HP Select Identity Software

Connector for IBM Lotus Notes/Domino UCA

Connector Version: 1.00

Installation and Configuration Guide

Document Release Date: September 2007
Software Release Date: September 2007

Legal Notices

Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Copyright Notices

Trademark Notices

Java™ is a US trademark of Sun Microsystems, Inc.

Microsoft and Windows® are U.S. registered trademarks of Microsoft Corporation.

Oracle® is a registered US trademark of Oracle Corporation, Redwood City, California.

Support

You can visit the HP software support web site at:

www.hp.com/go/hpsoftwaresupport

HP Software online support provides an efficient way to access interactive technical support tools. As a valued support customer, you can benefit by using the support site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract.

To find more information about access levels and HP Passport, go to:

http://h20230.www2.hp.com/new_access_levels.jsp

Contents

1 Documentation Map 7

2 Introduction 9

About this Guide 9

About HP Select Identity 9

About Connectors 10

Features and Capabilities 10

Deploying a Connector 11

Unified Connector Architecture 11

About the Domino UCA Connector 12

Overview of Installation Tasks 15

3 Extracting the Contents of the Schema File 17

4 Installing the Domino UCA Connector 19

System Requirements 20

Extracting Contents of the Schema File 20

Installing the Connector RAR 20

5 Installing the Domino UCA Agent 21

Set Up the Keystore and Truststore 21

Install the Domino UCA Agent 23

Install the Domino UCA Agent Manually 28

Start the Domino UCA Agent 30

Set up the Domino UCA Connector to Work with Select Identity 30

6 Deploying the Domino UCA Connector on the Application Server 33

WebLogic/WebSphere 33

7 Configuring the Domino UCA Connector with Select Identity 35

Configuration Procedure 35

Add a New Connector 36

Add a Resource 37

Add Basic Information 37

Create a Mutual Authentication Policy 39

Set up Resource Access Information 41

Map Resource Attributes 43

Define a Caching Policy 50

Configuring Domino UCA Connector on Non-English Platforms 51

8 Uninstalling the Domino UCA Connector 53

Deleting the Connector from Select Identity 53

Deleting the Connector from WebLogic 54

Deleting the Connector from WebSphere 54

Uninstalling the Domino UCA Agent 54

A Group Availability Checking Functionality to Accommodate Domino Users. 55

1 Documentation Map

This chapter describes the organization of the HP Select Identity connector documentation and provides necessary information on how to use the documentation set to install and configure the connectors.

Figure 1 illustrates the documentation map for HP Select Identity connectors. For a list of available product documentation, refer to Table 1.

Figure 1 Documentation Map

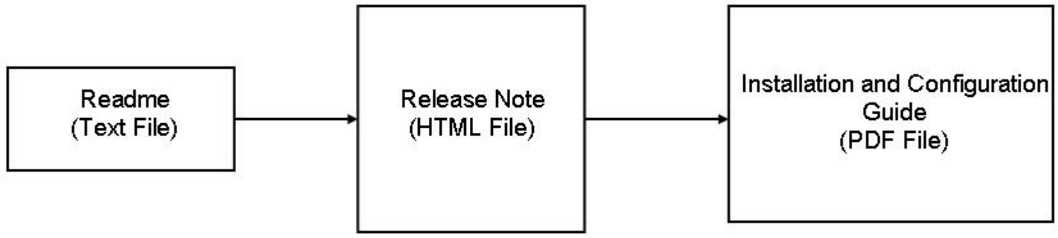


Table 1 Connector Documentation

Document Title and Filename	Contents	Location
Release Note `Domino UCA Connector 1.00 Release Note.htm`	This file contains necessary information on new connector features, enhancements, known problems or limitations, and support information.	`/Docs/` subdirectory under the connector directory
Connector Installation and Configuration Guide `Domino_UCA_guide.pdf`	The connector installation guide provides installation instructions for a specific connector. It contains resource-specific configuration details. The connector installation guide also provides detailed information on: • Deploying a connector on an application server. • Configuring a connector with Select Identity. Refer to this guide when you need information about connector installation.	`/Docs/` subdirectory under the connector directory

2 Introduction

This chapter provides an overview of the HP Select Identity connector for Domino UCA. An HP Select Identity connector for Domino UCA enables you to provision users and manage identities on a Domino application server configured for mutual authentication.

About this Guide

The *Installation and Configuration Guide for the Connector for IBM Lotus Notes/Domino UCA* provides an overview of how to install, configure, and deploy the Domino UCA connector on the Select Identity server.

The instructions explained in this guide are unique for the Domino UCA connector. For additional-connector specific or resource-specific installation information, refer to the specific connector's installation and configuration guide.

About HP Select Identity

The HP Select Identity approach to identity management helps you automate the process of provisioning and managing user accounts and access privileges across platforms, applications, and corporate boundaries. Select Identity communicates with the enterprise information system through connectors, and automates the tasks of identity management. The enterprise information system, which is also referred to as the **resource**, can be a database, a directory service, or an enterprise resource planning (ERP) package, among many others.

Select Identity supports both one-way secure socket layer (SSL) authentication in which only the server is authenticated and two-way (mutual) SSL authentication in which both the server and client are authenticated.

When implementing mutual authentication and using a UCA-based connector, the application server and clients are configured and set up with the appropriate initialized keystores and truststores.

About Connectors

Select Identity connectors are either agent-based or agent-less. Agent-based connectors communicate with an agent module installed on the resource platform to do all forward provisioning. The agent also communicates with Select Identity web service over HTTP with SPML payloads.

You can establish a connection between a resource and Select Identity by using a connector. A connector is a piece of code that resides in the same system as the Select Identity core product in order to communicate with target systems such as a directory server or database. A connector is resource specific. The combination of Select Identity and connector enables you to perform a set of tasks on the resource to manage identity. A connector can be *unidirectional* or *bidirectional*. A unidirectional connector helps you manage identities from Select Identity, but if any change takes place in the resource, the resource cannot communicate that change back to Select Identity. On the other hand, a bidirectional connector can reflect the changes made on the resource back to Select Identity. This property of bidirectional connectors is known as *reverse synchronization*.

Features and Capabilities

A connector enables Select Identity to access a resource to manage users, groups, and entitlements. Select Identity can typically perform the following tasks by using a connector.

- Add, update, and remove users
- Retrieve user attributes
- Enable and disable users
- Verify a user's existence
- Change user passwords
- Reset user passwords

The set of tasks that can be performed by a connector on a resource varies from connector to connector.

A connector usually consists of:

- **RAR** file— this compressed file contains the connector binaries.
- **Schema** file — this contains the mapping file for the connector. A mapping file contains resource attribute information of the connector, which must be linked to Select Identity attributes.

A connector may not contain a schema file. In that case, the mapping file for the connector can be generated by using the Select Identity attribute mapping utility. Refer to *Appendix C: Attribute Mapping* chapter of *HP Select Identity Administration Guide* for information on the attribute mapping utility.

In addition to the above two files, there could be other files packaged with the connector, such as an agent file, a script file, and so on.

Deploying a Connector

To use a connector with Select Identity, you must deploy it on an application server, and then configure it with Select Identity. The RAR file of the connector, which contains the binary files, must be deployed on an application server. You must perform the following tasks to deploy and configure a connector. These tasks are explained throughout this guide.

1. Extracting Contents of the Schema File
2. Installing the Domino UCA Connector
3. Installing the Domino UCA Agent
4. Deploying the Domino UCA Connector on the Application Server
5. Configuring the Domino UCA Connector with Select Identity

Unified Connector Architecture

A connector implemented with Unified Connector Architecture (hereafter referred to as UCA) satisfies the requirements for secure communication between a connector and agent and communication between an agent and Select Identity's web service. To ensure a high level of security, UCA uses client authentication, also referred to as mutual authentication.

Mutual authentication requires each client and server (communication endpoints) to present a valid certificate, issued for the purpose of either a client or the server authentication respectively, that is trusted by the other endpoint and has not yet been revoked.

➤ Mutual authentication does not require the client to use the keystore and truststore. These are Java concepts. However, to set up mutual authentication, it may be necessary to create a keystore and a truststore on both ends before setting up a UCA connector and agent. Refer to the *HP Select Identity Installation Guide*.

UCA provides a generic framework to make connector development consistent and easy, as well as highly secure.

Implementation of UCA:

- Eliminates redundant connector coding efforts
- Simplifies deployment by conforming features and functions across connectors
- Enhances operating security
- Supports pluggability and scalability
- Simplifies administration
- Enables automatic connector updates
- Supports management standards such as WS/MAN

Benefits of UCA are:

- Developer codes the resource-specific portions of a connector; the generic UCA framework handles the common functions such as fail-over, polling, security, and logging.
- Agent-less and agent-based connectors look and behave similarly.
- Supports JCA 1.0 and 1.5.

- Agent-based communication channels and protocols are 'standardized' and 'unified'. This allows loose coupling and simplifies administration and security.
- Live update service enables remote agent-code upgrades.
- All agent configuration occurs centrally.
- Enables uniform/standards-based management and deployment.

➤ Some of the above features may not be available in the current version of this connector.

About the Domino UCA Connector

The connector for IBM Lotus Notes / Domino UCA – hereafter referred to as Domino UCA connector – enables HP Select Identity to manage user data in IBM Lotus Notes/Domino systems. The Domino UCA connector is a one-way connector and pushes changes made to user data in the Select Identity database to the target Domino server. The Domino UCA connector is an agent-based connector that utilizes mutual authentication for enhanced security. Mapping files included with the connector control how Select Identity maps fields within Select Identity to Domino fields.

During mutual authentication, Select Identity can serve as either the client for outbound communication or the server for inbound communication. When a Select Identity connector communicates with a Domino connector agent, the agent is the server and Select Identity and the Domino UCA connector are the client.

When mutual authentication is implemented, you must associate the certificate with the connector if a web service request is made with the connector's identity. Connectors use the certificate to authenticate themselves to Select Identity during a web service call.

➤ This connector can be used with Select Identity version 4.20.

The Domino UCA connector supports provisioning the following for users on the Domino UCA server:

- Access levels
- Entitlements
- Roles
- User groups

The following list describes the operations supported by the Domino UCA connector and how the Domino UCA connector works for each provisioning operation:

- Add a User—
  This functionality adds a Select Identity user on the Domino server. You can set all of the attributes in the Domino server for the user. This is controlled through configuration of the mapping file.

  An ID file is required for the user to log on to the Domino server by using the Notes client. When a Domino administrator creates a user on the Domino Administrator Console, the administrator must manually send the ID file to the user. The Domino UCA connector automates this process.

When the user is created, the ID file is mailed to the user's mailbox (as specified by the default mail account on the Domino server). If an alternative email address is specified for the user (by mapping the `AltEmailAddress` attribute in the mapping file), the ID file is also mailed to that address. If the `AltEmailAddress` value is not provided in the mapping file, the connector searches for the value in the `Properties.ini` file, which is installed with the connector's agent on the Domino server.

