager

**Rights**: Read rights on the Member attribute. Also, for dynamic members the read right on the Dynamic Filter attribute.

| Parameter | REQ/OPT | Note |
|---|---|---|
| uid | REQ | DN of the group whose members are to be listed. |
| attrName | OPT | |
| comp | OPT | |
| showDynamicUserMembers | OPT | At least one of the show parameters in the list must be used, set to true. |
| showNestedUserMembers | OPT | |
| showStaticUserMembers | OPT | |
| SLk1 | OPT | At most one set of these parameters is allowed with this function. The set is required if groupMemberSearch<br>StringMinimumLength is not zero. See the parameter file shown in Table B–2 on page B-7. |
| SSt1 | OPT | |
| STy1 | OPT | |

### workflowTicketInfo

**Description**: Use this function to get information about a specific request.

**Works with**: Group Manager, Organization Manager, User Manager

| Parameter | REQ/OPT |
|---|---|
| workflowInstanceDn | REQ |

| Parameter | REQ/OPT |
|---|---|
| workflowStepInstanceId | REQ |
| comp | OPT |

### workflowTicketSearch

**Description**: Use this function to present the result of a search for pending, completed, or all workflow requests.

**Works with**: Group Manager, Organization Manager, User Manager

| Parameter | REQ/OPT | Note |
|---|---|---|
| requestType | REQ | If the required type is an outgoing request, then requestType is not needed. |
| targetApplication | REQ | |
| ticketType | REQ | If the required type is an outgoing request, then ticketType is not needed. If the required type is an incoming request, There are three possible entries.<br>**WfAllTickets**: Search for all requests, regardless of status.<br>**WfCompletedTickets**: Search for requests that have been completely processed.<br>**WfPendingTickets**: Search for requests that are pending, only partially processed. |
| comp | OPT | |
| days | OPT | |
| noOfRecords | OPT | |
| sortBy | OPT | For workflow tickets, the class sorting attribute can have only one of the following values:<br>■ obticketid (for Ticket Number)<br>■ obapp (for Application Name)<br>■ obactionname (forAction)<br>■ obwfstatus (for Status)<br>■ obwftypename (for Request Type)<br>■ obtargetdn (for Requested For)<br>■ obcurrentdn (for Requested by)<br>■ obactordn (for Action Taker)<br>■ obdateprocessed (for Date Processed)<br>■ oblockedby (for Locked By)<br>■ obsubflow (for Subflow Number)<br>If the attribute is invalid, then an error message is returned, such as "Invalid value for parameter sortBy". If no attribute is specified, the default is the first attribute (most likely obticketid) in the admin-configured workflow ticket search table.<br>(You can see this table in the Identity System Console, Common Configuration, Configure Workflow Panels, Ticket Search Table). |
| sortOrder | OPT | |

| Parameter | REQ/OPT | Note |
|---|---|---|
| startFrom | OPT | |

## Functions to Set Data

Following is a list of all those functions that set data.

### commonLogout

**Description**: Log out of Group Manager, Organization Manager, User Manager.

**Works with**: Group Manager, Organization Manager, User Manager

Takes no parameters.

### expandGroup

**Description**: Use this function to expand a dynamic group into its current static members.

**Works with**: Group Manager

**Rights**: VIEW for the *Group Dynamic Filter* and *Group Expansion* attributes; VIEW for the group class attribute; MODIFY for the *Member* attribute.

| Parameter | REQ/OPT | Note |
|---|---|---|
| comp | OPT | |
| groupsToExpand | OPT | One or the other of these must be provided. |
| expandAllGroups | OPT | |

### workflowChangeAttributeRequest

**Description**: Use this function to initiate a change attribute request using a workflow.

**Works with**:Group Manager, Organization Manager, User Manager

| Parameter | REQ/OPT |
|---|---|
| changeRequestAttr | REQ |
| changeRequestType | REQ |
| ObWorkflowName | REQ |
| uid | REQ |
| comp | OPT |

# Parameter Reference

The following table describes each of the parameters in detail. In general, parameters have the same meaning for each function. When a function behaves differently with respect to a parameter, this is noted in a Notes column of the functions tables.

Several parameters, such as `locId` and `tab_id`, take values that are not obvious from the GUI presentation. However, these can be obtained from the URL address for the function you want to implement as a portal.

For example, if you do a search within the User Manager and click one of the employees to do a view, you see that the `tab_id` used is `employees`.

Boolean parameter values must be set to `true` or `false` in the URL. Alternative representations of Boolean values, such as yes and no, 1 and 0, and so on are not supported.

Integer parameter values must be specified as an uninterrupted sequence of decimal digits.

String parameter values must be URI-encoded as described in the previous paragraphs (see "Using Portal Inserts" on page 3-2) if they contain spaces or punctuation.

The values to be entered for many of the parameters listed here are the exact DN values as they appear in the directory, rather than the display values. To find these DN values, you will need to use a tool that will allow you to browse in the directory and display DN entries. An example of such a tool is `ldp.exe`, provided with Windows 2000 systems. Other methods are described in the following paragraphs.

Find schema names for an attribute for an application by following these steps (taking User Manager as an example): Identity System Configuration, User Manager, User Manager Configuration, Configure Tab. Click the link of the type of User you need, then click **Modify Attributes**. At this point, an applet will show up. The top left corner shows a list of schema names for the attribute, and the top right corner shows the display names of the attributes, where you can locate the attribute you want to refer to.

Find attribute names by using the Modify Attributes feature for the appropriate application. For example, look under User Manager, User Manager Configuration, Configure Tab. Select the appropriate tab (which you are not going to change). Select **Modify Attributes**. The attribute names for that tab are displayed in the field identified as Attribute.

***Table 3–3 Parameters Used for Portal Functions***

| Parameter Name | Description | Rules |
|---|---|---|
| advSearch | Use this parameter to specify that the advanced search form is to be used instead of the basic search form. | Single-valued, Boolean, true or false.<br>Default: false. |
| attrName | Use this parameter to specify the names of one or more attributes to be viewed or changed, depending upon the function.<br>Use the schema names, not the display names. | Multi-valued, string.<br>Default: If no names are provided, then the attributes that will be shown are all of those that the user is allowed to view, depending upon the function. |
| backUrl | Used with the two password change-related functions, this provides the URL for a link to go back to after the password change is made. | Single-valued, a string.<br>Default: none. |
| changeRequestAttr | Use this parameter to name the attribute whose value you want to change. This is the schema name of the attribute, not the display name. | Required.<br>Single-valued, a string.<br>Default: none. |

*Table 3–3 (Cont.) Parameters Used for Portal Functions*

| Parameter Name | Description | Rules |
|---|---|---|
| changeRequestType | Use this parameter to describe whether the request is to add or remove information. It has two values:<br>newval<br>remove | Required.<br>Single-valued, a string, one of the listed values.<br>Default: none. |
| comp | Use this parameter to make sure the page returned shows only the component you requested and nothing more. For example, this omits the navigation bar. If comp is set to true, it will be considered true for the rest of the session, even if not explicitly set in the URL. This parameter is optional for all functions that use it, but strongly recommended. | Single-valued, Boolean, true or false.<br>Default: false. |
| coords | These are present if the user clicked on the location map. | Single-valued, a text string representing a pair of coordinates, presented as xx, yy.<br>Default: none.<br>Either coords or rectangle may be part of the URL, but not both. |
| days | Use this parameter to specify a limited window, n days back from the current time, within which to look for requests. | Single-valued, an integer >=1.<br>Default: 0, meaning no limit; look as far back as the oldest request. |
| displayFormat | Use this parameter to specify the type of view for the results. | Single-valued, an integer<br>2 - use table format.<br>3 - use custom format. |
| expandAllGroups | Use this parameter to expand all groups that you have rights to expand.<br>If set to true, then all such groups are expanded. If set to false, then only the groups specified with the groupsToExpand parameter are expanded. | Single-valued, Boolean, true or false.<br>Default: false. |
| graphviewtype | Use this parameter to specify the format of an organization chart. There are two possibilities:<br>1: A vertical presentation, with parents preceding the children.<br>2: A horizontal layout, with parents to the left of children. | Single-valued.<br>Default: 1. |
| groupsToExpand | Use this parameter to specify one or more target groups you want to expand. | Multi-valued, a DN.<br>Default: none. |
| locId | Location at which the object resides. | Single-valued, a DN.<br>Default: none. |

*Table 3–3 (Cont.) Parameters Used for Portal Functions*

| Parameter Name | Description | Rules |
|---|---|---|
| locObjClass | The location objectclass name. | Single-valued.<br>Default: oblixlocation. |
| login | The identifying string of characters provided by the user, along with the password, to log in. This is usually some variation on the user name. | Single-valued.<br>Default: none. |
| noOfFields | Use this parameter to specify the number of attributes whose values are to be searched through.<br>Depending on the value of this parameter, you must provide the same number of sets of STy, SLk and SSt parameters. For example, if the noOfFields is 2, then required parameters would be STy1, SLk1 and SSt1 and STy2, SLk2 and SSt2.<br>The result of the search is an AND that satisfies all of the parameter sets.<br>The value of noOfFields must be greater than or equal to the number of sets. If it is greater, no error is reported, and the behavior will be just as if you had entered the correct, smaller value for n. | Single-valued, an integer value n >= 1.<br>Default: 1. |
| noOfRecords | Use this parameter to specify a maximum number of entries to be returned in the search results.<br>This parameter and its default values are overridden by the showAllResults parameter.<br>Note the default is derived from the defaultDisplayResultVar parameter in the oblixbaseparams.xml file. (See the "Oracle Access Manager Parameter Files" on page B-1) However, there is one exception. When a predefined report is created, the report definition includes the number of records to be displayed. This takes its value from the default in effect when the report is generated, and cannot be modified. | Single-valued, an integer value n >=1.<br>Defaults to the value of the defaultDisplay<br>ResultVal parameter. |
| ObWfComment | Use this parameter to provide a comment for a step in a workflow. | Single-valued, string.<br>Default: none. |
| ObDomainName | Use this parameter to specify the name of the domain in which you want to create, change, or remove an entry.<br>The domain name must be defined under the workflow referred to by the ObWorkflowName parameter. | Single-valued, a DN.<br>Default: none. |
| ObWorkflowName | Use this parameter to specify the name of the workflow that you want to use to create, change, or delete a directory entry. | Single-valued, a DN<br>Default: none. |

*Table 3–3 (Cont.) Parameters Used for Portal Functions*

| Parameter Name | Description | Rules |
|---|---|---|
| portalid | Use this parameter to specify a label that applies to a combination of a backURL, button image, and mousover text that has been added to the PICI file.<br>The label entered persists for the rest of the session, meaning that it continues to apply as though the parameter had been used in successive URLs. Use the value none to end persistence | Any text.<br>Default: none. |
| rectangle | Rectangle on the map indicating the location of the object. | Single-valued, a text string holding two pairs of numbers, the coordinates of the upper left and lower right corners of the rectangle, in the form xx1,yy1:xx2,yy2.<br>Default: (If not given, only the object's map is shown with the location of the object on that).<br>Either coords or rectangle may be part of the URL, but not both. |
| reportname | Use this parameter to provide the name of an existing report. | Single-valued.<br>Default: none |
| reportsubtab | Use this parameter to specify that you want the results of an existing report. Currently, the only legal value is predefinedreport. | Single-valued.<br>Default: none. |
| requestType | Use this parameter to specify which of the two possible request queue types you want to search.<br>incomingRequests: Requests you need to process.<br>outgoingRequests: Requests you have originated. | Single-valued.<br>Default: none. |
| scoperesolved | If rectangle is specified, then<br>scopeResolved must be set to true. | Single-valued, Boolean, true or false.<br>Default: if this parameter is not given, the scope is<br>resolved again. |
| showAdministratorOf Groups | Use this parameter to ask for groups for which you or another user serve as administrator. | Single-valued, Boolean, true or false.<br>Default: false. |
| show_all | If set to true, displays all users on the location map. | Single-valued, Boolean, true or false.<br>Default: false. |

*Table 3–3 (Cont.) Parameters Used for Portal Functions*

| Parameter Name | Description | Rules |
|---|---|---|
| showAllResults | Use this parameter to force all results of the search to be returned to the user. If the parameter value is true, it overrides the value of the noOfRecords parameter. | Single-valued, Boolean, valued true or false.<br>Default: false, meaning return results up to the limit imposed by the noOfRecords parameter. |
| showDynamicGroups | Use this parameter to ask to be included in the response to groups in which you or another user serve as dynamic members. | Single-valued, Boolean, true or false.<br>Default: false. |
| showDynamicUser Members | Use this parameter to specify whether dynamic members of a group are to be included in the response. | Single-valued, Boolean, true or false.<br>Default: false. |
| showMemberOfGroups | Use this parameter to ask to be included in the output of groups in which you or another user serve as members. | Single-valued, Boolean, true or false.<br>Default: false. |
| showNestedGroups | Use this parameter to ask for nested groups you, or another user, are a member of to be included in the response. | Single-valued, Boolean, true or false.<br>Default: false. |
| showNestedUser Members | Use this parameter to specify whether nested members of a group are to be included in the response. | Single-valued, Boolean, true or false.<br>Default: false. |
| showOwnerOfGroups | Use this parameter to ask for groups you, or another user, are an owner of to be included in the output. | Single-valued, Boolean, true or false.<br>Default: false. |
| showStaticGroups | Use this parameter to ask for groups you, or another user, are a static member of to be included in the response. | Single-valued, Boolean, true or false.<br>Default: false. |
| showStaticUserMembers | Use this parameter to specify whether static members of a group are to be included in the response. | Single-valued, Boolean, true or false.<br>Default: false. |

*Table 3–3 (Cont.) Parameters Used for Portal Functions*

| Parameter Name | Description | Rules |
|---|---|---|
| SLkn | Use this parameter to choose the way string data is selected. Legal entries all begin with the letter O, and the next two letters are an abbreviation of the search type.<br>Possible values are:<br>OSM: Substring match. Search results include entries whose value contains the exact data entered for this parameter, including spaces.<br>OGE: Greater than or equal to. Search results include entries whose string value is greater than or equal to the data entered for this parameter.<br>OLE: Less than or equal to. Search results include entries whose string value is less than or equal to the data entered for this parameter.<br>OBW: Begins with. Search results include entries whose string value begins with the data entered for this parameter.<br>OEW: Ends with. Search results include entries whose string value ends with the data entered for this parameter.<br>OSL: Sounds like. Attempts a phonic match on the entered data.<br>OEM: Exact match. Search results include entries whose string value is the same as the data entered for this parameter.<br>OOS: Oblix-specific substring match. Differs from OSM. Spaces are considered to be delimiters, and results include entries which match both of the two strings.<br>Any other value than the ones specified in this table returns an error (Invalid parameters). | Multi-valued, 1 to n. For an explanation of n, see noOfFields.<br>Default: none. If an invalid value or no value is provided, an error is returned. |
| sortBy | Use this parameter to specify which one of the attributes to use to sort the results.<br>Use the schema name, not the display name. | Single-valued.<br>Default: if no value is specified, the class attribute of the structural objectclass of the tab specified by tab_id is used. |
| sortOrdersortOrder | Use this parameter to specify the sort order, ascending or descending. There are two possible values.<br>ascending<br>descending | Single-valued.<br>Default: ascending. |

*Table 3–3 (Cont.) Parameters Used for Portal Functions*

| Parameter Name | Description | Rules |
|---|---|---|
| SStn | Use this parameter to provide a string value to be searched for.<br>Note: The value provided for this parameter must be equal to or greater than the value of SearchStringMinimumLength in the userservcenterparams.xml file. | Multi-valued, 1 to n. For an explanation of n, see the noOfFields parameter.<br>Default: If no value is specified, then the default is to do a blank search on the class attribute. This means, return everything that has any value (other than a NULL value) for the selected STy attribute. |
| startFrom | Use this parameter, for a long list of search results, to skip over a selected number of items and start the list with a specified item. For example, if 100 entries were found by the search, entering a value of 80 for this parameter gives a response showing only items 80 through 100. | Single-valued, integer.<br>Default: 0, meaning to start from the beginning of the search results list. |
| STyn | Use this parameter to specify an attribute whose string values are to be searched. Attributes are associated, by application, with one or more tabs. The attribute must have been marked as searchable for the tab name provided or assumed for the tab_id parameter. If it is not, an error is returned. An administrator must have set the searchable flag for the attribute. | Multi-valued, 1 to n. For an explanation of n, see the noOfFields parameter.<br>Default: none. |
| tab_id | Use this parameter to specify the name of the tab which describes the information category you want to work within. Possible values for the parameter differ across applications.<br>For User Manager and Group Manager, only one tab is allowed. For Organization Manager multiple tabs are allowed.<br>If omitted, Oracle Access Manager can always find a default value for tab_id, as described in the Rules column.<br>However, Oracle recommends you always provide a value for tab_id. This will provide self-documentation for each portal link you create and give you exactly what you want regardless of what other changes might be made to the system.<br>For example, Organization Manager enables you to change the order in which tabs are displayed. If you rely on the default tab_id in this case, all your portal functions would be affected and might not work correctly. | Single-valued.<br>Default:<br>For User Manager and Group Manager, which have only a single tab, tab_id is assumed.<br>For Organization Manager, which has multiple tabs, the tab_id is assumed to be that for the leftmost tab. |

*Table 3–3 (Cont.) Parameters Used for Portal Functions*

| Parameter Name | Description | Rules |
|---|---|---|
| target | Determines the window in which the page is displayed. It takes two possible values:<br>self: Displays in the same window from which it was called.<br>top: Displays in the top browser window. | Single-valued, a string.<br>Default: self. |
| targetApplication | Use this parameter to specify the application to be searched for tickets.<br>If you want to search all applications, use the value allApplications.<br>To search a specific application, enter the internal application name:<br>groupservcenter: For Group Manager<br>objservcenter: For Organization Manager<br>userservcenter: For User Manager | Single-valued.<br>Default: none. |
| ticketType | Use this parameter to specify the status type for the requests to be searched for. There are three possible entries.<br>WfAllTickets: Search for all requests, regardless of status.<br>WfCompletedTickets: Search for requests that have been completely processed.<br>WfPendingTickets: Search for requests that are pending, only partially processed. | Single-valued.<br>Default: none. |
| uid | Use this parameter to specify the DN of an entry you want to view or modify.<br>NOTE: This parameter is used in many functions, and is NOT limited to User Manager activities, which might be assumed from its name. | Single-valued, a DN.<br>Default: none. |
| workflowInstanceDn | Use this parameter to specify the DN of the workflow for which information is required. To specify the step for which the information is required, provide the workflowStepInstanceId parameter. The DN for the workflow is shown in the workflow definition view (see the *Oracle Access Manager Administration Guide*). | Single-valued, a DN.<br>Default: none. |
| workflowStepInstanceId | Use this parameter to specify a certain step, in the workflow specified by workflowInstanceDn, for which information is required. | Single-valued, integer value<br>Default: none |

# Portal Inserts Example

This section illustrates one method of providing a Oracle Access Manager portal to users.

### Task overview: One method of providing a Oracle Access Manager portal

1. Identify the Oracle Access Manager function(s) you intend to provide.

2. For each function, use the descriptions from this chapter to determine the URL components required to make the request to Oracle Access Manager, then construct the URL.
3. Develop a Web page in HTML to serve as a starting point for the Oracle Access Manager functionality you are providing. This page will contain links, forms, or links and forms that access Oracle Access Manager as a portal.
4. Deploy your page on the intranet.
5. Distribute the URL of your index page to users.

This example builds a portal insert that displays the Identity System profile page from User Manager for a given user using User Manager's view function.

Collect the following information for the URL:

| Parameter | Description |
|---|---|
| uid | DN of the user whose profile you wish to view, this month's Star Employee, taken from the directory. (The index page administrator updates this each month). |
| attrName | Attributes to be returned. This parameter is used repeatedly to ask the Identity System to return the Full Name, Photo, Email, Title and Phone Number attributes, so that viewers can write or call to congratulate Star Employees on their achievement. |

For the example the base URL for User Manager is:

```
http://test.com:88/identity/oblix/apps/userservcenter/bin/
userservcenter.cgi
```

You manually learn from Human Resources, or an external system, who is this month's Star Employee, and locate them in the directory to get their DN. The DN in the example is:

```
cn=Rohit Valiveti,ou=Sales,ou=Dealer1k1,ou=Latin America,ou=
Ford,o=Company,c=US
```

Applying URL encoding to this to escape special characters like = and space gives:

```
cn%3DRohit%20Valiveti%2Cou%3DSales%2Cou%3DDealer1k1%2Cou%3DLatin
%20America%2Cou%3DFord%2Co%3DCompany%2Cc%3DUS
```

which is used for the value of the uid parameter in the URL.

In the example directory, the attribute names needed for the profile data you have decided to show in the profile page are as follows:

- cn (Full Name)
- genbadgephoto (Photo)
- description
- mail (Email address)
- genphonenumber (phone number)
- title (individual's title)

**Note:** These attribute names are very likely to be different in your actual deployment environment; you must check the directory schema or ask the directory administrator for the names in use in your target environment.

Finally, set comp to true, to exclude the navigation bar and search form from the result and display only the component.

You now have all the information required to construct the following URL:

```
http://techpubs.com:88/identity/oblix/apps/
userservcenter/bin/userservcenter.cgi?program=view&uid=cn%3DRohit%20Valiveti%2Cou%
3DSales%2Cou%3DDealer1k1%2Cou%3DLatin%20America%2Cou%3DFord%2Co%3DCompany%2Cc%3DUS
&attrName=cn
&attrName=genbadgephoto&attrname=description
&attrName=mail
&attrName=genphonenumber
&attrName=mail
&attrName=genphonenumber
&comp=true
```

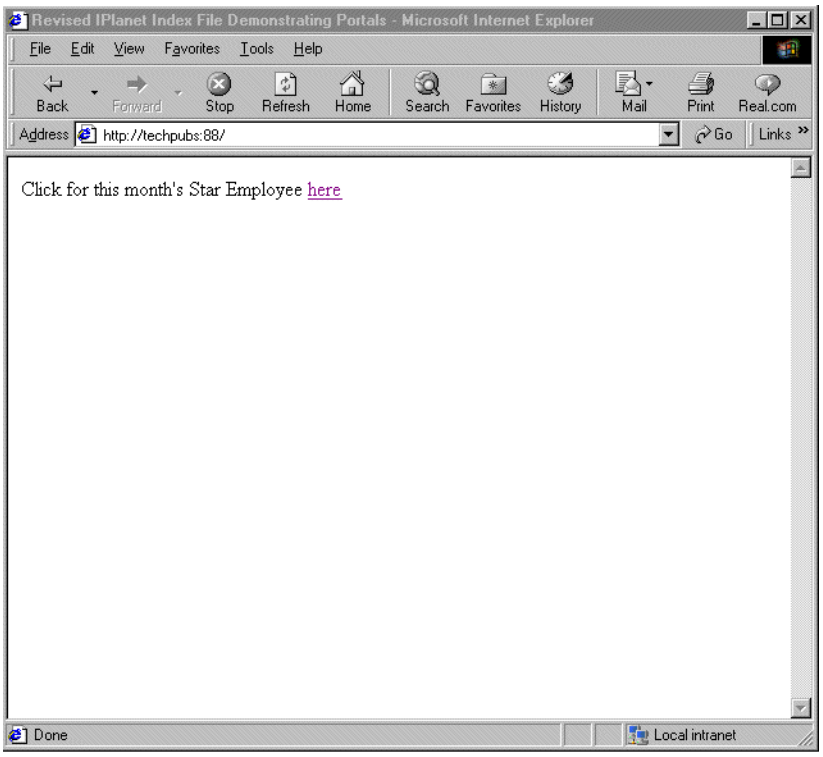
Now you can develop a simple Web page with a link to the view function. You are of course free to design any page you like. As long as it can generate a similar URL request, Oracle Access Manager does not care how you did it.

