HP OpenView Select Identity

Administrator Guide

Software Version: 3.0.1

UNIX® (Sun Solaris) and Windows® Operating Systems



October 2004

© 2004 Hewlett-Packard Development Company, L.P.

Legal Notices

Warranty

Hewlett-Packard makes no warranty of any kind with regard to this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be held liable for errors contained herein or direct, indirect, special, incidental or consequential damages in connection with the furnishing, performance, or use of this material.

A copy of the specific warranty terms applicable to your Hewlett-Packard product can be obtained from your local Sales and Service Office.

Restricted Rights Legend

Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause in DFARS 252.227-7013.

Hewlett-Packard Company United States of America

Rights for non-DOD U.S. Government Departments and Agencies are as set forth in FAR 52.227-19(c)(1,2).

Copyright Notices

© 2004 Hewlett-Packard Development Company, L.P.

No part of this document may be copied, reproduced, or translated into another language without the prior written consent of Hewlett-Packard Company. The information contained in this material is subject to change without notice.

This product includes software developed by the Apache Software Foundation (http://www.apache.org/). Portions Copyright (c) 1999-2003 The Apache Software Foundation. All rights reserved.

Select Identity uses software from the Apache Jakarta Project including:

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

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

Additional third party software used by Select Identity includes:

- JasperReports developed by SourceForge.
- iText (for JasperReports) developed by SourceForge.
- BeanShell.
- Xalan from the Apache XML Project.
- Xerces from the Apache XML Project.
- Java API for XML Processing from the Apache XML Project.
- SOAP developed by the Apache Software Foundation.
- JavaMail from SUN Reference Implementation.
- Java Secure Socket Extension (JSSE) from SUN Reference Implementation.
- Java Cryptography Extension (JCE) from SUN Reference Implementation.
- JavaBeans Activation Framework (JAF) from SUN Reference Implementation.
- OpenSPML Toolkit from OpenSPML.org.
- JGraph developed by JGraph.
- Hibernate from Hibernate.org.

This product includes software developed by Teodor Danciu http:// jasperreports.sourceforge.net). Portions Copyright (C) 2001-2004 Teodor Danciu (teodord@users.sourceforge.net). All rights reserved.

Portions Copyright 1994-2004 Sun Microsystems, Inc. All Rights Reserved.

This product includes software developed by the Waveset Technologies, Inc. (www.waveset.com). Portions Copyright © 2003 Waveset Technologies, Inc. 6034 West Courtyard Drive, Suite 210, Austin, Texas 78730. All rights reserved.

Portions Copyright (c) 2001-2004, Gaudenz Alder. All rights reserved.

Trademark Notices

Select Identity is a trademark of Hewlett-Packard Development Company, L.P.

Microsoft, Windows, the Windows logo, and SQL Server are trademarks or registered trademarks of Microsoft Corporation.

Sun[™] workstation, Solaris Operating Environment[™] software, SPARCstation[™] 20 system, Java technology, and Sun RPC are registered trademarks or trademarks of Sun Microsystems, Inc. JavaScript is a trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.

This product includes the Sun Java Runtime. This product includes code licensed from RSA Security, Inc. Some portions licensed from IBM are available at http://oss.software.ibm.com/ icu4j/.

IBM, DB2 Universal Database, DB2, WebSphere, and the IBM logo are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both.

This product includes software provided by the World Wide Web Consortium. This software includes xml-apis. Copyright © 1994-2000 World Wide Web Consortium, (Massachusetts Institute of Technology, Institute National de Recherche en Informatique et en Automatique, Keio University). All Rights Reserved. http://www.w3.org/Consortium/Legal/

Intel and Pentium are trademarks or registered trademarks of Intel Corporation in the United States, other countries, or both.

AMD and the AMD logo are trademarks of Advanced Micro Devices, Inc.

BEA and WebLogic are registered trademarks of BEA Systems, Inc.

VeriSign is a registered trademark of VeriSign, Inc. Copyright © 2001 VeriSign, Inc. All rights reserved.

All other product names are the property of their respective trademark or service mark holders and are hereby acknowledged.

Support

Please visit the HP OpenView web site at:

http://openview.hp.com/

There you will find contact information and details about the products, services, and support that HP OpenView offers.

You can go directly to the support web site at:

http://support.openview.hp.com/

The support web site includes:

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

contents

Welcome to Select Identity	12
System Architecture	14
Product Documentation	16
Deployment Overview	18
Select Identity Deployment Concepts	18
Connectors	
Resources	19
Attributes	20
External Calls	20
Rules.	21
Notifications	
Workflow Studio	22
Challenge Response	22
Service	
Business Relationships	23
Administrative Roles	
Auto Discovery	24
Users	25
Reconciliation	
Configurations	
Self Service	
	System Architecture. Product Documentation . Deployment Overview Select Identity Deployment Concepts . Connectors . Resources . Attributes . External Calls . Rules. Notifications . Workflow Studio . Challenge Response. Service . Business Relationships . Context . Administrative Roles . Auto Discovery. Users . Request Status. Configuration and Audit Reporting . Reconciliation . Configurations .

	Sample Deployment Process	27
	Logging In to Select Identity	27
	Deployment Steps	28
Chapter 3	Connectors	31
	Creating and Installing a Connector	32
	Managing Connectors	33
	Deploying a Connector	33
	Modifying a Connector	34
	Viewing a Connector	34
	Deleting a Connector	35
Chapter 4	Resources	36
	Authoritative Sources.	37
	Adding and Managing System Resources	38
	Deploying a Resource	38
	Modifying a Resource	41
	Viewing a Resource	43
	Deleting a Resource	43
	Viewing Resource Attributes	44
Chapter 5	Attributes	46
	Managing Multiple Passwords	48
	Using Attributes to Facilitate User Searches	49
	Resource-Specific Guidelines	50
	AS400 Attributes	50
	Tandem Attributes	53
	UNIX, Tandem, and AS400 Attributes	54
	Adding and Mapping an Attribute	54
	Viewing an Attribute	58
	Modifying an Attribute	59
	Deleting an Attribute	59
Chapter 6	External Calls	60
	Creating an External Call For Workflow Templates	61
	Creating an External Call for Attributes	62

	Deploying an External Call	62
	Modifying an External Call	64
	Viewing an External Call	64
	Deleting an External Call	65
Chapter 7	Rules	66
	Adding a Rule	67
	Modifying a Rule.	67
	Viewing a Rule	68
	Deleting a Rule	68
Chapter 8	Notifications	69
	Pre-defined Variables	70
	Creating and Modifying Notification Templates	71
	Adding a Notification Template	
	Copying a Notification Template	74
	Modifying a Notification Template	74
	Viewing a Notification Template	75
	Deleting a Notification Template	75
Chapter 9	Workflow Studio	76
	Workflow Studio Overview	77
	Workflow Templates in Select Identity	77
Chapter 10	Challenge Response Questions	79
Chapter 11	Services	81
	Business Relationships	82
	Context	83
	Resource-Specific Information	84
	AS400 Service Configuration	84
	Tandem Service Configuration	84
	Creating and Modifying Services	85
	Deploying a Service	86
	Modifying a Service	87
	Deleting a Service	88

	Service Views
	Creating a Service View 88
	Modifying a Service View
	Deleting a Service View
	Service Attributes
	Setting Service Attribute Values
	Setting Service Attribute Properties
	Defining Business Relationships and Context
	Creating a Business Relationship
	Modifying a Business Relationship
	Deleting a Business Relationship
	Creating Context
	Modifying Context
	Deleting Context
Chapter 12	Administrative Roles 101
	Administrative Capabilities and Actions 102
	Select Identity Capabilities and Actions 102
	Select Identity Default Roles 105
	Creating and Managing Administrative Roles 106
	Adding an Admin Role 107
	Modifying a Role 108
	Viewing a Role
	Deleting a Role 109
Chapter 13	Auto Discovery
	Auto Discovery Procedure Overview 111
	Define Users and Attributes from an Authoritative Resource 111
	Create an SPML file Containing Users and Attributes
	Create an SPML file Containing Entitlements 113
	Check the TruAccess.properties File 113
	Upload User Accounts, Attributes, and Entitlements
	Schedule Services Assignment
	Job Results
	Scheduling User Discovery 116
	Viewing User Discovery Status 118

	Scheduling Services Assignment	119
	Viewing Assignment Status	120
Chapter 14	Users	121
	Adding a User	
	Modifying a User Account	
	Adding a Service to a User Account	
	Enabling or Disabling Service Membership	127
	Enabling or Disabling All Services	127
	Viewing Service Membership	128
	Resetting a User's Password	129
	Deleting a Service Membership	129
	Terminating a User Account	130
	Viewing Account Attributes	131
	Managing User Account Expiration	131
	Managing User's Entitlements through Rules	132
Chapter 15	Approvals	133
Unapter 15		100
Chapter 16	Request Status	
Chapter 16	Request Status	136
	Request Status Account Reconciliation	136 139
Chapter 16	Request Status	136 139 140
Chapter 16	Request Status Account Reconciliation Reconciliation Dependencies	136 139 140 141
Chapter 16	Request Status Account Reconciliation Reconciliation Dependencies Reconciling with Authoritative Sources	136 139 140 141 142
Chapter 16	Request Status Account Reconciliation Reconciliation Dependencies Reconciling with Authoritative Sources Reconciling with Non-authoritative Sources	136 139 140 141 142 142
Chapter 16	Request Status Account Reconciliation Reconciliation Dependencies Reconciling with Authoritative Sources Reconciling with Non-authoritative Sources Reconciling Account Data	136 139 140 141 142 142 143
Chapter 16	Request Status Account Reconciliation Reconciliation Dependencies Reconciling with Authoritative Sources Reconciling with Non-authoritative Sources Reconciling Account Data Viewing an Automated Job	136 139 140 141 142 142 143 144
Chapter 16	Request Status Account Reconciliation Reconciliation Dependencies Reconciling with Authoritative Sources Reconciling with Non-authoritative Sources Reconciling Account Data Viewing an Automated Job Modifying an Automated Job Deleting an Automated Job	136 139 140 141 142 142 143 144 144
Chapter 16	Request Status Account Reconciliation Reconciliation Dependencies Reconciling with Authoritative Sources Reconciling with Non-authoritative Sources Reconciling Account Data Viewing an Automated Job Modifying an Automated Job	136 139 140 141 142 142 143 144 144 145
Chapter 16 Chapter 17	Request Status Account Reconciliation Reconciliation Dependencies Reconciling with Authoritative Sources Reconciling with Non-authoritative Sources Reconciling Account Data Viewing an Automated Job Modifying an Automated Job Deleting an Automated Job Creating a Job to Run Once Viewing Task Status	136 139 140 141 142 142 143 144 144 145 146
Chapter 16	Request Status Account Reconciliation Reconciliation Dependencies Reconciling with Authoritative Sources Reconciling with Non-authoritative Sources Reconciling Account Data Viewing an Automated Job Modifying an Automated Job Deleting an Automated Job Creating a Job to Run Once	136 139 140 141 142 142 143 144 144 145 146 148

Chapter 19	Configuration and Audit Reports	151
	Generating Audit Reports	151
	Generating Configuration Reports	154
	Saving Report Configurations	156
Chapter 20	Configurations	158
	Exporting a Configuration	
	Importing a Configuration	
Appendix A	Resource Access Information	161
	AS400	
	Control-SA	
	SAP	
	Domino	
	LDAP for Active Directory	
	LDAP for eTrust	
	LDAP for iPlanet	
	Tandem Himalaya for Safeguard	
	UNIX with SSH	
	UNIX with Telnet.	
	Active Directory (Agent-Based)	
	Windows NT Domain (Agent-Based).	
	Windows Local (Agent-Based)	
Appendix B	Creating Reconciliation Rules	172
	Application Server Configuration for Rules	172
	Rule DTD	
	Example: Reconciliation Rule	
Appendix C	Event Reference	181
Glossary		182
Index		193

1

Welcome to Select Identity

Studies show that the IT costs associated with maintaining a manual identity management solution are climbing. As companies grow and collaborate with greater numbers of customers and partners, manual methods require significant resources and time to meet expanding requirements.

HP OpenView Select Identity provides a new approach to identity management that increases efficiency, productivity, and security for the complex or extended enterprise. Select Identity uses a patent-pending technology to manage the entire identity life cycle (provisioning, maintenance, and termination). Select Identity offers key business functionality to drive even greater efficiency: delegation of authority, reporting, audits, integration of workflows, and approval processes.

Select Identity is the first truly scalable solution for managing identity within and between large enterprises. The Select Identity solution automates the process of provisioning and managing user accounts and access privileges across platforms, applications, and corporate boundaries. Along with robust workflow, user self-service, reporting, and delegated administration capabilities, Select Identity is the most comprehensive identity management system available.

Select Identity provides a service-centric approach to managing identities. In any company, its employees, customers, and partners participate in a number of services or business processes that comprise the operation of the company. For example, these processes might include "order processing" or "accounts receivable." Each service may consist of a number of applications or resources that require unique access privileges depending on its participants and corporate policy. Select Identity incorporates these complex relationships and leverages them to automate the tasks associated with managing identities, including provisioning of accounts and privileges, approval workflows, delegation of administrative rights, enforcement of security policy, and reporting. Select Identity mitigates the limitations of the traditional role and rule-based identity management, enabling scalability throughout the extended enterprise while reducing deployment times and management costs.

Key features of the Select Identity system include the following:

- **Centralized Management** Provides a single point of control for the management of users and entitlements
- **Provisioning** Automates the creation, update, and deletion of accounts and entitlements on information systems across the enterprise
- Administrative Delegation Enables administrative rights to be distributed to multiple tiers of functional departments, customers, and partners
- User Self-service Enables end users to initiate access to Services, change passwords, set password hints, and update general identity information through a simple web-based client
- **Approval Workflow** Automates approval processes required to grant access privileges to users
- **Password & Profile Management** Manages and distributes password and user profile information across and between enterprise information systems
- Audit and Reporting Provides standardized reporting on actions and user account activity

With Select Identity, provisioning and management of user accounts and privileges is no longer a barrier to realizing the efficiencies and competitive advantage of extending system access to ever greater numbers of employees, customers, and partners.

System Architecture

Select Identity is an event-driven, J2EE application that enables clustering, failover, multi-phase commit, and asynchronous operation. The following illustration provides a high-level view of the Select Identity system and its components.

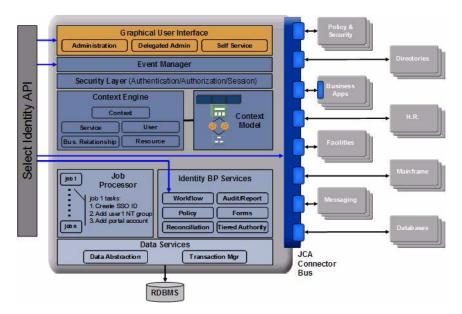


Figure 1 Select Identity Architecture

All requests to and from the system use the HTTP protocol. User accounts use one virtual ID to access back-end systems and services and are governed by Select Identity system capabilities and actions. Accounts are also governed by security policies that are defined by an administrator based on the access requirements of the company's products and services.

The Context Engine and Identity Business Process Services components of the Select Identity architecture are particularly useful to administrators and personnel responsible for deploying and maintaining the Select Identity system. These components contain the functions that administrators use most. These functions include

Context Management – Maintains the Context structure that defines identities and access for all users and resources in the extended enterprise.

Service Management – Provides a business-centric abstraction over resources, entitlements, and other identity-related entities. Services represent the products and services that you offer to customers and partners.

Business Relationship Management – Provides granular control over how groups of users access Services.

User Management – Provides consistent account creation and management across Services.

Resource Management – Provides a client to the physical information systems on which your Services rely for user account data.

Workflow Studio – Defines account provisioning processes that can be executed to grant access to Services for any event within the Select Identity system.

Reconciliation – Ensures the proper coordination of provisioning workflow across multiple resources.

Auditing and Reporting – Provides robust standard and custom reporting facilities for user entitlements and system event history.

Forms – Automates the creation of electronic forms presented to end users that are used to register for access to services, change passwords, set password hints, and update personal information.

Tiered Authority – Enables the secure, multi-tiered delegation of administrative roles, such as management of identity profiles and entitlements, to functional departments, customers, and partners.

Leveraging an open, standard, J2EE Connector Architecture (JCA) bus, Select Identity uses predefined connectors to access back-end system data stores. Connectors are configured during the installation process and are easy to deploy. If you wish to create your own connectors, Select Identity offers a software developer's kit (SDK) that enables you to do so. See the *HP OpenView Select Identity Connector Guide* for information.

Product Documentation

The Select Identity product documentation includes the following:

- Release notes are provided in the top-level directory of the HP OpenView Select Identity CD. This document provides important information about new features included in this release, known defects and limitations, and special usage information that you should be familiar with before using the product.
- For installation and configuration information, refer to the *HP OpenView* Select Identity Installation Guide. All installation prerequisites, system requirements, and procedures are explained in detail in this guide. Specific product configuration and logging settings are included. This guide also includes uninstall and troubleshooting information.
- An *HP OpenView Connector Installation Guide* is provided for each resource connector. These are located on the Select Identity Connector CD.
- Detailed procedures for deployment and system management are documented in the *HP OpenView Select Identity Administrator Guide* and Select Identity online help system. This guide provides detailed concepts and procedures for deploying and configuring the Select Identity system. In the online help system, tasks are grouped by the administrative functions that govern them.
- The *HP OpenView Select Identity Workflow Studio Guide* provides detailed information about using Workflow Studio to create workflow templates. It also describes how to create reports that enable managers and approvers to check the status of account activities.
- The *HP OpenView Select Identity External Call Developer Guide* provides detailed information about creating calls to third-party applications. These calls can then be deployed in Select Identity to constrain attribute values or facilitate workflow processes. In addition, JavaDoc is provided for this API. To view this help, extract the javadoc.jar file in the docs/api_help/external_calls/Javadoc directory on the HP OpenView Select Identity CD.
- If you need to develop connectors, which enable you to connect to external systems for provisioning, refer to the *HP OpenView Select Identity Connector Developer Guide*. This document provides an overview of the Connector API and the steps required to build a connector. The audience of this guide is developers familiar with Java.

JavaDoc is also provided for the Connector API. To view this help, extract the javadoc.jar file in the docs/api_help/external_calls/ Javadoc directory on the HP OpenView Select Identity CD.

• The *HP OpenView Select Identity Web Service Developer Guide* describes the Web Service, which enables you to programatically provision users in Select Identity. This guide provides an overview of the operations you can perform through use of the Web Service, including SPML examples for each operation.

An independent, web-based help system is available for this API. To view this help, double-click the index.htm file in the docs/api_help/web_service/help directory on the HP OpenView Select Identity CD.

2

Deployment Overview

HP OpenView Select Identity automates and simplifies all identity management tasks, including provisioning of accounts and entitlements, execution of business process workflows, delegation of administrative rights, enforcement of security policy, auditing, and reporting.

After installing Select Identity, you can begin the deployment process. Select Identity creates a logical identity for each user, which links the user to the respective resources, resource IDs, and enterprise systems such as LDAP and web single sign-on services. Select Identity's use of the enterprise/relationship model and the logical identity approach enables you to manage users in a simple, efficient, cost-effective, and secure manner.

Select Identity Deployment Concepts

This chapter provides an overview of the tasks that are necessary to deploy Select Identity in your enterprise. Detailed procedures for each task are provided in subsequent chapters and in online help.

You can deploy Select Identity in several ways. This guide provides a comprehensive view of all Select Identity deployment tasks in a logical order that you can follow or adapt to fit your business needs. As with any enterprise-class software deployment, you may want to review your business requirements and security policies before performing any of the following tasks. Having all of your system information organized and available will also expedite the process.

Connectors

Select Identity uses J2EE connectors to communicate with the system resources that contain identity profile information. You may have received a set of connectors with your initial Select Identity purchase, or you may have used the Connector APIs to create your own. Connector management defines the communication criteria by which Select Identity reconciles identity information with your system resources. A connector is needed for each resource type in your environment. For example, if your identity information resides in LDAP, Windows, and UNIX systems, you must deploy a connector for each system type.

Deploying and managing system connectors is performed through the Connectors capability and includes the following actions:

- Deploy, delete, and modify connectors
- View connector settings

For more information, see Connectors on page 31.

Resources

Resources in the Select Identity system represent the applications, databases, and directories that Select Identity provisions. Select Identity views resources as user data stores in which accounts and entitlements can be created, modified, and deleted. Typical resources in your environment might be Windows Server Systems or UNIX. After you deploy connectors for each resource type, you can deploy the resources on which your products and services rely.

Select Identity maps virtual user IDs to the IDs contained in the data stores of your systems. The end result is that no matter how many back-end user data stores reside in your environment, Select Identity creates a single, unified view of a user that spans all of the resources that may contain information about the user. For example, you may offer a service to your customers that relies on a database or web single sign-on service. After you deploy these resources in the Select Identity system, the end user accessing the Service has one logical Select Identity ID, which maps to the user accounts on both the database system and the web single sign-on system.

With connectors deployed, you simply provide the addresses of the machines in your environment and Select Identity creates the bridge to each data store. Select Identity then uses administrative authority to access each user data repository in each resource as each Service requires.

Adding and managing system resources is performed through the Resources capability and includes the following actions:

- Deploy, modify, delete resources
- View resources

For more information, see Resources on page 36.

Attributes

Select Identity uses attributes and their values to map user data to the correct resources and entitlements. Attributes are also used within Select Identity to enable account and Service management. You can create any number of attributes to reflect user profile data, physical location, or other business management criteria.

Each connector installs a mapping file for resource attributes. This file provides a means by which Select Identity attributes are mapped to each resource or data store.

Adding and managing attributes is performed through the Attributes capability and includes the following actions:

- Deploy, modify, and delete attributes
- View attributes

For more information, see Attributes on page 46.

External Calls

When accounts are added to Select Identity, they are verified through a series of attributes and workflow approval steps, which you define. Depending on your environment, one of those steps may require a call to a third-party application or system. You can create these calls to validate account attributes or lookup approvers. An external call invokes a user-defined function in order to interface with an external system and update user profile information based on the data returned by the system.

For more information, see HP OpenView Select Identity External Call Guide.

After you create external calls required by your business, you can manage them through the External Calls capability, which includes the following actions:

- Deploy, delete, and modify external call settings
- View external call settings

For more information, see External Calls on page 60.

Rules

Reconciliation rules are executed by Select Identity when a new user is added from an Authoritative resource through the Reconciliation capability. Rules provide a flexible mechanism for handling exception cases when assigning entitlements and monitoring authoritative sources.

Rules are created outside of Select Identity and are uploaded to the system. Managing rules is performed through the Rules capability of the client and includes the following actions:

- Add, modify, and delete rules
- View rules

For more information, see Rules on page 66.

Notifications

The Notifications section of the client enables you to define the content of email notices that are sent to users when a system event occurs. By creating these policies, you define the messages that the Select Identity system sends when an event occurs. These messages are useful at different stages in a workflow process.

Notices are sent to a user when an event occurs, such as account approval, rejection, or modification. Email can also be sent when an account password or hint is reset.

Creating and managing notification policies is performed through the Notifications capability and includes the following actions:

- Add, delete, and modify notification policies
- Copy notification policies
- View notification policies

For more information, see Notifications on page 69.

Workflow Studio

Workflow is the process by which user requests for Service access are approved and provisioned by Select Identity. These provisioning events include the addition and removal of accounts and can require any number of approval steps. Each step, defined in a workflow template, can include a call to individuals or external systems for validation and approval. Steps within a workflow process can also send notifications to systems and individuals. Workflow templates also enable you to track the progress of a system event through the Request Status pages. See Request Status on page 136 for more information.

Creating workflow templates is performed through the Workflow Studio capability. For overview information, see Workflow Studio on page 76. All conceptual and procedural information for Workflow Studio is in the *HP OpenView Select Identity Workflow Studio Guide*.

Challenge Response

While password characteristics are defined with attributes, you can define challenge and response hints for users who forget their passwords. Accounts can also be locked after a number of failed attempts.

See Challenge Response Questions on page 79 for more information.

Service

A Select Identity Service encapsulates all of the resources, entitlements, workflows, policies, and other identity management elements related to a single business service. For example, you may have a Service, such as Customer Support, that includes all of the identity management components related to your help desk, including CRM and Internet support portal systems. The Services capability enables you to add, view, modify, and delete the Services that are accessed by your customers and business partners. Services are made available to your customers and partners by setting Business Relationships and Context.

Business Relationships

A large part of Service creation involves establishing Business Relationships that you want to have with customers and partners. The Business Relationships that you create define how companies, organizations, or divisions access your Services. Business Relationships create a secure context in which partners and users of your Services see only what is relevant to them.

Setting Business Relationships enables you to assign workflow templates and notification policies. You can also define attributes that are fixed for users. Management of Business Relationships is hierarchical, which creates a secure way for Services to be shared across different companies or locations. Business Relationships are then assigned to Context groupings.