Also, when creating users in Select Identity that will be provisioned on a Domino server, follow the guidelines given below:

— When creating a user, specify only one access level because the Domino server allows only one ACCESS LEVEL to be specified for a user at a time.

— ENTITLEMENT, ROLE, and Group are multi-value components of the entitlement (for example, a user can belong to zero or more of these attributes). Therefore, you can select any combination of these components when creating the user.

— You must assign an ACCESS LEVEL before assigning an ENTITLEMENT or ROLE.

You can use the connector to add both a Notes user or a non-Notes user (a Domino user without Notes privilege and id file).

- Modify a User—
  The connector can modify all the attributes on the Domino server except UserID and Password attributes.

  Also, when changing user entitlements in Select Identity for users who are provisioned in Domino, make sure you select only one ACCESS LEVEL. (You may want to remove the ACCESS LEVEL previously selected before adding a new one.)

- Delete a User—
  This feature deletes a user on the Domino server.

- Disable Service Membership—
  This removes all entitlements assigned to a user by the Select Identity service on the Domino server.

- Enable Service Membership—
  This restores all entitlements removed by the Disable Service Membership functionality.

- Delete Service Membership—
  This removes a user from the Domino server.

- Disable All Services—
  This functionality disables the user in all Select Identity services to which he or she is provisioned. This prevents the user from logging on to the Domino server.

- Enable All Services—
  This restores and enables the user for all Services disabled by Disable All Service. On the Domino server, the user can log on to the system once the action completes.

- Reset Password—
  The Domino UCA connector can manage HTTP passwords only. The changes to the user's HTTP password are synchronized with Select Identity. This function resets a user's HTTP password, and the user must specify this new password when using the Notes Web Interface.

  The connector cannot change the Notes client password. The Notes client uses ID files, which are provided by the administrator, that have different passwords. Users can log on to their mailboxes by using their old passwords. However, you can prevent this by setting the `Check passwords on Notes IDs` property to **`YES`** in the server security settings.

To enable password verification for Notes users, you must enable password verification for users and servers:

a Make sure that the administration process is set up on the server and you have at least Author access and the User Modifier role in the Domino Directory.

b From the Domino Administrator, click the **People & Groups** tab using a network connection to the Domino Directory.

c Select each Person document for which you want to enable password checking.

d Choose **Actions - Set Password Fields**, and then click **Yes** to continue.

e Select **Check password**.

f Complete these fields, and then click **OK**:

Field	**Enter**
Required change Interval	Number of days during which users must provide a new password. The default is 0, which does not require users to change their passwords and ignores any entry in the Grace period field.
Grace period	Number of days after a required change interval that users have to change their passwords. The default is 0, which allows users an unlimited amount of time to change their passwords after the change interval expires. A value between 3 and 7 days is recommended.

Perform the following instructions to enable password verification on each server with which these users authenticate:

a Click the **Configuration** tab and open each Server document.

b Click the **Security** tab.

c In the Check passwords on Notes IDs field, select **Enabled**.

To disable password verification for an individual user, perform the following steps. When you disable password verification for a user, Domino does not check passwords for the user even if password verification is enabled for the server.

a From the Domino Administrator, click the **People & Groups** tab using a network connection to the Domino Directory.

b Select each Person document for which you want to disable password verification.

c Choose **Actions - Set Password Fields**, and then click **Yes** to continue.

d Select **Don't check password**, and then click **OK**.

To disable password verification for a server, perform these steps. When you disable password verification for a server, Domino does not check passwords for any users who access the server, even if the user has password verification enabled.

a From the Domino Administrator, click the **Configuration** tab and open the Server document.

b Click the **Security** tab.

c In the Check passwords on Notes IDs field, select **Disabled**.

The following list describes some additional features of the Domino UCA connector:

- The Domino connector supports creation of non-Notes user.
- The Domino connector provides the option of specifying the value of the certifier ID file name and the certifier password as part of resource creation or as user attributes. This enables the use of multiple certifier ID files to create users.
- The Domino connector exposes a function called `Process()`, which could be invoked from a workflow external call. This function checks if a given group can accommodate more users. If the group is full, the `Process()` function creates a new group and returns the newly created group name. Refer to Appendix A for more details on this functionality.

Overview of Installation Tasks

Before you start installing the connector, you must ensure that system requirements and all the installation prerequisites are met. Table 2 provides an overview of installation tasks.

Table 2 Organization of Tasks

Task Number	Task Name	Reference
1	Install Select Identity (if not already installed)	See the *HP Select Identity Installation Guide*.
2	Install the Domino UCA connector agent. Includes: • Editing the property files to point to the new keystore and truststore. • Modifying the server.xml file to point to the new server keystore and truststore.	See Installing the Domino UCA Agent on page 21.
3	Install the Domino UCA connector on the Select Identity server.	See Installing the Domino UCA Connector on page 19.
	• Meet the system requirements for the connector.	See System Requirements on page 20.
	• Extract the contents of the Schema file (the file that contains the mapping files for the connector) to the location on the Select Identity server.	See Extracting Contents of the Schema File on page 20.

Table 2 Organization of Tasks

Task Number	Task Name	Reference
4	Set up the keystore and truststore if not already set up. • Create keys. • Copy the files to the Select Identity server and the Domino connector agent directory.	See Setting up the Keystores and Truststores, and refer to the *HP Select Identity Installation Guide*.
5	Configure the connector in the Select Identity application.	See Configuring the Domino UCA Connector with Select Identity on page 35.
6	Deploy the resource and create the service in the Select Identity application.	See Configuring the Domino UCA Connector with Select Identity on page 35.

3 Extracting the Contents of the Schema File

Most of the connectors contain at least one schema file. This file contains the mapping information of the connector. Some of the connectors do not have a schema file packaged with them, and the mapping files are generated with the help of the Select Identity attribute mapping utility. If the connector that you are deploying does not contain a schema file packaged with it, skip to the next chapter.

You must extract contents of the schema file to a location on the Select Identity server. Perform one of the procedures explained below depending on the application server on which the connector will be deployed.

WebLogic

1 Create a subdirectory in the Select Identity home directory where you can store the connector mapping files.

  For example, you can create `<SI_HOME_DIR>/Schema` where

  `<SI_HOME_DIR> = /opt/si420/weblogic/` for Select Identity installed on UNIX and `<SI_HOME_DIR> = C:\si420\weblogic\` for Select Identity installed on Windows.

2 Extract contents of the schema JAR file, `dominoSchema.jar,` to the `Schema` directory. Some connectors may contain more than one schema file. Refer to the connector's installation and configuration guide to find out the right schema file to be used.

3 To ensure that the `CLASSPATH` environment variable in the WebLogic startup script references the `Schema` directory created above, perform the following steps:

  a Open the `myStartWL.cmd/.sh` file from the location `<SI_HOME_DIR>/weblogic/scripts` with a text editor.

  b Add the directory path of the `Schema` directory to the `CLASSPATH` variable in the script.

  If you install more than one connector, you can extract the schema file of all the connectors to the same location.

WebSphere

On WebSphere, `<WebSphere_Install_Directory>/AppServer/lib/ext` folder is present in `WAS CLASSPATH` by default. Extract contents of the schema file to the location `<WebSphere_Install_Directory>/AppServer/lib/ext`.

4 Installing the Domino UCA Connector

The Domino UCA connector is packaged in the following files, which are located in the UCADomino directory of the Select Identity Connector CD.

Table 3 Domino UCA Connector Files

Number	File Name	Description
1	UCADominoConnector_420.rar	Contains the WebSphere binaries for the connector
	UCADominoConnector_420WL9.rar	Contains the WebLogic v9.2 binaries for the connector
2	Dominoschema.jar	Contains the following mapping files for WebSphere: • dominouser.properties — maps the Select Identity user attributes to those on the Domino server. • dominogroup.properties — maps the Select Identity group attributes to those on the Domino server; note that group provisioning is not currently supported, though this file must be extracted during installation. • domino.xsl — maps attributes on the Domino server to attributes on the Select Identity server. This file is used by the agent during reverse synchronization. **Note:** The domino.xsl file is not currently used as the current version of the connector doesn't support reverse synchronization

System Requirements

The Domino UCA connector is supported in the following environments:

Table 4 Platform Matrix for Domino UCA connector

Select Identity Version	Application Server	Database
4.20	WebLogic 9.2 on Windows 2003	Microsoft SQL Server 2000
	WebSphere 6.1 on HP-UX 11i	Oracle 9i

The Domino 6.5.4. connector and agent are supported by the following operating systems:

- Windows 2000
- Windows 2003
- Windows XP

The agent must be installed on the system where the Domino server is running.

➤ The Domino UCA connector and agent work *only* with Select Identity version 4.20.

The Domino connector is internationalized and able to operate with languages that are supported by the Java Unicode specification. If you wish to use the connector on non-English platforms, make sure that the following prerequisites are met:

- The Select Identity server should be configured for internationalization. Refer to the *HP Select Identity Installation Guide* for details.
- The resource must be configured to support local language characters.

Extracting Contents of the Schema File

The schema file of the connector contains necessary mapping information to map resource attributes to Select Identity. Extract contents of the `Dominoschema.jar` file to a directory that is in the application server `CLASSPATH`.

Installing the Connector RAR

To install the connector RAR file (`UCADominoConnector_420.rar` or `UCADominoConnector_420WL9.rar`) on the Select Identity server, you must copy the file to a local subdirectory on the Select Identity server, and then deploy on the application server.

When deploying the RAR on WebSphere, enter the JNDI Pool Name as **`eis/UCADominoConnector`**.

5 Installing the Domino UCA Agent

The Domino connector is an agent-based connector. The Domino UCA agent is a suite of services and support files deployed on the resource.

➤ You must install the Domino UCA agent on the system where the Domino server is running. In the resource system, you must set the `JAVA_HOME` environment variable to the <*Java Home*> location. For example, if Java is installed at `C:\JRE`, set `JAVA_HOME = C:\JRE`.

Also, you must have `notes.jar` in your `CLASSPATH` and the Domino install directory in `CLASSPATH` and `PATH`.

For example, if the Domino server is installed on `C:\Lotus` and `notes.jar` file is in `C:\Lotus\Domino`, the `CLASSPATH` variable must include the following:

```
C:\Lotus\Domino\notes.jar; C:\Lotus\Domino
```

and the `PATH` variable must include the following:

```
C:\Lotus\Domino
```

Perform the following tasks to complete the installation process:

1. Set Up the Keystore and Truststore — Perform this task to create the keystore and truststore that you will need when you install the Domino UCA agent.
2. Install the Domino UCA Agent — Perform this task to install the Domino UCA agent by using the installation wizard.
3. Start the Domino UCA Agent — Perform this task to start the Domino UCA agent on Windows and Solaris

Set Up the Keystore and Truststore

This keystore is used to store the mutual authentication key pair. You register this keystore in Select Identity using the Security Set Up feature. Refer to the *HP Select Identity Administration Online Help*.