For this example, you can replace the index page for the Web server through which you access Oracle Access Manager with the following HTML:

```
<html>
<head>
    <title>
         Revised iplanet Index File Demonstrating Portals
    </title>
</head>
<body>
  <p>
      Click for this month's Star Employee
      <a href="portalsexamples.html">
           here
           </a>
        </p>
     </body>
</html>
```

Now, users trying to access the Web server at the URL http://techpubs:88 see the following page instead of the iPlanet index page:

***Figure 3–2 Sample Portal Insert Page***



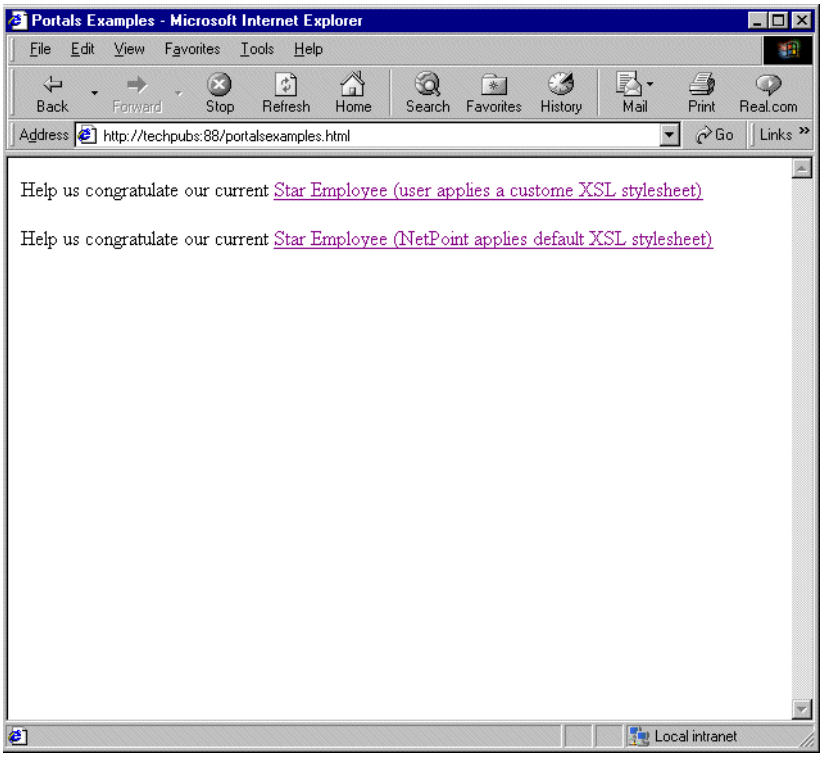

The users click the link to the portalsexamples.html page, whose content is the following:

```
<html>
<head>
     <title>Portal Examples </title>
</head>
<body>
    <p>Help us congrtulate our current
<ahref="http://techpubs:88/identity/oblix/apps/userservcenter/bin/userservcenter.c
gi ?program=view
&uid=cn%3DRohit%20Valiveti%2Cou%3DSales
  %2Cou%3DDealer1k1%2Cou%3DLatin%20America
  %2Cou%3DFord%2Co%3DCompany%2Cc%3DUS
&attrName=cn
&attrName=genBadgePhoto
&attrName=description
&attrName=mail&attrName=genphonenumber
&attrName=title
&comp=true
&xsl=usc_profilenew.xsl
">
Star Employee (user applies a custom XSL stylesheet)
</a>
</p>
       <p>Help us congratulate our current
          <a href="http://techpubs:88/identity/
            oblix/apps/userservcenter/bin/
            userservcenter.cgi
            ?program=view
            &uid=cn%3DRohit%20Valiveti%2Cou%3DSales
```

```
%2Cou%3DDealer1k1%2Cou%3DLatin%20America
%2Cou%3DFord%2Co%3DCompany%2Cc%3DUS
&attrName=cn
&attrName=genBadgePhoto
&attrName=description
&attrName=mail&attrName=genphonenumber
&attrName=title
&comp=true
">
Star Employee (Oracle Access Manager applies default XSL
stylesheet)
</a>
</p>
</body>
</html>
```

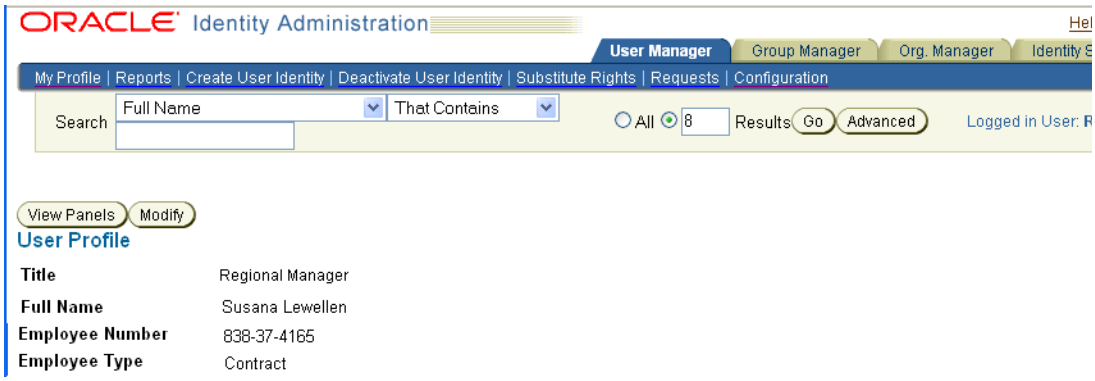
They see this page:

***Figure 3–3 Portal Inserts Sample Results Page***




Then, depending upon which link they select, they get two different presentations of the view page. If they click the first link, the default XSL stylesheet is applied, they will see a page with the default View Panels and Modify buttons.

***Figure 3–4 Page That Uses Default stylesheet***

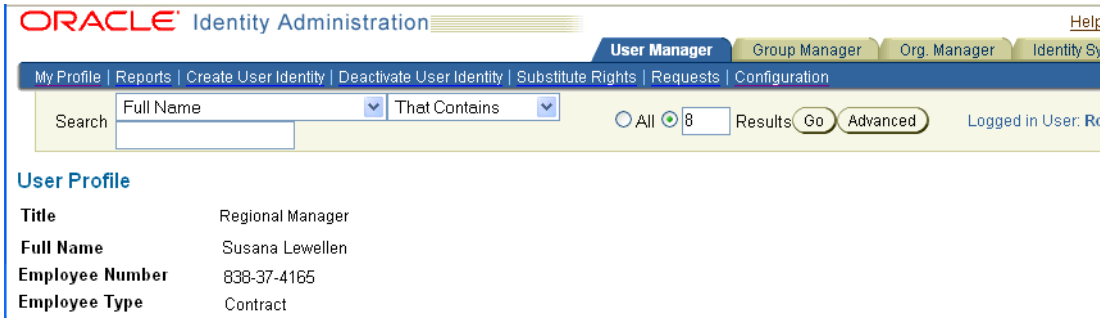



If the user clicks the second link, Oracle Access Manager uses a modified version of the stylesheet that controls the displayed content for this page. The following extra parameter:

```
&xsl=usc_profilenew.xsl
```

is provided in the URL. This stylesheet expressly removes the buttons from the presentation. It also modifies the title displayed in the browser window, as seen in the following example. Methods for creating this custom stylesheet are discussed in "Designing the GUI with PresentationXML" on page 2-1.

***Figure 3–5 Page That Uses Modified stylesheet***



# 4

# Modifying Catalog Files

Oracle Access Manager makes extensive use of catalog files to configure various system attributes and behaviors. Catalog files are those files ending with param.xml or msg.xml. These files control Oracle Access Manager behavior and message content, respectively. This chapter describes some of the many changes that can be made to these files. Topics include:

- Multibyte Data Support
- Setting Overall and Attribute Specific Date Formats
- Setting the Date Range for the Year List
- Changing the Color of the Configure Attributes Panel
- Changing Top Navigation Bar Application Name
- Changing User Name and Password Text on Login Page
- Changing Parameter Catalogs to Control Operation
- Changing Message Catalogs and MouseOver Text

> **See also:** A description of the param.xml file structure and contents, and a discussion of how to change them, is provided in "Oracle Access Manager Parameter Files" on page B-1.

## Multibyte Data Support

UTF-8 encoding and support is provided automatically, whether you have a new 10*g* (10.1.4.0.1) installation or upgrade an older installation to Oracle Access Manager 10*g* (10.1.4.0.1). You do not need to make any changes to your environment. As with previous releases, data in the directory server is stored with UTF-8 encoding.

> **Note:** All of your directory data is UTF-8 format. Oracle Access Manager does not support a mix of data types in the directory.

For more information about globalization, localization, and multibyte support, see the *Oracle Access Manager Introduction* and the discussion in "XML Encoding" on page 4-1.

### XML Encoding

This discussion outlines the encoding schemes you will see in XML message files, and what to specify if you customize these files.

**ISO-8859-1 Encoding**: For pure English text, there is no difference between ISO-8859-1 encoding and UTF-8 encoding. For this reason, the encoding scheme for English language XML message and XSL files remains ISO-8859-1. The following example shows an XML message file (auditmsg.xml), from an English directory (\lang\en-us):

*IdentityServer_install_dir*\identity\oblix\lang\en-us\auditmsg.xml

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
- <MessageCtlg xmlns="http://www.oblix.com" CtlgName="auditmsg">
...
```

> **Note:** XML files in earlier product releases may continue to specify encoding="ISO-8859-1", while earlier LST files that are converted to XML during the upgrade use UTF-8 encoding.

**UTF-8 Encoding**: For non-English languages, XML message files have encoding set as UTF-8, because ISO-8859-1 encoding cannot represent all characters in all languages. The following sample file is from the German language directory *IdentityServer_install_dir*\identity\oblix\lang\de-de\auditmsg.xml:

```
  <?xml version="1.0" encoding="UTF-8" ?>
- <MessageCtlg xmlns:oblix="http://www.oblix.com" CtlgName="">
  <Message MsgTag="ExAuditInitHandler">ExçêpäìÖÑExç Öççürrêdöçç ìÑì ähêä AüdìäAü
MÖdülêMÖ ìÑìäìàlìzàäìÖÑìÑìäì. ThêT êxçêpäìÖÑêxç säàçksä ìsì: %1.</Message>
...
```

It is worth mentioning that even within the English language directory (\lang\en-us) some files state UTF-8 encoding because this encoding scheme is universal. For example, the following is the English version of data_types.xml:

```
<?xml version="1.0" encoding="UTF-8" ?>
- <MessageCtlg xmlns="http://www.oblix.com" CtlgName="data_types.xml">
  <Message MsgTag="OB_BIN">Binary</Message>
  <Message MsgTag="OB_DN">Distinguished Name</Message>
  <Message MsgTag="OB_TEL">Telephone</Message>
...
```

In other language directories, German for example, the same file appears as:

```
  <?xml version="1.0" encoding="UTF-8" ?>
- <MessageCtlg xmlns:oblix="http://www.oblix.com" CtlgName="">
  <Message MsgTag="OB_BIN">BìÑàryBì</Message>
  <Message MsgTag="OB_DN">DìsäìÑgùìshêdDìsä NàmêN</Message>
  <Message MsgTag="OB_TEL">TêlêphÖÑêTêl</Message> ...
```

> **Note:** When customizing XML message files, you can choose either encoding="ISO-8859-1" or encoding="UTF-8". In either case, the Oracle Access Manager XML parser reads the encoding tag in the file for correct processing.

**See also:** For more information about XSL stylesheets and wrapper files, see "Designing the GUI with PresentationXML" on page 2-1.

# Setting Overall and Attribute Specific Date Formats

Problem: When you install Oracle Access Manager for the first time, a default format is used for all attributes that are configured to use a display type "Date". This default display format cannot be changed during installation. Later, you may need to change the default format, or set it differently for different attributes.

Solution: Change date formats in either of two ways, described in this section:

- Change the universal default value. This format is automatically used when attributes are configured to use display type "date".

  or,

- Change the value stored in the directory for each attribute. The stored format is used instead of the default format.

Oracle Access Manager supports the date display type formats in Table 4–1 to control handling of month (M), day (D), and year (Y). Use the format name shown in the data type column to make dates display in the format shown in the Example column. You can also specify a date separator to be used between the MDY values. The date separator can be any of the values "/". "-", or "" (no separator).

***Table 4–1 Date formats***

| dateType Value | Example | Description |
|---|---|---|
| *ObIntegerDate* | 946080000 | Number of seconds after midnight of December 31, 1970 |
| *ObMDYDate* | 12/31/1999 | mm/dd/yyyy |
| *ObDMYDate* | 31/12/1999 | dd/mm/yyyy |
| *ObDMonthYDate* | 31-Dec-1999 | dd-MMM-yyyy |
| *ObMonthDYDate* | Dec-31-1999 | MMM-dd-yyyy |
| *ObISO8061Date* | 19993112 | yyyyddmm |

## Modifying Default Date Display

You need to modify the obDateSep and obDateType parameters in the globalparams.xml file, as described in the following procedure.

### To modify the default date display type for the system

1. Open the globalparams.xml file using a text editor.

   ```
   IdentityServer_install_dir/identity/oblix/apps/common/bin/globalparams.xml file
   ```

2. Locate the lines to be changed (dash (-) and slash (/) are supported date separators).

   For example:

   ```
   <SimpleList>
     <NameValPair
        ParamName="obDateSep" Value="/"></NameValPair>
   </SimpleList>
   <SimpleList>
     <NameValPair
         ParamName="obDateType" Value="ObMDYDate" /></NameValPair>
   </SimpleList>
   ```

3. Change the value for the obDateType parameter, as needed, using one of the `obDateType` values from the table, then change the value for the `obDateSep` parameter.

   For example, the changed lines might look like this:

```
<NameValPair ParamName="obDateSep" Value="-" />
     <NameValPair ParamName="obDateType" Value="ObMonthDYDate"/   >
```

4. Save your changes and close the file
5. Stop and start the Identity Server.

## Modifying Date Display by Attribute

Date formats can also be set for specific attributes.

### To modify the date display by attribute

1. From the Identity System Console, select Common Configuration.
2. On the Common Configuration page, select Object Classes, then select the class whose attribute is to be modified.
3. On the View Object Class page, select Modify Attributes.

   For any attribute of display type Date, you are shown two fields: the Date Type and the Date Separator.
4. Change the content of these fields to match the values you want to use.

# Setting the Date Range for the Year List

By default, Oracle Access Manager provides a list of years ranging from 1993 to 2012. This is reasonable when the dates entered are those for badge issue or expiration dates, but is not useful if the date calls for a bigger range, such as one to include a birth date. You can extend the year date range that is carried in the basic.xsl stylesheet.

For a more detailed explanation of why this works, see "Designing the GUI with PresentationXML" on page 2-1.

> **Note:** The standard Oracle Access Manager XSL files define only this one dropdown year date range. The method described here will have a global effect. The changes described in the following procedure must be made to both of these files.

### To set the date range for the year list

1. Locate the basic.xsl stylesheet in the following directory:

   *IdentityServer_install_dir*/identity/oblix/lang/shared/basic.xsl

2. Copy the stylesheet to your custom directory to overwrite the wrapper file there.

   For example:

   *IdentityServer_install_dir*/identity/oblix/lang/langTag/Custom_Dir/basic.xsl

3. In the stylesheet in your custom directory, locate the templates for ObDateYear.
4. Locate the lines in the templates that begin and end the definition of the year list.

```
- <xsl:template name="ObDateYear">
...
- <xsl:if test="@obyear">
  - <option value="{@obyear}" selected="true">
     <xsl:value-of select="@obyear" />
   </option>
  </xsl:if>
  <option value="">----</option>
  <option value="1993">1993</option>
  <option value="1994">1994</option>
  <option value="1995">1995</option>
  ...
  <option value="2012">2012</option>
 </select>
</xsl:template>
```

where *IdentityServer_install_dir* is the directory where the Identity Server is installed, *langTag* is a language tag (en-us for example) in RFC 1766 format.

5. Copy, paste, and edit the pattern to extend the year date range.

   For example, the year list is defined by the following lines: (xsl:template name="ObDateYear"):

```
<option value="">----</option>
      <option value="1992">1992</option>
         <option value="1993">1993</option>
```

   To extend dates beyond 2012, you would insert lines as follows:

```
<option value="2012">2012</option>
      <option value="2013">2013</option>
         </select
         </xsl:template>
```

6. Copy the stylesheet to your custom style directory on the WebPass.

   *WebPass_install_dir*/identity/oblix/lang/langTag/Custom_Dir/basic.xsl

7. Stop and start the Identity Server and WebPass

# Changing the Color of the Configure Attributes Panel

If you need to change foreground and background colors for the Configure Attributes panel, you can change the RGB values that control these colors in the oblixadminparams.xml file.

### To change the Configure Attributes panel color

1. Locate the oblixadminparams.xml file in the directory:

   *IdentityServer_install_dir*/identity/oblix/apps/common/bin/oblixadminparams.xml

   where *IdentityServer_install_dir* is the directory where the Identity Server is installed.

2. Locate the entries:

```
<NameValPair ParamName="config_meta_attr_applet_bg" Value="cccccc" />
<NameValPair ParamName="config_meta_attr_applet_fg" Value="000000" />
```

The parameter bg controls background color, fg controls foreground. Values following the colon are RGB hex values for color.

3. Change the RGB values to set the new colors.
4. Save and close the file.
5. Restart your Identity Server for the changes to take effect.

## Changing Top Navigation Bar Application Name

To change the mouseover text used for Identity System top Navigation Bar buttons, you edit the oblixbaseparams.xml file.

### To change the top navigation bar application name

1. Locate the oblixbaseparams.xml file in the directory:

   *IdentityServer_install_dir*/identity/oblix/apps/common/bin/oblixbaseparams.xml

   where *IdentityServer_install_dir* is the directory where the Identity Server is installed.

2. In this file, locate the controlling text for any of the modules.

   For example, the text for Group Manager:

```
</ValNameList>
<ValNameList ListName="groupservcenter_application_info">
  <NameValPair ParamName="VERSION" Value="10.1.3" />
  <NameValPair ParamName="CODE" Value="GM1013" />
  <NameValPair ParamName="ID" Value="groupservcenter" />
  <NameValPair ParamName="PROGRAM" Value="../../groupservcenter/
bin/groupservcenter.cgi" />
  <NameValPair ParamName="DESCRIPTION" Value="Group Manager" />
  <NameValPair ParamName="NAVBAR_GIF" Value="T1TABgroupmanager" />
  <NameValPair ParamName="NAVBAR_GIF2" Value="T1TABgroupmanager" />
  <NameValPair ParamName="NAVBAR_GIFDIR" Value="../../common/ui/ style0/" />
  <NameValPair ParamName="WORKFLOW_ALLOWED" Value="true" />
  </ValNameList>
```

   The text following DESCRIPTION is the information that displays when you place the mouse pointer over the Group Manager button.

3. Change the text entry to the content needed.
4. Save and close the file.
5. Restart your Identity Server for the change to take effect.

## Changing User Name and Password Text on Login Page

You can change the text on the default login page. By default, this page shows two text fields, Username and Password. You can change those text labels to a different value; for example, to show UID rather than Username as the login name, by editing the oblixbasemsg.xml file.

### To change user name and password text on the Logon screen

1. Locate and open the oblixbasemsg.xml file in the directory:

   *IdentityServer_install_dir*/identity/oblix/lang/langTag/oblixbasemsg.xml

where *IdentityServer_install_dir* is the directory where the Identity Server is installed and langTag is a language tag (en-us, for example) in RFC 1766 format.

The oblixbasemsg.xml file contains paired sets of data, in the form:

```
<Message MsgTag="message name">Message text</Message>
```

Oracle Access Manager uses "message name" to locate the text that is to be displayed.

**Note:** Do not change the "message name".

Oracle Access Manager displays Message text, which is variable text and can be changed.

2. Locate the Message text that you want to change.

   For example:

   ```
   <Message MsgTag="MUsername">Username </Message>
   <Message MsgTag="MPassword">Password </Message>
   ```

3. Change the message text:

   For example, to change MUsername to UID:

   ```
   <Message MsgTag="MUsername">UID</Message>
   ```

4. Save and close the file.
5. Restart your Identity Server for the change to take effect.

## Changing Parameter Catalogs to Control Operation

You can change Oracle Access Manager operation in ways that are not specifically called out in this guide. Oracle Access Manager is controlled primarily by hard-coded logic. At some points, generally at the user interface, the content of certain text files guides operation. You can change the content of some of these files.

**See also:** A description of configurable parameter catalogs and their contents is provided in "Oracle Access Manager Parameter Files" on page B-1.

## Changing Message Catalogs and MouseOver Text

You can revise mouseover text, or change the content of a displayed error message, by changing text in the message catalog.

As discussed elsewhere, multiple languages are available. Messages that were once in stylesheets are language dependent and are now defined separately as variables in message catalogs. The Oracle Access Manager directory structure consolidates all message catalogs for JavaScript files, XSL, and HTML.

- Any language-specific files will be located in \lang*langTag*.
- Any non-language specific objects are located within \lang\shared.

All the stylesheets have a language-specific wrapper in \lang*langTag*\style0 which includes the main language-neutral version stylesheet in \lang\shared. This new

wrapper segregates the main stylesheet functionality, which is language independent, from language-specific messages.

Language-specific messages are referred to through variables in message catalog files, as discussed in the following topics:

- Handling Language-Specific stylesheet Messages
- Handling Language-Specific Messages for JavaScript

## Handling Language-Specific stylesheet Messages

The messages for stylesheets are defined in the message catalog:

```
\IdentityServer_install_dir\identity\oblix\lang\langTag\msgctlg.xsl
```

You need to ensure that all displayable strings in your older version stylesheets are placed in the 10*g* (10.1.4.0.1) stylesheet message catalog. For example, suppose you have customized a version 6.1 stylesheet, navbar.xsl, in:

```
\IdentityServer_install_dir\identity\oblix\apps\common\ui\style0\navbar.xsl
```

where a message reads as:

```
<xsl:text> &lt;&lt; Click here to return to the previous application(s).
</xsl:text>
```

In the 10*g* (10.1.4.0.1) version of the stylesheet:

```
\IdentityServer_install_dir\identity\oblix\lang\shared\navbar.xsl
```

you need to modify the message to read:

```
<xsl:text> &lt;&lt; <xsl:value-of select="$MPrevAppln"/> </xsl:text>
```

and ensure that MPrevAppln is defined in the 10*g* (10.1.4.0.1) message catalog:

```
\IdentityServer_install_dir\identity\oblix\lang\langTag\msgctlg.xsl
```

as follows:

```
<xsl:variable name="MPrevAppln">Click here to return to the previous
application(s). </xsl:variable>
```

### To handle language-specific message catalogs for XSL stylesheets

1. Locate the stylesheet containing the message.

   For example:

   ```
   \IdentityServer_install_dir\identity\oblix\lang\shared\navbar.xsl
   <xsl:text> &lt;&lt; Click here to return to the previous application(s).
   </xsl:text>
   ```

2. Copy the stylesheet to the custom style directory.

   For example:

   *IdentityServer_install_dir*\identity\oblix\lang\langTag\Custom_dir\navbar.xsl

3. Modify the message in the stylesheet to use the appropriate message catalog parameter.

   For example:

```
<xsl:text> &lt;&lt; <xsl:value-of select="$MPrevAppln"/> </xsl:text>
```

4. Locate the language-specific message catalog.

   `\IdentityServer_install_dir\identity\oblix\lang\langTag\msgctlg.xsl`

5. Ensure that the message parameter is properly defined.

```
<xsl:variable name="MPrevAppln">Click here to return to the previous
application(s). </xsl:variable>
```

6. Restart your Identity Server to have any changes to take effect.

## Handling Language-Specific Messages for JavaScript

Pop-up messages in JavaScript files are also replaced by variables. The message catalog for JavaScript files is located in:

```
\WebPass_install_dir\identity\oblix\lang\langTag\msgctlg.js
```

Each language-specific message catalog is divided into sections that show the messages for specific JavaScript files, several of which are named as follows:

```
misc.js
miscs.js
monitorwf.js
personselector.js
proxyadmin.js
selector.js
atickets.js
wfqs.js
deactivateuser.js
confirm.js
```

You need to ensure that all displayable strings are placed in the message catalog and the message catalog must be referenced through the I18N_GetMsg function.

For example, the code in the JavaScript file:

`\WebPass_install_dir\identity\oblix\lang\shared\admin.js`

that pops up a message:

```
alert("Room must have a name.")
```

appears as:

```
alert(I18N_GetMsg('MRoomNameReq'))
```

where MRoomName is defined in:

```
\WebPass_install_dir\identity\oblix\lang\langTag\msgctlg.js
```

as:

```
MESSAGE_CATALOG[ 'MRoomNameReq' ] = "Room must have a name.";
```

**Note:** Oracle recommends that you retain the files in \shared as a reliable backup and instead copy the file to be customized into your custom style directory first

### To handle language-specific message catalogs for JavaScript files

1. Ensure that all displayable strings for JavaScript files are placed in the message catalog:

   *WebPass_install_dir* \identity\oblix\lang*langTag*\ msgctlg.js

2. Ensure that the message catalog is referenced through the I18N_GetMsg function located in (automatically loaded):

   `\WebPass_install_dir\identity\oblix\lang\shared\i18n.js`

3. Restart your Identity Server and WebPass to have any changes to take effect.

# 5

# Other Customization

This chapter covers various ways you can customize the Oracle Access Manager application that do not fall cleanly into any of the categories covered earlier.

This chapter discusses the following:



## Customizing to Allow Auto-Login

The Identity System supports a self registration workflow. For the User Manager application only, this can be used to provide an auto-login capability. This capability can be extended to allow users of the workflow to access additional resources immediately following the self registration, without being challenged. In addition, for Oracle Access Manager resources, these users can be automatically authenticated after Self Registration. This section describes the steps necessary to accomplish this.

### Task overview: Customizing for auto-login

1. Add at least one AccessGate, as described in the *Oracle Access Manager Installation Guide*.

   The AccessGate that you add must have its Access Management Service option set to true. You add this AccessGate simply to ensure that at least one has been created and configured, to control access to Oracle Access Manager.

2. Configure the AccessGate, as described in the *Oracle Access Manager Access Administration Guide*.

   From the *`Identity_install_dir`*`/identity/AccessServerSDK/oblix/tools directory`, run the configureAccessGate program to configure the AccessGate. No special configuration data needs to be provided to satisfy Auto-login requirements.

   *Identity_install_dir* is the directory where the Identity System is installed.

3. Enable auto-login using a certain Identity System Parameter file.

   In the *Identity_install_dir*/identity/oblix/data/common/basedbparams.xml file, particular parameter values need to be set, as defined in Table 5–1. You will need to know the URL and access method for the page that the user will go to immediately following self-registration.

***Table 5–1 Auto-login parameters***

| Parameter Name | Value |
|---|---|
| SelfRegGeneratesSSOCookie | true |
| SR_SSOCookieMethod | Access method for the next page. |
| doAccessServerFlush | false |
| enableAllowAccessCache | true |
| SR_SSOCookieURL | Location of the next page. |
| SR_SSOCookieDomain | A valid domain name, for example, example.com |
| SR_SSOCookiePath | Location of the next page. |

Here is an example of this file content after these changes have been made.