Context

While Business Relationships define the criteria by which users access Services, Context enables you to define logical groupings for users based on identity profile attributes and values. For example, you can create Contexts for England, India, and China that are dependent on the "country" attribute (an attribute that you defined in Attribute Management). When users register for a Service, the value for the country attribute determines the Context in which a user is managed.

Creating and managing Services, Business Relationships, and Context is performed through the Services capability and includes the following actions:

- Create, modify, and delete Services
- Create, modify, and delete Service Views
- Set Service attribute values and properties

- Create, modify, and delete Business Relationships
- Create, modify, and delete Context

For more information, see Services on page 81.

Administrative Roles

After you define Services, you can establish the administrative roles that are relevant for each. Administrative roles determine the capabilities and actions that Select Identity administrators can perform within the system.

Select Identity provides basic roles that reflect the capabilities and actions that are performed within the system. You can use the roles as defined, edit these roles, or create your own to better reflect your business needs.

Creating and managing administrative roles is performed through the Administrative Roles capability and includes the following actions:

- Add, delete, and modify Admin roles
- View Admin roles

For more information, see Administrative Roles on page 101.

Roles are assigned through a user's association with an Admin Service. See Services on page 81 for more information.

Auto Discovery

The Auto Discovery capability enables you to add multiple users to one or more Services. Auto Discovery is helpful for new installations. Use this process to add user accounts directly from the resources that are defined to support a Service. This process relies on the use of a data file to upload information to the Select Identity system.

See Auto Discovery on page 110 for complete information about this process.

Users

Users are added to the system by Select Identity administrators or through the registration process defined for a Service. The workflow template and Business Relationship that you have assigned to each Context determines how this process takes place.

Creating and managing user accounts is performed through the Users capability in the client and includes the following actions:

- Add, and modify user accounts
- View Service membership
- Add Service access to an existing user
- Enable and disable Service membership
- Enable and disable all Services
- Delete Service membership
- Terminate user accounts
- Reset account passwords
- View user account attributes
- Manage user expiration

For more information, see Users on page 121.

Request Status

When user accounts are added to the system, you can view status and approval-process details by using the Request Status capability. Request Status enables you to view color-coded workflow steps that are executed, not executed, or are waiting approval. Select Identity provides a default report template for displaying workflow information.

For more information, see Request Status on page 136.

Configuration and Audit Reporting

All account management processes can be viewed through audit and configuration reports. You can generate audit reports to monitor regular account interaction. Configuration reports display current information related to the setup of the Select Identity system.

The following configuration and audit reports are available:

- Service Audit Report
- User Audit Report
- User Audit Summary Report
- User Configuration Report
- User Configuration Summary Report
- User Configuration Detail Report

For more information, see Configuration and Audit Reports on page 151.

Reconciliation

You can synchronize Select Identity account data with the data in an authoritative or other system resource. An authoritative source is one that contains the most recent account information, such as a human resources server or email server. Non-authoritative sources may be used to update less important account data.

For more information, see Account Reconciliation on page 139.

Configurations

Select Identity enables you to configure your system in any environment, then import or export its key components, such as Services, attributes, templates, and accounts. This enables you to easily move from a test to a production environment. Managing system configurations is performed through the Configurations capability and includes the following actions:

- Importing configurations
- Exporting configurations

Self Service

After users are established within Select Identity, they can view and update their passwords and challenge response questions. This reduces the member of required actions in areas such as account updates and password management.

User management of accounts is called Self Service in the Select Identity client and includes the following actions:

- Changing passwords and password hints
- Delegating Admin Roles, if an administrator
- View account profile

For more information, see Account Self Service on page 148.

Sample Deployment Process

There are several ways to deploy your Select Identity system. The following is a suggestion based on previous Select identity deployments. Chapters in this guide refer to when and how you can change the order to better fit your production process.

Logging In to Select Identity

To log in after the server is installed, you must obtain the host name, login ID, password, and port number. The default login account is

User name: sisa

Password: abc123

Log in to Select Identity by entering the following URL in the web browser:

If WebLogic is the application server:

http://webLogic_hostname:7001/lmz/control/home

Log in to the system with this account information and create a new Select Identity system administrator based on your company's security policies, and delete the sisa account. This account belongs to the System Administrator role. See Select Identity Default Roles on page 105 for actions.

Deployment Steps

Follow the sample deployment process.

- 1 Log in to the system as the Select Identity system administrator.
- 2 Open **Connectors** and deploy any connectors that you require for resources to communicate with Select Identity.
- **3** Open **Resources** and create a resource for each of the systems on which Select Identity will rely for user identity information.
- 4 Open Attributes and define the identity attributes that will determine how accounts are grouped and managed.
- 5 Open External Calls and deploy any programs that you want to call third-party applications during the account approval process.
- 6 Open **Rules** and deploy rules when you want to programmatically assign new users to a Service based on some qualifying criteria during the reconciliation process.
- 7 Open **Notifications** and create the templates that the system will use to notify users and administrators when a system event occurs, such as the addition or removal of an account.
- 8 Open Workflow Studio and create templates to define the process by which user accounts are provisioned.
- **9** Open **Challenge/Response** and define the questions and hints that users can answer to reset their passwords.
- 10 Open Services and create all of the Services, Business Relationships, and Context that you plan to offer customers and partners.
- 11 Open Admin Roles and create the administrative roles that will govern your Services.

After completing these tasks, you can add users or enable users to request registration with the system. You can also use the **Auto Discovery** process to add groups of users at one time. After users are established within Select Identity, they can view and update portions of their identity profiles with the **Self Service** pages.

Use the **Approvals** and **Request Status** pages to manage and monitor the addition of accounts to the Select Identity system.

Use **Configurations** to import or export Select Identity configurations from test to production environments.

Reports can be run at any time to view system configuration and account activity.

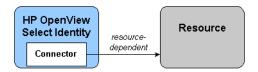
3

Connectors

HP OpenView Select Identity enables you to connect to enterprise applications and resources to configure and manage user accounts and entitlements in those systems. The component that enables Select Identity to access a resource is called a **connector**. The connector acts as a gateway between Select Identity and the resource.

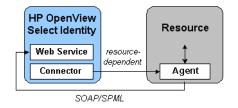
Select Identity supports two types of connectors:

• A one-way connector initiates communication with a resource. If a resource is supported through the use of a one-way connector, provisioning operations initiated by Select Identity are synchronized with the resource through the connector. The following diagram illustrates the flow of data:



The connector resides on the Select Identity server and sends requests to the resource. The resource defines the protocol that must be used by the connector to issue the request. To create a one-way connector, you must create the connector and install it on the Select Identity server.

• A two-way connector contains the connector that resides on the Select Identity server and an agent that resides on the resource. The connector communicates with the agent and the agent performs the provisioning operations. The agent also listens for changes on the host resource and sends notices to Select Identity when changes are detected. Thus, a two-way connector enables data to flow in two directions, as illustrated in the following diagram. Changes to user accounts can occur on either system.



The connector must issue a request according to the resource's specifications. When the agent issues a request to Select Identity's web service, it must do so through the SOAP protocol with an SPML payload through HTTP or HTTPS.

Creating and Installing a Connector

To create a connector that enables Select Identity to connect to a system resource in your environment, you must build a resource adapter using the J2EE Connector architecture (JCA). To do this, you must have an understanding of the Java Developer Kit (JDK) and you should be familiar with the JCA. In addition, Select Identity provides a Connector API to be used in conjunction with JCA to create connectors. After you build the connector, you can install it on the Select Identity server, which enables you to deploy it and create resources in the Select Identity client. Each connector is delivered with an installation guide that contains information about associated connector files and attribute mapping files.

The *HP OpenView Select Identity Connector Guide* provides details about writing code for a connector, including methods to be implemented in the Select Identity Connector API. Refer to this guide for an API overview, packaging instructions, and an installation procedure. The Connector API is documented and available in online help. Refer to Product Documentation on page 16 for details on accessing the documentation.

Managing Connectors

After you create a connector, you can deploy it through the Select Identity Connector pages. You will need one connector for each resource type that you want to support. For example, if you want to connect to three LDAP servers, only one LDAP connector is installed and deployed.

Before connectors can be managed through the Connector pages, the *connector.rar* file must be deployed on the Select Identity application server. See the *HP OpenView Connector Installation Guide*, which is included on the Select Identity Connector CD.

Deploying a Connector

Perform the following to deploy a new connector:

1 From the home page of Connectors, click **Deploy New Connector**. The Connector Information page displays.

Admin Roles	Conr	nectors	Resource	s	Services	Notifications	Users
Request Status	Audit Reports	Configur	ation Reports	Chal	llenge / Response	WorkFlow Studio	Attributes
Auto Discovery	Recon	ciliation	External C	alls	Approvals	Configurations	Rules
Home > Connectors						Wednesday, Septer	mber 29, 200
Type in the name and	all noconcorri	oformation o	f the connector h	ah nniad	ployed Click "Sub	mit" when finished	
Type in the name and	annecessary	monnauon o	The connector i	Jeing de	proyed. Onex Bub	wien initiatieu.	
Connector Informati		nonnauon o		Jeing de	proyed. Onex Sub	and when missied.	
		Idap		Jeing de	proyed. Once out		
Connector Informati *Connector Name:		ldap		Jeinig de			
Connector Informati				Jenig de		inter interiore.	
Connector Informati *Connector Name:		ldap					

- 2 Enter a unique name for this connector in the Connector Name field.
- 3 Enter the JNDI name for the connector in the Pool Name field. It is always eis/connector_name. This JNDI name is specified during the creation of the connector.
- 4 Click Submit.

The connector is deployed by the system.

Modifying a Connector

If your connector configuration changes, you can update the deployment information.

Perform the following steps to modify a connector:

- 1 From the home page of Connectors, select a connector from the Connectors drop-down list.
- 2 Select Modify Connector from the Actions drop-down list.
- 3 Click Submit. The Connector Information page displays.

Basic connection information is listed, including the connector name and pool name.

4 Modify any of the available fields and click Submit.

Viewing a Connector

You can view resource connectors configured for your system.

Perform the following steps to view a connector:

- 1 From the home page of Connectors, select a connector from the Connectors drop-down list.
- 2 Select View Connector from the Actions drop-down list.
- 3 Click Submit. The Connector Information page displays.

Basic connection information is listed, including the connector name and pool name.

Deleting a Connector

You can delete a connector from the Select Identity system. Make sure to remove any resource and Service dependencies before deleting the connector.

Perform the following steps to delete a connector:

- 1 From the home page of Connectors, select a connector from the Connectors drop-down list.
- 2 Select **Delete Connector** from the Actions drop-down list.
- 3 Click Submit.

You are prompted to confirm the action. Click $\ensuremath{\mathsf{OK}}$ to delete the connector.

4

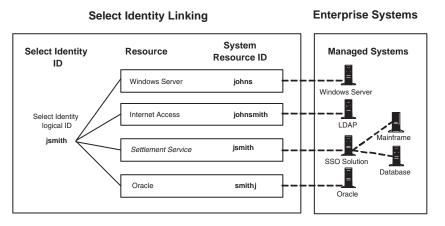
Resources

Resources in the HP OpenView Select Identity system represent the physical applications, databases, and directories that Select Identity relies on for account information. Select Identity views resources as user data stores in which accounts and entitlements can be created, modified, and deleted. Typical resources in your environment might include Windows Server Systems or Oracle databases.

Within the Resources section of the Select Identity client, you can deploy, view, modify, and delete the resources to which Select Identity maps its users. The end result is that no matter how many back-end user data stores you have in your environment, Select Identity creates one user ID to provide access to the Services that they support.

The following illustrates this.

Figure 2 Select Identity Example



For example, you may offer a Service to your customers that relies on a database, such as UNIX or web single sign-on service. Select Identity provides a unified view of a user identity named *jsmith*. Select Identity's concept of an identity is not only system-wide, it is enterprise-wide. If a user leaves the company, for example, Select Identity tracks all of the various resources where the user has an identity (account and entitlements) and can act appropriately.

Authoritative Sources

The Authoritative Source setting enables you to establish a resource that is used as the baseline for all accounts within the Select Identity system. For example, your human resources server may contain all of your company's most current identity profile information. If so, you can add this server as a resource and delegate it as an Authoritative Source for user information.

Once a system is defined as an Authoritative Source, you can add a rule that detects changes within that resource and propagates them to Select Identity. See Rules on page 66 for more information about using rules in Select Identity.

Another advantage of defining an Authoritative Source is that it can be used to add user accounts to the Select Identity system during initial deployment. You can also add accounts from an Authoritative Source after the system is in production.



You can compare resource information to a non-Authoritative Source, but you cannot add accounts from one. See Account Reconciliation on page 139 for information about Resource Reconciliation.

Adding and Managing System Resources

Select Identity is installed with each of the resource connections that your business requires. If you add new systems to your environment later, additional resource connectors can be acquired from HP OpenView Professional Services or developed using the Select Identity Connector SDK. Connectors can be deployed and managed through the Connectors section of the client. See Connectors on page 31 for more information.

This chapter provides details for all of the actions that you can perform within Resources. Access to each of these functional areas is determined by the administrative roles assigned to your account by the Select Identity system administrator.



When adding a user in Select Identity for UNIX, Tandem, and AS400 systems, avoid entering an entitlement (secondary groups) value that is the same value as the Default Group for the system resource. This may cause an entitlement to be inadvertently removed from the user if the user is modified and the Default Group value is changed for that user.

Deploying a Resource

You need to deploy a resource for each system on which users have accounts that relate to the Services you provide. The following procedures use an LDAP system as a resource example.

The information that you will enter for each of your system resources will vary according to the system itself. See Resource Access Information on page 161 for a listing of system-specific access information.

Perform the following steps to deploy a resource:

1 From the home page of Resources, click **Deploy New Resource**.

The Resource Information page displays.

Admin Roles	Conr	nectors	Resource	S	Services	Notifica	itions	Users
Request Status	Audit Reports	Configura	ation Reports	Chal	lenge / Respons	e WorkFl	ow Studio	Attributes
Auto Discovery	Recon	ciliation	External C	alls	Approvals	Config	urations	Rules
Home > <u>Resources</u>							day, Septem	
Type in the name an and owner. Click "Sa				ployed. N	lext, select the re	source type	Ad	sic Info ditional Info cess Info
Resource Informati	on							
*Resource Name:		LDAP Res	ource					
Resource Descrip	tion:	Data sto	re 3 for H(2.	<			
*Resource Type:		LDAP	~				1	
*Authoritative Sourc	e:	⊖Yes ⊙	No					
*Delete User:		⊙Yes O	No					
Save & Continue		* De	signates Requi	red Field	s	Cance	əl	

- 2 Enter a name for this resource in the Resource Name field.
- 3 If you choose, you can add a description for this application in the Resource Description text box.
- 4 Select a system type from the Resource Type drop-down list. This determines the connector used to access the resource.
- 5 If this resource provides the most current user data in your environment, select **Yes** from the Authoritative Source options. Select Identity can then rely on this resource to synchronize account data.
- 6 If you want to delete users from this resource when they are deleted from an associated Service, select **Yes** from the Delete user options.
- 7 Click Save & Continue to proceed.

The Additional Information page displays.

Admin Roles	Con	nectors	Resource	es	Services	Notification	IS	Users
Request Status	Audit Reports	Configur	ation Reports	Chall	lenge / Response	WorkFlow	Studio	Attributes
Auto Discovery	Recor	ciliation	External C	alls	Approvals	Configurat	tions	Rules
Home > <u>Resources</u> LDAP Resource	> Deploy New R	esource				Wednesday,		
Modify parameters a	s desired for the	target resou	rce. Click "Save	& Contin	ue" when finished			sic Info
								ditional Info cess Info
Resource Informati	on						AU	255 1110
Resource Name:		LDAP	Resource					
Manage User								
Manage User								
Associate to Group:		✓						

- 8 You may be asked to associate this resource with a Managed Group, if the system uses the concept of entitlements. Select the check box to create the association.
- 9 Click Save & Continue to proceed.

The Resource Access Information page displays.

Admin Roles	Co	nnectors	Resource	es	Services	Notificatio	ns	Users
Request Status	Audit Reports		ation Reports		ige / Response	WorkFlow	/ Studio	Attributes
Auto Discovery	Reci	nciliation	External C	alls	Approvals	Configura		Rules
Home > Resources LDAP Resource	> Deploy New	Resource				Wednesda	y, Septem	ber 29, 2004
Modify parameters as if server is active and			rce. Click "Test	and Submit	" when finished	I to determine	Add	sic Info ditional Info cess Info
Resource Access In	formation							
*Resource Name:		LDAP Reso	urce					
Access URL:		ldap://loca	alhost389					
Suffix:		dc=com						
Login Name:		cn=Directo	ory Manager					
Password:		•••••						
* User Suffix:		ou=people	•					
* User Object Class	82	top,persor	n.organizationa	alPerson,in	e			
* Group Suffix:		ou=Group	s					
 Group Object Clas 	IS:	top,group	ofuniquename	s				
		iPlanetxm			(View)			

10 Based on the application type that you selected in Step 4, you will be asked to provide the information required to connect to this system, such as machine name and URL. You can also view the mapping file that Select Identity uses to map attributes to this resource.

Enter your system connection information. See Resource Access Information on page 161 for examples.

11 Click **Test and Submit**. Select Identity verifies the connection and adds the new resource to the system.

Modifying a Resource

You can modify the system resources on which your products and Services rely. You may need to modify a resource in the following cases:

- the connector mapping has changed
- the resource application was moved to another machine
- the resource admin password has changed

Perform the following steps to modify a resource:

- 1 From the home page of Resources, click $\stackrel{\ensuremath{\sim}}{\sim}$ to search for and select the resource that you want to modify.
- 2 Select Modify Resource from the Actions drop-down list.
- 3 Click Submit. The Resource Information page displays.
- 4 You can modify the following information:
 - If you want a description for this resource, you can add or edit one in the Resource Description text box.
 - You can also change the Authoritative Source for this resource.
- 5 Click Save & Continue. The Additional Information page displays.
- 6 Select or clear the Associate to Group check box.
- 7 Click Save & Continue. The Access Information page displays.
- 8 If your access to this system changed, you can edit the appropriate fields.
- 9 If you want to view the mapping file for this resource, click View next to the Mapping File field.

The XML file displays.



10 Click **Test and Submit**.

П

Select Identity verifies the connection and updates the resource.

Changing the configuration of a resource can have serious consequences. Select Identity may display a warning and ask you to confirm the action in any of the following cases:

- If you change the URL or IP of the resource
- If there is a filter present and you change it
- If the Select Identity database is not synchronized with the resource

Viewing a Resource

You can view system information for resources on which Select Identity and your Services rely.

Perform the following steps to view a system resource:

- 1 From the home page of Resources, click $\stackrel{\ensuremath{\sim}}{\sim}$ to search for and select the resource that you want to view.
- 2 Select View Resource from the Actions drop-down list.
- 3 Click Submit.

You can view all configuration information by clicking the available links on the right.

Deleting a Resource

You can delete a system resource from Select Identity if your Services no longer require access to it.



If a resource is still associated with a Service, it cannot be deleted.

Perform the following steps to delete a resource:

- 1 From the home page of Resources, click \checkmark to search for and select the resource that you want to delete.
- 2 Select **Delete Resource** from the Actions drop-down list.
- 3 Click Submit.

You are prompted to confirm the action. Click **OK** to delete the resource.

Viewing Resource Attributes

You can view the attributes that are used to provision user information for a given resource.

Perform the following steps to view resource attributes:

- 1 From the home page of Resources, select a resource from the Resources drop-down list, or click \checkmark to use the search function.
- 2 Select View Attributes from the Actions drop-down list.
- 3 Click Submit. The Display Options page displays.

Admin Roles	Conn	ectors	Resource	S	Services	Notific	ations	Users
Request Status	Audit Reports	Configura	tion Reports	Chall	enge / Respor	ise WorkF	low Studio	Attributes
Auto Discovery	Recon	ciliation	External C	alls	Approvals	Config	gurations	Rules
							Thursday,	July 29, 20
Home > Resources >	View Attribute	S						
Select the filter and pr								
Select the litter and pr	ess submit							
Resource Name: Acti								
Resource Name: Acti								
		Ν	Vame		~	ascending		~
Resource Name: Acti Display Options			Vame 10		>	ascending		~
Resource Name: Acti Display Options Order By:						ascending		~

- 4 Choose the Order By and Items Per Page options that you want.
- 5 Click Submit. The List of Resource Attributes displays.

	2 0 00			Total Record
lame	Min Length	Max Length	Attribute Mapped To	Authorative
Address 1	1	128		
Address 2	1	128		
Business Phone	1	20		
City	1	128		
Description	1	256		
Directory	0	128		
Email	1	256	Email	N
First Name	1	64	FirstName	N
lome Phone	1	20		
.ast Name	1	64	LastName	N

Home > Resources > View Attributes

Cancel

- 6 You can page through the results to view details for each attribute, such as value constraints, Select Identity mapping, and whether or not the attribute is considered authoritative. See Authoritative Sources on page 37 for more information.
- 7 You can click **New Search** to change display criteria, or click **Cancel** to return to the Resources home page.

5

Attributes

HP OpenView Select Identity enables you to define the way in which user identities are managed and stored. Each user profile can contain any number of attributes, such as username, first name, last name, and email address. The resources that you deployed contain their own resource attributes based on the operating system or application group's information. Select Identity relies on attributes defined for each resource and resource attributes defined through the Attributes pages to enable access to Services and provision accounts.

A mapping file is associated with each connector, which contains resource-specific attributes. This file maps the connector to the resource, and defines where and how identity information is stored on that resource. During the resource deployment procedure, you can view the file that the connector uses to map resource attributes. The following is a sample:

You can create attributes that are specific to Select Identity through the Attributes pages. These attributes can be used to associate Select Identity user accounts with system resources by mapping them to the connector mapping file. This process becomes necessary because a single attribute "username" can have a different definition on three different resources, such as "login" for UNIX, "UID" for a database, and "userID" on a Windows server.

You also can create attributes that you do not map to a resource. These attributes may be specific to Select Identity or to your business. If attributes are not mapped to a resource, they are valid in Select Identity only and cannot be used to associate an account with a resource.

The following diagram illustrates how the attribute "username" is mapped to multiple resources through each connector mapping file.

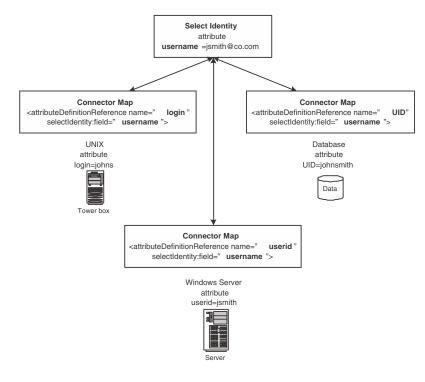


Figure 3 Attribute Mapping Example

If you offer a Service that relies on these three resources, users who register for the Service can be mapped accordingly. This enables you to create a standard set of profile attributes for your users that are relevant for your business and then map them to any of your system resources, regardless of how the attribute is defined on the resource.

Attributes that are automatically mapped between Select Identity and resources are key (attributes that are required by the resource) and entitlement attributes.

When defining attributes, you can assign external calls for the following purposes:

- Value, which defines the acceptable values for an attribute.
- Constraint, which constrains the attribute value to a particular format or requirement.
- Validation, which calls an external program to validate the value of the attribute.

These functions are deployed through External Calls and are then made available when creating an attribute.For more information about creating external calls for attributes, see the *HP OpenView Select Identity External Call Guide*.

Managing Multiple Passwords

Select Identity manages and synchronizes multiple passwords used throughout an enterprise. Typically, legacy systems, client-server, and newer technology systems are managed by different IT staffs and require different password formats, strengths, and policy. Select Identity uses the Attributes function to manage all password specifications. An administrator can create as many attributes as needed to properly provision user-related data into a resource. A resource's password is simply another attribute in Select Identity, which can be pushed to the resource during account creation and reset activities.

Select Identity has one default password attribute called *password*. This attribute cannot be removed as it is used for Select Identity system authentication. This attribute can be used to push the same password to any number of resources, thus synchronizing Select Identity with the resources.

Multiple password attributes can be created to address differing password policies and requirements. Each password attribute must have a unique text name and contain a unique password policy, such as minimum and maximum characters allowed during registration, or whether the password should be auto-generated to meet a corporate standard.

Once a password attribute is used to provision a user with Select Identity, that password is tracked by Select Identity for the life of the user's existence in the system. Subsequent password reset requests will display all password attributes for the user, thus all resource(s) using that password attribute will be synchronized. This mapping of password attributes to resources can be 1:1 or 1: many.

Using Attributes to Facilitate User Searches

User accounts can consist of many attributes. Typically, users are searched based on certain key attributes (email, SSN, employee ID). Certain user profile attributes can be added to the TruAccess.properties file and used to expedite search functions. If these attributes are set, the TAUser database table must be extended by adding extra columns that reflect these values. The extra attributes must then be mapped to those columns.

To specify certain attributes on which you want to search, you can perform the following:

- Identify the key attributes, such as SSN, EmployeeId, or email. You will need to make sure that these are defined within Select Identity and within the mapping file used for each system resource in which data is stored.
- Add corresponding columns to the TAUser table in the database.
- Add entries in the TruAccess.properties file.