The Domino UCA connector supports mutual authentication and requires a mutual authentication key pair to be stored in the keystore. During installation of the Domino UCA Agent, you are prompted for the name and location of your keystore and truststore where these key pairs are stored.

➤ It is not necessary to create a new keystore and truststore specifically for use with this connector. The Domino UCA connector and agent can work with any keystore and truststore that you already have, as long as you add the mutual authentication key pair as required.

If the keystore and truststore have not been previously created, create the keystore and truststore before installing the agent.

To create a mutual authentication keystore for use in Select Identity 4.20, perform the following steps:

1. Run the keytool utility to create a keystore and a key pair.

   ➤ When you create a key pair, a keystore is automatically created during this process.

2. Generate a certificate request file, as shown in this command line example which creates an X.509 certificate request file at `./req/myReq.csr` for a certificate at `myKeyAlias` in the keystore:

   ```
   keytool -certreq -keyalg RSA -alias myKeyAlias -file ./req/myReq.csr
   -keystore ./ks/myKeystore -storetype JKS
   ```

3. Send the new request file to your certificate authority for digital signing.

4. Import the signed certificate back to the keystore from which you generated the certificate request. The following command line example imports the signed certificate file: `./signed/signedCert.pem` to `ks/myKeystore` at the key alias named `myKeyAlias`:

   ```
   keytool -import -trustcacerts -alias myKeyAlias -file ./signed/
   signedCert.pem -keystore ./ks/myKeystore -storetype JKS
   ```

5. Import the signed certificate to the appropriate truststore. The following command line example imports the signed certificate file `./signed/signedCert.pem` to `ks/mytruststore` at the key alias named `myKeyAlias`:

   ```
   keytool -import -trustcacerts -alias myKeyAlias -file ./signed/
   signedCert.pem -keystore ./ks/mytruststore -storetype JKS
   ```

6. Generate the property files for the keystore and/or truststore by executing either `genprop.sh` (Linux) or `genprop.bat` (Windows).

   When prompted to specify the file type to generate, select the appropriate option:

   - For keystores, select option **2:OVSI secure object migration keystore**
   - For truststores, select option **3:OVSI truststore**

Install the Domino UCA Agent

Complete the following steps to run the installation wizard, which installs the agent. You can also install the agent as a console application or as a service.

Before running the installation wizard, ensure that the `log4j-1.2.8.jar` file resides in the *`JREDIR`*`\lib\ext` directory, where *JREDIR* is the Java Runtime Environment (JRE) that will be used by the wizard.

For example, if the JRE resides in

`C:\Program Files\Java\j2re1.5.0_12`,

verify that the

`log4j-1.2.8.jar` file

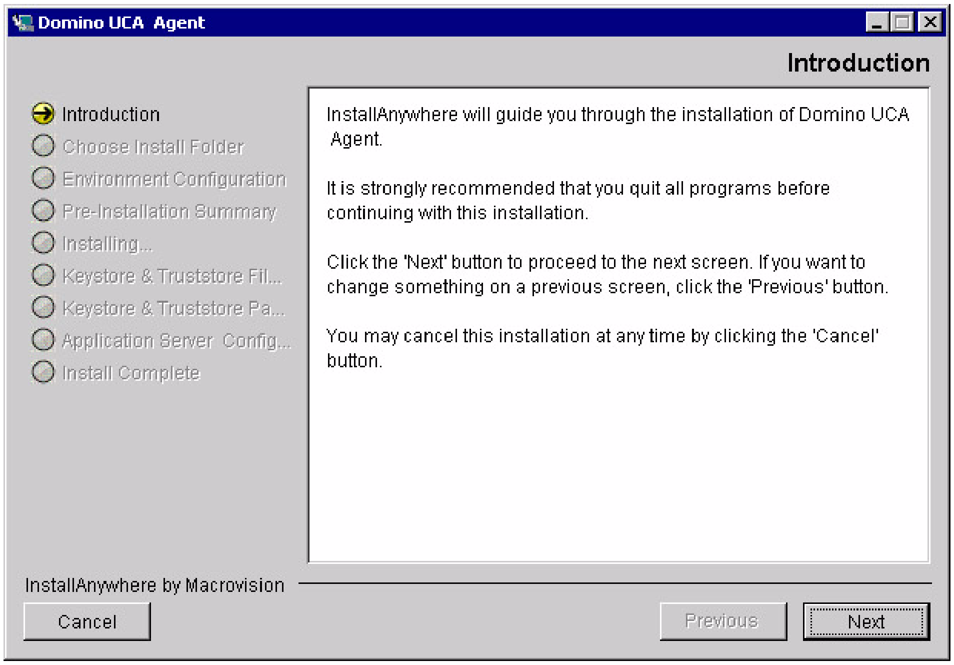
resides in

`C:\Program Files\Java\j2re1.5.0_12\lib\ext`.

Also, ensure that this JRE is included in the `path` system variable.

Note: JRE 1.5 is required.

1 Run the installation wizard (`install.exe`). The Introduction page opens:


Domino UCA Agent
Introduction
Introduction
Choose Install Folder
Environment Configuration
Pre-Installation Summary
Installing...
Keystore & Truststore Fil...
Keystore & Truststore Pa...
Application Server Config...
Install Complete
InstallAnywhere by Macrovision
Cancel
Previous
Next

InstallAnywhere will guide you through the installation of Domino UCA Agent.

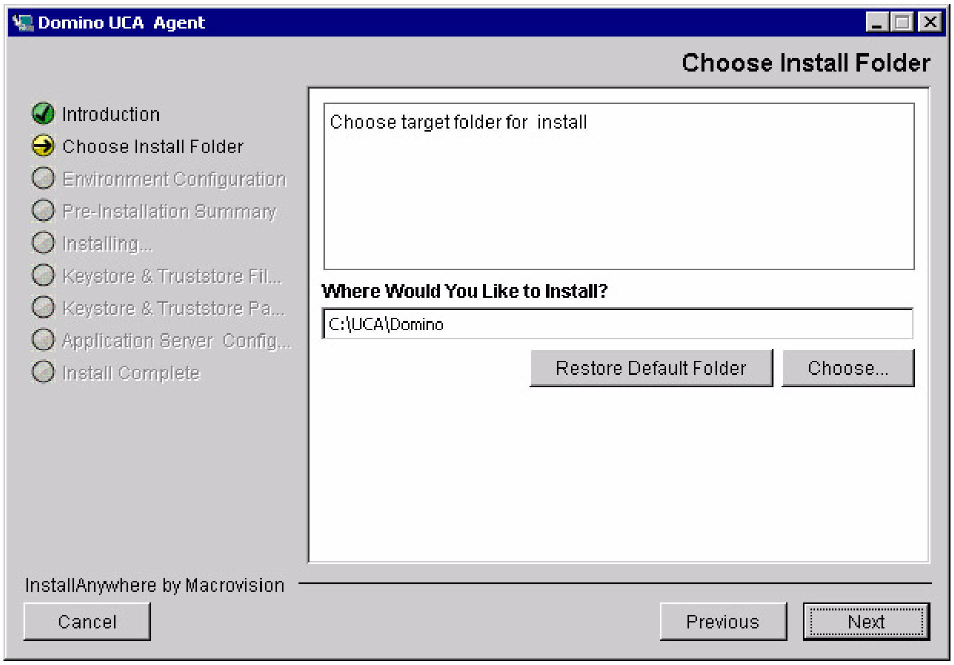
It is strongly recommended that you quit all programs before continuing with this installation.

Click the 'Next' button to proceed to the next screen. If you want to change something on a previous screen, click the 'Previous' button.

You may cancel this installation at any time by clicking the 'Cancel' button.

2 Click **Next** to proceed.

The Choose Install page opens.



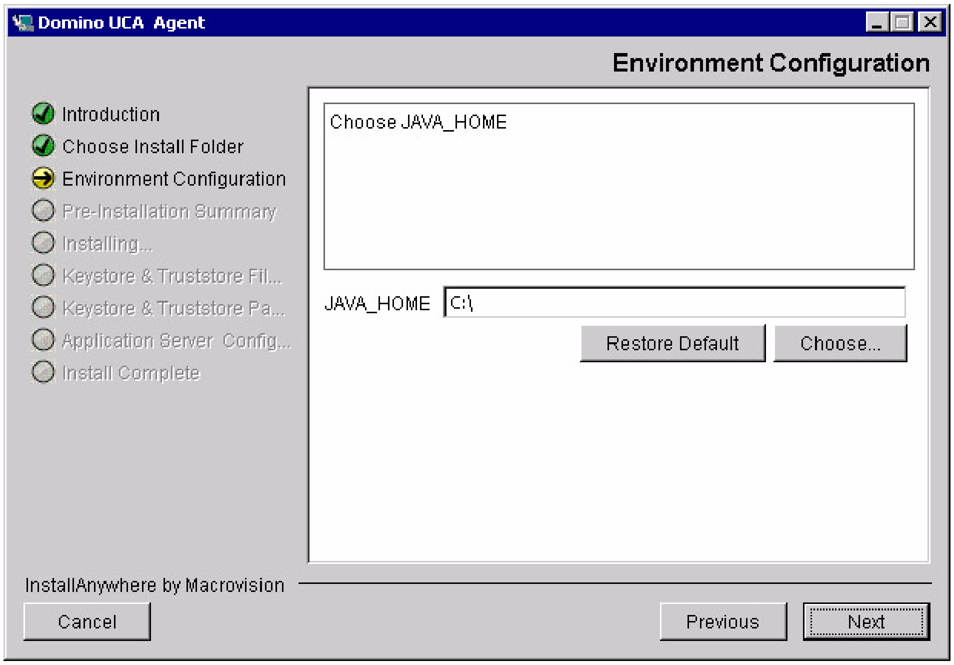
Choose target folder for install

Where Would You Like to Install?

C:\UCA\Domino

3 Enter your install path or click **Choose** and select a directory location from the list. Click **Next**.

The Environment Configuration page opens.

