# Novell Identity Manager Driver for Lotus Notes\*

IMPLEMENTATION GUIDE

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#### **About This Guide**

The Identity Manager Driver for Lotus Notes is designed to automatically let you synchronize data in an eDirectory™ tree with data stored in a Domino\* Directory or another Notes database. This configurable solution allows you to increase productivity and streamline business processes by integrating Lotus Notes and eDirectory.

The guide contains the following sections:

- Chapter 1, "Overview," on page 9
- Chapter 2, "Installing and Configuring the Driver," on page 15
- Chapter 3, "Upgrading," on page 33
- Chapter 4, "Customizing the Driver," on page 39
- Appendix A, "Using the Movecfg.exe Utility," on page 89
- Appendix B, "Samples for New Features," on page 93

#### **Audience**

This manual is for Lotus Notes administrators, Novell® eDirectory administrators, and others who implement the Identity Manager Driver for Lotus Notes.

#### **Feedback**

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to Novell's Feedback Web site (http://www.novell.com/documentation/feedback.html) and enter your comments there.

#### **Documentation Updates**

For the most recent version of this document, see the Drivers Documentation Web Site (http://www.novell.com/documentation/idmdrivers).

#### **Additional Documentation**

For documentation on using Identity Manager and the other drivers, see the Identity Manager Documentation Web site (http://www.novell.com/documentation/idm).

#### **Documentation Conventions**

In this documentation, a greater-than symbol (>) is used to separate actions within a step and items within a cross-reference path.

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Overview 1

The Identity Manager Driver for Lotus Notes lets you synchronize data in a Novell<sup>®</sup> eDirectory<sup>™</sup> tree with data stored in a Domino Directory or another Notes database.

The Identity Manager Driver for Notes is essentially an application programming interface (API) translator that maps object data represented in an XML document between the Identity Vault and the appropriate Lotus Domino Toolkit for Java\* object methods.

- Section 1.1, "Changes in Terminology," on page 9
- Section 1.2, "New Features," on page 9
- Section 1.3, "Notes Driver Basics," on page 11
- Section 1.4, "Driver Components and Configuration," on page 13

#### 1.1 Changes in Terminology

The following terms have changed from earlier releases:

Table 1-1 Changes in Terminology

Earlier Terms	New Terms	
DirXML <sup>®</sup>	Identity Manager	
DirXML Server	Metadirectory server	
DirXML engine	Metadirectory engine	
eDirectory	Identity Vault (except when referring to eDirectory attributes or classes)	

#### 1.2 New Features

- Section 1.2.1, "Driver Features," on page 9
- Section 1.2.2, "Identity Manager Features," on page 11

#### 1.2.1 Driver Features

The following Lotus Notes driver features are added to the Identity Manager driver for Lotus Notes v2.3 for Identity Manager 3.

Document enhancements that were added in the time frame, including:

- Lotus Notes ACL entry Add/Modify
- The ability to set and modify Lotus Notes field flags on the Subscriber channel

Updated import configuration with reworked entitlement support:

 The configuration file now includes improved driver parameter formatting (in GCV style format)

- Entitlement support is now 100% DirXML Script and includes improved logic.
- Driver installs with the Connected System (Remote Loader) option.
- New configuration option that allows the Notes Driver to install with a Notes client and the Remote Loader on a machine separate from the Domino Server.

#### query-ex support:

- When a query-ex sequence initiates, all potential query responses are cached in memory by the NotesDriverShim using a list of UNIDs; when the appropriate query-ex command is received, the appropriate Notes fields associated with the Notes UNID are retrieved, and returned.
- New driver parameter: <janitor-cleanup-interval> of type integer. Janitor cleanup checks for, and releases resources that may have been orphaned by unfinished query-ex sequences. This interval determines how often to perform this janitorial service.

#### Lotus Notes document locking support options:

- Driver parameters driver options: <allow-document-locking> enables the NotesDriverShim to lock Notes database documents if they are being modified. This parameter is only effective using Notes 6.5 or higher and if the Notes database has the Allow document locking check box enabled.
- Driver parameters subscriber options: <notes-doc-lock-fail-action> specifies the action (document return code) the Notes Driver returns to the Metadirectory engine if the Notes Driver fails to acquire a document lock.

#### Notes database (db) replica creation and settings options:

- The Notes Driver v2.2 can apply database replication settings and replication entry settings.
- The creation of a database replica can be instantiated, and give a request to perform replication. This enhancement allows the creation of a mailfile replica when a mailfile is initially created.
- This enhancement also allows you to modify replication settings on an existing database being synchronized, to perform a replication request on the synchronized database, and to create a new replica on an accessible Domino server.

#### Additional DN format options are now available on the Publisher channel:

- NOTES TYPED (default): CN=JoeUser/OU=Sales/O=ACME
- NOTES: JoeUser/Sales/ACME
- SLASH TYPED: \O=ACME\OU=Sales\CN=JoeUser
- SLASH: \ACME\Sales\JoeUser
- LDAP TYPED: CN=JoeUser,OU=Sales,O=ACME
- LDAP: JoeUser, Sales, ACME
- DOT TYPED: CN=JoeUser.OU=Sales.O=ACME
- DOT- JoeUser.Sales.ACME

#### Support for a more secure HTTPPassword format:

Domino 6 provided a more secure password hashing algorithm to be used with the
HTTPPassword attribute that is stored on person documents (records) in the Notes Address
Book. This latest version of the driver now appropriately uses this more secure HTTPPassword
hashing format.

#### Domino 7 support:

 Although no special Domino 7 APIs have been utilized, Domino 7 is a tested and supported platform.

Improved return status document support:

- The NotesDriverShim can now return XML output status documents showing the driver's extra tasks, such as creating a user mailfile. This means that an add command can now return multiple status documents.
- Status is now returned for:
  - Creating/updating an ACL entry
  - Creating a mailfile
  - Creating database replica
  - Issuing a database replication request
  - Updating database replication settings

#### 1.2.2 Identity Manager Features

For information about the new features in Identity Manager, see "What's New in Identity Manager?" in the *Identity Manager 3.0.1 Installation Guide*.

#### 1.3 Notes Driver Basics

Identity Manager fundamentals are explained in the "Overview Of Identity Manager 3.0.1 Architecture" in the *Novell Identity Manager 3.0.1 Administration Guide*. The Overview discusses the driver architecture in general, and the Guide contains a section on "Managing Identity Manager Drivers."

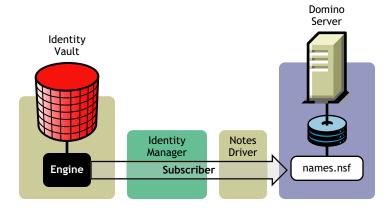
#### 1.3.1 Default Data Flow

A channel is a combination of rules, policies, and filters that are used to synchronize data between two systems. The Subscriber and Publisher channels describe the direction in which the data flows. The Subscriber channel takes the event from Identity Vault (eDirectory) and sends that event to the receiving system (Lotus Notes). The Publisher channel takes the event from Lotus Notes, and sends that event to the Identity Vault. The Subscriber and Publisher channels act independently; actions in one channel are not affected by what happens in the other.

#### **Subscriber Channel**

The Subscriber channel is the channel of communication from the Identity Vault to Lotus Notes. The following illustration shows this data flow:

Figure 1-1 Data Flow Through the Subscriber Channel

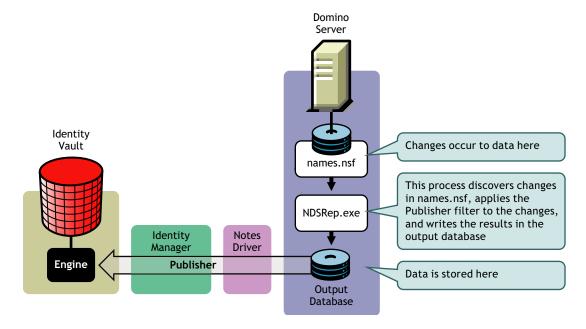


The driver can be configured to work with Notes databases other than names.nsf.

#### **Publisher Channel**

The Publisher channel represents the channel of communication from Lotus Notes to the Identity Vault. The following illustration shows how this data is published:

Figure 1-2 Data Flow Through the Publisher Channel



#### 1.3.2 Policies

Policies are used to control the synchronization of data between the Identity Vault and the application, database, or directory. Policies transform an event on a channel input into a set of

commands on the channel output. The Lotus Notes driver includes the following set of preconfigured policies:

- Schema Mapping: Mappings have been defined for the Notes address book.
- Creation: The default Creation policy logic for the Publisher channel and the Subscriber channel is the same. To create a User object requires a Given name and a Surname. To create Group object requires Description, Membership, and Owner attributes.
- Matching: The default Matching policy logic for the Publisher channel and the Subscriber channel is the same. An eDirectory User object is considered to be the same object in Notes when Given name and Surname match in both directories. An eDirectory Group object is considered to be the same object in Notes when the CN is the same in both directories.
- Placement: The default Placement policy on the Subscriber channel places all User objects
  from a specified Identity Vault container in a specified Notes Organizational Unit, and all
  Group objects from a specified Identity Vault container in a specified Organizational Unit in
  Notes. The same relationship is typically maintained on the Publisher channel. The container
  names and OU names for this default Placement policy are collected from the user when
  importing the default driver configuration.

#### 1.4 Driver Components and Configuration

The driver contains the following components:

- **Default Driver Configuration File:** A driver configuration file is a file you can import to set up default rules, style sheets, and driver parameters. The driver configuration file included with the driver is Notes.xml, with its accompanying .xlf file (for any language other than English).
- **Driver Files:** CommonDriverShim.jar and NotesDriverShim.jar are the Java files that direct synchronization between Lotus Notes and the Identity Vault.
- ndsrep: Ndsrep is a Lotus Domino server add-in process to enable data synchronization. It keeps track of the time of the last successful synchronization within a Notes database, and checks the Lotus Domino Server for changes based on that time stamp. It then reads the changes from the Notes database, determines the event types they represent, and filters the updates based on objects and attributes specified in the Publisher filter in the driver configuration in the Identity Vault.
- dsrepcfg.ntf: A Notes database template required for the initial startup of the Notes driver shim. The Notes driver shim uses this Notes database template to create a configuration database named dsrepcfg.nsf used by ndsrep to determine the Publisher filter and other driver publication settings.

# Installing and Configuring the Driver

2

This section contains a road map for successfully installing and configuring the driver. There are tasks you must do before you install, tasks you only do on the Lotus Domino server side, tasks you only do on the Novell<sup>®</sup> eDirectory<sup>TM</sup> and Identity Manager side, and tasks you do after the installation. The order in which you do these tasks is important. Complete the tasks in the order listed.

- Section 2.1, "Where to Install the Driver," on page 15
- Section 2.2, "Meeting Requirements for the Driver," on page 16
- Section 2.3, "Preparing Lotus Notes for Synchronization," on page 17
- Section 2.4, "Setting Up the Driver," on page 18

#### 2.1 Where to Install the Driver

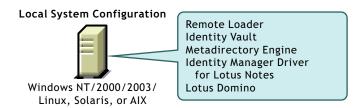
You must decide whether to install the driver locally or remotely. After you've decided where to install the driver, continue with Section 2.2, "Meeting Requirements for the Driver," on page 16.

#### 2.1.1 Installing Locally

A local installation installs the driver on the same computer where you have installed the Lotus Domino server, the Identity Vault, and Identity Manager.

It is recommended that you always load the Identity Manager driver for Lotus Note using the Remote Loader, even if the driver is installed on the same machine as the Identity Vault and Identity Manager.

Figure 2-1 Use the Remote Loader for Local System Configurations

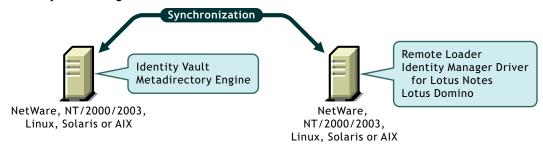


#### 2.1.2 Installing Remotely

A remote installation typically installs the driver on a different computer than the one where Identity Manager and the Identity Vault are installed. You must use this option when Domino and the Identity Vault are not on the same server.

Figure 2-2 When Domino and the Identity Vault Are On Different Servers

#### Remote System Configuration



When installing the Notes driver on AIX, Solaris, or Linux, the driver requires the Remote Loader to be installed in the same location. Novell recommends using the Remote Loader with the Notes driver in order to reduce the effects of potential errors caused by a driver policy, which may adversely affect the Domino server's operation.

#### 2.2 Meeting Requirements for the Driver

If you are running the Lotus Notes driver from the Domino server, that computer must be running the following software:

- One of the following with Lotus Notes R5.0.8 or later:
  - Windows\* NT\*
  - Windows 2000 Server
  - Windows 2000 Professional

Use the operating system versions required by Lotus Domino.

- One of the following with Lotus Notes R6 or later:
  - Windows NT
  - Windows 2000 Server
  - Windows 2000 Professional
  - Windows 2003
  - Solaris\*

If you are using the driver on Solaris, you should edit the /etc/system file on Solaris to include the following line:

set msgsys:msginfo msgtql=1024

**NOTE:** This and other tips are listed in a document published by Sun\*, "Domino on Solaris: Common Tuning Tips" (http://www.sun.com/third-party/global/lotus/technical).

Linux\*

AIX\*

If your Notes system is unable to load tasks on the server, you might need to apply PTF 486444 for AIX 5.2.

Use the operating system versions required by Lotus Domino.

If you are running the Lotus Notes driver from a computer that has only the Lotus Notes client installed, you need:

- Lotus Notes R5.0.8 or later
- Windows NT
- Windows 2000 Server
- Windows 2000 Professional

#### 2.3 Preparing Lotus Notes for Synchronization

Complete the setup tasks in this section to ensure that your Lotus Notes system works with Identity Manager.

- Section 2.3.1, "Collecting Configuration Information," on page 17
- Section 2.3.2, "Creating Lotus Notes Accounts and Groups," on page 17
- Section 2.3.3, "Providing Access to Certifiers and ID Files in the Lotus Notes Infrastructure," on page 18

#### 2.3.1 Collecting Configuration Information

You need to provide a number of system-specific details when you import the driver configuration for Lotus Notes. Some of these details can be collected before you complete the following procedures, and others are defined during the process.

See the list in Section 2.4.2, "Creating a Driver Object and Importing the Driver Configuration," on page 25.

#### 2.3.2 Creating Lotus Notes Accounts and Groups

- 1 Create a Notes User ID to be used exclusively by the driver and give it manager-level ACL access to the target Notes database (usually names.nsf), the output database (ndsrep.nsf) created by ndsrep, and certlog.nsf. If you are synchronizing with the names.nsf database, you should select (turn on) all ACL roles (GroupCreator, GroupModifier, NetCreator, NetModifier, PolicyCreator, PolicyModifier, PolicyReader, ServerCreator, ServerModifier, UserCreator, UserModifier).
- **2** If a Deny Access group doesn't already exist, create this group using the Lotus Domino Administrator tool. This group is used to hold disabled user accounts.
- **3** Copy and save the Universal ID (UNID) for the Deny Access group you just created. This string is used by the driver to uniquely identify this object, and you need to specify it when you are importing the driver configuration.

To get the string:

- **3a** View the Document Properties of the group. (You can select the object and right-click to select Document Properties.)
- **3b** Click the Meta tab (the fifth tab from the right).
- **3c** Go to the end of the text in the Identifier field, and copy the character string from the last forward slash to the end. This will always be 32 alphanumeric characters.

For example, if text in the Identifier field is Notes://myserver/87256E530082B5F4/85255E01001356A8852554C200753106/16A28402CCEB7A9C87256E9F007EDA9B

then the UNID would be

16A28402CCEB7A9C87256E9F007EDA9B

**3d** Paste this information into a file for later use when you run the Create Driver Wizard, as noted in Section 2.4.2, "Creating a Driver Object and Importing the Driver Configuration," on page 25.

## 2.3.3 Providing Access to Certifiers and ID Files in the Lotus Notes Infrastructure

The Notes driver user needs access rights to the following:

- Its own user certifier ID file for the driver user in Notes
- The certifier ID files for the certifiers that you want the driver to create users for
- The server ID file (optional; depends on your configuration)
- File access to a place where the driver can create new user certifier ID files (optional; depends on whether you want the driver to have this ability)

#### 2.4 Setting Up the Driver

Complete these tasks to get the driver installed, configured, and running. (If you are upgrading the driver, see Chapter 3, "Upgrading," on page 33.)

• Section 2.4.1, "Installing the Driver Shim," on page 18

This procedure refers to the others in this section, to show when they should be completed.

- Section 2.4.2, "Creating a Driver Object and Importing the Driver Configuration," on page 25
- Section 2.4.3, "Configuring Database Replication Using Ndsrep," on page 29
- Section 2.4.4, "Migrating and Resynchronizing Data," on page 30
- Section 2.4.5, "Activating the Driver," on page 31

Most installations require some customization after installation to handle certification. Refer to Chapter 4, "Customizing the Driver," on page 39 for more information.

#### 2.4.1 Installing the Driver Shim

- "Installing on Windows" on page 19
- "Installing on AIX, Linux, or Solaris" on page 21

• "Troubleshooting Installation" on page 24

#### **Installing on Windows**

- **1** Install the Remote Loader.
- **2** To install the driver shim, it is recommended you run the driver using the Remote Loader, even if the driver is running on the same machine as Identity Manager.

In the installation, choose Connected System Server, as described in "Setting Up Remote Loaders" in the *Novell Identity Manager 3.0.1 Administration Guide*.

The necessary files for the driver shim are installed in the \Novell\RemoteLoader and \Novell\RemoteLoader\lib directories.

You can install the driver shim at the same time you install the Metadirectory engine, or after.

**2a** To run the driver locally on the same machine as the Metadirectory engine, run the Identity Manager installation program and select the Identity Manager Driver for Lotus Notes.

Instructions are in "Managing Identity Manager Drivers" in the *Novell Identity Manager* 3.0.1 Administration Guide.

- **2b** To run the driver remotely, install the driver shim and the Remote Loader on the system where you want to run the driver. Instructions are in "Setting Up a Connected System" in the *Novell Identity Manager 3.0.1 Administration Guide*
- **3** Manually copy the following files to set up the driver.

Filename	Copy from	Copy to
ndsrep.exe	The installed location: \novell\NDS	The Domino server executable folder (\Lotus\Domino)
	<pre>or \Novell\RemoteLoader</pre>	
dsrepcfg.ntf	The installed location: \novell\NDS	The Domino server data folder (Lotus\Domino\Data)
	<pre>Or \Novell\RemoteLoader</pre>	
Notes.jar	\Lotus\Domino	<pre>If running remotely, \Novell\RemoteLoader\lib</pre>
		or if running locally, \Novell\NDS\lib

- 4 Make sure that the Domino shared libraries directory (for example, c:\lotus\domino) is in the Windows system path, and reboot the computer to make sure this step becomes effective.
  - Without this directory in the Windows system path, the JVM\* might have difficulty locating the Domino shared libraries required by Notes.jar, such as nlsxbe.dll.
- **5** If the Domino server requires databases to be signed, use a Notes client or Domino Administrator to sign dsrepcfg.ntf with your Domino server's server ID.
- **6** After installation, create a driver object as explained in Section 2.4.2, "Creating a Driver Object and Importing the Driver Configuration," on page 25.
- **7** Set passwords for the driver and Remote Loader for the initial startup of the Remote Loader.

These passwords must be the same as the Driver Password and Remote Password you specified when importing the driver configuration, as described in Section 2.4.2, "Creating a Driver Object and Importing the Driver Configuration," on page 25.

- **8** Start the driver using iManager.
  - **8a** In iManager, select *Identity Manager > Identity Manager Overview*.
  - **8b** Locate the driver in its driver set by searching the entire tree, or specify a container and click *Search*.
  - **8c** Click the driver status indicator in the upper-right corner of the driver icon, then click *Start Driver.*
  - **8d** Enter the password for the Notes user that you are using for the driver, if you are prompted to do so. This prompt appears only the first time you start the driver, and whether it appears depends on your driver configuration.

When the driver starts for the first time, it does the following:

- Searches for the Domino Server (specified in the driver parameters at import time)
- Opens dsrepcfg.nsf. If that file does not exist, the driver creates dsrepcfg.nsf automatically, using the dsrepcfg.ntf database template that is provided with the driver.
- Writes to *dsrepcfg.nsf* the Publisher parameters and data specifying an appropriate update database file (usually named ndsrep.nsf), so that ndsrep can read them.

**IMPORTANT:** If multiple notes.ini files exist on the machine running the driver, ensure the NotesDriverShim uses the correct.ini by placing its directory in the OS search path. If the driver shim initializes with the wrong notes.ini file, the driver shim cannot open dsrepcfg.ntf.

If dsrepcfg.ntf is not found, or the initial dsrepcfg.nsf creation process fails, then the Publisher channel shuts down, and you cannot complete Step 9.

Ensure that the driver shim initializes properly by modifying the Windows system path to find the appropriate notes.ini file.

**9** At the Domino Console, start the ndsrep task:

load ndsrep instance

The *instance* must be the driver name, or a unique instance name set up for this driver. If the name of your driver includes spaces, then you must put quotes around the name. After ndsrep is loaded, all TELL commands are issued to this instance of ndsrep using the instance name.

A task named DirXML or a similar name is now displayed in the Notes Task Viewer.

**10** After the initial configuration and startup has been validated, update the Domino server's notes in file so that ndsrep is loaded automatically.

#### For example:

ServerTasks=Update, Replica, Router, AMgr, AdminP, ndsrep notesdrv1, CalConn, Sched, HTTP, IMAP, POP3

If the name of your driver includes spaces, then you must put quotes around the name.

After the first successful startup, the Notes driver and ndsrep can be launched in any order that is convenient for your particular configuration.

For more information about ndsrep, see Section 2.4.3, "Configuring Database Replication Using Ndsrep," on page 29.

- 11 Activate the driver, as explained in Section 2.4.5, "Activating the Driver," on page 31.

  Data synchronized by the driver should not be used outside of a test environment if you have not purchased the driver.
- **12** If you want to synchronize all objects at once, you must initiate the process as explained in Section 2.4.4, "Migrating and Resynchronizing Data," on page 30.
  - Otherwise, synchronization takes place on an object-by-object basis, the next time a change is made to the individual object.
- 13 Most installations require some customization after installation to handle certification. Refer to Chapter 4, "Customizing the Driver," on page 39 for more information.

#### Installing on AIX, Linux, or Solaris

**1** After installing Identity Manager, install the driver shim and the Remote Loader on the system where you want to run the driver.

For AIX, Linux, and Solaris, you must run the driver using the Remote Loader, even if the driver is running on the same machine as Identity Manager.

In the installation, choose Connected System Server, as described in "Setting Up Remote Loaders" in the *Novell Identity Manager 3.0.1 Administration Guide*.

The necessary files for the driver shim are installed in /usr/lib/dirxml.

**2** Make sure that /usr/lib/dirxml/classes/Notes.jar is linked to the correct directory for your environment.

For example, enter the following:

ls -l /usr/lib/dirxml/classes/Notes.jar

The link should be something like the following:

/usr/lib/dirxml/classes/Notes.jar linked to /opt/lotus/notes/latest/linux/Notes.jar

**3** Make sure you have created a user to run the Remote Loader and the driver, as described in "Creating Lotus Notes Accounts and Groups" on page 17.

You cannot run Remote Loader for the Notes driver using root.

- **4** Create a driver object as explained in "Creating a Driver Object and Importing the Driver Configuration" on page 25. Do not start the driver yet.
- **5** Use a Notes client or Domino Administrator to sign dsrepcfg.ntf with your Domino server's server ID.
- 6 Copy the following files from where they are installed (/usr/lib/dirxml/rules/notes by default), to the location where you intend to launch your driver on the Domino server, such as /local/notesdata, /home/notes, or /user/bin. You might want this location to be in your execution search path.