See the *HP OpenView Select Identity Installation Guide* for information about editing the database tables and *TruAccess.properties* file.

Resource-Specific Guidelines

Certain resources require specific attribute orders and values to expedite provisioning. The following tables provide attribute specifics. Refer to this information when creating attributes for the following resource types.

AS400 Attributes

The following is the recommended order for adding AS400 attributes and possible values that will facilitate account provisioning in AS400 systems. Attributes should also be added and processed in this order when creating a Service that relies on an AS400 resource.

For each attribute that has a value listed in the table, perform the following when creating the attribute in Select Identity. See Adding and Mapping an Attribute on page 54 for the complete procedure.

- Select the **Specified** option for Value Constraint Type on the Information page.
- Add each value as the Constraint Display Name and Constraint Value on the Values page, as shown

The Attribute Value Managemen Attribute Information - test	t section all	ws you to add Select Identity Attribute \	'alues.	Informatio Values Mapping
Constraint Display Name: *SECOFR	Ea	*USER - *USER	Û	
Constraint Value: *SECOFR				

All of the values in the following table must be added for each attribute.

AS400 Attributes	Name-Value Pairs
UserName	
FirstName	
Middle Name	
Preferred Name	

AS400 Attributes	Name-Value Pairs
Password	
User Class	*USER, *SECOFR, *SECADM, *SYOPR, *PGMR
Primary Group	
AS/400-109_ENTITLEMENTS	
Password Expires	*NO, *YES
User Directory Id	
User Directory Address	
User Id	
Home Directory	
User Description	
Addr1	
Addr2	
User Location	
Network UserId	
Title	
Building	
System Name	
Department	
PhHome	
PhBus	
Office	
Company	
Fax Number	
Display Sign-On	*SYSVAL, *NO, *YES
Job Description	
Object Auditing	*NONE, *CHANGE, *ALL

AS400 Attributes	Name-Value Pairs
Keyboard Buffering	*SYSVAL, *NO, *YES, *TYPEAHEAD
Sort Sequence	
Message Queue	
MQ Delivery	*NOTIFY, *BREAK, *HOLD, *DFT
MQ Severity	
Attention-Key-Handling Program	
Current Library	
Language Identifier	
Authority	*EXCLUDE, *ALL, *CHANGE, *USE
Object Owner	*USRPRF, *GRPPRF
Limit Capabilities	*YES, *PARTIAL, *NO
Maximum Storage	
Country/Region Identifier	
Print Device	
User Options	
Accounting Code	
Coded Character Set Identifier	
Priority Limit	
Locale	
Initial Program	
Group Authority	*NONE, *ALL, *CHANGE, *USE, *EXCLUDE
Initial Menu	
Action Auditing	*NONE, *CMD, *CREATE, *JOBDTA, *OBJMGT, *OFCSRV, *PGMADP, *SAVRST, *SERVICE, *SPLFDTA, *SYSMGT

AS400 Attributes	Name-Value Pairs
Character Identifier Control	*SYSVAL, *DEVD, *JOBCCSID
Document Password	
Special Environment	*SYSVAL, *NONE, *S36
Output Queue	

Tandem Attributes

For Tandem attributes that cannot be mapped to existing Select Identity attributes, you must create new attributes in Select Identity and map them to the corresponding Tandem attributes.

The Tandem connector can dynamically retrieve the list of primary groups from the Tandem resource. To enable this, create a Primary Group attribute with the following settings:

Attribute Name	Primary Group
Identity Object Type	User
Primitive Type	String
Attribute Type	Normal
Storage Type	Normal
Multi Value	No
Min Length	1
Max Length	50
Required	Yes
Default Display Name	Primary Group
Default Display Mask	0
Default Display Length	0
Value Constraint Type	Dynamic

Value Constraint Function Value Generation Function Value Validation Function

UNIX, Tandem, and AS400 Attributes

When adding a user in Select Identity, avoid entering an entitlement (secondary groups) value that is the same value as the Default Group for the system resource. This may cause an entitlement to be inadvertently removed from the user if the user is modified and the Default Group value is changed for that user.

Search Connector

Adding and Mapping an Attribute

You can add any number of attributes to manage identity information. The attribute can then be mapped to resource attributes during account addition and updates.

Perform the following steps to add and map an attribute:

1 From the home page of Attributes, click Add New Attribute.

Attribute Information		
*Attribute Name	town	
★Identity Object Type	User	~
*Primitive Type	String	*
*Attribute Type	Normal	*
*Storage Type	Normal	*
Description	User's home city.	<
Default Help Text	Enter your city of residence	
*Multi Value	⊙Yes ○No	
*Min Length	1	
*Max Length	64	
Value Pattern		
*Required	⊙Yes ○No	
*Default Display Name	City	
Default Display Mask	0	
Default Display Length	0	
Value Constraint Type	Specified	~
Value Constraint Function		
Value Generation Function		
Value Validation Function		

The Attribute Information page displays.

- 2 Enter a name for the attribute in the Attribute Name field.
- 3 Choose the object type for this attribute from the Identity Object Type drop-down list. Choose **User** if the attribute will define user profile information.
- 4 Choose the type of value that you want the attribute to have from the Primitive Type drop-down menu. Choices include **String** and **Date**.
- **5** Choose the attribute type. Choices are **Password** for those attributes that define password requirements, and **Normal** for all others.

If you choose the **Password** attribute type, the storage type option should be one-way.

- 6 Choose the storage type for the attribute from the Storage Type drop-down menu. This option determines if the attribute is stored in Select Identity, in a resource, or both.
- 7 If you choose, you can enter a description for the attribute in the Description text box.

- 8 Enter text to help the user understand what is required from this field in the Default Help text box.
- 9 If this attribute can have multiple values, Select the Yes Multi Value option.
- **10** Enter a minimum length for the attribute value in the Min Length field.
- 11 Enter a maximum length for the attribute value in the Max Length field.
- 12 You can enter a regular expression for the attribute value in the Value Pattern field.
- 13 If you want this attribute to be required, select the Yes Required option.
- 14 Enter the Default Display Name for the attribute. This is the name that users see when registering for a Service.
- 15 If you want to mask a portion or all of the attribute's value when entered, enter a number in the Default Display Mask field. You can use this option to mask password entries.
- 16 Enter the number of characters that you want displayed for the attribute value in the Default Display Length field.
- 17 Choose a type from the Value Constraint Type drop-down list.

None enables a user to enter a value.

Specified enables you to specify values that a user can select for this attribute. If you choose this option, an additional page is displayed enabling you to specify name and value pairs.

Dynamic specifies a search for values through the use of an external call.

18 If you want to call a function to constrain the value of the attribute, click

to search for and specify the program. Programs are registered through the External Calls capability.

If you specified **Dynamic** for the Value Constraint Type, you must choose a program to search for a value. An additional page displays enabling you to specify arguments.

19 If you want to call a function to generate the value of the attribute, click

 $\overset{
ho}{\sim}$ next to the Value Generation function to search for and specify the function.

- 20 If you want to call a program to validate the value of the attribute, click $\stackrel{\text{}^{\text{}}}{}$ to search for and specify the program.
- 21 Click Save & Continue to proceed.

The Attribute Mapping page displays.

ap the concero attribute to one-to- authoratative if needed.	many resource attributes. You may sele	ct one of the resource attribute	Information Values Mapping
tribute Mapping for town			
Authoritative Resource Attributes:		Clear Auth	
Mapped Resource Attributes:	SAP_ENTITLEMENTS(SAP)	٩	
		Set Auth Remove	

22 Click $\stackrel{\ensuremath{\sim}}{}$ to search for the resource and attributes that you want to map. After you locate the resource, the available attributes are listed.

Resource Attribute Search Result						
Please Select Resource Attribute(s).						
Add & Continue	Add & Close	Close Window				
		Total Records: 9				
Resource Attribute Name(Reso	ource Name)					
Class(SAP)						
Cost Center(SAP)						
Email(SAP)						
First Name(SAP)						
Last Name(SAP)						
Password(SAP)						
SAP_ENTITLEMENTS(SAP)						
SAP_KEY(SAP)						
User Name(SAP)						
44 4 4 4 4 4 4 4 4 						
Add & Continue	Add & Close	Close Window				
New Search						

23 Choose the attribute or attributes that you want to map and click Add & Continue to choose more options or Add & Close to add your choices and close the window. When you are finished click Close Window.

The Attribute Mapping page displays.

ap the concero attribute to one-to-n a authoratative if needed.	nany resource attributes. You	may select one of the resource attribute	Informatio Mapping
ttribute Mapping for USCity			
Authoritative Resource Attributes:		Clear Auth	
Mapped Resource Attributes:	City(ActiveDir)	~	
		Set Auth Remove	

To remove attributes from the Mapped Resource Attributes list, select the attribute and click **Remove**.

- 24 If you want an attribute mapped to the authoritative resource, select it and click **Set Auth**. The attribute is mapped to the resource that you define as the authoritative source. See Authoritative Sources on page 37 for more information.
- 25 When finished, click Submit.

Viewing an Attribute

You can view an attribute and its mapping information.

Perform the following steps to view an attribute:

- 1 From the home page of Attributes, click $\stackrel{\ensuremath{\rho}}{}$ to search for the attribute that you want to view.
- 2 Select View Attribute from the Actions menu.
- 3 Click **Submit**. The Attribute Information page displays.
- 4 Click the tabs to the right of the page to view attribute mapping information.
- 5 When finished, click **Attributes** in the cookie trail at the top of the page to return to the home page.

Modifying an Attribute

You can modify attributes and mapping information. See Adding and Mapping an Attribute on page 54 for details about each field. When modifying an attribute, there are custom properties of Select Identity attributes that may not be reflected at the Service level.

Perform the following to modify an attribute:

- 1 From the home page of Attributes, click \checkmark to search for the attribute that you want to modify.
- 2 Select Modify Attribute from the Actions menu.
- 3 Click Submit. The Attribute Information page displays.
- 4 Modify any available fields.
- 5 Click Save & Continue. The Attribute Mapping page displays.
- 6 You can add, edit, or delete attribute mapping values.
- 7 When finished, click **Submit** to save your settings.

Deleting an Attribute

You can delete an attribute from the Select Identity system. Remove any Service or Business Relationship dependencies before deleting the attribute.

Perform the following steps to delete an attribute:

- 1 From the home page of Attributes, click $\stackrel{P}{\sim}$ to search for the attribute that you want to delete.
- 2 Select **Delete Attribute** from the Actions menu.
- 3 Click Submit.
- 4 You are prompted to confirm the action. Click **OK** to delete the attribute.

6

External Calls

HP OpenView Select Identity workflow processes and profile attributes support the ability to perform actions on external systems. This capability, called **External Calls**, enables integration of access approval processes with other business processes and systems. External system calls can also constrain or verify the value of identity profile attributes.

Select Identity supports the ability to invoke calls to external systems to perform the following:

- Value generation generates the values of an attribute
- Value constraint provides a list of possible values for an attribute
- Value validation validates the value of an attribute
- Workflow action performs a task as part of a workflow, enabling you to integrate approval processes with external processes and systems
- Approver Selection searches an external program for a workflow step approval.

You must code the classes that are called by external calls using the External Call API and Workflow API. After you create the Java file(s) that comprise an external call, you can register it with Select Identity through the External Calls capability. Refer to the *HP OpenView Select Identity External Call Developer Guide* for information about creating external calls.

The Select Identity External Call and Workflow APIs define a Java-based interface for creating external callouts. Although the Select Identity-facing portion of the interface must be Java, it can be a "wrapper" for a program written in any language.

For workflow external calls, the APIs support synchronous communication. Select Identity requires the external system to complete its processing and provide status information as part of the callout, which is required to return status that indicates how Select Identity will proceed with the workflow.

Creating an External Call For Workflow Templates

Select Identity enables you to interact with external systems for Workflow Steps and Approver Lookups. To create an external call, you must write the code that issues a request to the external system. See the *HP OpenView Select Identity External Call Guide* for complete information regarding the creation of external calls.

When the external call returns information, it must return data that is valid in Select Identity. For example, for Approval Lookups, the external call must return a valid user ID that exists in Select Identity. Therefore, when you create the external call, provide a way for it to map the returned user ID to the Select Identity user ID.



If the external system cannot send the Select Identity user ID, the workflow process is terminated and an error is sent.

After you create the call, copy the source file(s) to a directory on the Select Identity server. Copying the files to a directory in the Select Identity installation path will save you a step in the deployment procedure.

Creating an External Call for Attributes

You can assign external functions to different attributes for the following purposes:

- Value, which defines the acceptable values for an attribute.
- Constraint, which constrains the attribute value to a particular format or requirement.
- Validation, which calls an external program to validate the value of the attribute.

These functions are created and made available in the Select Identity system through the External Calls pages. For an example, see the *HP OpenView* Select Identity External Call Developer Guide.

Deploying an External Call

After you create the files you need to make the external call, you can deploy them through the Select Identity client. You can create external calls to enhance a workflow process or support profile attribute creation management.

Perform the following steps to create an external call:

1 From the home page of External Calls, click Add New Call. The Basic Information page displays.

Home > External Calls > Add New Call		
	he new external call being deployed. Next, enter the Class Name d Number of Parameters and click "Save & Continue".	Information Parameters
Basic Information		
*External Call Name:	Call Approvers	
Description:	Call to approvers file	
*Classname:	n.select identity.truaccess.externalcall.approver	
Classpath: (Separated by ;)	×	
*Call Type:	Approver Selection	
*Number of Parameters:	0	
Save & Continue	* Designates Required Fields Cancel	ĺ

- 2 Enter a unique name for the new call in the External Call Name field.
- 3 If you choose, enter a description in the Description text box.
- 4 Enter the name of the class that implements the Java interface in the Classname field.
- 5 Enter the fully qualified path to the interface in the Classpath field.

If the path is within the Select Identity installation path, this information is not required.

6 Select the type of call you are adding from the Call Type drop-down list. Choices for a workflow process are as follows:

 $\ensuremath{\mathsf{WorkFlow}}$ External Call – calls an external program or system during a workflow process

Approver Selection – searches an external program for a workflow step approval.

Attribute Value Generation – generates the value of an attribute

Attribute Value Constraint – restricts the value of an attribute

Attribute Value Validation - validates an attribute value

- 7 Enter the number of parameters required by the external call in the Number of Parameters field.
- 8 Click Save & Continue.

If you specified parameters for this call, the Parameters page displays.

Modify parameters as desired t	or the external call. Click "Submit" when finished.		Information Parameters
Basic Information			
External Call Name: Search	Connector		
Parameter Name	Parameter Value		
1. resource_name	Active Directory		
Submit		Cancel	

- **9** Enter the name and value for each parameter that you want to pass to the external system.
- 10 Click Submit. The new call is registered with Select Identity.

Modifying an External Call

If you need to change the external call classname, path, or the parameters that are passed from Select Identity, you can modify this information in the Select Identity client.

Perform the following steps to modify an external call:

- 1 From the home page of External Calls, click $\stackrel{P}{\sim}$ to search for and select an external call.
- 2 Select Modify Call from the Actions drop-down list.
- 3 Click **Submit**. The Basic Information page displays.
- 4 Change any information but the call name and type.
- 5 Click Save & Continue. The Parameter Information page displays.

You must proceed through each page or your changes will not take effect.

- 6 If you have any parameters set, you can modify them here.
- 7 Click **Submit** to save your settings.

Viewing an External Call

Perform the following steps to view external call settings:

- 1 From the home page of External Calls, click $\stackrel{P}{\sim}$ to search for and select an external call.
- 2 Select View Call from the Actions drop-down list.
- 3 Click Submit. The Basic Information page displays.
- 4 Click the tabs to the right to view configuration information.

Deleting an External Call

Perform the following steps to delete an external call:

- 1 From the home page of External Calls, click $\stackrel{p}{\sim}$ to search for and select an external call.
- 2 Select **Delete Call** from the Actions drop-down list.
- 3 Click Submit.
- 4 You are prompted to confirm the action. Click **OK** to delete the call from Select Identity.

7

Rules

Reconciliation Rules are used to control how new users are assigned and provisioned in HP OpenView Select Identity for reconciliation requests. When a reconciliation add request is received by Select Identity for an authoritative resource, the rule is applied to the new user. If the user meets the criteria specified in the rule and qualifies for a Service, the user can be added to that Service based on criteria specified in the rule. Once a rule is created, you can deploy and manage it through the Rules pages.

Rules are created outside of Select Identity and then uploaded to the system. You must create an XML or SPML file that adheres to the rules DTD. The file name must follow the *ResourceName_yyyy_mm_dd_hh_mm* format as described in <u>Reconciliation Dependencies on page 140</u>. You can save the file in any directory on the Select Identity server. When you add the rule in the Rules capability, the XML rule file is uploaded to the Select Identity database.

To see SPML file examples, refer to the \SampleXML\Reconciliation directory on Select Identity product CD. A sample rule and overview of the DTD are available in Creating Reconciliation Rules on page 172.

Adding a Rule

This procedure requires you to create an XML or SPML file that defines the actions to be performed. See Creating Reconciliation Rules on page 172 for details.

Perform the following to define a rule:

1 From the home page of Rules, click **Add New Rule**. The Rule Information page displays.

Reconciliation		llenge / Response	WorkFlow Studio	Attribute			
Reconcination	External Calls	Approvals	Configurations	Rules			
Wednesday, September 29, 2004							
gement							
			pen the template or rule	file, (2)			
achine, (3) Modify the	file, and (4) Opload the	tile.					
RuleTemplate.x	ml						
ct a file: C:\Documents and Settings\Toddl Browse							
C:\Documents a	and Settings\Todd\/ B	owse					
	ion allows you to uplo achine, (3) Modify the	, ion allows you to upload a rule file. You can (ion allows you to upload a rule file. You can (1) click the link to op achine, (3) Modify the file, and (4) Upload the file.	gement ion allows you to upload a rule file. You can (1) click the link to open the template or rule achine, (3) Modify the file, and (4) Upload the file.			

- 2 Click the RuleTemplate.xml link to view or edit the template file, or click Browse to select a rule.
- 3 Click Save Rule to make the file available within Select Identity.

Modifying a Rule

After a rule is added to the system, you can modify it on your system and update it through the Rules pages.

Perform the following steps to modify a rule:

- 1 From the home page of Rules, select the rule that you want to modify from the Available Rules drop-down list.
- 2 Select Modify Rule from the Actions list.
- 3 Click Submit. The Rule Information page displays.

- 4 Click the **RuleTemplate.xml** link to edit the template file and save it, or click **Browse** to select a rule that you modified on your system.
- 5 Click Save Rule.

Viewing a Rule

Perform the following steps to view a rule:

- 1 From the home page of Rules, select the rule that you want to view from the Available Rules drop-down menu.
- 2 Select View Rule from the Actions list.
- 3 Click Submit. The rule's XML displays.

Deleting a Rule

Perform the following steps to delete a rule:

- 1 From the home page of Rules, select the rule that you want to delete from the Available Rules drop-down menu.
- 2 Select **Delete Rule** from the Actions list.
- 3 Click Submit.
- 4 You are prompted to confirm the action. Click **OK** to delete the rule.

8

Notifications

The Notifications section of the client enables you to define the content of email notices that are sent to users when an account is created or removed or when an account attribute has changed. By creating these templates, you define the messages that the Select Identity system sends when an account event occurs.

Notices are sent to a user when an account is approved, rejected, or modified. Email can also be sent when an account password or hint is reset.

Pre-defined Variables

When creating notification templates, you can use variables for administrator names, user names, and email addresses. These variables enable the system to supply the appropriate information based on the action and the user performing the action. The following are available variables:

Variable Type	Description	Variable
Request	Variables for the Request Object. The REQ variable supports the following objects:	REQ:
	[REQ:ParentRequestId] [REQ:ServiceName] [REQ:RequestId] [REQ:RequestActionName] [REQ:RequestActionDescription]	
RequestTarget	Variables for the userID that is being created. All variables from the TAAttrDef table can be used. Example: [RQT:UserName]	RQT:

Variable Type	Description	Variable
Requester	Variables for the administrator making the request. All variables from the TAAttrDef table can be used. Example: [RQSTR:UserName]	RQSTR:
Workflow	Variables defined in the workflow template. Workflow variables show workflow information. Currently, the only workflow variable is Approvers Comments. Example: [WF:\$ApproverComments]	WF:
Environment	Variables defined for the environment within properties file. Environment variables provide information such as host or port. Any value that you can perform a System.getProperty() on can be used for this variable.	ENV:

Creating and Modifying Notification Templates

The Notifications capability enables you to define the content of email notices that are sent to users and administrators during the account creation, modification, or removal process. See Event Reference on page 181 to review the actions for which you can create notification templates.

This chapter provides details for all of the actions that you can perform within the Notifications pages. Access to each of these functional areas is determined by the administrative roles assigned to your account.

Adding a Notification Template

Perform the following steps to add a new notification template:

1 From the home page of Notifications, click Add New Notification Template. The Information page displays.

Admin Roles	Connecto	rs	Resource	s	Services	Notificatio	ns	Users
Request Status Au	udit Reports	Configura	ation Reports	Chal	lenge / Response	WorkFlow	Studio	Attributes
Auto Discovery	Reconciliat	tion	External C	alls	Approvals	Configura	tions	Rules
Home > <u>Notifications</u> >	Add New Notifica	ition Terr	nplate			Wednesday	, Septern	ber 29, 200
Add template name, de Continue" when finishe		ct other p	parameters for n	iew notif	ication template. C	lick "Save &		ormation intent
Template Information								
*Template Name:		Use	er Add					
Template Description	1:	Noti a us	ice to send whe ser.	n adding				
*Category:		(se	lect a category)	*				
Save & Continue]	* De:	signates Requir	ed Field	s	Cancel		

- 2 Enter a name for this template in the Template Name field.
- 3 Enter a description for this template in the Template Description field.
- 4 Select the category, or type of template, that you want to create from the Category drop-down list.

Select **User** to define a notification template that users will see when their accounts are created or modified.

5 Click Save & Continue.

The Content page displays.

Admin Roles		Conn		Resource	-	Services	Notificatio		Users	
Request Status	Audi	t Reports		ation Reports		lenge / Response			Attributes	
Auto Discovery		Recond	iliation	External C	alls	Approvals	Configura		Rules	
Home > Notification: User Add							Wednesda		iber 29, 2004	1
Enter the required in	forma	tion for the r	notification te	emplate and clic	ck "Subm	it" when finished.			ormation	
									ntent	
Template Informati	on									
*Template Name:			User Add							
Sender Name:			adminA							
Sender Email:			admin@	company.com						
To Email:			user@co	mpany.com						
CC Email:										
BCC Email:										
*Subject:			Welcome	e to Web Service						
*Body:			Please lo passwor	ogin and change d.	e your					
Submit			* Designate	es Required Fie	Ids		Cancel	1		

- 6 Enter a name or value in the Sender Name field. You can use predefined variables, such as [RQSTR:UserName], and the system will enter the name of the administrator sending the request. See Pre-defined Variables on page 70 for more information.
- 7 Enter an address in the Sender Email field. You can use the predefined variables and the system will enter the address of the administrator that is sending the request.
- 8 If you want the email to be sent to another recipient, enter the address in the CC Email or BCC Email fields.
- 9 Enter a subject for this email in the Subject field.
- 10 Enter the text for this email response in the Body text box. The text should reflect the meaning of the category that you selected in Step 4.
- 11 Click **Submit** to save your settings.

The new template is added to the template list on the Notifications home page.

Copying a Notification Template

If you have several similar template requirements, you may want to create one and use the Copy Notifications action to create the rest. This enables you to copy all of the configuration information from the first template and edit only the fields that are different, instead of entering all of the information again.

Perform the following steps to copy a notification template:

- 1 From the home page of Notifications, click $\stackrel{\ensuremath{\sim}}{}$ to search for and select the template that you want to copy.
- 2 Select Copy Notification Template from the Actions drop-down list.
- 3 Click **Submit**. The Information page displays.
- 4 Enter a unique name for this template in the Template Name field. This is the only field that you are required to change.
- 5 You can modify any of the information on this and the next configuration page. The pages and fields are the same as in the Add New Notification Template procedure on page 72.
- 6 Click Save & Continue after completing your changes on each page.

The copied template is added to the system.

Modifying a Notification Template

You can change any of the template fields. Users and administrators will see the new messages the next time an action prompts the system to send one.

Perform the following steps to modify a template:

- 1 From the home page of Notifications, click $\stackrel{\ensuremath{\rho}}{}$ to search for and select the template that you want to copy.
- 2 Select Modify Notification Template from the Actions drop-down list.
- 3 Click Submit.
- 4 You can modify any of the information on the rest of the configuration pages. The pages and fields are the same as in the Add New Notification Template procedure on page 72.

- 5 Click Save & Continue after completing your changes on each page.
- 6 Click **Submit** to save your settings.