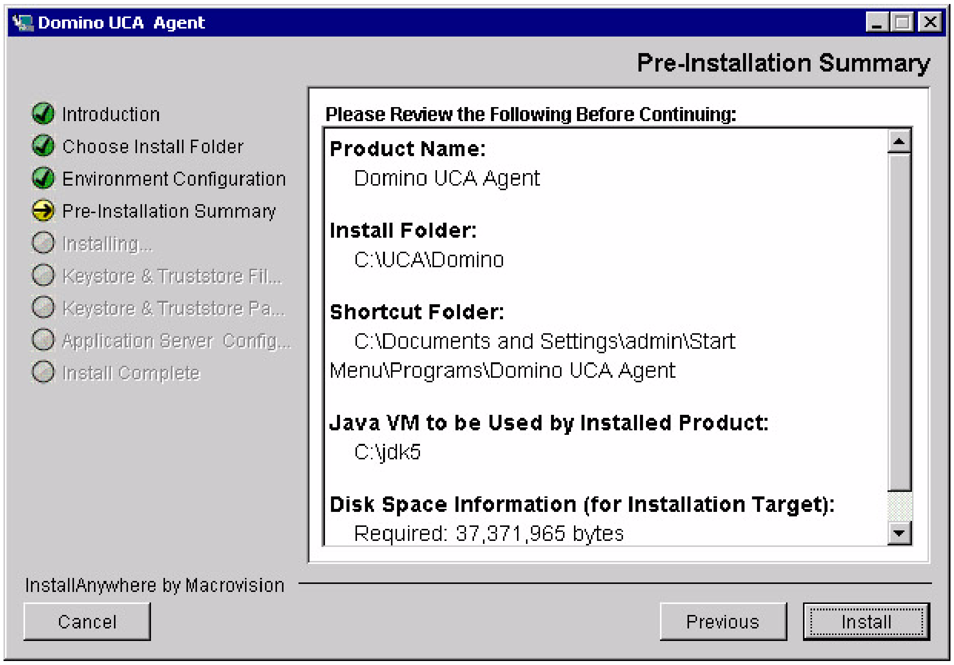

Domino UCA Agent
Environment Configuration
Introduction
Choose Install Folder
Environment Configuration
Pre-Installation Summary
Installing...
Keystore & Truststore Fil...
Keystore & Truststore Pa...
Application Server Config...
Install Complete
Restore Default
Choose...
InstallAnywhere by Macrovision
Cancel
Previous
Next

Choose JAVA_HOME

JAVA_HOME C:\

4 Select the directory location for **JAVA_HOME** and click **Next**.

The Pre-Installation Summary page opens.


Domino UCA Agent
Introduction
Choose Install Folder
Environment Configuration
Pre-Installation Summary
Installing...
Keystore & Truststore Fil...
Keystore & Truststore Pa...
Application Server Config...
Install Complete
InstallAnywhere by Macrovision
Cancel
Previous
Install

Pre-Installation Summary

Please Review the Following Before Continuing:

Product Name:
Domino UCA Agent

Install Folder:
C:\UCA\Domino

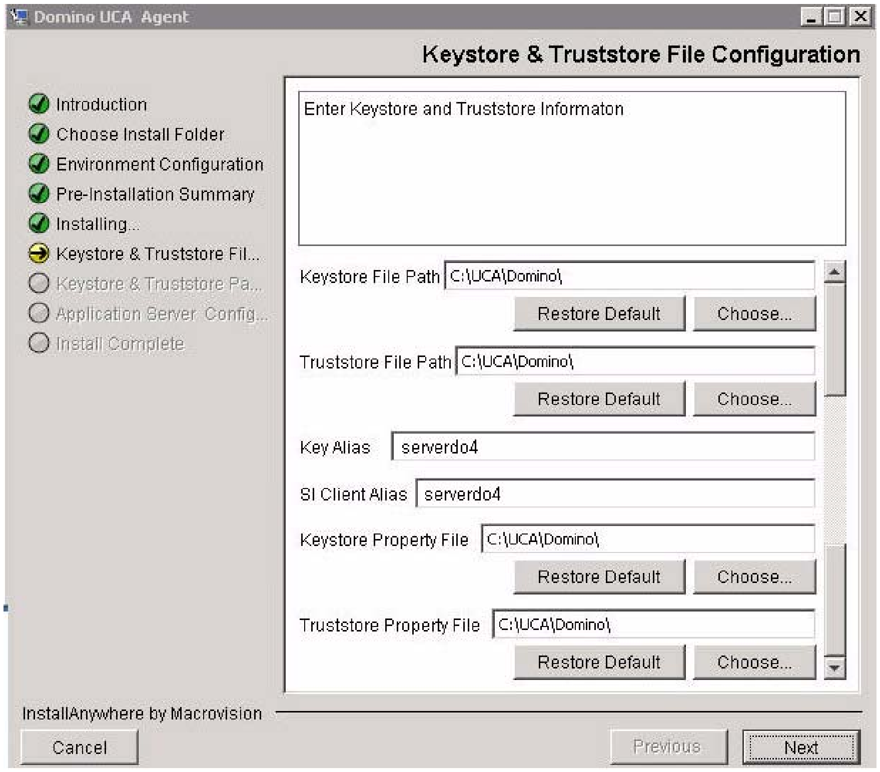
Shortcut Folder:
C:\Documents and Settings\admin\Start Menu\Programs\Domino UCA Agent

Java VM to be Used by Installed Product:
C:\jdk5

Disk Space Information (for Installation Target):
Required: 37,371,965 bytes

5 Click **Install** to start the installation.

The Keystore & Truststore File Configuration page opens.



Keystore & Truststore File Configuration

Enter Keystore and Truststore Informaton

Keystore File Path C:\UCA\Domino\

Truststore File Path C:\UCA\Domino\

Key Alias serverdo4

SI Client Alias serverdo4

Keystore Property File C:\UCA\Domino\

Truststore Property File C:\UCA\Domino\

6 In the **Keystore File Path** field, enter the keystore file name and path or click **Choose** to select the path from the directory list.

7 In the **Truststore File Path** field, enter the truststore file name and path or click **Choose** to select the path from the directory list.

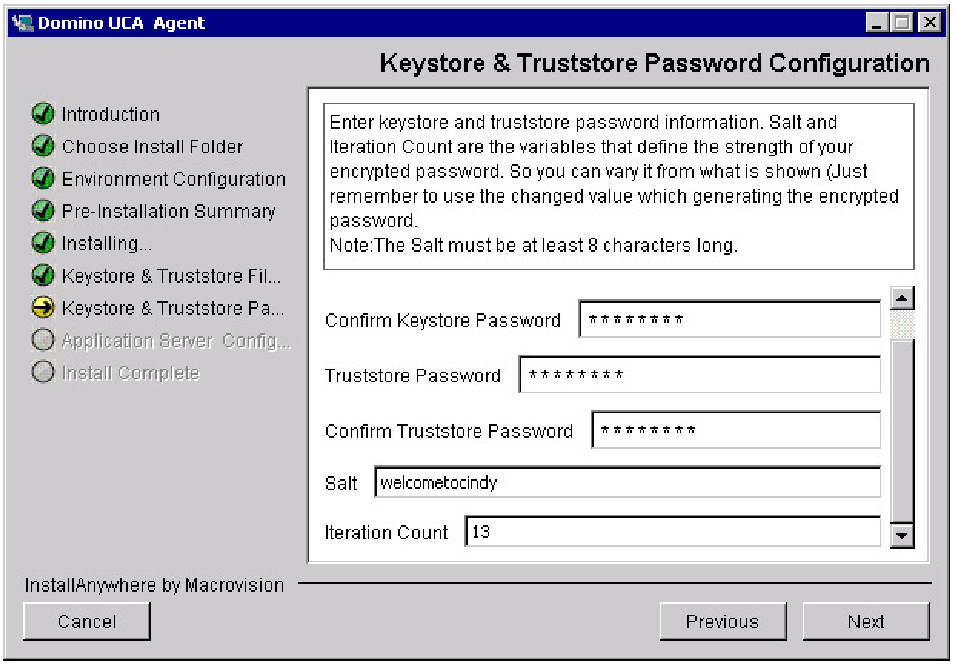
8 In the **Key Alias** field, enter the key alias name.

9 In the **SI Client Alias** field, enter the SI Client Alias name.

10 In the **Keystore Property File** field, enter the keystore property file name and location or click **Choose** and select a directory location from the list.

11 In the **Truststore Property File** field, enter the truststore property file name and location or click **Choose** and select a directory location from the list.

12 Click **Next**. The Keystore & Truststore Password Configuration page opens.



Domino UCA Agent

Keystore & Truststore Password Configuration

- ✓ Introduction
- ✓ Choose Install Folder
- ✓ Environment Configuration
- ✓ Pre-Installation Summary
- ✓ Installing...
- ✓ Keystore & Truststore Fil...
- ➔ Keystore & Truststore Pa...
- ○ Application Server Config...
- ○ Install Complete

Enter keystore and truststore password information. Salt and Iteration Count are the variables that define the strength of your encrypted password. So you can vary it from what is shown (Just remember to use the changed value which generating the encrypted password.
Note:The Salt must be at least 8 characters long.

Confirm Keystore Password: ********

Truststore Password: ********

Confirm Truststore Password: ********

Salt: welcometocindy

Iteration Count: 13

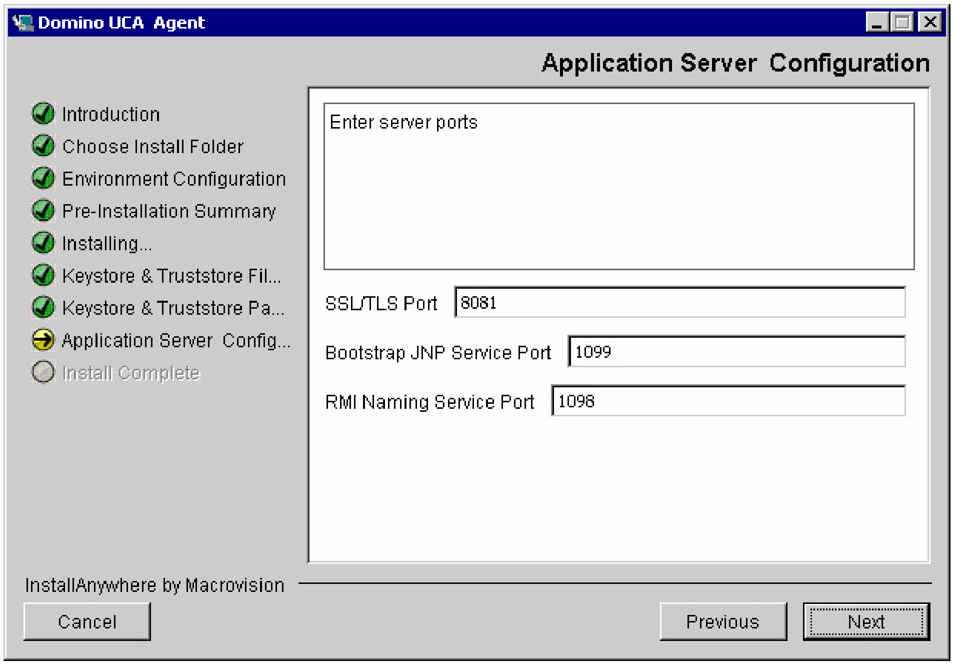
13 Enter the keystore and truststore passwords.

➤ The keystore and truststore passwords are those that you created before beginning this installation procedure.