Filename	Description
rdxml.startnotes	This script calls the findDomino script, which sets up appropriate Domino operating system environment variables for the Notes driver. Then the rdxml.startnotes script launches the Remote Loader with the Notes driver parameters specified in the rdxml.confignotes file.
	If the location where the scripts are placed is not in a current search path, you might need to do one of the following:
	<ul> <li>Modify rdxml.startnotes to include a specific path to the findDomino script.</li> </ul>
	<ul> <li>Create a symbolic link for findDomino in /usr/bin.</li> </ul>
rdxml.stopnotes	This script stops the Remote Loader that is running the Notes driver.
findDomino	This script is called from the rdxml.startnotes script. When you launch rdxml.startnotes, this script sets up operating system environment variables that indicate the location of a UNIX* type of installation of Domino.
rdxml.confignotes (or wherever your configuration is	This configuration is referenced by rdxml.startnotes and rdxml.stopnotes scripts.
stored)	You might need to modify the rdxml.startnotes script to fit your environment. For example, if you change the name of the configuration file to a name other than rdxml.confignotes, you must revise the last line in the script.
	You might need to change the configuration ports that are referenced in this file.

These three sample scripts and the sample configuration file are provided to demonstrate how to launch the driver. You can start the Remote Loader for the driver using rdxml.startnotes, and stop the Remote Loader for the driver using rdxml.stopnotes.

The sample scripts work in a variety of situations. If they do not work in your environment, you might need to edit them appropriately. The sample scripts produce a Remote Loader trace log for the driver that can be used for troubleshooting.

- 7 Modify the scripts and configuration file to fit to your environment, as described in the table in Step 6.
- **8** Make sure that the three scripts noted in Step 6 have file access for execution (for example, rwxr-xr-x).
- **9** Set passwords for the driver and Remote Loader for the initial startup of the Remote Loader. For example,

These passwords must be the same as the Driver Password and Remote Password you specified when importing the driver configuration, as described in Section 2.4.2, "Creating a Driver Object and Importing the Driver Configuration," on page 25.

**10** Use rdxml.startnotes to start Remote Loader for the driver.

For example,

The *driver script directory* should be the directory where you placed the files in Step 6.

- **11** Start the driver using iManager.
  - **11a** In iManager, select *Identity Manager > Identity Manager Overview*.
  - **11b** Locate the driver in its driver set.
  - **11c** Click the driver status indicator in the upper right corner of the driver icon, then click *Start Driver*.

When the driver starts the first time, it does the following:

- Searches for the Domino Server (specified in the driver parameters at import time)
- Opens dsrepcfg.nsf. If that file does not exist, the driver creates dsrepcfg.nsf automatically, using the dsrepcfg.ntf database template that is provided with the driver.
- Writes to dsrepcfg.nsf the Publisher parameters and data specifying an appropriate update database file (usually named ndsrep.nsf), so that ndsrep can read them.

**NOTE:** If dsrepcfg.ntf is not found, or this initial dsrepcfg.nsf creation process fails, then the Publisher channel shuts down, and Step 12 cannot be completed.

**12** At the Domino Console, start the ndsrep task:

```
load ndsrep instance
```

The *instance* must be the driver name, or a unique instance name set up for this driver. If the name of your driver includes spaces, then you must put quotes around the name. After ndsrep is loaded, all TELL commands are issued to this instance of ndsrep using the instance name.

A task named DirXML or a similar name is now displayed in the Notes Task Viewer.

**13** After the initial configuration and startup has been validated, update the Domino notes.ini file so that ndsrep is loaded automatically.

#### For example:

```
ServerTasks=Update, Replica, Router, AMgr, AdminP, ndsrep notesdrv1, CalConn, Sched, HTTP, IMAP, POP3
```

If the name of your driver includes spaces, then you must put quotes around the name.

After the first successful startup, the Notes driver and ndsrep can be launched in any order that is convenient for your particular configuration.

**14** Activate the driver, as explained in Section 2.4.5, "Activating the Driver," on page 31.

Data synchronized by the driver should not be used outside of a test environment if you have not purchased the driver.

15 If you want to synchronize all objects at once, you must initiate the process as explained in Section 2.4.4, "Migrating and Resynchronizing Data," on page 30.

Otherwise, synchronization takes place on an object-by-object basis, the next time a change is made to the individual object.

**16** Most installations require some customization after installation to handle certification. Refer to Chapter 4, "Customizing the Driver," on page 39 for more information.

For troubleshooting tips, see "Troubleshooting Installation" on page 24.

#### **Troubleshooting Installation**

#### For Windows:

• The first time the driver runs, it searches for the Domino Server (specified in the driver parameters at import time), and tries to open dsrepcfg.nsf to write the publisher parameters that ndsrep reads. If dsrepcfg.nsf does not exist, the NotesDriverShim attempts to create dsrepcfg.nsf using the database template dsrepcfg.ntf that ships with the driver.

If dsrepcfg.nsf is successfully created, and contains data specifying an appropriate update database file (usually named ndsrep.nsf), then you can load ndsrep successfully at the Domino Console.

If dsrepcfg.ntf is not found, or this initial dsrepcfg.nsf creation process fails, then the Publisher channel shuts down, and you can't load the ndsrep task at the Domino console.

You can use a Notes client to create the dsrepcfg.nsf database using the dsrepcfg.ntf template. After doing so, modify the ACL so that the Notes driver user has manager-level access to the database.

For AIX, Linux, and Solaris:

- If you upgrade Domino after installing the driver, you need to do one of the following:
  - Check the following symbolic links, and re-create them manually if necessary.

Table 2-1 Links To Check

File to link	Symbolic link to create
Notes.jar	/usr/lib/dirxml/classes/Notes.jar
	Example:
	<pre>In -s /opt/lotus/notes/latest/your_platform/Notes.jar /user/lib/dirxml/classes/Notes.jar</pre>
ndsrep	/opt/lotus/notes/latest/your_platform/ndsrep
	Example:
	<pre>In -s /usr/lib/dirxml/rules/notes/ndsrep /opt/lotus/notes/latest/your_platform/ndsrep</pre>
dsrepcfg.ntf	/opt/lotus/notes/latest/your_platform/dsrepcfg.ntf
	Example:
	<pre>In -s /usr/lib/dirxml/rules/notes/dsrepcfg.ntf /opt/lotus/notes/latest/your_platform/dsrepcfg.ntf</pre>

The variable *your\_platform* represents the operating system. The following table shows the folder names:

**Table 2-2** Folder Names for the Different Operating Systems

Operating System	Folder Name	
AIX	ibmpow	
Linux	linux	
Solaris	sunspa	

Back up certain files, and then reinstall the driver. Reinstalling the driver shim re-creates
the symbolic links, but it overwrites certain files. If you have made changes to them, you
need to make a backup.

Back up the following files:

```
rdxml.startnotes
rdxml.stopnotes
findDomino
```

rdxml.confignotes (or wherever your configuration is stored)

After reinstalling the driver shim, copy the backups to their original location.

• The sample scripts provided (rdxml.startnotes, rdxml.stopnotes, findDomino) produce a Remote Loader trace log for the driver that can be used for troubleshooting.

# 2.4.2 Creating a Driver Object and Importing the Driver Configuration

Import the driver configuration file to create all necessary eDirectory objects, such as policies, style sheets, and filters, for basic driver configuration. Then you can modify the configuration to fit your specific business needs.

Follow the instructions in "Creating a Driver Object" in the *Novell Identity Manager 3.0.1 Administration Guide*.

Provide the following information and finish the wizard, then start the driver as described in Section 2.4.1, "Installing the Driver Shim," on page 18.

The sample driver configuration uses a new feature, flexible prompting, to reduce complexity when importing the configuration. If you choose to install the driver for use with the Remote Loader, an additional page is displayed in the wizard where you provide information for those features.

 Table 2-3
 Setting Up Role-Based Entitlements

Import Prompt	Description
Notes User ID	Enter the Notes User ID this driver will use for Notes Authentication (in fully qualified canonical form, such as cn=Notes Driver/o=Organization).
	This user ID needs administrative rights to the Input database as well as the Output database. We recommend that this ID be specifically created for the driver and used only by the driver. This prevents the driver from responding to changes made to Notes when this user is used.
Notes User ID File	Enter the full path (on the Domino Server) for the Notes User ID file associated with the Notes User this driver will use for Notes Authentication.
Notes User Password	Enter the password for the Notes User ID this driver will use when authenticating to Notes (for the above user ID file).
Domino Server	Enter the Name of the Domino server this driver will authenticate to (in fully qualified canonical form, such as cn=NotesServer/o=Organization).
Notes Server ID File	Enter the full path for the Notes Server ID file associated with the Notes Server this driver will authenticate to.
Default Notes Certifier ID File	Enter the full path (on the Domino server) for the Default Notes Certifier ID file the driver will use at the default certifier. This is usually the root certifier, but can be any certifier with adequate access.
Notes Fully Qualified Default Certifier Name	Enter the default Fully Qualified (typed) Notes Certifier name as found in the Notes Address Book (/o=acme)
Notes Default Certifier Name	Enter the default Notes Certifier name (typeless) as found in the Notes Address Book (/acme)
Default Notes Certifier Password	Enter the password for the Default Notes Certifier ID this driver will use when certifying new users.
	This password is secured using the Named Passwords feature. See Section 4.3, "Using Named Passwords," on page 42.
Notes Organization Name	Enter the name of the Notes Organization (This is usually the o= at the root of the tree).
Notes Domain	Enter the name of the Notes Domain.
Target Notes Database	Enter the relative path and file name (on the Domino server) for the target Notes Database. The path should be relative to the Domino server's data directory.
Is this database a Notes Address Book?	This driver has the capability of interfacing with different Notes databases.
Notes Changelog Database	Enter the relative path and file name (on the Domino server) for the Notes Changelog Database. This file is created by ndsrep. The path should be relative to the Domino server's data directory.

Import Prompt	Description
Certify new Notes Users?	Whether the driver should certify users added to Notes on the Subscriber channel.
Notes ID Storage Path	Enter the path (on the Domino server) where the driver should create new user ID files.
Notes Certification Log Database	Enter the relative path and file name (on the Domino server) for the Notes Certification Log Database. The path should be relative to the Domino server's data directory.
Update Address Book with user certifications?	Whether Notes should update the server entry in the Address Book when a new user is certified in Notes on the Subscriber channel.
Store User ID files in Notes Address Book?	Whether Notes should store new user IDs in the address book when certifying users added to Notes on the Subscriber channel.
Is the Domino Server a North American Server?	Is the Domino server this driver is binding to when certifying new users a North American Domino server? (This affects encryption levels.) Choose Yes for 128-bit encryption.
ID File Expiration Term	Enter the expiration term (in years) for ID files created by the driver when certifying users added on the Subscriber channel.
Notes Password Strength Value:	Enter the minimum password strength for new Notes user IDs (0 - 16).
Default Notes User ID Password:	Enter the default password for new Notes user IDs.
Default Notes HTTP Password	Enter the default HTTP password for new Notes users.
Create Mail File?	Whether the driver should create a mail file for users certified to Notes on the Subscriber channel.
Mail Database Storage Path:	Enter the relative path where the driver should create new Mail databases. The path should be relative to the Domino Data directory.
Notes Mail Database Template	Enter the relative path and filename (on the Domino server) for the Notes Mail Database Template this driver will use when creating new mail databases. The path should be relative to the Domino server's data directory.
Notes Mail Server	Enter the Name of the Notes Mail Server this driver will create new mail databases on (in fully qualified canonical form, such as cn=NotesServer/o=Organization).
Internet Mail Domain	Enter the Internet Mail Domain to be used when generating Internet e-mail addresses.
Deny Access Group Universal Note ID	Enter the Notes Universal ID for the Deny Access Group. This can be found on the Properties sheet for the Group in the Notes Client (32 characters long).
Publisher Channel Poll Rate	Enter the polling interval (in seconds) for how often the publisher channel will check the change log for updates.
Publisher placement destination path for USERS	Enter the eDirectory path where eDirectory users will be created.

Import Prompt	Description
Publisher placement destination path for GROUPS	Enter the eDirectory path where eDirectory groups will be created.
Subscriber placement source path for USERS	Enter the eDirectory path (subtree root) where user changes will be detected.
Subscriber placement source path for GROUPS:	Enter the eDirectory path (subtree root) where group changes will be detected.
Detect Event Loop Back?	Select Yes to prevent event loopback from occurring, or No to allow event loopback.
NDSREP Schedule Units	Enter the schedule units for the ndsrep polling interval.
NDSREP Schedule Value	Enter the schedule value for the ndsrep polling interval.
DNFormat	Enter the distinguished name format used by the Publisher channel.
NDSREP Domino Console Trace Setting	Enter the Domino console trace setting.
Check Attributes	Whether all attributes shoulc be checked for each object event.
Write Time Stamps	Whether driver time stamps should be written to each synchronized object.
Password Failure Notification User	Enter the user's name who should be notified in case of password failure.
Enable Entitlement features	Select Yes if you are using the Entitlements Driver and want to include the entitlement features provided by this driver configuration.
	This is a design decision. Don't select Yes for this option unless you have reviewed the information about Entitlements in the <i>Novell Identity Manager 3.0.1 Administration Guide</i> .
Force Remote Loader Connection	Configure the driver for use with the Remote Loader service by selecting Remote, or select Local to configure the driver for local use. For information on how to decide, see Section 2.1, "Where to Install the Driver," on page 15.
Remote Host Name and Port	Remote driver configuration only.
	Enter the Host Name or IP address and port number where the Remote Loader Service has been installed and is running for this driver. The default port is 8090.
Driver Password	Remote driver configuration only.
	The Driver object password is used by the Remote Loader to authenticate itself to the Metadirectory server. It must be the same password that is specified as the Driver object password on the Identity Manager Remote Loader.

Import Prompt	Description
Remote Password	Remote driver configuration only.
	The Remote Loader password is used to control access to the Remote Loader instance. It must be the same password that is specified as the Remote Loader password on the Identity Manager Remote Loader.

#### 2.4.3 Configuring Database Replication Using Ndsrep

Complete the following sections to configure replication using ndsrep:

- "Setting Up Ndsrep" on page 29
- "Loading and Controlling Ndsrep" on page 29
- "Setting Up Multiple Instances of Ndsrep" on page 30

#### **Setting Up Ndsrep**

- 1 Review the information about ndsrep and starting the driver in the steps in Section 2.4.1, "Installing the Driver Shim," on page 18.
- 2 Make sure you have copied the necessary files for your platform, as described in Section 2.4.1, "Installing the Driver Shim," on page 18.
- **3** (Windows only) Add c:\lotus\domino (or the appropriate Domino executable folder) to your system path, then reboot the computer.
- **4** Before trying to load ndsrep, make sure that the Identity Manager Driver for Lotus Notes has been started at least once.

#### **Loading and Controlling Ndsrep**

You always load and run ndsrep at the server console on the Domino server. The ndsrep program creates an output database (by default, ndsrep.nsf), detects changes in the address book in the Domino server (or other Notes database), and copies these changes to the output database.

• Loading ndsrep: Load ndsrep in the Domino Server console.

Add ndsrep to the ServerTasks = statement in notes.ini and restart the Domino server,

#### For example:

ServerTasks=Update, Replica, Router, AMgr, AdminP, ndsrep notesdrv1, CalConn, Sched, HTTP, IMAP, POP3

or

Type the following in the Notes Server Console window:

load ndsrep instance

In either case, if the name of your driver includes spaces, then you must put quotes around the name.

• Controlling ndsrep: Use the TELL commands described in the table.

The following ndsrep TELL commands allow for immediate ndsrep actions. These commands are not stored; ndsrep simply executes the action.

TELL Command	Description
RefreshConfig	Reads ndsrep configuration information from the configuration store.
Replicate	Forces an immediate check for updated notes.
Resume	Sets ndsrep to resume processing timer events and replication.
ShowConfig	Displays ndsrep configuration settings in the console window.
ShowFilter	Displays the first 240 characters of the filter for updated records that ndsrep is using when publishing.
Suspend	Suspends activity until the Resume command is given.

#### Setting Up Multiple Instances of Ndsrep

You can run multiple instances of ndsrep to support multiple drivers running against a single Domino server. You must specify the appropriate driver instance name as a parameter when loading ndsrep. By default, this instance name is the name of the driver.

If the name of your driver includes spaces, then you must put quotes around the name.

Consider the following important issues with setting up ndsrep and multiple instances:

• To load ndsrep, you must use the appropriate instance name: load ndsrep *instance* 

ndsrep is loaded and referenced using TELL commands by the value of *instance*.

- By default, ndsrep stores configuration data for instances in a common Notes database (dsrepcfg.nsf).
- When modifying notes.ini to auto load multiple instances of ndsrep, simply insert ndsrep *instance* multiple times on the ServerTask line of notes.ini.

#### For example:

```
ServerTasks=Update, Replica, Router, AMgr, AdminP, ndsrep notesdrv1, ndsrep notesdrv2, CalConn, Sched, HTTP, IMAP, POP3
```

• For custom configurations, you can tell ndsrep to utilize a different configuration database. To do so, use the ndsrep configuration parameter and load ndsrep using the -f filename parameter as noted in ndsrep configuration database and ndsrep configuration instance in the parameters table in Chapter 4, "Customizing the Driver," on page 39

#### 2.4.4 Migrating and Resynchronizing Data

Identity Manager synchronizes data as the data changes. If you want to synchronize all data immediately, you can choose from the following options:

- Migrate Data from eDirectory: Allows you to select containers or objects you want to
  migrate from the Identity Vault to an application. When you migrate an object, the
  Metadirectory engine applies all of the Matching, Placement, and Create rules, as well as the
  Subscriber filter, to the object.
- Migrate Data into eDirectory: Allows you to define the criteria Identity Manager uses to migrate objects from an application into Novell the Identity Vault. When you migrate an object,

the Metadirectory engine applies all of the Matching, Placement, and Create rules, as well as the Publisher filter, to the object. Objects are migrated into the Identity Vault using the order you specify in the Class list.

• Synchronize: The Metadirectory engine looks in the Subscriber class filter and processes all objects for those classes. Associated objects will be merged. Unassociated objects are processed as Add events.

To use one of the options explained above:

- 1 In iManager, select *Identity Manager > Identity Manager Overview*.
- **2** Locate the driver set containing the Notes driver, then double-click the driver icon.
- **3** Click the appropriate migration button.

#### 2.4.5 Activating the Driver

Activation must be completed within 90 days of installation, or the driver will not run.

For activation information, refer to "Activating Novell Identity Manager Products" in the *Identity Manager 3.0.1 Installation Guide*.

**Upgrading** 

- Section 3.1, "Upgrading on Windows," on page 33
- Section 3.2, "Upgrading on AIX, Linux, or Solaris," on page 36

#### 3.1 Upgrading on Windows

- Section 3.1.1, "Preparing to Upgrade," on page 33
- Section 3.1.2, "Upgrading the Driver Shim and Configuration from 1.x to Identity Manager 3," on page 33
- Section 3.1.3, "Upgrading the Driver Shim and Configuration from 2.x to 3.0," on page 36

#### 3.1.1 Preparing to Upgrade

The new driver shim is intended to work with your existing driver configuration, but this assumes that your driver shim and configuration have the latest fixes. Make sure you have reviewed all TIDs and product updates for the version of the driver you are using.

# 3.1.2 Upgrading the Driver Shim and Configuration from 1.x to Identity Manager 3

1 When you install Identity Manager 3, make sure you select the option to install the utilities (the default). This installs the movecfg.exe utility that is necessary for upgrading, noted in Step 5. Instructions are in "Installing the Connected System Option on Windows" or "Installing the Connected System Option on UNIX/Linux" in the *Identity Manager 3.0.1 Installation Guide*.

```
You can also download the movecfg.exe file from the Utilities directory on the Identity_Manager_3_Linux_NW_Win.iso or the Identity Manager 3 Unix.iso image CDs.
```

2 You can install the upgraded driver shim at the same time you install the Metadirectory engine, or after. To install the driver shim after, run the Identity Manager installation program and select the Identity Manager Driver for Notes (called Notes.xml). Instructions are in "Installing Identity Manager" in the *Identity Manager 3.0.1 Installation Guide*.

The new driver shim replaces the previous one.

**IMPORTANT:** Running a new driver with a previous version of the Metadirectory engine is not supported.

- **3** Convert your existing configuration to 3.0 format, using the wizard. See "Upgrading" in the *Identity Manager 3.0.1 Installation Guide*.
- **4** Unload all instances of ndsrep from the Domino Server Console.
- **5** Use the movecfg. exe utility to upgrade the placement of configuration parameters, as described in Appendix A, "Using the Movecfg.exe Utility," on page 89.

You can use a batch file such as the example provided in Section A.2, "Example Batch File to Use," on page 90.

The movecfg.exe utility is installed in the \utilities directory if you select the option to install Utilities during Identity Manager installation.

For example, on Windows:

C:\novell\nds\DirXMLUtilities

**IMPORTANT:** If you have multiple instances of ndsrep, you must run movecfg.exe once for each instance, using the -ndsrep parameter.

- **6** (Windows only) Copy the following files:
  - Manually copy ndsrep.exe from its installed location (\novell\NDS) to the Domino server executable folder (\Lotus\Domino).
  - Manually copy dsrepcfg.ntf from its installed location (\novell\NDS) to the Domino server data folder (\Lotus\Domino\Data).
    - On Linux and Solaris, the package install places it in the /usr/lib/dirxml/rules/notes folder and creates a symbolic link for it in the /local/notesdata folder.
  - Manually copy the Notes.jar file from the \Lotus\Domino directory to the \Novell\nds\lib directory (or the \novell\remote\loader\lib directory if running Remote Loader).

This is necessary for product updates as well as new releases.

7 If you have previously modified the Domino server's notes.ini file ServerTasks line to auto-load ndsrep (as described in "Loading and Controlling Ndsrep" on page 29), you must add an instance name (by default, the driver name) as a parameter to ndsrep.

#### For example:

```
ServerTasks=Router, Replica, Update, Amgr, AdminP, maps, ndsrep notesdrv1, ndsrep notesdrv2
```

If you have multiple instances of ndsrep, you must do this for each instance. If the name of your driver includes spaces, then you must put quotes around the name.

For example, if the driver name is CN=Notes Driver, your notes.ini might look like the following:

```
ServerTasks=Router,Replica,Update,Amgr,AdminP,maps, ndsrep
notesdrv1,ndsrep "Notes Driver"
```

- **8** Restart ndsrep, or restart the Domino server.
- **9** Stop and restart eDirectory<sup>™</sup> and the driver for the system to use the new driver shim file.
  - At this point, the driver should work even though you have not made changes to the configuration other than converting it to Identity Manager 3 format.
- **10** If you want to make changes to the driver configuration, such as using named passwords or global configuration values (GCVs) for multiple certifiers, you can do so.

See Chapter 4, "Customizing the Driver," on page 39.

**NOTE:** For an example of the new parameters and new features such as named passwords, review the sample driver configuration.

11 If you are using Lotus Notes 6.0.3, and you want to use the AdminP process features, you need to turn them on by adding the driver parameter named Allow Domino AdminP Support to the Subscriber Options.

#### For example:

```
<allow-adminp-support display-name="Allow Domino AdminP
Support">True</allow-adminp-support>
```

See Allow Domino AdminP Support in Section 4.4.2, "Subscriber Options," on page 45.

12 Consider adding the sample policy named Notes - Return Email Address (NotesReturnEmail.xml) to your driver configuration, in the Command Transformation policy set on the Subscriber channel.

When a new user in the Identity Vault is synchronized to Notes, this policy is used to write back the Notes e-mail address to the Identity Vault. In 1.x versions of the driver, this functionality was done differently. If you want to continue to have this functionality with the 3.0 driver version, you must use the new policy.

See "Importing a Policy to Write Back the Notes E-Mail Address for New Users" on page 35.