Viewing a Notification Template

Perform the following steps to view a template:

- 1 From the home page of Notifications, click \checkmark to search for and select the template that you want to copy.
- 2 Select View Notification Template from the Actions drop-down list.
- 3 Click Submit.
- 4 Select the type of information that you want to view from the topics on the right.
 - Information provides basic information about the template.
 - **Contents** provides the content variables that are sent in the email.

Deleting a Notification Template

To delete a notification template, perform the following steps:

- 1 From the home page of Notifications, click $\stackrel{\ensuremath{\sim}}{}$ to search for and select the template that you want to copy.
- 2 Select Delete Notification Template from the Actions drop-down list.
- 3 Click Submit.
- 4 You will be prompted to confirm the action. Click **OK** to delete the template.

9

Workflow Studio

The complexity of the workflow process can vary widely depending on your provisioning needs. You can simply provision a user by creating the user in Select Identity then pushing the user account to the external resource. Or, provisioning can require multiple Select Identity administrators' approval. The approval process can also rely on external calls to third-party systems or databases.

For example, when an employee is promoted to manager, he needs access to the company's HCM system to manage other employees. To support these newly-acquired responsibilities, the employee must be granted new entitlements and access privileges. Before giving him access to these systems, upper-level management needs to approve the access requests and the employee must be created in the supporting systems. Thus, the workflow process involves retrieving the names of managers, requesting their approval to add the employee to the HCM systems, provisioning the employee's account, and notifying him that he is now authorized to manage others.

Workflow Studio Overview

Workflow Studio enables you to create the workflow templates that represent the provisioning process. A workflow template models this process in order to automate the actions that approvers and systems management software must perform. The workflow process can also rely on an external call to a third-party system or database. See External Calls on page 60 for more information.

An administrator with Workflow Studio actions defines the workflow templates and processes by which users are added to, updated, or removed from the system. A workflow can require one or more steps before completion. Each approver can be notified by email when a new account needs to be reviewed. That administrator can then log in and access the Approvals section of the Select Identity client, where a Pending Tasks notification displays at the top of the home page.

The template creation process can be as complex as your business security policies dictate. The *HP OpenView Select Identity Workflow Studio Guide* describes how to use Workflow Studio to create workflow templates and the building blocks you will use. All of the concepts and procedures for the Workflow Studio capability are in the *HP OpenView Select Identity Workflow Studio Studio Guide*.

Workflow Templates in Select Identity

Using the Select Identity client, you can assign workflow templates to request events in a Business Relationship. (A Business Relationship is created as part of a Service.) For example, you can assign a simple provisioning template to an add request for self-registration. This template might perform user provisioning and request a single approval. Then, when a new user requests access to the service, the template is invoked and an administrator must approve the request before the user is added to the supporting systems.

As Select Identity invokes a template, it creates a workflow instance and performs activities as defined in the template. ("Workflow" refers to a workflow instance.) If you create a more complicated workflow, activities might include the following:

- Selecting a list of approvers by specifying a role created on the Admin Roles home page. See Administrative Roles on page 101 for more information.
- Sending email using one of the email templates created on the Notifications home page. See Notifications on page 69 for more information.
- Calling external systems registered with Select Identity on the External Calls home page. See External Calls on page 60 for more information.

You can generate reports to track the status of request events and the workflows that support them. To view reports, specify parameters on the Request Status home page of the Select Identity client. See the *HP OpenView Select Identity Workflow Studio Guide* for more information.

10

Challenge Response Questions

Secure access to the Services that your company offers is defined through the use of attributes and challenge and response policies. The HP OpenView Select Identity Challenge/Response capability determines the generic security policy for the system.

The Select Identity challenge and response policy governs the password hints for the system. You can also restrict login attempts with this policy. Perform the following steps to modify the Select Identity challenge and response policy:

1 From the home page of Challenge/Response, the Password Hints page displays.

	sponse parameters. These are the questions t allows a user to reset their password in the	
Your Password Hints		
Existing Challenge(s):	What is your pet's name?	Delete
	What is your favorite color?	Delete
	What is your least favorite animal?	Delete
	Do you LOVE Select Identity?	✓ Delete
New Challenge(s):		×
To change password, u	ser required to answer 1 💌 challenge(s)	
Account will be locked af	ter: (unlimited) 🔽 incorrect Challenge/Res	conse submission(s)

- 2 Modify any of the fields. You can
 - delete the existing hints
 - create new hints
 - determine the number of hints a user must answer to change a password
 - lock the account after a number of incorrect attempts
- 3 Click Modify.

11

Services

Select Identity provides a service-oriented architecture. Identities are viewed and managed within the context of the Services to which they have access. The Services pages enable you to create and manage the Services that are accessed by your customers and business partners. When creating Services, you define a number of things that will determine how your users access the system and the entitlements that they are granted when doing so.



Services should be created only after all resources, policies, and workflows are in place.

There are three types of Services.

Business Services – Represent the business products and applications and are accessed by your customers and partners.

Admin Services – Provide a means of associating administrative roles to user accounts.

Composite Services – Enable Service grouping. Users registering for a composite Service can have access to multiple Services.

The Services capability also enables you to set and view Business Relationships, which provide a secure management structure and view for your partners and customers. Business Relationships are hierarchical and management can be delegated to any level. This chapter provides details for all of the actions that you can perform within the Services pages. Access to each of these functional areas is determined by the administrative roles assigned to your account by the Select Identity system administrator.

Business Relationships

Services are made available to your customers and partners by setting a Business Relationship in Select Identity. Management of Business Relationships is hierarchical, which creates a secure way to share Services across different companies or locations. You can independently manage Business Relationship security requirements and user access.

The following example illustrates a simple structure as defined by a Business Relationship hierarchy.

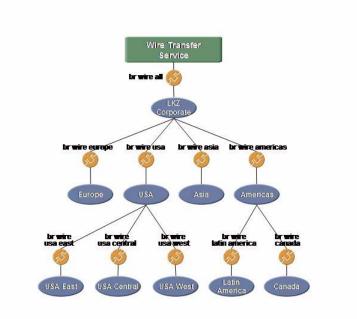


Figure 4 Business Relationship Hierarchy

LKZ Corporation can view and manage all Business Relationships. As defined by the Business Relationships, companies can view and manage partners that are lower in the Service hierarchy. This hierarchy creates a management structure that represents real Business Relationships and protects the privacy and security of those relationships.

Attributes defined at the Business Relationship level take precedence over those set at the Service level. For example, if a Service is defined to require a one-stage approval process for new account registration and a Business Relationship is assigned to a partner that requires a two-step process, the partner is required to follow the two-step process to register for that Service.

Context

Context defines the rights and permissions that a group of users receives based on the defined Business Relationship (such as Gold, Silver, and Platinum). Users are added to a context grouping according to the attributes and values that you select. For example, you may want to group users by location. You would then create a context with attribute "Country" and values "USA," "India," and "France" defined. Users are sorted according to the value they select when registering for a Service.

See Defining Business Relationships and Context on page 93 for detailed procedures.

Resource-Specific Information

Certain resources require specific Service configuration to facilitate the provisioning of account data. Resources and configuration specifics are listed here.

AS400 Service Configuration

Attributes should be listed and processed in a specific order when creating a Service that relies on an AS400 resource. This order will facilitate the account provisioning process. See AS400 Attributes on page 50 for an ordered table of AS400 attributes and possible values. Attributes can be ordered in through the Service View pages. See Creating a Service View on page 88.

Tandem Service Configuration

The following attributes need special consideration when creating Services that rely on a Tandem resource.

Service View Creation

When creating a Service that relies on a Tandem resource, the **Group ID** attribute should not be included in the Service view. This attribute is internally updated by the Tandem connector.

Add User to Service

When adding a user to a Service that relies on a Tandem resource, the following attributes are mandatory, must be selected as "Required."

UserName

Password

Primary Group

The **UserID** attribute is optional, and if empty, the connector creates a new user ID for that user from the Tandem server. All other attributes are optional, and if empty, they will not be set on the Tandem server.

Modify User of a Service

When modifying a user associated with a Service that relies on Tandem, the following attributes should not be made available for update. These attributes are fixed for a user once created.

UserName Password UserID Primary Group

Creating and Modifying Services

The Services section enables you to add, modify, and delete the Services that are accessed by your customers and business partners. These Services, in addition to the Business Relationship structure that you establish, form a management structure for users of the Select Identity system.

You can also set Business Relationships and context from the Services pages. Services are made available to your customers and partners by setting a Business Relationship in Select Identity.



Some of the steps in the following procedures reference other capabilities and actions within Select Identity. Cross references are provided where appropriate. Because there are many ways to deploy the Select Identity system, review these sections to determine the order that is right for you.

Deploying a Service

You can provide many Services to your customers. Make sure that the resources required to support each Service are already configured.

Perform the following steps to add a Service:

1 From the home page of Services, click **Deploy New Service**. The Basic Info page displays.

	ervice, complete the required fields in the f want to associate to the new service. Ass Click 'Create' when finished'		
Service Information			
* Service Name:	Finance Service		
*Service Type:	Business Service	~	
Service Description:	Service offering for business clients.	<	
Resources:	LDAP71 SAP	م ۱	
*Attributes:	Addr1 City Company Country Default Group		
* Context Attribute:	State	*	
Primary User Key:	UserName	~	

- 2 Enter a name for the Service in the Service Name field.
- 3 Select a Service type from the drop-down menu.

Business Service – a standard Service offering to customers and partners.

Admin Service – a Service that assigns administrative roles to users for management purposes.

Composite Service – a grouping of Services. Services must be created before they can be grouped into a composite Service.

- 4 Enter a description for the Service in the Service Description field.
- 5 Click $\stackrel{\ensuremath{ \sim} }{}$ to locate and add resources to support the Service. You can add multiple resources at one time from the Search Results page.

- 6 Click $\stackrel{\ensuremath{\sim}}{}$ to locate and add attributes to support the Service. You can add multiple attributes at one time from the Search Results page.
- 7 Select an attribute for which you want to define the context, or logical grouping, for users of the Service. For example, if you want to group users by their location, you can use the "Country" attribute and users will be grouped by the value, such as "USA," "India," or "France."
- 8 Select an attribute from the Primary User Key drop-down list. This attribute establishes the default search criteria for users of this Service. For example, if you choose "Email," you can search user accounts based on email values.
- 9 Click Create.

If this Service requires the configuration of Business Relationships, it will remain in the Pending state until activated by the association of Business Relationships and Context.

Modifying a Service

If you need to modify a Service or the information that a user of the Service is required to provide at registration, perform the following steps. The pages that are displayed are the same as the pages in the previous procedure.

- 1 From the home page of Services, click $\stackrel{P}{\sim}$ to search for and select a Service.
- 2 Select Modify Service from the Actions drop-down list.
- 3 Click Submit.
- 4 Modify the information that is available to you.

The pages and fields are the same as in the Deploy New Service procedure on page 86.

5 Click **Modify** after completing your changes.

Deleting a Service

You can delete a Service from the Select Identity system. Make sure that no users are associated with the Service.

Perform the following steps to delete a Service:

- 1 From the home page of Services, click $\stackrel{P}{\sim}$ to search for and select a Service.
- 2 Select Delete Service from the Actions drop-down list.
- 3 Click Submit.
- 4 You will be prompted to confirm the action. Click **OK**.

Service Views

After you create a Service, you can create views that are valid for different groups of users. For example, if you want a specific set of users to see only certain fields when registering for the Service, you can define a view that makes only those fields available.

Creating a Service View

Perform the following steps to create a Service view:

- 1 From the home page of Services, click $\stackrel{P}{\sim}$ to search for and select a Service.
- 2 Select Create View from the Actions drop-down list.
- 3 Click Submit.

*S	ervice View Name:		Finance A					
	Name	Order	Display Name	Length	Mask	Require	Visible	Update
~	City	5	City	0	0	V	V	V
	Control SA_KEY	0	Control SA_KEY	40	0			
v	UserName	1	UserName	0	0	V	V	V
V	GUID	2	GUID	0	0	V		
~	Control SA_ENTITLEMENTS	4	Control SA_ENTITLEMENT	40	0	V		✓
~	Email	3	Email	0	0	V	V	V

The Service View Information page displays.

- 4 Enter a name for this view in the Service View Name field.
- 5 Select the check boxes to the left of the fields that you want displayed for this view. The fields are displayed for users registering for this Service.
- 6 Order the fields that you want displayed by entering numbers in the Order column.
- 7 You can edit the name that is displayed to users in the Display Name fields.
- 8 Define or change the maximum length of each value in the Length column.
- **9** If you want all or a portion of the value masked, enter that number of characters in the Mask column.
- 10 If you want to require a field, select its check box in the Require column.
- 11 If you want a field to be visible on the registration page, select its check box in the Visible column.
- 12 If you want to give users permission to update a field value, select its check box in the Update column.
- 13 Click Create.

Modifying a Service View

Perform the following steps to modify a Service view:

- 1 From the home page of Services, click $\stackrel{P}{\sim}$ to search for and select a Service.
- 2 Select Modify View from the Actions drop-down list.
- 3 Click Submit.
- 4 Click $\stackrel{\ensuremath{ \sim} }{\sim}$ to search for and select a Service view. The Service View Information page displays.
- **5** Modify any of the field definitions.
- 6 Click Modify.

Deleting a Service View

Before deleting a Service view, make sure that all dependencies have been removed.

Perform the following steps to delete a Service view:

- 1 From the home page of Services, click $\stackrel{P}{\sim}$ to search for and select a Service.
- 2 Select **Delete View** from the Actions drop-down list.
- 3 Click Submit.
- 4 Select a Service view from the Service View Name drop-down list.
- 5 Click Delete.

Service Attributes

You can define a set of attributes and values that are available for or required by a Service. Attributes are created and managed through the Attributes pages. The attributes that are available for a Service are determined, in part, by the resources that are selected to support it. Additional attributes that are specific to the Select Identity system or your business may also be available. Attributes and values that are defined specifically for a Service create a supper-set for Business Relationship and context creation.

Setting Service Attribute Values

You can restrict the values that a user can select from when registering for a Service. For example, you may have the attribute "Country" available and want to restrict value options to "USA," "Korea," and "Japan" for a particular Service.

Perform the following steps to set Service attribute values:

- 1 From the home page of Services, click $\stackrel{P}{\sim}$ to search for and select a Service.
- 2 Select Set Service Attribute Values from the Actions drop-down list.
- 3 Click Submit. The Attribute Selection page displays.

a valid value for the defined earch for existing Attribute V	attribute in the Constraint Disp alues by clicking on the search	olay Name and Cons i icon. You will see th	traint Value text boxe: e display name and
State	*		
EX		î	
C+3			
	a valid value for the defined earch for existing Attribute V Values selection box. Repe State	a valid value for the defined attribute in the Constraint Dise earch for existing Attribute Values by clicking on the search Values selection box. Repeat for each attribute you wish to State	

4 Select the attribute for which you want to restrict values from the Defined Attributes list. If the attribute that you selected has predefined values, the search icon displays.

- 5 Click $\stackrel{\ensuremath{ \sim} }{}$ to search for and select the values that you want to set for this attribute.
- 6 If you want to constrain the display name and value for this attribute, enter the name and value pair in the constrain fields.
- 7 After values are selected, click the Add Value icon to move the value pair to the right.
- 8 Click Apply.

Setting Service Attribute Properties

You can require a set of attributes or set properties that are specific for a Service.

Perform the following steps to set attributes properties for a Service:

- 1 From the home page of Services, click $\stackrel{P}{\sim}$ to search for and select a Service.
- 2 Select Set Service Attribute Properties from the Actions drop-down list.
- 3 Click Submit. The Attribute Selection page displays.

Choose the order in which the function asso associated to them, and therefore, not all attr registration, check the box in the Required co Multi Value column. Provide a user friendly na Name. Click "Apply" when finished.	butes require an Pr lumn. To allow an a	ocess Orde ttribute to co	r number. To n intain more tha	nake an attribute required during an one value, check the box in the
Service Atribute Properties				
Service Attribute Name	Process Order	Required	Multi Value	Display Name
Consolidated Directory_ENTITLEMENTS	7		Image: A start of the start	Consolidated Directory_ENTIT
Consolidated Directory_KEY	12	 Image: A start of the start of		Consolidated Directory_KEY
Country	3			Country
Department	8			Department Name
Email	1			Email
FirstName	9			First Name
GUID	5			GUID
Hierarchy	13			Hierarchy
LastName	4			LastName
Password	10			Password
Person Number	3			Person Number
SSN	11			SSN
Standard ID	14			Standard ID (H)
State	6			State
UserName	2			Standard ID

- 4 Select the check boxes to the left of the fields that you want displayed for this view. The fields are displayed for users registering for this Service.
- 5 Order the fields that you want displayed by entering numbers in the Order column.

The order defined here establishes the default order for any views created for this Service. It also determines the order in which attribute value generation functions are processed, if present.

6 If you want to require a field, select its check box in the Required column.

Attributes that are required by a Service must be present for user accounts that are added to Select Identity through the Reconciliation capability and for any other assignment to this Service. If an account does not have a required attribute, it cannot access the Service.

- 7 If an attribute can have multiple values, the Multi Value check box is selected. Deselect the check box if you want to restrict the user to one value.
- 8 Edit the name that is displayed to users in the Display Name fields.
- **9** Click **Apply** to save your settings.

Defining Business Relationships and Context

Services are made available by creating a Business Relationship, which defines the entitlements, workflows, and policies that will be used to access the Service. Context enables you to assign a Business Relationship to a group of users with a common attribute, thus providing access to the Service under the terms you established.

Defining a Business Relationships enables you to assign granular rights, or levels of Service, to your customers and partners. It is similar to a Platinum or Gold membership in a club.

The Service deployment defines a superset of attributes that can be assigned to Business Relationships. For example, if a Service is defined to require a three-stage approval process for new account registration, an administrator defining Business Relationships for this Service must choose a subset of those approval processes. The following procedures enable you to set and view Business Relationships and define context for each of your Services.

Creating a Business Relationship

Business Relationships are hierarchical in terms of management and create a secure way to share Services across different companies or locations. Business Relationship settings take precedence over the Service configuration.

Perform the following steps to set a Business Relationship:

- 1 From the home page of Services, click ^P to search for and select a Service. When configuring the search criteria, search for Services that are in the Pending state.
- 2 Select Create Business Relationship from the Actions drop-down list.
- 3 Click Submit.

The Business Relationship Information page displays.

	esired Business Relationship in the Business Re and Fixed Attributes as desired for the Business F	
Business Relationship Informatio		
*Business Relationship Name:	Finance Group	
*Business Relationship Parent:	dkbrHPUnixSSH	

- 4 Enter a name for the new Business Relationship in the Business Relationship Name field.
- 5 Click $\stackrel{\ensuremath{\sim}}{\sim}$ to search for an select a parent for this relationship.

The Business Relationship page is populated with options determined by the parent selection.

usiness Relationship Information				
Business Relationship Name:	Finance Gro	up]	
Business Relationship Parent:	dkbrHPUnix	SSH	\mathbf{P}	
otification Events				
Notification Events		Notifications		
Approve	<i>₽</i>	Add User		₽
	Û			Û
vent Handlers		l		J
Request Events		Workflow Template		
DELEGATED:Add Service	P	SI Provisioning Only		
SELF:Add New User	ĥ	orr revisioning only		
				Û
		Default View: a		\sim
xed Attributes				
Name: FirstName	▼	Default Group = ""		î
				9
Value:				
	L			

- 6 Click $\stackrel{\ensuremath{ \sim} }{}$ to search for and select the Notification events that you want available for this relationship.
 - a After you choose the events, select an event in the list.
 - b Click ^P next to the Notifications table to search for and select the notification policies that you want to assign for each event. See Notifications on page 69 for information about notification policies.
- 7 Click $\stackrel{\ensuremath{\sim}}{}$ to search for and select the Request events and that you want set for this relationship.

See Event Reference on page 181 for a list of events and actions within Select Identity.

- a After you choose the events, select an event in the list.
- Click ^P next to the Workflow Template table to search for and select the workflow templates that you want to assign for each event. See Workflow Studio on page 76 for information about workflow templates.

- **c** With the template still selected, click $\stackrel{\ensuremath{\sim}}{}$ next to the Default View field to search for an select the Service view that you want assigned to each event.
- 8 Select the fixed attributes that you want assigned to users enabled for this Business Relationship. You can select multiple attributes. See Attributes on page 46 for information about attributes and values.
 - **a** Choose an attribute from the Name drop-down list. This list is provided by the parent Business Relationship.
 - **b** After the attribute is selected, search for or enter a value in the Value field.
 - c Click [b] to move the attribute and value to the entry table. To delete an attribute, select it and click \hat{u} .
- 9 Click Create.

The Business Relationship is now active. However, the Service remains in Pending state until the Context is set.

Modifying a Business Relationship

Perform the following steps to modify a Business Relationship:

- 1 From the home page of Services, click $\overset{P}{\sim}$ to search for and select a Service.
- 2 Select Modify Business Relationship from the Actions drop-down list.
- 3 Click Submit.
- 4 Click $\stackrel{\ensuremath{ \sim} }{}$ to search for and select the Business Relationship that you want to modify.
- **5** Modify any of the available fields.
- 6 Click Modify.

Deleting a Business Relationship

Before you delete a Business Relationship, make sure that the Context settings for this relationship have been deleted.

Perform the following steps to delete a Business Relationship:

- 1 From the home page of Services, click $\overset{P}{\sim}$ to search for and select a Service.
- 2 Select Delete Business Relationship from the Actions drop-down list.
- 3 Click Submit.
- 4 Click ^P to search for and select the Business Relationship that you want to modify. The Business Relationship Information page displays.
- 5 Click **Delete**.

Creating Context

Context enables you to assign a Business Relationship to a group of users based on a common attribute, thus providing access to the Service.

Perform the following steps to set context for a business relationship:

- 1 From the home page of Services, click $\overset{P}{\sim}$ to search for and select a Service.
- 2 Select Create Context from the Actions drop-down list.
- 3 Click Submit.

Home > Services > Create Contex	xt
	Then enter or search for a Business Relationship and any other required parameters listed. A revent Handlers as desired for the Context. For a wildcard context, place an asterisk (*) in Treater when finished.
Service Context Information	
*Service Context Name:	New York
*Service Context Parent:	dkctxLDAP72
*Business Relationship:	dkbrLDAP72
*Company Name:	· ~
Notification Event Handlers	
Notification Events	Notifications
Approve	
Event Handlers	
Request Events DELEGATED Add New User DELEGATED Add Service SELF Add New User	Workflow Template SI Provisioning Only
Create	* Designates Required Fields

The Service Context Information page displays.

- 4 Enter a name for the context in the Service Context Name field.
- 5 If available, click \checkmark to search for and select a parent context. The parent provides a superset of attributes, workflow processes, and policies that you can choose from.
- 6 Click $\stackrel{\ensuremath{\sim}}{}$ to search for and select a Business Relationship. The Business Relationship provides a superset of attributes, workflow processes, and policies that you can choose from.
- 7 Click ^P to search for and select a value for the context attribute that you defined when creating the Service. For example, if you defined "Country" as the context attribute for this Service, you would select a value such as "India" to create this context.

When you choose the parent Business Relationship, other options display.

- 8 Click ^P to search for and select the Notification events that you want available for this relationship. If the Business Relationship has only one Notification event selected, these steps are not necessary.
 - a After you choose the events, select an event in the list.

- Click ^P next to the Notifications table to search for and select the notification policies that you want to assign for each event. See Notifications on page 69 for information about notification policies.
- 9 Click ^P to search for and select the Request events and that you want set for this relationship. If the Business Relationship has only one Request event selected, these steps are not necessary.
 - a After you choose the events, select an event in the list.
 - Click ^P next to the Workflow Template table to search for and select the workflow templates that you want to assign for each event. See Workflow Studio on page 76 for information about workflow templates.
- 10 Click **Create**. The context is created for the Service and the Service is now enabled.

Modifying Context

You can modify the context relationship of users assigned to a Service.

Perform the following steps to modify context:

- 1 From the home page of Services, click $\overset{P}{\sim}$ to search for and select a Service.
- 2 Select **Modify Context** from the Actions drop-down list.
- 3 Click Submit.
- 4 Click $\stackrel{\ensuremath{ \sim} }{\sim}$ to search for and select the context that you want to modify. The Service Context Information page displays.
- **5** Modify any of the available fields.
- 6 When finished, click Modify.

Deleting Context

Before you delete a context setting for a Service, make sure that all dependencies have been removed.

Perform the following steps to delete context:

- 1 From the home page of Services, click $\stackrel{P}{\sim}$ to search for and select a Service.
- 2 Select **Delete Context** from the Actions drop-down list.
- 3 Click Submit.
- 4 Click $\stackrel{\ensuremath{ \sim} }{\sim}$ to search for and select the context that you want to delete.
- 5 Click Delete.

12

Administrative Roles

You can create administrative roles to govern the actions that each administrator can perform within the HP OpenView Select Identity system. There are predefined roles that you can view and modify. If your environment requires more granular roles, you can create your own.

Administrative roles are made available through Services that are designed specifically for management. When you create a Service, you have the option to define it as an Administrative Service. You can then add users to this Service to assign administrative roles. See Creating and Modifying Services on page 85 for information about creating a Service.