```
<?xml version="1.0"?>
      <ParamsCtlg xmlns="http://www.oblix.com" CtlgName="basedbparams">
                  <CompoundList ListName="">
                  <SimpleList>
                          <NameValPair ParamName="default_policy"
                                Value="false"/>
                          <NameValPair ParamName="doAccessServerFlush"
                             Value="false"/>
                          <NameValPair
                             ParamName="SelfRegGeneratesSSOCookie"
                             Value="true"/>
                          <NameValPair ParamName="SR_SSOCookieMethod"
                             Value="GET"/>
                          <NameValPair ParamName="enableAllowAccessCache"
                             Value="true"/>
                          <NameValPair ParamName="SR_SSOCookieURL"
                             Value="/identity/oblix"/>
                          <NameValPair ParamName="SR_SSOCookieIP"
                             Value="192.168.1.109"/>
                          <NameValPair ParamName="SR_SSOCookiePath"
                             Value="/"/>
                          <NameValPair ParamName="SR_SSOCookieDomain"
                             Value="example.com"/>
                       </SimpleList>
                       </CompoundList>
          </ParamsCtlg>

<?xml version="1.0"?>
           <ParamsCtlg xmlns="http://www.oblix.com" CtlgName="basedbparams">
                       <CompoundList ListName="">
                       <SimpleList>
                          <NameValPair ParamName="default_policy"
                                Value="false"/>
                          <NameValPair ParamName="doAccessServerFlush"
                             Value="false"/>
                          <NameValPair
```

```
                    ParamName="SelfRegGeneratesSSOCookie"
                    Value="true"/>
                <NameValPair ParamName="SR_SSOCookieMethod"
                    Value="GET"/>
                <NameValPair ParamName="enableAllowAccessCache"
                    Value="true"/>
                <NameValPair ParamName="SR_SSOCookieURL"
                    Value="/identity/oblix"/>
                <NameValPair ParamName="SR_SSOCookieIP"
                    Value="192.168.1.109"/>
                <NameValPair ParamName="SR_SSOCookiePath"
                    Value="/"/>
                <NameValPair ParamName="SR_SSOCookieDomain"
                    Value="example.com"/>
            </SimpleList>
            </CompoundList>
        </ParamsCtlg>
```

4. Protect the URL specified in the SR_CookieURL parameter in the Identity Server basedbparams.xml file with a Basic over LDAP authentication scheme in the Access System.

   If any other type of authentication scheme is used, the ObSSOCookie will not be created for the user and auto-login will fail.

5. Stop and restart the Identity server.

   This step, now or later, is essential in order to load the new content of the parameter file.

6. Configure the WebGate to accept auto-login by using an Access System Parameter Catalog.

   In the Access System configuration page for the WebGate, do one of the following:

   - Set the IPValidation field to false
   - Set IPValidation to true and enter the value that was used for the IP address (SR_SSOCookieIP) in the IPValidationExceptions list.

   See *Oracle Access Manager Access Administration Guide* for details. The IPValidationExceptions field is a list of IP addresses that are excluded from IP address validation. It is often used for excluding IP addresses that are set by proxies. Since the IP validation is a universally applied parameter and you might want to validate the IP in other cases, the second option is likely the one you will follow.

7. Following the change(s), stop and restart the Web server associated with the WebGate.

   This step, now or later, is essential in order to load the new content of the WebGate parameters.

To ensure that the URL specified in basedbparams.xml is protected by a policy domain in the Access System, copy the URL and paste it in the Access Tester. If the URL is not recognized, you may need to preface it with the correct host identifier. For instance, the URL of /identity/oblix may not be protected, but the URL //12345:99/identity/oblix might be.

Finally, you must configure a Self Registration workflow in User Manager, as follows.

### Task overview: Configuring a Self Registration workflow

1. Create a workflow, as described in the *Oracle Access Manager Administration Guide*.

   The first step of the workflow must be Self Registration. This step must have the login and password semantic type attributes configured. The password attribute must be part of the self-registration step for auto-login to work.

2. Optionally, you can add non-interactive steps, such as external actions. Interactive steps in the workflow will be impossible, because the user is not considered logged in until after the workflow completes.

3. Configure Enable as the last step.

   This workflow will generate SSO cookies that can be used for authentication if the workflow completes successfully. In addition, the new user can use Oracle Access Manager without having to log in.

   If you need it, the cookie generated as part of auto-login can be obtained from the auto-login page output using IdentityXML. Look for the cookie under the ObSSOCookie element and extract the data for ObValue.

   The pertinent part of the XML string will look something like:

```
<ObSSOCookie>
               <ObDisplay obdisplayName="SSOCookie"
                        obdisplayType="textS" obname="ObSSOCookie"
                        obmode="view" obcanRequest="false"
                        obrequired="false">
                  <ObTextS>
                  <ObValue>
                        ghv6XNmGZefMq8cgIte08alq477M
                        nvaivG+tSaxHRzaOXBcfMkzmf/
                        UeTrKcg2jJmyo3PpNbLKS+UgmRi/
                        rg8Ac2LlU9a7rprYjqocs
                        QGQEgymqELZC0VQo6KqGguv7ujrBt9JtzwQ6/
                        sDJFlVaLDwLs0vJbg5kop5
                        FASBF9ohGOwQcUtDGlVal
                        DwktElNskHYgtjvjc9pBBGtlU9sGuYA/cTw==
                  </ObValue>
                  </ObTextS>
               </ObDisplay>
               </ObSSOCookie>
```

## Setting Up Self Registration Through IDXML

If the Web pass is protected by a WebGate, you can set up self registration through IDXML for those users who can register themselves. To avoid lockout conditions, you may want to allow self-registration for Master Administrators and for users who lost their passwords.

You use the following URL for the self-registration request:

```
/identity/oblix/apps/userservcenter/bin/userservcenter.cgi?/from_
prog=workflowSelfRegistration
```

The URL for self-registration is not the usual /identity/oblix/apps/userservcenter/bin/userservcenter.cgi.

> **See also:** See the chapter on workflows in the *Oracle Access Manager Administration Guide* for more information on self-registration.

## Customizing the Self-Registration Confirmation Page

As described in "Designing the GUI with PresentationXML" on page 2-1, you can customize the user interface by modifying various stylesheets. When a user completes self-registration, a confirmation page appears.

### To customize the self-registration confirmation page

1. Open the following file:

   *Identity_install_dir*/oblix/lang/shared/wf_selfregdone.xsl

   Where *identity_install_dir* is the directory where the Identity System is installed.

2. Re-start the Identity Server for your changes to take effect.
3. Apply these changes to all Identity Server installations.

# Customizing Logout

As described in the *Oracle Access Manager Access Administration Guide*, Oracle Access Manager provides a way to specify an single sign-on logout URL. As part of the installation process, Oracle Access Manager automatically sets up the logout URL

```
/identity/oblix/apps/userservcenter/bin/ userservcenter.cgi?/from_
prog=workflowSelfRegistration
```

The logout URL is configurable in the LogOutUrls parameter in the AccessGate configuration page.

The logout.html file activates JavaScripts which perform the actual logout. Users may change this to a different URL, which would for example activate an HTML, CGI or even a PERL file created by the user.

### Task overview: Customizing logout

1. Create a different HTML or CGI file to perform the logout steps. This file must have the characters logout. somewhere in its name, for example, mybanklogout.cgi.
2. Store it in a defined location. Oracle recommends using `/access/oblix/apps/common/bin`.
3. In the Access System landing page, click Access System Console, then click System Configuration, then click Server Settings, then click Configure SSO Logout URL.
4. Replace the default URL with one pointing to the location of your new logout process.
5. Within the Access System, navigate to Policy Manager > Create Policy Domain. Create a new policy domain for this logout resource using the Anonymous authentication scheme. The URL Prefix entered to the Resource page should be one that includes the logout resource file or its the parent folder.

# Customizing Workflow Email Notifications

The Identity System's workflow feature enables the user to associate a pre- or post-notification email with a workflow step, using standard PresentationXML techniques to build the email messages. An OutPutXML data stream is combined with a stylesheet to create a logical file. This file is passed to a Mail Server queue from which it is eventually sent to its final destination.

The Identity System expects to find the necessary stylesheets in the following directory:

```
Identity_install_dir/identity/oblix/lang/langTag/style0
```

where *Identity_install_dir* is the directory where the Identity System is installed and langTag is a language tag in RFC 1766 format.

The Mail Server will have been previously configured to use either the Text-only mail style or the HTML mail style. (The MHTML mail style cannot be customized.) That setting controls the choice of the default stylesheet. The default stylesheet is wf_prepostnotification_txt, if the mail style is set to Text-only or wf_prepostnotification_html if the mail style is set to HTML. If an error occurs during workflow processing, CORE Id uses the stylesheets wf_errornotification_txt for mail style Text-only and wf_errornotification_html for mail style HTML.

Users can expand this functionality to provide distinct message formats for pre- and post-notification, and distinct message formats by workflow ID and the step number within the workflow. To do this, users add new stylesheets to the directory. Oracle Access Manager looks for these files first and if they are present uses them instead of the default files.

The file names added by the user must follow this naming structure:

WfDefId_WfStepDefId_preorpostnotify_mailtype

Following are the meanings of each part of the name:

WfDefId: This is the Id for the workflow for which the notification is to be sent. It is the rdn of the workflow. The ID is automatically created when a workflow is created. You can obtain the ID by using the 'View' feature in the work flow definition screen.

WfStepDefId: This is the workflow step for which the notification is to be sent. It is a number.

preorpostnotify: This is the exact text prenotify or postnotify.

mailtype: This is the exact text txt or html. Understand that this suffix does not determine whether the message will be sent as text or HTML. It serves solely as a way for Oracle Access Manager to find the correct file. For example, if the Mail Server is configured for Text-only, Oracle Access Manager looks for a file with the suffix txt. In this case, if you have created a stylesheet with the html suffix, Oracle Access Manager does not look for it and uses wf_prepostnotification_txt instead.

Following are some example file names:

This provides a customized prenotification email message for step 2 of Workflow 1864aaa89df04422bfd33afcdfb45641, if the Mail Type has been set to Text-only.

```
1864aaa89df04422bfd33afcdfb45641 _2_prenotify_txt.xsl
```

This provides a customized postnotification email message for step 4 of Workflow 1864aaa89df04422bfd33afcdfb45641, if the Mail Type has been set to HTML.

---

**Note:** You must put the customized email stylesheets in the style0 directory, even if you have made some other directory the master style directory. Email processing looks for the email stylesheets only in the style0 directory.

---

## Customizing the Subject Line in an Email Notification

You can configure three types of notification email:

- pre-notify
- post-notify
- escalation notification

The Subject line for these email notifications is set in the following message catalog file:

*Identity_install_dir*/oblix/lang/*lang*/workflowdbmsg.xml

Where Identity_install_dir is the installation directory for the Identity Server and *lang* is the language name, for example, en-us, fr-fr, and so on. The following snippet in the message catalog file illustrates the strings that you can customize to change the email Subject line:

```
<Message MsgTab="WfPreNotifyMailSub"
>Pre-notification of workflow step</Message>
<Message MsgTab="WfPostNotifyMailSub"
>Post-notification of workflow step</Message>
<Message MsgTab="WfEscallationNotifyMailSub"
>Escallation-notification of workflow step</Message>
```

# XML Interface and Special Characters

Certain characters in XML files in certain instances require special handling in order to be correctly interpreted by Oracle Access Manager.

## OutPutXML Files

The current version of the XML standard calls for certain characters to be escaped using the & sign followed by additional text. OutPutXML follows this requirement. Users will need to translate these characters when reading from OutPutXML or provide their escaped equivalents when creating OutPutXML.

A table of these characters, with their escaped values, follows.

***Table 5–2 Special Characters in XML***

| Character | Escaped representation |
|---|---|
| & (ampersand) | &amp; |
| > (greater than) | &gt; |
| < (less than) | &lt; |
| ` (single apostrophe) | &apos; |
| " (double quote) | &quot; |

## XML Files and International Characters

XML files, for example message files after internationalization, may contain characters that will need to be translated to Oracle Access Manager. It is not possible to provide an exhaustive list of these characters. The general technique is to replace the offending character with its escaped hex equivalent. For example, an accented o, which has the hex equivalent F2, must be shown in the XML file as &#xF2.

**See also:** See "XML Schema" on page A-3.

## DN Validation

At the Oracle Access Manager application level, you can optionally control the view and modify functions of the DN type attributes, such as manager or uniquemember, by validating the DN attribute's values. The login user can be allowed to view or modify only those values of the DN for which they have view access (on the class attribute of the objectclass of the DN) as well as localized access; that is, this DN falls under the user's searchbases with respect to the type of objectclass of the DN.

This DN validation is optional and it can be turned on or off through the parameter catalog modifications. Note that the DN validation is an expensive operation, therefore if you do not want so much security, Oracle recommends this validation be turned off. But if security is important, this DN validation must be turned on.

The parameters are in this file:

*Identity_install_dir*/identity/oblix/apps/common/bin/oblixappparams.xml

and can be overridden by each application.There are two parameters each for view mode and modify mode. For view mode, there is a Boolean parameter called "validateAllDnViewMode". There is also a parameter in vallist format, called validateDnAttrsViewMode. This is used only if the Boolean parameter is false.

The Boolean parameter provides a way to turn the validation on or off globally. The Vallist provides the option of turning the validation on/off on an attribute by attribute basis. Thus, the vallist parameters will only be used if the Boolean parameter is false.

Similarly, there are two corresponding parameters for the modify mode called validateAllDnViewMode and validateDnAttrsModifyMode. By default, in the shipped product, only the Boolean parameters are listed and they are set to false.

---

**Note:** The DN validation is always on for IdentityXML calls, for all DN type attributes.

---

## Overriding Windows NT/2000 Default Authentication

The IIS Web server on Windows NT and 2000 supports Challenge/Response Authentication, which defaults to on when IIS is installed. This enables NT users to use their NT domain log-ins when requesting resources from IIS and can conflict with Oracle Access Manager's authentication.

For example, on the first request from an Internet Explorer (IE) browser to a resource on IIS protected by Oracle Access Manager requiring basic authentication, IE displays a login dialog box requesting a domain along with the user name and password login provided by Oracle Access Manager.

### To disable Windows Challenge/Response Authentication

1. Run the Microsoft Management Console for IIS.
2. Select the Web Server Host under Internet Information Server in the left hand panel.
3. Right click and select Properties.
4. Scroll down and select Edit the Master Properties for WWW Service.

5. Select the Directory Security tab.
6. Select Edit Anonymous Access and Authentication Control.
7. Complete the appropriate step for your platform:

   **NT**: Deselect the Windows NT Challenge/Response checkbox.

   **Windows 2000**: Deselect the Integrate Windows Authentication checkbox.
8. Click OK.
9. In the Windows IIS properties screen, click OK.
10. Close the Microsoft Management Console.

## Using Oracle Access Manager for Authorization Only

In this scenario, you have in place a satisfactory method for authenticating users but would also like to use Oracle Access Manager's authorization services.

The solution is to add an authentication scheme to be used in this instance. Using LDAP tools, change the challenge method for this scheme to a special value that the Access Server recognizes for this situation, and instruct the Web server to do the Oracle Access Manager authentication/authorization processing after the other authentication method has been applied.

> **Note:** The technique described here is specific to and verified only with iPlanet's Web Server 4.1 and Directory Server 4.11.

The key to this solution is to define an authentication scheme using the challenge method ext, which is provided through Oracle Access Manager's GUI. This scheme is coupled to the iPlanet variable auth-user, which the existing authentication method is expected to set when it authenticates. Oracle Access Manager finds this variable already set when it attempts verification, and therefore does not send a challenge back to the browser, but instead goes on to perform authorization.

The following tasks must be completed in order to support Oracle Access Manager for authentication only.

### Task overview: Implementing Oracle Access Manager authentication

1. Within the directory, ensure that all user records contain an attribute that can be used by the authentication scheme. The user name attribute, uid, is an example.
2. Within Access System Console, add a new authentication scheme, which will use a special challenge method. See the *Oracle Access Manager Access Administration Guide* for details.
3. Within the directory server obj.conf file, change the processing order to allow the another authentication process to set the authentication result before Oracle Access Manager is used. With the authentication check already completed, Oracle Access Manager will simply go on to do authorization processing.

All user records in the directory will have an instance of an attribute that will be checked as part of the existing authentication method. Most likely, this will be the user name, uid.

### To use Oracle Access Manager for authorization only

1. Define an External Authentication Scheme.

For example:

**a.** Log in to the Access System Console.

**b.** Go to the Access System Configuration screen, click Authentication Management, and click Add.

**c.** Create a new authentication scheme, as described in the *Oracle Access Manager Access Administration Guide*, and note the following:

The display `Name` and `description` can be any text you choose.

`Level` should be consistent with other authentication schemes you might be using, but can be any value.

For the Challenge Method, use `ext`.

For the Challenge Parameter, you `must` enter `creds:auth_user`, to match the name of the internal variable carried by iPlanet.

For SSL Required, use *No*. This will not be used, since no redirection will take place.

`Required Challenge Redirect` is left blank, for the same reason.

The value for Plugin(s) is critical. Enter only one.

* Order: is set to 1.
* Plugin Name must be `credential_mapping`.
* Plugin Parameters are two values separated by a comma. First is the name of the Oracle Access Manager mapping base. The second is an LDAP filter specifying the name of the attribute in the directory whose value is expected to match `auth-user`. An example of this entry is:

```
ObMappingBase="o=Company, c=US", obMappingFilter="
   (&(objec\]"
      M NB\=-09876UYT5R4E3tclass=inetOrgPerson)
      (uid=%auth-user%))"
```

**2.** Change the processing order in the iPlanet `Obj.conf`, to allow the existing authentication method to execute first, and set the iPlanet `user-auth` variable.

For example:

**a.** In the `obj.conf` file for the Web Server, locate the line:

```
AuthTrans fn="OBWebGate_Authent"
```

**b.** Comment it out by inserting a "#" at the beginning of the line.

**c.** Copy the line, without the "#", to the line directly after the line reading:

```
PathCheck fn="check-acl" acl="default"
```

**d.** In this new line, change `AuthTrans` to `ObjectType`.

The `obj.conf` file content would then appear as follows:

```
<Object name="default">
#AuthTrans fn="OBWebGate_Authent"
   NameTrans fn="pfx2dir" from="/oblix/apps/webgate/bin/
      webgate.cgi" dir="/" name="web_gate"
   NameTrans fn="pfx2dir" from="/oberr.cgi" dir="/"
      name="oberr"
. . .
```

```
PathCheck fn="check-acl" acl="default"
ObjectType fn="OBWebGate_Authent" dump="true"
```

**Note:** This change, done in this way, is necessary in order to force WebGate to run after check-acl authentication. Netscape ACL processing, including authentication, is done in the PathCheck check-acl directive. WebGate needs to run after check-acl in order to pick up the auth-user variable whose value is expected to have been set by the authentication method. It will not work to simply put a PathCheck directive for WebGate after the check-acl directive because check-acl is always the last PathCheck directive run, regardless of the order given in obj.conf. The method described here, putting WebGate in as an ObjectType directive, has been tested and works.

3. Stop and start the Web Server and the Access Server to ensure that these changes go into effect.

## Denying Access to Unprotected Resources Automatically

Oracle Access Manager normally enables access to all resources that are not specifically protected by a policy domain. You can deny access to any user if the requested resource is not protected by a policy domain by setting the DenyOnNotProtected field to true in the WebGate configuration GUI. The DenyOnNotProtected field is set to false by default. See *Oracle Access Manager Access Administration Guide* for details.

**Note:** Be sure to modify this parameter for each WebGate.

### To modify an AccessGate through the Access System Console

1. Launch the Access System Console, click the Access System Configuration tab, then click the AccessGate Configuration link in the left navigation pane.

   The Search for AccessGates page appears.

2. Select the search attribute and condition from the lists, or select All to find all AccessGates.

   The Search list is a selection list of attributes that can be searched. The remaining fields allow you to specify search criteria that are appropriate for the selected attribute.

3. Click Go.

   The search results are displayed on the page.

4. Click the name of the WebGate that you want to modify.

   The AccessGate Details page appears.

5. Click Modify.

   The Modify AccessGate page appears. You can enter new information on this page

   You cannot change a WebGate's name. To rename it, you must delete it from the Access System Console and then uninstall it. You then create a new WebGate.

6. Type new values as needed.

7. Click Save to save your changes or click Cancel to exit the page without saving.

# 6

# Customizing Access Control with Plug-Ins

Oracle Access Manager provides APIs that allow software developers to write custom programs or components that integrate closely with Oracle Access Manager. These modules may represent anything from custom extensions of base Oracle Access Manager functionality to significant applications that are outside of Oracle Access Manager, but need to interact with Oracle Access Manager for identity or access control functions.

This chapter describes several methods of working with Oracle Access Manager programmatically:

- Customizing AccessGate/WebGate
- Customizing Authentication Plug-ins
- Customizing Authorization Plug-ins
- Customizing Oracle Access Manager to Interact with External Systems

## Customizing AccessGate/WebGate

Oracle Access Manager provides a standard WebGate component, which is used to control access to a Web server. You want to use Oracle Access Manager's access control system to control access to an application server or a function within a standalone application.

You can use the Access Manager API, as discussed in the *Oracle Access Manager Deployment Guide*, to create a custom AccessGate.

Oracle Access Manager provides a software developer's kit (SDK) that can be used to create an interface to Oracle Access Manager's authentication and authorization services. This interface can be built into commercially available application servers, such as BEA WebLogic, IBM WebSphere, iPlanet Application Server, or any other application that can access the Access Server. The application, with the API added, then acts as an AccessGate to the Access Server.

In particular, the Access Manager API enables Java (servlets, JSPs, EJBs, and so on), C++ (COM/ASP), and C applications to:

- Authenticate users
- Support secured single sign-on (SSO) across Web and application servers
- Authorize user requests for application resources (URLs, EJBs and their methods, and user-defined resources)
- Support protection of non-HTTP resources
- Provide both Java Bean level and Enterprise Java Bean level security

The API is designed primarily to support J2EE-compatible application servers, in particular the way they work with servlets, Java Server Pages, and Enterprise Java Beans, and so is designed from a Java perspective. The API also provides bindings for C++ and C.

Creating an AccessGate is a significant programming task, and for that reason is covered in greater detail in the *Oracle Access Manager Deployment Guide*.

## Customizing Authentication Plug-ins

You can create an authentication method, for example for a new certificate type, that is not covered completely by the existing plug-ins provided with Oracle Access Manager. Or, you can add a method to authenticate users against an external data store, such as an RDBMS.

To do this, you use the Authentication Plug-in API, as described in the *Oracle Access Manager Deployment Guide*, to write the new plug-in and add it to Oracle Access Manager.

When a browser, for example, requests a resource from an Access System-protected Web server, the WebGate plug-in checks to see if the resource is protected and if the user needs to authenticate. If so, WebGate requires a new login for the user and sends an authentication challenge to the browser. The challenge conforms to the challenge method defined in an authentication scheme. The authentication scheme in turn is part of an authentication rule which is part of the access policy protecting the resource. When the scheme is carried out, it invokes a single authentication plug-in, or two or more chained plug-ins which are performed in a specified order. The *Oracle Access Manager Access Administration Guide* provides an introduction to authentication schemes and describes steps for assigning and ordering plug-ins in an authentication scheme.

All schemes follow the same general flow. In response to the authentication challenge, the browser obtains credentials from the user, such as a user name and password or a client certificate. In some cases, for example client certificate authentication, credentials are generated by the browser on behalf of the user. The browser sends the credentials to the server, in a format determined by the challenge. WebGate re-formats the credentials as a set of name-value pairs for use during its processing and treats them as an authentication request.

Input to the single plug-in, or to each plug-in in the scheme, is the set of credentials. Output is a status, to either accept, deny, continue or abort the authentication, and a set of credentials, possibly different from the originals. A result message is logged in the audit file if authentication is denied. When the authentication scheme finishes, the result must be to have produced one and only one valid user DN, or, if authentication fails, no user DN.

If authentication succeeds, WebGate creates a session cookie containing the user's profile DN, the IP address of the user's browser, the level of authentication successfully performed, and an expiration timestamp for the cookie. WebGate can also set HTTP header variables based on the authentication actions defined for the authentication scheme. The cookie and HTTP information are returned to the browser, and access is granted.

Creating an authentication plug-in is a significant programming task, and for that reason is covered in greater detail in the *Oracle Access Manager Developer Guide*.

## Customizing Authorization Plug-ins

Oracle Access Manager associates collections of resources into domains, and provides a way for users to set policies controlling access to the domains. You want to add coverage for something other than the default resources. For instance, you may want to apply an authorization algorithm that is influenced by rules or other data that reside in an external data store, such as an RDBMS.

You can use the Authorization Plug-in API, as discussed in the *Oracle Access Manager Developer Guide*, to write the new plug-in and add it to Oracle Access Manager.

The API provides a way for the user to create functional modules, called plug-ins, which are used within an authorization scheme. Schemes are included in authorization rules, and one or more authorization rules, along with one authentication rule and one audit rule, make up a policy that controls access to a resource type within a domain, such as certain URLs within a Web site or a set of methods within an application. The Access System provides two standard resource types, URL and EJB, but others can be easily added and defined by the user. See the *Oracle Access Manager Access Administration Guide* for methods to create resource types, domains, policies, rules and schemes.

Plug-ins within authorization schemes are used for two purposes:

- To confirm or deny access to a resource, or to acquire data to be used by the next authorization rule in the policy. This is called an authorization plug-in.
- To perform an action after the access decision is made. This is called a custom action plug-in.

To use a plug-in created by the Authorization Plug-in API, two types of information need to be configured by an administrator:

- An authorization scheme to use the plug-in. A given scheme can be used by both authorization plug-ins and custom action plug-ins.
- A custom authorization rule to use the scheme.

Creating an authorization plug-in is a significant programming task, and for that reason is covered in greater detail in the *Oracle Access Manager Deployment Guide*.

## Customizing Oracle Access Manager to Interact with External Systems

You can insert logic that will communicate with an application or perform an action outside of Oracle Access Manager.

To do this, you use the Identity Event Plug-in API, as discussed in the *Oracle Access Manager Deployment Guide*, to create the necessary logic and tie it to events that occur within the Identity System.

The Identity Event Plug-in API gives systems integrators the ability to extend beyond the base Oracle Access Manager functionality. It does this by providing a channel for Identity System data to flow between Oracle Access Manager applications and a wide range of external software components. The potential applications for this API can be as simple as basic logging of Oracle Access Manager usage, or as sophisticated as data-filtering pipelines or seamless bridges to ERP systems.

The Identity Event Plug-in API is a standard installed component of the Oracle Access Manager product.

Creating an Identity Event plug-in is a significant programming task, and for that reason is covered in greater detail in the *Oracle Access Manager Developer Guide*.

# 7

# Useful Tools

Tools are available for you to use to make changes to the installed Oracle Access Manager files, such as parameter files and directories. This chapter discusses these tools. Topics include:



## Text Editor

Oracle Access Manager operation is influenced by the content of various ASCII text files, in particular parameter files, also called *.xml files. These can be edited with a text editor.

Here are some guidelines to observe when editing these text files:

- Always make and save a backup copy of the original file. This provides a way to recover if you make a mistake.
- Do not insert blank lines.
- Do not insert comments in the file.
- Remember to stop and restart the Identity Server to force to force reloading of the changed data, whose original values may have been cached. For certain changes, you will also have to restart your Web server.
- Verify that the intended change has taken effect.
- Make one change at a time if possible, to make it easy to find any mistakes. Whether or not you do this, keep a record of what you changed and when, so that if users start to report problems you can quickly find out if they relate to your configuration changes.
- Use a simple text editor, such as *NotePad* on NT or *vi* on UNIX, to avoid introducing non-ASCII characters into the file. You can also use an XML editor if you have one to reduce the chance of introducing errors when editing XML files. Some XML editors will check the file for well-formedness for you.

# LDAP Tools

Directory applications use Lightweight Directory Access Protocol (LDAP) as a standard tool to create, modify and report data stored within the directory. Specific tools are available to allow relatively easy manipulation of this data directly, using LDAP.

This section provides a short introduction of these tools and methods for using them. More detail is available from the manufacturer of your server application, specifically for its version of these tools.

## Viewing Directory Content in LDIF Files

The structure of a directory, and the data contained within it, is represented by the content of an LDAP Data Interchange Format (LDIF) file. The file can be output, the formatted result of a request made to the directory by an LDAP reporting tool, such as LDAPSEARCH. It can also be input, data that is intended for insertion to the directory, either as entirely new data, or as an update to existing data, using an updating tool such as LDAPMODIFY.

The following is an example, part of an LDIF file taken from an Oracle Access Manager Demo Directory:

```
   dn: cn=John Kramer, ou=Sales, o=Company, c=US
objectclass: top
   objectclass: person
   objectclass: organizationalPerson
   objectclass: inetOrgPerson
   objectclass: companyOrgPerson
   cn: John Kramer
   sn: Kramer
   telephonenumber: 415-555-5269
   facsimiletelephonenumber: 415-333-1005
   title: Account Manager
   departmentnumber: 1204
   employeetype: Fulltime
   employeenumber: 521-321-4560
   givenname: John
   .
   .
```

## Reporting Directory Content with LDAPSEARCH

LDAPSEARCH is one possible tool that can be used to report directory content. There are others, which use a different syntax, but the concepts are the same.

LDAPSEARCH can be used in either a command line or interactive mode. The command line approach is preferable, as it enables users to provide the text of the report request by means of a input file. It is easy to verify the content of this file before making the request. Errors are corrected by changing a few characters in the file rather than retyping the full request, which would be necessary in the interactive mode.

## LDAPSEARCH Command Line Format

The command line format for LDAPSEARCH is:

- ldapsearch(*params*)(*filter*) (*attr_list*)

- Each of the three categories shown in italics between ( ) is optional; if all are omitted, LDAPSEARCH drops into interactive mode, which is not discussed here.

  The categories are as follows:

- params: These parameters tell LDAPSEARCH how to operate. One of them, -f, is used to specify a filter file. If instead the search filter is provided on the command line, all parameters must be stated before the filter is stated.
- filter: The filter instructs LDAPSEARCH to provide a subset of the data that would otherwise be provided. For example, a filter could require that only names beginning with N be reported. A filter provided on the command line must be enclosed within quotes.
- attr_list: The attribute list, if included on the command line, overrides the default attribute listing. The default list shows all attributes belonging to the directory entry, except operational attributes. If you wish to see only some of these attributes listed, provide their names in the command line, following the filter and separated by spaces. If you want to see operational attributes, provide their names in the command line. If you follow the operational attributes with a * you get the default list of attributes as well.

### LDAPSEARCH Command Line Parameters

Parameters are always provided in the form:

- -p pdata

  where p is the parameter, preceded by a dash, and pdata is the information required for the parameter, if any. If the data contains a space, it must be completely enclosed in double quotes:

- -p "pdata with spaces"

  Following is an alphabetical list of commonly used parameters. There are others. See the reference document for your version of LDAPSEARCH, or use the parameter /? to see them listed.

  -A: Tells the search to retrieve the attribute names only, not the attribute values.

  -b: Searchbase, the starting point for the search. The value specified here must be a distinguished name that is in the directory. Data provided for this parameter MUST be in double quotation marks. For example:

- -b "cn=Barbara Jensen, ou=Development, o=Oracle.com"

  -D: Distinguished name of the server administrator, or other user authorized to search for entries. This parameter is optional if anonymous access is supported by your server. For example:

- -D "uid=j.smith, o=Oracle.com"

  -f: Specifies the file containing the search filter(s) to be used in the search. For example:

- -f filterfile

  -h: Hostname or IP address of the machine on which the directory server is installed. This entry is optional; if no hostname is provided, LDAPSEARCH uses the local host. For example:

- -h myserver.com

  -H: This generates a list of all possible LDAPSEARCH parameters.

-p: Port number that the directory server listens at. For example:

- -p 1049

-s: Scope of the search. The data provided for the scope must be one of the following:

base: Search only the entry specified in the -b option.

one: Search only the immediate children of the entry specified in the -b parameter; do not search the actual entry specified in the -b parameter.

sub: Search the entry specified in the -b parameter, and all of its descendants. That is, perform a subtree search starting at the point identified in the -b parameter. This is the default, if the -s parameter is not used.

-S: Designates the attribute(s) to use as sort criteria, controlling the order in which the results are displayed. You can use multiple -S arguments if you want to sort on multiple criteria. The default behavior is not to sort the returned entries. In the following example, the search results are sorted first by surname and then, within surname, by first name:

-w: Password associated with the distinguished name that is specified in the -D option. If you do not specify this parameter, anonymous access is used. For example:

- -S sn -S firstname
- -w password

-x: Specifies that the search results are sorted on the server rather than on the client. This is useful if you want to sort according to a matching rule, as with an international search. In general, it is faster to sort on the server than on the client.

-z: Specifies the maximum number of entries to return in response to a search request. For example:

- -z 1000

### Examples

If you wanted to get the surname (sn), common name (cn), and given name for every employee within the sales organization whose given name is John, from the directory server listening at port 392, entirely from the command line, you could provide the following information:

ldapsearch -p 392 -b "ou=sales, o=company, c=US" -s sub "givenname=John" sn cn givenname

Results could be something like:

```
dn: cn=John Jackson, ou=Sales, o=Company, c=US sn: Jackson cn: John Jackson
givenname: John dn: cn=John Kramer, ou=Sales, o=Company, c=US sn: Kramer cn: John
Kramer givenname: John

dn: cn=John Jackson, ou=Sales, o=Company, c=US
sn: Jackson
   cn: John Jackson
   givenname: John
   dn: cn=John Kramer, ou=Sales, o=Company, c=US
   sn: Kramer
   cn: John Kramer
   givenname: John
```

You can get the same results by using a filter file. For example, a file called namejohn containing the filter:

```
givenname=John
```

can be used, with the command line being the following:

```
ldapsearch -p 392 -b "ou=sales, o=company, c=US" -s sub -f namejohn sn cn
givenname
```

## Changing Directory Content with LDAPMODIFY

LDAPMODIFY is a tool that can be used to change or add directory content. There are others, but the concepts are similar.

LDAPMODIFY opens a connection to the specified server, using the distinguished name and password you supply, and modifies the entries based on LDIF update statements contained in a specified file. LDAPMODIFY can also be run in interactive mode, a method that is not discussed here.

If schema checking is active when you use LDAPMODIFY, the server performs schema checking for the entire entry before applying it to the directory. If the directory server detects an attribute or object class in the entry that is not known to the schema, then the entire modify operation fails. Also, if a value for a required attribute is not present, the modify operation fails. Failure occurs even if the value for the problem object class or attribute is not being modified.

> **Note:** Turn on schema checking at all times, as a matter of good practice, to avoid accidently adding data to the directory that could later be unusable or cause schema violations when schema checking is turned back on. Schema checking is controlled at the directory administration server console and is generally on by default.

### LDAPMODIFY Command Line Format

The command line format for LDAPMODIFY is:

```
ldapmodify <params>
```

> **Note:** The params category is optional; if it is omitted, LDAPMODIFY drops into interactive mode, which will not be discussed here.

where (*params*)are parameters that tell LDAPMODIFY how to operate. One of them, -f, can be used to specify a file describing modifications to be made to the directory.

### LDAPMODIFY Command Line Parameters

Parameters are always provided in the form:

- -p pdata

  where p is the parameter, preceded by a dash and followed by a space, and pdata is the information required for the parameter, if any. If the data contains a space, it must be completely enclosed in double quotes:

- -p "pdata with spaces"

  Following is an alphabetical list of commonly used parameters. There are others. Use the parameter /? to see them listed.

  -c: Forces the utility to run in continuous operation mode. Errors are reported, but the utility continues with modifications. Default is to quit after reporting an error.

  -a: Enables you to add LDIF entries to the directory without requiring the changetype:add LDIF update statement, which is necessary in the interactive mode. This provides a simplified method of adding entries to the directory; in particular, this enables you to directly add a file created by LDAPSEARCH and modified to make changes.

  -D: The distinguished name of the server administrator or other user authorized to change directory entries. This parameter is optional if anonymous access is supported by your server. For example:

- -D "uid=j.smith, o=Oracle.com"

  -f: Provides the name of the file containing the LDIF update statements used to define the directory modifications. For example:

- -h mozilla
- -f changestomake.txt

  -h: Hostname or IP address of the machine on which the directory server is installed. This entry is optional; if no hostname is provided, LDAPSEARCH uses the local host. For example:

  -H: Lists all possible LDAPMODIFY parameters.

  -p: Port number that the directory server uses. For example:

- -p 1049

  -w: Password associated with the distinguished name that is specified in the -D option. If you do not specify this parameter, anonymous access is used. For example:

- -w password

### Examples

Suppose you want to change the stored given name of John Kramer, as reported under the discussion of LDAPSEARCH. The data reported back was:

```
dn: cn=John Kramer, ou=Sales, o=Company, c=US
   sn: Kramer
      cn: John Kramer
      givenname: John
```

This output can be used to derive an input file, ToHarvey, whose content might be:

```
dn: cn=John Kramer, ou=Sales, o=Company, c=US
   changetype:modify
      replace:givenname
      givenname: Harvey
```

The command line would then be:

```
ldapmodify - p 392 -f ToHarvey
```

If you were to now search the directory with the command line:

```
ldapsearch -p 392 -b "ou=sales, o=company, c=US" -s sub "givenname=Harvey" sn cn
```

```
givenname
```

The response would be:

```
dn: cn=John Kramer, ou=Sales, o=Company, c=US
   sn: Kramer
   cn: John Kramer
   givenname: Harvey
```

## XML/XSL Editors

The following are some links to editors that might be useful in working with XML and XSL files:

- http://www.w3.org/Style/XSL/

  (under the XSL-Enabled Authoring Tools)

- http://www.xml.com/pub/rg/XML_Editors
- http://www.xmlspy.com/

## XSL Validation

Oracle recommends you thoroughly validate XSL stylesheets before using them in production. The following are freeware validators:

- Xalan (testxslt)

  http://xml.apache.org/xalan-c/index.html

  This contains a validator called testxslt, version 1.1

- Saxon

  http://users.iclway.co.uk/mhkay/saxon/

- XT

  http://www.jclark.com/xml/xt.html

All three tools will parse and check for syntax errors. The second two do the better job of listing and locating syntax errors, while the first most closely approximates Oracle Access Manager's XSLT processor.

## Troubleshooting Example

The Identity System uses the Xalan/Xerces XSLT processor. The Xalan processor is orders of magnitude faster than the built-in XSLT engine.

Suppose you add templates derived from basic.xsl to a custom xslStyleFunctions.xsl and both are included in almost any customized stylesheet). In this case, Xalan may report a number of problems, including an inability to resolve any of the oblix:ObScript/oblix:ObValue/. This results in empty JavaScript includes, for example:

```
<script="JavaScript" xml:space="preserve"\
</script>
<script="JavaScript" xml:space="preserve"\
</script>
...
<script="JavaScript" xml:space="preserve"\
</script>
```

The XSLT standard does not impose requirements on how processors should handle template conflict resolution. As a result, the XMLSPY internal processor does not report errors. However, Xalan would and the Identity System returns a stylesheet processing error.

In this case, there was a conflict due to multiple same-name templates sharing the same priority. A good description of template priorities can be found at:

- http://www.vbip.com/books/1861003323/chapter_3323_09.asp

  Default priorities are assigned by the processor based on certain criteria. Some processors apply smart logic to determine which conflicting template wins, for example, the template closest to the source stylesheet (wf_create.xsl or usc_profile.xsl).

  Adopting the following style would protect against template conflict resolution:

- Add a priority of `1' to any templates in basic.xsl.
- Add a priority of `2' to any xslStyleFunctions.xsl templates with the potential for a name conflict.
- Add a priority of `3' to any source (bottom-level) xsl in case there is another override to a template defined in included xsl-s.

The following two procedures prepare you to troubleshoot Xalan-specific stylesheet processing errors reported by the Identity System within XMLSPY.

### To use XMLSPY with Xalan/Xerces on Windows 2000 and higher

1. Download a Xalan-C 1.7.0 binary distribution, which is not compatible with Xerces-C 2.5.0 distribution.
2. Download a Xerces-C 2.4.0 binary distribution.
3. Unzip the downloaded archives.

   For example:

   C:\opt
4. Navigate to your system PATH variable.

   For example:

   From the Control Panel select System, from System select Advanced, from Advanced select Env Vars, from Env Vars select System Variables, from System Variables select Path.
5. Append the following to your system PATH variable:

   C:\opt\xml-xalan\c\Build\Win32\VC6\Release;C:\opt\xerces-c2_4_0-windows_nt-msvc_60\bin;
6. Configure XMLSPY to use an external XSL processor, as discussed next.

### To configure XMLSPY to use an external XSL processor

1. From the Tools menu choose  Options, fro m options choose XSL.
2. Restart XMLSPY to pick up the newly updated PATH.
3. Select External XSL transformation program.
4. In the text box, enter Xalan.exe -o %2 %1 %3
5. Click OK.

# A

# XML Background

This appendix provides overviews of XML, XML schemas, and XSLT, for those who may need it in order to follow the discussion and examples for these topics in the main chapters of this guide:

- XML
- XML Schema
- XSL and XSLT

Full descriptions and specifications for this information are available at the following site under XML, XML Schema, and XSL:

www.ww3.org

Find documentation for XML at:

`http://www.w3.org/XML/`

Find documentation for the XML Schema at:

`http://www.w3.org/XML/Schema`

A tutorial on the XML schema syntax is available at:

`http://www.w3.org./TR/xmlschema-0`

Find documentation for XSL and XSLT at the following Web sites:

`http://www.w3.org/Style/XSL/`

`http://www.w3.org/TR/xslt`

A good description of template priorities can be found at:

`http://www.vbip.com/books/1861003323/chapter_3323_09.asp`

## XML

XML stands for Extensible Markup Language. It is a set of rules that define tags that break a document into parts and identify the parts of the document. These tags define a syntax that can then be used in combination with an XSL stylesheet to reconstruct the document.

The tags that are defined must follow the XML rules, but their content and arrangement can be anything the developer wants. A file of XML text, arranged to represent a certain document, is called an XML application. Oracle Access Manager OutputXML is an XML application, designed to create HTML which will in turn present Oracle Access Manager pages to a browser.

Oracle Access Manager also uses XML as a structured way to provide some parameters that control its operation. This is a different use than for OutputXML, but since the applications are much shorter and the XML syntax rules are followed here as well, one of these files will serve as an example. For example, frontpageadminparams.xml has the following content:

```
<?xml version="1.0" ?>
<ParamsCtlg xmlns="http://www.oblix.com"
         CtlgName="frontpageadminparams">
      <CompoundList ListName="">
         <SimpleList>
            <NameValPair ParamName="top_frame"
               Value="_top" />
            <NameValPair ParamName="top_main_frame"
                  Value="main_frame" />
            <NameValPair ParamName="min_location_area"
               Value="400" />
         </SimpleList>
      </CompoundList>
   </ParamsCtlg>
```

This indented presentation, showing the tag levels, is an automatic feature of Microsoft's Internet Explorer. XML editors will also show the file in this way.

Some important parts of this file are the following:

```
<ParamsCtlg xmlns="http://www.oblix.com"
      CtlgName="frontpageadminparams">
```

This, the XML declaration, is the first line of any well-formed XML application. Internet Explorer and some editors will not show the file as formatted XML unless this line is present. The starting and ending ? make this an XML processing instruction. version="1.0" is an attribute. Attributes are name-value pairs separated by an equals sign, which provide additional information for the instruction. Currently there is only one version of XML.

`ParamsCtlg` is a tag, which starts the definition of the first element in the XML application. The definition ends with the matching closing tag, which has the same form except it uses a / before the tag name:

```
</ParamsCtlg>
```

Everything between the starting and ending tags defines the element ParamsCtlg. Nested within it is the element `CompoundList`, which has elements nested within it, and so on. An important attribute is `xmlns`, which stands for `XML namespace`.This specifies an owner and possible reference source for this XML application. We identify ourselves as creators of this application.

```
<NameValPair ParamName="top_frame" Value="_top" />
```

The technically precise way to write this element would have been

```
<NameValPair>
   ParamName="top_frame" Value="_top"
   </NameValPair>
```

However, when the definition is a short one like this, the XML rules allow use of an abbreviated closing tag. /> indicates the closing tag for the immediately preceding start tag.

The attributes ParamName="top_frame" and Value="_top" provide the useful content of the file, which is the name of a variable used by Oracle Access Manager and its value.

An important concept, essential to the application of stylesheets, is a node. A node is a level within the XML application, described by stringing together the elements that locate it uniquely within the nested elements. For example, ParamsCtlg is the root node for the application. The root node is the element name immediately following the XML processing instruction(s); all other elements are nested within it. Other examples of nodes are ParamsCtlg/CompoundList and ParamsCtlg/CompoundList/SimpleList.

## XML Schema

An XML Schema shows and describes the content of an XML application. The following list interprets some of the elements that appear within a Oracle Access Manager Schema definition file, based on the first few characters of each element. This is *not* intended to be an explanation of the full XML schema syntax; see the referenced site for that.

: : Appears within the body of an element being defined, and defines an attribute that belongs to it. Parts of the definition usually present are:

- **name="xxxx"**: The name of the attribute.
- **type="yyyy"**: The data type for the attribute; see the list following this one.
- **use="required"**: This is present only if the attribute must be present in the output.
- **value="zzzz"**: This is present only if the attribute takes a fixed value.

**xsd:choice**: Precedes a list of other elements, indicating that one and only one of those elements is allowed. The choice itself can be made from zero to many times, as controlled by the values of minOccurs and maxOccurs. The value of minOccurs is the fewest number of times this element can appear in the list. If the value is zero, the element is optional in the list. The value of maxOccurs is the greatest number of times the element can appear in the list. A value of Unbounded means there is no limit.

**xsd:complexType**: Most often used in the body of an element that is being defined, and means that the element will contain other elements.

**xsd:element name="xxxx"**: Declares and within its body goes on to fully define a category of information describing the element xxxx. Most instances of this in the schema files go on to provide a body for the element and build it up from subelements. A few, for example ObTextMesage in the displaytype.xsd file, have no body, in which case they use type to immediately specify the data type of the element.

**xsd:element ref="xxxx"**: Most often used to provide the name of a subelement for inclusion in a list that is part of the body defining an element. The referenced element will have been defined elsewhere. The element may also include the attributes minOccurs and maxOccurs.

**xsd:enumeration**: Provides a list of possible values.

**xsd:include schemalocation="xxxx":** An element that specifies a file which contains additional XML schema information, to be treated just as if it were provided inline in the current file.

**xsd:restriction base="xxxx"**: Defines the pattern for values that are used for a data type being defined; see xsd:simpletype. Oracle Access Manager uses the restriction base

NMTOKEN, which means the value must be a legal XML string and contain no white spaces.

**xsd:sequence**: Precedes a list of subelements within another element, and indicates that, if they are present, they will appear in the order listed.

**xsd:simpletype**: This begins the definition of a data type, usually followed by an **xsd:restriction** definition.

Some possible data types are:

- **xsd:boolean**: Acceptable values are true/false, or 1/0.
- **xsd:date**: Acceptable values are dates in the form YYYY-MM-DD (many other date types are possible).
- **xsd:decimal**: Acceptable values are decimal numbers (other number types are possible)
- **xsd:string**: Acceptable values are a string of characters
- **xsd:time**: Acceptable values are a time of day in the form hh:mm:ss.sss.
- **xsd:uri-reference**: Acceptable values are URLs.

All XML schema elements are defined within a root element called oblix. Table A–1 shows the schema for the usc_profile.xsd definition of oblix, beginning with its initial definition in component_profile.xsd. The table shows the schema only to the first two node levels under oblix; the full schema goes much deeper. If you look at just the pure OutputXML provided by Oracle Access Manager for the view (My Identity) program, this information, in this order, is what you see.

***Table A–1 Schema Levels***

| Level 1 | Level 2 |
|---|---|
| `ObProfile` (defined in component_profile.xsd) | ObPanel |
| | ObHeaderPanel |
| | ObRequestInfo |
| | ObScripts |
| | ObForm |
| | ObDisplay |
| | ObTextMessage |
| | Obbutton |
| | ObStatus |
| `ObNavBar` (defined in navbar.xsd) | ObRequestInfo |
| | ObScripts |
| | ObMisc |
| | ObApps |
| | ObApplication |
| | ObFunctionButtons |
| | ObStatus |
| `ObSearchForm` (defined in searchform.xsd) | ObHelpContext |
| | ObRequestInfo |

*Table A–1 (Cont.) Schema Levels*

| Level 1 | Level 2 |
|---|---|
| | ObScripts |
| | ObForm |
| | ObDisplay |
| | ObButton |
| | ObAdvancedSearch |
| | ObSearchRow |
| | ObStatus |
| `ObApplicationFunc` (defined in navbar.xsd) | ObFunctions |
| | ObRequestInfo |
| | ObStatus |
| `ObStatus` (defined in component_basic.xsd) | This is a string of type xsd:string; it contains no other elements. |

# XSL and XSLT

XSL stands for Extensible Style Language. Files written in this language are used along with XSLT to create documents. The XSL file itself is a well-formed XML document. The language relies heavily upon the use of templates, which are sets of instructions to the XSL transformer, telling it what to produce as output for a particular node within the XML.

XSLT stands for XSL Transformation. This is a process that combines an XML application with an XSL stylesheet to create a document.

## General Syntax

The following list interprets some of the elements that appear within an Identity System stylesheet file, based on the first few characters of each element. This is not intended to be an explanation of the full XSL syntax; see the referenced site for that.

> **Note:** In the Oracle Access Manager XSL files, lines starting with <xsl: are instructions to the XSL transformer. All others are HTML text to be written verbatim into the HTML output.

**xsl:apply-templates select="xxxx"**: Once the transformer is positioned, using xsl:template-match, to a node within the XML, this element identifies which subnodes or sub-subnodes are to be processed. Point at sub-subnodes within the selected node by providing their nested structure, for example xsl:apply-templates="xxxx/yyyy", where yyyy is a node nested within xxxx. If the select option is omitted, templates for all the subnodes under the matched node are processed.

The transformer decides which templates to use by identifying each subnode by name, and then searching the entire stylesheet for the best xsl:template match for that name. The match will generally be on the last node in the nested list, for example yyyy in the previous example. The instructions for that matched node are applied immediately.

**xsl:attribute name="string"**: Inserts the text specified by string into the output.

**xsl:call-template name="xxxx"**: Immediately performs the transformation required by the template xxxx. The template to be called will have been specified using xsl:template name="xxxx".

**xsl:choose**: Precedes a list of possible transformations, each of which is indicated by the use of the xsl:when element. It may be that none of the xsl:when elements applies; the xsl:otherwise element covers this possibility. If more than one of the xsl:when elements is true, only the first true xsl:when element is applied.

**xsl:for-each select="xxxx"**: Applies the content of this element to all occurrences of xxxx.

**xsl:if test="expression"**: Enables a choice to be made. If expression evaluates to a Boolean true, the content of the xsl:if element is performed. If not, it's not performed. Expression syntax is described in "Expression Syntax" on page A-6.

**xsl:include href ="xxxx":** An element that specifies a file which contains additional XSL stylesheet information, to be treated just as if it were provided inline in the current file.

**xsl:number value="expression"**: Used to insert a formatted integer into the output. In Oracle Access Manager stylesheets, expression often uses the position() function, which indicates the position of a node in a list, starting with 1.

**xsl:otherwise**: The last element in the list of elements under an xsl:choose, following the xsl:whens, which is to be applied if none of the xsl:whens is true.

**xsl:template match="xxxx"**: Point the transformer to the node named xxxx in the XML data. Point at subnodes by providing their nested structure, for example xsl:template-match="xxxx/yyyy", where yyyy is a node nested within xxxx. This must be followed by one or more uses of xsl:apply-templates, otherwise no transformation of the XML data will be done.

**xsl:template name="xxxx"**: Create a named template, to be applied when xsl:call-template="xxxx" is used.

**xsl:value-of select="expression"**: Inserts the value specified by expression into the output.

**xsl:when test="expression"**: Enables a choice to be made. If expression evaluates to a Boolean true, the content of the xsl:when element is performed. If not, it's not performed. Usually, multiple xsl:when elements are nested under an xsl:choose element.

### Expression Syntax

Again, this is only a subset of a much longer list, provided to allow you to interpret Oracle Access Manager XSL files. Expressions can be of several kinds:

- Node Sets: A node set describes a set of nested elements, in the form xxxx/yyyy/zzzz, meaning the element zzzz is nested within the element yyyy which is then nested within the element xxxx. When a node set is used as the expression for a test, the test is true if the nested set exists in the XML, false if it does not.

  Further, this may be used in the form xxxx/yyyy/zzzz[@attribute = a value]. This means to look at the value of the attribute belonging to element zzzz. The expression is true if the attribute has the specified value and false otherwise.

- String Content: One form of this is