- **13** Activate the driver. See Section 2.4.5, "Activating the Driver," on page 31.
- **14** When your changes are complete, restart the driver.

#### Importing a Policy to Write Back the Notes E-Mail Address for New Users

This policy is designed to generate an e-mail address for user Add events on the Subscriber channel. It provides backwards compatibility for functionality that existed in the previous version of the driver. In 1.x versions of the driver, this functionality was done differently.

If you want to continue to have this functionality when upgrading a driver configuration to the 3.0 driver version, you must use the new policy. (The policy is already a part of the sample configuration provided with the 2.1 version of the driver.)

The default form of the e-mail address provided by the policy is a concatenation of the Given Name, a space, the Surname, and domain name entered when importing the policy. For example: Joe User@mydomain.com. The policy can be edited after import to customize the form of the e-mail address as needed.

- **1** In iManager, click *Identity Manager Utilities > Import Drivers*.
- **2** Select the driver set where your existing driver resides.
- **3** In the list of driver configurations that appears, scroll down to the *Additional Policies* heading, then select only the item labeled *Notes Return Email Address*. Click *Next*.
  - A list of import prompts appears.
- **4** Select the name of your existing driver.
- **5** Specify the domain name to be used as the suffix for the e-mail address generated. For example, mydomain.com.
- 6 Click Next.

A page appears with the message "A driver named *your\_driver\_name* already exists in the driver set. Select one of the options below."

- **7** Select the following items:
  - Update Only Selected Policies in That Driver

- Return Email Address (Subscriber DirXML Script)
- **8** Click *Next*, then click *Finish* to complete the wizard.

At this point, the new policy has been created as a policy object under the driver object, but is not yet part of the driver configuration. To link it in, you must manually insert it into a policy set.

- **9** Insert the new policy into the Command Transformation policy set on the Subscriber Channel.
  - **9a** Click *Identity Manager > Identity Manager Overview*. Select the driver set for the driver you are updating.
  - **9b** Click the driver you just updated. A page opens showing a graphical representation of the driver configuration.
  - **9c** Click the icon for the Command Transformation on the Subscriber channel.
  - **9d** Click *Insert* to add the new policy. In the Insert page that appears, click *Use an Existing Policy*, then browse for and select the new policy object. Click *OK*.
  - **9e** If you have more than one policy in the policy set, use the arrow buttons to move the new policy to the correct location in the list.

### 3.1.3 Upgrading the Driver Shim and Configuration from 2.x to 3.0

- 1 Stop the driver.
- **2** Install the new driver shim.
- **3** If you are using Lotus Notes 6.0.3 or later, and you want to use the AdminP process features, you need to turn them on by adding the driver parameter named Allow Domino AdminP Support to the Subscriber Options.

#### For example:

```
<allow-adminp-support display-name="Allow Domino AdminP
Support">True</allow-adminp-support>
```

See Allow Domino Admin Support in Section 4.4.2, "Subscriber Options," on page 45.

- **4** Consider adding the Publisher Options driver parameter named NDSREP Console Trace Level to your driver configuration. See NDSREP Console Trace Level in Section 4.4.3, "Publisher Options," on page 50.
- **5** See Chapter 4, "Customizing the Driver," on page 39 for other new driver configuration parameters that might be useful for your driver configuration.
- **6** When your changes are complete, restart the driver.

#### 3.2 Upgrading on AIX, Linux, or Solaris

Section 3.2.1, "Upgrading Domino," on page 36

#### 3.2.1 Upgrading Domino

For AIX, Linux, and Solaris, if you upgrade Domino after installing the driver, you need to do one of the following:

• Check symbolic links, and re-create them manually if necessary.

• If you have customized the files rdxml.startnotes, rdxml.stopnotes, findDomino, or rdxml.confignotes, back them up and then reinstall the driver. Reinstalling the driver shim re-creates the symbolic links, but it overwrites those files.

For more information, see "Troubleshooting Installation" on page 24.

# **Customizing the Driver**

4

This section explains how to customize your driver for your specific business rules.

- Section 4.1, "Determining eDirectory Object Placement When a Notes Object is Moved," on page 39
- Section 4.2, "Automatically Determining Which Certifier to Use," on page 41
- Section 4.3, "Using Named Passwords," on page 42
- Section 4.4, "Using Driver Parameters," on page 42
- Section 4.5, "Custom Driver Parameters," on page 53
- Section 4.6, "Additional Sample Policies," on page 83
- Section 4.7, "Synchronizing a Database Other Than Names.nsf," on page 84
- Section 4.8, "Schema Mapping Type and Form," on page 84
- Section 4.9, "Move/Rename," on page 84
- Section 4.10, "Tell AdminP Commands," on page 87

**NOTE:** When you customize data synchronization, you must work within the supported standards and conventions for the operating systems and accounts being synchronized. Data containing characters that are valid in one environment, but invalid in another, causes errors.

# 4.1 Determining eDirectory Object Placement When a Notes Object is Moved

A Move is done by Identity Manager relative to either a parent's association key or dest-dn. Containment in Notes is purely logical, and as such, an OU in Notes never has an association to the Identity Vault, so it isn't possible to provide a parent association. Also, the driver shim has no reference of the eDirectory™ namespace or containment, so it can't provide a parent dest-dn (destination DN). Therefore, an appropriate parent dest-dn must be provided by a policy.

Notes - Move Sample is a sample Publisher channel policy that contains logic to determine eDirectory object placement when an associated Notes object is moved.

This policy is designed to provide the same functionality contained in the sample style sheet named placemove.xsl, provided with earlier versions of the driver.

On a move, the dest-dn is set for a particular source dn. After importing the Notes - Move Sample policy, you have a policy defining a single mapping between source and destination containers. You can define additional mappings by editing the resulting policy.

**NOTE:** Because of the way Notes manages CN and DN in FullName, it is not possible to distinguish between a Move and a Rename event in ndsrep. Therefore, when ndsrep determines that the FullName item has changed, it generates both a Move and a Rename event.

To add the Notes - Move Sample policy to your driver configuration:

1 In iManager, click *Identity Manager Utilities > Import Drivers*.

- **2** Select the driver set where your existing driver resides.
- **3** In the list of driver configurations that appears, scroll down to the Additional Policies heading, then select only the item labeled *Notes Move Sample*. Click *Next*.

A list of import prompts appears.

- **4** Select the name of your existing Notes driver.
- **5** Specify one container in Notes and the corresponding container in the Identity Vault.

The import process uses this information to create one pair of "mappings" between Notes containers and eDirectory containers.

- **5a** Specify the source container from Notes where the move originates.
  - For example, \MyOrganization\Engineering\Testing.
- **5b** Browse for and select the destination container where the object should be moved to. For example, Testing.MyOrganization.
- 6 Click Next.

A page appears with the message "A driver named *your\_driver\_name* already exists in the driver set. Select one of the options below."

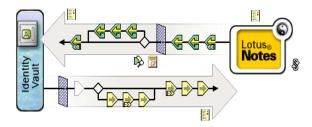
- **7** Select the following:
  - Update Only Selected Policies in That Driver
  - ◆ Move Sample (Subscriber DirXML Script)
- **8** Click *Next*, then click *Finish* to complete the wizard.

At this point, the new policy has been created as a policy object under the driver object, but is not yet part of the driver configuration. To link it in, you must manually insert it into a policy set.

**9** Insert the new policy in a policy set on the Publisher Channel.

Place it where it would be appropriate in your driver configuration. For example, in the Input Transformation or Event Transformation policy set.

- **9a** Click *Identity Manager > Identity Manager Overview*. Select the driver set for the driver you are updating.
- **9b** Click the driver you just updated. A page opens showing a graphical representation of the driver configuration.



- **9c** Click the icon for the policy set on the Publisher Channel.
- **9d** Click the *Plus* button to add the new policy. In the Create Policy page, click *Make a copy of an existing policy*, then browse for and select the new policy object. Click *OK*.

- **9e** If you have more than one policy in the policy set, use the arrow buttons \(\text{\texts}\) to move the new policy to the correct location in the list.
- 10 Complete the "mappings" for all the containers in Notes and eDirectory by editing the XML for the policy.

Follow the example of the first pair that is created for you with the container names you provided in Step 5.

### 4.2 Automatically Determining Which Certifier to Use

Because most Notes environments use more than one certifier, NotesDriverShim can be configured to use different certifiers through policy. The sample Cert.xsl style sheet, located in the dirxml\drivers\lotusNotes\rules directory on the

Identity Manager 3 Linux NW Win.iso CD, is an Output Transformation style sheet that contains logic to determine which Notes Certifier to use based on the src-dn attribute on the <add> tag. Another example provided is the NotesCertifierSelectionSampleSS.xsl sample style sheet. (These are installed if you install from the Identity Manager 3 Unix.iso CD.)

You can edit the choose/when statements to model your Notes system certifier structure. If using only the root certifier is acceptable, then using Cert.xsl is not necessary, because the driver parameters screen can contain the information for the root certifier.

To use Cert.xsl in your environment, first, change the existing xsl:when statements to match your configuration.

```
<xsl:when test="string($dn) = '\dirxml-ds\provo\notes\eng'">
  <xsl:attribute name="cert-id">c:\lotus\domino\data\eng.id/
xsl:attribute>
  <xsl:attribute name="cert-pwd">certify2eng</xsl:attribute>
  <xsl:attribute name="user-pwd">new2notes</xsl:attribute</pre>
</xsl:when>
```

Add as many xsl:when statements as you need to model your organization's certification structure.

Then change the cert-id and cert-pwd in xsl:otherwise to match your root certifier information.

```
<xsl:otherwise>
  <xsl:attribute name="cert-id">d:\lotus\domino\data\cert.id
xsl:attribute>
  <xsl:attribute name="cert-pwd">certify2notes</xsl:attribute>
</xsl:otherwise>
```

Cert.xsl communicates the certifier information by adding attributes to the add tag in the XML document. If NotesDriverShim doesn't find these attributes, it uses the root certifier information from the driver Parameters passed during initialization.

NOTE: Cert.xsl also shows how to override several other parameters for the driver. See Section 4.5, "Custom Driver Parameters," on page 53 for more information about these parameters.

## 4.3 Using Named Passwords

The Metadirectory engine provided with Identity Manager 2 added a new way of securing the passwords you need to use in your driver policies. The sample driver configuration shows an example and it still works with Identity Manager 3.

One use for this feature would be to store a password for each of your Notes certifiers. For example, if you had certifiers for Human Resources, Engineering, and Marketing, you could use named passwords to securely store the password for each respective certifier ID file in your driver parameters. In the driver configuration, you would click the *Edit XML* button and specify driver parameters something like this:

```
<cert-id-password display-name="Certifier Password" is-
sensitive="true" type="password-ref">HR</cert-id-password>
<cert-id-password display-name="Certifier Password" is-
sensitive="true" type="password-ref">Engineering</cert-id-password>
<cert-id-password display-name="Certifier Password" is-
sensitive="true" type="password-ref">Marketing</cert-id-password>
```

When you return to the graphical interface for the driver parameters, each of these passwords has prompts to enter the password and confirm the password. These passwords are stored, encrypted, with the driver configuration. You can reference these passwords by name in your driver policies.

For an example of how to use named passwords, see the sample configuration and also the NotesCertifierSelectionSampleSS.xsl sample style sheet, listed in Section 4.6, "Additional Sample Policies," on page 83.

# 4.4 Using Driver Parameters

To change driver parameters, edit the Driver Parameters page.

- 1 In iManager, click *Identity Manager > Identity Manager Overview*.
- **2** Find the driver in its driver set.
- **3** Click the driver icon to display the Driver Overview page.
- **4** Click the driver icon again to display the Modify Object page.
- **5** Click *Driver Configuration*.
- **6** Use the information in the tables that follow to upgrade driver parameters.
- Section 4.4.1, "Driver Options," on page 42
- Section 4.4.2, "Subscriber Options," on page 45
- Section 4.4.3, "Publisher Options," on page 50

#### 4.4.1 Driver Options

The third column of the following table contains XML text that you can paste into the Driver Parameters XML Editor. The XML text represents exactly what is necessary to display the parameters. You can also place the information that you see under the Description heading within the <description> </description> parameters.

 Table 4-1
 Driver Parameters

Parameter	Description	XML to Define Driver Parameters
Default Certifier ID file	The default Notes Certifier ID file that is used to register user objects in the Notes Address Book. The full path of the file should be represented with respect to the operating system hosting Domino.	<pre><definition display-="" name="cert-id- file" type="string"></definition></pre>
		<pre><value>c:\lotus654\domino\data \ids\people\ndriver.id</value></pre>
Default Certifier ID password	The default Notes Certifier ID file password that is used to register user objects in the Notes Address Book.  When using the type="password-ref" attribute of this parameter, the password is	<pre><definition <="" display-="" is-="" name="cert-id-password" pre="" sensitive="true"></definition></pre>
	encrypted and securely stored with the Driver Configuration. When securely stored in this fashion, the password can then be	<pre>type="password-ref"&gt; <description> <!-- description--></description></pre>
	referenced by the Metadirectory engine or a driver using the key name specified. (In this example, defaultCertPwd.)	<pre><value>defaultCertPwd<!-- value--> <pwd-value removepwd="false"> </pwd-value></value></pre>
Directory File or Input Database	The file name of the database to be synchronized with the Identity Vault. Specify this item without full path information.	<pre><definition display-="" name="directory-file" type="string"> <description> </description></definition></pre>
		<pre><value>names.nsf</value> </pre>
Notes Address Book	Specify True if the input database (directory file) is a Notes Address book; otherwise, specify False.	<pre><definition display-="" name="is- directory" type="boolean"> <description> </description></definition></pre>
		<pre><value>true</value> </pre>
Notes Domain Name	The name of the Notes domain the driver is running against. It might be different from the Notes Organization name, and therefore can't be derived from the server name.	<pre><definition display-="" name="notes-domain" type="string"> <description> </description></definition></pre>
		<pre><value>PROVO1</value> </pre>

Parameter	Description	XML to Define Driver Parameters
Server ID File	The Notes Server ID file associated with the Notes Server this driver authenticates to (This is optional). The full path of the file should be represented with respect to the operating system hosting Domino. This ID file need not be the server ID file. It can actually be an ID file that has no password (and need not have any access anywhere).	<pre><definition display-="" name="server-id- file" type="string"></definition></pre>
		\server.id
Update File or ndsrep polling cache	The filename of the database used to cache database changes that need to be published to the Identity Vault. The default is ndsrep.nsf. Specify this item without full path information.	<pre><definition display-="" name="update-file" type="string"> <description> </description></definition></pre>
	The Driver's Domino add-in process ndsrep creates this database. Within this database, filtered updates are cached before being consumed by the Notes Driver's publisher.	<pre><value>ndsrep.nsf</value> </pre>
Notes User ID file	The Notes User ID file associated with the Notes User this driver represents (this is required). The full path of the file should be represented with respect to the operating system hosting Domino. The password associated with this user ID file is input in the following user interface section: <i>Driver Configuration &gt; Authentication &gt; Specify</i>	<pre><definition display-="" name="user-id- file" type="string"></definition></pre>
	the application password.	<pre>definition&gt;</pre>
Janitor Cleanup Interval	Janitor cleanup checks for and releases resources that might have been orphaned by unfinished query-ex sequences. This interval determines how often to perform this janitorial service.	<pre><definition display-="" name="janitor-cleanup- interval" type="integer"> <description> </description></definition></pre>
		<pre><value>30</value> </pre>
Allow Document Locking	Enables Notes database documents to be locked by the Notes Driver Shim if they are being modified. This parameter is only effective using Notes 6.5 or higher and the Notes database has the Allow document locking check box enabled.	<pre><definition display-="" name="allow- document-locking" type="boolean"> <description> </description></definition></pre>
		<pre><value>true</value> </pre>

#### 4.4.2 Subscriber Options

The third column of the following table contains XML text that you can paste into the Driver Parameters XML Editor. The XML text represents exactly what is necessary to display the parameters. You can also place the information that you see under the Description heading within the <description> </description> parameters.

 Table 4-2
 Subscriber Channel Parameters

Parameter	Description	XML to Define Driver Parameters
Allow Domino AdminP Support	Specifies that AdminP features can be used. AdminP features are supported only for users of Lotus Notes 6.0.3 or later.	<pre><definition display-="" name="allow- adminp-support" type="boolean"> <description> </description></definition></pre>
	If you have Lotus Notes 6.0.3 or later and you want to use the AdminP features, you must add this parameter and set it to true.	
	If the parameter does not exist in the driver parameters, the default setting is false.	<pre><value>true</value> </pre>
	This parameter can be overridden on a command-by-command basis using the attribute Allow AdminP Support described in Section 4.5, "Custom Driver Parameters," on page 53.	
Certify/Register Users	This parameter indicates the default behavior for the driver regarding Notes user account creation. Yes indicates the driver by default attempts to register users in the Notes Address book by certifying them and creating an ID file for each user when add events are received.	<pre><definition display-="" name="cert- users" type="boolean"> <description> </description> <value>true</value></definition></pre>
	This default setting can be overridden using the XML <certify-user> attribute tag.</certify-user>	<pre></pre>
Create Mail DB	This parameter indicates the default behavior for the driver regarding e-mail account creation. True indicates the driver by default attempts to create a Notes Mail database when adding a new user.  This default setting can be overridden	<pre><definition display-="" name="create-mail" tmpid="238" type="boolean"> <description> </description></definition></pre>
	using the XML attribute tag <create- mail&gt;.</create- 	<pre><value>true</value> </pre>

Parameter	Description	XML to Define Driver Parameters
Default HTTP Password	The default Notes Web (HTTP) password set for newly created Notes users.  This default setting can be overridden using the XML attribute tag <user-pwd>.</user-pwd>	<pre><definition display-="" name="default- http-password" type="string"> <description> </description></definition></pre>
		<pre><value>notesweb</value> </pre>
Default Notes Password	The default Notes User ID password for newly created Notes users.  This default setting can be overridden using the XML attribute tag <user-pwd>.</user-pwd>	<pre><definition display-="" name="default- password" type="string"> <description> <!-- description--> <value>notes</value></description></definition></pre>
		<pre></pre>
Expiration Term	The default expiration term (specified in years) for newly created Notes User ID files.  This default setting can be overridden using the XML attribute tag <expireterm>.</expireterm>	<pre><definition display-="" name="expiration-term" type="integer"> <description> </description></definition></pre>
		<pre><value>2</value> </pre>
Failed Command Reply Status	If the parameter does not exist in the driver parameters, the default setting is Retry.  Possible values are Success, Warning, Error, Retry, or Fatal.  This parameter can be used when	<pre><definition display-="" name="retry- status-return" type="enum"> <description> </description></definition></pre>
	troubleshooting critical situations.	<pre><value>retry</value> </pre>
ID File Storage Location	This parameter specifies the default Notes User ID file (certifier) storage location that is used when user objects are registered and ID files are created. New ID files are placed in this location. The full path of the folder should be represented in relationship to the operating system hosting Domino.	<pre><definition display-="" name="cert-path" type="string"> <description> </description></definition></pre>
	This default setting can be overridden using the XML attribute tag <user-id-path>.</user-id-path>	<pre><value>c:\lotus654\domino\data \ids\people</value> </pre>

Parameter	Description	XML to Define Driver Parameters
Internet Mail Domain Name	Obsolete in version 2.0.	<pre><definition display-="" name="account.email.Inte rnetDomainName" type="string"> <description> </description> <value><variable-ref name="base.Notes.INetMail lDomain" var-=""></variable-ref></value></definition></pre>
Add User E-Mail ACL Level	The default ACL setting for the newly created mail file of newly created user objects. Valid values are NOACCESS, DEPOSITOR, READER, AUTHOR, EDITOR, DESIGNER, and MANAGER. When no ACL setting is specified, the setting defaults to MANAGER.	<pre><definition display-="" name="account.email.acls etting" type="enum"> <description> </description></definition></pre>
	This default setting can be overridden	description>
	<pre>using the XML attribute tag <mailfile- acl-level&gt;.</mailfile- </pre>	<pre><value>default</value> </pre>
User Mail File Storage Location	A mail storage path relative to the Domino data storage location where mail files are stored if created by the driver. For example, if the parameter is set to "mail," then new mail files created by the driver on the Domino server (running on Linux) are stored in the /local/notesdata/mail folder.	<definition <br="" display-name="User&lt;br&gt;Mail File Storage Location">name="mailfile-path" type="string"&gt; <description> </description></definition>
		<value>mail</value> 
Notes Password Strength	The default minimum password length (0-16 characters) for newly created Notes User ID files.	<pre><definition <="" display-="" name="Notes Password Strength (0 - 16)" pre=""></definition></pre>
	This default setting can be overridden using the XML attribute tag <minimum-pwd-len>.</minimum-pwd-len>	<pre>name="minimum-pwd-len" type="integer"&gt; <description> <!-- description--></description></pre>
		<pre><value>2</value> </pre>
Is Domino Server North American?	North American Server User ID file (certifier) property. Set to True only if the Domino Server is in North America. According to Domino registration requirements, this attribute is required for user ID file creation.	<pre><definition display-="" name="north-american- flag" type="boolean"> <description> </description></definition></pre>
		<pre><value>true</value> </pre>

Description	XML to Define Driver Parameters
The DN of the Domino Server that holds the mail files.  This default setting can be overridden using the XML <mailserver> element as a child of the add event element.</mailserver>	<pre><definition display-="" name="mail-server" type="string"> <description> </description></definition></pre>
	<pre><value>CN=blackcap/ O=novell</value> </pre>
If the parameter does not exist in the driver parameters, the default value is warning.  Possible values are success, warning, error, retry, or fatal.	<pre><definition display-="" name="notes-save-fail-&lt;/pre&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;This parameter can be used when troubleshooting and is overwritten by &lt;pre&gt;&lt;retry-status-return&gt;&lt;/pre&gt;&lt;/td&gt;&lt;td&gt;&lt;pre&gt;action" type="enum"> <description> <!-- description--> <value>warning</value> </description></definition></pre>
Set the parameter to true to allow the Notes driver to set or to change the Web (HTTP) password attribute on user objects. Set the parameter to false to disallow the Notes driver from setting or changing the web (HTTP) password attribute on user objects. The default setting is true.	<pre><definition display-="" name="allow-http- password-set" type="boolean"> <description> </description> <value>true</value> </definition></pre>
The Notes Certification log file that is used to record the registration of user objects in the Notes Address Book. Specify this item without full path information.	<pre><definition> <definition display-="" name="cert-log" type="string"> <description> </description> <value>certlog.nsf</value></definition></definition></pre>
	The DN of the Domino Server that holds the mail files.  This default setting can be overridden using the XML <mailserver> element as a child of the add event element.  If the parameter does not exist in the driver parameters, the default value is warning.  Possible values are success, warning, error, retry, or fatal.  This parameter can be used when troubleshooting and is overwritten by <retry-status-return>  Set the parameter to true to allow the Notes driver to set or to change the Web (HTTP) password attribute on user objects. Set the parameter to false to disallow the Notes driver from setting or changing the web (HTTP) password attribute on user objects. The default setting is true.  The Notes Certification log file that is used to record the registration of user objects in the Notes Address Book. Specify this item</retry-status-return></mailserver>

Parameter	Description	XML to Define Driver Parameters
Store User ID in Address Book	This flag indicates the default behavior for the driver regarding attaching user ID files on their respective user objects in the Notes Address Book at registration time.	<pre><definition <="" display-="" name="store-id-ab-flag" pre=""></definition></pre>
	Setting the flag to True causes registered user objects in the Notes Address Book to be created with an attached user ID file.	<pre>type="boolean"&gt; <description> <!-- description--></description></pre>
	Setting the flag to False causes registered user objects in the Notes Address Book to be created without an attached user ID file.	<pre><value>true</value></pre> /definition>
	This default setting can be overridden using the XML attribute tag <store-useridfile-in-ab>.</store-useridfile-in-ab>	
E-Mail File Template	The .ntf database template to be used when creating a new mail database when the driver creates a user e-mail account. This template must be accessible to the Domino server in the Domino data folder.	<pre><definition display-="" name="mailfile-template" type="string"> <description> </description></definition></pre>
		<pre><value>mail654.ntf</value> </pre>
Add Registered Users To Address Book	This parameter indicates the default behavior for the driver regarding placing registered user objects in the Notes Address Book. Setting the flag to True causes registered users to be placed in the address book. Setting the flag to False causes users to be registered (meaning that a certifier ID file is created for the user) without the user object being placed into the Notes Address Book.	<pre><definition display-="" name="update-ab-flag" type="boolean"> <description> </description> <value>true</value> </definition></pre>
	This default setting can be overridden using the XML attribute tag <update-addressbook>.</update-addressbook>	
Document Lock Failure Action	Specify the action (document return code) the Notes Driver will return to the Metadirectory engine if the Notes Driver fails to acquire a document lock. The value choices are retry (default), warning, error, fatal, and success.	<pre><definition display-="" name="notes-doc-lock- fail-action" type="enum"></definition></pre>
	This parameter is overwritten by <retry-status-return></retry-status-return>	<pre><value>retry</value> </pre>

Parameter	Description	XML to Define Driver Parameters
Number of File Creation Collision Retry Attempts	Specify a positive integer value indicating the highest number to append to a filename when attempting to resolve file name collisions. If the NotesDriverShim cannot create a mailfile or a mailfile replica because of a file name collision, the NotesDriverShim appends an integer text value to the end of the attempted filename and tries again to create the file. Thus, if the mailfile <code>JohnDoe.nsf</code> already exists, then the <code>NotesDriverShim</code> will attempt to create <code>JohnDoel.nsf</code> . If this value is 0, then this file creation after filename collision feature is not invoked.	<pre><definition display-="" name="db- creation-max-collisions" type="integer"> <value>5</value> </definition></pre>

### 4.4.3 Publisher Options

The third column of the following table contains XML text that you should paste into the Driver Parameters XML Editor. The XML text represents exactly what is necessary to display the parameters. You can also place the information that you see under the Description heading within the <description> </description> parameters.