When creating administrative roles, remember that Select Identity provides n-tier delegation of management tasks. Your organization can delegate any range of management tasks to customers and partners as needed.

This chapter provides details for all of the actions that you can perform within the Select Identity system. Access to each of these functional areas is determined by the administrative roles assigned to your account by registering for a Service or a Select Identity system administrator.

Administrative Capabilities and Actions

You may want to familiarize yourself with Select Identity administrative capabilities and actions before creating administrative roles. Roles and actions are designed to represent all of the management capabilities within Select Identity and are named accordingly. Each grouping of actions is represented by a management link in the Select Identity client.

Select Identity Capabilities and Actions

Roles represent a group of actions that a Select Identity administrator can perform within each management capability (link) in the client. The actions that are assigned to each administrator help form a view of the system. You can assign any number of management capabilities to each administrative role.

When an administrator with that role logs in to Select Identity, a list of roles associated with the account is listed at the bottom of the home page.

Admin Roles		Conn	ectors	Resource	s	Services	Notifications	Users
Request Status	Aud	it Reports	Configur	ation Reports	Chall	lenge / Response	WorkFlow Studio	Attributes
Auto Discovery		Recon	ciliation	External C	alls	Approvals	Configurations	Rules

The following are all of the actions organized by Select Identity capability. All are accessed through the Admin Roles section of the client.

Capability	Actions		
Admin Roles		Admin Roles	select all
numm noics		View Admin Role	select all
		Add Admin Role	
		Modify Admin Role	
		Delete Admin Role	
		Delete Administer	
Connectors		Connectors	select all
000000000		View Connector	
		Deploy Connector	
		Modify Connector	
		Delete Connector	
		-	
Resources		Resources	select all
		View Resource	
		Deploy Resource	
		Modify Resource	
		Delete Resource	
		View Resource Attributes	
Services			
Services		Services	select all
		Add Service	
		View Service	
		Modify Service	
		Delete Service	
		Set Service Attribute Values Set Service Attribute Properties	
		Create View	
		Modify View	
		 Modify view Delete View 	
		Create Business Relationship	
		Modify Business Relationship	
		Delete Business Relationship	
		Create Context	
		Modify Context	
		Delete Context	
Notifications		Notifications	select all
1,00110010115		View Notification Template	001001 011
		Add Notification Template	
		Copy Notification Template	
		Modify Notification Template	
		Delete Notification Template	

Capability	Actions
Users	Users select all
03015	View Service Membership
	Add New User
	Modify User
	Inoble Service Membership
	Disable Service Membership
	Delete Service Membership
	Enable All Services
	✓ Disable All Services
	Reset Password
	✓ Terminate User
	Add Service
	View User Attributes
	Manage User Expiration
Request Status	Request Status select all
•	User Request
A 111 D	
Audit Reports	Audit Reports select all
	Service Audit Report
	User Audit Report
	User Audit Summary Report
O C + :	
Configuration	Configuration Reports select all
Reports	User Configuration Report
1	User Configuration Summary Report
Challenge/	Challenge / Response select all
-	Challenge / Response select all
Response	
Workflow	Workflow Studio select all
	Add Workflow Template
Studio	Modify Workflow Template
	Delete Workflow Template
Attributes	Attributes select all
	Add Attribute
	View Attribute
	Modify Attribute
	✓ Delete Attribute
Auto Discovery	Auto Discovery select all
Auto Discovery	Auto Discovery Relect all C Schedule User Discovery
Auto Discovery	
Auto Discovery	Schedule User Discovery

Capability	Actions
Reconciliation	Reconciliation Extent all Image: Add New Automated Job Image: View Automated Job Image: Modify Automated Job Image: View Automated Job Image: One Time Task Image: View Task Status
External Calls	External Calls Stelect all V View Call V Add New Call V Modify Call V Delete Call
Approvals	Approvals select all
Rules	Rules select all V Add Rule V Modify Rule V View Rule V Delete Rule
Configurations	Configurations select all Image: Select configuration Image: Select configuration

Select Identity Default Roles

Select Identity offers several default roles that you can use "as-is" or modify to better match your business requirements. All roles have access to Self Service, which enables administrators to view account profiles.

The following roles are available by default:

End User

An end user is simply a user of Select Identity Services. Accounts with this role have only the entitlements that are granted through registration of a Service.

Approver

An Approver can perform account provisioning actions. An administrator with this role can approve user account additions, removals, or changes.

Select Identity System Administrator

A Select Identity System Administrator has all Admin Role, Connector, Resource, Workflow, Service, Notification, User, External Call, and Attribute management actions.

Creating and Managing Administrative Roles

The Admin Roles section of the client enables you to create, modify, and manage the roles that define administrator's access to the Select Identity system.



Part of the administrator management process is granting roles to new and existing administrator accounts. Defining roles before adding administrators expedites the process.

Adding an Admin Role

You can add any number of roles to meet your management needs. Roles are later assigned to users through administrative Services.

Perform the following steps to add a role:

1 From the home page of Admin Roles, click Add New Admin Role.

The Role Definition page displays.

Admin Role Name:	Finance Admin	Finance Admin		
Description:	<u>×</u>			
min Roles	select all	Challenge / Response	select all	
View Admin Role		Modify Challenge / Response		
Add Admin Role				
Modify Admin Role		Workflow Studio	select all	
✓ Delete Admin Role		Add Workflow Template		
		View Workflow Template		
Connectors	select all	Modify Workflow Template		
View Connector		Delete Workflow Template		
Deploy Connector				
Modify Connector		Attributes	select all	
 Delete Connector 		Add Attribute		
		View Attribute		
lesources	select all	Modify Attribute		
View Resource		Delete Attribute		
Deploy Resource				
 Modify Resource 		Auto Discovery	select all	

- 2 Enter a name for this role in the Role Name field.
- 3 Enter a description for the role in the Role Description field.
- 4 Select the actions that you want an administrator with this role to perform by checking the appropriate check boxes. To review each category and its purpose in the system, see Select Identity Capabilities and Actions on page 102.

If you want to enable all actions within a given category, click select all.

5 Click **Submit** to save your settings.

Modifying a Role

If you have permission to do so, you can modify Select Identity administrative roles.

Perform the following steps to modify an administrative role:

- 1 From the home page of Admin Roles, click $\stackrel{\sim}{\sim}$ to search for and select the role that you want to modify.
- 2 Select Modify Admin Role from the Actions drop-down list.
- 3 Click Submit. The Role Definition page displays.
 - You can edit the description for this role in the Role Description field.
 - By checking the appropriate check boxes, you can define the actions that you want an administrator with this role to perform. You can deselect the actions that you do not want associated with this role. To review each category and its purpose in the system, see Select Identity Capabilities and Actions on page 102.
 - If you want to enable all actions within a given category, click select all.
- 4 Click **Submit** to save your settings.

Viewing a Role

You can view the actions for a given role.

Perform the following steps to view an administrative role:

- 1 From the home page of Admin Roles, click \checkmark to search for and select the role that you want to modify.
- 2 Select View Admin Role from the Actions drop-down list.
- 3 Click **Submit**. The following information displays:
 - The name for this role
 - A description for the role
 - The actions associated with this role

Deleting a Role

You can delete any administrative role, except the Select Identity System Administrator role. Before deleting a role, make sure that the administrators who were assigned this role are notified.

Perform the following to delete an administrative role:

- 1 From the home page of Admin Roles, click $\stackrel{\ensuremath{ \sim} }{}$ to search for and select the role that you want to modify.
- 2 Select Delete Admin Role from the Actions drop-down list.
- 3 Click Submit.
- 4 You are prompted to confirm the action. Click **OK** to delete the role.

13

Auto Discovery

The Auto Discovery capability enables you to easily add a large group of your organization's existing users to HP OpenView Select Identity. The list of users and their associated attributes are specified in an SPML file and are subsequently loaded to Select Identity through the **Schedule User Discovery** action.

After users are added to Select Identity, entitlements associated with the users are discovered by specifying the resource from which the users originated. These entitlements, like the user attributes, are specified in an SPML file and associated to a user's unique identifier. After both the users and entitlements are loaded to Select Identity, the **Schedule Services Assignment** action is used to associated the users to the proper Services. By associating users to Services, you've created an account which can now be maintained through Select Identity's contextual model.

Auto Discovery Procedure Overview

The following steps describe the process of adding a group of existing users to Select Identity. All detailed procedures are available later in this chapter and in the Select Identity online help.



You must have the Select Identity system administrator role to perform Auto Discovery tasks.

Define Users and Attributes from an Authoritative Resource

Typically, businesses have an existing authoritative resource that contains account information and attributes for each account. For example, your authoritative resource might have an employee number and attributes associated with the employee number (First Name, Last Name, Address, Phone, Social Security). Before building your SPML file, identify your main source of user data and determine your list of attributes to be loaded to Select Identity.

Create an SPML file Containing Users and Attributes

Many resources today have a utility or mechanism for exporting user data to an XML or SPML format. To create the SPML format needed for Auto Discovery, perform one of the following:

- Export your data in the resource to LDIF format and use a parser to convert the data to SPML.
- Export your data in the resource to XML or DSML format. Convert it to SPML using an XML parser and XSLT style sheet.
- Use a third-party mapping tool to convert your data to SPML format.
- Programatically build the file by reading through your resource and writing out a data record for each user.

To see an example of using an LDIF format to SPML conversion, view the sample files located in the \SampleXML\Auto-Discovery directory on the Select Identity product CD.

When creating the input file containing the user attributes, specify the unique identifier attribute associated with each user. The identifier is specified in the <operationalAttributes xmlns=> section of the SPML file and is designated as a value in the keyFields attribute. Select Identity's default attribute for identifying accounts is UserName. The following is a sample of this section of the SPML file:

```
<operationalAttributes xmlns="">
    <attr name="urn:trulogica:concero:2.0#keyFields"><value>
    UserName</value></attr>
</operationalAttributes>
```

In addition to specifying the operational attribute in the header of the file, you will need to specify two operational attribute values for each add user request:

```
<addRequest requestID="1">
  <operationalAttributes xmlns="">
    <attr name="urn:trulogica:concero:2.0#taUserName">
    <value>avaughan</value></attr>
    <attr name="urn:trulogica:concero:2.0#taResourceKey">
    <attr name="urn:trulogica:concero:2.0#taResourceKey">
    <value>AQ4100</value></attr>
    </operationalAttributes>
```

The taUserName field value represents the unique value used to identify each account in Select Identity. The taResourceKey represents the corresponding key used to identify the account on the resource from which the user originates.

The file must begin and end with <batchRequest></batchRequest>.

Each account to be added begins and ends with <addRequest></addRequest>. The operational attributes and values listed for each add request are required by Select Identity. An account cannot be added without these attributes and values.

When specifying attributes in the SPML file, be sure to use the mapped resource attribute's name. This may differ from the Select Identity attribute name. Attributes uploaded to Select Identity must be mapped to a resource. For information related to attribute mapping, see Attributes on page 46.

To see an example of an add user request file, refer to the Select Identity product CD in the \SampleXML directory.

Create an SPML file Containing Entitlements

After building the SPML file containing your list of users and associated attributes, you will now need to review the resources containing the entitlements associated with your users. User's may have entitlements from multiple resources. To upload these entitlements, a separate SPML file containing the entitlements must be created for each resource. You will need to use one of the methods described in Create an SPML file Containing Users and Attributes on page 111 to create this SPML file.

For each resource file created, determine the unique identifier on the resource that links the entitlement to the designated user. This unique identifier is specified in the SPML file as the taResourceKey field. In addition, you will specify the userId or user name so that you can associate the entitlements to the correct Select Identity account. This is designated in the identifier tag as follows:

```
<identifier xmlns=""
type="urn:oasis:names:tc:SPML:1:0#UserIDAndOrDomainName"><id>AEE20
0</id></identifier>
```

When specifying the entitlement, the identifier type UserIDAndOrDomainName is used to specify the username or account in Select Identity associated with the entitlement. In the example above, the entitlement is associated with an account called AEE200 in Select Identity.

The operational attributes keyFields, and taResourceKey are required for assigning entitlements. These are specified in the file that you created to add users to the system. The attribute keyFields is only listed once at the beginning of each file. The attribute taResourceKey is listed for each user account.

To see an example file for adding entitlement to an existing user, refer to the Select Identity product CD in the \SampleXML directory.

Check the TruAccess.properties File

There are properties that you can set in the TruAccess.properties file to facilitate the upload process.

```
truaccess.batch.inprogresstimeout=1800
truaccess.batch.ownerkey=0
```

Specifies the attributes for batch processing for the Auto Discovery and Reconciliation functions. Common batch processing is 0, or you can specify an identifier for a specific application server.

truaccess.batch.pickuppolicy=1
truaccess.batch.reportdir=c:/temp/reports

Specifies the policy to pick up the batch files for the Auto Discovery facility. Values are:

1 - common batch only (truaccess.batch.ownerkey property is set to 0) 2 - own batch only (must have a unique owner key ID specified in the truaccess.batch.ownerkey property)

3 - common and own batch

This file is described in detail in the *HP OpenView Select Identity Installation Guide*.

Upload User Accounts, Attributes, and Entitlements

You can now upload the user accounts, attributes, and entitlements through the Auto Discovery pages. See Scheduling User Discovery on page 116 for a complete procedure.

Schedule Services Assignment

The **Schedule Services Assignment** action associates newly discovered users with existing Services in Select Identity. To take advantage of Select Identity's Contextual Identity Management, a user must be associated with a Service. Service assignment is generally a one-time event and is used in the early phase of establishing the Select Identity environment.

Service assignment is the last step of the Auto Discovery process. Service assignment should only be done after all user accounts and entitlements have been loaded into Select Identity. All Services should be created before performing this action.

All user accounts that qualify for an existing Service are automatically assigned to the Service. Qualification is based on attribute and entitlement match for each account. An administrator can assign newly created accounts to all or a subset of existing Services. Once Services are assigned, user accounts are maintained using Select Identity's Users capability. See Scheduling Services Assignment on page 119 for a complete procedure.

Job Results

After each of the Auto Discovery jobs completes, the creator of the job receives an HTML report. The report lists users that were successfully created and those that failed. The following is a sample report:

Job Name:	adtest2 1		
Resource Name:	Consolidated Directory		
Submitted By:	Concero SysAdmin(concerosa)		
Job Started On:	2004-09-30 15:38:58 CDT		
Job Completed On:	2004-09-30 15:39:00 CDT		
Total Records:	5		
Success Records:	5		
Failed Records:	0		
Job Result:	all successful		
Detail Data File Name:	AutoDiscoveryReportadtest2 1.xml		
Batch Id:	2626		
Success Cases			
User Id	Result		
ch1231	Completed		
ch1232	Completed		
ch1233	Completed		
ch1234	Completed		
ch1235	Completed		

You can make any needed corrections and resubmit the file with only those accounts that failed. You will need to create a new job to upload this file in the Select Identity client.



If you are the creator of the job that ran initially, you cannot give the new job the same name. Each job that you create as an administrator must be assigned a unique name.

Scheduling User Discovery

You can configure Select Identity to add user accounts on a specified date. This process enables Select Identity to add account data to the system from a data file that you create. See Create an SPML file Containing Users and Attributes on page 111 for information about creating a data file.

Perform the following steps to schedule user account discovery:

- 1 From the home page of Auto Discovery, select **Schedule User Discovery** from the Actions drop-down list.
- 2 Click Submit.

The Auto Discovery Configuration page displays.

Admin Roles	Conr	ectors	Resource	s	Services		Notifications	Users
Request Status	Audit Reports	Configura	ation Reports	Cha	llenge / Respons	e	WorkFlow Studio	Attributes
Auto Discovery	Recon	ciliation	External C	alls	Approvals		Configurations	Rules
Home > Auto Discovery > Schedule Discovery Thursday, September 30, 2004								
The Auto Discovery section allows you to provision user using SPML data file. To Schedule the Auto Discovery select a resource, select a file, enter the desired Scheduling information and press 'Submit'.								
Auto Discovery Upload Configuration								
*Select a Resource	, [SAP			Q			
*Job Name	[Discovery1						
*Upload File Path	[C:\Documents and Settings\Todd\] Browse						
Email CC:								
*Job Execution Dat	e	2004-9-30	•					
Submit								Cancel

- 3 Click $\stackrel{\ensuremath{ \sc P}}{}$ to search for and select the resource in which you want to locate user accounts.
- 4 Enter a name for this job in the Job Name field.
- 5 Click **Browse** to locate and select the data file that you want to upload. See Create an SPML file Containing Users and Attributes on page 111 for information about data files.
- 6 Select Identity sends email to the administrator creating and running the job when the job completes. If you want an email sent to another administrator, enter an address in the Email CC field.
- 7 Click the **Calendar** icon to choose a date for this job to run. The job runs at 12:00 AM on the scheduled day. If you select the current day from the calendar, the job runs immediately.
- 8 Click Submit.

The job is added and will run when scheduled.

Viewing User Discovery Status

You can view the status of previously scheduled jobs.

Perform the following steps to view job status:

- 1 From the home page of Auto Discovery, select View User Discovery Status from the Actions drop-down list.
- 2 Click Submit. The Search Information page displays.
- **3** Enter search values for the job name.
- 4 Enter search values or click $\stackrel{\ensuremath{\sim}}{\sim}$ to locate the resource name.
- 5 Enter search values for the schedule date.
- 6 Define how you want to view search results.
- 7 Click Submit. The Search Results page displays.

<u>Home</u> > <u>Auto Discover</u> y > View Discovery Status	sday, September 30, 200						
List of Auto Discovery Jobs							
14 4 Page 1 of 1 ▷ ▷▷ Total Records: 4							
Job ID Job Name Resource Name Scheduled Date Status	User ID						
1145 Test1-1 LDAP71 2004-09-23 Complet	te 2						
1146 Test1-2 LDAP70 2004-09-23 Complet	te 2						
1208 Test1-3 LDAP70 2004-09-23 Complet	te 2						
0 Discovery1 SAP 2004-09-30 schedul	ed 2						
Id d Page 1 of 1 b bb							

The jobs that match your search criteria are listed.

Scheduling Services Assignment

As users are added to the system, you can schedule Service access.

Perform the following steps to schedule Service assignments:

- 1 From the home page of Auto Discovery, select Schedule Services Assignment from the Actions drop-down list.
- 2 Click Submit.

The Service Assignment Configuration page displays.

Admin Roles	Connectors	Resources	Services	Notifications	Users		
Request Status Au	dit Reports Configur	ation Reports C	hallenge / Response	e WorkFlow Studio	Attributes		
Auto Discovery	Reconciliation	External Calls	Approvals	Configurations	Rules		
Home > Auto Discovery > Schedule Service Assignment Thursday, September 30, 2004 The Service Assignment section allows you to assign services to all provisioned users. To Schedule the Service Assignment,							
	duling information and p			y will apply to all services			
*Job Name	Add Service:	s1					
Email CC	admin@con	npany.com					
*Job Execution Date	2004-9-30						
Select Services	ch72 dkserLDAF	°70					
			₽ 🕯				
Submit					Cancel		

- 3 Enter a name for the job in the Job Name field.
- 4 Select Identity sends email to the administrator creating and running the job when the job completes. If you want an email sent to another administrator, enter an address in the Email CC field.
- 5 Click the **Calendar** icon to choose a date for this job to run. The job runs at 12:00 AM on the scheduled day. If you select the current day from the calendar, the job runs immediately.
- 6 Click $\stackrel{\ensuremath{ \sim} }{}$ to locate and select the Services that you want to assign.
- 7 Click Submit.

The job is added and will run when scheduled.

Viewing Assignment Status

You can view status for jobs scheduled to assign Services to provisioned users.

Perform the following steps to view Service assignment status:

- 1 From the home page of Auto Discovery, select **View Assignment Status** from the Actions drop-down list.
- 2 Click Submit. The Search Information page displays.
- 3 Enter search values for the job name.
- 4 Enter search values for the schedule date.
- 5 Define how you want to view search results.
- 6 Click Submit.

The Search Results page displays.

A desta D		0	at an	Deserves		0	1	81-11F		1.1 marca
Admin R		Conne		Resource		Services		Notifications		Users
Request Stat	us Audi	t Reports	Configura	ation Reports	Cha	llenge / Resp	onse	WorkFlow St	udio	Attributes
Auto Disc	overy	Reconci	liation	External C:	alls	Approva	ls	Configuration	ns	Rules
Home > Auto Discovery > View Assignment Status Thursday, September 30, 2004										
List of Service Assignment Jobs										
Job ID	Job Nan	ne		Scheduled Date			Status		User	ID
2671	Add Sen	vices1		2004-09-30			In Progr	ess	2	
<pre>44 4 Page 1 of 1 ▷ ▷> New Search Cancel</pre>										

The jobs that match your search criteria are listed.

14

Users

The Users capability enables you to manage user accounts within your organization. You determine the Services that are made available to each account and the attributes that are relevant. As new users log in to access Services, workflow templates define the process by which user requests are approved and provisioned by Select Identity.

You should be familiar with your company's Service structure. Many of the actions that you perform in the Users section are dependant upon Service, context, and profile attribute information. See Services on page 81 for information about Services and context. See Attributes on page 46 for information about attributes.

This chapter provides details for all of the actions that you can perform within the Users pages. Access to each of these functional areas is determined by the administrative roles assigned to your account.

Adding a User

To enable access to Services managed by Select Identity, add accounts for users in your customers' organizations.

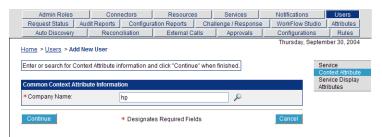
Perform the following steps to add a new user account:

1 From the home page of Users, click Add New User. The Service Selection page displays.

Admin Roles	Conn	ectors	Resource	IS	Services	Notificat	ions	Users
Request Status	Audit Reports	Configura	ation Reports	Chal	enge / Response	e WorkFlo	w Studio	Attributes
Auto Discovery	Recond	iliation	External C	alls	Approvals	Configu	rations	Rules
Home > Users > Add New User								
Search and select ser	vice to which yo	u want to ad	d user to. Click '	"Continu	e" when finished.			rvice
Service Selection							Se	ntext Attribut rvice Display ributes
*Service Name(s):		ch72 dkserHPU	nixSSH		P 🕯			
Continue	L.	* Designat	es Required Fie	Ida		Cancel		

- 2 Click $\stackrel{\ensuremath{\sim}}{}$ to search for and select the Services that you want to associate to the user. Only 15 Services can be added at one time.
- 3 Click **Continue** to proceed.

The Common Context Attribute Information page displays. This page may vary based on the Services that you select.



4 The context attributes that were defined for each selected Service display

to the left. Click \checkmark to search for and select the values that you want to assign to this user. This determines the context grouping in which the account is managed. See Defining Business Relationships and Context on page 93 for information about context and context attributes.

5 Click Continue. The Service Display page displays.

Admin Roles	Conne	octore	Resource	•	Services	Notification	is Users
Request Status	Audit Reports		ation Reports		lenge / Respons		
Auto Discovery	Reconc	iliation	External C:	alis	Approvals	Configurat	
Thursday, September 30, 2004							
Home > Users > Add	I New User						
0							Oracian
Click on Service nam Time for the provision					cted service. Mod	ity the Schedule	Service Context Attribute
Time for the provision	ing activity to beg	JIII. CIICK SI	upmit when ims	sneu.			Service Display
							Attributes
Service Attribute Edi	t Status						
Service					Revi	ewed	
dkserHPUnixSSH (Bi	isiness Service)				NO		
ch72 (Business Serv	ice)				NO		
Provisioning Schedule Information							
Schedule Time:						u l	
Submit						Cancel	

6 Click a Service link. The attributes required for the Service view display.

Home > Users > Add New			
Insert the required attribute	es for the user and click 'Save & Conti	nue' when finished.	Service Context Attribute Service Display Attributes
Password:	•••••	Password	Autoutes
* City:	Austin	City	
*LastName:	Middlebrook	LastName	
Email:		Email	
* State:	Texas	~	
*FirstName:	К	FirstName	
*UserName:	kmiddlebrook	UserName	
Title:			
Save & Continue	* Designates Requ	uired Fields Ca	ancel

7 Enter or choose values for this user account and click **Save & Continue** to proceed.

If this is an Admin Service, select the Administrative Roles that you want the user to have. You will also select the Services that this user will manage or you can select

All Services – which enables the user to manage all Services

All Contexts – which enables the user to manage all contexts defined for each selected Service. If this option is not selected, the Admin Service Contexts page displays.

Enter Context Attribute Va	lue for each Service and press "Submit".		Service Context Attribute Service Display
* Hierarchy:	AEAA.	₽ 11 All	Attributes Admin Service Contexts
Context Attribute Inform	ation For Service: atb2LDAP70		
* Hierarchy:		P 11 III	

Click $\stackrel{P}{\sim}$ to search for and select values for each context attribute or select All to manage all contexts for a Service.

Selecting the Domain Users entitlement when adding a user to a Service that relies on an Active Directory resource will result in a failed request. The Domain Users entitlement is automatically added by default during provisioning.