  ```
  <xsl:value-of select="@attribute" />
  ```

which means return the value of the attribute.

Another is

```
<xsl:if test="@attribute">
```

which is true if the attribute is valid for the element and has a non-`NULL` value.

- Numeric Content: In this case, the expression reduces to a number. An example is

  ```
  <xsl:number value="position()-1">
  ```

  which gives a number one less than the position of the current element in a list of elements.

### Client-Side Transformation

Client-side processing of stylesheets is supported only with Microsoft Internet Explorer (IE) 5.5 and later. Earlier versions of IE require installation of a patch.

### To set up client-side transformation

1. Install the latest msxml patch.

   This must be msxml3.0 (or higher), which can be obtained from:

   `http://download.microsoft.com/downloads/`

2. Install the registration tool for msxml.

   This can be obtained from:

   `http://msdn.microsoft.com/msdn-files/027/001/469/xmlinst.exe`

3. Enter the following command sequence:

   ```
   xmlinst -u
   regsvr32 -u coreid
   msxml.dll
    regsvr32 msxml3.dll
   xmlinst
   ```

4. Change the controlling parameter.

   In the *`$Identity_install_dir`*`/identity/oblix/apps/common/bin/globalparams.xml` parameter file, change the value for OutputFormat from default to xml.

5. Restart the Identity Server.

6. Verify the change.

To verify that this change indeed took place, enter the Identity System using an Internet Explorer 5 browser. If you do a view source, you will see XML instead of HTML.

### Oracle Access Manager XSL Transformation Limits

Oracle Access Manager has a built-in XSL Transformation processor. This processor implements most, but not all, of the XSLT standard. The following is some information applying to the Oracle Access Manager version.

- The processor does not insert the declaration line:

  ```
  <?xml version="1.0" ?>
  ```

in XML files that it generates. If this is needed because you want to see an indented XML presentation, you must include it in the stylesheet.

- The processor does not support UTF characters in a sort. An attempt to do this will generate an error report.
- The processor has a stack limit depth of 5298; recursive templates can go no deeper than this.
- The processor assumes that its output is intended for use by a browser and formats output with an HTML formatter.
- The processor is intended primarily for use in a production environment, where performance is important. It does only minimal checking of stylesheet syntax. Very bad syntax can crash the processor. Only known stylesheets with validated content should be used in the production environment. Validation tools are listed in "XSL Validation" on page 7-7.
- Embedded stylesheets in the XML are not supported.
- Full support, or in some cases, any support, of the following commands is not provided. If you need to use these commands, double-check your results before putting the stylesheet into production.
- XSL:format-number
- XSL:output
- XSL:document
- XSL:namespace
- XSL:comment
- XSL:format
- XSL:processing instruction
- XSL:sort: case order
- XSL: id

For more information, see "Useful Tools" on page 7-1

# B

# Oracle Access Manager Parameter Files

Oracle Access Manager provides a simple means for users to modify the way it operates, by changing the content of specified parameter files, also called catalog files. This appendix describes the file format, provides a list of the files, and describes values within them that you can change to customize Oracle Access Manager system operation.

## File Categories and Locations

All of the parameter files are located relative to the Identity System or Access System installation directory, which could be, for example:

On Windows:

c:\OAM\identity\oblix

or

c:\OAM\access\oblix

On Unix:

/var/OAM/identity/oblix

or

/var/OAM/access/oblix

At times this manual refers to the installation directory as the *component_install_dir*.

> **Note:** The remainder of this discussion will refer to paths relative to the installation directory, and will use the path separator / . This is to aid readability; it also happens to be the correct syntax for UNIX systems and URLs, as well as relative paths for external references within XML and other files. When referring to file paths on disk, Windows users should replace / with \ as necessary.

The parameter files can be viewed as belonging to one of several categories, distinguished by the type of parameters they contain:

- Parameters that affect the administration of Identity applications: User Manager Configuration, Group Manager Configuration, Org. Manager Configuration.
- Parameters that affect the Identity applications and end user functions: User Manager, Group Manager, Org. Manager, Asynch Mailer, Password Management, Query Builder, Selector.

- Parameters whose effects are common across applications: the user applications, the administrative applications and the Comm Server (a binary streaming data module).
- Parameters that affect Oracle Access Manager interaction with the directory server, further subcategorized as follows: user, group, organization, application, configuration, workflow, and LDAP referential integrity.
- Parameters that affect Oracle Access Manager multi-tier architecture, for example, the WebPass Web application, or the Identity Server engine.

Parameters that control each category in the previous list reside in one of the following files:

### Administrative Parameters

apps/admin/bin/objservcenteradminparams.xml

apps/admin/bin/frontpageadminparams.xml

### User Parameters

apps/userservcenter/bin/userservcenterparams.xml

apps/userservcenter/bin/usc_wf_params.xml

apps/groupservcenter/bin/groupservcenterparams.xml

apps/groupservcenter/bin/gscaclparams.xml

apps/groupservcenter/bin/gsc_wf_params.xml

apps/objservcenter/bin/objservcenterparams.xml

apps/objservcenter/bin/osc_wf_params.xml

apps/asynch/bin/asynchparams.xml

apps/querybuilder/bin/querybuilderparams.xml

apps/selector/bin/selectorparams.xml

### Common Parameters

apps/common/bin/globalparams.xml

apps/common/bin/oblixadminparams.xml

apps/common/bin/oblixappparams.xml

apps/common/bin/oblixbaseparams.xml

apps/common/bin/comm_serverparams.xml

### Directory Interaction Parameters

data/common/appdbparams.xml

data/common/configdbparams.xml

data/common/userdbparams.xml

data/common/groupdbparams.xml

data/common/objectdbparams.xml

data/common/workflowdbparams.xml

data/common/ldapappdbparams.xml

data/common/ldapconfigdbparams.xml

data/common/basedbparams.xml

data.ldap/common/ldapreferentialintegrityparams.xml

#### Oracle Access Manager Multi-tier Architecture Parameters

apps/webpass/bin/webpass.xml

## Modifications to Parameter Files

The parameter files are read once, when the Identity System or Access System starts up. You can modify the parameter files in-place using a text editor or an XML editor. The changes will not take effect until the next time the Identity or Access Server starts up.

It is always a good idea to make a backup copy of all the files before you edit them so that you have a known state to roll back to if you make a mistake.

The parameter files are not validated by Oracle Access Manager. If you see unexpected behavior after making changes, check the Identity System log files located under *IdentityServer_install_dir*/identity/oblix/logs for error messages that might help you locate the problem. When editing XML files it is relatively easy to break the XML syntax, for instance by omitting a closing tag. Oracle recommends that you use an XML editor instead of a conventional text editor.

If more than one Identity or Access Server is installed, a set of catalog files will have been installed under the *component_install_dir* of each server instance. If you want your changes to affect all installed servers, propagate the changes to all instances.

## Precedence Rules

Some parameters exist in more than one file. When this occurs, Oracle Access Manager resolves the value using the following heuristics. In all cases, the search stops as soon as the parameter is found:

1. User Application Parameters

   The application-specific parameter file (under the application directory for User Manager, Group Manager, and so on), is searched first.

   Then, the oblixappparams.xml file is searched.

   Then, the oblixbaseparams.xml file is searched.

2. Admin Application Parameters

   The set of application-specific administration parameter files (User Manager Admin, Group Manager Admin, and so on) are searched first.

   Then, the oblixadminparams.xml file is searched.

   Then, the oblixbaseparams.xml file is searched.

3. Directory (DB) Parameters

   The set of parameter files specific to the DB (ldapuserdbparams, and so on) are searched first.

   Then, the default DB parameter files (userdbparams.xml, appdbparams.xml, and so on) are searched.

   Then, the basedbparams.xml file is searched.

# Parameter File Format

Parameter files are expressed in XML. They have a simple structure, and make extensive use of user-friendly names to aid in working with the files.

When working with parameter files, it is essential that you limit your changes to only the text falling within quotation marks and strictly follow the rules for each kind of change.

The following excerpt is from the userservcenterparams.xml file. Methods for providing the parameter values are highlighted in bold in the following example and discussed after the example.

```
<?xml version="1.0" ?>
<ParamsCtlg xmlns="http://www.oblix.com"
      CtlgName="userservcenterparams">
   <CompoundList ListName="">
      <SimpleList>
         <NameValPair ParamName="top_frame"
               Value="_top" />
         <NameValPair ParamName="top_main_frame"
               Value="main_frame" />
         <NameValPair ParamName="min_location_area"
               Value="400" />
      </SimpleList>
      <ValList ListName="search_result_views">
         <ValListMember Value="table_view" />
         <ValListMember Value="custom_view" />
      </ValList>
      <SimpleList>
         <NameValPair ParamName="ObEnhanceSearch"
            Value="true" />
      </SimpleList>
      <ValNameList ListName="ObEnhanceSearchList">
         <NameValPair ParamName="OOS"
               Value="That Contains" />
      ...
      ...
         <NameValPair ParamName="OSL"
               Value="That Sounds Like" />
      </ValNameList>
      <SimpleList>
         <NameValPair ParamName="navbar_bgcolor"
               Value="#669966" />
      </SimpleList>
   </CompoundList>
</ParamsCtlg>
```

There are three methods of providing parameter values. These are shown in bold in the previous excerpt:

1. `<SimpleList>`

   The `SimpleList` element provides a simple list of NameValPair elements giving parameter names and their values. The parameter names (*ParamName* ) are known to the Identity Server Manager and are expected to be present. The parameter names and legal values, for this and the other methods, are provided under "Parameter Reference" on page B-5.

2. `<ValList ListName="search_result_views">`

The ValList element provides a list of options, such as methods of execution or a choice of display format, as a set of ValListMember elements that are available to the Identity System. The name of the method or format goes in the value attribute. These names are predefined and cannot be changed. You can enhance flexibility for the Identity System by adding a new ValListMember entry. You can reduce functionality by removing a ValListMember element. For example, if you remove the line

```
<ValListMember Value="custom_view"/>
```

the Identity System is no longer able to display a custom view.

For this type of change, the *Parameter Name* column in the tables that follow actually shows the `ListName`.

3. `<ValNameList ListName="ObEnhanceSearchList">`

The ValNameList element is similar to the SimpleList element, because it provides a list of NameValPair elements. Oracle Access Manager generally uses ValNameList parameters to construct pull-down menus in the GUI. The list includes a parameter name (ParamName) and a value for the text describing it. The parameter names are predefined and cannot be changed. You may add them to the list, remove them from the list, or change the text displayed for the parameter in the GUI pull-down menu by changing the content of the value attribute.

For example, if you remove the line

```
<NameValPair ParamName="OOS" Value="That Contains" />
```

OOS will no longer appear as a search option. If instead you change the line to the following