 Table 4-3
 Publisher Channel Parameters

Parameter	Description	XML to Define Driver Parameters
Check Attributes	The ndsrep check and publish attributes parameter. Set to True if only modified attributes within the Publisher filter should be sent to the Identity Vault via the Publisher channel when a Notes object is modified. Set to False if all sync attributes specified within the Publisher filter should be sent to the Identity Vault via the Publisher channel when a Notes object is modified.	<pre><definition display-="" name="check-attrs-flag" type="boolean"> <description> </description> <value>true</value> </definition></pre>
	The default value is True.	
DN Format	The Distinguished Name format used by ndsrep. Valid values are NOTES_TYPED, NOTES, SLASH_TYPED, SLASH, LDAP, LDAP_TYPED, DOT, and DOT_TYPED. The default is NOTES_TYPED.	<pre><definition display-="" name="dn-format" type="enum"> <description> </description></definition></pre>
		<pre><value>NOTES_TYPED</value></pre> value>

Parameter	Description	XML to Define Driver Parameters
Enable Loop Back Detection	Loopback detection parameter. Set to True to enable loopback detection. Set to False to disable loopback detection.	<pre><definition display-="" name="loop- detect-flag" type="boolean"> <description> <!-- description--> <value>true</value> </description></definition></pre>
NDSREP Configuration Database	The ndsrep configuration database filename created and maintained by the driver. This parameter controls which .nsf database the driver shim uses to write its publication options.  The full path of the filename should be represented with respect to the operating system hosting Domino. When using this parameter, ndsrep needs to be loaded with the -f filename parameter.	<pre><definition display-="" name="config-db-name" type="string"> <description> <!-- description--> <value>mycfg.nsf</value> </description></definition></pre>
	<pre>ndsrep load example: load ndsrep NotesDriver2 -f /home/notes/mycfg.nsf  If this parameter is not present, by default</pre>	
	the Configuration database filename is set to dsrepcfg.nsf and is normally located in the Domino data folder.	
	If the name of your driver includes spaces, then you must put quotes around the name.	
NDSREP Configuration Instance	The ndsrep configuration instance name created and maintained by the driver within the ndsrep configuration database. This parameter controls which database note the driver shim uses to read and write its publication options within the ndsrep configuration database. When using this parameter, ndsrep utilizes the settings of this configuration instance when loaded with this instance name as a parameter.	<pre><definition display-="" name="instance-id" type="string">     <description> <!-- description--> <value>NotesDriver2</value>     </description></definition></pre>
	If this parameter is not present, by default the configuration instance is set to the name of the driver (the driver RDN in eDirectory.)	
	ndsrep load example:	
	load ndsrep NotesDriver2	
	If the name of your driver includes spaces, then you must put quotes around the name.	

Parameter	Description	XML to Define Driver Parameters
NDSREP Console Trace Level	Possible values are SILENT, NORMAL, VERBOSE, or DEBUG.  If this parameter is not present, the default setting is NORMAL.	<pre><definition display-="" name="ndsrep-console- trace-level" type="enum"> <description> </description> <value>NORMAL</value> </definition></pre>
NDSREP Schedule Units	The ndsrep polling interval unit. Valid values are SECONDS, MINUTES, HOURS, DAYS, and YEARS. The default value is SECONDS.	<pre><definition display-="" name="schedule- units" type="enum"> <description> <!-- description--></description></definition></pre>
		<pre><value>SECONDS</value> </pre>
NDSREP Schedule Value	The ndsrep polling interval unit value. This value is utilized in conjunction with the <schedule-units> configuration parameter.</schedule-units>	<pre><definition display-="" name="schedule-value" type="integer"> <description> </description></definition></pre>
		<pre><value>30</value> </pre>
Polling Interval	Notes Driver Shim publisher polling interval, specified in SECONDS, MINUTES, HOURS, and DAYS,.	<pre><definition display-="" name="polling-interval" type="integer"> <description> <!-- description--></description></definition></pre>
		<pre><value>30</value> </pre>
Publication Heartbeat Interval (in seconds)	Publication Heartbeat Interval specified in seconds. This parameter can be used instead of <pub-heartbeat-interval> to provide finer interval size granularity. If no documents are sent on the Publisher channel for this specified interval (duration of time), then a heartbeat document is sent by the driver. A value of 0 indicates that no heartbeat documents are to be sent.</pub-heartbeat-interval>	<pre><definition display-="" name="pub- heartbeat-interval- seconds" type="integer"> <description> <!-- description--> <value>0</value> </description></definition></pre>
	If this parameter is not present, by default the publication heartbeat interval is 0.	

Parameter	Description	XML to Define Driver Parameters
Publication Heartbeat Interval	Publication Heartbeat Interval specified in minutes. If no documents are sent on the Publisher channel for this specified interval (duration of time), then a heartbeat document is sent by the driver. A value of 0 indicates that no heartbeat documents are to be sent.	<pre><definition display-="" name="pub- heartbeat-interval" type="integer"> <description> <!-- description--></description></definition></pre>
	If this parameter is not present, by default the publication heartbeat interval is 0.	<pre><value>0</value> </pre>
Write Time Stamps?	Whether ndsrep writes special driver time stamp on synchronized Notes parameter. Set to True to have ndsrep write a driver specific time stamp on all Notes objects that are synchronized. This special driver time stamp is used to more accurately determine Notes object attribute updates. Set to False to have ndsrep determine Notes object attribute updates based on existing Notes object time stamps.	<pre><definition display-="" name="write-timestamps- flag" type="boolean"></definition></pre>
	The default value is True.	

#### 4.5 Custom Driver Parameters

You can override many of the driver configuration parameters by using custom driver parameters in policies.

An example of two overrides is shown in Section 4.2, "Automatically Determining Which Certifier to Use," on page 41. In the Cert.xsl sample style sheet, the certifier ID and certifier password are passed as attributes of the <add> XML element. The driver finds those parameters and uses the passed values instead of the default values from the driver parameters. The parameters apply as indicated in the Valid Use column of the following table.

If an attribute overriding a default configuration parameter is present, it is applied to the note regardless of event type. Because these parameters map to items on a note in Lotus Notes, these overrides are passed as attribute tags of the event element, or <add-attr> children of the event element in the XML document.

Another example is in the sample driver configuration, in the style sheet named AddAccountNotesOptions.xml. It utilizes global configuration values (GCVs) specified in NotesConfig2GCV.xml to determine which setting to apply.

For items that use Yes or No values, True or False values can also be used.

The Notes Driver 2.2 can add or modify ACLEntries on the ACL record of a Lotus Notes database (.nsf) that is being synchronized (Subscriber channel only). Likewise, the ACL of a new mail file that the NotesDriverShim creates for a user can be modified with specific settings at creation time. These parameters are also included in the following table.

The Notes Driver 2.1.2 and above can apply database replication settings and replication entry settings. The driver can create a database replica, as well as request to perform replication, which can also create a mailfile replica when a mailfile is initially created.

This enhancement also allows for modifying replication settings of the existing database that is being synchronized, to perform a replication request on the synchronized database, and to create a new replica on an accessible Domino server.

The following table lists the XML tags that can be added as siblings to the add or modify command element in an XDS document that is submitted to the NotesDriverShim to appropriately configure a database's replication options. XML tags used for mailfile replication settings (prefixed with mailfile-) can only be used within add command elements. These attributes are divided into Rep and MailFile Rep attributes in this table.

 Table 4-4
 Custom Parameters That Override Driver, Subscriber, and Publisher Parameters

Parameter	XML Tag	Valid Use and Value	Description
ACL Administration Server	acl- administration- server	As an attribute to an <add>, <add>, <add>, <add>, <add>, <add>, or <adelete> command element. String: distinguished Notes object name (i.e. "CN=Server1/O=myOrg")</adelete></add></add></add></add></add></add>	The name of the Administration Server that can perform maintenance on this database. This value must be a Notes Distinguished Name of a valid Domino Administration Server. Only available on Domino 6.0.3 or higher.
ACL Admin Name Modifier	acl-admin- names	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	The ACL isAdminNames property indicates whether the administration server can modify the names fields in this database. Only available on Domino 6.0.3 or higher.
		Boolean: true   false	
ACL Admin Reader- Author Modifier	acl-admin- reader-author	As an attribute to an <add>, <add>, <addedoctribute< a="">, or <delete> command element.</delete></addedoctribute<></add></add>	The ACL isAdminReaderAuthor property indicates whether the administration server can modify the Readers and Authors fields in this database. This is only available on Domino 6.0.3 or higher.
		Boolean: true   false	
ACL Admin Reader- Author	acl-entry- admin-reader- author	As an attribute to an <add>, <amount <<="" <amount="" td=""><td>Indicates if the admin-reader-author attribute is set.</td></amount></add>	Indicates if the admin-reader-author attribute is set.
		Boolean: true   false	

Parameter	XML Tag	Valid Use and Value	Description
ACL Admin Server	acl-entry- admin-server	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Indicates if the admin-server attribute is set. If set to true, this setting overrides the ACL Administration Server property and places this entry's name in the ACLs Administration Server property. See aclarate interesting server.
		Boolean: true   false	administration-server.
ACL Create Personal Folder	acl-entry-can- create- personal-folder	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Indicates if the can-create-personal-folder attribute is set.
		Boolean: true   false	
ACL Create Shared Folder	acl-entry-can- create-shared- folder	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Indicates if the can-create-shared-folder attribute is set.
		Boolean: true   false	
ACL Create Documents	acl-entry-can- create- documents	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Indicates if the can-create-documents attribute is set.
		Boolean: true   false	
ACL Create LS Or Java Agent	acl-entry-can- create-ls-or- java-agent	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Indicates if the can-create-LS-or-Java attribute is set.
		Boolean: true   false	
ACL Create Personal Agent	acl-entry-can- create- personal-agent	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Indicates if the can-create-personal-agent attribute is set.
		Boolean: true   false	

Parameter	XML Tag	Valid Use and Value	Description
ACL Replicate Or Copy Documents	acl-entry-can- replicate-or- copy- documents	As an attribute to an <add>, <add>, <addition <add="">, or <adelete> command element.</adelete></addition></add></add>	Indicates if the can-replicate-or-copy- documents attribute is set. Only available on Domino 6.0.3 or higher.
		Boolean: true   false	
ACL Delete Documents	acl-entry-can- delete- documents	As an attribute to an <add>, <amount in="" second="" td="" the="" the<=""><td>Indicates if the can-delete-documents is set.</td></amount></add>	Indicates if the can-delete-documents is set.
		Boolean: true   false	
ACL Entry Level	acl-entry-level	As an attribute to an <add>,</add>	Indicates the ACLEntry level. Valid strings include:
		<pre><modify>, or <delete> command element.</delete></modify></pre>	MANAGER DESIGNER
		String or Integer	EDITOR AUTHOR READER DEPOSITOR NOACCESS
ACL Entry Name	acl-entry-name	As an attribute to an <add>, <amdify>, or <delete> command element.</delete></amdify></add>	The name of the ACLEntry. If not present, this value defaults to the Notes Distinguished Name (FullName) of the current object being synchronized.
		String: distinguished Notes object name (i.e. "CN=John Doe/ OU=myOrgUnit/ O=myOrg")	
ACL Entry Remove	acl-entry- remove	As an attribute to an <add>, <add>, <addition <aded=""><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded><aded< td=""><td>Indicates if the ACLEntry is to be removed from the ACL record of the database.</td></aded<></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></aded></addition></add></add>	Indicates if the ACLEntry is to be removed from the ACL record of the database.
		Boolean: true   false	

Parameter	XML Tag	Valid Use and Value	Description
ACL Extended Access	acl-extended- access	As an attribute to an <add>, <amount <a="" href="mailto:smaller"><modify>, or <aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:small< td=""><td>The ACL isExtendedAccess property indicates whether extended access is enabled for this database. Only available on Domino 6.0.3 or higher.</td></aherem="mailto:small<></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></modify></amount></add>	The ACL isExtendedAccess property indicates whether extended access is enabled for this database. Only available on Domino 6.0.3 or higher.
		Boolean: true   false	
ACL Internet Level	acl-internet- level	As an attribute to an <add>, <modify>, or <delete> command element. String or Integer</delete></modify></add>	The maximum internet access level for this database. Valid strings include:  MANAGER DESIGNER EDITOR AUTHOR READER DEPOSITOR NOACCESS
ACL Public Reader	acl-entry-public- reader	As an attribute to an <add>, <amdify>, or <delete> command element.</delete></amdify></add>	Indicates if the public-reader attribute is set
		Boolean: true   false	
ACL Public Writer	acl-entry-public- writer	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Indicates if the public writer attribute is set.
		Boolean: true   false	
ACL Server	acl-entry-server	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Indicates if the ACLEntry server attribute is set.
		Boolean: true   false	
ACL Uniform Access	acl-uniform- access	As an attribute to an <add>, <add>, <added <a<="" <aded="" td="" to=""><td>The ACL isUniformAccess property indicates whether a consistent ACL is enforced across all replicas of this database.</td></added></add></add>	The ACL isUniformAccess property indicates whether a consistent ACL is enforced across all replicas of this database.
		Boolean: true   false	

Parameter	XML Tag	Valid Use and Value	Description
ACL User Type	acl-entry-user- type	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Indicates the ACLEntry user type. Valid strings include:
			MIXED_GROUP PERSON PERSON_GROUP
		String or Integer	SERVER SERVER_GROUP UNSPECIFIED
ACL Enable Role	acl-entry- enable-role	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Specifies the roles to set on the ACL.
		String	
ACL Disable Role	acl-entry- disable-role	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Specifies the roles to set on the ACL.
		String	
Administration Process Server	adminp-server	As an attribute to an <add>, <modify>, <move>, <delete>, or <domino-console-command> event element.</domino-console-command></delete></move></modify></add>	Specifies the Domino server with which to establish an administration process session; or, specifies the Domino server where a console command should be sent. The default is the local server specified in the driver parameters. Example: adminpserver="myserver1/acme". Requires Notes 6.0.3 or later.
		String	
Allow AdminP Support	allow-adminp- support	As an attribute to an <add>, <modify>, <move>, <rename>, or <delete> event element.  Boolean: true   false</delete></rename></move></modify></add>	Specifies whether the command received by the Notes driver shim should allow issuing AdminP requests if possible. The attribute can be True or False. The default is False if not set with the <allow-adminpsupport> driver parameter in the subscriberoptions section. This attribute can be used to override Allow Domino AdminP Support in Section 4.4.2, "Subscriber Options," on page 45, on a command-by-command basis. Example: allow-adminpsupport="True". Requires Notes 6.0.3 or later.</allow-adminpsupport>

Parameter	XML Tag	Valid Use and Value	Description
Alternate Full Name	AltFullName	As an <add- attr&gt; child element of an <add> event. String</add></add- 	This element specifies the Alternate Full Name attribute in Notes when registering a new user. Like other user attributes, this can be synchronized using an attribute in eDirectory or inserted in a style sheet. See the Lotus Notes documentation for information on setting AltFullName for a user.
Alternate Organization Unit	alt-org-unit	As an attribute to an <add> event element.</add>	Specifies the alternate Organization Unit when registering a new user in Notes.
		String	
Alternate Organization Unit Language	alt-org-unit-lang	As an attribute to an <add> event element.</add>	Specifies the alternate Organization Unit language when registering a new user in Notes.
		String	
Certification Expiration Date	cert-expire-date	As an attribute to an <add>, <modify, <move="" or=""> event element.  String</modify,></add>	Specifies the date when a user certifier expires. This attribute can be applied to override the default expiration term specified in the driver parameters. It is used by the Notes Driver shim when processing events that result in AdminP requests that cause the recertification of the user, such as move, rename, or recertify, or on add event when creating new Notes users. The date format should be specified in text using the appropriate format of the locale of the Domino Server. For example, in English, cert-expire-date="1 July 2010". An alternate to this attribute is expire-term.
Certifier ID File	cert-id	As an attribute to an <add> event element String</add>	This tag specifies the Notes Certifier ID file that is used to register this user object in the Notes Address Book. The full path of the file should be represented with respect to the operating system hosting Domino. Overrides the default Notes Certifier ID file parameter <cert-id-file> in the driver configuration.</cert-id-file>
Certifier ID File Parameter Reference	drv-param-cert- id	As an attribute to an <add> event element String</add>	This tag can be used instead of the Certifier ID file <cert-id> tag. This tag specifies a driver parameter that holds the Notes Certifier ID file that is used to register this user object in the Notes Address Book. The driver parameter tag can have any name, but its value needs to indicate the full path of the certifier ID file with respect to the operating system hosting Domino.  Overrides the default Notes Certifier ID file parameter <cert-id-file> in the driver configuration.</cert-id-file></cert-id>

Parameter	XML Tag	Valid Use and Value	Description
Certifier Name	certifier-name	As an attribute to a <pre><move> event element.</move></pre> String	Specifies the certifier name required to move a user in Notes from an old certifier to a new certifier. The value is the name of the new certifier where the user is moving to. This attribute should be used in conjunction with old-cert-id or one of its alternates, old-cert-pwd or one of its alternates, cert-id or one of its alternates. The cert-id specified should belong to the certifier-name. Example: certifier-name="/mktg/acme". Requires Notes 6.0.3 or later.
Certifier Password	cert-pwd	As an attribute to an <add> event element.  String</add>	This tag specifies the Notes Certifier ID password to be used with the certifier ID file. The password value is passed in clear text. The Notes Certifier ID file and password are used to register user objects in the Notes Address Book. Overrides the default Notes Certifier ID file password parameter <cert-id-password> in the driver configuration. Alternates are <named-cert-pwd> and <drv-param-cert-pwd>.</drv-param-cert-pwd></named-cert-pwd></cert-id-password>
Certifier Password Key Name Reference	named-cert- pwd	As an attribute to an <add> event element.  String</add>	This tag can be used instead of the Certifier Password <cert-pwd> tag. This tag specifies a named-password key name that holds the Notes Certifier ID password to be used with the certifier ID file that is used to register this user object in the Notes Address Book. The Notes Certifier ID file and password are used to register user objects in the Notes Address Book. Overrides the default Notes Certifier ID file password parameter <cert-id-password> in the driver configuration. Alternates are <cert-pwd> and <drv-param-cert-pwd>.</drv-param-cert-pwd></cert-pwd></cert-id-password></cert-pwd>

Parameter	XML Tag	Valid Use and Value	Description
Certifier Password Parameter Reference	drv-param-cert- pwd	As an attribute to an <add> event element.  String</add>	This tag can be used instead of the Certifier Password <cert-pwd> tag. This tag specifies a driver parameter that holds the Notes Certifier ID password to be used with the certifier ID file that is used to register this user object in the Notes Address Book. The driver parameter tag can have any name, but its value indicates the password of the Certifer ID file. The referenced driver parameter can be a clear-text password or an encrypted named password. The Notes Certifier ID file and password are used to register user objects in the Notes Address Book. Overrides the default Notes Certifier ID file password parameter <cert-id-password> in the driver configuration. Alternates are <cert-pwd> and <named-cert-pwd>.</named-cert-pwd></cert-pwd></cert-id-password></cert-pwd>
Certify User Flag	certify-user	As an attribute to an <add> event element.  String</add>	Applying this tag determines the behavior for the driver regarding Notes user account creation. Its value can be Yes or No. Yes indicates the driver will register this user in the Notes Address book by certifying the user (meaning it creates an ID file for the user).
			Overrides the default Certify Users flag <pre><cert-users> in the driver configuration.</cert-users></pre>
Create Mail File Flag	create-mail	As an attribute to an <add> event element. Boolean: true   false</add>	This tag indicates whether the driver needs to create an e-mail account for this user. Its value can be Yes or No. Yes indicates the driver will attempt to create a Notes Mail database when adding (creating) this new user. Overrides the default Create Mail File flag <create-mail> in the driver configuration.</create-mail>
Database Inheritance for Mail File Template	mail-file-inherit- flag	As an attribute to an <add> event element.  Boolean: true   false</add>	This tag specifies whether database structures based on a particular template are updated when that template is updated. Its value can be Yes or No.  The default (the absence of this tag) is Yes,
			meaning True.  You can override the default and set this tag to No or False if you don't want a change to a mail file template to affect existing database design.

Parameter	XML Tag	Valid Use and Value	Description
Delete Windows Group	delete- windows-group	As an attribute to a <delete class="group"> event element.  Boolean: true   false</delete>	Specifies whether synchronized Windows groups should be deleted from Windows or not. The value is True or False. Domino has its own capability of synchronizing users and groups with Windows systems. When the Notes Driver shim utilizes AdminP to delete a group, the request can also indicate that this deletion should be synchronized with Windows. By default this attribute is set to False. Example: deletewindows-group="True". Requires Notes 6.0.3 or later.
Delete Windows User	delete- windows-user	As an attribute to a <delete class="user"> event element.  Boolean: true   false</delete>	Specifies whether synchronized Windows users should be deleted from Windows or not. The value is True or False. Domino has its own capability of synchronizing users and groups with Windows systems. When the Notes Driver shim utilizes AdminP to delete a user, the request can also indicate that this deletion should be synchronized with Windows. By default this attribute is set to False. Example: delete-windows-user="True". Requires Notes 6.0.3 or later.
Deny Access Group ID	deny-access- group-id	As an attribute to a <delete> event element. String</delete>	Specifies the Notes deny access group UNID for a delete event. When the Notes Driver shim utilizes AdminP to delete users from Notes, it has the capability to attach a deny access group name to that AdminP delete user request, so the deleted user's name is inserted as a member of the specified deny access group. An alternate attribute is deny-access-group-name. Example: deny-access-group-id="7EFB951A3574521F87256E540001F140". Requires Notes 6.0.3 or later.
Deny Access Group Name	deny-access- group-name	As an attribute to a <delete> event element. String</delete>	Specifies the Notes deny access group name for a delete event. When the Notes Driver shim utilizes AdminP to delete users from Notes, it has the capability to attach a deny access group name to that AdminP delete user request, so the deleted user's name is inserted as a member of the specified deny access group. An alternate attribute is deny-access-group-id. Example: deny-access-group-name="Deny Access". Requires Notes 6.0.3 or later.