8 Click Submit. You are returned to the Service Display page.

If you are assigning multiple Services, you must perform Step 6 through Step 8 for each one.

9 When finished assigning values for each Service, you can schedule the addition of the user. or click **Submit** to immediately add the user.

If you selected an Administrative Service, additional information may be required.

If you schedule the account addition, the account is added at 12:00 A.M. on the day you select.

The user account remains in the Pending state until it is approved according to the workflow template associated with each Service. The new user will receive email notification with a password when approved.

Modifying a User Account

You can modify account information for the users in your Service context. You cannot, however, modify the Select Identity user ID.

Perform the following steps to modify a user account:

- 1 From the home page of Users, click $\stackrel{P}{\sim}$ to search for and select a user ID.
- 2 Select Modify User from the Actions drop-down list.
- 3 Click Submit.
- 4 Click $\stackrel{\ensuremath{^{\frown}}}{}$ to search for and select the Services for which you want to modify this user's information. Only 15 Services can be added at one time.
- 5 Click Continue to proceed. The Service Display page displays.
- 6 Click a Service link. The attributes and values for the Service context display.
- 7 You can modify any available fields.
- 8 Click **Save & Continue**. The Context Attribute Information page displays if the selected Service is an Admin Service.
- 9 Select the appropriate value for the context attribute.
- 10 Click Submit.

You are returned to the Service Display page. Select any other Services for which you want to make account modifications and repeat Step 6 through Step 10.

11 When you are finished assigning values for each Service, you can schedule the modification of the account, or click **Submit** for changes to occur immediately.

If you schedule the modification, the account is changed at 12:00 A.M. on the day you select.

Adding a Service to a User Account

You can add Service access to an existing account.

Perform the following steps to add Service access:

- 1 From the home page of Users, click $\stackrel{P}{\sim}$ to search for and select a user ID.
- 2 Select Add Service from the Actions drop-down list.
- 3 Click Submit. The Service Selection page displays.
- 4 Click $\stackrel{\ensuremath{\sim}}{}$ to search for and select the Services to which you want to grant access. Only 15 Services can be added at one time.
- 5 Click Continue. The Context Attribute Information page displays.
- 6 The context attributes that were defined for each selected Service that you

selected display to the left. Click \checkmark to search for and select the values that you want to assign to this user. This determines the context grouping in which the account is managed. See Defining Business Relationships and Context on page 93 for information about context and context attributes.

- 7 Click **Continue**. The Service Display page displays.
- 8 Click a Service link. The attributes and values for the Service context display.
- **9** The user profile information populates the available fields for this Service. If necessary, enter attribute values and add Service-specific information.

You are returned to the Service Display page. Select any other Services for which you want to make account modifications and repeat this process.

10 When finished assigning values for each Service, you can schedule the Service addition, or click **Submit** to immediately add the Service.

If you schedule the addition, the Service is added at 12:00 A.M. on the day you select.

Enabling or Disabling Service Membership

You can enable or disable Service membership for any user account. If you would like to delete a user account from a Service, see Deleting a Service Membership on page 129.

Perform the following steps to disable or enable a user account:

- 1 From the home page of Users, click $\stackrel{P}{\sim}$ to search for and select a user ID.
- 2 Select Enable Service Membership or Disable Service Membership from the Actions drop-down list.
- 3 Click Submit.
- 4 Select the Services for which you want the account enabled or disabled.
- 5 The request to enable or disable the account is made.

The workflow process assigned to each Service in which the account is managed must be completed before the account is enabled or disabled.

Enabling or Disabling All Services

You can enable or disable all Services for any user account. If you would like to delete a user account from the system, see Terminating a User Account on page 130.

Perform the following steps to disable or enable a user account:

- 1 From the home page of Users, click $\stackrel{P}{\sim}$ to search for and select a user ID.
- 2 Select Enable All Services or Disable All Services from the Actions drop-down list.
- 3 Click Submit.
- 4 The request to enable or disable the account is made.

The workflow process assigned to each Service in which the account is managed must be completed before the account is enabled or disabled.

Viewing Service Membership

You can view the attributes and values that make up a user account.

Perform the following steps to view a user account:

- 1 From the home page of Users, click $\stackrel{P}{\sim}$ to search for and select a user ID.
- 2 Select View Service Membership from the Actions drop-down list.
- 3 Click Submit.

The User Information page displays.

User Information	
User Name:	ch1116
Email:	cynthia.hollocker@hp.com
Status:	Created
Security Status:	Unlocked
User Information For Service: chCombo	(Business Service) Status: Enabled
Email:	cynthia.hollocker@hp.com
FirstName:	Nancy
Company Name:	HP
LastName:	Norris
Password:	fOA1nxKFfyqQx95GX0CpXwHLXak=
CostCenter:	cc
Class:	qa
LDAP72_ENTITLEMENTS:	FD Managers
SAP_ENTITLEMENTS:	×
UserName:	ch1116

User profile information for each Service and context is listed for the specified user.

Resetting a User's Password

If a user needs a password reset, you can assign one or have the system generate a new one. The options are dependent on the security policy associated with each Service. When this action is complete or approved, the user is sent an email notification.

Perform the following steps to reset an account password:

- 1 From the home page of User Management, click $\stackrel{P}{\sim}$ to search for and select a user ID.
- 2 Select Reset Password from the Actions drop-down list.
- 3 Click Submit. The Password Input page displays.
- 4 Enter a new password in the Password field.
- **5** Confirm the password.
- 6 Click Submit.
- 7 The request to change the account password is made.

The workflow process assigned to each Service in which the account is managed must be completed before the account password is changed.

Deleting a Service Membership

To disable an account that might be reinstated later, choose the Disable All Services option. To remove an account from Select Identity and all associated resources, see Terminating a User Account on page 130.

Perform the following steps to delete a user from a Service:

- 1 From the home page of Users, click $\stackrel{P}{\sim}$ to search for and select a user ID.
- 2 Select Delete Service Membership from the Actions drop-down list.
- 3 Click Submit.

- 4 Select the Services in which you want the account deleted.
- 5 The request to delete the account is made.

The workflow process assigned to each Service in which the account is managed must be completed before the account is deleted.

Terminating a User Account

Terminating an account removes it from the Select Identity system and all resources associated with the account. The account is disabled for 24 hours before it is removed form the system. If needed, you can enable the account during this time period.

After an account is terminated, it cannot be retrieved. If you want to remove an account from the system but have the account ID available, choose the Delete User action.

Perform the following steps to delete a user from the Select Identity system:

- 1 From the home page of Users, click $\stackrel{P}{\sim}$ to search for and select a user ID.
- 2 Select Terminate User from the Actions drop-down list.
- 3 Click Submit.
- 4 The request to terminate the account is made.

The account is disabled for a 24-hour period before it is removed from Select Identity and associated resources. This value is configurable through the TruAccess.properties file, which is described in the *HP OpenView Select Identity Installation Guide*.

Viewing Account Attributes

You can view the attributes and values associated with an account.

Perform the following steps to view account attributes:

- 1 From the home page of Users, click $\stackrel{P}{\sim}$ to search for an select a user ID.
- 2 Select View User Attributes from the Actions drop-down list.
- 3 Click Submit.

The Attribute Information page displays.

Home > <u>User Management</u> > View User Attributes ▶ jen211				
User Attributes				
FirstName	first2			
LastName	vo211			
LDAP177_KEY	jen211			
GUID	347345FA-9726-7C03-18FC-1D5E38A558F1			
LDAP211_ENTITLEMENTS	CD Group2 QA Managers			
Company Name	HP			
UserName	jen211			
LDAP177_ENTITLEMENTS	USA Central			
LDAP211_KEY	jen211			
Email	tvo@trulogica.com			

Managing User Account Expiration

You can change the schedule for the expiration of user accounts once the termination process starts.

Perform the following steps to manage the expiration of a user account:

- 1 From the home page of Users, click $\stackrel{P}{\sim}$ to search for and select a user ID.
- 2 Select Manage User Expiration from the Actions drop-down list.
- 3 Click Submit.

The Expiration Settings page displays.

ch1116	rs > Manage User Expiration account expiration section allows you to se	
	expiration criteria, enter the new expiration te from an account, select the appropriate b	date and notification timeframe. To terminate a user or remove the utton. Click "Submit" when finished.
Current Setti	ngs	
Expiration Da	ite:	Not Set
Manager Not	ification Sent:	Not Applicable
Expiration Pr	ocess Status:	Not Applicable
New Settings	3	
•	New Expiration Date:	2004-9-30
	Manager Notification(days):	30
Submit		Cancel

- 4 Click the calender icon to select a new date for account expiration, or enter a range of days.
- 5 Click Submit.

Managing User's Entitlements through Rules

You can associate entitlements and attributes to a user when adding the user to a Service. The entitlements are usually associated to the Business Relationship in the Service, and the user is given entitlements based on his or her context. However, you may want to enforce a rule which changes the user's entitlements based on an event such as the addition or modification of an account. Select Identity enables you to implement a specific rule based on changes made to a user's attribute. For example, if a user's job code is changed through a modification action, entitlement rules can be implemented to change the user's entitlements based on the new job code. The old entitlement associated with the previous job code can be deleted and the user receives a new entitlement based on the new job code. Entitlement rules are enforced through external calls using Select Identity's Workflow Engine.

See a complete example of this scenario and how to implement an entitlement rule using workflow in the *HP OpenView Select Identity Workflow Studio Guide*.

15

Approvals

Workflow is the process by which Select Identity approves and provisions user requests for Services. These provisioning events include the modification, addition, and removal of accounts. The approval process for account requests or account changes can require multiple administrators or a single administrator, depending on your business and security requirements.

The Approvals capability enables you to approve or reject accounts that are pending. You will receive email notification when an account is pending your approval.

Perform the following steps to approve or reject an account:

1 From the home page of Approvals, choose a date range from the Period options and account status (All, Pending, Approved, Rejected) from the Display Options fields.

Admin Roles	Connectors	Resources	Services	Notifications	Users
Request Status Au Auto Discovery	Idit Reports Configur	ation Reports Ch External Calls	allenge / Response Approvals	WorkFlow Studio Configurations	Attributes Rules
ome > Approvals	J <u></u>	,		Thursday, Septem	
	v approvals, select a timet	rame and the desired	Display Options. Cli	ck 'Display' when finishe	d.
Vorkflow Approval					
Period		Displ	ay Options		
Period From: 2004-9-5		Displ Statu	· ·	~	

2 Select the number of items per page that you want to view from the Items Per Page drop-down list.

Approva	Process List Category	Action	Target	Service	Request +	Status: all Close / How Long
G. G.	USER	Add New			07-30-2004 16:50	
	USER	User	NNTESTA	TestGroup13	07-30-2004 10.50	44 MM
Ø	USER	Add New User	NBTESTE	TestGroup13	07-30-2004 16:21	07-30-2004 16:22
Ø	USER	Add New User	NBKTESTD	TestGroup13	07-30-2004 16:19	07-30-2004 16:19
B	USER	Add New User	NBTESTC	TestGroup13	07-30-2004 16:01	01:33 HH:MM
B , B ,	USER	Add New User	NBTESTB	TestGroup13	07-30-2004 15:56	01:38 HH:MM
G , G ,	USER	Add New User	NBTESTA	TestGroup13	07-30-2004 15:48	01:46 HH:MM
G. B.	USER	Add New User	NBTEST	TestGroup13	07-30-2004 15:46	01:48 HH:MM
Ø	USER	Add New User	DTTEST7	TestGroup13	07-30-2004 15:15	07-30-2004 15:16
Ø	USER	Add New User	NBKTEST6	TestGroup15	07-30-2004 15:09	07-30-2004 15:10
Ø	USER	Add New User	NBTEST4	TestGroup13	07-30-2004 14:57	07-30-2004 14:58
Ø	USER	Add New User	NBTEST14	TestGroup13	07-30-2004 14:48	07-30-2004 14:48
Ø	USER	Add New User	NBTEST3	TestGroup13	07-30-2004 14:41	07-30-2004 14:41
Ø	USER	Add New User	NBTEST2	TestGroup12	07-30-2004 14:17	07-30-2004 14:18
Ø	USER	Add New User	NBTEST2	TestGroup14	07-30-2004 14:16	07-30-2004 14:16
Ø	USER	Add New User	test45	j28	07-30-2004 14:13	07-30-2004 14:15
Ø	USER	Add New User	NBTEST2	TestGroup13	07-30-2004 14:12	07-30-2004 14:16
Ø	USER	Add New User	NBTEST2	TestGroup14	07-30-2004 14:12	07-30-2004 14:16
0	USER	Add New	j30u1	j28	07-30-2004 12:30	07-30-2004 12:30

3 Click Display. The Approval Process List displays.

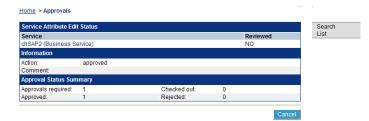
You can sort information by user name, Service, or request.

- Click the Target heading at the top of the table to sort by user name.
- Click the Service heading at the top of the table to sort by Service.
- Click the **Request** heading at the top of the table to sort by workflow dates.

The icons to the left show the status of the account.

- **l** indicates that the account is modified.
- \square indicates that the account is added.
- **1** indicates that the account is deleted.
- 🖶 indicates that there are more approvers needed.
- 4 To review a user account, click the target account name.

The Service Attribute Edit page display.



5 Click the Service name to review the account details. Account details display.

	Approvals		
Home > Approvals			Friday, July 30, 2004
Review/Edit attribute information.	Press "Submit" when done.		
Attribute Information			
*UserName:	NBTEST	UserName	
*FirstName:	Davidson	FirstName	
*LastName:	Tomlin	LastName	
*Email:	dtomlin@trulogica.com	Email	
*Password:	•••••	Password	
LDAP71_ENTITLEMENTS:	TestGroup13		
Submit			Cancel

- 6 Some values may be editable. These values are defined in the Service view. Click **Submit**.
- 7 You are returned to the Service Attribute Edit page.
- 8 Click Approve to approve the account, or **Reject** to reject it.

16

Request Status

The Request Status capability enables you to view the complete transaction status for account events within HP OpenView Select Identity. Account additions, changes, or removals must have a workflow template attached. The workflow process must complete before the request is approved by the system.

Request Status enables you to view the status of account events based on the assigned workflow process. If the workflow template has multiple activities that are grouped into a block, the status of those activities can be viewed in a Request Status report.

Perform the following steps to request account status:

- 1 From the home page of Request Status, choose a date range from the Period options and account status (All, Closed, Opened, Failed) from the Display Options fields.
- 2 If you want status for a single request and know the request number, enter the number in the Request Number field.

Admin Roles	Conn	ectors	Resource	s	Services	Notifications	Users
Request Status	Audit Reports	Configura	ation Reports	Challe	nge / Response	WorkFlow Stu	dio Attributes
Auto Discovery	Recon	ciliation	External C	alls	Approvals	Configuration	s Rules
Home > Request Stat	tus					Thursday, Se	ptember 30, 200
The Request Status s or by the Status of the				user requ	est. You can sea	arch by a particular R	lequest Number
Request Status Repo	rt						
Request Status Repo Request Number:	rt						
	rt			Dis	play Options		
Request Number:	ort 2004-9-1			Dis		All	~

- 3 Select the number of items per page that you want to view from the Items Per Page drop-down list.
- 4 Click Submit.

The Request Status results are displayed.

To view the status of a user request, click on the corresponding Request Number.								
Request List								
Request Number	Target	Status	Requestor	Start 🔻	Close / How Long			
3585	j25test	Opened	SelectIdentity SysAdmin	09-30-04 00:01	17:16 HH:MM			
3583	j23-UL1	Opened	SelectIdentity SysAdmin	09-30-04 00:01	17:16 HH:MM			
3581	j2568	Opened	SelectIdentity SysAdmin	09-30-04 00:01	17:16 HH:MM			
3579	jNTL23a	Opened	SelectIdentity SysAdmin	09-30-04 00:01	17:16 HH:MM			
3577	jshyam2	Opened	SelectIdentity SysAdmin	09-30-04 00:01	17:17 HH:MM			
3169	j2444	Opened	SelectIdentity SysAdmin	09-29-04 00:01	1-17:17 DD HH:MM			
3167	jfixedIn	Opened	SelectIdentity SysAdmin	09-29-04 00:01	1-17:17 DD HH:MM			
3474	usx01	Closed	SelectIdentity SysAdmin	09-28-04 17:07	09-28-04 17:09			
3371	usx01	Closed	SelectIdentity SysAdmin	09-28-04 16:47	09-28-04 16:49			
3165	testshyamtrang.vo@hp.com	Closed	Jenny Administrator	09-28-04 11:49	09-28-04 11:49			
3268	user2803	Closed	SelectIdentity SysAdmin	09-28-04 11:40	09-28-04 11:43			
2969	jtest22	Opened	Jenny Administrator	09-28-04 11:11	2-06:06 DD HH:MM			
2967	testshyamtrang.vo@hp.com	Closed	Jenny Administrator	09-28-04 11:06	09-28-04 11:39			

5 You can mouse over a requestor to view the user name and email. You can also sort by start date or click on a request number to view request status.

Status for that request displays.

Admin Roles	Connec	tors Resourc	es Servi	ces	Notifications	Users
Request Status	Audit Reports	Configuration Reports	Challenge / R	esponse	WorkFlow Studio	Attributes
Auto Discovery	Reconcili	ation External (Calls Appr	ovals	Configurations	Rules
					rinday,	July 30, 200
	a specific user req	uest, click on the corresp	oonding Workflow	nstance.		
To view the details of a Request Items for Re	a specific user req quest Number: 12	248	oonding Workflow	nstance. Servic	e Status	
	a specific user req quest Number: 12	,	_		e Status Closed	

6 Click on the workflow instance to view the approval process for the request.

The workflow template displays.

Welcome WorkFlow Instance - Microsoft Internet Explorer	
	Workflow Instance : 1008
RenydB RenydB	
Report	Template ^
Instance Name: Select Identity Instance Request Report Start time: 09-22-2004 06:03 Wait time: 09-22-2004 06:04 Status: Workflow instance ends Block Mame: ProvisionBlock Description: ProvisionBlock Information	
🔊 Done	Sucal intranet

17

Account Reconciliation

Dynamically changing environments may need to update account information periodically. This process is called **reconciliation**. If you have a resource that is considered the authoritative source for user data in your environment, you can reconcile HP OpenView Select Identity data with that resource. For example, your human resources server may be the first to receive changes regarding users in your environment. Select Identity can reconcile account data with that resource on a regular basis.

Select Identity Reconciliation uses the same SPML data file type as discussed in Create an SPML file Containing Users and Attributes on page 111. This file should reflect changes from a specified resource, including entitlement and attribute changes. The file is then uploaded to Select Identity. All Services that rely on the specified resource are checked for account changes and updated accordingly.

You can add rules to reconciliation jobs that facilitate the provisioning process. Reconciliation rules are only executed by Select Identity when a new user is added from an Authoritative resource through the Reconciliation capability. To see SPML file examples, refer to the \SampleXML\Reconciliation directory on Select Identity product CD. A sample rule and overview of the DTD are available in Creating Reconciliation Rules on page 172. During Select Identity installation, several settings were established in the TruAccess.properties file to enable reconciliation. See the *HP OpenView* Select Identity Installation Guide for details about this file and its settings.



You must have the Select Identity system administrator role to perform Reconciliation tasks.

You may need to increase the JTA timeout seconds on WebLogic for Reconciliation to work properly.

Reconciliation Dependencies

Before running a reconciliation job, ensure that the following dependencies are met:

- Connectors and resources are deployed for systems with which you want to reconcile.
- All necessary resource and Select Identity attributes are mapped within the connector mapping files and Attributes capability.
- All SPML data files for automated jobs follow the *ResourceName_yyyy_mm_dd_hh_mm.xml* or *ResourceName_yyyy_mm_dd_hh_mm.spml* naming convention and are stored in the reconciliation root directory as specified in the *TruAccess.properties* file. See the *HP OpenView Select Identity Installation Guide* for information about this properties file.
- If using Select Identity in a Clustering Environment, you must ensure the TruAccess Properties file has the following properties set correctly:

```
truaccess.batch.inprogresstimeout=1800
truaccess.batch.ownerkey=0
```

Specifies the attributes for batch processing for the Auto Discovery and Reconciliation facilities. Common batch processing is 0, or you can specify an identifier for a specific application server.

```
truaccess.batch.pickuppolicy=1
truaccess.batch.reportdir=c:/temp/reports
```

Specifies the policy to pick up the batch files for the Auto Discovery and Reconciliation facilities. Values are:

1 - common batch only (the <code>truaccess.batch.ownerkey</code> property is set to 0)

2 - own batch only (must have a unique owner key ID specified in the truaccess.batch.ownerkey property)

- 3 common and own batch
- One or more Services are created to use the resources with which you want to reconcile data and the default workflow template for reconciliation (ReconciliationDefaultProcess) is associated. See the *HP OpenView Select Identity Workflow Studio Guide* for information about this template.
- User accounts added to a Service through reconciliation must
 - have access to all resources that the Service requires.
 - have all valid, required Service attribute values, a matching Service context value, and fixed attribute values. Values must match the constrains set by the field definition.

Reconciling with Authoritative Sources

When resources are created, they can be designated as authoritative sources. These resources have the most up-to-date account information in your environment. Reconciling with an authoritative source enables Select Identity to

- Create accounts that are not already in Select Identity and assign all relevant attributes, values, and entitlements.
- Update existing account attributes, values, and entitlements. If the account is disabled, Select Identity begins the assigned workflow process to enable the account.
- Check any existing rules associated with the resource to provide Service access. Each resource can have one defined reconciliation rule for this purpose and the rule ID in the file must be named *ResourceName_*ReconRule.
 - The rule affects new users only.

- If this rule exists and the user meets the rule qualifications, the new user is added to Services as specified by the rule.
- If the rule does not exist, the workflow process is started to add all new accounts to Services associated with the resource, if the user is qualified.
- Check for accounts that are deleted from the resource and enables them.

Reconciling with Non-authoritative Sources

Reconciliation with non-authoritative sources requires that accounts be present in the resource and in Select Identity. If accounts are not present, no add or modify actions are performed. If the account exists in Select Identity, all add, modify, and delete actions can be performed.

Reconciling Account Data

You can schedule a job to reconcile data with a specified resource.

Perform the following steps to schedule reconciliation:

1 From the home page of Reconciliation, click Add New Job. The Job Information page displays.

Admin Roles	Connectors	Resource	s	Services	Notificatio	ns Usei	S
Request Status Audit	Reports Configu	uration Reports	Cha	llenge / Response	WorkFlow	/ Studio Attribu	Ite
Auto Discovery	Reconciliation	External C	alls	Approvals	Configura	ations Rul	es
Home > Reconciliation > A	Add New Automated	Job			Thursday	y, September 30,	20
Job Information							
*Job Name	Recon1						
*Resource Name	SAP			\sim			
Server File Sub Director	\sap						
CC Email							
Start Date	2004-9-30)		•			
*Frequency	1			Day	~		
						-	-

2 Enter a name for the job in the Job Name field.

- 3 Click $\stackrel{\ensuremath{ \sim} }{}$ to search for and select the resource from which you want to update.
- 4 Select Identity reads data files from the reconroot directory. You may have multiple files and multiple jobs to run. If so, enter a subdirectory for this job to reference in the Server File Sub Directory field. This is the directory in which the SPML data file is stored.
- 5 The system sends email to the creator of the job when the job completes. If you want to send a copy of the email to another user, enter the address in the Email CC field.
- 6 Click the calendar icon to choose a day for the job to start running. If you select today's date, the job runs immediately. The job runs at 12:00 A.M. on all other dates.
- 7 Enter a value in the Frequency field and select an increment of time from the drop-down list.
- 8 Click Submit.

The job is created and runs when scheduled.

Viewing an Automated Job

Perform the following steps to view a reconciliation job:

- 1 From the home page of Reconciliation, click $\stackrel{\ensuremath{\sim}}{}$ to search for and select the job that you want to view.
- 2 Select View Automated Job from the Actions drop-down list.
- 3 Click **Submit**. The Job Information page displays.

Admin Roles	Connectors	Resources	Services	Notifications Users
Request Status Audit F	Reports Configura	ation Reports Cha	allenge / Response	WorkFlow Studio Attributes
Auto Discovery	Reconciliation	External Calls	Approvals	Configurations Rules
				Thursday, September 30, 200
Home > Reconciliation > Vi	ew Automated Job			
Job Information				
*Job Name	Recon1			
*Resource Name	SAP			
Server File Sub Directory	\sap			
CC Email				
Start Date	2004-09-30			
*Frequency	24		Hour	

Modifying an Automated Job

Perform the following steps to modify a reconciliation job:

- 1 From the home page of Reconciliation, click $\stackrel{\ensuremath{\sim}}{}$ to search for and select the job that you want to modify.
- 2 Select Modify Automated Job from the Actions drop-down list.
- 3 Click Submit. The Job Information page displays.
- 4 Change any property, but the job name.
- 5 Click Submit.