```
<NameValPair ParamName="OOS" Value="That Holds" />
```

OOS will be described as "That Holds" in the GUI pull-down menu.

For this type of change, the *Parameter Name* column in the tables shows the ListName.

# Parameter Reference

The following tables describe the parameters that may be present in each parameter file.

The key to the table columns is as follows:

**Parameter Name:** The name of the parameter. In some cases, a parameter takes a set of subordinate parameters, whose names are listed.

**Description:** What the parameter is used for.

**Default Value:** The factory default value in the file when installed.

**Possible Values:** Alternative values that you can enter for the parameter.

***Table B–1 userservcenterparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `min_location_area` | The area allocated for the location GIF. This depends on each customer's location image. | `400` | A positive integer |

***Table B–1 (Cont.) userservcenterparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| navbar_bgcolor | The background color for the application navigation bar. This is the value in the obbgcolor attribute of the ObNavbar element. | #669966 | Any RGB value |
| ObEnhanceSearch | Enables extended search user interface and functionality. | true | true<br>false |
| ObEnhanceSearchList | If the ObEnhanceSearch parameter is set to true, the search page displays a list of search operators. This list is constructed using the ObEnhanceSearchList parameter. The list contains a set of NameValPair elements. The following are the supported ParamName (Value) attribute pairs for all applications:<br>OOS (That Contains)<br>OSM (Contains in Order)<br>OEM (=)<br>OLE (<=)<br>OGE (>=)<br>OBW (That Begins With)<br>OEW (That Ends With)<br>OSL (That Sounds Like)<br>The value text in parentheses describes the semantics of each value, and is also the default text displayed to the user in the list. You can change the display text in the catalog. In the user interface the ParamName, *Oxx*, is not displayed. It is an operation code sent to the application doing the search. | See the description | All applications:<br>OOS<br>OSM<br>OEM<br>OLE<br>OGE<br>OBW<br>OEW<br>OSL |
| search_result_views | Display format for User Manager search results. User Manager supports table format and custom format. | table_view<br>custom_view | table_view<br>custom_view |
| searchStringMinimumLength | The minimum number of characters that the user must provide to perform a search operation.<br>Note: This parameter does not appear in the installed version of this file. If you add this parameter, it applies only to the User Manager. | 0 | 0<br>Or any positive integer |
| top_frame | Name of the top browser frame in the User Manager. | _top | A frame name |
| top_main_frame | Name of the main browser frame in the User Manager. | main_frame | A frame name |

***Table B–2 groupservcenterparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| groupMember SearchString MiminumLength | The minimum length of the search string that the user must enter to do a member search. This is used only in the Group Manager View Members page, where the user can search for members using specific search criteria.<br>A value of 0 enables the user to do a blank search where the application displays all the members of the group.<br>If this parameter has any other value, then the user can only do a search if the search string has at least that many characters. | 0 | Any positive integer, including zero |
| navbar_bgcolor | The background color for application navigation bar. The value is presented in the obbgcolor attribute of the ObNavbar element. | #9999CC | Any RGB value |
| ObEnhanceSearch List | This parameter controls the of search conditions in the Search toolbar. The name is a search condition understood by the application. The value is a display name that appears in the selection menu.<br>OOS (That Contains)<br>OSM (Contains in Order)<br>OEM (=)<br>OLE (<=)<br>OGE (>=)<br>OBW (That Begins With)<br>OEW (That Ends With)<br>OSL (That Sounds Like) | See the description | OOS<br>OSM<br>OEM<br>OLE<br>OGE<br>OBW<br>OEW<br>OSL |
| search_result_ views | When a search is performed in Organization Manager these are the possible display format(s) for the results. Any combination of these values is allowed. The absence of any one of these values disables that search result's view format. | table_view<br>custom_view | table_view<br>custom_view |

*Table B–2 (Cont.) groupservcenterparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| searchString MinimumLength | The minimum number of characters that the user must provide as the basis for a search. This overrides, for Organization Manager only, the value provided in the *oblixappparams.xml* file.<br>Note: This parameter does not appear in the installed version of this file. If you add this parameter, the value applies only to Group Manager. | 0 | Any positive, non-zero integer |

*Table B–3 objservcenterparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| navbar_bgcolor | The background color for application navigation bar. The value is presented in the obbgcolor attribute of ObNavbar element. | #FFCC00 | Any RGB value |
| ObEnhanceSearch List | A list of search conditions in the search toolbar. The name is a search condition understood by the application. The value in parenthesis is displayed on the selection menu, as follows:<br>OOS (That Contains)<br>OSM (Contains in Order)<br>OEM (=)<br>OLE (<=)<br>OGE (>=)<br>OBW (That Begins With)<br>OEW (That Ends With)<br>OSL (That Sounds Like) | See the description | See the description |
| search_result_ views | When a search is performed in Organization Manager these are the possible display format(s) for the results. Any combination of these values is allowed. The absence of any one of them disables that search results view format. | table_view<br>custom_view | table_view<br>custom_view |

*Table B–3 (Cont.) objservcenterparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| searchString MinimumLength | The minimum number of characters that the user must provide as the basis for a search. This overrides, for Organization Manager only, the value provided in the *oblixappparams.xml* file.<br>Note: This parameter does not appear in the installed version of this file. If you add it, the value applies only to Organization Manager. | 0 | Any positive, non-zero integer |

*Table B–4 gsc_wf_params.xml, osc_wf_params.xml, usc_wf_params.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| A compound list for a workflow type | This compound list contains detailed parameters for each of the workflow types shown in the Possible Values column. Under each workflow type there appears a set of actions compound lists, as explained in the next parameter in this table. | None | CREATE_OBJECT<br>DELETE_OBJECT<br>CHANGE_ATTRIBUTE |
| Actions compound list | The compound list for a workflow type contains one action compound list for each valid action for that workflow type.<br>For example: CREATE_OBJECT will have compound lists for the following actions:<br>initiate, self_ registration, provide_ info, approval, provide_approval, activate, commit, external_action, error_ report.<br>Under each of these there is a set of parameters and values, as described in the rest of this table. | None | initiate<br>self_ registration<br>request<br>provide_info<br>change_info<br>approval<br>provide_approval<br>change_approval<br>activate<br>deactivate<br>commit<br>error_report<br>external_action |
| archiveFileName | File name of the archive file. | None | Correct file name |
| deactivate archiveFileName | File name of the deactivated users archive file. | None | Correct file name |
| exclude_attrs | Excludes an attribute(s) from showing up in relevant data | None | Attribute name in the schema. For SecureWay, gsc_wf_ params.xml is replaced by gsc_wf_ params-sw.xml during setup. obgroup puredynamic is excluded in CREATE_ OBJECT |

*Table B–4 (Cont.) gsc_wf_params.xml, osc_wf_params.xml, usc_wf_params.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| exit_condition | A ValNameList which defines the two parameters:<br>false<br>true | None | 0 and 1 , respectively |
| forcecommit | Flag indicating whether the entry should be committed before the user action for this action, for example: activate, deactivate. | false | true<br>false |
| Notifee | A ValList for which the member values may be any of the items in the Possible Values column. These are allowed roles for the person to be notified. | None | dns<br>ob_self<br>previous step owner<br>current step participants<br>next step participants<br>initiator |
| occurrence | Allowed number of occurrences for each action. | None | 1<br>*n* |
| Participant | A ValList for which the member values may be any of the items in the Possible Values column. These are allowed roles for the participant. | None | ob_any<br>dns<br>ob_self |
| pre_action | A ValList, which is a list of possible actions that may occur before this one. | None | any action name. |
| relevant_data | A ValList for which the member values may be any of the items in the Possible Values column. These are possible types of relevant data for this action. | None | required<br>provisioned<br>optional |
| subscription_ policies | A ValList for which the member values may be any of the items in the Possible Values column. These are a set of allowed subscription policies. | None | Subscription PolicyOpen<br>Subscription PolicyOpenFilter<br>Subscription PolicyControlled Workflow<br>Subscription PolicyClosed |

*Table B–4 (Cont.) gsc_wf_params.xml, osc_wf_params.xml, usc_wf_params.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| useraction | A flag that indicates if a user action is required for a particular action. For example, the provide_info, approval, and activate actions will have the useraction flag set to true. Commit and external_ action would have useraction as false. | None | false<br>true |
| wf_name | A compound list of names for the different workflow types. These names should be easy for users to recognize. | None | Can be any meaningful string for the workflow type |
| wfDateFormat | Workflow date formats. | None | 2 (*mm/dd/yyyy*)<br>3 (dd/mm/yyyy)<br>4 (dd/mm/yyyy)<br>5 (mm/dd/yyyy) |
| wfDateSeparator | A single character used to separate the *YMD* parts of a date provided in wfDateFormat. If the parameter file does not specify a character for this parameter, the default is used. | / (slash) | / (slash)<br>- (hyphen)<br>. (period)<br>, (comma)<br>(space) |
| initialStep | Signals if a step with that action can be the first step for that particular type of workflow.<br>You cannot add to the set of permitted first steps, however you can remove items from this set of steps on a per-workflow-type basis. For example, you cannot make the commit step the first step by setting its initialStep parameter to true. However, for a step that is permitted as a first step, you can set its initialStep parameter to false.<br>Note: Oracle does not recommend that you change the values for these parameters. | false | true<br>false |

*Table B–5 asynchparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| asynch_user | The DN of a user who is allowed to do asynchronous operations. | none | Any valid user DN |
| mailer_sleep_ time | Duration for which the mailer goes to sleep, then wakes up to send the pending mail. | 10 | Any positive integer value, in seconds |

*Table B–5 (Cont.) asynchparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| queuewaittime | Queue wait time for the global mail queue. | 10 | Any positive integer value, in milliseconds |

*Table B–6 querybuilderparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| navbar_bgcolor | This is used to set the back ground color of the navigation bar in Query Builder. | #CC6666 | Any RGB value |
| ObQBOperators List | List of search conditions in the Query Builder filter toolbar.<br>CND_EQ "Equals"<br>CND_NEQ "Does not equal"<br>CND_LTE "Greater than equal to"<br>CND_GTE "Less than/equal to"<br>CND_LT "Less than"<br>CND_GT "Greater than"<br>CND_CON "Contains"<br>CND_DNC "Does not Contain"<br>CND_PRE "Present"<br>CND_NPR "Not Present"<br>CND_BW "Begins With"<br>CND_EW "Ends With"<br>CND_DBW "Does not begin with"<br>CND_DEW "Does not end with"<br>CND_SLK "Sounds Like"<br>CND_DSLK "Does not sound like" | As listed under Description | As listed under Description |

*Table B–7 selectorparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| navbar_bgcolor | This is used to set the background color of the navigation bar in the Selector. | "#CC6666" | Any RGB value |

*Table B–7 (Cont.) selectorparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| ObEnhanceSearchList | List of search conditions in the Search toolbar. The value is the search condition display name that appears in the selection menu that is used by the application. | OOS: That Contains<br>OSM: Contains In Order<br>OEM: Equal to<br>OLE: Less than or equal to(<=)<br>OGE: Greater than or equal to(>=)<br>OBW: That Begins With<br>OEW: That Ends With<br>OSL: That Sounds Like | The same, plus:<br>ONE: Not equal to (!=) |

*Table B–8 frontpageadminparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| min_location_area | The area allocated for the location GIF. This depends on each customer's location image. | 400 | A positive integer |
| top_frame | Name of the top frame in User Manager application. | _top | A frame name |
| top_main_frame | Name of the main frame in User Manager application | main_frame | A frame name |

*Table B–9 globalparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| authUserLocation | Position of the authuser variable in the request. Netscape places the authuser variable in the variable section of the request, while Site Minder places it in the request headers. | headers | Auth user location in the request, for example,<br>vars (for Netscape)<br>headers (for Siteminder) |
| ActiveDirectory | The value of this parameter is true if the Master Administrator selects Active Directory as the directory server type during Identity Server configuration, false otherwise. | None | true<br>false |

***Table B–9 (Cont.) globalparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| backslash ReturnedAs | The escaped string representation of the '\' character as returned by the directory. This is used in context of the ObDPostalAddress display type. Since '$' is the delimiter in a postal address string, some directory servers return it in escaped format. In order to distinguish between a \ in an escaped string versus an actual \ in the value, the \ in the value is returned in an escaped format. For example, NDS returns it as "\\", Netscape returns it as "\5c".<br>Note: When a '\' is part of the attribute value itself, it should be escaped and sent as "\5c" as discussed in RFC 2252. | \5c | \5c or \\ and so on |
| browserNoCache | If this parameter is set to true, (the default), the browser is does not cache the page. If it is set to false, it will cache. You can set this value in the globalparams.xml file, or you can pass it on the URL. | true | true<br>false |
| BypassAccess ControlForDir Admin | Indicates whether the attribute access control should be bypassed for directory administrators. | true | true<br>false |
| client_request_ retry_attempts | When you configure a WebPass, in the Identity Server Timeout Threshold field, you specify how long (in seconds) the WebPass attempts to contact a non-responsive Identity Server before it considers it unreachable and attempts to contact another server. However if the Identity Server takes longer to service a request than the value of the timeout threshold, the WebPass continues to try to contact the Identity Server with the request. This parameter enables you to set a limit on the number of retries that the WebPass attempts. | -1 | An integer. The default of -1 means that an unlimited number of retries are possible. |

*Table B–9 (Cont.) globalparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| compound_data_ threshold | In the directory schema, the obcompounddata attribute stores multivalued data in XML format. Some directories restrict the size of attribute values. In cases where obcompounddata overflows, you can chunk the obcompounddata value and store it as a multivalued attribute. The default chunk size and threshold value for when the data can be chunked can be specified on this parameter. | -1 | The default of -1 means no chunking is done. The value can be any positive integer value, depending on the directory |
| cookieDomain | The domain that is used when setting a cookie. The default is the computer name. This is usually used if you have set up something like DNS round-robin for better performance or server failover. | "" | "" or, for example, oracle.com |
| cookieSeperator | Cookie delimiter used for compacting the various cookies.<br>**Do not change the # value**. | #<br>Do not change | #<br>Do not change |
| cookieSizeLimit | Maximum cookie size. | 4096 | Integer value = 4096 |
| DBAuditRetry Interval | The interval at which an attempt is made to restore broken connections to the database. Increasing this parameter lessens the risk of thrashing due to failed write attempts. | 600 | Integer value, in seconds |
| DBAuditTruncate DataToColLength | During database auditing, data must be truncated for insert operations to work on SQL Server and the Oracle database. This parameter decides the limit for truncation.<br>For Oracle Access Manager 7.0.x, if set to false, audit data is truncated at 255 characters.<br>For Oracle Access Manager 10.1.4.0.1, if set to false, audit data is truncated to 255 characters for the Oracle database and 170 characters for the SQL Server database.<br>For all releases, if set to true, audit data is truncated to the length of the column in the audit schema. | false | true<br>false<br>**Note:** For an Oracle database with an OCI connection type, set the value to false. Truncation to the length of the column is not supported for the OCI connection type. When an OCI connection type is used, the size limit is 255 characters. |

***Table B–9 (Cont.) globalparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `disable_native_ deactivate` | If the directory is Active Directory, NDS, or iPlanet5, when a user is deactivated, the application uses a directory-native deactivate feature to disable the account. This feature is enabled by default. | `true` | `true`<br>false |
| `dollarReturnedAs` | The escaped string representation of the "$" character as returned by the directory server. This is used in context of the ObDPostalAddress display type. Since "$" is the delimiter in a postal address string, some directory servers return it in escaped format. For example, NDS returns it as "\$", Netscape returns it as "\24". NOTE that when a '$' is part of the attribute value itself, it should be escaped and sent as "\24" as discussed in RFC 2252. | `\24` | `\24`<br>`\$`<br>and so on |
| `excludeOCsFor TreeInApplet` | This parameter specifies the list of object classes whose objects are excluded from display in the Identity System. For example, if you remove the group object class item from the list, the group objects will be visible in the Identity System applications.<br>By default, the Identity System does not display every object and attribute in the directory. This parameter enables you to expose object classes in the Identity System applications that would otherwise be hidden. | directory-dependent | directory-dependent |

***Table B–9 (Cont.) globalparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `exclusiveAutn Checkout` | If a directory server does not support concurrent binds on the same LDAP connection, this parameter ensures that the binds are serialized on the connection. This ensures that multiple connections can be established and that the load is balanced on these connections.<br>This value is set to true for NDS and cannot be changed. NDS does not support concurrent binds on a single LDAP connection. For any other directory that does not support concurrent binds on a single LDAP connection, you must add this parameter with a value of true to the globalparams file. | `true` | `true`<br>`false` |
| `ExcludeOCsFor TreeInApplet` | When there are many users under the same parent node, the performance of the user interface control (a Java applet) that enables you to graphically expand the node is adversely affected. This parameter enables you to specify a list of object classes for which expansion should not be performed. | `inetOrg Person` | Object classes that the customer wants to exclude |
| `formZero Threshold` | This parameter controls the space that Oracle Access Manager allocates to a buffer. | `1000` | Integer |
| `heartbeat_ldap_ connection_ timeout_in_ millis` | Used in configuring directory server failover. Specifies the amount of time Identity and Access Servers wait to establish a connection with the directory server. If a connection with the directory server is not established within this time, the Identity and Access Servers assume that the directory is down or not reachable, and the servers start establishing connections with the other directory servers. See the section on failover in the *Oracle Access Manager Deployment Guide* for details. | `4000` | A positive integer, in milliseconds<br>-1: Wait for the duration of the platform's connection timeout. If in this time a connection is not established, assume that the directory is down and start establishing connections with another directory server. |

***Table B–9 (Cont.) globalparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| heartbeat_ enabled | Indicates if the Identity and Access Servers should proactively identify when a directory server is down. Oracle recommends that you enable this function. Note that if your network is slow and heartbeat_ldap_ connection_ timeout_in_ millis is set to a low value (for example, 10 milliseconds), the heartbeat mechanism can give an incorrect indication that directory is unreachable when it is up and working. See the section on failover in the *Oracle Access Manager Deployment Guide* for details. | true | true<br>false |
| HTML_Message_ End_Tag | HTML support for message catalog changes. HTML_ Message_End_Tag is the configurable end tag. | <StopHTML> | Any valid HTML tag |
| HTML_Message_ Start_Tag | HTML support for Message Catalog changes. HTML_ Message_Start_Tag is the configurable start tag. | <StartHTML> | Any valid HTML tag |
| IsADSIEnabled | If using ADSI instead of LDAP to connect to Active Directory, this parameter is set to true. | None | true<br>false |
| IsBackward Compatible | The IsBackwardCompatible flag in the globalparams.xml file for the Access Server enables older WebGates to talk to the new Access Server. During the upgrade of the Access Server, this flag is set to true. This flag is set to false by default. If you upgrade all of your WebGates, you can reset this parameter to false. | false | true<br>false |

***Table B–9 (Cont.) globalparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `LargeStatic Groups` | In the Identity System, operations on large static groups, for example, groups with over 10,000 members, can cause memory to spike.<br>If a static group is too large, you can modify the method used to evaluate the group. Note that if you configure the `LargeStaticGroups` parameter, you must make corresponding changes in the Identity System to ensure that subgroups of this group are searched and evaluated as intended. Generally, you must include these subgroups directly in all search bases, workflow targets, and so on that reference the parent group. See the chapter on performance tuning in the *Oracle Access Manager Deployment Guide* for details. | None | The DN of the group. Multiple entries are permitted. The following is an example:<br>`<ValList xmlns="http://www.oblix.com" ListName="Large Static Groups"> <ValListMember Value="cn=testgroup, o=mycompany, c=us"> </ValListMember> </ValList> <ValList xmlns="http://www.oblix.com" ListName="Large Static Groups"> <ValListMember Value="cn=testgroup2, o=mycompany, c=us"> </ValListMember> </ValList>` |
| `LDAPMaxNoOf Retries` | This parameter limits the number of times that the Identity Server, Access Server, or Policy Manager can retry a query to a directory server.<br>This parameter provides a safeguard for when the value of the `LDAPOperationTimeout` parameter is too low. If the directory server is working, but the Oracle Access Manager component acts as if it is down, the component can go into an infinite loop of switching between failover directory servers. In this case, the operation never returns to the component that made the request.<br>This parameter applies to each query independently of other queries involved in processing a request. | `0`<br>Indicates that number of retries is the total number of primary and secondary directory servers that you have configured to communicate with the component. | `-1, 0,` or any positive whole number.<br>-1 indicates an infinite number of retries. Oracle recommends that you set the value to be greater than the number of directory servers that communicate with the Oracle Access Manager component. This ensures that at least one attempt is made to connect to each configured directory server. |

***Table B–9 (Cont.) globalparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `LDAPOperation Timeout` | This parameter sets an amount of time that the Identity Server, Access Server, or Policy Manager waits for a response from the directory server before failing over to a secondary directory server, if one is configured.<br>When processing a single user request, Oracle Access Manager components may issue multiple LDAP queries. The LDAPOperationTimeout parameter applies to each query independently of other queries involved in processing the same request. For example, this parameter sets the time that the component waits for a response from the directory server for a single entry of a search result.<br>You configure the time to wait for all search result entries using the Time Limit parameter in the directory profile. See the *Oracle Access Manager Administration Guide* for details. | `-1`<br>This value enables the directory server to determine the time to spend on the request.<br>**Warning:** If the directory server hangs, this default causes Oracle Access Manager to hang, too.<br>See the chapter on failover in the *Oracle Access Manager Deployment Guide* for details. | A positive number that indicates a time in milliseconds.<br>A value of `-1` gives control to the directory server.<br>Base the value on the amount of data in directory server, network latency, whether SSL is configured, and so on. A value that is too low can result in an infinite loop, where operational directory servers do not have adequate time to return a result.<br>See the chapter on failover in the *Oracle Access Manager Deployment Guide* for details. |
| `ListOfSupported DS` | This parameter lists all the supported data stores:<br>■ `OID`—Oracle Internet Directory<br>■ `IPLANET5`—Sun Directory Server 5.x<br>■ `Novell`—Novell Directory Services (NDS eDirectory)<br>■ `MSAD`—Microsoft Active Directory<br>■ `MSADAM`—Microsoft Active Directory Application Mode<br>■ `DIRX`—Siemens DirX<br>■ `IBMSWAY`—IBM Directory Server<br>■ `DataAnywhere`—Data Anywhere | `NCSP4`<br>`Novell`<br>`MSAD` | See the description |
| `locale_params` | This parameter contains all the necessary input information for running Oracle Access Manager in different locale modes. charset is character set, language is current language, doUtf Conversion indicates whether to do UTF conversion or not. | `charset: iso-8859-1`<br>`language: En_US`<br>`doUtf Conversion: NO` | charset: Any valid character set<br>language: Any valid language<br>doUtf Conversion: NO or `YES` |

***Table B–9 (Cont.) globalparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| logRequestUrl | If logRequestUrl is set to true, a URL is set to log requests. It is used by WebPass. | false | true<br>false |
| maxDBAgentCache Size | Defines the directory agent cache size. | 2000 | Any positive integer |
| maxForRanged Member Retrieval | This parameter must be set to retrieve members from groups that have a large number of static members. This parameter is used for Active Directory 2000 and Active Directory 2003. | 1000 | The default value is 1000, which is appropriate for Active Directory 2000. For Active Directory 2003, set this value to 1500. |
| MigrateUserData To1014 | With Release 10.1.4 Patchset 1 (10.1.4.2.0) a new parameter in the globalparams.xml, MigrateUserDataTo1014, is used by the Identity Server and Access Server during a user's first login.<br>See the *Oracle Access Manager Administration Guide* for details on Lost Password Management and the *Oracle Access Manager Upgrade Guide* for details on the in-place component upgrade and zero downtime upgrade. | If you upgrade from an earlier release using the zero downtime upgrade method, the result is a 10.1.4.2.0 instance and the value is false by default.<br>If you upgrade from an earlier release using the in-place component method, and then apply the Release 10.1.4 Patchset 1 (10.1.4.2.0) the result is a 10*g* (10.1.4.0.1) instance and the value is true by default.<br>If you install 10*g* (10.1.4.0.1) and then apply Release 10.1.4 Patchset 1 (10.1.4.2.0) , the value is true by default. | true<br>false |
| nsAuthUser | Name of the authentication user variable for a Netscape or IIS Web server | HTTP_OBLIX_ UID | Authentication user variable name. For example, auth-user (for Netscape)<br>SM_USER (for Siteminder) |

***Table B–9 (Cont.) globalparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `oisClientTimeout Threshold` | How long (in seconds) an Identity Server attempts to contact another Identity Server before it considers it unreachable, in which case an error is logged.<br>Identity Servers communicate with one another primarily for cache flush requests. When a cache is updated on one server, that server tells the other servers to update their caches. The timeout for asynchronous cache flush requests is configured on this parameter. | `60` | An integer, representing number of seconds.<br>Absence of this parameter or a value of -1 indicates synchronous cache flushing. |
| `OutputFormat` | Request an output format, for use with PresentationXML.<br>To override the default value for this parameter, include the `format` parameter in the Presentation XML request. | `default` | `default`: Combine the XML and stylesheet at the server (server side processing).<br>`xml`: Send the XML and the stylesheet to the browser (client side processing). You cannot override this in the Presentation XML request. |
| `PortalIdCache` | PortalIdCache defines information that controls portalId caching.<br>PortalIdCache.maxNum Elems indicates the maximum number of portal IDs to be cached.<br>PortalIdCache.timeout sets the timeout of the portal Id cache refresh.<br>PortalIdCache.disabled indicates whether to disable or enable the Portal ID cache. | `PortalId Cache. maxNumElems` — `250`<br>`PortalId Cache. timeout` — `0`<br>`PortalId Cache. disabled` — `false` | `PortalId Cache. maxNumElems` — *`Integer`*<br>`PortalId Cache. timeout` — *`time in seconds`*<br>`PortalId Cache. disabled` — `false` or `true` |
| `ResourceFilter SearchScope` | The level of scope of search on a given searchbase. | `1` | `1` indicates 1 level down, to as many levels as exist. Entry of any other value uses the default value (`1`). |

*Table B–9 (Cont.) globalparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| samAccountName Length | The number of characters permitted in a Security Access Manager account name. This parameter applies to installations that run Active Directory in mixed mode (not native mode).<br>Increase the default value if you are running in native mode. | 20 | An integer. |
| sendMail Notification Enabled | Enables or disables notification events in workflow, attribute change, and container limit events. The flag has no effect on bug or feedback emails since these are routed though the user's email client. | false | true<br>false |
| SQLDBType | Identifies the type of database used for auditing. | SQLServer | SQLServer: Indicates a SQL Server database.<br>Oracle: Indicates an Oracle Database that uses an ODBC connection type.<br>Oracle_OCI: Indicates an Oracle Database that uses an OCI connection type. |
| StringStack | Controls the amount of space that the Oracle XML Developer's Kit can use for XSL transformation of the Identity stylesheets. A value of at least 512 is required. For complex stylesheets, the tranformation engine can run out of space, and the Identity Server can exit. You can set this parameter to a higher value for complex stylesheets. | 512 | An integer value, in KB. Minimum value: 512. |
| TimeToWaitFor ServiceThreads | A thread that wants to flush the osd and config db caches needs to wait for all other service threads to complete before flushing. This value is the maximum time the flush thread should wait, in seconds, before flushing. If all service threads complete before this time, then the flush thread will stop waiting and start flushing. | 60 | Integer value greater than or equal to zero.<br>Zero is legal but not a good idea; setting this value too low could lead to SEGV crashes |

***Table B–9 (Cont.) globalparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| TurnOffNested GroupEvaluation | This parameter only applies to the Access Server.<br>There are three types of groups in a directory:<br>■ Static groups have a list of members<br>■ Dynamic groups are defined by a filter<br>■ Nested groups consist of one or more static, dynamic, or nested groups<br>This parameter enables or disables the evaluation of nested groups in the directory. It applies to authentication and authorization actions that use the obmygroups parameter and to groups that are assigned to Allow Access and Deny Access conditions in authorization schemes.<br>The default value of false means that nested group evaluation is enabled.<br>When set to true, nested group evaluation is disabled.<br>If you do not use nested groups in your directory, you can set the value of this parameter to true to enhance system performance. | false | true<br>false |
| UidInfoCache | This parameter contains information about uid caching. When configuring this parameter, to optimize group performance in the Identity System, set the maximum number of elements to double the number of user entries in the directory server.<br>UidInfoCache.maxNumElems — indicates the max number of uid to be cached.<br>UidInfoCache.timeout — sets the time out of the uid cache.<br>UidInfoCache.disabled — indicates whether to disable or enable the Uid info cache. | UidInfo Cache.maxNu mElems - 50000<br>UidInfo Cache .timeout - 0<br>UidInfo Cache .disabled - false | UidInfoCache .maxNumElems— An integer. The default is 50000, which represents 50 KB.<br>UidInfoCache .timeout — Time in seconds<br>UidInfoCache .disabled — false or true |
| UseLDAPFor Authentication | In a pure ADSI environment, if this flag is enabled, Oracle Access Manager will use LDAP for authentication calls. All other operations would go through ADSI. | None | true<br>false |

***Table B–9 (Cont.) globalparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| whichAttrIsLogin | This parameter indicates which directory attribute is used to log into Oracle Access Manager. | HTTP_OBLIX_LOGIN_VAR | Any directory attribute or HTTP_OBLIX_LOGIN_VAR |
| whichVarIsOblixLang | This parameter specifies the name of the header variable that specifies the language of the request. | HTTP_OBLIX_LANGUAGE | Header variable name |
| whichVarIsAcceptLang | This parameter specifies the name of the header variable in the user's browser that specifies the language of the request. | Accept-Language | Header variable name |
| whichVarIsUserType | Name of the HTTP header variable containing user type information. The value must correspond to obnavigation.xml. This is additional support of navigation if the usertype parameter is not in the URL, mainly for single sign-on. | HTTP_OBLIX_USER_TYPE HTTP | Header variable name |
| XMLStructureCache | This cache stores in memory the static portion of each XML document.<br>XMLStructureCache.maxNumElems—Maximum number of elements to be stored in the cache (integer).<br>XMLStructureCache.timeout—Number of seconds that an element remains in the cache. If this value is 0, then elements are never timed out of the cache.<br>XMLStructureCache.disabled—If this argument is set to "true", the cache is disabled. | XMLStructureCache.maxNumElems — 20<br>XMLStructure Cache. timeout — 0<br>XMLStructureCache.disabled — false | XMLStructureCache.maxNumElems — Any integer<br>XMLStructureCache. timeout — Any valid seconds<br>XMLStructureCache. disabled — false or true |
| XSLProcessor | When using IdentityXML, the XSLProcessor parameter indicates the processor to use when generating the page.<br>Note that the default value is the only officially supported value. This value indicates that the XDK processor should be used. The other processor types should be used only in non-production environments for testing XSL processor issues. | default | default<br>XALAN<br>DGXT |

*Table B–9 (Cont.) globalparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `XSLstylesheet CacheSize` | Controls the maximum number of stylesheets to hold in the cache. A cached stylesheet is in a binary form that can be used immediately in an XSL transformation to generate a requested page. If the stylesheet for a requested page is not in the cache, it must be loaded from disk and processed by the XML parser before it can be used for a transformation. Caching the most frequently used pages can reduce the perceived latency. The trade-off is that cached binary stylesheets can be quite large. (Exactly how large depends on your stylesheet design.) An efficient strategy to conserve memory is to set this parameter slightly higher than the number of pages that you consider frequently used. All those stylesheets will be cached, and relatively infrequent ones can be brought into cache without flushing the common ones. | `20` | Any integer greater than zero. *Do not* use a value less than or equal to zero. If you do, an internal test value is used; this value is *not* zero. |
| `XSLstylesheet LiveUpdate` | This causes the following behavior when the stylesheet for the requested page is already in the stylesheet cache:<br>true — Check timestamp on the top-level stylesheet file. If the file is newer, refresh the cache entry. true is convenient because you do not have to restart the server or artificially fill the cache in order to see the result of a stylesheet update.<br>false — Do not check the timestamp. If the stylesheet is cached, use it. In a stable system, a value of false eliminates unnecessary file system access for cached stylesheets and can result in better performance. | false | `true`<br>`false` |

*Table B–10 oblixadminparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `csv_field_delim` | A CSV field delimiter that is used to separate two fields when generating reports. | `,`<br>(comma) | |
| `csv_value_delim` | CSV value delimiter is used to separate two values when generating reports. | `,`<br>(comma) | |

*Table B–10 (Cont.) oblixadminparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| config_meta_ attr_applet_bg | An RGB hexadecimal number that defines the configuration attributes background color. | cccccc | An RGB hexadecimal number for a color |
| config_meta_ attr_applet_fg | An RGB hexadecimal number that defines the configuration attributes foreground color. | 000000 | An RGB hexadecimal number for a color |
| mime_type_file_ location | The location of the MIME type file. | ../../admin /bin/mime_ types.lst | Do not configure |
| oblixNode | The RDN of the node under which all the Oblix configuration information is stored. This is prefixed to the config DN that you specify during setup. The entire DN is the container for all Oblix data. For example, if the configuration DN was specified as "o=company,c=us", and the oblixNode parameter is given the value "o=configdata", then the oblix container DN is "o=configdata, o=company,c=us". | The parameter is not specified in the installed version of this file. Until specified otherwise during setup, the value is taken to be o=oblix. | Any valid RDN values such that they satisfy the container requirements of the parent node [the config DN]. |

*Table B–11 oblixappparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| checkChange AttributeEven AllowModify | For performance reasons, if a user has write (modify) permissions for an attribute, applications do not check that the user is a participant in a Change Attribute workflow for that attribute.<br>If this flag is true and the user has write permission, applications check that the user is a participant. This causes a Request button(s) to appear in the application, next to the attribute to be modified. | false | true<br>false |
| csv_field_delim | A CSV field delimiter is used to separate two fields when generating reports. | ,<br>(comma) | |
| csv_value_delim | A CSV value delimiter is used to separate two values when generating reports. | ,<br>(comma) | |
| enable_oaview | Enable optional authentication view. | false | true<br>false<br>or any other string |

***Table B–11 (Cont.) oblixappparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| group_cgi | The URL to get to a group application. | ../../group servcenter/ bin/ groupserv center.cgi | ../../group servcenter/ bin/group servcenter. cgi |
| group_view_ program | The program that is used to view a group profile (this is used to append to the URL as &program=view) or whatever program you want the application to go to (during cross application linking) view a group. | view | view<br>Go to the Group Manager application for other options such as viewing member details, and so on |
| initial_search_ advance | Use the initial search as the first view when user wants to perform a search. | false | true<br>false<br>or any other string |
| initial_search_ advance_ nooffields | The number of fields to display for an initial advanced search. Use with initial_search_advance. | 3 | Any positive integer |
| object_cgi | The URL to get to the Organization Manager application. | ../../objser vcenter/bin/ objservcente r.cgi | ../../objserv center/bin/ objservcenter .cgi |
| object_view_ program | The program used to view an object profile (this is used to append to the URL as &program=view) or whatever program you want the application to go to (during cross application linking) view a object. | view | view<br>(Go to the group manager application for other options) |
| search_result_ show_count | Show the count for the number of search results returned in a search operation. | false | true for true<br>false<br>or any other string |
| search_result_ views | When a search is performed, these are the possible display format(s) for the results. Any combination of these values is allowed. Also the order of the search results side tabs depends on the order of the values listed. The absence of any one of these values disables that search results view format. | table_view<br>custom_view | table_view<br>custom_view |
| searchSame AttrAsOr | If the same attribute has provided multiple values in a search request, assume that it is an AND if set to false or an OR if set to true. | false | true<br>false |

*Table B–11 (Cont.) oblixappparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| searchString MinimumLength | The minimum number of characters that the end user needs to provide in order to perform a search operation. The value can be overridden for each of the Identity applications by adding this parameter to the parameter file that is specific to the Identity application. | 0 | Any positive integer. |
| user_cgi | The URL to access an Identity application, for example, User Manager. | ../../user servcenter/ bin/userserv center.cgi | Same as default |
| user_view_ program | The program that is used to view a user profile (this is used to append to the URL as &program=view) or whatever program you want the application to go to view a user (during cross-application linking). | view | view |
| validateAllDn ViewMode | Turns DN validation on or off when a user views the values of all DN-type attributes. If it is true, all DN attributes are validated before being displayed to the user, and the logged in user only sees values of the DN-type attributes that he or she has view access to. View access is set on the class attribute for the object class of the DN. View access is also determined by localized access, that is, this DN falls under the user's search bases with respect to the object class type of the DN. | false | true<br>false |
| validateAllDn ModifyMode | Turns DN validation on or off for the modify mode for the values of all DN-type attributes. If it is true, all DN attributes are validated before being displayed to the user in the form. Validation means that the logged in user see values of the DN that he or she has view access to. View access is set on the class attribute of the object class of the DN. View access can also be localized access, that is, this DN falls under the user's search bases with respect to the type of object class of the DN. The user is allowed to add and remove only the DNs that he has access to. | false | true<br>false |