Parameter	XML Tag	Valid Use and Value	Description
Domino Console Command	tell-adminp- process	As an attribute to an <add>, <modify>, <move>, <delete> event element.  String</delete></move></modify></add>	Specifies the Domino console command to perform after an AdminP request has been performed by the Notes driver shim. For Domino console commands to succeed, the Notes Driver user must have appropriate Domino Console privileges granted.  Example: tell-adminp-process="tell adminp process new". Requires Notes 6.0.3 or later.
			See the instructions in Section 4.10, "Tell AdminP Commands," on page 87.
Driver Parameter Old Certifier ID	drv-param-old- cert-id	As an attribute to a <move> event element. String</move>	Specifies the driver parameter holding the old certifier ID file name required to move a user in Notes from an old certifier to a new certifier. The value is the driver parameter tag. An alternate to this attribute is old-certid. This attribute should be used in conjunction with certifier-name, old-certifier one of its alternates, cert-id or its alternate, and cert-pwd or one of its alternates. Example: drv-param-old-certid="mktg-cert-id-file". Requires Notes 6.0.3 or later.
Driver Parameter Old Certifier Password	drv-param-old- cert-pwd	As an attribute to a <pre><move> event element.</move></pre> String	Specifies the driver parameter holding the password for the old certifier ID file required to move a user in Notes from an old certifier to a new certifier. The value is the driver parameter tag. An alternate to this attribute is named-old-cert-pwd or old-cert-pwd. This attribute should be used in conjunction with certifier-name, old-cert-id or one of its alternates, cert-id or one of its alternates, and cert-pwd or one of its alternates. Example: drv-param-old-cert-pwd="mktg-cert-id-password". Requires Notes 6.0.3 or later.
Enforce Unique Short Name	enforce-unique- short-name	As an attribute to an <add> event element. String</add>	Specifies whether to enforce uniqueness of short names when registering a new user in Notes. The value is True or False. The default is False. If specified as True, and the Notes user registration process determines that the short name for the new user already exists, then the new user information is overlaid onto the existing Notes user of the same short name, thereby preventing the existence of a duplicate short name. Example: enforce-unique-short-name="True". Requires Notes 6.0.3 or later.

Parameter	XML Tag	Valid Use and Value	Description
Extended OU	extended-ou	As an attribute to an <add> or <modify> event element.</modify></add>	The value of the tag is appended to the generated DN based on the selected certifier when registering a user.
		String	
Group Membership Removal	remove-all- group- membership	As an attribute to a <modify> or <delete> event element.</delete></modify>	This tag indicates that this user object should be removed from the membership list of all groups in the Notes database, except for groups of type "Deny List"
		Boolean: true   false	(GroupType=3). Valid values are Yes and No. The absence of this tag defaults to No This tag only applies to person (user) objects in the Notes Address Book.
ID File Name	user-id-file	As an attribute to an <add> event element.</add>	This tag specifies the filename to be used for the user's ID file. The filename does not include the file path. When this tag is
		String	absent, a default filename is generated by the Notes driver by using the first and last name attributes of the user (FirstNameLastName.id).
ID File Path	user-id-path	As an attribute to an <add> event element.</add>	This tag specifies the file path to the Notes User ID file storage location to be used when creating the user's ID file. The new ID
		String the folder respect Domino	file is placed in this location. The full path of the folder should be represented with respect to the operating system hosting Domino. Overrides the default Notes User ID certificate location parameter <certpath> in the driver configuration.</certpath>
Immediate	immediate	As an attribute to a <delete> event element.</delete>	Specifies whether a delete event performed by AdminP immediately deletes a user from the Notes Address Book (NAB), or waits
		Boolean: true   false	until the AdminP request is processed at its scheduled interval. The specified value should be True or False. The default is False. Example: immediate="True". Requires Notes 6.0.3 or later.
InternetAddress	InternetAddress	As an <add- attr&gt; child element of an <add> event.</add></add- 	This element specifies the user's Internet e- mail address in the Notes Address Book.
		String	
Language of Alternate Full Name	AltFullNameLan guage	As an <add- attr&gt; child element of an <add> event.</add></add- 	This element specifies the language used for the Alternate Full Name when registering a new user. Like other user attributes, this can be synchronized using an attribute in eDirectory or inserted in a
		String	an attribute in eDirectory or inserted in a style sheet. See the Lotus Notes documentation for information on setting AltFullNameLanguage for a user.

Parameter	XML Tag	Valid Use and Value	Description
Mail File Size Quota	mail-file-quota	As an attribute to an <add> event element.</add>	This tag specifies the value of the mail file quota (size in KB) that is applied to the email database file when it is created.
		Integer	
Mail Server	mail-server	As an attribute to an <add> event element.</add>	Specifies the mail server to be used to create a mailfile for a new user. This attribute overrides the value specified in the driver parameters. Example: mail-
		String	server="CN=ms2/O=acme"
Mail System	mail-system	As an attribute to an <add> event element.</add>	Specifies the mail system type set for the new user being created. Valid values are NOTES, POP, INTERNET, OTHER, NONE.
		String or integer	The default value is NOTES. Requires Notes 6.0.3 or later.
MailDomain	MailDomain	As an <add- attr&gt; child element of an <add> event.</add></add- 	This element specifies the name of the Notes Mail Domain when creating an e-mail database file.
		String	
MailFile	MailFile	As an <add- attr&gt; child element of an <add> event.</add></add- 	This element specifies the filename to be used when creating the user's e-mail database file. The filename does not include the file path. When this tag is
		String	absent, a default filename is generated by the Notes driver using the first and last name attributes of the user (FirstNameLastName.nsf).
MailFile ACL Administration Server	mailfile-acl- administration- server	As an attribute to an <add>command element.</add>	The name of the Administration Server that can perform maintenance on this database. This value must be a Notes Distinguished
		String: distinguished Notes object name (i.e. "CN=Server1/ O=myOrg")	Name of a valid Domino Administration Server. Only available on Domino 6.0.3 or higher.
MailFile ACL Admin Names	mailfile-acl- admin-names	As an attribute to an <add> command element.</add>	The ACL isAdminNames property indicates whether the administration server can modify the names fields in this database.
		Boolean: true   false	Only available on Domino 6.0.3 or higher.
MailFile ACL Admin Reader Author	mailfile-acl- admin-reader- author	As an attribute to an <add> command element.</add>	The ACL isAdminReaderAuthor property indicates whether the administration server can modify the Readers and Authors fields in this database. Only excitable on Demine
		Boolean: true   false	in this database. Only available on Domino 6.0.3 or higher.

Parameter	XML Tag	Valid Use and Value	Description
MailFile ACL Control	mailfile-acl-level	As an attribute to an <add> event element</add>	The default ACL setting for the newly created mail file of newly created user objects. Valid values are: NOACCESS, DEPOSITOR, READER, AUTHOR, EDITOR, DESIGNER, and MANAGER. Values can be specified either as the Java ACL constant or the role name, as found in Table 4-5 on page 82. This attribute should be added in the same rule where the certification attributes are calculated and set and it should be added using the same XSL constructs. Overrides the default Mail File ACL Level parameter <mailfile-acl-level> in the driver configuration.</mailfile-acl-level>
MailFile ACL Entry Name	mailfile-acl- entry-name	As an attribute to an <add> command element. String: distinguished</add>	The name of the ACLEntry. If not present, this value defaults to the Notes Distinguished Name (FullName) of the current object being synchronized.
		Notes object name (i.e. "CN=John Doe/ OU=myOrgUnit/ O=myOrg")	
MailFile ACL Entry Remove	mailfile-acl- entry-remove	As an attribute to an <add>command element.</add>	Indicates if the ACLEntry is to be removed from the ACL record of the mailfile database.
		Boolean: true   false	
MailFile ACL Entry Public Reader	mailfile-acl- entry-public- reader	As an attribute to an <add>command element.</add>	Indicates if the public-reader attribute is set
		Boolean: true   false	
MailFile ACL Entry Public Writer	mailfile-acl- entry-public- writer	As an attribute to an <add></add>	Indicates if the public-writer attribute is set.
		Boolean: true   false	
MailFile ACL Entry Server	mailfile-acl- entry-server	As an attribute to an <add>command element.</add>	Indicates if the ACLEntry server attribute is set
		Boolean: true   false	

Parameter	XML Tag	Valid Use and Value	Description
MailFile ACL Entry Level	mailfile-acl- entry-level	As an attribute to an <add></add>	Is the equivalent to mailfile-acl-level. Indicates the ACLEntry level. Valid strings include:
		String or Integer	MANAGER DESIGNER EDITOR AUTHOR READER DEPOSITOR NOACCESS
MailFile ACL Entry User Type	mailfile-acl- entry-user-type	an <add> str command element. MI String or Integer PE SE SE</add>	Indicates the ACLEntry user type. Valid strings include:
			MIXED_GROUP PERSON PERSON_GROUP SERVER SERVER_GROUP UNSPECIFIED
MailFile ACL Entry Enable Role	mailfile-acl- entry-enable- role	As an attribute to an <add> command element.</add>	Specifies the roles to set on the ACL (by default, mailfile ACLs do no have any roles defined).
		String	
MailFile ACL Entry Disable Role	mailfile-acl- entry-disable- role	As an attribute to an <add> command element.</add>	Specifies the roles to set on the ACL (by default, mailfile ACLs do no have any roles defined).
		String	
MailFile ACL Entry Admin Reader- Author	mailfile-acl- entry-admin- reader-author	As an attribute to an <add> command element.</add>	Indicates if the admin-reader-author attribute is set.
		Boolean: true   false	
MailFile ACL Entry Admin Server	mailfile-acl- entry-admin- server	As an attribute to an <add> command element.</add>	Indicates if the admin-server attribute is set. If set to true, this setting overrides the ACL Administration Server property and places
		Boolean: true   false	this entry's name in the ACLs Administration Server property. See acl- administration-server.
MailFile ACL Entry Create Documents	mailfile-acl- entry-can- create- documents	As an attribute to an <add>command element.</add>	Indicates if the can-create-documents attribute is set.
		Boolean: true   false	

Parameter	XML Tag	Valid Use and Value	Description
MailFile ACL Entry Create LS Or Java Agent	mailfile-acl- entry-can- create-ls-or- java-agent	As an attribute to an <add>command element.</add>	Indicates if the can-create-LS-or-Java attribute is set.
		Boolean: true   false	
MailFile ACL Entry Create Personal Agent	mailfile-acl- entry-can- create- personal-agent	As an attribute to an <add> command element.</add>	Indicates if the can-create-personal-agent attribute is set.
		Boolean: true   false	
MailFile ACL Entry Create Personal Folder	mailfile-acl- entry-can- create- personal-folder	As an attribute to an <add>command element.</add>	Indicates if the can-create-personal-folder attribute is set.
		Boolean: true   false	
MailFile ACL Entry Create Shared Folder	mailfile-acl- entry-can- create-shared- folder	As an attribute to an <add>command element.</add>	Indicates if the can-create-shared-folder attribute is set.
		Boolean: true   false	
MailFile ACL Entry Delete Documents	mailfile-acl- entry-can- delete- documents	As an attribute to an <add>command element.</add>	Indicates if the can-delete-documents is set.
		Boolean: true   false	
MailFile ACL Entry Replicate Or Copy Documents	mailfile-acl- entry-can- replicate-or- copy- documents	As an attribute to an <add>command element.</add>	Indicates if the can-replicate-or-copydocuments attribute is set. This is only available on Domino 6.0.3 or higher.
		Boolean: true   false	
MailFile ACL Extended Access	mailfile-acl- extended- access	As an attribute to an <add>command element.</add>	The ACL isExtendedAccess property indicates whether extended access is enabled for this database. This is only available on Domino 6.0.3 or higher.
		Boolean: true   false	
MailFile ACL Internet Level	mailfile-acl- internet-level	As an attribute to an <add> command element.</add>	The maximum internet access level for this database. Valid strings include:
		String or Integer	MANAGER DESIGNER EDITOR AUTHOR READER DEPOSITOR NOACCESS

Parameter	XML Tag	Valid Use and Value	Description
Mailfile ACL Manager ID	mail-acl- manager-id	As an attribute to an <add> event element.</add>	Specifies the UNID of a user to be given manager credentials on the ACL of the mailfile of the newly created user. An alternate is mail-acl-manager-name.  Example: mail-acl-manager-id="BB888BB0C35D13EC87256EA8006296CE"
Mailfile ACL Manager Name	mail-acl- manager-name	As an attribute to an <add> event element.</add>	Specifies the name of a user to be given manager credentials on the ACL of the mailfile of the newly created user. An alternate is mail-acl-manager-id. Example: mail-acl-manager-name="CN=Notes Admin/O=acme"
MailFile ACL Uniform Access	mailfile-acl- uniform-access	As an attribute to an <add> command element.  Boolean: true   false</add>	The ACL isUniformAccess property indicates whether a consistent ACL is enforced across all replicas of this database.
MailFile Action	mail-file-action	As an attribute to a <delete> event element.</delete>	Specifies the AdminP action to perform on the mailbox of a deleted user. This action is included in an AdminP user delete request. Acceptable values are ALL, HOME, and NONE. The default value is NONE. ALL indicates to delete the mailbox on the home mail server and all mailbox replicas. HOME indicates to delete the mailbox on only the home mail server. All AdminP delete mailbox requests must be approved by a Domino Administrator before they are performed. Example: mail-file-action="ALL". Requires Notes 6.0.3 or later.
MailFile Quota Warning Threshold	mail-quota- warning- threshold	As an attribute to an <add> event element.</add>	Specifies the value of the mail file quota warning threshold (size in KB) that is applied to the e-mail database file when it is created. Example: mail-quota-warning-threshold="120000". Requires Notes 6.0.3 or later.
MailFile Subdirectory	mail-file-subdir	As an attribute to an <add> event element.</add>	Specifies the subdirectory below the Domino server's data directory where the mailfile of a new user should be created. Example: mail-file-subdir="mail-dbs"
MailFileTemplate	mailfile- template	As an attribute to an <add> event element</add>	This tag specifies the filename of the .ntf database template to use when creating the user's new mail file for an e-mail account. This template must be accessible to the Domino server in the Domino data folder. Overrides the default Mail File Template <mailfile-template> in the driver configuration.</mailfile-template>

Parameter	XML Tag	Valid Use and Value	Description
MailFile Calendar Profile Create	mailfile- calprofile-create		If set to True, new mailfiles are created with a calendar profile document and populated with an owner field.
		Boolean: true   false	
MailFile Calendar Profile Owner	mailfile- calprofile-owner	As an attribute to an <add>command element.</add>	, ,
		String: distinguished Notes object name, such as "CN=John Doe/ OU=myOrgUnit/ O=myOrg" to be the owner of the mailfile.	equals "true," the mailfile's owner is automatically set to the name of the newly created Notes person.
•	mailfile-rep- new-server	As an attribute to an <add>command element.</add>	
		String: distinguished name of Domino server where a new replica will be created, such as CN=server1/ O=acme.	Depending on the size of the database, this might be a time-consuming process for the NotesDriverShim. Can be used in connection with mailfile-rep-new-db-name.
-	mailfile-rep- new-db-name	As an attribute to an <add> command element.</add>	3
		String: file name of the new replica, such as mail/ JohnDoeRep2.nsf.	used. The default location of the new file is in the Domino server's data folder. Can be used in connection with mailfile-rep-new-server.
MailFile Rep Source Server	mailfile-rep-src- server	As an attribute to an <add>command element.</add>	
		String: distinguished name of a replica Domino source server, such as CN=server2/ O=acme.	source server/destination server pair does not already exist within the replication entry list, then a new replication entry is created. If this parameter is absent, then the source server defaults to "any server" (a hyphen '-' means any server). To be used in connection with mailfile-rep-dest-server. Only available on Domino 6.0.3 or higher.

Parameter	XML Tag	Valid Use and Value	Description
MailFile Rep Destination Server	mailfile-rep- dest-server	As an attribute to an <add>command element.</add>	Specifies the Domino destination server (When computer) of a replication entry (within the replication object). If specified,
		String: distinguished name of a replica Domino destination server, such as i.e. CN=server1/ O=acme.	and the source server/destination server pair does not already exist within the replication entry list, then a new replication entry is created. If this parameter is absent, then the destination server defaults to "any server" (a hyphen "-" means any server). To be used in connection with mailfile-rep-src-server. Only available on Domino 6.0.3 or higher.
MailFile Rep Formula	formula an <add> replication entry. By de command element. replication entry conta The formula must be a formula. Used in conne formula rep-src-server and/or rep-src-server.</add>	an <add></add>	Specifies the replication formula for a replication entry. By default a new replication entry contains the @All formula.
		The formula must be a valid replication formula. Used in connection with mailfile-rep-src-server and/or mailfile-rep-dest-server. Only available on Domino 6.0.3 or higher.	
MailFile Rep Include ACL	mailfile-rep- include-acl	As an attribute to an <add>command element.</add>	Specifies the inclusion of the ACL during replication for a replication entry. Set true to include the ACL, and false to exclude the
		Boolean: true   false	ACL. Used in connection with mailfile-rep- src-server and/or mailfile-rep-dest-server. Only available on Domino 6.0.3 or higher.
MailFile Rep Include Agents	mailfile-rep- include-agents	As an attribute to an <add> command element.</add>	<b>5</b> ,
		Boolean: true   false	agents. Used in connection with mailfile- rep-src-server and/or mailfile-rep-dest- server. Only available on Domino 6.0.3 or higher.
MailFile Rep Include Documents	mailfile-rep- include- documents	As an attribute to an <add>command element.</add>	Specifies the inclusion of documents during replication for a replication entry. Set to true to include documents, and false to exclude
		Boolean: true   false	documents. Used in connection with mailfile-rep-src-server and/or mailfile-rep-dest-server. Only available on Domino 6.0.3 or higher.
MailFile Rep Include Forms	mailfile-rep- include-forms	As an attribute to an <add> command element.</add>	•
		Boolean: true   false	forms. Used in connection with mailfile-rep src-server and/or mailfile-rep-dest-server. Only available on Domino 6.0.3 or higher.

Parameter	XML Tag	Valid Use and Value	Description
MailFile Rep Include Formulas	mailfile-rep- include- formulas	As an attribute to an <add> command element.</add>	Specifies the inclusion of formulas during replication for a replication entry. Set to true to include formulas, and false to exclude formulas. Used in connection with mailfile-
		Boolean: true   false	rep-src-server and/or mailfile-rep-dest- server. Only available on Domino 6.0.3 or higher.
MailFile Rep View List	view-list an <add> replicated for a replication entry. command element. specifies the views as a list, separ names with semicolons, such as String: ViewList Sent; Calendar; Meetings. Used i connection with mailfile-rep-src-se</add>		
		String: ViewList	names with semicolons, such as Inbox; Sent; Calendar; Meetings. Used in connection with mailfile-rep-src-server and/ or mailfile-rep-dest-server. Only available on Domino 6.0.3 or higher.
MailFile Rep Cutoff Interval	mailfile-rep- cutoff-interval	As an attribute to an <add>command element.</add>	1 1 3 \
		Integer: numeric value	rep-cutoff-delete).
MailFile Rep Don't Send Local Security Updates	mailfile-rep- dont-send-local- security- updates	As an attribute to an <add>command element.</add>	<b>3</b> 1
		Boolean: true   false	send local security updates. Only available on Domino 6.0.3 or higher.
MailFile Rep Abstract	mailfile-rep- abstract	As an attribute to an <add>command element.</add>	<b>U</b> 1
		Boolean: true   false	large documents and remove attachments, and false to replicate large documents in their entirety.
MailFile Rep Cuttoff Delete	mailfile-rep- cutoff-delete	As an attribute to an <add></add>	Specifies whether documents that are older than the cutoff date should be automatically deleted. The cutoff date is determined by
		Boolean: true   false	today's date minus the cutoff interval (mailfile-rep-cutoff-interval). Set to true to automatically delete documents that are older than the cutoff date, and false to not delete old documents.
MailFile Rep Disabled	mailfile-rep- disabled	As an attribute to an <add>command element.</add>	Specifies whether replication is disabled. Set true to disable replication, and false to enable replication.
		Boolean: true   false	

	KML Tag	vana Ose and value	Description
	mailfile-rep- gnore-deletes	As an attribute to an <add>command element.</add>	Specifies whether outgoing deletions should not be replicated to other databases. Set to true to not replicate outgoing
		Boolean: true   false	deletions, and false to replicate outgoing deletions.
Destination Deletes ig	mailfile-rep- gnore-dest- deletes	As an attribute to an <add>command element.</add>	Specifies whether incoming deletions should not be replicated to the current database. Set to true to not replicate
		Boolean: true   false	incoming deletions, and false to replicate incoming deletions.
	mailfile-rep- oriority	As an attribute to an <add>command element.</add>	Specifies the replication priority. The choices are HIGH, MED, and LOW. The default is Medium (MED).
		String or integer	
	mailfile-rep- clear-history	As an attribute to an <add>command element.</add>	Set true to clear the replication history from the replication object, and set to false affects nothing.
		Boolean: true   false	
	mailfile-rep- entry-remove	As an attribute to an <add> command element.</add>	Set true to remove the current replication entry from the replication object, and set to false affects nothing. Used in connection
		Boolean: true   false	with mailfile-rep-src-server and/or mailfile-rep-dest-server.
	mailfile-rep- mmediate	As an attribute to an <add>command element.</add>	Indicates that database replication must begin immediately to the specified Domino server on which an existing database
		String: distinguished name of a replica Domino destination server, such as CN=server1/ O=acme.	replica already exists.
MailServer M	MailServer	As an <add- attr&gt; child element of an <add> event.</add></add- 	This element specifies the name of the Notes Server where the mail file should be created when creating an e-mail account (mail database file).
		String	

Parameter	XML Tag	Valid Use and Value	Description
Name Expiration Date	name-expire- date	As an attribute to a <modify> event element. String</modify>	Specifies the specific date when an old user name will expire after a move user is performed by AdminP. This attribute only has effect when moving non-certified (Web) users. This attribute can be applied to override the default expiration term of 21 days. The date format should be specified in text using the appropriate format of the locale of the Domino Server. For example, in English, name-expire-date="1 July 2010". An alternate to this attribute is name-expiration-days. Requires Notes 6.0.3 or later.
Name Expiration Days	name- expiration-days	As an attribute to a <modify> event element.</modify>	Specifies the specific number of days an old user name can be used before expiration after a move user is performed by AdminP. This attribute only has effect when moving non-certified (Web) users. This attribute can be applied to override the default expiration term of 21 days. An alternate to this attribute is name-expiration-date. Example: name-expiration-days="14". Requires Notes 6.0.3 or later.
Named Old Certifier Password	named-old-cert- pwd	As an attribute to a <move> event element.  String</move>	Specifies the named password for the old certifier ID file required to move a user in Notes from an old certifier to a new certifier. The value is the named password to be retrieved from the driver configuration. An alternate to this attribute is drv-param-old-cert-pwd or old-cert-pwd. This attribute should be used in conjunction with certifiername, old-cert-id or one of its alternates, cert-id or one of its alternates, and cert-pwd or one of its alternates. Example: named-old-cert-pwd="mktgNamedPwd". Requires Notes 6.0.3 or later.
No ID File	no-id-file	As an attribute to an <add> event element.  Boolean: true   false</add>	Specifies whether the Notes registration process creates an ID file for the new user. The value is True or False. The default is False. Example: no-id-file="True". Requires Notes 6.0.3 or later.
Notes Explicit Policy Name	notes-policy- name	As an attribute to an <add> event element.</add>	Specifies an explicit policy name to attach to a user when the user is registered. This attribute does not execute Notes registration policies, or any other policies at registration time. Requires Notes 6.0.3 or later.