Deleting an Automated Job

Perform the following steps to delete a reconciliation job:

- 1 From the home page of Reconciliation, click $\stackrel{\ensuremath{\sim}}{}$ to search for and select the job that you want to delete.
- 2 Select Delete Automated Job from the Actions drop-down list.
- 3 Click Submit.
- 4 You are prompted to confirm the action. Click **OK** to delete the job.

Creating a Job to Run Once

Perform the following steps to run a reconciliation job once:

- 1 From the home page of Reconciliation, select **One Time Job** from the Actions drop-down list.
- 2 Click Submit.

The Job Configuration page displays.

Admin Roles	Conn	ectors	Resource	s	Services	Notifications	Users
Request Status A	udit Reports	Configura	ation Reports	Chall	enge / Response	e WorkFlow Studio	Attributes
Auto Discovery	Recon	ciliation	External C	alls	Approvals	Configurations	Rules
Home > <u>Reconciliation</u>	> One Time T	ask				Friday,	July 30, 200
the one-time Reconci						using SPML data file. To Iling information and pre	
Configuration							
*Job Name	[reconcile					
*Resource Name	[LDAP177			\sim		
*Upload File Path	[C:\Documen	ts and Sett Bro	owse			
CC Email	[
		2004-7-30					
* Start Date							

- 3 Enter a name for the job in the Job Name field.
- 4 Click $\stackrel{\ensuremath{ \sim} }{}$ to search for and select the resource from which you want to update.
- 5 Click **Browse** to select the directory from which you want Select Identity to upload the data file.
- 6 The system sends email to the creator of the job when the job completes. If you want to send a copy of the email to another user, enter the address in the Email CC field.
- 7 Click the calendar icon to choose a day for the job to run. If you select today's date, the job runs immediately. The job runs at 12:00 A.M. on all other dates.
- 8 Click Submit.

The job is created and runs when scheduled.

Viewing Task Status

Perform the following steps to view task status:

- 1 From the home page of Reconciliation, select View Task Status from the Actions drop-down list.
- 2 Click Submit.

The Search page displays.

	Conr	ectors	Resource	S	Services	Notifications	Users
Request Status	Audit Reports	Configura	ation Reports	Challe	enge / Response	WorkFlow Studio	Attributes
Auto Discovery	Recon	ciliation	External C	alls	Approvals	Configurations	Rules
<u> Home</u> > <u>Reconciliat</u> i	on > One Time 1	lask 🛛				Friday,	July 30, 200
the one-time Reco						ising SPML data file. To ing information and pres	
Configuration							
*Job Name		reconcile					
*Resource Name	[LDAP177			\sim		
		C:\Document	to and Sott Des				
*Upload File Path			is and sett bio	wse			
*Upload File Path CC Email				wse			

- 3 Enter your search criteria.
- 4 Click Submit.

The Results page displays.

Admin Roles		Conn	ectors	Resource	S	Services	Notifications	Users
Request Status	Aud	lit Reports	Configura	ation Reports	Cha	allenge / Response	e WorkFlow Studio	Attributes
Auto Discover	y	Recon	ciliation	External C	alls	Approvals	Configurations	Rules
							Friday,	July 30, 2004

Home > Reconciliation > View Task Status
--

Task ID	Job Name	Resource Name	Start Time	End Time	Status	User ID
1002	Auo-Auth	LDAP177	2004-07-30 17:03:49.0	2004-07-30 17:04:00.0	Completed	1006
1003	Auto-LDAP71	LDAP71	2004-07-30 17:14:19.0	2004-07-30 17:14:41.0	Completed	1006
1004	Auto-LDAP71	LDAP71	2004-07-30 17:25:49.0	2004-07-30 17:26:09.0	Completed	1006
1005	ModManualEnts	LDAP71	2004-07-30 17:42:21.0	2004-07-30 17:42:31.0	Completed	1006
1006	Auto-LDAP71	LDAP71	2004-07-30 17:55:19.0	2004-07-30 17:55:33.0	Completed	1006
1007	Auo-Auth	LDAP177	2004-07-30 18:03:49.0	2004-07-30 18:03:53.0	Completed	1006

If your job is not listed, click New Search to refine your search criteria.

18

Account Self Service

After users are added to the Select Identity system, they can change their passwords, and create password hints through the Self Service pages. Administrators can grant their roles to another administrator within their Service context. This alleviates the burden of some of the most common administrative tasks from your IT or support staff.

Changing Passwords and Password Hints

One of the most common user management tasks is changing or updating passwords. Through Self Service, Select Identity enables administrators to pass this task on to users. If given the permission to do so, users can change their password for each Service to which they have access. Users can also set or change password hints.

Perform the following steps to change your account password:

- 1 From the home page of Self Service, select **Change Password** from the Actions drop-down list.
- 2 Click Submit.

The Password Information page displays.

Please input your old password an	I new password	
Password Input		
* Current password:	•••••	
New Password	••••	
Confirm New Password	••••	

- 3 Enter your current password in the Current Password field.
- 4 Enter a new password.
- **5** Confirm the new password.
- 6 Click Submit.

When the change is approved, Select Identity sends email confirmation based on the notification policy associated with the action.

Perform the following to change your password reset questions:

- 1 From the home page of Self Service, select **Change Password Reset Questions** from the Actions drop-down list.
- 2 Click Submit.

The Your Password Reset Questions page displays.

Home > Self Service > Password Re	set Questions	
	d reset questions, please fill out the form belo will be prompted to re-enter these answers t	
Your Password Reset Questions (All	l answers are case sensitive)	
* Current Password:	•••••	
* Challenge:	what is your name?	×
*Answer:	•••••	
*Confirm Answer:	•••••	
Submit	* Designates Required Fields	Cancel

- 3 Enter your password in the Current Password field.
- 4 Select a hint from the Challenge drop-down menu.
- 5 Enter an answer for this question in the Answer field.
- 6 Confirm the answer.

7 If available, select another question from the second Challenge drop-down list.

This action is dependent on the Select Identity challenge and response policy.

- 8 Enter an answer for this question in the Answer field.
- **9** Confirm the answer.
- 10 Click Submit.

When the change is approved, Select Identity sends email confirmation based on the notification policy associated with the action.

Delegating or Removing Administrative Roles

You can delegate your administrative roles to another Select Identity administrator within your Service context or remove roles that were delegated. This action is for administrators only.

Perform the following steps to delegate or remove roles:

- 1 From the home page of Self Service, select **Delegate Admin Roles** from the Actions drop-down list.
- 2 Click **Submit**. The User Selection page displays.



- 3 Click the search icon $\stackrel{\ensuremath{ \sim} }{}$ to search for a name. The user must be a member of your Service context.
- 4 Click Activate to delegate roles, or click Deactivate to remove roles.

When the change is approved, Select Identity sends email confirmation based on the notification policy associated with the action.

19

Configuration and Audit Reports

Select Identity auditing and reporting features enable your organization to produce context-driven, standard, and custom reports of user entitlements and system event history. Better reports and audits allow tighter control over information, reduced risk of security breach, and enforce higher levels of compliance with requirements and regulations.

This chapter provides details for all of the actions that you can perform within Configuration Report and Audit Report capabilities. Access to each of these functional areas is determined by the administrative roles assigned to your account by the Select Identity system administrator.

Generating Audit Reports

Select Identity provides audit reports for all Select Identity system functions. Audit reports provide the history of activities within the system. Audit reports detail historical transactions that have occurred in Select Identity. You can generate a single report or create a report template, which can be accessed each time you click **Audit Reports**.

User Audit Report

Generate a User Audit report to view configuration activities for specific user accounts over a period of time. This report details all actions related to any

user within Select Identity. These user actions include: Add New User, Modify User, Delete Service Membership, Enable All Services, Disable All Services, Reset Password, Add Service, Change Password, Forget Password, Enable Service Membership, Disable Service Membership, Terminate User, Login, and Logout. The report can be generated based on different input data including specific user, specific service, or specific service and context. The type of data displayed for each report is configurable and may include the following columns: Time Stamp, Requestor, User Name, Action, Service and Status.

User Audit Report Summary

Summarizes all user account actions and provides a count for each action per Service and context. The User Audit Summary Report summarizes all actions related to users within Select Identity. These user actions include Add New User, Modify User, Delete Service Membership, Enable All Services, Disable All Services, Reset Password, Add Service, Change Password, Forget Password, Enable Service Membership, Disable Service Membership, Terminate User, Login, and Logout. The report can be generated either by specific Service or by specific Service and context. The report displays three columns per action which include the following: Service Name, Context, and Count.

Service Audit Report

Generate a Service Audit report to view configuration activities for a Service over a period of time. This report details all actions related to one or multiple Services within Select Identity. Reports are generated based on specific actions including delete, modify, import and add. The type of data displayed for each report is configurable and may include the following columns: Time Stamp, Requester, Service Name, Service Type, Action, Component, Component Name, and Status.

The configuration procedure for each report is similar. The available audit data will change to suit the report type. The following procedure uses the Service Audit report as an example.

Perform the following steps to generate an audit report:

- 1 From the Audit Reporting home page, select **Service Audit Report** from the Report Type Selection drop-down list.
- 2 Click Submit.

The Report Configuration page displays.

Home > Audit Reporting > Service Audit R	ıt	
Service Report Configuration		<available configurations=""> 🔽</available>
Reporting Period	Display Options	
From: 2004-6-1	Order By: Time Stamp 🖌 Desce	ending 😽
Through: 2004-6-4	Items Per Page: 10 💌	
	Report Type: HTML 🗸	
	Report Generation: 💿 Generate Report Now	
Configuration Data		
Service Selection		
	P	
Fields	Actions	
{ALL}	{ ALL }	
Time Stamp Requestor	add modify	
Service Name	delete	
Service Type		
Display		Save This Configuration

To use an existing report template, choose it from the Available Configurations drop-down list at the top of the page. If not, follow the rest of this procedure.

3 Choose a range of days or months and enter them in the From and Through fields. Select from the calendar views or enter dates using the following format (specifying the time is optional):

yyyy-mm-dd [hh:mm]

- 4 Choose the display options for this report.
 - Choose the category by which you want to see data ordered from the Order By drop-down list.
 - Choose the field type by which you want information ordered and select **Ascending** or **Descending** from the drop-down lists.
 - Select an option from the Items Per Page list.
 - Select a report type.
 - Choose the Generate Report Now option, or schedule to report to run at a later date.
- 5 Select the audit data that you want to display. You can use the CTRL and SHIFT keys to select multiple options.
 - Click $\stackrel{P}{\sim}$ to search for and select the Service that you want to audit.
 - Choose the categories of information that you want to view from the Fields list.

- Select the actions that you want to audit from the Actions list.
- 6 Click **Display** to view the report, or **Save This Configuration** to have these report settings available for future use. See Saving Report Configurations on page 156 for information about saving reports.

The following is an example report.

			Audit Servic	e Report			
Num	Time Stamp▼	Requestor	Service Name	Action	Component	Component Name	Status
1	2004-07-13 17:28:59.0	concerosa	alan	modify	Biz Relation	atb70bra	success
2	2004-07-13 16:53:24.0	concerosa	alan	modify	service	alan	success
3	2004-07-13 16:53:05.0	concerosa	alan	modify	service	alan	success
4	2004-07-13 16:52:17.0	concerosa	alan	modify	service	alan	success
5	2004-07-13 16:50:39.0	concerosa	alan	modify	service	alan	success
6	2004-07-13 13:21:13.0	concerosa	alan	modify	Biz Relation	atb70bra	success
7	2004-07-07 18:32:22.0	concerosa	alan	modify	Biz Relation	atb70bra	success

Click on a requestor name to view profile information for a user.

Click Printer View to print the report, or you can configure a new report.

Generating Configuration Reports

Select Identity provides configuration reports for user, administrator, and Service management activities. Configuration reports represent the state of Select Identity at the time the report is created. For example, an administrator can display all users associated with a Service context at a given time. You can generate a single report or create a report template that can be accessed each time you click **Configuration Reports**.

User Configuration Report

Generate a User Configuration report to view active user accounts within Select Identity sorted by context. You can only view users that are currently active within your Service context. The report can be generated based on a specific user, a specific Service, or specific Service and context. The type of data displayed for each report is configurable and may include User ID, First Name, Last Name, Email, Service, and Context.

User Configuration Summary Report

Generate a User Configuration Summary Report to summarize all current user accounts by Service and context within Select Identity. The report can be generated either by specific Service or by specific Service and context. The report displays data columns including Service Name, Context, and Count.

User Configuration Detail Report

Generate a User Configuration Detail Report to summarize all current user accounts by context attribute and value. The report displays data columns including Service Name, Context, and Count.

The configuration procedure for each report is similar. The available configuration data will change to suit the report type. The following procedure uses the User Configuration Summary report as an example.

Perform the following steps to generate a configuration report:

- 1 From the Configuration Reporting home page, select User Configuration Summary Report from the Report Type Selection drop-down list.
- 2 Click Submit.

The Report Configuration page displays.

Home > Configuration Reporting > User Configura	ion Summary Rpt
User Configuration Summary Report	<available configurations=""></available>
Display Options Report Type: HTML V Report Generation: ③ Generate Report Now	
Configuration Data	
Service Selection	Context Attribute Selection
J2Adm-AP	
Display	Save This Configuration

If you want to use an existing report template, choose it from the Available Configurations drop-down list at the top of the page. If not, follow the rest of this procedure.

- **3** Select the display options for this report.
 - Choose the **Generate Report Now** option, or schedule to report to run at a later date.
 - Click P to search for and select the Service that you want to audit.
 - Click $\stackrel{P}{\sim}$ to search for and select the Service that you want to audit.

4 Click **Display** to view the report, or **Save This Configuration** to have these report settings available for future use. See Saving Report Configurations on page 156 for information about saving reports.

The following is a sample.

User C	onfiguration Summary	
Total User Accounts:		2
User Accounts by Specific Services		
Service Name	Context	Count
j2Adm-AP		
	HP	2

After the report displays, you can click **Printer View** and print the report, or configure a new report.

Saving Report Configurations

You can save your report definitions and schedule them to run at regular intervals. This enables you to easily track changes and updates within the Select Identity system.

Perform the following steps to save a report definition:

1 From one of the Report Definition pages, click **Save This Configuration**. The Manage Configurations page displays.



2 Enter a name for the report definition and click Submit.

The report is saved. The definition page displays so that you can run the report. You can later access the report from the Available Configurations drop-down list.

Click **Manage Configurations** from the home page of the reporting section to delete this report definition. The following displays.

Home > Configurations > User Configuration Rpt > Manage Configurations
The Report Configuration Management section allows you to manage saved Report Configurations allowing them to be recalled when generating Reports.
Select the desired Report Configuration Name and Action below then press 'Submit'.
Report Configuration Name: User Report 3 🗸
Report Configuration Action: Delete Configuration 🐱
Submit

20

Configurations

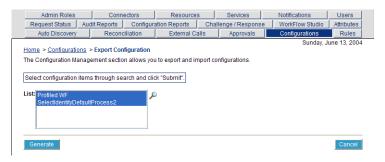
HP OpenView Select Identity provides a configuration management capability that enables you import and export Service, workflow, request, notice, attribute, and resource data from one environment to another. For example, you may have set up your Select Identity system in a test environment and want to export your configuration to a production environment. All data is imported and exported through XML files.

Exporting a Configuration

Perform the following steps to export configuration information:

- 1 From the home page of Configurations, select the item type that you want to want to export from the Configuration drop-down list.
- **2** Select **Export Configuration** form the Actions list.
- 3 Click Submit.

The Configuration list page displays.



- 4 Click $\stackrel{P}{\sim}$ to search for and select the items that you want to export.
- 5 Click Generate to create the XML data file.



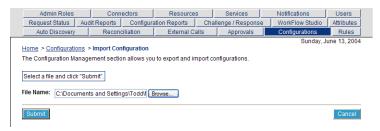
6 Save the file to any location.

Importing a Configuration

Perform the following steps to import a configuration file:

- 1 From the home page of Configurations, select the item type that you want to want to import from the Configuration drop-down list.
- 2 Select Import Configuration form the Actions list.
- 3 Click Submit.

The Configuration list page displays.



- 4 Click **Browse** to locate the file that you want to import.
- 5 Click **Submit** to import the file.

The Configuration list page displays.

A

Resource Access Information

Each resource has specific access information. This information is used to enable Select Identity communication through the connector installed for each resource. You will be prompted for network connection information and system account access information during the resource deployment process. This process is described in detail in Deploying a Resource on page 38.

You will need the following access information for each resource that you deploy.

AS400

Field Name	Sample Values	Description
Resource Name	as400_server	Name given to the resource.
Host Name	server.company.com	The address of the server.
Admin	admin	The administrative login name.
Admin Password		Administrative account password.

Control-SA

Field Name	Sample Values	Description
Resource Name	control-sa_server	Name given to the resource.
Admin User Name	admin_user	The administrative login name.
Admin Password	password123	Administrative account password.
Name of the ESS Schema owner	essid	The Enterprise Security Station (ESS) schema owner.
Host Name of the ESS Server	server.company.com	The ESS server host.
Port Number of the ESS Server	1570	The port number of the orbix daemon.
ESSClient	/essclient.exe	The location of the ESS client on the web server.
Max Wait Time	2	The maximum time that the server should wait for a response in minutes. This is used for job code assignments.
Entitlements Table Data Source	jdbc/TruAccess	The data source for entitlements information.
Entitlements Table	essEntitlements	The database table for entitlements.
Column Name	entitlements	The database column for entitlements.
Mapping File	ControlSAEss.xml	The attribute mapping file for the resource.

SAP

Field Name	Sample Values	Description
Resource Name	sap_server	Name given to the resource.
User Name	admin	Administrative username.
Password	password123	Account password.
Client ID	00	Server client ID.
Language	EN	Specified language for the system.
Host Address	server.company.com	The address of the server.
System Number	00	The system number.
Mapping File	Sap-R3.xml	Name of the resource mapping file.

Domino

Field Name	Sample Values	Description
Resource Name	Domino_server	Name given to the resource.
Server Name	PSO111	The NETBIOS name or IP address of the Domino server.
Agent Port	5003	The port on which the agent is running on the Domino server.
UserName	Administrator	Administrative account on the Domino server.
Password	Password123	Internet password corresponding to the administrative account.
Notes Base Dir	C:\Lotus\Notes\Data (Windows)/usr/local/ notesdata (Solaris)	The Notes data directory. User ID files are created here.

Field Name	Sample Values	Description
Domino Certifier ID File	C:\Lotus\Domino\data \cert.id (Windows) /usr/local/ notesdata/cert.id (Solaris)	The Certifier ID that is used to provision users. Note that Domino servers support hierarchical Certifiers.
Domino Certifier ID Password	Certpassword	The password corresponding to the specified Certifier.
Address Book DB File	names.nsf	The Domino Address Book on which all operations are to be performed.

LDAP for Active Directory

Field Name	Sample Values	Description
Resource Name	ActiveDirectory	Name of the target resource.
Access URL	ldap://136.168.1.20:389	URL access to the resource.
	ldaps://192.168.1.19:636	If using secure LDAP (ldaps) for password changes, specify ldaps as the protocol and 636 as the port.
Suffix	dc=qa,dc=hp,dc=com	Root suffix.
Login Name	domain\user	Name required to log in to the resource.
Password	Password123	Password corresponding to the login account.
User Suffix	cn=users	Suffix of user's distinguished name.
User Object Class	top, person, organizationalPerson,user	Object class of users.
Group Suffix	cn=users	Suffix part of group's distinguished name.

Field Name	Sample Values	Description
Group Object Class	top,group	Object class of user groups.
Mapping File	ActiveDir.xml	Location of the connector mapping file used to map resource attributes to Select Identity attributes.

LDAP for eTrust

Field Name	Sample Values	Description
Resource Name	ETrust	Name of the target resource.
Access URL	ldap://136.168.1.20:389	URL access to the resource.
Suffix	c=AU	Root distinguished name suffix.
Login Name	admin	Name required to log in to the resource.
Password	Password123	Password corresponding to the login account.
User Suffix	ou=ADMINISTRATION, ou=CORPORATE, ou=DEMOCORP	Suffix part of user's distinguished name.
User Object Class	inetorgperson	Object class of users.
Group Suffix	ou=ADMINISTRATION, ou=CORPORATE, ou=DEMOCORP	Suffix part of group's distinguished name.
Group Object Class	OrganizationalUnit	Object class of user groups.
Mapping File	CAEtrust.xml	Location of the connector mapping file used to map resource attributes to Select Identity attributes.

LDAP for iPlanet

Field Name	Sample Values	Description
Resource Name	local_iplanet	Name of the target resource.
Access URL	ldap://localhost:389	URL access to the resource.
Suffix	dc=india, dc=hp	Root suffix.
Login Name	cn=Directory Manager	Name required to log in to the resource.
Password	Password123	Password corresponding to the login account.
User Suffix	ou=people	Suffix of user's distinguished name.
User Object Class	top, person, organizationalPerson, inetorgPerson	Object class of users.
Group Suffix	ou=groups	Suffix part of group's distinguished name.
Group Object Class	top,groupofuniquenames	Object class of user groups.
Mapping File	iplanet.xml	Location of the connector mapping file used to map resource attributes to Select Identity attributes.

Tandem Himalaya for Safeguard

Field Name	Sample Values	Description
Resource Name	SNVT-tandem	Name given to the resource.
Host Name	server.company.com	IP address or hostname of the Tandem server.
Super User Group	trulogica	The group to which the Super User belongs.

Field Name	Sample Values	Description
Super User Name	user	User name of the user who has Administrative privileges on the Tandem machine. Specify only the user name (without the group name).
Super User Password	Password123	Password for the Super User account.
Expect Executable	/Expect/bin/ expect.exe	Path to the Expect executable, which is required to run scripts.
Script Location	/Select_Identity/ TandemConnector/ scripts	Location of the Expect scripts that were extracted from the Tandem-expect-scripts. zip file during installation.
Safecom Path	\$SYSTEM.ASUTILS. SAFECOM	The path to the Safecom executable on the Tandem server.
Mapping File	TandemSchema- Mapping.xml	Location of the connector mapping file used to map Select Identity attributes to attributes on the logical resource.

UNIX with SSH

Field Name	Sample Values	Description
Resource Name	unix_server	Name given to the resource.
UserName		Login account on the UNIX machine.
UserPassword		Password for the UserName account.

Field Name	Sample Values	Description
HostName	server.company.com	The hostname or ip address of the unix machine to perform user account provisioning.
AdminPassword	rootPassword	Password to gain administrator privileges.
UnixType	Solaris, HP-UX, Linux	Type of UNIX operating system that HostName is running.
Ssh	True	Encrypted connection to hostname using the Secure Shell protocol.
sshKnownHosts	knownHosts	The file that contains the list of known hosts for SSH connections. If a connection is made to HostName and its id does not match the id stored in sshKnownHosts, then the connection is denied. This parameter is optional but highly recommended.
Port	22	Port to use when connecting to HostName. The default for ssh is 22 and non-ssh is 23. This parameter is optional.
scriptLocation	/connectorScripts/	Location for the Bean Shell scripts that are used by the connector.
mappingFile	UnixConnector.xml	Location of the connector mapping file used to map resource attributes to Select Identity attributes.

UNIX with Telnet

Field Name	Sample Values	Description
Resource Name	unix_server	Name given to the resource.
Host Name	server.company.com	IP Address or host name of the UNIX machine.
UserName	accountadmin	Login account on the UNIX machine.
UserPassword	Password123	Password for the UserName account.
AdminPassword	rootPassword	The password to gain administrator privileges.
Executable	/tools/expect-5.21/ expect.exe	Path name of the expect executable, required to run scripts.
scriptLocation	/connectorScripts/ expect/Solaris	Location of the expect scripts that are used by the connector.
mappingFile	UnixConnector-tel.xml	Location of the connector mapping file used to map resource attributes to Select Identity attributes.

Active Directory (Agent-Based)

Field Name	Sample Values	Description
Resource Name	ad_server	Name given to the resource.
Domain	mydomain.com	Active Directory domain name.
Username	Administrator	Administrative account on the target Windows resource.
Password	Password123	Password corresponding to the UserName account.

Field Name	Sample Values	Description
Server Name	server.company.com	The NETBIOS name or IP address or the Windows system running Active Directory.
AD Port	389	Active Directory port on the Windows resource.
Agent Port	5051	Forward connector server port, as configured on the resource agent.

Windows NT Domain (Agent-Based)

Field Name	Sample Values	Description
Resource Name	nt_server	Name given to the resource.
Domain	mydomain.com	The name of the NT domain.
Username	Administrator	Administrative account on the target resource.
Password	Password123	Password corresponding to the administrative account.
Server Name	server.company.com	The NETBIOS name or IP address of the NT Domain server.
AgentPort	5052	Forward connector server port, as configured on the resource agent.

Windows Local (Agent-Based)

Field Name	Sample Values	Description
Resource Name	local_server	Name given to the resource.
UserName		Administrative account on the target resource.