14 In the **Salt** field, enter the Salt value for encryption. Salt must be at least 8 characters long.

15 Scroll down to view the **Iteration Count** field, and enter the iteration count.

16 Click **Next**. The Application Server Configuration page opens.


Domino UCA Agent
Application Server Configuration
Introduction
Choose Install Folder
Environment Configuration
Pre-Installation Summary
Installing...
Keystore & Truststore Fil...
Keystore & Truststore Pa...
Application Server Config...
Install Complete
InstallAnywhere by Macrovision
Cancel
Previous
Next

Enter server ports

SSL/TLS Port: 8081

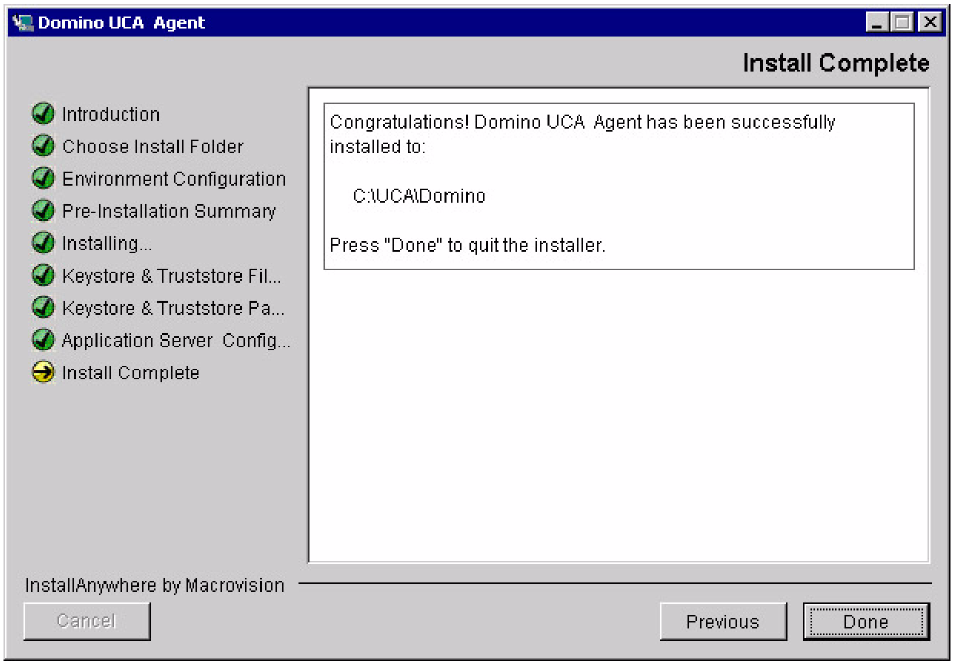
Bootstrap JNP Service Port: 1099

RMI Naming Service Port: 1098

17 Use the default server ports, or enter your server ports, if provided.

> The SSL/TLS port is the port used on the Select Identity server side to communicate with the agent.

18 Click **Next**. The Install Complete page opens.


Domino UCA Agent
Install Complete
Introduction
Choose Install Folder
Environment Configuration
Pre-Installation Summary
Installing...
Keystore & Truststore Fil...
Keystore & Truststore Pa...
Application Server Config...
Install Complete
InstallAnywhere by Macrovision
Cancel
Previous
Done

Congratulations! Domino UCA Agent has been successfully installed to:

C:\UCA\Domino

Press "Done" to quit the installer.

19 Click **Done** to exit the install wizard.

Install the Domino UCA Agent Manually

It may be necessary to make changes to the UCA Agent configuration after installation. Use the manual procedure described below to implement changes. The following procedure explains how to install the Domino UCA Agent manually.

The following files are created or modified:

${**Install directory**}\server\minimal\deploy\jbossweb-tomcat55.sar\server.xml

${**Install directory**}\server\minimal\deploy\security-service.xml (new file)

${**Install directory**}\server\minimal\deploy\jbossweb-tomcat55.sar \META-INF\
jboss-service.xml

To manually configure the Domino UCA agent or make changes to the existing configuration, complete the following steps as appropriate:

1 Edit the connector configuration in `server.xml` as follows:

   a Remove the following attributes:

   - `keystoreFile`
   - `keystorePass`
   - `truststoreFile`
   - `truststorePass`

   b Add the following attributes:

   - `securityDomain`
   - `SSLImplementation`

   Your script should look like the following example:

```
<Connector port="8081" address="${jboss.bind.address}"
  maxThreads="100" strategy="ms" maxHttpHeaderSize="8192"
  emptySessionPath="true"
  scheme="https"
  secure="true"
  clientAuth="want"
  keyAlias="server"
  sslProtocol = "TLS"
  securityDomain="java:/jaas/encrypt-keystore-password"
  SSLImplementation="org.jboss.net.ssl.JBossImplementation" />
```

➤ The port is the SSL/TLS port.

2 Create a new file named `security-service.xml` in the following directory:

${**Install directory**}\server\minimal\deploy

This file should contain the following code:

```
<server>
 <!-- ============================================================== -->
 <!-- Security                                                       -->
 <!-- ============================================================== -->
 <mbean code="com.hp.si.uca.jaasSecurity.UcaJaasSecurityDomain"
name="jboss.security:service=PBESecurityDomain">
      <constructor><arg type="java.lang.String"
value="encrypt-keystore-password"/></constructor>
      <attribute name="KeyStoreURL">${jboss.server.home.dir}/keystores/
serverdb</attribute>
      <attribute name="KeyStorePass">

{CLASS}org.jboss.security.plugins.FilePassword:${jboss.server.home.dir}/
keystores/keystore.password
      </attribute>
      <attribute name="TrustStoreURL">${jboss.server.home.dir}/keystores/
servertrustdb</attribute>
      <attribute name="TrustStorePass">

{CLASS}org.jboss.security.plugins.FilePassword:${jboss.server.home.dir}/
keystores/truststore.password
      </attribute>
      <attribute name="Salt">welcometocindy</attribute>
      <attribute name="IterationCount">13</attribute>
   </mbean>
</server>
```

In the above script:

- `KeyStoreURL` and `TrustStoreURL` specify the paths of the keystore and truststore.
- `keystore.password` and `truststore.password` are the files that contain the encrypted passwords that you create in the next step.
- `Salt` and `IterationCount` are the variables that define the strength of the encrypted password. Use the same values for `Salt` and `IterationCount` in the next step. The value of `Salt` must be at least 8 characters long.

3 Edit `jboss-service.xml` and add the following line at the end:

```
<depends>jboss.security:service=PBESecurityDomain</depends>
```

4 Move the `jboss-service.xml` file to the following directory:

`${`**Install directory**`}\server\minimal\keystores`

5 Run the following commands to generate `keystore.password` and `truststore.password`:

```
java -cp ../lib/jbosssx.jar org.jboss.security.plugins.FilePassword
welcometojboss 13 password keystore.password

java -cp ../lib/jbosssx.jar org.jboss.security.plugins.FilePassword
welcometojboss 13 password truststore.password
```

➤ Confirm java -version shows 1.5 or plus.

In the above commands:

- **welcometocindy** and **13** are the values of `Salt` and `IterationCount` used in `security-service.xml`. These values should be the same for both `keystore.password` and `truststore.password`.
- **password** is the password of the keystore/truststore being encrypted.

Start the Domino UCA Agent

To start the Domino UCA agent, go to `INSTALL_PATH\bin` and invoke `run.bat`.

Set up the Domino UCA Connector to Work with Select Identity

To set up Select Identity to work with the Domino UCA connector, complete the following steps in the Select Identity user interface:

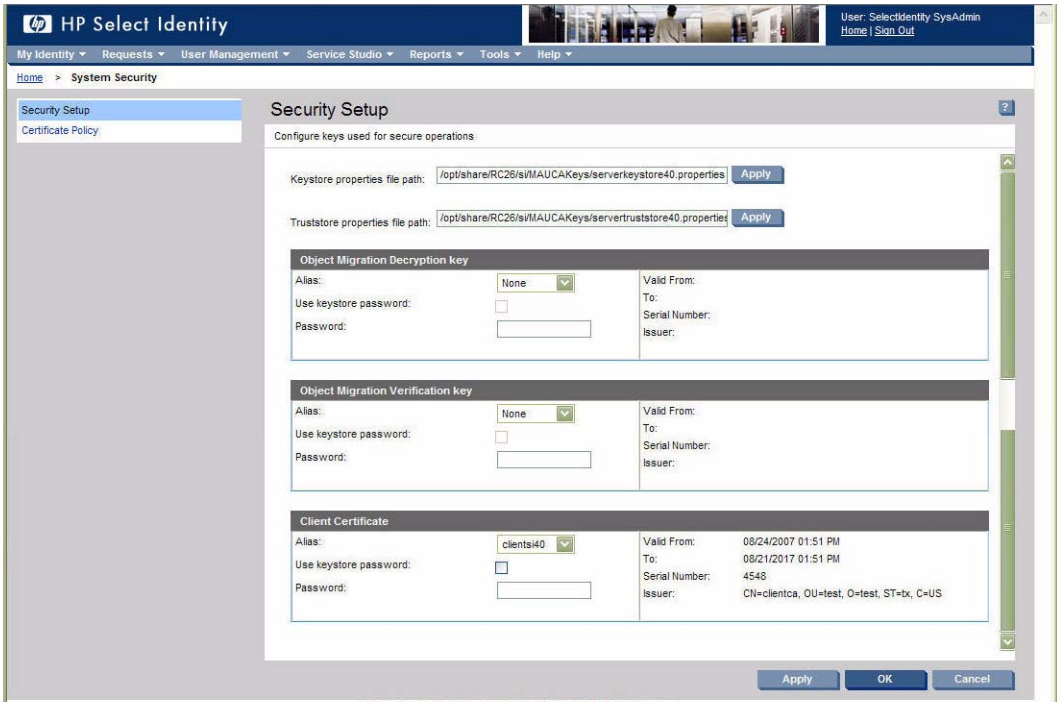
1 Generate the properties files.

For example, `clientkeystore.properties` and `clienttruststore.properties`.

For `ucaSiClientDb` and `ucaSiClientTrustDb`, do the following:

2 Under **Tools** menu, select **System Security** → **Security Setup**.

The Security Setup page opens.



Security Setup

Configure keys used for secure operations

Keystore properties file path: /opt/share/RC26/si/MAUCAKeys/serverkeystore40.properties Apply

Truststore properties file path: /opt/share/RC26/si/MAUCAKeys/servertruststore40.properties Apply

Object Migration Decryption key

Alias:	None	Valid From:	
Use keystore password:	□	To:	
Password:		Serial Number:	
		Issuer:	

Object Migration Verification key

Alias:	None	Valid From:	
Use keystore password:	□	To:	
Password:		Serial Number:	
		Issuer:	

Client Certificate

Alias:	clientsi40	Valid From:	08/24/2007 01:51 PM
Use keystore password:	□	To:	08/21/2017 01:51 PM
Password:		Serial Number:	4548
		Issuer:	CN=clientca, OU=test, O=test, ST=tx, C=US

3 Enter the file path for the keystore properties file.

4 Enter the file path for the trust store properties file.

5 Under the **Client Certificate** section select the client certificate alias from the list. For example, *clientsi40*.

Refer to the *HP Select Identity Installation Guide* and the *HP Select Identity Administration Online Help* for information about setting up security features in Select Identity and implementing mutual authentication.