Parameter	XML Tag	Valid Use and Value	Description
Notes HTTP Password	HTTPPassword	As an <add- attr&gt; or <modify- attr&gt;child element of an <add> or <modify> event.</modify></add></modify- </add- 	This element specifies the user's Web (HTTP) password for Notes. This setting is ignored if the Allow HTTP Password Set parameter <allow-http-password-set> is set to No (or False)</allow-http-password-set>
		String	
Notes Password Strength	minimum-pwd- len	As an attribute to an <add> event element.</add>	This tag specifies a password strength to apply to the User ID file of newly registered users. Value can be 0 - 16. Overrides the
		Integer: 1-16	default Notes User ID minimum password length parameter <minimum-pwd-len> in the driver configuration.</minimum-pwd-len>
Notes Password	user-pwd	As an attribute to an <add> event element.</add>	The user's Notes password used to create the user's ID file (certifier). Overrides the default Notes Password parameter
		String	<pre><default-password> in the driver configuration.</default-password></pre>
Notes Password Change Interval	notes- password- change-interval	As an attribute to an <add>, or <modify> event element.</modify></add>	Specifies a Notes user's password change interval. The value of this attribute is a number. The change interval specifies the number of days at which the user must
		Integer	supply a new password. The value defaults to zero. When this attribute is attached to a user add or modify event, an AdminP Set Password Information request is generated. Example: notes-password-change-interval="120." Requires Notes 6.0.3 or later.
Notes Password Check Setting	notes- password- check-setting	As an attribute to an <add>, or <modify> event element.</modify></add>	Specifies a Notes user's password check setting. When this attribute is attached to a user add or modify event, an AdminP Set Password Information request is generated.
		String or integer	Acceptable values are PWD_CHK_CHECKPASSWORD, PWD_CHK_DONTCHECKPASSWORD, and PWD_CHK_LOCKOUT. Example = notes-password-check-setting=" PWD_CHK_CHECKPASSWORD." Requires Notes 6.0.3 or later.

Parameter	XML Tag	Valid Use and Value	Description
Internet Password Force Change	internet- password-force- change	As an attribute to an <add>, or <modify> event element.  Boolean: true   false</modify></add>	Specifies whether a Notes user is forced to change his or her password on next login. The value of this attribute is True or False. If set to True, the user is forced to change their password on next login. If set to False (default), the user is not forced to change the password on next login. When this attribute is attached to a user add or modify event, an AdminP Set Password Information request is generated. Example: internet-password-force-change="True." Requires Notes 6.0.3 or later.
Notes Password Grace Period	notes- password- grace-period	As an attribute to an <add>, or <modify> event element.</modify></add>	Specifies a Notes user's password grace period. The value of this attribute is a number. The grace period specifies the number of days an old password is valid after it has expired. The value defaults to zero. When this attribute is attached to a user add or modify event, an AdminP Set Password Information request is generated. Example: notes-password-grace-period="10." Requires Notes 6.0.3 or later.
Old Certification ID	old-cert-id	As an attribute to a <pre><move> event element.</move></pre>	Specifies the old certifier ID file required to move a user in Notes from an old certifier to a new certifier. The value is the full path and filename of the old certifier ID file. An alternate to this attribute is drv-param-old-cert-id.
			This attribute should be used in conjunction with certifier-name, old-cert-pwd or one of its alternates, cert-id or one of its alternates, and cert-pwd or one of its alternates.  Example: old-cert-id="c:\lotus\domino\data\mktgcert.id". Requires Notes 6.0.3 or later.
Old Certification Password	old-cert-pwd	As an attribute to a <move> event element. String</move>	Specifies the password for the old certifier ID file required to move a user in Notes from an old certifier to a new certifier. The value is the password string. An alternate to this attribute is drv-param-old-cert-pwd or named-old-cert-pwd. This attribute should be used in conjunction with certifier-name, old-cert-id or one of its alternates, cert-id or one of its alternates, and cert-pwd or one of its alternates. Example: old-cert-pwd="mktg-password1." Requires Notes 6.0.3 or later.

Parameter	XML Tag	Valid Use and Value	Description
Rep New Server	rep-new-server	As an attribute to an <add>, <modify>, or <delete> command element.  String: distinguished name of Domino server where a new replica will be created, such as CN=server1/ O=acme.</delete></modify></add>	The name of the Domino server where a new replica will be created. The Domino server must be accessible on the network. Depending on the size of the database this may me a time consuming process for the NotesDriverShim. Can be used in connection with rep-new-db-name.
Rep New Database Name	rep-new-db- name	As an attribute to an <add>, <add>, <add>condify&gt;, or <adelete> command element.</adelete></add></add></add>	
		String: file name of the new replica, such as mail/ JohnDoeRep2.nsf.	connection with rep-new-server.
Rep Source Server	rep-src-server	As an attribute to an <add>, <modify>, or <delete> command element.  String: distinguished name of a replica Domino source server, such as CN=server2/ O=acme.</delete></modify></add>	Specifies the Domino source server (Receives from) of a replication entry (within the replication object). If specified, and the source server/destination server pair does not already exist within the replication entry list, then a new replication entry is created. If this parameter is absent, then the source server defaults to "any server" (a hyphen "-" means any server). To be used in connection with rep-dest-server. Only available on Domino 6.0.3 or higher.
Rep Destination Server	rep-dest-server	As an attribute to an <add>, <modify>, or <delete> command element.  String: distinguished name of a replica Domino destination server, such as CN=server1/ O=acme.</delete></modify></add>	Specifies the Domino destination server (When computer) of a replication entry (within the replication object). If specified, and the source server/destination server pair does not already exist within the replication entry list, then a new replication entry is created. If this parameter is absent, then the destination server defaults to "any server" (a hyphen "-" means any server). To be used in connection with rep-src-server. Only available on Domino 6.0.3 or higher.

Parameter	XML Tag	Valid Use and Value	Description
Rep Formula	rep-formula	As an attribute to an <add>, <modify>, or <delete> command element</delete></modify></add>	Specifies the replication formula for a replication entry. By default a new replication entry contains the @All formula. The formula must be a valid replication formula. Used in connection with rep-src-
		String: replication formula	server and/or rep-dest-server. Only available on Domino 6.0.3 or higher.
Rep Include ACL	rep-include-acl	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	
		Boolean: true   false	available on Domino 6.0.3 or higher.
Rep Include Agents	rep-include- agents	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	,
		Boolean: true   false	Domino 6.0.3 or higher.
Rep Include Documents	rep-include- documents	As an attribute to an <add>, <add>, or <adelete> command element.</adelete></add></add>	
		Boolean: true   false	available on Domino 6.0.3 or higher.
Rep Include Forms	rep-include- forms	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Specifies the inclusion of forms during replication for a replication entry. Set to true to include forms, false to exclude forms. Used in connection with rep-src-server and/ or rep-dest-server. Only available on
		Boolean: true   false	Domino 6.0.3 or higher.
Rep Include Formulas	rep-include- formulas	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	
		Boolean: true   false	available on Domino 6.0.3 or higher.

Parameter	XML Tag	Valid Use and Value	Description
Rep View List	rep-view-list	As an attribute to an <add>, <modify>, or <delete> command element.  String: ViewList</delete></modify></add>	Specifies a specific list of view names be replicated for a replication entry. The string specifies the views as a list, separating view names with semicolons, such as Inbox; Sent; Calendar; Meetings. Used in connection with rep-src-server and/or rep-dest-server. Only available on Domino 6.0.3 or higher.
Rep Cutoff Interval	rep-cutoff- interval	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Specifies the number of days after which documents are automatically deleted if the CutoffDelete property is set (see rep-cutoff-delete).
		Integer: numeric value	
Rep Don't Sent Local Security Updates	rep-dont-send- local-security- updates	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Specifies whether local security (encryption) updates are sent. Set to true to not send local security updates, and false to send local security updates. Only available on Domino 6.0.3 or higher.
		Boolean: true   false	
Rep Abstract	rep-abstract	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	, ,
		Boolean: true   false	their entirety.
Rep Cutoff Delete	rep-cutoff- delete	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Specifies whether documents that are older than the cutoff date should be automatically deleted. The cutoff date is determined by today's date minus the cutoff interval (repcutoff-interval). Set to true to automatically
		Boolean: true   false	delete documents that are older than the cutoff date, and false to not delete old documents.
Rep Disabled	rep-disabled	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Specifies whether replication is disabled. Set to true to disable replication, and false to enable replication.
		Boolean: true   false	

Parameter	XML Tag	Valid Use and Value	Description
Rep Ignore Deletes	rep-ignore- deletes	As an attribute to an <add>, <amount <a="" href="mailto:smaller"><modify>, or <aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:smaller"><aherem="mailto:small< td=""><td>Specifies whether outgoing deletions should not be replicated to other databases. Set to true to not replicate outgoing deletions, and false to replicate outgoing deletions.</td></aherem="mailto:small<></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></aherem="mailto:smaller"></modify></amount></add>	Specifies whether outgoing deletions should not be replicated to other databases. Set to true to not replicate outgoing deletions, and false to replicate outgoing deletions.
		Boolean: true   false	
Rep Ignore Destination Deletes	rep-ignore-dest- deletes	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Specifies whether incoming deletions should not be replicated to the current database. Set to true to not replicate incoming deletions, and false to replicate incoming deletions.
		Boolean: true   false	
Rep Priority	rep-priority	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Specifies the replication priority. Default is Medium (MED).
		String: HIGH, MED, LOW	
Rep Clear History	rep-clear- history	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Set to true to clear the replication history from the replication object, and set to false affects nothing.
		Boolean: true   false	
Rep Entry Remove	rep-entry- remove	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Set to true to remove the current replication entry from the replication object, and set to false affects nothing. Used in connection with rep-src-server and/or rep-dest-server
		Boolean: true   false	
Rep Immediate	rep-immediate	As an attribute to an <add>, <modify>, or <delete> command element.</delete></modify></add>	Indicates that database replication must begin immediately to the specified Domino server on which a existing database replica already exists.
		String: distinguished name of a replica Domino destination server. (i.e. CN=server1/ Acme)	

Parameter	XML Tag	Valid Use and Value	Description
Recertify User	recertify-user	As an attribute to a <modify> event element.  Boolean: true   false</modify>	Causes a recertify user request to be sent to AdminP. The attribute value is specified as True or False. Proper certifier ID and password attributes (cert-id, cert-pwd, or equivalents) must be provided or the default certifier is applied to the AdminP recertification request.
			This attribute should be used in conjunction with cert-id or its alternate, and cert-pwd or one of its alternates. Can be used in conjunction with expire-term or cert-expiredate elements for specify the new expiration term of the user's certifier. Example: recertify-user="True." Requires Notes 6.0.3 or later.
Registered Users in Notes Address Book	update- addressbook	As an attribute to an <add> event element.  Boolean: true   false</add>	This tag specifies if the driver puts registered user objects in the Notes Address Book. Setting the tag to Yes causes registered users to be placed in the address book. Setting the tag to No causes users to be registered (that is, a certifier ID file is created for the user) without the user object being placed into the Notes Address Book.
			Overrides the default Update Address Book parameter <update-ab-flag> in the driver configuration.</update-ab-flag>
Roaming Cleanup Period	roaming- cleanup-period	As an attribute to an <add> event element.</add>	Specifies the Notes client's cleanup interval in days for a roaming user when the roaming user's cleanup setting is set to "CLEANUP_EVERY_NDAYS." This attribute should be used in conjunction with roaming-user="True," and roaming-cleanup-setting="EVERY_NDAYS." Example: roaming-cleanup-period="90." Requires Notes 6.0.3 or later.
Roaming Cleanup Setting	roaming- cleanup-setting	As an attribute to an <add> event element.  String</add>	Specifies the roaming user cleanup process for Notes client data. Valid values are AT_SHUTDOWN, EVERY_NDAYS, NEVER, and PROMPT. The default value is NEVER. This attribute should be used in conjunction with roaming-user="True." Example: roaming-cleanup-setting="AT_SHUTDOWN." Requires Notes 6.0.3 or later.
Roaming Server	roaming-server	As an attribute to an <add> event element.</add>	Specifies the name of the Domino server to store the roaming user data. This attribute should be used in conjunction with roaming-user="True." Example: roaming-server="CN=myserver2/O=acme." Requires Notes 6.0.3 or later.

Parameter	XML Tag	Valid Use and Value	Description
Roaming Subdirectory	roaming-subdir	As an attribute to an <add> event element.</add>	Specifies the subdirectory below the Domino server's data directory where user roaming data is stored. The last character of the value should be a file path separator (/ or \). Example: roaming-subdir="roamdata\". Requires Notes 6.0.3 or later.
Roaming User	roaming-user	As an attribute to an <add> event element.  Boolean: true   false</add>	Specifies whether the Notes registration process creates this user with roaming capabilities. The value is True or False. The default is False. Example: roaming-user="True." Requires Notes 6.0.3 or later.
Store User ID File In Notes Address Book	store-useridfile- in-ab	As an attribute to an <add> event element.  Boolean: true   false</add>	This tag specifies if the driver attaches the user ID file for this user onto its user object in the Notes Address Book at registration time. Setting the tag to Yes causes this registered user object in the Notes Address Book to be created with an attached user ID file. Setting the tag to No causes this registered user object in the Notes Address Book to be created without an attached user ID file. Overrides the default Store UserID in Address Book parameter <store-id-ab-flag> in the driver configuration.</store-id-ab-flag>
Synchronize Internet Password	sync-internet- password	As an attribute to an <add> event element.  Boolean: true   false</add>	Specifies whether a user's Internet password (HTTPPassword) is synchronized to match the user's Notes Client ID password, by means of the background processes of the Domino server. The value is True or False. The default is False. Example: sync-internet-password="True." Requires Notes 6.0.3 or later.
User ID file certifier type	cert-id-type	As an attribute to an <add> event element.  String</add>	This tag specifies the User ID file certifier type when user ID files are created at user registration time. Valid values are ID_FLAT, ID_HIERARCHICAL, and ID_CERTIFIER. The absence of this tag sets the default certifier type of ID_HIERARCHICAL.
User ID file Expiration Term	expire-term	As an attribute to an <add> event element.</add>	This tag specifies the expiration term (specified in years) for the Notes User ID file of this user. Overrides the default Expiration Term parameter <expiration—term> in the driver configuration.</expiration—term>

 Table 4-5
 ACL Description and Its Java ACL Constant

NOACCESS	ACL.LEVEL_NOACCESS
DEPOSITOR	ACL.LEVEL_DEPOSITOR
READER	ACL.LEVEL_READER
AUTHOR	ACL.LEVEL_AUTHOR
EDITOR	ACL.LEVEL_EDITOR
DESIGNER	ACL.LEVEL_DESIGNER
MANAGER	ACL.LEVEL_MANAGER

### 4.6 Additional Sample Policies

Style sheets are XSLT documents that define transformations or modifications of XML documents. You can configure and create rules, policies, and style sheets using iManager.

Identity Manager provides the following additional samples:

- NotesMoveSample.xml: This sample policy is a Publisher channel policy that contains logic to determine eDirectory object placement when an associated Notes object is moved.
  - In the Import Drivers Wizard, this policy is named Notes Move Sample and is available under the Additional Policies heading. See Section 4.1, "Determining eDirectory Object Placement When a Notes Object is Moved," on page 39.
- **NotesReturnEmail.xml:** This sample policy is a Command Transformation policy designed to generate an e-mail address for user Add events on the Subscriber channel.
  - It is necessary only when upgrading the driver shim and configuration from 1.x to 3. (The policy is already a part of the sample configuration provided with the 2.1 version of the driver and later.)
  - In the Import Drivers Wizard, this policy is named Notes Return Email Address and is available under the Additional Policies heading. See "Importing a Policy to Write Back the Notes E-Mail Address for New Users" on page 35.
- Cert.xsl: An Output Transformation style sheet that contains logic to determine which Notes certifier to use based on the src-dn attribute on the <add>tag.
  - See Section 4.2, "Automatically Determining Which Certifier to Use," on page 41 for more information.
- Override.xsl. Shows an example of how to use attributes to override parameters. See the list in Section 4.5, "Custom Driver Parameters," on page 53.
- Placemove.xsl: An Input Transformation style sheet that contains logic to determine placement containment when synchronizing a move from Lotus Notes to the Identity Vault.
  - See Section 4.1, "Determining eDirectory Object Placement When a Notes Object is Moved," on page 39 for more information.
- AddUniqueName.xsl. Simple example of how a unique name can be created for a Notes user.
- EntitlementGrpCmdCompletionSS.xsl. If you choose to use Role-Based Entitlements when importing the sample configuration, this style sheet is included. This is an example of how to process the payload of an operation-data element.
- NotesCertifierSelectionSampleSS.xsl. Based on Cert.xsl, this shows an enhanced sample of
  how to utilize multiple Notes certifiers. It demonstrates using named passwords in multiple
  ways. See Section 4.2, "Automatically Determining Which Certifier to Use," on page 41 and
  Section 4.3, "Using Named Passwords," on page 42.

**NOTE:** Most of these are located in the product distribution in nt/dirxml/drivers/lotusNotes/rules. Some of them are used in the sample driver configuration.

# 4.7 Synchronizing a Database Other Than Names.nsf

Although the driver is intended as a directory synchronization driver for the Notes directory, it is possible to configure the driver to use a Notes database other than names.nsf. In this case, you need to make sure that the Schema Mapping policy is appropriate for the schema in the target database.

### 4.8 Schema Mapping Type and Form

In a Notes names and address book, each document contains a Type field as well as a Form field. The Type field supports the LDAP Server on Notes by providing a class name. The Form field is a standard Notes document field that indicates which form should be used to display the document. The Form item is not required, and if it is not present, the Notes client uses a default form.

Identity Manager does not provide the ability to map a single DS attribute to multiple target application attributes. This means that the Schema Mapping policy can't be used to map the object class to Form and Type. To handle this, the Driver Configuration asks if the directory database is really a Notes directory. If it is, the class name on DSEntry (translated into the Notes namespace) is used as the value for Type.

The object-class attribute on the DSAttribute object can be used to update the Form item if specified in the Schema Mapping policy. This provides a way to set both of those attributes, as well as providing mappings to allow the Type and Form values to differ. If the Schema Mapping policy contains a mapping between an eDirectory attribute and Form, it might be necessary to translate the content of the eDirectory attribute. This can be done by using an Output Transform policy. Conversely, an Input Transform policy is used to translate content from the Notes namespace to the eDirectory namespace.

If the directory source is not a Notes Directory, the driver writes no Type item and the Class Name attribute is written to the Form item. If a Form item appears in the filter, the driver and ndsrep ignore it

If the driver is configured against the Notes directory, the translated values for classname are written to a Type item in the Notes database, and Form can be included in the Schema Mapping policy. If the driver is configured against a Notes database other than the directory, the translated values for classname are written to a Form item in the Notes database, and Form might not be included in the Schema Mapping policy.

#### 4.9 Move/Rename

Move and Rename events are not supported in the default configuration. However, you can synchronize a Move or Rename event in Notes across the Publisher channel and into the Identity Vault if you modify the default Schema Map and the default Publisher Filter, and add a policy.

In addition, you can synchronize a Move or Rename event on the Subscriber channel if you have Notes 6.0.3 or later, enable AdminP support, and add policies that provide the necessary attributes.

- Section 4.9.1, "Subscriber Channel," on page 85
- Section 4.9.2, "Publisher Channel," on page 86
- Section 4.9.3, "Considerations for Using AdminP," on page 86

#### 4.9.1 Subscriber Channel

- "Moving a User" on page 85
- "Modifying a User Name in eDirectory (a Rename Event in Notes)" on page 85
- "Renaming a Group" on page 86

#### Moving a User

- 1 Make sure you are using Notes 6.0.3 or later and have reviewed Section 4.9.3, "Considerations for Using AdminP," on page 86.
- **2** Make sure you have turned on support for the AdminP process, by adding the following parameter to the Subscriber Options in the driver parameters:

```
<allow-adminp-support display-name="Allow Domino AdminP
Support">True</allow-adminp-support>
```

See Allow Domino AdminP Support in Section 4.4.2, "Subscriber Options," on page 45.

- **3** Create driver policies that add the following attributes to the move event:
  - The certifier name of the destination certifier in Notes.
  - The certifier ID and a password for the destination certifier in Notes (the certifier that the user is going to)
  - The old certifier ID and password for the source certifier in Notes (the certifier that the user is coming from)

A sample of a command to the driver shim that moves a user is included in Section B.3, "Sample of Moving a User," on page 96.

#### Modifying a User Name in eDirectory (a Rename Event in Notes)

When a user's given name, middle initial, or surname changes in eDirectory, this event can cause the Rename of an object in Lotus Notes. If you have Notes 6.0.3 or later with AdminP support enabled, you can perform the Rename in Notes.

- 1 Make sure you are using Notes 6.0.3 or later and have reviewed Section 4.9.3, "Considerations for Using AdminP," on page 86.
- **2** Make sure you have turned on support for the AdminP process, by adding the following parameter to the Subscriber Options in the driver parameters:

```
<allow-adminp-support display-name="Allow Domino AdminP
Support">True</allow-adminp-support>
```

See Allow Domino AdminP Support in Section 4.4.2, "Subscriber Options," on page 45.

**3** Create driver policies that provide the correct certifier and password for the Notes user that is being renamed.

If a certifier and password are not specified in the event, the default certifier and password specified in the driver parameters are used.

A sample of a command to the driver shim that renames a user is included in Section B.2, "Sample of Renaming: Modifying a User Last Name," on page 95.

#### Renaming a Group

If you have Notes 6.0.3 or later with AdminP support enabled, you can rename groups. Rename events from eDirectory for groups do not require you to create any additional driver policies.

Rename events from eDirectory can be applied only to group objects in Notes. (For users, the driver shim uses an appropriate modify event to rename a user in Notes, as described in "Modifying a User Name in eDirectory (a Rename Event in Notes)" on page 85.)

- 1 Make sure you are using Notes 6.0.3 or later and have reviewed Section 4.9.3, "Considerations for Using AdminP," on page 86.
- **2** Make sure you have turned on support for the AdminP process, by adding the following parameter to the Subscriber Options in the driver parameters:

```
<allow-adminp-support display-name="Allow Domino AdminP
Support">True</allow-adminp-support>
```

See Allow Domino Admin PSupport in Section 4.4.2, "Subscriber Options," on page 45.

#### 4.9.2 Publisher Channel

To enable the one-way object move/rename synchronization:

- **1** Modify the schema mapping to map eDirectory Full Name to Notes FullName.
- **2** Enable the Full Name attribute in the Publisher filter.
- **3** Make sure that the Full Name attribute in the Subscriber filter is *not* enabled.
- **4** Make sure that the Public/Private AB setting is Yes in the driver configuration parameters.
- **5** Use a policy in your driver configuration like the one described in Section 4.1, "Determining eDirectory Object Placement When a Notes Object is Moved," on page 39.

After these modifications have been made, ndsrep detects changes to FullName. Because FullName contains both name and location information in a single attribute, ndsrep cannot distinguish between a Move and a Rename. Therefore, a change to FullName initiates both a Move and a Rename event to be synchronized into eDirectory.

#### 4.9.3 Considerations for Using AdminP

AdminP support provides several new features, but to use them effectively you must keep in mind the following:

- You need to have an understanding of AdminP and of Notes administration.
- A success message returned to the driver for an AdminP request means only that the request was successfully received by AdminP, not that it was completed successfully.
- AdminP requests made by the driver are not completed until AdminP attempts the action. The timing depends on the configuration of the Administration Process by the Notes administrator, the Domino server network, and the complexity of the action requested.

