

Novell DirXML[®] Driver for Lotus Notes*

2.0

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IMPLEMENTATION GUIDE

April 26, 2004



Novell[®]

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DirXML Driver 2.0 for Lotus Notes Implementation Guide

[April 26, 2004](#)

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About This Guide

This document is for Lotus Notes administrators, Novell® eDirectory™ administrators, and others who implement the DirXML® Driver for Lotus Notes.

The DirXML 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 gives you the ability 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](#)
This section introduces new features and explains the default driver configuration.
- ◆ [Chapter 2, “Installing and Configuring the Driver,” on page 13](#)
This section covers both the installation process as well as post-installation setup tasks.
- ◆ [Chapter 3, “Upgrading,” on page 27](#)
This section covers the upgrade tasks.
- ◆ [Chapter 4, “Customizing the Driver,” on page 29](#)
This section explains how to use driver parameters to customize the data synchronization of the driver. It provides examples for common customizations.
- ◆ [Appendix A, “Using the Movecfg.exe Utility,” on page 45](#)
This section explains how to use the movecfg.exe utility to assist you in the upgrade process.
- ◆ [Appendix B, “Updates,” on page 49](#)

Additional Documentation

For documentation on using Nsure™ Identity Manager and the other drivers, see the [Identity Manager Documentation Web site \(http://www.novell.com/documentation/lg/dirxml20\)](http://www.novell.com/documentation/lg/dirxml20).

Documentation Updates

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

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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User Comments

We want to hear your comments and suggestions about this manual and the other documentation included with Novell Nsure Identity Manager. To contact us, send e-mail to proddoc@novell.com.

1

Overview

The DirXML[®] Driver for Lotus Notes lets you synchronize data in a Novell[®] eDirectory[™] tree with data stored in a Domino Directory or another Notes database.

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

In this section:

- ◆ [“New Features” on page 9](#)
- ◆ [“Notes Driver Basics” on page 10](#)
- ◆ [“Driver Components and Configuration” on page 12](#)

New Features

In this section:

- ◆ [“Driver Features” on page 9](#)
- ◆ [“Identity Manager Features” on page 10](#)

Driver Features

- ◆ **The driver is cross-platform.** The driver now runs on the Domino server platforms of Linux and Solaris.
When using the driver with Linux* or Solaris*, you must load it using the Remote Loader, even if the driver is on the same machine as eDirectory.
- ◆ **Notes client is no longer required.** The 2.0 version of the driver runs on the Domino server.
- ◆ **Named Passwords:** The sample driver configuration uses a new feature of Nsure[™] Identity Manager, named passwords, to protect the certifier passwords. One example is provided in the sample driver configuration. For more information, see [“Using Named Passwords” on page 30](#).
- ◆ **Multiple instances of NDSRep.** The configuration of multiple instances of NDSRep on the same Domino server is handled automatically.
- ◆ **NDSReg is no longer used.** Prior to version 2.0, NDSRep parameters were stored in the Windows* registry using NDSReg. With version 2.0 of the DirXML Driver for Lotus Notes, the ndsrep Domino add-in process reads configuration parameters from a Lotus Notes database (dsrepcfg.nsf), so NDSReg is no longer necessary.

If you are upgrading, you use the movecfg.exe utility to move specific DirXML Driver for Lotus Notes 1.x parameters from the Windows registry to the DirXML Driver for Lotus Notes 2.x parameters location in eDirectory. See [“Upgrading on Windows” on page 27](#).

- ◆ **Support for Identity Manager Password Synchronization:** The ability to set and modify the password is provided for the Notes HTTP password. For the traditional Notes ID file password, the password can be set only when it is created.

For information about Password Synchronization, see [“Password Synchronization across Connected Systems”](#) in the *Novell Nsure Identity Manager 2 Administration Guide*.

- ◆ **Support for Role-Based Entitlements:** The driver configuration now provides the option to use Role-Based Entitlements for provisioning.

Using Role-Based Entitlements is a design decision. Before you choose this option, see [“Using Role-Based Entitlements”](#) in the *Novell Nsure Identity Manager 2 Administration Guide*.

- ◆ **Support for Novell Nsure Audit:** The driver makes special use of the ability to specify a status type for any of the status levels defined. For more information, see [“Logging Events Using Nsure Audit”](#) in the *Novell Nsure Identity Manager 2 Administration Guide*.