6 Deploying the Domino UCA Connector on the Application Server

To install the connector on Select Identity, you must first deploy the connector on the application server.

WebLogic/WebSphere

To deploy the connector on a WebLogic or WebSphere application server, perform the following steps:

1. Create a subdirectory in Select Identity home directory where you can store the connector's RAR file.

   For example, you can create `<SI_HOME_DIR>/connectors`
   where `<SI_HOME_DIR>` = `/opt/Select_Identity` in UNIX
   and `<SI_HOME_DIR>` = `C:\Select_Identity` in Windows. (A connector subdirectory may already exist.)

2. Copy the RAR file from the Select Identity Connector CD to the connector subdirectory.

3. Perform the following steps to deploy the connector on WebLogic. If deploying on WebSphere, skip to step 4 on page 33.

   a. If not currently running, start the application server in the domain for Select Identity and log on to the WebLogic Server Console.

   b. In the left panel, expand the Deployments folder, and then right-click on **Connector Modules**, and select **Deploy a New Connector Module**.

      Alternatively, at the right panel of the Server Console home page, click the **Connector Modules** link, which is under Your Deployed Resources column of the Domain Configurations section. The Resource Connectors page appears. Click on **Deploy a New Connector Module** link on this page.

   c. Click the link in the Location field, locate, and select the RAR file from the list. The RAR file is stored in the connector subdirectory.

   d. Click **Target Module**.

   e. If only one server is configured, skip to the next step. If more than one server is configured, the next page prompts you to select the servers on which you want to deploy the connector. Select the server instance, and then click **Continue**.

   f. Review the settings. Keep all the default settings and click **Deploy**. The Status of the Last Action column should display Success.

4. If you want to deploy the connector on WebSphere, perform the following steps:

   a. Start the application server, if necessary.

   b. Log on to the WebSphere Application Server Console.

   c. Navigate to **Resources** → **Resource Adapters**.

d Click **Install RAR**. The Install RAR File page appears.

e If it is a cluster setup, select a WebSphere node from the Node list.

f In the Server path field, enter the path to the connector's RAR file. The RAR file is stored in the subdirectory created in the beginning.

g Click **Next**.

h In the Name field, enter a name for the connector.

i Click **OK**.

j Click the **Save** link (at the top of the page).

k On the Save to Master Configurations dialog box, click **Save**.

l Repeat step f to step k for all the available nodes (for cluster setup).

m Click **Resources** → **Resource Adapters**. The Resource Adapters page appears.

n Click **Browse Nodes** and select a node in the Node text box (in case of a cluster) and click **Apply**.

o Click the new connector.

p Click **J2C Connection Factories** in the Additional Properties table.

q Click **New**.

r In the Name field, enter the name of the factory for the connector. This is the pool name of the connector. Refer to the respective connector's installation and configuration guide to find out the specific pool name.

s Click **OK**.

t Click the **Save** link.

u On the Save to Master Configurations dialog box, click **Save**.

v Repeat the step m to step u for all available nodes (for cluster setup).

w Restart WebSphere.

7 Configuring the Domino UCA Connector with Select Identity

This chapter describes the procedure to configure the Domino UCA connector with Select Identity and the connector-specific parameters that you must provide when configuring the connector with Select Identity.

Configuration Procedure

After you deploy the connector RAR on the application server, you must configure the connector with Select Identity. Perform the following tasks to deploy and configure the Domino UCA connector with Select Identity.

1 Add a New Connector

2 Add a Resource

Add a New Connector

The first task in deploying the Domino UCA connector to work with Select Identity is to add the new connector in Select Identity using Select Identity's user interface. Use one connector for each supported server resource type. Multiple resources can use the same connector. For example, to connect to three servers, you install and deploy only one connector. Resources sharing a connector are placed in a resource pool.

Connector management defines the communication criteria Select Identity uses to reconcile identity information with your system resources. Before a connector can interface between Select Identity and the designated resources, there must be a record of the connector in Select Identity.

Connector records cannot be created unless the connector has already been deployed on a WebLogic or WebSphere console server.

To add the connector using the Select Identity user interface, refer to the *HP Select Identity Administration Online Help*.

Refer to the following table when entering the parameters in the Manage Connectors fields.

Table 5 Manage Connectors Page

Field	Description
Connector Name	Identifies the complete name of the connector.
Pool Name	Specifies the full name of the resource pool for this resource. If the pool name is incorrect, you cannot add the connector. For example, `eis/UCADominoConnector`.
Mapper Available	Indicates whether the Attribute Mapper utility supports the connector. Select **No** for the Attribute Mapper utility support option when setting up the Domino UCA connector.
Approval Required	Indicates approval is required for changes when configuration change control is in place. Approval Required is the default setting.

Refer to the *HP Select Identity Administration Online Help* for information on adding a new connector in Select Identity.

Add a Resource

After you add the connector to Select Identity, you set up a resource. Add a new resource in Select Identity that uses the newly added Domino UCA connector. Use the Select Identity Add Resource wizard to perform the procedure. Steps 1-3 are explained in this section as they relate to the UCA connector configuration and setup.

Refer to the *HP Select Identity Administration Online Help* for complete instructions on adding a resource in Select Identity.

Add Basic Information

To deploy a resource that uses the newly added connector, perform the following steps:

1. Select **Service Studio** → **Resources**.
2. Click **Add New Resource**.
3. Complete the fields as required.

Refer to the following table when entering the parameters in the Add Resource: Basic Information page:

Table 6 Add Resource: Basic Information page

Field	Description
Resource Description	Provides a brief description of the resource.
Connector Name	Identifies the connector used to access the resource in Select Identity. **Note:** The connector must be included in the Managed Connectors list for you to select it here. If you do not see your connector, map the necessary connector before continuing. See the *HP Select Identity Administration Online Help* for more information.
Authoritative	Indicates whether the resource is authoritative. The system default is No, or non-authoritative. Select Identity defines two classes of resources: • An authoritative resource is considered to be the "master" source for important user identity accounts and attribute values. • Non-authoritative resources typically need to stay synchronized with regard to the key aspects of a user's identity that originate from the authoritative resource and also contain other resource-specific identity data. For more information about authoritative and non-authoritative resources, refer to the *HP Select Identity Administration Guide*.

Table 6 Add Resource: Basic Information page

Field	Description
Select Identity Password Authority	Indicates the authority level of the password. The default setting is No, but change this setting to Yes if both of the following are true: • The password on this resource authenticates users logging into Select Identity. • Password changes made through the "Forget Password" function are updated synchronously on the resource. **Note:** Selecting Yes allows login data to be synchronized across all resources so that users only need to sign in once.
Delete User	Indicates the conditions during which users are deleted from the resource. The default setting is No.
Approval Required	Indicates approval is required for changes when configuration change control is in place. See the *HP Select Identity Administration Online Help* for information. Approval Required is the default setting.
Resource Owner	Indicates the name (User ID) of the resource owner if a contact person has been assigned to answer questions about this resource.

Create a Mutual Authentication Policy

The Add Resource: Mutual Authentication Policy page enables you to create a mutual authentication policy by specifying the inbound and outbound security settings. The inbound security settings apply to incoming web service requests. The outbound security settings apply to outgoing connections to the connectors.

➤ Configuration of mutual authentication is required for the Domino UCA connector.

Complete the fields as required.

- Select the inbound security levels.
- Select the outbound security levels.

  ➤ You *must* select “Server and Client Certificate Required” as the outbound security level when configuring mutual authentication for the Domino UCA connector.

Refer to the *HP Select Identity Administration Online Help* for instructions.

Refer to the following table when entering the parameters in the Add Resource: Create a Mutual Authentication Policy page:

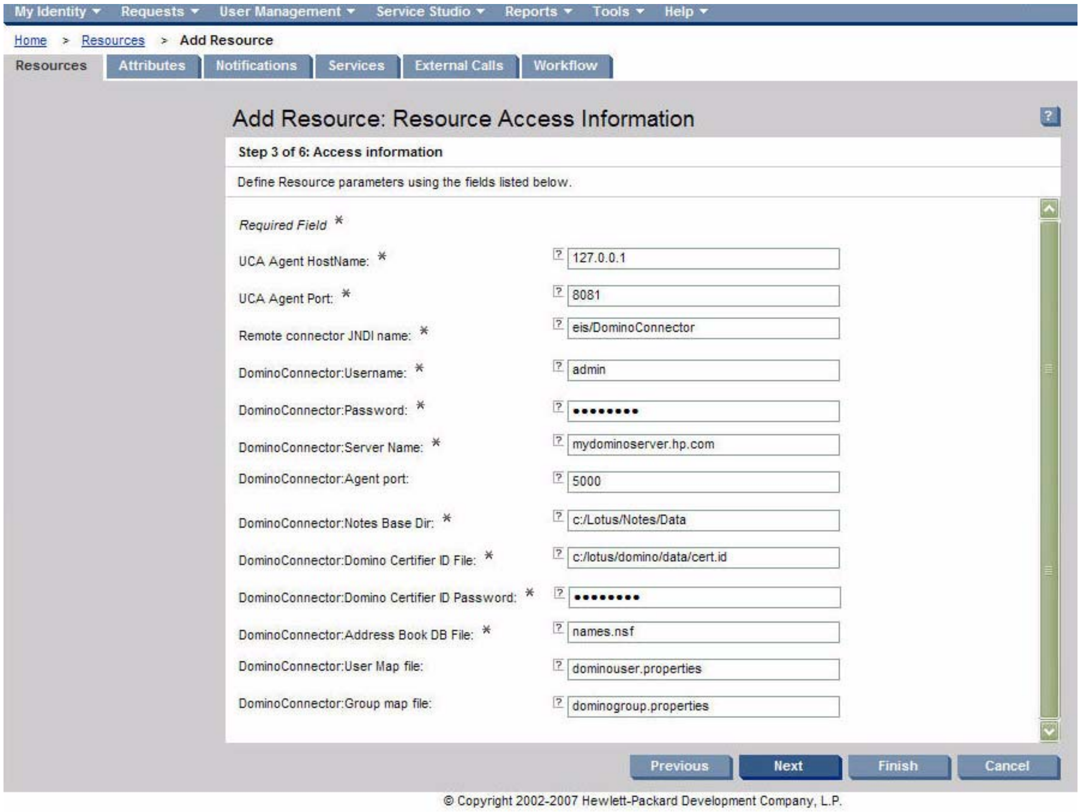
Table 7 Add Resource: Mutual Authentication Policy page fields

Field	Description
Inbound Communication – Security Level	Indicates the inbound security level selected from the following Security Level options: • **None** – indicates that the resource does not use PKI (Public Key Infrastructure) for secure inbound communication. If Client Certificate Required is selected on the System Security page, you cannot select None. A client certificate is required. • **Client Certificate Required** – indicates that the client must present a certificate when connecting to Select Identity.
Inbound Communication – Only Allow Resource Owner Submit Request	If checked, indicates that the Resource Owner must be defined and the resource owner must have a certificate. When selected, only the owner of the resource can submit a reconciliation request.
Outbound Communication – Security Level	Indicates the outbound security level selected from the following Security Level options: • **None** – indicates that the resource does not use PKI for secure outbound communication. • **Server Certificate Required** – indicates that the server must present a certificate when Select Identity connects to this server. The Select Identity connector must also request the server's certificate and validate it. • **Server and Client Certificate Required** – indicates that the Select Identity connectors must submit a request for the server certificate and validate it, and that the Select Identity connectors must present a certificate to the server for authentication. — **Use SI Certificate** – Indicates that the Select Identity certificate is required and is set up. When you select this option, the following information displays about the SI certificate: issuer, valid from and to date, and serial number. If you select **Use SI Certificate**, no further selections are required. **Note:** If you do not select the Use SI Certificate option, you must complete the following fields: — **Client Certificate** – Select an available client certificates from the drop-down list. — **Use keystore password** – Indicates that the password for the keystore is used. — **Password** – Specifies a password to use if not using the keystore password. **Note:** Please note that you *must* select the "Server and Client Certificate Required" option in order to use the Domino UCA connector.