- Some AdminP requests require manual approval by the Notes administrator before they are completed.
- AdminP requests typically include the FullName of the Notes user (or ListName for a group). The driver sends requests based on the FullName of the user at the time the request was initiated, but AdminP does not necessarily complete the request immediately, and other requests that affect the FullName of the same user object might be waiting to be processed. If the FullName of the user is changed by a request, a subsequent request might fail because AdminP can't find the user.

For example, consider this scenario:

- You send a request from the driver to change a user's first name in Notes, and you use the AdminP feature to also rename the user object (changing FullName).
- You immediately send a second request from the driver to change the same user's last name in Notes and also rename the user object (changing FullName).

Both requests are received by AdminP. Both requests refer to the user with the same FullName. At midnight, AdminP begins processing the requests. The first one succeeds. However, the second one fails because the FullName was changed by the first request.

To help you use AdminP effectively, the following features are provided:

- You can cause the driver to send commands directly to the Domino Console. For example, you can issue a command to process all AdminP requests immediately. See Section 4.10, "Tell AdminP Commands," on page 87, and Domino Console Command in Section 4.5, "Custom Driver Parameters," on page 53.
- You can enable or disable AdminP support for an individual command. See Allow AdminP Support in Section 4.5, "Custom Driver Parameters," on page 53.

#### 4.10 Tell AdminP Commands

When the driver issues a request to the Domino AdminP process, these requests are delayed until the AdminP process completes them. (Refer to Notes documentation for information about administration processing intervals.)

If desired, you can attach a <tell-adminp-process> attribute to an event. If the event contains AdminP tasks that need to be performed, the command you specify is sent to the Domino server console. The attribute is described in Domino Console Command in Section 4.5, "Custom Driver Parameters," on page 53.

For example, when sending a Move user event, you could include the following attribute on the move event:

```
tell-adminp-process="tell adminp process new"
```

This example command causes the driver to request the AdminP process to process all the new tasks, which would include the move that was requested in that event.

To use tell-adminp-process commands:

- **1** Make sure you are using Notes 6.0.3 or later.
- **2** Make sure you have turned on support for the AdminP process, by adding the following parameter to the Subscriber Options in the driver parameters:

```
<allow-adminp-support display-name="Allow Domino AdminP
Support">True</allow-adminp-support>
```

See Allow Domino AdminP Support in Section 4.4.2, "Subscriber Options," on page 45.

- **3** Make sure the Notes user for the driver has rights to send commands to the Domino server console.
- 4 Make sure that the event contains AdminP tasks.

The tell-adminp-process command is sent only if AdminP tasks need to be performed as part of the event.

**5** Use the correct syntax.

Samples of using tell-adminp-process commands are included in Appendix B, "Samples for New Features," on page 93.

**6** To find out whether the AdminP request was completed successfully, use Lotus Notes tools such as the Domino Administrator.

Completion of a command by the Notes driver shim involving an AdminP request does not mean that the command has been successfully completed. It means only that the request has been made to AdminP.

For example, the driver might successfully make a request to AdminP to move a user. However, if incorrect certifiers were specified in the event, the move would fail when the AdminP process attempts it.

# **Using the Movecfg.exe Utility**



The movecfg.exe utility is a Windows console command line utility to be utilized when upgrading the Identity Manager Driver for Lotus Notes 1.x to version 2.2. It is installed if you select the option to install utilities during the Identity Manager installation.

The movecfg. exe utility is used to move specific Identity Manager Driver for Lotus Notes 1.x parameters from the Windows registry to the Identity Manager Driver for Lotus Notes 2.2 parameters location in the Identity Vault.

If you have multiple instances of ndsrep, you must run movecfg.exe once for each one, using the -ndsrep parameter.

With version 2.2 of the Identity Manager Driver for Lotus Notes, the ndsrep Domino add-in process reads configuration parameters from a Lotus Notes database (dsrepcfg.nsf). Prior to version 2.0, these parameters were stored in the Windows registry (\HKEY LOCAL MACHINE\SOFTWARE\NOVELL\VRD\DOMINO).

This utility attempts to move the necessary parameters from the Windows registry to the Lotus Notes Driver object (that is being upgraded) in the Identity Vault. It also attempts to place the LastEventTimeStamp for ndsrep that is stored in the registry into a Lotus Notes database (dsrepcfg.nsf). The LastEventTimeStamp is not stored as a driver parameter in the Identity Vault. For this reason it is placed directly into the ndsrep configuration database (dsrepcfg.nsf).

You can use a batch file such as the example provided in Section A.2, "Example Batch File to Use," on page 90.

- Section A.1, "Prerequisites," on page 89
- Section A.2, "Example Batch File to Use," on page 90
- Section A.3, "Using the Movecfg.exe Utility," on page 91
- Section A.4, "Troubleshooting," on page 92

**NOTE:** This utility is not localized for specific languages. All parameter descriptions that are imported into a specified driver are in English.

# A.1 Prerequisites

- Identity Manager utilities are installed. The movecfg.exe utility is installed if you select the Utilities option when installing Identity Manager 3. If you did not install the utilities when you installed Identity Manager, you can rerun the Identity Manager install and select to install just the utilities, or you can download movecfg.exe from the Utilities directory on the Identity Manager 3 Linux NW\_Win.iso CD.
- Run movecfg.exe from the Domino Server machine. The movecfg.exe utility should be executed from the same Domino Server that launches ndsrep.
- Domino Server is active. The Domino Server must be up and running.
- LDAP access is required to eDirectory. The user name (in LDAP form) and password must be
  passed as parameters to movecfg. If a password is not passed, movecfg prompts for it. The

- password is not encrypted, so clear text passwords must be accepted by the LDAP server, or the LDAP server bind will fail.
- Lotus Notes ID file password. When the movecfg utility attempts to create (or update) the ndsrep configuration database (dsrepcfg.nsf), it prompts for the Lotus Notes password of the Notes ID file that last accessed the Domino server (or possibly client) from this machine (this Notes ID file is referenced from the notes.ini file). If this password is entered correctly, the ndsrep configuration database (dsrepcfg.nsf) can then be appropriately updated with the LastEventTimeStamp copied from the ndsrep configuration in the registry. For dsrepcfg.nsf to be initially created by movecfg.exe, dsrepcfg.ntf (which is distributed with the Identity Manager Driver 2.2 for Lotus Notes) must be available to the Domino Server (at c:\Lotus\Domino\Data\dsrepcfg.ntf).
- Multiple Lotus Notes driver instances. If you have more than one Lotus Notes driver connected to the same Domino server, movecfg.exe must be run once for each instance of the Lotus Notes driver that is being converted. To convert Lotus Notes Driver parameters that are not the default driver parameters (but are the 2nd, 3rd, 4th, etc. Notes driver parameters) the -ndsrep parameter must be utilized.

## A.2 Example Batch File to Use

You can run the movecfq. exe utility with a batch file like the following example: @echo off REM \* \*\*\*\*\* REM REM Name: MoveCfg1to2.bat REM Description: Sample batch file to demonstrate the usage and launch parameters REM of movecfq.exe REM See movecfq.txt for descriptions of movecfq.exe usage parameters REM REM Copyright (C) 2003-2004 Novell, Inc., All Rights Reserved \*\*\*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\* setlocal REM echo on REM SAMPLE CALL 1 call movecfg.exe -host server.acme.com -port 389 -edir-dn cn=admin,o=acme -edir-pwd acmePass -driverDN cn=NotesDriver,cn=DriverSet1,o=acme -noteSvr cn=Domino1/ o=acme -timeout 15 REM SAMPLE Call 2: When converting a second or third Notes driver on the same machine, use the -ndsrep parameter REM call movecfq.exe -host server.acme.com -port 389 -edir-dn cn=admin,o=acme -edir-pwd acmePass -driverDN

cn=Notes2Driver,cn=DriverSet1,o=acme -noteSvr cn=Domino1/o=acme timeout 15 -ndsrep Notes2Driver

# A.3 Using the Movecfg.exe Utility

The movecfg.exe utility contains the following parameters:

movecfg -host <ldap host name/address> -port <port number> -edir-dn
<login dn> -edir-pwd <password> -driverDN <driverDN> -noteSvr

<Domino Server Name> [-ndsrep] <NDSREP instance name> [-timeout]
<timeout>

[-f] <ndsrep config db>

#### Example:

movecfg -host ldapsvr.mycompany.com -port 389 -edir-dn
cn=admin,o=MyOrg
-edir-pwd secret -driverDN cn=myDriver,cn=MyOrgUnit,O=MyOrg -noteSvr
CN=MyDomino/O=MyOrg

 Table A-1
 The Movecfg Utility's Parameters with Their Descriptions

Parameter Name	Required or Optional	Description
-host <ldap address="" host="" name=""></ldap>	Required	The DNS host name or the IP address of the LDAP host of the Identity Vault Server.
-port <port number=""></port>	Optional	LDAP port of the LDAP host specified by the -host parameter.
		Default = 389
-edir-dn <login dn=""></login>	Required	The fully qualified LDAP distinguished name of the Identity Vault user that updates the driver configuration. It must be in LDAP form.
		Example: cn=DirXMLAdmin,cn=eng,o=acme
-edir-pwd <password></password>	Optional	The password matching the user object specified by the -edir-dn login object. If a password is not supplied, a password prompt is presented.
-driverDN <driverdn></driverdn>	Required	The fully qualified LDAP distinguished name of the driver that needs its parameters updated. It must be in LDAP form.
		Example: cn=NotesDriver1,cn=DirXMLDriverSet,o=acme
-noteSvr <domino server<br="">Name&gt;</domino>	Required	The Domino Server Name.
		Example cn=NoteSrv/o=acme

Parameter Name	Required or Optional	Description
[-ndsrep] <ndsrep instance="" name=""></ndsrep>	Optional	The name of the Driver configuration instance to be stored in the ndsrep configuration database (dsrepcfg.nsf). By default this is set to the relative distinguished name of the Driver (such as NotesDriver1).
[-timeout] <timeout></timeout>	Optional	The timeout value when attempting to connect and communicate with the LDAP host.
[-f] <ndsrep config="" db=""></ndsrep>	Optional	The name of the ndsrep configuration database.
		Default = dsrepcfg.nsf

# A.4 Troubleshooting

If the movecfg utility is not successful in updating your outdated Lotus Notes Driver configuration, try following the manual process.

- 1 Shut down the Domino Server where ndsrep is launched.
- 2 Shut down the Identity Manager Driver for Lotus Notes that you are upgrading.
- **3** Copy the following text from this document, and paste it into the <publisher-options> section of the Lotus Notes Driver configuration.

- **4** Use the Regedit utility on Windows to view each ndsrep configuration value. The regedit key values are under \hkey\_Local\_Machine\software\novell\vrD\domino.
  - Update the new Lotus Notes Driver publisher-options configuration values to match the corresponding values stored within the Windows registry.
- **5** Start the Lotus Notes Driver and the Domino Server.

# Samples for New Features

В

The driver supports using AdminP process such as Delete, Move, and Rename. These features require you to use Notes 6.0.3 or later, turn on AdminP support for the driver (see Allow Domino AdminP Support in Section 4.4.2, "Subscriber Options," on page 45), and make changes to your driver policy.

The driver also supports sending commands to the Domino server console.

This section provides examples of the event produced by the Metadirectory engine, and the command that must be given to the driver shim. Policy samples are not provided, but the example shows how the event must be transformed and shows attributes that need to be provided by policies.

Refer to Section 4.9, "Move/Rename," on page 84 and Section 4.10, "Tell AdminP Commands," on page 87 for more information.

- Section B.1, "Sample of Adding a User," on page 93
- Section B.2, "Sample of Renaming: Modifying a User Last Name," on page 95
- Section B.3, "Sample of Moving a User," on page 96
- Section B.4, "Sample of Deleting a User," on page 97
- Section B.5, "Samples of Sending a Command to the Domino Server Console," on page 99
- Section B.6, "Replication (Rep) Attribute Tags," on page 100
- Section B.7, "Sample ACL Entry Tags," on page 107
- Section B.8, "Setting and Modifying Lotus Notes Field Flags," on page 113

### **B.1 Sample of Adding a User**

This section shows a sample of the events when creating user John Doe in the Identity Vault.

- Section B.1.1, "Add Event Produced by the Metadirectory Engine," on page 93
- Section B.1.2, "Add Event Received by the Notes Driver Shim," on page 94

#### **B.1.1 Add Event Produced by the Metadirectory Engine**

#### **B.1.2 Add Event Received by the Notes Driver Shim**

```
<nds dtdversion="2.0" ndsversion="8.x">
  <source>
   cproduct version="2.0.5.38">Identity Manager
   <contact>Novell, Inc.
  </source>
  <input>
   <add expire-term="5"
                                    certify-user="Yes"
           class-name="Person"
           create-mail="Yes"
           dest-dn="cn=John Doe/ou=sales/o=dirxml"
           drv-param-cert-id="sales-cert-id-file"
                                                           drv-
param-cert-pwd="sales-cert-id-password"
           enforce-unique-short-name="No"
           event-id="MYSERVER-NDS#20040603175534#1#1"
           internet-password-force-change="Yes"
level="MANAGER"
                          mail-acl-manager-name="CN=Notes Driver/
O=dirxml"
                   mail-file-quota="120000"
                                                       mail-quota-
warning-threshold="100000"
                           notes-password-change-
interval="100" notes-password-check-
setting="PWD CHK CHECKPASSWORD"
                                         notes-password-grace-
            notes-policy-name="/EmployeePolicy"
period="5"
          qualified-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=sales\CN=John Doe"
roaming-cleanup-period="90" roaming-cleanup-setting="REG_ROAMING_CLEANUP_EVERY_NDAYS" roaming-
server="cn=myserver/o=dirxml" roaming-
subdir="Roaming\JohnDoe"
                                  roaming-user="Yes"
           src-dn="\mytree\DirXML\Notes\Users\sales\John Doe"
           src-entry-id="38727"
           sync-internet-password="Yes">
     <add-attr attr-name="FullName">
       <value naming="true" timestamp="1086285300#20"</pre>
type="string">John Doe</value>
     </add-attr>
     <add-attr attr-name="LastName">
       <value timestamp="1086285300#3" type="string">Doe</value>
     </add-attr>
```

# **B.2 Sample of Renaming: Modifying a User Last Name**

This section shows a sample of the events when changing a last name from Doe to Doerr in the Identity Vault. Refer to Section 4.9, "Move/Rename," on page 84 for more information.

- Section B.2.1, "Modify Event Produced by the Metadirectory Engine," on page 95
- Section B.2.2, "Modify Event Received by the Notes Driver Shim," on page 95

#### **B.2.1 Modify Event Produced by the Metadirectory Engine**

```
<nds dtdversion="2.0" ndsversion="8.x">
 <source>
   <contact>Novell, Inc.
 </source>
 <input>
   <modify class-name="User"</pre>
          event-id="MYSERVER-NDS#20040603175500#1#3"
           qualified-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=sales\CN=John Doe"
           src-dn="\mytree\DirXML\Notes\Users\sales\John Doe"
           src-entry-id="38727"
           timestamp="1086291578#2">
     <association</pre>
state="associated">BB888BB0C35D13EC87256EA8006296CE</association>
     <modify-attr attr-name="Surname">
       <remove-value>
         <value timestamp="1086285300#3" type="string">Doe</value>
       </remove-value>
       <add-value>
         <value timestamp="1086291578#2" type="string">Doerr</value>
       </add-value>
     </modify-attr>
   </modify>
 </input>
</nds>
```

#### **B.2.2 Modify Event Received by the Notes Driver Shim**

```
<nds dtdversion="2.0" ndsversion="8.x">
  <source>
```

```
oduct version="2.0.5.38 ">Identity Manager
   <contact>Novell, Inc.
  </source>
 <input>
   <modify class-name="Person"</pre>
               drv-param-cert-id="sales-cert-id-file"
drv-param-cert-pwd="sales-cert-id-password"
               event-id="MYSERVER-NDS#20040603175500#1#3"
               qualified-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=sales\CN=John Doe"
               src-dn="\mytree\DirXML\Notes\Users\sales\John Doe"
               src-entry-id="38727"
               tell-adminp-process="tell adminp process all"
               timestamp="1086291578#2">
     <association
state="associated">BB888BB0C35D13EC87256EA8006296CE</association>
     <modify-attr attr-name="LastName">
       <remove-value>
         <value timestamp="1086285300#3" type="string">Doe</value>
       </remove-value>
       <add-value>
         <value timestamp="1086291578#2" type="string">Doerr</value>
       </add-value>
     </modify-attr>
    </modify>
 </input>
</nds>
```

## **B.3 Sample of Moving a User**

This section shows a sample of the events when moving John Doerr from the OU=sales to OU=mktg in eDirectory™. Refer to Section 4.9, "Move/Rename," on page 84 for more information.

- Section B.3.1, "Move Event Produced by the Metadirectory Engine," on page 96
- Section B.3.2, "Move Event Received by the Notes Driver Shim," on page 97

#### **B.3.1 Move Event Produced by the Metadirectory Engine**

#### **B.3.2 Move Event Received by the Notes Driver Shim**

```
<nds dtdversion="2.0" ndsversion="8.x">
 <source>
   oduct version="2.0.5.38 ">Identity Manager
   <contact>Novell, Inc.
 <input>
    <move
          certifier-name="/mktg/dirxml"
           class-name="Person"
          drv-param-cert-id="mktg-cert-id-file"
                                                           drv-param-
cert-pwd="mktg-cert-id-password"
                                          drv-param-old-cert-
id="sales-cert-id-file"
                                 drv-param-old-cert-pwd="sales-cert-
id-password"
           event-id="MYSERVER-NDS#20040603175500#1#1"
           old-src-dn="\mytree\DirXML\Notes\Users\sales\John Doerr"
           qualified-old-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=sales\CN=John Doerr"
           qualified-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=mktg\CN=John Doerr"
           src-dn="\mytree\DirXML\Notes\Users\mktg\John Doerr"
           src-entry-id="38727"
            tell-adminp-process="tell adminp process all"
           timestamp="1086285300#1">
      <association
state="associated">BB888BB0C35D13EC87256EA8006296CE</association>
      <parent qualified-src-dn="O=DirXML\OU=Notes\OU=Users\OU=mktq"</pre>
             src-dn="\mytree\DirXML\Notes\Users\mktg" src-entry-
id="36691"/>
   </move>
 </input>
</nds>
```

# **B.4** Sample of Deleting a User

This section shows a sample of the events when deleting John Doerr from eDirectory.

- Section B.4.1, "Delete Event Produced by the Metadirectory Engine," on page 98
- Section B.4.2, "Delete Event Received by the Notes Driver Shim," on page 98

#### **B.4.1 Delete Event Produced by the Metadirectory Engine**

```
<nds dtdversion="2.0" ndsversion="8.x">
 <source>
   cproduct version="2.0.5.38 ">Identity Manager
    <contact>Novell, Inc.</contact>
 </source>
 <input>
    <delete class-name="User"
           event-id="MYSERVER-NDS#20040603195215#1#6"
           qualified-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=mktg\CN=John Doerr"
           src-dn="\mytree\DirXML\Notes\Users\mktg\John Doerr"
            src-entry-id="38727"
           timestamp="1086292335#6">
     <association
state="associated">BB888BB0C35D13EC87256EA8006296CE</association>
   </delete>
 </input>
</nds>
```

#### **B.4.2 Delete Event Received by the Notes Driver Shim**

```
<nds dtdversion="2.0" ndsversion="8.x">
 <source>
   cproduct version="2.0.5.38 ">Identity Manager
   <contact>Novell, Inc.</contact>
 </source>
 <input>
    <delete class-name="Person"</pre>
           delete-windows-user="false" deny-access-group-
id="7EFB951A3574521F87256E540001F140"
           event-id="MYSERVER-NDS#20040603195215#1#6"
           immediate="true"
                                        mail-file-
action="MAILFILE DELETE ALL"
                                        qualified-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=mktg\CN=John Doerr"
           src-dn="\mytree\DirXML\Notes\Users\mktg\John Doerr"
           src-entry-id="38727"
            tell-adminp-process="tell adminp process all"
timestamp="1086292335#6">
     <association
state="associated">BB888BB0C35D13EC87256EA8006296CE</association>
   </delete>
 </input>
</nds>
```

# B.5 Samples of Sending a Command to the Domino Server Console

This section shows an example of using the driver's ability to send a command to the Domino server console and receive a response.