*Table B–11 (Cont.) oblixappparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| validateDnAttrs ViewMode | Turns DN validation on or off for view mode for the values of the specified DN type attribute. This is a ValList parameter. You provide the list of attributes as a vallist. This parameter is used only if the validateAllDnViewMode parameter is set to false. This enables attribute level validation. The parameter validateAllDnViewMode provides global validation.<br>DN attributes in this vallist are validated before being displayed. Validation means that the logged in user sees values of the DN that he or she has view access to as specified on the class attribute of the object class of the DN, or that he or she has localized access to. That is, this DN falls under the user's search bases with respect to the type of object class of the DN. | none | A vallist of DN type attributes. Use LDAP names, not display names. |
| validateDnAttrs ModifyMode | Turns DN validation on or off for modify mode for the values of the specified DN type attribute. This is a ValList parameter. You provide the list of attributes as a vallist. This parameter is used only if the parameter validateAllDnModifyMode is set to false. This enables attribute level validation, whereas the parameter validateAllDnModifyMode provides global validation.<br>DN attributes that you specify in this vallist are validated before being displayed in the form. Validation means that the logged in user only sees values of the DN that he or she has view access to, as specified on the class attribute of the object class of the DN, or if he or she has localized access. With localized access, this DN falls under the user's search bases with respect to the type of object class of the DN. | none | A vallist of DN type attributes. Use LDAP names, not display names. |

***Table B–12 oblixbaseparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| groupservcenter_admin_application_info with sub parameters:<br>VERSION<br>CODE<br>ID<br>PROGRAM<br>DESCRIPTION<br>NAVBAR_GIF<br>NAVBAR_GIF2<br>NAVBAR_GIFDIR | information about the Group Manager Admin application. The listed parameters define the version of the application running, the code used for license checking, relative path of the application, the mouseover message for the application, the name of the GIF used on the top navigation bar, and the relative path to the GIF used on the top navigation bar. | VERSION=5.00<br>CODE=GMAD<br>ID=groupservcenter_admin<br>PROGRAM=../../admin/bin/front_page_admin.cgi?targetApplication=groupservcenter_admin<br>DESCRIPTION=Group Manager Admin<br>NAVBAR_GIF=OTABgroupmanager<br>NAVBAR_GIF2=OTABgroupmanager2<br>NAVBAR_GIFDIR=../../common/ui/ style0 | DESCRIPTION can be any text string<br>NAVBAR_GIF can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>NAVBAR_GIF2 can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR |
| userservcenter_admin_application_info<br>with sub parameters:<br>VERSION<br>CODE<br>ID<br>PROGRAM<br>DESCRIPTION<br>NAVBAR_GIF<br>NAVBAR_GIF2<br>NAVBAR_GIFDIR | information about the User Manager Admin application. The listed parameters define the version of the application running, the code used for license checking, relative path of the application, mouseover message for the application, name of the GIF used on the top navigation bar, and the relative path to the GIF used on the top navigation bar. | VERSION=5.00<br>CODE=UMAD<br>ID=userservcenter_admin<br>PROGRAM=../../admin/bin/front_page_admin.cgi?targetApplication=userservcenter_admin<br>DESCRIPTION=User Manager Admin<br>NAVBAR_GIF=OTABusermanager<br>NAVBAR_GIF2=OTABusermanager2<br>NAVBAR_GIFDIR=../../common/ui/style0 | DESCRIPTION can be any text string<br>NAVBAR_GIF can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>NAVBAR_GIF2 can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR |
| access_control_applet with sub-parameters:<br>applet_dimension_width<br>applet_dimension_height<br>column_width | This list contains customization values for dimensions of the Attribute Access Control applet. | applet_dimension_width=630<br>applet_dimension_height=765<br>column_width=135 | A positive integer |

***Table B–12 (Cont.) oblixbaseparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| access_ front_page_ admin_ application_ info with sub parameters:<br>VERSION<br>CODE<br>ID<br>PROGRAM<br>DESCRIPTION<br>NAVBAR_GIF<br>NAVBAR_GIF2<br>NAVBAR_ GIFDIR | information about the Access Administration application. The listed parameters define the version of the application running, the code used for license checking, relative path of the application, mouseover message for the application, name of the GIF used on the top navigation bar, and the relative path to the GIF used on the top navigation bar. | VERSION=5.00<br>CODE=AD30<br>ID=access_front_ page_admin<br>PROGRAM=../../../ ../../access/obli x/apps/admin/bin/ front_page_ admin.cgi?<br>DESCRIPTION= Access Administration<br>NAVBAR_GIF= T1TABaccessadmin<br>NAVBAR_GIF2= T1TABaccessadmin<br>NAVBAR_ GIFDIR=../../comm on/ui/style0 | DESCRIPTION can be any text string<br>NAVBAR_GIF can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>NAVBAR_GIF2 can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR |
| applet_ customiza tions | Enables you to configure dimensions for various applets used in the Identity System<br>This compound list contains the following valname lists.<br>workflow_definition_ applet<br>setsearchbase_applet<br>delegate_admin_ applet<br>access_control_ applet | According to the list | |
| Apply_ LostPwdMgmt | Specify whether to apply lost password management. | Default parameter in params file is Yes. If no value is specified in the parameter catalog, then product assumes the value is No. | Yes (case insensitive)<br>All other values mean no |
| certAttrs | Attribute values that can show up on a certificate. | issuerDN<br>validFrom<br>validTill | This is a multi-valued parameter:<br>issuerDN<br>validFrom<br>validTill<br>SubjectDN<br>PubKeyAlgID<br>Version |

***Table B–12 (Cont.) oblixbaseparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `checkuseris deactivated` | When a user initiates an action, Oracle Access Manager can be set to check to see if that user is deactivated. By default, this check is disabled in order to reduce the number of reads of the directory. The check can be enabled by adding this parameter, and setting its value to *true* . | `false` | `true`<br>`false` |
| `containment limit_applet`<br>with sub-parameters:<br>`applet_ dimension_ width`<br>`applet_ dimension_ height`<br>`column_width` | This list contains values for dimensions of the Containment Limit applet. | `applet_dimension_ width =805`<br>`applet_dimension_ height=467`<br>`column_width=135` | A positive integer |
| `cookieBust Limit` | Number of people that can be selected, for example, in the Selector application, before the cookie size limit is exceeded. This depends greatly on the size of the DN for each entry, and upon the operating system. Suggested values are 15 or less for Active Directory, 25 or less for others. | `30` | A positive integer. If there are any<br>Latin-1 characters in the user DN, then each such Latin-1 character should be counted as 3 characters (this is because Latin-1 characters are escaped to their %xx hex equivalent in the cookie) |
| `dateSep` | A character used to separate fields in a date value. | `/` | A single character |

***Table B–12 (Cont.) oblixbaseparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `dateType` | Different formats to display a date value. | `ObMDYDate` | `ObMDYDate` (12/31/2000)<br>`ObDMYDate` (31/12/2000)<br>`ObDMonthYDate` (31-Dec-2000),<br>`ObMonthDYDate` (Dec-31-2000),<br>`ObIntegerDate` (*yyyy-mm-dd*T*hh*:*mm*:*ss*),<br>`ObISO8061Date` (yyyy-mm-ddThh:*mm*:*ssTZD* or *yyyymmdd*T*hhmmss**TZD*), where *TZD* = {+-}*hh*:*mm*) |
| `default_ display_vals` with sub parameters:<br>`default DisplayName`<br>`default DisplayVal` | Display name for a no-operation, single-selection menu item and its corresponding value. This is used while creating a report. | `default DisplayName=None`<br>`default DisplayVal=` | Any string |
| `default Display ResultVal` | Default number of values to display in the results for a search. It is used when the user first does a search, or if the user's cookie file is not available. Subsequent searches get this value from the user's cookie. This value also controls what is shown on Generate Reports, Incoming Requests, Outgoing Requests, and Monitor Requests pages in the Identity Server. | `8` | A positive integer |
| `delegate_ admin_applet`<br>with sub parameters:<br>`applet_ dimension_ width`<br>`applet_ dimension_ height`<br>`column_width` | This list contains values for dimensions of the Delegate Admin applet. | `applet_dimension_ width=630`<br>`applet_dimension_ height=665`<br>column_width=135 | A positive integer |

***Table B–12 (Cont.) oblixbaseparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| front_page_admin_application_info with sub parameters:<br>VERSION<br>CODE<br>ID<br>PROGRAM<br>DESCRIPTION<br>NAVBAR_GIF<br>NAVBAR_GIF2<br>NAVBAR_GIFDIR | Information about the Identity Administration application. The listed parameters define the version of the application running, the code used for license checking, relative path of the application, mouseover message for the application, name of the GIF used on the top navigation bar, and the relative path to the GIF used on the top navigation bar. | VERSION-5.00<br>CODE=FPAD<br>ID=front_page_admin<br>PROGRAM=../../admin/bin/front_page_admin.cgi<br>DESCRIPTION= Identity Administration<br>NAVBAR_GIF=T1TABidentityadmin<br>NAVBAR_GIF2=T1TABidentityadmin<br>NAVBAR_GIFDIR=../../common/ui/style0 | DESCRIPTION can be any text string<br>NAVBAR_GIF can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>NAVBAR_GIF2 can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR |
| groupservcenter_application_info with sub parameters:<br>VERSION<br>CODE<br>ID<br>PROGRAM<br>DESCRIPTION<br>NAVBAR_GIF<br>NAVBAR_GIF2<br>NAVBAR_GIFDIR<br>WORKFLOW_ALLOWED | Specific information about the Group Manager application. The listed parameters define the version of the application running, the code used for license checking, relative path of the application, mouseover message for the application, name of the GIF used on the top navigation bar, and the relative path to the GIF used on the top navigation bar. | VERSION=5.00<br>CODE=GM50<br>ID=groupservcenter<br>PROGRAM=../../groupservcenter/bin/groupservcenter.cgi<br>DESCRIPTION=Group Manager<br>NAVBAR_GIF=T1TABgroupmanager<br>NAVBAR_GIF2=T1TABgroupmanager<br>NAVBAR_GIFDIR=../../common/ui/style0<br>WORKFLOW_ALLOWED=true | DESCRIPTION can be any text string<br>NAVBAR_GIF can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>NAVBAR_GIF2 can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>WORKFLOW_ALLOWED if set to true means allowed, any other values mean not allowed |
| installed_apps | Name of the applications that are enabled. | N.A. | For the Identity System, the applications are:<br>userservcenter (User Manager), groupservcenter (Group Manager), objservcenter (Organization Manager) |

***Table B–12 (Cont.) oblixbaseparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| loginslack | Oracle Access Manager expects the machine times for all Web Servers running Policy Manager and Identity Server to be synchronized. If they are not, logging in to the Policy Manager or the Access System Console is not possible. This parameter specifies a slack time in seconds by which the machine times may differ. | 60 | A positive integer (in seconds) |
| max_url_ length | The maximum URL length for the specified browsers. The length is expressed in bytes. | netscape=4096<br>ie=1024 | netscape: A positive integer<br>ie: A positive integer |
| objserv center_ admin_ application_ info<br>with sub parameters:<br>VERSION<br>CODE<br>ID<br>PROGRAM<br>DESCRIPTION<br>NAVBAR_GIF<br>NAVBAR_GIF2<br>NAVBAR_ GIFDIR | information about the Organization Manager Admin application. The listed parameters define the version of the application running, the code used for license checking, relative path of the application, mouseover message for the application, name of the GIF used on the top navigation bar, and the relative path to the GIF used on the top navigation bar. | VERSION=5.00<br>CODE=OMAD<br>ID=objservcenter_ admin<br>PROGRAM=../../adm in/bin/front_ page_ admin.cgi?targetA pplication=objser vcenter_admin<br>DESCRIPTION=Org. Manager Admin<br>NAVBAR_GIF= OTABgroupmanager<br>NAVBAR_GIF2= OTABgroupmanager2<br>NAVBAR_ GIFDIR=../../comm on/ui/style0 | DESCRIPTION can be any text string<br>NAVBAR_GIF can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>NAVBAR_GIF2 can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR |

***Table B–12 (Cont.) oblixbaseparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| objserv center_ application_ info with sub parameters:<br>VERSION<br>CODE<br>ID<br>PROGRAM<br>DESCRIPTION<br>NAVBAR_GIF<br>NAVBAR_GIF2<br>NAVBAR_ GIFDIR<br>WORKFLOW_ ALLOWED | Information about the Organization Manager application. The listed parameters define the version of the application running, the code used for license checking, relative path of the application, mouseover message for the application, name of the GIF used on the top navigation bar, and the relative path to the GIF used on the top navigation bar. | VERSION=5.00<br>CODE=OM50<br>ID=objservcenter<br>PROGRAM=../../ objservcenter/bin / objservcenter.cgi<br>DESCRIPTION=Org. Manager<br>NAVBAR_GIF= T1TABorgmanager<br>NAVBAR_GIF2= T1TABorgmanager<br>NAVBAR_ GIFDIR=../../comm on/ui/style0<br>WORKFLOW_ ALLOWED=true | DESCRIPTION can be any text string<br>NAVBAR_GIF can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>NAVBAR_GIF2 can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>WORKFLOW_ ALLOWED value of true means allowed, any other values mean not allowed |
| policyserv center_ application_ info with sub parameters:<br>VERSION<br>CODE<br>ID<br>PROGRAM<br>DESCRIPTION<br>NAVBAR_GIF<br>NAVBAR_GIF2<br>NAVBAR_ GIFDIR | Information about the Policy Manager application. The listed parameters define the version of the application running, the code used for license checking, relative path of the application, mouseover message for the application, name of the GIF used on the top navigation bar, and the relative path to the GIF used on the top navigation bar. | VERSION=1.0<br>CODE=PS10<br>ID= policyservcenter<br>PROGRAM=../../../ ../../access/obli x/apps/front_ page/bin/front_ page.cgi<br>DESCRIPTION= Policy Manager<br>NAVBAR_GIF= T1TABaccess manager<br>NAVBAR_GIF2= T1TABaccess manager<br>NAVBAR_ GIFDIR=none | DESCRIPTION can be any text string<br>NAVBAR_GIF can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>NAVBAR_GIF2 can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR |
| setsearch base_applet, with sub parameters:<br>applet_ dimension_ width<br>applet_ dimension_ height<br>column_width | This list contains values for dimensions of the Set Searchbase applet. | applet_dimension_ width=650<br>applet_dimension_ height=740<br>column_width=135 | A positive integer |

*Table B–12 (Cont.) oblixbaseparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| show Replication Warnings | This parameter determines whether to display replication-related warnings, for example, "Your changes may not be immediately available," after any of the following operations: modify or add attributes, create ticket, process ticket, change style, modify or add location. | true | true<br>false |
| sysmgmt_ application_ info<br>with sub parameters:<br>VERSION<br>CODE<br>ID<br>PROGRAM<br>DESCRIPTION<br>NAVBAR_GIF<br>NAVBAR_GIF2<br>NAVBAR_ GIFDIR | Information about the System Admin application. The listed parameters define the version of the application running, the code used for license checking, relative path of the application, mouseover message for the application, name of the GIF used on the top navigation bar, and the relative path to the GIF used on the top navigation bar. | VERSION=5.00<br>CODE=SMAD<br>ID=sysmgmt<br>PROGRAM=../../ admin/bin/front_ page_ admin.cgi?target Application=sysmg mt<br>DESCRIPTION= System Admin<br>NAVBAR_ GIF=OTABsystem admin<br>NAVBAR_ GIF2=OTABsystemad min2<br>NAVBAR_ GIFDIR=../../comm on/ui/style0 | DESCRIPTION can be any text string<br>NAVBAR_GIF can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>NAVBAR_GIF2 can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR |
| system_ consoles | The application to appear on the System Console. | front_page_admin | This is a multi-valued parameter:<br>front_page_ admin<br>policyservcent er<br>access_front_ page_admin |
| top_frame | Name of the top frame in the Front Page application. | _top | A frame name (eg._top) |
| top_main_ frame | Name of the main frame in the Front Page application. | main_frame | A frame name (for example, main_ frame) |

***Table B–12 (Cont.) oblixbaseparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| userserv center_ application_ info with sub parameters:<br>VERSION<br>CODE<br>ID<br>PROGRAM<br>DESCRIPTION<br>NAVBAR_GIF<br>NAVBAR_GIF2<br>NAVBAR_ GIFDIR<br>WORKFLOW<br>_ALLOWED | Information about the User Manager application. The listed parameters define the version of the application running, the code used for license checking, relative path of the application, mouseover message for the application, name of the GIF used on the top navigation bar, and the relative path to the GIF used on the top navigation bar. | VERSION=5.00<br>CODE=UM50<br>ID=userservcenter<br>PROGRAM=../../user servcenter/bin/u serservcenter.cgi<br>DESCRIPTION=User Manager<br>NAVBAR_GIF= T1TABuser manager<br>NAVBAR_ GIF2=T1TABuser manager<br>NAVBAR_ GIFDIR=../../comm on/ui/style0<br>WORKFLOW_ ALLOWED=true | DESCRIPTION can be any text string<br>NAVBAR_GIF can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>NAVBAR_GIF2 can be any gif name with a .gif extension that exists in the NAVBAR_GIFDIR<br>WORKFLOW_ ALLOWED if true means allowed, any other values mean not allowed |
| ssologouturl | This parameter overrides the SSO Logout URL parameter configured in the Access System Console | None | Any valid URL that does the single sign-on logout. |
| workflow_ definition_ applet<br>with sub-parameters:<br>applet_ dimension_ width<br>applet_ dimension_ height<br>column_ width_ workflowdef<br>column_ width_ workflow_ targetdef<br>column_ width_ workflow_ stepdef<br>column_ width_ participant_ notifee | This list contains values for dimensions of the workflow applet. This includes the three pages in workflow creation: workflow definition, target definition and step definition. The column_ width parameters apply to the left column of all the respective applets. | applet_dimension_ width=650<br>applet_dimension_ height=625<br>column_width_ workflowdef=160<br>column_width_ workflow_ targetdef=160<br>column_width_ workflow_ stepdef=160<br>column_width_ participant_ notifee=100 | A positive integer |

***Table B–13 configdbparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `enableLDAP Referral` | When the directory server returns a referral, this parameter controls whether the referral is automatically chased. A referral message provides the address of a master server. A client can chase a referral. | true (automatically chase the referral) | `true`<br>`false` |

***Table B–14 groupdbparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `allow_non_rdn_ modifications` | If this parameter is set to true, the user can modify an attribute that is part of the DN, if they have modification rights. This check is imposed because non-RDN modification affects the DN itself and results in moving the directory entry to a different subtree. This affects referential integrity issues. This parameter enables the administrator to prevent such operations.<br>This only applies to attributes that make up the non-RDN portion of the DN. For example, ou, o, and c in the DN "cn=John Smith, ou=Corporate, o=Company,c=US". | `false` (do not allow non-RDN modifications) | true (allow non-RDN modifications)<br>`false` (do not allow non-RDN modifications) |
| `default_policy` | Default policy for access control to generic or location objects when no policy is found. | `false` (Deny Access) | `true` (Allow Access)<br>`false` (Deny Access) |

*Table B–14 (Cont.) groupdbparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `default_ subscription_ policies` | Selects which of the four subscription policies supported by Group Manager are available.<br>The policies are displayed at the time of definition for a Create Group workflow. In the workflow definition, the user can select the subscription policies he wants to allow for groups that are created using this workflow definition. Then at the time of the actual create operation by the end-user, these options are shown in the Subscription Policy field, as a list, from which the end-user is supposed to select one policy that he wants to apply to this group.<br>Note that the subset of the policies that are selected during workflow definition is also stored in each group entry created using that workflow, in an attribute hidden from the user. Later on, if the user wants to modify the subscription policies, then the values are obtained form this hidden attribute and again shown in the single-selection list. | All of the possible values are made available by default. | `SubscriptionPolicyOpen` — Automatic, no approval necessary<br>`SubscriptionPolicyOpenFilter` — Automatic if new member satisfies filter, no approval necessary<br>`SubscriptionPolicyControlledWorkflow` — Needs approval through a workflow<br>`SubscriptionPolicyClosed` — Nobody can subscribe to this group |

*Table B–14 (Cont.) groupdbparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| default_ subscription_ policy | Default policy for group subscription when no policy is found in the group entry. | Subscription PolicyClosed | The allowed policies are:<br>Subscription PolicyOpen (Automatic, no approval necessary)<br>Subscription PolicyOpen Filter<br>(Automatic if new member satisfies filter, no approval necessary)<br>Subscription Policy Controlled Workflow (Needs approval through workflow)<br>Subscription PolicyClosed (nobody can subscribe to this group)<br>See the default_ subscription _policies parameter in this table for more information. |
| extra_group_ filter | An LDAP filter. This filter, if specified, is used by Group Manager to qualify group searches. This filter may contain an Oblix rule substitution. | ou=$ou$. The meaning of this filter is that the group being searched must have the same ou value as the user who initiates the search. For example, if the user belongs to ou=corporate, a filter of ou=corporate is used to qualify group searches. | Any valid LDAP filter, which may or may not contain a valid rule substitution.<br>Note: Any characters that are valid syntax for an LDAP filter, but are also xml markup, must be specified as entity references. |

*Table B–14 (Cont.) groupdbparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| max_filter_ conditions | This parameter can be used to control the length of the filter that is used in group queries. It is an integer that says how many elements can make up the filter. The Group Manager application uses a search algorithm to minimize the number of searches done. It uses OR logic to combine multiple filters (essentially queries) into one large filter. But every directory server has its own limitations on the length of a filter used in doing the LDAP searches. This parameter enables the administrator to tune it according to the directory server used. | 20 | Any integer value, depending on what the directory server is able to handle |
| use_extra_ group_filter_ expansion | Indicates whether or not to use the extra_group_filter to further qualify group searches in group expansion. | false | true<br>false |
| use_extra_ group_filter_ mygroups | Indicates whether or not to use the extra_group_filter to further qualify group searches in the MyGroups Profile. | false | true<br>false |
| user_defined_ unique_member | This parameter is applicable to IBM SecureWay. In the SecureWay schema, a uniquemember attribute is required in the schema. Deactivating a user who is also the last member of a group causes an objectclass violation if the deactivation is done through User Manager.<br>Therefore, User Manager attempts to replace this soon-to-be deactivated user with an entry for the Directory Administrators group. This parameter is used in place of the Directory Administrator group, if specified. | None | Any valid dn |

***Table B–15 objectdbparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `allow_non_rdn_ modifications` | If this parameter is set to true then modifying an attribute that is part of the DN will effect the DN itself and will result in moving the directory entry to a different subtree. This only applies to attributes that make up the non-RDN portion of the DN. For example, ou, o, and c in the DN "cn=John Smith, ou=Corporate, o=Company, c=US". Unlike similar parameter in groupdbparams.xml and userdbparams.xml, this parameter is configured for each object class. | false (do not move the entry) for each object class | true (allow moving) for each object class<br>false (do not move the entry) for each object class |
| `default_ containment_ policy` | Default policy for Containment Limit when no policy is found. | `false` (Do not Allow Create) | `true` (Allow Create)<br>`false` (Deny Create) |
| `default_policy` | Default policy for access control to generic or location objects when no policy is found. | `false` (Deny Access) | true (Allow Access)<br>`false` (Deny Access) |

***Table B–16 workflowdbparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `qs_state_ groupservcenter` | Controls whether Quickstart is enabled for Group Manager. | `true` | `true`<br>`false` |
| `qs_state_ objservcenter` | Controls whether Quickstart is enabled for Object Manager. | `true` | `true`<br>`false` |
| `qs_state_ userservcenter` | Controls whether Quickstart is enabled for User Manager. | `true` | `true`<br>`false` |
| `WfDefCache Disabled` | Determines if the workflow caches are to be disabled or not. | false | `true`<br>`false` |
| `WfDefCacheMaxNo OfElmts` | Maximum number of allowed elements in each of the workflow caches. | `25` | Unsigned integer |
| `WfDefCache Timeout` | Timeout for each individual element in the cache. | `0` | Long integer |
| `WfDefMaxNumStep DefFilters PerSearch` | Determines the maximum number of step definition filters that can be used in each search. If the final number of filters is more than this specified value then multiple searches will be done. | None | Integer |

*Table B–16 (Cont.) workflowdbparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `WfInstanceNot Required` | A flag indicating if a single-user-action step workflow instance should be written to the directory server. This flag enables you to not save workflow instances if they are based on a single user action step and are not required later<br>(for example, for auditing) and improve workflow runtime performance.<br>false: Write workflow intances to the directory server.<br>true: Do not write to the directory server, unless otherwise required by the workflow definition. | `false` | `true`<br>`false` |

*Table B–17 ldapappdbparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `ListOfDS AttributesFor Filter Substitution` | List of directory server read-only system attributes utilized for ACL filter substitution. These attributes values do not return unless the directory server specifically queries for them. The list is entered as a ValList, in the form<br><ValList<br>ListName="ListOfDSAttributes ForFilterSubstitution"><br><ValListMember Value="entrydn"<br>Operation="Add"/><br></ValList> | nothing | List of attributes such as entrydn, creatorsname, password<br>expirationtime |
| `osdcache: hashsize` | The hash size for the cache. | `3001` | Any positive integer (preferably a prime number) |

*Table B–18 ldapconfigdbparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `dynamic Auxiliary` | Set objectclass. This is only used for AD: AD does not allow the use of auxiliary class in the objectClass attribute. | false | `true`<br>`false` |

*Table B–18 (Cont.) ldapconfigdbparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `groupspecial Attrs` | Used to cache in attributes for group class. | The cn attribute is derived from the auxiliary class mailrecipient, and hence does not show up on the list of required attributes. Also, sAMAccount Name attribute is cached by default. | Any valid attribute names. |
| `bind-dn password` | Bind DN, and password | none | Any valid string value for each |
| `specialAttrs` | Used to cache in attributes for person class. | SAMAccount Name attribute is cached. | Any valid attribute names |
| `useOIDNaming Attribute` | If the oidnamingattribute flag is set, convert the name to oid. Currently, this flag is only set in the case of Active Directory. | false | `true`<br>`false` |

*Table B–19 basedbparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `default_policy` | Default policy for access control to any object. If the driving application database does not override this parameter, the default set here is assumed. | false (Deny Access | true (Allow Access)<br>false (Deny Access) |
| `doAccessServer Flush` | This signals that the AccessGate client has been configured on the OIS server and it can now begin to send user flush requests to the Access System, using the Policy Manager API. | `false` | `true`<br>`false` |
| `enableAllow AccessCache` | This paramters turns caching of evaluated access control policies on or off. The cache exists only for the duration of processing a request. The cache helps when an access control policy needs to be evaluated more than once in the same request. This cache contains information regarding whether the user is allowed or denied access based on the evaluated policy. | true | `true`<br>`false` |

*Table B–19 (Cont.) basedbparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| SelfReg Generates SSOCookie | This tells the Access System to automatically logon the requester right after self-registration if the person is activated. To do this, the settings for SR_ SSOCookieMethod and SR_ SSOCookieURL parameters must also be specified in this file. | false | true<br>false |
| SR_SSOCookie Domain | This is one of the ObSSOCookie generation parameters. If no value is specified for this parameter, the ObSSOCookie is not associated with a particular domain. | None | An valid domain name, for example oblix.com |
| SR_SSOCookieIP | One of the ObSSOCookie generation parameters. If no value is specified for this parameter, the client IP will be used. | None | Any of the IP or IP addresses, if any, specified in the IPValidation Exceptions parameter in the Access System (Access System Configuration tab, AccessGate Configuration page). |
| SR_SSOCookie Method | Access Manager SDK query parameter, used with self-registration. This parameter, along with the SR_ SSOCookieURL parameter, is used by the Access Manager SDK to determine the URL and method that are protected. The SSOCookie will not be generated if this value is not specified. | GET | Any one of the HTTP Request Methods that are protected by the Access System |
| SR_SSOCookie Path | One of the ObSSOCookie generation parameters. This parameter will be used to generate ObSSOCookie. If none is specified, / will be used. | / | / or any URL path |
| SR_SSOCookieURL | Access Manager SDK query parameter, used with self-registration.This parameter, along with the SR_ SSOCookieMethod parameter, is used by the Access Manager SDK to determine the URL and method that are protected The SSOCookie will not be generated if this value is not specified. | /identity/ oblix | Any URL protected by the Access System |

***Table B–20 ldapreferentialintegrityparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `Objectclasses AndAttributesTo DoReferential Integrity` | This compoundlist contains a set of ValList elements named after object classes. Each ValList may be empty or may contain ValListMember elements named after attributes belonging to the object class.<br>The object classes listed are those that Oracle Access Manager will update whenever an entry is renamed (such as its DN changed).<br>The attributes listed for each object class are of type DN, and thus may refer to the entry which is being renamed.<br>If no attributes are listed for a particular object class, Oracle Access Manager queries the schema to find all the DN attributes for that object class.<br>If there is an attribute list, then only the listed attributes are used for the referential integrity check. | See the following table for a list of objectclasses and attributes. | Any valid objectclass with DN syntax attributes.<br>Note: In order for Oracle Access Manager to work correctly, the default values should NOT be changed. You should only *add* your own objectclass and attributes to this list. |
| `references_to_ non_existing_ entries_allowed` | Determines how to deal with a reference to a non-existent entry.<br>Since AD and Novell automatically remove references to non-existent entries, this parameter should be set to false for those Directory Servers. The Netscape/iPlanet DS does not; Oracle Access Manager adjusts the reference as you direct. | `false` | Active Directory: Set to `false`<br>Novell: Set to `false`<br>Netscape/ iPlanet:<br>■ Set to `false` to have Oracle Access Manager update DN attributes that point to an entry being renamed<br>■ Set to `true` to have Oracle Access Manager *not* update DN attributes referring to an entry being renamed |

*Table B–20 (Cont.) ldapreferentialintegrityparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| referential_ integrity_using | Determines the responsibility for renaming a DN. The Active Directory and Novell directory servers do this automatically, ds is therefore the proper entry. Netscape does not, leaving it to Oracle Access Manager to make the change; this is indicated by the parameter value oblix . These values are set by the installation process and must not be changed by the user. | Varies with the Directory Server, defined at install time. | Active Directory: Set to ds<br>Novell: Set to ds<br>Netscape: Set to oblix |
| unique_value_ attrs | Specify a list of attributes whose values need to be unique under the configured directory server namespace. Necessary values vary with the brand of directory server. The **Possible Values** column shows the required entries; users may add additional attributes. | uid | Novell: Remove list<br>Active Directory: Add one ValListMember, sAMAccount Name<br>Netscape: Leave the default ValListMember, uid |

Here are the attributes referred to in the previous table, under ObjectclassesAndAttributesToDoReferentialIntegrity:

*Table B–21 ObjectClass Attributes for Referential Integrity*

| ObjectClass | Attributes |
|---|---|
| groupofuniquenames | uniqueMember<br>owner<br>seeAlso |
| inetOrgPerson | manager<br>secretary |
| oblixattribute access | obmodifyaccessuid<br>obviewaccessuid<br>obnotifyuid |
| oblixAuxLocation | oblocationdn |
| oblixcreatedeleteaccess | obaccessuid<br>obnotifyuid |
| oblixGenericResource AuxClass | obResourceUid |
| oblixgroup | obgroupadministrator<br>obgroupcreator |
| oblixGroupResource AuxClass | obResourceUid |
| oblixlocation | obparentlocationdn |
| oblixorgperson | obindirectmanager<br>oblocationdn |

*Table B–21 (Cont.) ObjectClass Attributes for Referential Integrity*

| ObjectClass | Attributes |
|---|---|
| oblixPolicyCondition | obpolicyconditionUid<br>obpolicyconditiongroup |
| oblixUserResourceAuxClass | obResourceUid |

*Table B–22 appdbparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| debug | Indicates whether or not the WebPass client should be in debug mode and write debug information to the debug file. | false | true: Use debug mode<br>false: Do not use debug mode |
| id | Unique identifier for WebPass client plug-in. | webpassdefault | Any |
| failover Threshold | The number of Identity Server connections that the WebPass client will attempt to keep active. If the number of connections falls under the failoverThreshold, the WebPass client will attempt to open additional connections until the number of open connections equals the failoverThreshold. To meet the failoverThreshold, the WebPass client will use Identity Servers first from the primary server list, then from the secondary server list. | 1 | Any number |
| ldapMaxSession TimeInMins | The size of the caches for LDAP connections to the Access Server and Policy Manager increase over time. Oracle Access Manager does not control this caches directly. To prevent the cache size from causing a performance problem, you can configure the ldapMaxSessionTimeInMins parameter to close the connection.<br>Closing the connection clears the cache. | 600 | An integer (in minutes) |
| maxConnections | The maximum number of connections to Identity Servers. | 1 | Any number |
| maxSessionTime | The time an Identity Server connection will remain open in hours. | 24 | Any number |
| osdcache:warmup cache | Warms up the OSD cache. | true | no or false: do not warm up<br>anything else: warm up |

***Table B–22 (Cont.) appdbparams.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `primary_server_list` | List of primary Identity Servers. Each list entry is a triplet of host, port, numConnections. | The triplet (for example, `defaulthost, 6022, 1`). | Any valid triplet of (host, port, num Connections):<br>host: The host on which the primary Identity Server resides<br>port: The port on the host on which the primary Identity Server listens<br>num Connections: The number of connections that the WebPass client can open to a particular primary Identity Server. |
| `secondary_server_list` | List of secondary Identity Servers. Each list entry is a triplet of (host,port,numConnections) | None | Any valid triplet of (host, port, num Connections)<br>host: The host on which the secondary Identity Server resides<br>port: The port on host on which the secondary Identity Server listens<br>num Connections: The number of connections that the WebPass client will open to a particular secondary Identity Server |

*Table B–22 (Cont.) appdbparams.xml*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `security` | The mode of transport security used for WebPass client and Identity Servers.<br>`open` — Transport security mode where no authentication and no encryption is performed. The WebPass client does not demand any proof of the Identity Server's identity, and the Identity Server accepts connections from all WebPass clients connected to it.<br>`simple` — Transport security mode where communication between the WebPass client and the Identity Server is encrypted using TLS v1 (Transport Layer Security, RFC 2246). Webpass and Identity Server authenticate one another using a global password, which must be the same across installations.<br>`cert` — Transport security mode under which the data transferred between points is encrypted using SSLand a public key certificate. | open | open<br>simple<br>cert<br>as described in the Description column. |
| `sleepFor` | A time interval in seconds. After each interval, the WebPass client will update its configuration if the refresh flag is set to true. Also, the interval after which the WebPass client will do its failoverThreshold calculation and open additional connections, if necessary. | 60 | Any number. |

***Table B–23 overridedbprofile.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `list of agents` | List of agents for which the default values obtained from the directory server are to be overridden. Each list has a list name that should be the same as the agent for which the connection parameters are required to be overridden. Each agent should be accompanied by the following (host, port,<br>secureport) This is used in the case where one directory server replicates another, and the user wants to use the replicant.<br>An example of this file is installed at:<br>*IdentityServer_install_dir*`/identity/oblix/data/common`<br>You must change the content of the file and move it to:<br>*IdentityServer_install_dir*`/identity/oblix/data.ldap/common`<br>in order for it to take effect. | none | A valid agent name along with the following three parameters:<br>`host`: Hostname for the directory server<br>`port`: Port at which the directory server listens for open LDAP connections<br>`secureport`: Secure port for the DS |

***Table B–24 accessdb.xml, appdb.xml, configdb.xml, obgroupdb.db.xml, obobjectdb.xml,userdb.xml, webresrcdb.xml, workflowdb.xml, ticketdb.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `ldapRootDN` | Bind dn. | Specified during setup | Any valid dn |
| `ldapRootPasswd` | Bind password. | Specified during setup | Any password |
| `ldapServerName` | LDAP host name for this database. | Specified during setup | Any valid host name |
| `ldapServerPort` | LDAP port number. | Specified during setup | Any valid port number |
| `ldapSizeLimit` | Client side size limit. | 0 | Any valid integer |
| `ldapTimeLimit` | Client side time limit. | 0 | Any valid integer |
| `workflow DefinitionBase`<br>(only in `workflowdb.xml`) | The base dn where workflow definitions are stored. | None (obcontainer= workflow Definitions | Any valid dn |
| `workflow InstanceBase`<br>(only in `workflowdb.xml`) | The base dn where workflow instances are stored. | None (obcontainer= workflow Instances under oblix tree) | Any valid dn |

***Table B–24 (Cont.) accessdb.xml, appdb.xml, configdb.xml, obgroupdb.db.xml, obobjectdb.xml,userdb.xml, webresrcdb.xml, workflowdb.xml, ticketdb.xml***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| xmlns | Oblix xml name space. | http://www.oblix.com | http://www.oblix.com |

***Table B–25 adsi_params.xml (Active Directory Services Interface Parameters)***

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| sizeLimit | Integer value that limits the number of query results returned for authentication. | 0 | Do not change this value. |
| timeLimit | Integer value that limits the number of seconds before a query times out. | 0 | Any positive integer |
| pageSize | Page size of results that ADSI request from the server. | 100 | Any positive integer |
| useImplicitBind | Which credentials to use. | 0 | 0: Implicit Credentials<br>1: Explicit Credentials<br>2: Use User Principal Name |
| adsiCredential | An LDAP specification of a user, such as "cn=Administrator,cn=users,dc=myhost,dc=mydomain,dc=com". | None | Valid credential |
| adsiPassword | An encoded text string representing the LDAP user's password. | None | Valid password |
| useGCForAuthn | Flag, asks the question: do you want to use the Global Catalog for authentication. If set to true, users may not be able to login until user accounts are replicated to the Global Catalog from the respective domain controllers. | false | true<br>false |
| useDNSPrefixed LDAPPaths | To prefix the domain name to LDAP strings, a new parameter has been added to the adsi_params.xml and adsi_params.lst files. By default this parameter is not in adsi_params.xml. Before running setup, this parameter has to be manually added and set to true for the Identity Server. You do not need to set service login credentials. | None | true<br>false |

*Table B–25 (Cont.) adsi_params.xml (Active Directory Services Interface Parameters)*

| Parameter Name | Description | Default Value | Possible Values |
|---|---|---|---|
| `encryption` | When set to true, this flag encrypts the traffic between the Identity and Access Servers and Directory Server. When set to true, the SSL port (636) on Active Directory should be enabled. The rootCA certificates must have been installed in the local store for Trusted Certificate Authorities.<br>This flag is applicable for authentications in all bind modes, and for all directory server traffic for explicit bind types (1 and 2). Note that password change on Active Directory always goes through the SSL port (636), irrespective of what the encryption flag is set to. | false | `true`<br>`false` |
| `aynchronous Search` | Flag, asks the question: shall ADSI operate in its default mode, enabled to perform asynchronous searches? If set to false, it does synchronous searches. | true | `true`<br>`false` |

# C

# Configuring Identity System Navigation

The Identity System ships with an interface that supports four types of users: End User, Delegated Administrator, Delegated Identity Administrator, and Master Administrator. Each user type has different rights and is limited to different levels of Oracle Access Manager functionality. When users log in to Oracle Access Manager, they will be presented with a series of screens, a navigation system, that is defined for their user type.

This system can be modified to:

- Support new user types
- Select the screens to be shown, and determine the order in which they are presented
- Specify a default user type.

This Appendix describes *obnavigation.xml*, the configuration file that controls the navigation system, and explains how to work with it.

## Overview

The Identity System uses the `obnavigation.xml` file as a guide to build the OutPutXML. PresentationXML uses OutPutXML to build the Navigation Bar that appears at the top of each Oracle Access Manager page. It includes the application name, help and logout buttons, and the various tabs to select other modules within the application. The stylesheet of course provides the final definition of how to display this information, but the file described in "Obnavigation.xml File" on page C-1 determines its content. The interaction with the stylesheet is described in more detail.

## Obnavigation.xml File

When you installed the Identity System you put it into an *Identity_install_dir* directory, for example:

```
/var/coreid/identity/oblix (UNIX)
```

or

```
C:/coreid/identity/oblix (Windows NT)
```

The obnavigation.xml file is installed under this, in the directory:

*Identity_install_dir*`/identity/oblix/apps/common/bin`

The file is provided in an XML format, the schema for which is provided under "File Schema" on page C-4.

## File Content

The following is a part of the installed obnavigation.xml file showing all the element types. The elements are discussed in a table immediately after the example:

```
<?xml version="1.0" ?>
            <ObNavigation defaultUserType="systemAdmin">
            <ObHierarchy name="oblix" elementName="ObNavbar"
               userType="endUser" obdisplayName="End User"
                  bgcolor="CCCC66">
            <ObCollection name="ObMisc">
                  <ObLink appName="common" name="T1help" />
                  <ObLink appName="common" name="T1about" />
                  ObLink appName="common" name="T1logout" />
            </ObCollection>
            <ObCollection name="ObApps">
                  <ObLink appName="common"
                        name="userservcenter_application_info"
                        elementName="ObApplication">
                     <ObCollection name="ObTitle">
                     <ObLink appName="userservcenter"
                                 name="T1TABusermanager" />
                     </ObCollection>
                     <ObCollection name="ObFunctions">
                        <ObLink appName="userservcenter"
                              name="MyProfile" />
                        <ObLink appName="userservcenter"
                              name="Report">
                           <ObCollection name="ObReportFunctions">
                              <ObLink appName="userservcenter"
                                 name="generateReport" />
                              <ObLink appName="userservcenter"
                                 name="viewPredefinedReports" />
                           </ObCollection>
                        </ObLink>
                        <ObLink appName="userservcenter"
                              name="Workflow">
                           <ObCollection
                                    name="ObWorkflowFunctions">
                              <ObLink appName="userservcenter"
                                 name="wfOutgoingRequest" />
                           </ObCollection>
                        </ObLink>
                     </ObCollection>
               </ObLink>
               ...
               <ObLink appName="common"
                        name="groupservcenter_application_info"
                        elementName="ObApplication">
               ...
               <ObLink appName="common"
                        name="objservcenter_application_info"
                        elementName="ObApplication">
               ...
               <ObLink appName="common"
                        name="corpdir_application_info"
                        elementName="ObApplication">
```

```
    ...
</ObCollection>
....
</ObHierarchy>
....
</ObNavigation>
```

Elements in this file are the following:

***Table C–1 ObNavigation.xml File***

| Element Name | Description | Example |
|---|---|---|
| `ObNavigation` | This is the root element for the XML structure.<br>It contains one attribute:<br>`defaultUserType` - This specifies the default user type. The value entered for the attribute must match one of the user types defined in the rest of the file.<br>The `ObNavigation` element contains one or more `ObHierarchy` elements. | *<ObNavigation defaultUserType=*<br>*"systemAdmin">*<br>*...*<br>*</ObNavigation>* |
| `ObHierarchy` | The *ObHierarchy* element defines the navigation structure, as a nested hierarchy, for a user type.<br>It contains five attributes:<br>■ `name`: Reserved for future enhancements, currently not used.<br>■ `elementName`: The element name in the Output XML that contains the navigation information. The installed stylesheets expect its value to be ObNavBar ; change this value only if you are willing to do extensive stylesheet changes.<br>■ *userType*: A unique value specifying the user type that uses this hierarchy.<br>■ *obdisplayName*: The display name for this user type.<br>■ *bgcolor*: Reserved for future enhancements, currently not used.<br>Each `ObHierarchy` element contains one or more `ObCollection` elements. | *<ObHierarchy name="oblix" elementName="ObNavbar" userType="endUser" obdisplayName="End User" bgcolor="CCCC66">*<br>*...*<br>*</ObHierarchy>* |
| `ObCollection` | The `ObCollection` element is a grouping of links. The collection itself does not enforce any navigation structure. Instead, it is a conceptual element used to group links with common themes together.<br>It contains one attribute:<br>■ `name`: This matches an element name in the Output XML. The installed stylesheets expect this to be either `ObMisc` or `ObApps`.<br>Each `ObCollection` element contains one or more `ObLink` elements. | `<ObCollection name="ObMisc">`<br>`...`<br>`</ObCollection>` |

*Table C–1 (Cont.) ObNavigation.xml File*

| Element Name | Description | Example |
|---|---|---|
| ObLink | The ObLink element represents a link, where a link is a set of information that enables user navigation to a certain functionality within Oracle Access Manager.<br>Some ObLink elements (but not all) are allowed to contain ObCollection elements. This means that, rather than directly providing functionality, the link presents the users with another set of links for navigation.<br>Each ObLink contains the following attributes:<br>■ appName and name: These must be provided as a pair, meaning within the named application allow use of the named functionality. There is a limited set of valid combinations, predefined within the Identity System. See the table in "Valid ObLink Combinations" on page C-8 for the full list. name values which are allowed to contain nested ObCollection elements are marked with an * in this list.<br>■ elementName: This element is optional. It provides a description for ObLink elements which contain nested ObCollection elements. | *<ObLink appName="common"*<br>*name=*<br>"userservcenter_<br>application_<br>info"<br>elementName="ObA<br>pplication"><br>...<br></ObLink> |

## File Schema

Following is the schema describing the logical structure of the obnavigation.xml file. This schema definition is not provided as part of the Oracle Access Manager installation files. See the reference provided in Appendix A, "XML Background" on page A-1 for more information on XML schema structures.

```
<?xml version="1.0" encoding="UTF-8"?>
               <xsd:schema
                  xmlns:xsd="http://www.w3.org/2000/10/XMLSchema"
                  elementFormDefault="qualified">
               <xsd:element name="ObCollection">
                  <xsd:complexType>
                        <xsd:sequence>
                           <xsd:element ref=
                              "ObLink" maxOccurs="unbounded"/>
                        </xsd:sequence>
                        <xsd:attribute name="name" use="required"
                              type="xsd:string"/>
                  </xsd:complexType>
               </xsd:element>
               <xsd:element name="ObHierarchy">
                  <xsd:complexType>
                        <xsd:sequence>
                           <xsd:element ref=
                              "ObCollection" maxOccurs="unbounded"/>
                        </xsd:sequence>
                        <xsd:attribute name="name" type="xsd:string"
                              use="required"/>
                        <xsd:attribute name="elementName"
                              type="xsd:string" use="required"/>
                        <xsd:attribute name="userType"
                              type="xsd:string" use="required"/>
                        <xsd:attribute name="obdisplayName"
                              type="xsd:string" use="required"/>
                        <xsd:attribute name="bgcolor" use="required">
                           <xsd:simpleType>
```

```
                  <xsd:restriction base="xsd:binary">
                     <xsd:encoding value="hex"/>
                  </xsd:restriction>
               </xsd:simpleType>
            </xsd:attribute>
      </xsd:complexType>
   </xsd:element>
   <xsd:element name="ObLink">
      <xsd:complexType>
            <xsd:sequence>
               <xsd:element ref="ObCollection"
                  minOccurs="0"    maxOccurs="unbounded"/>
            </xsd:sequence>
            <xsd:attribute name="appName" use="required">
               <xsd:simpleType>
                  <xsd:restriction base="xsd:NMTOKEN">
                     <xsd:enumeration value="common"/>
                     <xsd:enumeration value=
                           "groupservcenter"/>
                     <xsd:enumeration value=
                           "objservcenter"/>
                     <xsd:enumeration value=
                           "userservcenter"/>
                  </xsd:restriction>
               </xsd:simpleType>
            </xsd:attribute>
            <xsd:attribute name="name" use="required">
               <xsd:simpleType>
                  <xsd:restriction base="xsd:NMTOKEN">
                     <xsd:enumeration value="Admin"/>
                     <xsd:enumeration value="Create"/>
                     <xsd:enumeration value=
                           "FTABconfiguration"/>
                     <xsd:enumeration value=
                           "FTABcreatereports"/>
                     <xsd:enumeration value=
                           "FTABorgchart"/>
                     <xsd:enumeration value=
                           "FTABrequests"/>
                     <xsd:enumeration value=
                           "FTABviewreports"/>
                     <xsd:enumeration value="MyProfile"/>
                     <xsd:enumeration value=
                           "T1TABgroupmanager"/>
                     <xsd:enumeration value=
                           "T1TABorgmanager"/>
                     <xsd:enumeration value=
                           "T1TABusermanager"/>
                     <xsd:enumeration value="T1about"/>
                     <xsd:enumeration value="T1help"/>
                     <xsd:enumeration value="T1logout"/>
                     <xsd:enumeration value="Workflow"/>
                     <xsd:enumeration value=
                           "adminDelegate"/>
                     <xsd:enumeration value=
                           "adminExpandGroups"/>
                     <xsd:enumeration value=
                           "adminPreWorkflowDef"/>
                     <xsd:enumeration value=
                           "adminProxy"/>
```

```
                        <xsd:enumeration value=
                              "adminSetContainmentLimit"/>
                        <xsd:enumeration value=
                              "adminSetSearchbase"/>
                        <xsd:enumeration value=
                              "adminWorkflowDef"/>
                        <xsd:enumeration value="dashline"/>
                        <xsd:enumeration value=
                              "front_page_admin
                                 _application_info"/>
                        <xsd:enumeration value=
                              "groupservcenter
                                 _application_info"/>
                        <xsd:enumeration value=
                              "multipleObjectTabs"/>
                        <xsd:enumeration value=
                              "objservcenter
                                 _application_info"/>
                        <xsd:enumeration value=
                              "userservcenter
                                 _application_info"/>
                        <xsd:enumeration value=
                              "policyservcenter
                                 _application_info"/>
                        <xsd:enumeration value=
                              "wfCreateProfile"/>
                        <xsd:enumeration value=
                              "wfDeactivateProfile"/>
                        <xsd:enumeration value=
                              "wfIncomingRequest"/>
                        <xsd:enumeration value="wfMonitor"/>
                        <xsd:enumeration value=
                              "wfOutgoingRequest"/>
                     </xsd:restriction>
                  </xsd:simpleType>
               </xsd:attribute>
               <xsd:attribute name="elementName"
                     type="xsd:string"/>
      </xsd:complexType>
   </xsd:element>
   <xsd:element name="ObNavigation">
      <xsd:complexType>
            <xsd:sequence>
               <xsd:element ref="ObHierarchy"
                     maxOccurs="unbounded"/>
            </xsd:sequence>
            <xsd:attribute name="defaultUserType"
               type="xsd:string" use="required"/>
      </xsd:complexType>
   </xsd:element>
   </xsd:schema>
```

# Customization

You can make the changes to the obnavigation.xml file as described in the following procedure. The changes take effect the next time the Identity Manager Server is restarted.

### To customize the obnavigation.xml file

1. Remove a link.

   To remove access to functionality for a user type, remove the ObLink element associated with that functionality. This example shows the original file part revised to remove the about functionality for an end user.

```
<ObHierarchy name="oblix" elementName="ObNavbar"
   userType="endUser" obdisplayName="End User"
   bgcolor="CCCC66">
<ObCollection name="ObMisc">
   <ObLink appName="common" name="T1help"/>
   <ObLink appName="common" name="T1logout"/>
</ObCollection>
```

2. Add a link.

   Use the ObHierarchy for the SystemAdmin user type as a template for this. It shows the full standard navigation possibilities. Determine the link to add. Find the ObCollection that you would like to add the link to, and add the link. In the revised file part example, an end user is now able to navigate to the page where new users are created.

   **Note:** The end user will still need to be granted create rights in order to work with the page.

```
<ObCollection name="ObFunctions">
               <ObLink appName="userservcenter"
                     name="MyProfile"/>
               <ObLink appName="userservcenter"
                     name="wfCreateProfile"
               <ObLink appName="userservcenter" name="Workflow">
                     <ObCollection name="ObWorkflowFunctions">
                        <ObLink appName="userservcenter"
                              name="wfOutgoingRequest"/>
                     </ObCollection>
               </ObLink>
            </ObCollection>
```

3. Remove a user type.

   Remove all of the ObHierarchy elements associated with the user type. That user type will not be able to reach any pages.

   **Note:** Don't remove the default user type. If you must remove the user type that is the default user type, set another user type to be the default.

4. Add a user type.

   Add an ObHierarchy element, specifying the new user type. Use the systemAdminObHierarch y as a template and remove any links and collections not suitable for the new user type.

   Append `&userType=(the user type attribute value in ObHierarchy)` to the entry point URL when you first access the system. The user

type information is stored in the cookie that is returned. It will be reset only if a new userType is used in the URL.

5.

Set the default user type.

Change the `ObNavigationdeafaultUserType` attribute value to the desired user type. This is used if the user type has not been previously set in a returned cookie and there is no user type specified in the URL.

## Valid ObLink Combinations

The following tables show Identity System functionality by application, to be used in defining a valid `ObLink`. For example, if you need to provide the User Manager functionality in User Manager then you would add:

```
<ObLink appname="userservcenter" name="T1TABUserManager"/>
```

In the tables, *name* values that are allowed to contain nested *ObCollection* elements are marked with an *.

`Appnames` in the tables correspond to applications this way:

**common**: Help, About, and Logout buttons, and Applications. See Table C–2 for details.

**userservcenter**: User Manager. See Table C–3 for details.

**groupservcenter**: Group Manager. See Table C–4 for details.

**objservcenter**: Organization Manager Table C–5 for details.

***Table C–2 Valid ObLink name Values for appName=common***

| Name | Description of function common to all applications |
|---|---|
| `T1help` | Help button |
| `T1about` | About button |
| `T1logout` | Logout button |
| `userservcenter_application_info` | User Manager |
| `groupservcenter_application_info` | Group Manager |
| `policyservcenter_application_info` | Access System |
| `access_front_page_admin_application_info` | Access System Configuration |
| `front_page_admin_application_info` | Identity System configuration |
| `objservcenter_application_info` | Organization Manager |

*Table C–3 Valid ObLink name Values for appName=userservcenter*

| Name | User Manager Function |
|---|---|
| T1TABusermanager | User Manager |
| MyProfile | My Identity |
| wfCreateProfile | Create User Identity |
| wfDeactivateProfile | Deactivated User Identity |
| adminProxy | Substitute Rights |
| Workflow * | Requests |
| wfIncomingRequest | Incoming Requests |
| wfOutgoingRequest | Outgoing Requests |
| wfMonitor | Monitor Requests |
| Admin * | Configuration |
| adminAccessControl | adminAccessControl |
| adminDelegate | Delegate Administration |
| adminWorkflowDef | Workflow Definition |
| adminSetSeachbase | Set Searchbase |

*Table C–4 Valid ObLink name Values for appName=groupservcenter*

| Name | Group Manager function |
|---|---|
| T1TABgroupmanager | Group Manager |
| MyProfile | My Groups |
| Create | Create Group |
| Workflow * | Requests |
| wfIncomingRequest | Incoming Requests |
| wfOutgoingRequest | Outgoing Requests |
| wfMonitor | Monitor Requests |
| Admin * | Configuration |
| adminAccessControl | adminAccessControl |
| adminDelegate | Delegate Administration |
| adminPreWorkflowDef | Workflow Definition |
| adminExpandGroups | Expand Dynamic Groups |

*Table C–5 Valid ObLink name Values for appName=objservcenter*

| Name | Org. Manager function |
|---|---|
| T1TABorgmanager | Organization Manager |
| multipleObjectTabs | The set of tabs configured for Organization Manager |
| wfCreateProfile | Create Organization Profile |
| FTABrequests * | Requests |

***Table C–5 (Cont.) Valid ObLink name Values for appName=objservcenter***

| Name | Org. Manager function |
|---|---|
| `wfIncomingRequest` | Incoming Requests |
| `wfOutgoingRequest` | Outgoing Requests |
| `wfMonitor` | Monitor Requests |
| `FTABconfiguration *` | Configuration |
| `adminAccessControl` | Attribute Access Control |
| `adminDelegate` | Delegate Administration |
| `adminWorkflowDef` | WorkflowDefinition |
| `adminSetContainmentLimit` | Container Limits |

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