Field Name	Sample Values	Description
Password	Password123	Password corresponding to the administrative account.
Server	server.company.com	Target resource NETBIOS name or IP address.
ServerPort	5001	Forward connector server port, as configured on the resource agent.

Β

Creating Reconciliation Rules

Reconciliation rules are only executed by HP OpenView Select Identity when a new user is added from an Authoritative resource through the Reconciliation capability. You must create an XML or SPML file that adheres to the rules DTD. The file name must follow the *ResourceName_yyyy_mm_dd_hh_mm* format as described in <u>Reconciliation</u> <u>Dependencies on page 140</u>. You can save the file in any directory on the Select Identity server. When you add the rule in the Rules capability, the rule file is uploaded to the Select Identity database.

Application Server Configuration for Rules

There are three . jar files packaged with the Select Identity installation CD that must be placed in a specific directory on the WebLogic web server. The files are xml-apis.jar, xerceslmpl.jar, and xalan.jar. They must be copied to <java_home>\jdk141_05\jre\endorsed within the BEA home directory.

Rule DTD

All rule files must adhere to the rule DTD. All XML documents are made up of the following simple building blocks:

Elements	The main building blocks of XML documents. Elements can contain text, other elements, or be empty.
Attributes	Extra information about elements. Attributes are always placed inside the starting tag of an element and always come in name/value pairs.
Entities	Variables used to define common text. Entities are expanded when a document is parsed by an XML parser. The following entities are predefined in XML: < ; for <, > ; for >, & ; for & , " ; for ", and ' ; for '.
PCDATA	Text that is parsed by a parser. Tags inside the text will be treated as markup and entities will be expanded.
CDATA	Text that is not parsed by a parser. Tags inside the text are not treated as markup and entities are not expanded.

If you are unfamiliar with XML and DTDs, refer to the specification at http://www.w3.org/TR/2000/REC-xml-20001006#sec-well-formed.
For a DTD tutorial, refer to http://www.w3schools.com/dtd/
default.asp.

The Select Identity rule DTD is provided in full below. Each element contains an explanation of its children and attributes:

```
<!-- Rules are scripts that are executed with reference to specific
events
@title TruAccess Rule Language
@root Rule
-->
<!--
A Rule has a collection of InputObjects and one or more scripts
that work on the input object
-->
```

```
<!ELEMENT Rule (InputObject*,Script+)>
<!--
   RuleId is an identifier that is used to identify the rule
   Comment is a piece of information associated with a rule Under
   debug mode the Comment is printed in the log
-->
<!ATTLIST Rule
   RuleId ID #REQUIRED
   Comment CDATA #IMPLIED>
<!--
   InputObject is an object that is used in the rule. Most of the
   time the InputObject will be created and passed to the rule.
   Optionally the input object will be created if specified. Please
   note that one should not specify variables as InputObjects.
   Variables are treated differently.
-->
<!ELEMENT InputObject EMPTY>
<!--
   type is the type of the object. It can be any valid fully
   qualified Java type name. The primitive types can be declared as
   int, String and boolean. The actual type when passed needs to be
   Integer, String and Boolean.
   name is the name of the object
   create specifies whether the object has to be created. The
   assumption is that the object supports a no-argument constructor
-->
<!ATTLIST InputObject
   type CDATA #REQUIRED
   name CDATA #REQUIRED
   create (yes no) #IMPLIED>
<!--
   Script is the body of a Rule, where conditions are checked and
   actions taken
-->
<!ELEMENT Script (ConditionScript | ActionScript | AssertScript |
PlainText | PrintScript)*>
<!--
   Comment in a script can be used to trace the execution for
   debugging
-->
<!ATTLIST Script
   Comment CDATA #IMPLIED>
<!--
```

Appendix B

```
ConditionScript is a condition statement
-->
<!ELEMENT ConditionScript (Condition, TrueAction, FalseAction?)>
<!--
   Comment in a script can be used to trace the execution for
   debugging
-->
<!ATTLIST ConditionScript
   Comment CDATA #IMPLIED>
<!--
   ActionScript models action. currently only one type of action is
   specified
-->
<!ELEMENT ActionScript (AssignStmt)>
<!--
   Comment in a script can be used to trace the execution for
   debugging
-->
<!ATTLIST ActionScript
   Comment CDATA #IMPLIED>
<!--
   AssignStmt allows assignment of values to fields or variables
-->
<!ELEMENT AssignStmt (Field, Expression )>
<!--
   Condition is a boolean expression
-->
<!ELEMENT Condition (Not?, ( OrCondition | AndCondition |
UnitCondition )>
<!--
   OrCondition models logical or
-->
<!ELEMENT OrCondition (UnitCondition+)>
<!--
   AndCondition models logical and
-->
<!ELEMENT AndCondition (UnitCondition+)>
<!--
   UnitCondition is a nested condition or a relation
-->
<!ELEMENT UnitCondition (Condition | Relation)>
<!--
   Relation is between two expression
-->
<!ELEMENT Relation (Expression, Expression?)>
<!--
```

```
Relation supports the following operations:
   <b>eq</b> equal
    <b>ne</b> not equal
    <b>gt</b> greater than
    <b>lt</b> less than
    <b>ge</b> greater than or equal
    <b>le</b> less than or equal
    <b>contains</b> contains
    <b>startswith</b> startswith
    <b>endswith</b> endswith
    <b>matches</b> matches
    <b>eqic</b> equals ignore case
   contains is a special operation. It can be applied to String, Map
  and Collection types. startswith, endswith, matches, equal can
  be applied to String only. The semantics are the same as that of
   java string class.
<!ATTLIST Relation
  op ( eq | ne | gt | lt | ge | le | contains ) #REQUIRED>
<!--
  TruAction is executed when the condition is true
-->
<!ELEMENT TrueAction (Script*)>
<!--
  FalseAction is executed when the condition is false
-->
<!ELEMENT FalseAction (Script*)>
< ! - -
  Field represents a field in a bean or a variable
-->
<!ELEMENT Field EMPTY>
<!--
  name is the name of the field. If the field has a . then it is
  assumed that it is an attribute of an InputObject otherwise it
   is a temporary variable.
   type is the type of the variable. The following types are
  supported:
   <b>int</b> integer
    <b>boolean</b> boolean
    <b>java.lang.String</b> Java String
    <b>java.util.Collection</b> Java Collection
    <b>java.util.Map</b> Java Map
```

```
For variables, the collection is implemented as an ArrayList and
   Map is implemented as a HashMap
   fieldKey is used to access the object in the collection/map
   hasG(S)etter and setter is used to generate accessing functions
   Y => has a function get<Name> and set<Name>
   N => no function ... direct access assuming that it is public
   D => has generic function: get(<name>) and set(<name>) of string
   type
-->
<!ATTLIST Field
   name CDATA #REQUIRED
   type ( int | boolean | java.lang.String | java.util.Map |
   java.util.Collection ) #REQUIRED
   fieldKey CDATA #IMPLIED
   hasGetter (Y | N | D) "D"
   hasSetter (Y | N | D) "D" >
<!--
   Expression is an expression
-->
<!ELEMENT Expression (Field | FixedValue | ArithExp | BoolExp)>
<!--
   BoolExp is a boolean expression
-->
<!ELEMENT BoolExp (Field | True | False | Relation | Condition)>
<!--
   True represents a true value
-->
<!ELEMENT True EMPTY>
<!--
   False is a false value
-->
<!ELEMENT False EMPTY>
<!--
   ArithExp is an Arithmatic Expression
-->
<!ELEMENT ArithExp (AddExp | MultExp | Field | FixedValue)>
<!--
   AddExp is an additive expression
-->
<!ELEMENT AddExp (ArithExp,ArithExp)>
<!--
   AddExp supports two operations
   <b>plus</b> addition
     <b>minus</b> subtraction
```

```
AddExp support concatanation of two Strings
-->
<!ATTLIST AddExp
   op ( plus | minus ) #REQUIRED>
<!--
   MultExp supports two operations
   <b>mult</b> multiplication
     <b>div</b> division
   -->
<!ELEMENT MultExp (ArithExp,ArithExp)>
<!ATTLIST MultExp
   op ( mult | div ) #REQUIRED>
<!--
   FixedValue is a literal which can be a quoted string or an
   integer
-->
<!ELEMENT FixedValue (#PCDATA)>
<!--
   AssertScript is an assertion
   Condition is checked and if it is false then an exception is
   generated with the Message
-->
<!ELEMENT AssertScript (Condition, ExceptionName?, Message?)>
<!--
   Comment in a script can be used to trace the execution for
   debugging
-->
<!ATTLIST AssertScript
   Comment CDATA #IMPLIED>
<!--
   This signifies a not condition
-->
<!ELEMENT Not EMPTY>
<!--
   A message for assertion failure
-->
<!ELEMENT Message (#PCDATA)>
<!--
   Any BeanShell script
-->
<!ELEMENT PlainText (#PCDATA)>
<!--
   class name of the assertion failed exception
-->
```

```
<!ELEMENT ExceptionName (#PCDATA)>
<!--
Statement to print an expression
-->
<!ELEMENT PrintScript (Expression)>
```

Example: Reconciliation Rule

The following is a sample of an XML rule used for reconciliation. This sample checks if the resource name is "LDAPv3_Auth," user attribute "Company," with a value of "ABCCorp." The rule then adds new users to the Services "reconSvc1" and "reconSvc2."

```
<?xml version="1.0" standalone="no"?>
<!--
<!DOCTYPE Rule PUBLIC "http://www.trulogica.com/truaccess/rule"
"file:///C:/sanjoy/TruAccess/scriptengine/src/rule/Rule.dtd">
-->
<Rule RuleId="LDAPv3_Auth_ReconRule" Comment="Reconciliation"
Authorative Resource Service Assignment Rules">
    <InputObject name="ResourceName" type="java.lang.String"/>
    <InputObject name="AttributeMap" type="java.util.HashMap"/>
    <InputObject name="ServiceNameMap" type="java.util.HashMap"/>
  <Script>
    <ConditionScript Comment="Check Resource Name and Company
Name">
      <Condition>
        <AndCondition>
          <UnitCondition>
            <Relation op="eq">
              <Expression>
               <Field name="ResourceName" type="java.lang.String"/>
              </Expression>
              <Expression>
                <FixedValue>&quot;LDAPv3_Auth&quot;</FixedValue>
              </Expression>
            </Relation>
          </UnitCondition>
          <UnitCondition>
            <Relation op="contains">
              <Expression>
```

```
<Field name="AttributeMap" type="java.util.Map"
fieldKey="0"/>
             </Expression>
              <Expression>
              <FixedValue>&quot;Company&quot;</FixedValue>
              </Expression>
           </Relation>
          </UnitCondition>
          <UnitCondition>
           <Relation op="eq">
             <Expression>
               <Field name="AttributeMap" type="java.util.Map"
fieldKey=""Company""/>
             </Expression>
              <Expression>
               <FixedValue>&quot;ABCCorp&quot;</FixedValue>
              </Expression>
           </Relation>
          </UnitCondition>
       </AndCondition>
     </Condition>
     <TrueAction>
        <ActionScript Comment="Assign Services">
          <AssignStmt>
             <Field name="ServiceNameMap" type="java.util.Map"
fieldKey=""reconSvc1""/>
               <Expression>
                  <FixedValue>&quot;+OK&quot;</FixedValue>
               </Expression>
           </AssignStmt>
           <AssignStmt>
             <Field name="ServiceNameMap" type="java.util.Map"
fieldKey=""reconSvc2""/>
               <Expression>
                  <FixedValue>&quot;+OK&quot;</FixedValue>
               </Expression>
          </AssignStmt>
         </ActionScript>
     </TrueAction>
    </ConditionScript>
 </Script>
</Rule>
```

С

Event Reference

The following tables lists the request events to which you can assign a workflow template when creating Business Relationships:

Delegated-registration Request Events

- Viewing a service membership
- Adding a user
- Modifying a user
- Deleting a service membership

Reconciliation Request Events

- Adding a service to a user
- Deleting a service membership

- Adding a service to a user
- Enabling a service membership
- Disabling a service membership
- Disabling all services

glossary

Α

Access Control List (ACL)

An abstraction that organizes entitlements and controls authorization. An ACL is list of entitlements and users that is associated with a secured object, such as a file, an operation, or an application. In an ACL-based security system, protected objects carry their protection settings in the form of an ACL.

Access Management

The process of authentication and authorization.

Action

A task that can be performed within each Select Identity capability.

In Workflow Studio, an action invokes functions provided by the workflow engine or external applications within an activity. For example, you can log information to a file, set a property to be used later in the workflow, call an external process, provision a user in Select Identity, or store data in a database.

See also: Capability

Activity

A task that may occur when a workflow template is executed (in Workflow Studio). Activities are the core components of workflow templates; they do the work necessary to provision users. An activity can set a property to be used throughout the workflow, track approvals, start a subworkflow, send email, call an external application, and so on.

Admin Role

A template that defines the administrative actions that can be performed by a user. An Administrative Service is created to provide access to roles. Users are then given access to the Service. Users with administrative roles can also grant their set of roles to another administrator within their Service context.

Approval Process

The process of approving the association, modification, or revocation of entitlements for an identity. This process is automated of these through workflow templates.

Approver

A Select Identity administrator who has been given approval actions through an Admin Role.

Attribute

An individual field that helps define an identity profile. For each identity, an attribute has a corresponding value. For example, an attribute could be "department" with possible values of "IT," "sales," or "support."

Audit Report

A report that provides regular account interaction information within the Select Identity system.

Authentication

Verification of an identity's credentials.

Authoritative Source

A resource that has been designated as the "authority" for identity information. Select Identity accounts can be reconciled against accounts in an authoritative source.

Authorization

Real-time enforcement of an identity's entitlements. Authentication is a prerequisite for authorization.

Auto Discovery

The process of adding user accounts to the Select Identity system for a specified Service through the use of a data file.

В

Block

A special type of activity that serves two purposes: to define information to be used by a subset of activities (block-level properties) and to provide block-level reporting. For example, you might define a block that submits an approval request, waits for the response, and returns the status of the request to the workflow. In other words, think of a block as a process within a template.

Block Type

A property that is assigned to a block in a workflow template using the blockType property in end block activity. The report template uses this property to identify how block information is rendered in the resulting report.

Business Relationship

A Select Identity abstraction that defines how a logical grouping of users will access a Select Identity Service. The Select Identity Service is a superset of all the identity management elements of a business service.

Business Service

A product or facility offered by, or a core process used by, a business in support of its day-to-day operations. Example business services could include an online banking service, the customer support process, and IT infrastructure services such as email, calendaring, and network access.

See also: Service

С

Capability

Actions that can be performed within the Select Identity client are grouped by capability, or link, in the interface.

See also: Action

Challenge and Response

A method of supplying alternate authentication credentials, typically used when a password is forgotten. Select Identity challenges the end user with a question and the user must provide a correct response. If the user answers the question correctly, Select Identity resets the password to a random value and sends email to the user. The challenge question can be configured by the administrator. The valid response is stored for each user with the user's profile and can be updated by an authenticated user through the Self Service pages.

Configurations

A capability that enables you to import and export Select Identity settings and configurations. This is useful when moving from a test to a production environment.

Configuration Report

A report that provides current system information for user, administrator, and Service management activities.

Connector

A J2EE connector that communicates with the system resources that contain your identity profile information.

Context

A Select Identity concept that defines a logical grouping of users that can access a Service.

Contextual Identity Management (CIM)

An organizational model that introduces new abstractions that simplify and provide scale to the business processes associated with identity management. These abstractions are modeled after elements that exist in businesses today and include Select Identity Services and Business Relationships.

Credential

A mechanism or device used to verify the authenticity of an identity. For example, a user ID and password, biometrics, and digital certificates are considered credentials.

D

Data File

An SPML file that enables you to define user accounts to be added to Select Identity through Auto Discovery or Reconciliation.

Delegated Administration

The ability to securely assign a subset of administrative roles to one or more users for administrative management and distribution of workload. Select Identity enables role delegation through the Self Service pages from one administrator to another user within the same Service context.

Delegated Registration

Registration performed by an administrator on behalf of an end user.

See also: Self Registration

Е

End User

A role associated to every user in the Select Identity system that enables access to the Self Service pages.

Entitlement

An abstraction of the resource privileges granted to an identity. Entitlements are resource-specific and can be resource account IDs, resource role memberships, resource group memberships, and resource access rights and privileges. Entitlements are also considered privileges, permissions, or access rights.

Expression

A combination of workflow variables and constant values to be evaluated. An expression can be assigned to a new variable or passed to an application as an argument. If you are familiar with a programming language, an expression used in a workflow template is like C or Java expression. Example of expressions can be found in action input parameters, application return values, and transition conditions.

External Call

A programmatic call to a third-party application or system for the purpose of validating accounts or constraining attribute values.

F

Form

An electronic document used to capture information from end users. Forms are used by Select Identity in many business processes for information capture and system operation.

Identity

The set of authentication credentials, profile information, and entitlements for a single user or system entity. Identity is often used as a synonym for "user," although an identity can represent a system and not necessarily a person.

Identity Management

The set of processes and technologies involved in creating, modifying, deleting, organizing, and auditing identities.

Instance

See: Workflow Instance

Μ

Management

The ongoing maintenance of an object or set of objects, including creating, modifying, deleting, organizing, auditing, and reporting.

Ν

Notifications

The capability that enables you to create and manage templates that define the messages that are sent when a system event occurs.

Password Reset

The ability to set a password to a system-generated value. Select Identity uses a challenge and response method to authenticate the user and then allow the user to reset or change a password.

Persistent Variable

A variable that is persisted after an instance is passivated. To extend the variable life cycle to the entire instance, you must create the variable to be persistent. This enables the variable to be created before a wait activity, and it will be accessible after the workflow instance resumes. To make a variable persistent, precede the name with \$. For example, the \$retryCount variable is persistent while retryCount is not.

See also: Workflow Variable

Policy

A set of regulations set by an organization to assist in managing some aspect of its business. For example, policy may determine the type of internal and external information resources that employees can access.

Process

A repeatable procedure used to perform a set of tasks or achieve some objective. Whether manual or automated, all processes require input and generate output. A process can be as simple as a single task or as complicated a multi-step, conditional procedure.

See also: Approval Process

Profile

Descriptive attributes associated with an identity, such as name, address, title, company, or cost center.

Property

See:Workflow Property

Ρ

Provisioning

The process of assigning authentication credentials to identities.

R

Reconciliation

The process by which Select Identity accounts are synchronized with a system resource. Accounts can be added to the Select Identity system through the use of an SPML data file.

Registration

The process of requesting access to one or more resources. Registration is generally performed by an end user seeking resource access, or by an administrator registering a user on a user's behalf.

See also: Delegated Registration, Self Registration

Request

An event within the Select Identity system for the addition, modification, or removal of a user account. Requests are monitored through the Request Status capability.

Resource

Any single application or information repository. Resources typically include applications, directories, and databases that store identity information.

Role

A simple abstraction that associates entitlements with identities. A role is an aggregation of entitlements and users, typically organized by job function.

See also: Admin Role

Rule

A programmatic control over system behavior. Rules in Select Identity are typically used for programmatic assignment of Services. Rules can also be used to detect changes in system resources.

S

Self Registration

Registration performed by an end user seeking access to one or more resources.

See also: Delegated Registration

Self Service

The ability to securely allow end users to manage aspects of a system on their own behalf. Select Identity provides the following self-service capabilities: registration, profile management, and password management (including password change, reset, and synchronization).

Service

A business-centric abstraction representing resources, entitlements, and other identity-related entities. Services represent the products and services that you offer to customers and partners.

Service Attribute

A set of attributes and values that are available for or required by a Service. Attributes are created and managed through the Attributes pages.

See also: Attribute

Service View

A restricted view of a Service that is valid for a group of users. Views enable you to define a subset of Service registration fields, change field names, reorder fields, and mask field values for specific users.

Single Sign-On (SSO)

A session/authentication process that permits a user to enter one set of credentials (name and password) in order to access multiple applications. A Web SSO is a specialized SSO system for web applications.

SPML Data File

See: Data File

Т

Template

See: Workflow Template

Transition

The definition of a relationship between activities. You can define that one activity always follows another, or you can define a condition that must be met before the workflow transitions from an activity to one or more others. For example, you can define a transition that only allows the workflow to progress if at least two administrators approve a request. If the request is not approved, the workflow can transition to an activity that sends email notification to an administrator.

U

Users

The Select Identity capability that provides consistent account creation and management across Services.

V

Variable

See: Workflow Variable

Variable Expression

See: Expression

W

Workflow Engine

A system component that executes workflows and advances them through their flow steps.

Workflow Instance

An invocation of a workflow template. An instance starts when it is created and ends when it completes (when the last activity is executed). An instance's status and other associated information can be viewed once an instance is created.

Workflow Process

The tasks, procedural steps, organizations or people involved, and required input and output information needed for each step in a business process. In identity management, the most common workflows are for provisioning and approval processes.

Workflow Property

A name-value pair, where the value is a text string. A property stores static data that cannot be changed at runtime. It can be accessed by the workflow API and report template. There are three levels of properties: global, block, and activity.

Workflow Studio

The Select Identity capability that enables you to create and manage workflow templates.

Workflow Template

A model of the provisioning process that enables Select Identity to automate the actions that approvers and systems management software must perform.

Workflow Variable

A name-value pair that can be created or changed at runtime in a workflow instance through actions, a workflow API call, or returned by an application invocation. It can be accessed by workflow API, workflow template, and report template. There are levels of variables: global, block, and activity.

See also: Persistent Variable

index

A

account reconciliation, 139 actions. 102 administrative roles, 101 adding a role, 107 capabilities and actions, 102 deleting a role, 109 list of interface actions, 102 modifying a role, 108 tasks overview, 24 viewing a role, 108 approvals, 133 approve or reject account requests, 133 approver role, 106 architecture diagram, 14 attributes, 20, 46 adding and mapping, 54 deleting, 59 facilitating user searches, 49 mapping file, 20, 46 modifying, 59 passwords, 48 password synchronization, 48 precedence in business relationships, 83 viewing, 58 audit reports, 151

authoritative sources, 37 auto discovery, 110 scheduling a job, 116 scheduling service assignments, 119 tasks overview, 24 viewing job status, 118 viewing service assignment status, 120

В

business relationships, 23, 82, 93 creating, 94 deleting, 97 hierarchy, 82 modifying, 96

С

capabilities, 102 challenge/response questions, 79 challenge response, 22 configuration reports, 154 configurations, 158 exporting, 158 importing, 160 tasks overview, 26 connectors, 31 connector API, 19, 32 creating, 32 deleting, 35 deploying, 33 modifying, 34 one-way communication, 31 tasks overview, 19 two-way communication, 31 viewing, 34 context, 23, 83, 93 creating, 97 deleting, 100 modifying, 99 context engine, 14

D

deployment example order, 27 tasks, 18 documentation, 16

E

end user role, 106 event reference, workflow-related events, 181 external calls, 60 deleting, 65 deploying, 62 modifying, 64 tasks overview, 20 types, 63 viewing, 64

interface actions, 102

J

J2EE Connector Architecture, 32

L

login default URL, 28

Μ

mapping file, 20, 46

Ν

notification policy users, 69 viewing a policy, 75 notifications, 69 copying a policy, 74 deleting a policy, 74 predefined variables, 70 tasks overview, 21 viewing a policy, 75

0

online help, 16

Ρ

password attributes, 48 passwords creating attributes, 55 managing multiple passwords, 48 predefined variables, 70

R

reconciliation. 139 adding new job, 142 creating a one-time job, 145 deleting an automated job, 144 modifying an automated job, 144 tasks overview, 26 viewing an automated job, 143 viewing job status, 146 with authoritative sources, 141 with non-authoritative sources, 142 reporting tasks overview, 26 reports, 151 saving report configuration, 156 request ID number, 137 request status, 136 tasks overview, 25 resources, 36 attribute mapping file, 42 deleting, 43 deploying, 38 modifying, 41 tasks overview, 19 viewing, 43 viewing attributes, 44 rules, 66 adding, 67 creating rules, 172 deleting, 68 DTD overview, 173 modifying, 67 tasks overview, 21

S

search facility, 49 searching for users, 49

viewing, 68

Select Identity default roles, 105 logging in to, 27 Select Identity features, 13 Select Identity ID example, 37 self service. 148 changing passwords and hints, 148 delegating roles, 150 tasks overview, 27 service attributes, 91 setting attribute properties, 92 setting attribute values, 91 service management modifying a service, 87 services, 81 deleting, 88 deploying, 86 tasks overview, 22 service views, 88 creating, 88 deleting, 90 modifying, 90 system administrator role, 106 system architecture, 14

U

users, 121 adding a service to an account, 126 adding a user, 122 deleting a service membership, 129 enabling or disabling all services for an account, 127 enabling or disabling service membership, 127 managing user expiration, 131 modifying a user, 125 resetting a password, 129 tasks overview, 25 terminating an account, 130 viewing account attributes, 131 viewing service membership, 128

W

workflow approval, 133 workflow studio, 22, 76 overview, 77 workflow templates integration with Select Identity, 77 overview, 77

Х

XML attribute mapping example, 46