- Section B.5.1, "Domino Console Command as Received by the Driver Shim," on page 99
- Section B.5.2, "Command Response Returned by the Notes Driver Shim," on page 99

# **B.5.1 Domino Console Command as Received by the Driver Shim**

#### **B.5.2 Command Response Returned by the Notes Driver Shim**

Responses are truncated after 32000 characters.

```
<nds dtdversion="2.0" ndsversion="8.x" xmlns:notes="http://</pre>
www.novell.com/dirxml/notesdriver">
      <source>
        cproduct build="20040602 1644" instance="NotesDriver"
version="2.1">Identity Manager Driver for Lotus Notes
       <contact>Novell, Inc.
      </source>
      <output>
        <notes:domino-console-response event-id="0">
          <server platform="Windows/32" time="20040603T141140,48-06"</pre>
version="Release 6.5">
            <name>myserver/dirxml</name>
            <title>MyServer Domino Server</title>
            <directory>C:\Lotus\Domino\Data</directory>
            <partition>C.Lotus.Domino.Data</partition>
            <uptime days="6" hours="1" minutes="52" seconds="38"/>
            <transactions hour="80" minute="2" peak="3614"/>
           <sessions peaknumber="5" peaktime="20040528T130914,23-06"/>
            <transactions count="35797" maxconcurrent="20"/>
            <threadpool threads="40"/>
            <availability index="100" state="AVAILABLE"/>
            <mailtracking enabled="0" state="Not Enabled"/>
            <mailjournalling enabled="0" state="Not Enabled"/>
            <sharedmail enabled="0" state="Not Enabled"/>
            <mailboxes number="1"/>
            <mail dead="0" pending="0"/>
            <tasks waiting="0"/>
            <transactionlogging enabled="0"/>
```

```
<hosting enabled="0"/>
            <faultrecovery enabled="0" state="Not Enabled"/>
            <activitylogging enabled="0" state="Not Enabled"/>
            <controller enabled="0" state="Not Enabled"/>
<diagnosticdirectory>C:\Lotus\Domino\Data\IBM TECHNICAL SUPPORT/
diagnosticdirectory>
            <consolelogging enabled="0" state="Not Enabled"/>
<consolelogfile>C:\Lotus\Domino\Data\IBM TECHNICAL SUPPORT\console.log
</consolelogfile>
          </server>
        </notes:domino-console-response>
        <status event-id="0" level="success"/>
     </output>
</nds>
```

## **B.6 Replication (Rep) Attribute Tags**

- Section B.6.1, "The ADD Event Policy Rule For Database Replication," on page 100
- Section B.6.2, "Mailfile Database Replication Attribute Tags As They Are Submitted To the Shim," on page 103
- Section B.6.3, "Sample Modify Event Policy Rule," on page 104
- Section B.6.4, "Modify Event Attribute Tags As They Are Submitted To the Shim," on page 106

#### **B.6.1 The ADD Event Policy Rule For Database Replication**

Below is a sample ADD Event policy rule to submit database replication parameters on behalf of a newly created mailfile:

```
<rule>
   <description>Add User E-Mail: Mail File Replication Settings/
description>
  <conditions>
      <and>
         <if-operation op="equal">add</if-operation>
         <if-class-name mode="nocase" op="equal">User</if-class-name>
      </and>
   </conditions>
   <actions>
      <do-set-xml-attr expression="../add" name="mailfile-rep-new-</pre>
server">
         <arg-string>
           <token-text xml:space="preserve">CN=server1/0=novel1
token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-new-db-</pre>
name">
         <arg-string>
            <token-text>mail/daffyduck rep1.nsf</token-text>
```

```
</arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-dest-</pre>
server">
         <arg-string>
            <token-text xml:space="preserve">CN=server1/0=novel1/
token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-</pre>
priority">
         <arg-string>
            <token-text>LOW</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-src-</pre>
server">
         <arg-string>
            <token-text xml:space="preserve">CN=server2/O=novell/
token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-include-</pre>
acl">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-include-</pre>
agents">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-include-</pre>
documents">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-include-</pre>
forms">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-include-</pre>
formulas">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-view-</pre>
list">
```

```
<arg-string>
            <token-text
xml:space="preserve">Inbox;Sent;Calendar;Meetings</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-cutoff-</pre>
interval">
         <arg-string>
            <token-text>240</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-dont-</pre>
send-local-security-updates">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-</pre>
abstract">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-cutoff-</pre>
delete">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-</pre>
disabled">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-ignore-</pre>
deletes">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-ignore-</pre>
dest-deletes">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-clear-</pre>
history">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-entry-</pre>
```

```
remove">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="mailfile-rep-</pre>
immediate">
         <arg-string>
            <token-text>CN=server1/O=novell</token-text>
         </arg-string>
      </do-set-xml-attr>
   </actions>
</rule>
```

#### B.6.2 Mailfile Database Replication Attribute Tags As They Are Submitted To the Shim

Below is a sample ADD Event containing mailfile database replication attribute tags as they are submitted to the Notes Driver shim. This sample modifies the replication settings of the newly created mailfile of the new Notes user and also creates a replica on server CN=server1/O=novell.

```
<nds dtdversion="2.0" ndsversion="8.x">
  <source>
     duct version="2.0.8.20050127 ">Identity Manager
     <contact>Novell, Inc.
  </source>
  <input>
     <add certify-user="true"
           class-name="Person"
           create-mail="true"
           dest-dn="CN=DaffyDuck/OU=eng/O=novell"
           drv-param-cert-id="eng-cert-id-file"
           drv-param-cert-pwd="eng-cert-id-password"
           event-id="BLACKCAP-NDS#20050331215122#1#1"
           mail-acl-manager-name="CN=Notes Driver/O=novell"
           mailfile-rep-abstract="false"
           mailfile-rep-clear-history="false"
           mailfile-rep-cutoff-delete="false"
           mailfile-rep-cutoff-interval="240"
           mailfile-rep-dest-server="CN=server1/0=novell"
           mailfile-rep-disabled="false"
           mailfile-rep-dont-send-local-security-updates="false"
           mailfile-rep-entry-remove="false"
           mailfile-rep-ignore-deletes="false"
           mailfile-rep-ignore-dest-deletes="false"
           mailfile-rep-immediate="CN=server1/O=novell"
           mailfile-rep-include-acl="true"
           mailfile-rep-include-agents="true"
           mailfile-rep-include-documents="true"
           mailfile-rep-include-forms="true"
           mailfile-rep-include-formulas="true"
           mailfile-rep-new-db-name="mail/daffyduck rep1.nsf"
           mailfile-rep-new-server="CN=server1/O=novell"
           mailfile-rep-priority="LOW"
```

```
mailfile-rep-src-server="CN=server2/O=novell"
            mailfile-rep-view-list="Inbox; Sent; Calendar; Meetings"
            qualified-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=eng\CN=DaffyDuck"
            src-dn="\novell tree\DirXML\Notes\Users\eng\DaffyDuck"
            src-entry-id="40729"
            timestamp="1112305882#22">
         <add-attr attr-name="FullName">
            <value timestamp="1112305882#22" type="string">DaffyDuck/
value>
         </add-attr>
         <add-attr attr-name="LastName">
            <value timestamp="1112305882#7" type="string">Duck</value>
         </add-attr>
         <add-attr attr-name="FirstName">
            <value timestamp="1112305882#5" type="string">Daffy/
value>
         </add-attr>
         <add-attr attr-name="InternetAddress">
            <value>DaffyDuck@novell.com</value>
         </add-attr>
      </add>
   </input>
</nds>
```

#### **B.6.3 Sample Modify Event Policy Rule**

Sample Modify Event policy rule to submit database replication parameters:

```
<description>Modify Group - Apply Database Replication Parameters/
description>
  <conditions>
     <and>
         <if-operation op="equal">modify</if-operation>
         <if-class-name mode="nocase" op="equal">Group</if-class-name>
     </and>
  </conditions>
  <actions>
     <do-set-xml-attr expression="../modify" name="rep-dest-server">
         <arg-string>
            <token-text xml:space="preserve">CN=server1/0=novel1
token-text>
         </arg-string>
     </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-priority">
         <arg-string>
            <token-text>HIGH</token-text>
         </arg-string>
     </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-src-server">
         <arg-string>
            <token-text xml:space="preserve">CN=server2/0=novel1/
token-text>
```

```
</arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-include-acl">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-include-</pre>
agents">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-include-</pre>
documents">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-include-</pre>
forms">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-include-</pre>
formulas">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-view-list">
         <arg-string>
            <token-text xml:space="preserve">People;People By
Category;Groups;Groups By Category</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-cutoff-</pre>
interval">
         <arg-string>
            <token-text>240</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-dont-send-</pre>
local-security-updates">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-abstract">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
```

```
<do-set-xml-attr expression="../modify" name="rep-cutoff-</pre>
delete">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-disabled">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-ignore-</pre>
deletes">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-ignore-dest-</pre>
deletes">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-clear-</pre>
history">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-entry-remove">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="rep-immediate">
         <arg-string>
            <token-text>CN=server1/O=novell</token-text>
         </arg-string>
      </do-set-xml-attr>
   </actions>
</rule>
```

#### B.6.4 Modify Event Attribute Tags As They Are Submitted To the Shim

Sample Modify Event containing database replication attribute tags as submitted to the Notes Driver shim. This sample modifies the synchronized .nsf database (in this case names.nsf):

```
<nds dtdversion="2.0" ndsversion="8.x">
  <source>
     cproduct version="2.0.8.20050127 ">Identity Manager
     <contact>Novell, Inc.
  </source>
  <input>
```

```
<modify
                class-name="Group"
                  event-id="BLACKCAP-NDS#20050401191642#1#1"
                  qualified-src-
dn="O=DirXML\OU=Notes\OU=Groups\CN=Engineering"
                  rep-abstract="false"
                  rep-clear-history="false"
                  rep-cutoff-delete="false"
                  rep-cutoff-interval="240"
                  rep-dest-server="CN=server1/O=novell"
                  rep-disabled="false"
                  rep-dont-send-local-security-updates="true"
                  rep-entry-remove="false"
                  rep-ignore-deletes="false"
                  rep-ignore-dest-deletes="false"
                  rep-immediate="CN=server1/0=novell"
                  rep-include-acl="true"
                  rep-include-agents="true"
                  rep-include-documents="true"
                  rep-include-forms="true"
                  rep-include-formulas="true"
                  rep-priority="HIGH"
                  rep-src-server="CN=server2/0=novell"
                  rep-view-list="People; People By
Category; Groups; Groups By Category"
dn="\novell tree\DirXML\Notes\Groups\Engineering"
                  src-entry-id="40743"
                  timestamp="1112383002#1">
            <association
state="associated">3EEB6FC36CBE4D3687256FD60069C721</association>
            <modify-attr attr-name="ListDescription">
               <add-value>
                  <value timestamp="1112383002#1"</pre>
type="string">Software Engineering Group</value>
               </add-value>
            </modify-attr>
      </modify>
   </input>
</nds>
```

# **B.7 Sample ACL Entry Tags**

The acl-entry-enable-role and acl-entry-disable-role tag values require a list of the roles that are defined in the ACL record. They also accept the [[ALL]] tag, which indicates using all of the roles defined in the ACL record.

You can select all roles with the string acl-entry-enable-role="[[ALL]]". This is equivalent to aclentry-enable-role="[GroupCreator] [GroupModifier] [NetCreator] [NetModifier] [PolicyCreator] [PolicyModifier] [PolicyReader] [ServerCreator] [ServerModifier] [UserCreator] [UserModifier]" for names.nsf.

You can deselect all roles with the string acl-entry-disable-role="[[ALL]]". This is equivalent to aclentry-disable-role="[GroupCreator] [GroupModifier] [NetCreator] [NetModifier] [PolicyCreator]

[PolicyModifier] [PolicyReader] [ServerCreator] [ServerModifier] [UserCreator] [UserModifier]" for names.nsf.

- Section B.7.1, "ADD Event Policy Rule To Submit ACLEntry Parameters," on page 108
- Section B.7.2, "The Add Event ACLEntry Tags That Are Submitted To the Notes Driver Shim," on page 109
- Section B.7.3, "Sample Modify Event Policy Rule," on page 110
- Section B.7.4, "Modify Event As Submitted To the Notes Driver Shim," on page 112

#### **B.7.1 ADD Event Policy Rule To Submit ACLEntry Parameters**

Sample ADD Event policy rule to submit ACLEntry parameters:

```
<rule>
   <description>Apply ACL entry attributes to ADD events</description>
   <conditions>
      <or disabled="true">
         <if-operation op="equal">add</if-operation>
   </conditions>
   <actions>
      <do-set-xml-attr expression="../add" name="acl-entry-public-</pre>
reader">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="acl-entry-public-</pre>
writer">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="acl-entry-level">
         <arg-string>
            <token-text>MANAGER</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="acl-entry-user-type">
         <arg-string>
            <token-text>PERSON</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="acl-entry-enable-</pre>
role">
         <arg-string>
            <token-text>[[ALL]]</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="acl-entry-disable-</pre>
role">
         <arg-string>
            <token-text xml:space="preserve">[NetCreator]
```

```
[NetModifier]</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="acl-entry-can-create-</pre>
documents">
          <arg-string>
            <token-text>true</token-text>
          </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="acl-entry-can-create-</pre>
ls-or-java-agent">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="acl-entry-can-create-</pre>
personal-agent">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="acl-entry-can-create-</pre>
personal-folder">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="acl-entry-can-create-</pre>
shared-folder">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add" name="acl-entry-can-delete-</pre>
documents">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
<do-set-xml-attr expression="../add" name="acl-entry-can-replicate-or-</pre>
copy-documents">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
   </actions>
</rule>
```

#### B.7.2 The Add Event ACLEntry Tags That Are Submitted To the **Notes Driver Shim**

Sample Add Event containing ACLEntry tags as they are submitted to the Notes Driver shim:

```
<nds dtdversion="2.0" ndsversion="8.x">
   <source>
      cproduct version="2.0.5.51 ">Identity Manager
      <contact>Novell, Inc.
   </source>
   <input>
      <add acl-entry-can-create-documents="true"</pre>
       acl-entry-can-create-ls-or-java-agent="true"
       acl-entry-can-create-personal-agent="true"
       acl-entry-can-create-personal-folder="true"
       acl-entry-can-create-shared-folder="true"
       acl-entry-can-delete-documents="true"
       acl-entry-can-replicate-or-copy-documents="true"
       acl-entry-enable-role="[[ALL]]"
       acl-entry-level="MANAGER"
       acl-entry-public-reader="true"
       acl-entry-public-writer="true"
       acl-entry-user-type="PERSON"
       certify-user="true"
       class-name="Person"
       create-mail="true"
       dest-dn="CN=DaffyDuck/OU=sales/O=novell"
       drv-param-cert-id="sales-cert-id-file"
       drv-param-cert-pwd="sales-cert-id-password"
       event-id="MYSERVER-NDS#20040920214955#1#1"
       expire-term="2"
       mail-acl-manager-name="CN=Notes Driver/O=novell"
       qualified-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=sales\CN=DaffyDuck"
       src-dn="\mytree\DirXML\Notes\Users\sales\DaffyDuck"
       src-entry-id="39862">
         <add-attr attr-name="FullName">
            <value naming="true" timestamp="1095716982#20"</pre>
             type="string">DaffyDuck</value>
         </add-attr>
         <add-attr attr-name="LastName">
            <value timestamp="1095716982#3" type="string">Duck</value>
         <add-attr attr-name="FirstName">
            <value timestamp="1095716995#1" type="string">Daffy/
value>
         </add-attr>
         <add-attr attr-name="InternetAddress">
            <value>DaffyDuck@novell.com</value>
         </add-attr>
      </add>
   </input>
</nds>
```

#### **B.7.3 Sample Modify Event Policy Rule**

Below is a sample Modify Event policy rule to submit ACLEntry parameters to the Notes Driver shim:

```
<rule>
   <description>Apply ACL entry attributes to MODIFY events/
description>
   <conditions>
      <or disabled="true">
         <if-operation op="equal">modify</if-operation>
      </or>
   </conditions>
   <actions>
      <do-set-xml-attr expression="../modify" name="acl-entry-public-</pre>
reader">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-public-</pre>
writer">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-level">
         <arg-string>
            <token-text>MANAGER</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-user-</pre>
type">
         <arg-string>
            <token-text>PERSON</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-enable-</pre>
role">
         <arg-string>
            <token-text>[[ALL]]</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-disable-</pre>
role">
         <arg-string>
            <token-text xml:space="preserve">[NetCreator]
[NetModifier]</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-can-</pre>
create-documents">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-can-</pre>
create-ls-or-java-agent">
         <arg-string>
```

```
<token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-can-</pre>
create-personal-agent">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-can-</pre>
create-personal-folder">
          <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-can-</pre>
create-shared-folder">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-can-</pre>
delete-documents">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify" name="acl-entry-can-</pre>
replicate-or-copy-documents">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
   </actions>
</rule>
```

#### **B.7.4 Modify Event As Submitted To the Notes Driver Shim**

Below shows the Modify Event containing ACLEntry tags as they are submitted to the Notes Driver shim:

```
<nds dtdversion="2.0" ndsversion="8.x">
  <source>
     cproduct version="2.0.5.51 ">Identity Manager
     <contact>Novell, Inc.
  </source>
  <input>
     <modify acl-entry-can-create-documents="true"</pre>
      acl-entry-can-create-ls-or-java-agent="true"
      acl-entry-can-create-personal-agent="true"
      acl-entry-can-create-personal-folder="true"
      acl-entry-can-create-shared-folder="true"
      acl-entry-can-delete-documents="true"
      acl-entry-can-replicate-or-copy-documents="true"
```

```
acl-entry-disable-role="[NetCreator] [NetModifier]"
       acl-entry-enable-role="[[ALL]]"
       acl-entry-level="MANAGER"
       acl-entry-public-reader="true"
       acl-entry-public-writer="true"
       acl-entry-user-type="PERSON" class-name="Person"
       event-id="MYSERVER-NDS#20040920215410#1#1"
       qualified-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=sales\CN=DaffyDuck"
       src-dn="\mytree\DirXML\Notes\Users\sales\DaffyDuck"
       src-entry-id="39862" timestamp="1095717426#2">
         <association
state="associated">BE64D2CAAB6EADD987256F150077EF7B</association>
         <modify-attr attr-name="OfficePhoneNumber">
            <remove-value>
              <value timestamp="1095717250#1" type="teleNumber">444-
4444</value>
            </remove-value>
            <add-value>
               <value timestamp="1095717426#2" type="teleNumber">555-
1212</value>
            </add-value>
         </modify-attr>
      </modify>
   </input>
</nds>
```

# **B.8 Setting and Modifying Lotus Notes Field Flags**

The Notes Driver v2.1.1 and above can set (add) or modify Lotus Notes field flags on documents (records) in a Lotus Notes database (.nsf) that is being synchronized (Subscriber channel only). Available Lotus Notes field flags which the driver can appropriately set are read-access, read/writeaccess, names, protected, and summary. The seal and sign flags can also be enabled or disabled, but without the expected supporting functionality.

Each Notes field flag can be set enabled or disabled using a corresponding XML tag. The following table represents this mapping.

Table B-1	Driver Attributes	Tags and T	Their Correspon	iding Notes	Field Flag
-----------	-------------------	------------	-----------------	-------------	------------

driver-attr-flag	Notes Field Flag
authors-flag	READ/WRITE-ACCESS
encrypted-flag	SEAL
names-flag	NAMES
protected-flag	PROTECTED
readers-flag	READ-ACCESS
signed-flag	SIGN

driver-attr-flag	Notes Field Flag
summary-flag	SUMMARY

You can insert these XML tags (driver-attr-flags) into XDS documents of the Subscriber channel as attributes of the <add-attr> or <modify-attr> elements (siblings to the attr-name attribute). The field flags must be used in the appropriate manner, according to Lotus Notes database schema and design rules. Inappropriate flags (or flag combinations) on a field can cause unexpected results for that document (record).

For example, it is possible for uncertified users to be removed from the view of the Notes Address book (rendering them inaccessible) when certain attribute flags (readers-flag, authors-flag) are set inappropriately on a field that cannot handle the flag.

The encrypted-flag can be set for a field, even though the driver does not take the necessary steps to call the encryption methods with appropriate certificates. So it is possible to set a field as SEAL but some other code will need to call the appropriate methods to encrypt the field in the document, or the field will not truly be sealed (encrypted).

- Section B.8.1, "Sample Creation Policy Rules," on page 114
- Section B.8.2, "A Sample Modify Policy Rule," on page 115
- Section B.8.3, "Example Add XDS Doc," on page 116
- Section B.8.4, "Example Modify XDS Doc," on page 118

#### **B.8.1 Sample Creation Policy Rules**

Below is an example of using the field flags in creation policy rules:

```
<rule>
   <description>Add Shoe Size</description>
   <conditions>
      <and>
            <if-operation op="equal">add</if-operation>
      </and>
   </conditions>
   <actions>
      <do-add-dest-attr-value class-name="User" name="ShoeSize">
         <arg-value type="string">
            <token-text xml:space="preserve">9.5</token-text>
         </arg-value>
      </do-add-dest-attr-value>
   </actions>
</rule>
<rule>
   <description>Apply ShoeSize Field Flags</description>
   <conditions>
      <and>
            <if-operation op="equal">add</if-operation>
            <if-class-name mode="nocase" op="equal">User</if-class-</pre>
name>
      </and>
   </conditions>
   <actions>
```

```
<do-set-xml-attr expression="../add[@class-name='User']/add-</pre>
attr[@attr-name='ShoeSize']" name="authors-flag">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add[@class-name='User']/add-</pre>
attr[@attr-name='ShoeSize']" name="readers-flag">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add[@class-name='User']/add-</pre>
attr[@attr-name='ShoeSize']" name="names-flag">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add[@class-name='User']/add-</pre>
attr[@attr-name='ShoeSize']" name="protected-flag">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add[@class-name='User']/add-</pre>
attr[@attr-name='ShoeSize']" name="summary-flag">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add[@class-name='User']/add-</pre>
attr[@attr-name='ShoeSize']" name="signed-flag">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../add[@class-name='User']/add-</pre>
attr[@attr-name='ShoeSize']" name="encrypted-flag">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
   </actions>
</rule>
```

#### **B.8.2 A Sample Modify Policy Rule**

Next is an example of a Modify policy rule in the command transform:

```
<rule>
   <description>Apply User Telephone Number Field Flags</description>
   <conditions>
      <and>
         <if-class-name mode="nocase" op="equal">User</if-class-name>
```

```
<if-operation op="equal">modify</if-operation>
         <if-op-attr name="Telephone Number" op="available"/>
      </and>
   </conditions>
   <actions>
      <do-set-xml-attr expression="../modify[@class-name='User']/</pre>
modify-attr[@attr-name='Telephone Number']" name="authors-flag">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify[@class-name='User']/</pre>
modify-attr[@attr-name='Telephone Number']" name="readers-flag">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify[@class-name='User']/</pre>
modify-attr[@attr-name='Telephone Number']" name="names-flag">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify[@class-name='User']/</pre>
modify-attr[@attr-name='Telephone Number']" name="protected-flag">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify[@class-name='User']/</pre>
modify-attr[@attr-name='Telephone Number']" name="summary-flag">
         <arg-string>
            <token-text>true</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify[@class-name='User']/</pre>
modify-attr[@attr-name='Telephone Number']" name="signed-flag">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
      <do-set-xml-attr expression="../modify[@class-name='User']/</pre>
modify-attr[@attr-name='Telephone Number']" name="encrypted-flag">
         <arg-string>
            <token-text>false</token-text>
         </arg-string>
      </do-set-xml-attr>
   </actions>
</rule>
```

#### B.8.3 Example Add XDS Doc

Below is an example Add XDS doc before it is submitted to the Notes Driver shim:

```
<nds dtdversion="2.0" ndsversion="8.x">
   <source>
      cproduct version="2.0.5.51 ">Identity Manager/product>
      <contact>Novell, Inc.
   </source>
   <input>
      <add certify-user="true"
       class-name="Person"
       create-mail="true"
       dest-dn="CN=ErnieEngineer/OU=eng/O=novell"
       drv-param-cert-id="eng-cert-id-file"
       drv-param-cert-pwd="eng-cert-id-password"
       event-id="BLACKCAP-NDS#20040915163542#1#1"
       expire-term="22"
       internet-password-force-change="false"
       mail-acl-manager-name="CN=Notes Driver/O=novell"
      mail-file-inherit-flag="true"
       no-id-file="false"
       notes-password-change-interval="0"
       notes-password-check-setting="PWD CHK CHECKPASSWORD"
       notes-password-grace-period="0"
       qualified-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=eng\CN=ErnieEngineer"
       roaming-cleanup-period="90"
       roaming-cleanup-setting="REG ROAMING CLEANUP EVERY NDAYS"
       roaming-server="CN=blackcap/O=novell"
       roaming-subdir="Roaming\ErnieEngineer"
       roaming-user="false" src-
dn="\raspberry\DirXML\Notes\Users\eng\ErnieEngineer"
       src-entry-id="39853"
       store-useridfile-in-ab="true"
       sync-internet-password="true">
         <add-attr attr-name="FullName">
            <value naming="true" timestamp="1095266118#20"</pre>
type="string">ErnieEngineer</value>
         </add-attr>
         <add-attr attr-name="LastName">
            <value timestamp="1095266118#3" type="string">Engineer/
value>
         </add-attr>
         <add-attr attr-name="FirstName">
            <value timestamp="1095266142#1" type="string">Ernie/
value>
         </add-attr>
         <add-attr attr-name="InternetAddress">
            <value>ErnieEngineer@novell.com</value>
         </add-attr>
         <add-attr attr-name="ShoeSize" authors-flag="false"</pre>
encrypted-flag="false" names-flag="false" protected-flag="true"
readers-flag="false" signed-flag="false" summary-flag="true">
            <value type="string">9.5</value>
         </add-attr>
      </add>
```

```
</input>
</nds>
```

#### **B.8.4 Example Modify XDS Doc**

Below is an example Modify XDS doc before it is submitted to the Notes Driver shim:

```
<nds dtdversion="2.0" ndsversion="8.x">
  <source>
     cproduct version="2.0.5.51 ">Identity Manager
     <contact>Novell, Inc.
  </source>
  <input>
     <modify class-name="Person"</pre>
      event-id="BLACKCAP-NDS#20040915164613#1#1"
      qualified-src-
dn="O=DirXML\OU=Notes\OU=Users\OU=eng\CN=ErnieEngineer"
      src-dn="\raspberry\DirXML\Notes\Users\eng\ErnieEngineer"
      src-entry-id="39853" tell-adminp-process="tell adminp process
all" timestamp="1095267005#2">
         <association
state="associated">A4C23EE8273577AF87256F10005B2BF9</association>
        <modify-attr attr-name="OfficePhoneNumber"</pre>
          authors-flag="false"
          encrypted-flag="false"
          names-flag="false"
          protected-flag="true"
          readers-flag="false"
          signed-flag="false"
          summary-flag="true">
            <remove-value>
               <value timestamp="1095266773#1" type="teleNumber">222-
2222</value>
            </remove-value>
            <add-value>
               <value timestamp="1095267005#2" type="teleNumber">222-
2221</value>
            </add-value>
         </modify-attr>
     </modify>
  </input>
</nds>
```