Set up Resource Access Information

Use the Resource Access Information page to define access values for the new resource. The fields that display on the Add Resource: Resource Access Information page are based on your previous entries.

The Add Resource: Resource Access Information page is shown as follows:



Add Resource: Resource Access Information

Step 3 of 6: Access information

Define Resource parameters using the fields listed below.

Required Field *

UCA Agent HostName: * 127.0.0.1

UCA Agent Port: * 8081

Remote connector JNDI name: * eis/DominoConnector

DominoConnector:Username: * admin

DominoConnector:Password: * ••••••••

DominoConnector:Server Name: * mydominoserver.hp.com

DominoConnector:Agent port: 5000

DominoConnector:Notes Base Dir: * c:/Lotus/Notes/Data

DominoConnector:Domino Certifier ID File: * c:/lotus/domino/data/cert.id

DominoConnector:Domino Certifier ID Password: * ••••••••

DominoConnector:Address Book DB File: * names.nsf

DominoConnector:User Map file: dominouser.properties

DominoConnector:Group map file: dominogroup.properties

© Copyright 2002-2007 Hewlett-Packard Development Company, L.P.

1 Complete the fields as required.

Refer to Table 8 when entering the parameters in the Add Resource: Resource Access Information page:.

Table 8 Add Resource: Resource Access Information page

Field	Sample	Description
UCA Agent HostName	127.0.0.1	Host on which UCA agent is running.
UCA Agent Port	8081	UCA Agent HTTPS port.
Remote connector JNDI name	eis/Domino Connector	JNDI name of connector factory on agent side.
DominoConnector:User Name	admin	The administrative user name on the Domino server.
DominoConnector:Password	**********	The Domino administrative user's password.
DominoConnector:Server Name	mydominoserver.hp.com	NETBIOS name of the Domino server.

Table 8 Add Resource: Resource Access Information page

Field	Sample	Description
DominoConnector:Agent Port		**Note:** This field is not used in the current version.
DominoConnector:Notes Base Dir.	c:/Lotus/Notes/ Data	The Notes base data directory. User ID files are created here. This is the folder on the Domino server.
DominoConnector:Domino Certifier ID File	c:/lotus/domino/ data/cert.id	The Domino certifier ID used to provision users. This is the folder on the Domino server. **Note:** Domino servers support hierarchical certifiers.
DominoConnector:Domino Certifier ID Password	**********	The password that corresponds to the Domino certifier ID.
DominoConnector:Address Book DB File	names.nsf	Address book database file for provisioning. All operations are performed on this book database file.
DominoConnector:User Map file	dominouser. properties	This file is named **dominouser.properties** and is the name of the Domino user properties file that contains user attribute mappings.
DominoConnector:Address map file	dominogroup. properties	This file is named **dominogroup.properties** and is the name of the Domino group properties file used for mapping attributes. The default value is dominogroup.properties, but the default value can be changed if you use some other customized properties file.

Note:

- The DominoConnector:Domino Certifier ID File name and DominoConnector:Domino Certifier ID Password fields are mandatory fields to create a Notes user.
- If you use the same Certifier ID File for all users, you must provide the values of Certifier ID File name and Certifier password during resource creation. Otherwise, you must specify these values every time you create a new user.

2 Click **Finish** to exit the Add Resource wizard or click **Next** to proceed to the next step.

After completion of Step 3 of the Add Resource wizard, you can save the resource without entering values on the remaining pages. You can modify the resource later to add the mapping, reconciliation, and caching information. Refer to the *Select Identity Administration Online Help* for information about creating and modifying resources.

Map Resource Attributes

After successfully adding a resource for the Domino UCA UCA connector, you can map the resource attributes to Select Identity attributes. Add new attributes to Select Identity if necessary. Refer to the *HP Select Identity Administration Online Help* for information on creating and mapping attributes.

When you first access the Add Service: Map Resource Attributes page, some of the Select Identity attributes (column two) may be pre-populated with values if the resource attribute (column one) exactly matches a Select Identity attribute. For the unmapped attributes indicated by “(Select one)”, map these attributes as appropriate.

Map the resource attributes as required by performing the following steps:

1. Under Resource Attribute, review the list of resource attributes.
2. From the Attribute list, choose the Select Identity attribute (column two) to map to the resource attribute (column one). For information about attributes, see Attributes.
3. Determine how the attributes are updated during reconciliation by choosing one or both of the following options:
   - **Sync In** – changes to the resource attribute update the corresponding attribute in Select Identity.
   - **Sync Out** – changes to the Select Identity attribute update the corresponding resource attribute.

   Resource attributes must be set to "Sync In" to create updates in Select Identity during reconciliation. Resource attributes updated by Select Identity during reconciliation are set to "Sync Out" to push the changes to the resource.
4. Repeat steps 2 and 3, as required, to map all resource attributes.
5. Click **Next** to continue or **Finish** to exit the wizard.

When mapping the attributes, refer to the following table for Domino UCA connector attribute mapping information.

Table 9 Domino UCA Attribute Mapping Information

Select Identity Resource Attribute	Domino User Attribute	Label on Domino UI	Description
UserName	ShortName	UserID	Primary key for the connector, and this is a mandatory attribute.
UserName	ShortName	Short name	Primary key for the connector, and this is a mandatory attribute.
Password	Password	(not available in UI)	This is a mandatory attribute.
AltEmail Address	AltEmail Address	(not available in UI)	An alternative email address where Select Identity will send the user’s ID file.

Table 9 Domino UCA Attribute Mapping Information

Select Identity Resource Attribute	Domino User Attribute	Label on Domino UI	Description
FirstName	FirstName	First name (on the Basics tab)	Note that the FullName attribute is automatically generated by the Domino server by combining the FirstName, MiddleName, and LastName attributes. Do not set the FullName attribute; this will cause an error and unpredictable behavior.
MiddleInitial	MiddleInitial	Middle initial (on the Basics tab)	
LastName	LastName	Last name (on the Basics tab)	
Title	Title	Personal title (on the Basics tab)	
JobTitle	JobTitle	Job title (in Work Details on the Work tab)	
CompanyName	CompanyName	Company (in Work Details on the Work tab)	
Manager	Manager	Manager (in Work Details on the Work tab)	
OfficePhone Number	OfficePhone Number	Office phone (in Work Details on the Work tab)	
CellPhone Number	CellPhone Number	Cell phone (in Work Details on the Work tab)	
OfficeCity	OfficeCity	City (in Company Information on the Work tab)	
OfficeState	OfficeState	State/Province (in Company Information on the Work tab)	
City	City	City (on the Home tab)	
State	State	State/province (on the Home tab)	

Table 9 Domino UCA Attribute Mapping Information

Select Identity Resource Attribute	Domino User Attribute	Label on Domino UI	Description
Zip	Zip	Zip/postal code (on the Home tab)	
HomePostal Address	HomePostal Address	Street address (on the Home tab)	
HomePhone Number	PhoneNumber	Home phone (on the Home tab)	
Comment	Comment	Comment (on the Miscellaneous tab)	
(not mapped by default)	Suffix	Generational qualifier (on the Basics tab)	
(not mapped by default)	CheckPassword	Boolean for Change Password (on the Basics tab)	
(not mapped by default)	MailSystem	Mail System (on the Mail tab)	
(not mapped by default)	MailDomain	Domain (on the Mail tab)	
(not mapped by default)	MailServer	Mail Server (on the Mail tab)	
(not mapped by default)	MailFile	Mail file (on the Mail tab)	
(not mapped by default)	MailAddress	Forwarding address (on the Mail tab)	
(not mapped by default)	Internet Address	Internet address (on the Mail tab)	
(not mapped by default)	Message Storage	Format preference for incoming mail (on the Mail tab)	
(not mapped by default)	Encrypt IncomingMail	Encrypt incoming mail (on the Mail tab)	
(not mapped by default)	ccMail Location	CC Mail Location (on the Mail tab)	
(not mapped by default)	ccMailUser Name	CC Mail Username (on the Mail tab)	
(not mapped by default)	Department	Department (in Work Details on the Work tab)	

Table 9 Domino UCA Attribute Mapping Information

Select Identity Resource Attribute	Domino User Attribute	Label on Domino UI	Description
(not mapped by default)	EmployeeID	Employee ID (in Work Details on the Work tab)	
(not mapped by default)	Location	Location (in Work Details on the Work tab)	
(not mapped by default)	OfficeFAX PhoneNumber	FAX phone (in Work Details on the Work tab)	
(not mapped by default)	PhoneNumber_6	Pager number (in Work Details on the Work tab)	
(not mapped by default)	Assistant	Assistant (in Work Details on the Work tab)	
(not mapped by default)	OfficeStreet Address	Street address (in Company Information on the Work tab)	
(not mapped by default)	OfficeZIP	Zip/postal code (in Company Information on the Work tab)	
(not mapped by default)	OfficeCountry	Country (in Company Information on the Work tab)	
(not mapped by default)	OfficeNumber	Office Number (in Company Information on the Work tab)	
(not mapped by default)	Country	Country (on the Home tab)	
(not mapped by default)	HomeFAXPhone Number	FAX phone (on the Home tab)	
(not mapped by default)	Spouse	Spouse (on the Home tab)	
(not mapped by default)	Children	Children (on the Home tab)	

Table 9 Domino UCA Attribute Mapping Information

Select Identity Resource Attribute	Domino User Attribute	Label on Domino UI	Description
(not mapped by default)	PersonalID	Personal ranking (on the Corporate Hierarchy Information tab)	
(not mapped by default)	x400Address	Other X.400 address (on the Miscellaneous tab)	
(not mapped by default)	Calendar Domain	Calendar domain (on the Miscellaneous tab)	
(not mapped by default)	WebSite	Web page (on the Miscellaneous tab)	
(not mapped by default)	PublicKey	Notes certified public key (on the Notes Certificates tab)	
(not mapped by default)	Certificate	Internet certificate (on the Internet Certificates tab)	
(not mapped by default)	Owner	Owners (on the Administration tab)	
(not mapped by default)	AltFullName	Alternate FullName (on the Administration tab)	
(not mapped by default)	AltFullName Sort	Alternate FullName Sort (on the Administration tab)	
(not mapped by default)	LocalAdmin	Administrators (on the Administration tab)	
(not mapped by default)	Password Digest	Password digest (on the Administration tab)	
(not mapped by default)	Password ChangeDate	Password Change date (on the Administration tab)	

Table 9 Domino UCA Attribute Mapping Information

Select Identity Resource Attribute	Domino User Attribute	Label on Domino UI	Description
(not mapped by default)	Password Change Interval	Password Change Interval (on the Administration tab)	
(not mapped by default)	PasswordGrace Period	Password Change Grace Period (on the Administration tab)	
(not mapped by default)	ClientType	Notes client license (on the Administration tab)	
(not mapped by default)	Profiles	Setup profile(s) (on the Administration tab)	
(not mapped by default)	AvailableFor DirSync	Foreign directory synch allowed (on the Administration tab)	
(not mapped by default)	NetUserName	Network account name (on the Administration tab)	
(not mapped by default)	ProposedAlt CommonName	Proposed alternate common name (on the Administration tab)	
(not mapped by default)	ProposedAlt OrgUnit	Proposed alternate unique organizational unit (on the Administration tab)	
(not mapped by default)	Proposed AltFull NameLanguage	Proposed alternate name language (on the Administration tab)	
(not mapped by default)	Sametime Server	Sametime server (on the Administration tab)	

Table 9 Domino UCA Attribute Mapping Information

Select Identity Resource Attribute	Domino User Attribute	Label on Domino UI	Description
(not mapped by default)	CertifierIDFile	(not available in UI)	The Certifier ID that is used to provision users. Note that Domino servers support hierarchical Certifiers.
(not mapped by default)	CertifierIDPwd	(not available in UI)	The password corresponding to the specified Certifier.
(not mapped by default)	IsNotesUser	(not available in UI)	Specifies if the user is a Notes user or not.

After mapping the attributes, you can use the connector to create a service, or you can associate the connector with an existing service. Refer to the *HP Select Identity Administration Guide* for information on Select Identity services.

Define a Caching Policy

The Add Resource: Define Caching Policy page enables you to create entitlement caching to reduce the impact to system performance caused by retrieving service provisions (entitlements) from resources. If you do not enable caching, all entitlements are retrieved and updated through the connector during the reconciliation, service creation, and user ID creation processes. All of the throughput can place significant demands on the system and cause substantial performance degradation.

To define a caching policy, perform the following steps:

1. Select the Caching Enabled option to turn caching on.
2. Complete the fields, as appropriate.

Refer to the following table when entering the remaining parameters for the Add Resource: Define a Caching Policy page:

Table 10 Add Resource: Define a Caching Policy page:

Field	Description
Never Expires	Identifies if and how the policy will expire. • Days – number of days between expiration interval • Hours – number of hours between expiration interval • Minutes – number of minutes between expiration interval
Polling Enabled	Indicates that Select Identity should poll this resource. When polling is enabled, Select Identity runs a batch job to poll the resource for changes to entitlements. This synchronizes Select Identity and resource entitlements.
Polling Interval	Indicates the polling interval by specifying how often Select Identity polls the resource. **Note:** This field is only available if you enable polling. • Days – number of days between each polling event • Hours – number of hours between each polling event • Minutes – number of minutes between each polling event
Refresh Cache Now	Specifies a manual refresh operation. Select Identity retrieves entitlements from the resource and updates the entitlement cache. If a large number of entitlements exists, you may have to wait for the retrieval to complete.

Configuring Domino UCA Connector on Non-English Platforms

If you install the connector, which is internationalized, on a non-English platform, you will have the following limitations when configuring the connector:

- When entering user attributes to provision (in Select Identity), you cannot enter local language characters for the following attributes:
  - UserName
  - Password
  - Email
- The attribute names on the resource cannot contain non-English characters. Thus, you cannot include non-English characters in the mapping file.
- Non-English entitlements are not supported by the connector.
- All configuration and property file names must be in English.
- The exception messages from the resource are in English.

8 Uninstalling the Domino UCA Connector

If you want to uninstall a connector from Select Identity, perform the following steps:

- Remove all resource dependencies.
- Delete the connector from Select Identity.
- Delete the connector from the application server.

See the *HP Select Identity Installation Guide* and the *HP Select Identity Administration Online Help* for information about deleting a connector from Select Identity and the application server.

Deleting the Connector from Select Identity

Before deleting a connector, remove all dependencies on the connector.

To delete a connector, perform the following steps:

1. Select **Service Studio** → **Resources.**

   The Resource list opens.

2. Click **Manage Connectors**.

   The Manage Connectors page opens.

3. Select the connector.
4. Click **Delete**.
5. Click **OK** to confirm and delete the connector from the list.
6. Click **OK** to return to the **Resource** list.

➤ Approval may be required for the deletion, if configuration management is enabled for connectors.

Deleting the Connector from WebLogic

Perform the following to delete a connector from WebLogic:

1. Log on to the WebLogic Server Console.
2. Expand the Deployments folder on the left pane, and then double-click **Connector Modules.**

   Alternatively, at the right panel of the Server Console home page, click the **Connector Modules** link, which is under the **Your Deployed Resources** column in the Domain Configurations section.
3. The right hand panel of the console displays a table showing all the deployed connectors. Click the delete icon next to the connector that you want to uninstall.
4. Click **Yes** to confirm the deletion.
5. Click **Continue**.

Deleting the Connector from WebSphere

Perform the following steps to uninstall the connector from WebSphere:

1. Log on to the WebSphere Application Server Console.
2. Navigate to **Resources** → **Resource Adapters**.
3. Select the connector to uninstall.
4. Click **Delete**.
5. Click the **Save** link (at the top of the page).
6. On the Save to Master Configuration dialog box, click the **Save** button.
7. If it is a cluster setup, click **Browse Nodes** to select other available nodes and perform step 3 to step 6 for each node.

Uninstalling the Domino UCA Agent

To uninstall the Domino UCA agent, perform the following steps:

1. Stop the agent, if running.
2. Run the following:

   $INSTALL_DIR$\ Uninstall_Domino UCA Agent\ Uninstall Domino UCA Agent.exe
3. Click **Next** each time you are prompted.
4. Click **Finish** when the procedure is complete.

A Group Availability Checking Functionality to Accommodate Domino Users

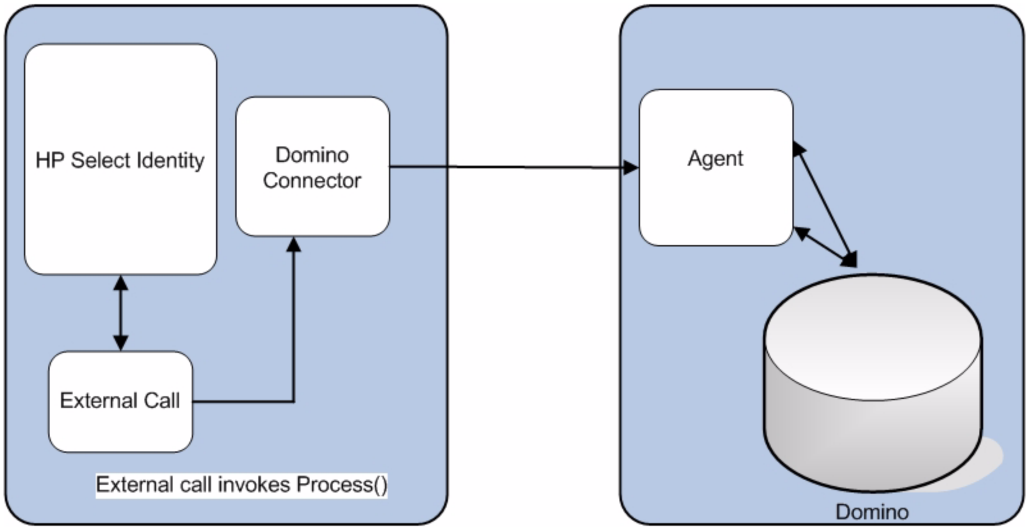
Domino server limits the maximum size of a plain text field (for example, `group Members` field) to 64KB per (non summary) text limit. This limit is encountered by Domino developers in their API calls. To counter this, the `Process()` function is provided in the form of an independent function, which can be executed by an external call (which needs to be developed). This function checks if a group can accommodate more users, creates a new group, links it to the existing group, and returns that group name when the limit is reached.

The Domino Connector is enhanced to expose a function that can be invoked to verify if the group has reached the specified limit of members. This function checks if a given group is available for more users to be assigned to it, create a new group if it is full, and returns this group id.

This limit can be specified by setting `MAX_GROUP_CAPACITY` property in the `Properties.ini` file (default setting is 64k), which is present in the Domino install folder.

If the number of members in the group is lesser than `MAX_GROUP_CAPACITY`, the same group name is returned.

If the number of members in the group is greater than or equal to `MAX_GROUP_CAPACITY`, a new group is created and linked to the existing group and the group name is returned. The name of the new group will be created by appending 1 to the existing group name. For example, if the existing group name is `GROUP`, the new group name will be `GROUP1`.If the `GROUP1` already exists and is full, the new group name will be `GROUP11`, and so on.



This feature can be invoked by writing an external call to invoke `Process()` function by passing appropriate information as explained below:

Instance of `TAConnector`, for example – `t`, is passed and it is cast to `TAConnectorExtIntf`.

The following is a sample code snippet in the external call:

```
TAConnectorExtIntf conn = (TAConnectorExtIntf) t;


SIGenConnectorRequest req = new SIGenConnectorRequest();
JCAUserModel userModel = new JCAUserModel();
userModel.setUserId("Sample user id"); // sample value used
req.setUserModel(userModel);
JCAEntitlementModel entModel = new JCAEntitlementModel("Core Group Id"); /
/ sample used
req.setEntModel(entModel);
req.setOperation("CHECK_AND_CREATE_GROUP");

conn.process(req);
```

The connector will check if the group is available, create a new one if necessary, and return it back to the `entModel` instance:

```
req.getEntModel().getId()
```