Identity Manager Features

For information about the new features in Identity Manager, see [“What's New in Identity Manager 2?”](#) in the *Novell Nsure Identity Manager 2 Administration Guide*.

Notes Driver Basics

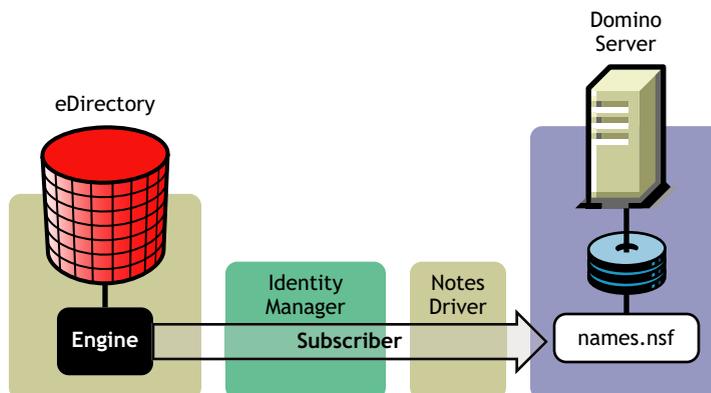
Identity Manager fundamentals are explained in the *Novell Nsure Identity Manager 2 Administration Guide*. This documentation discusses implementations, additions, or exceptions, specific to the DirXML Driver for Lotus Notes.

Default Data Flow

Subscriber Channel

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

Figure 1 Subscriber Channel Communication

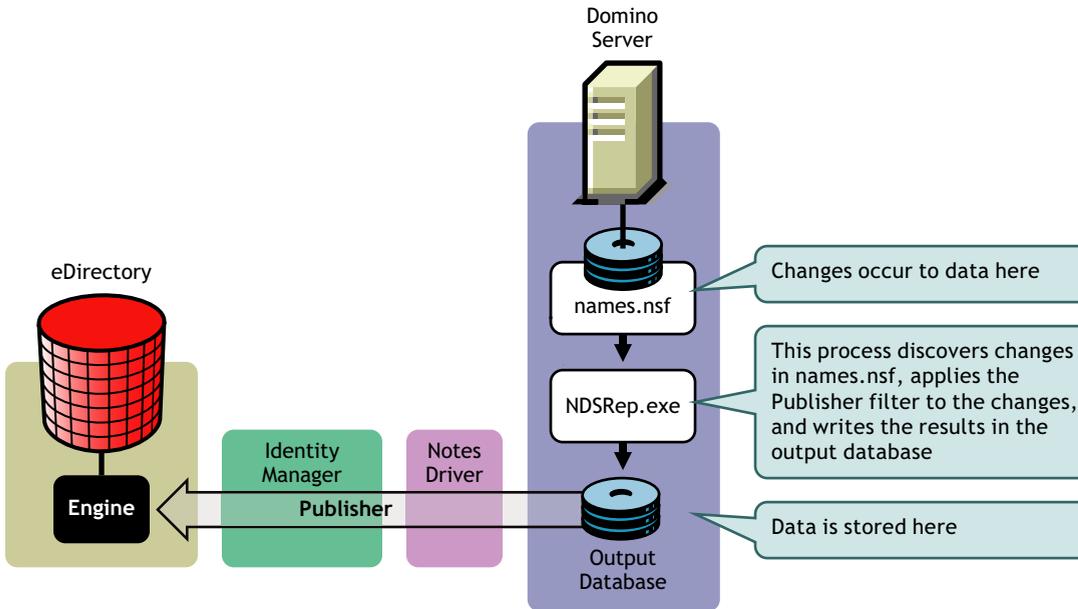


The driver can be configured to work with Notes databases other than names.nsf.

Publisher Channel

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

Figure 2 Publisher Channel Communication



Policies

Policies are used to control the synchronization of data between eDirectory and the application, database, or directory. Policies transform an event on a channel input into a set of commands on the channel output. The 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. For a User object to be created, Given name and Surname are required. For a Group object to be created, Description, Membership, and Owner are required.
- ◆ 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 eDirectory container in a specified Notes Organizational Unit, and all Group objects from a specified eDirectory 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.

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.
- ◆ **Driver Files:** CommonDriverShim.jar and NotesDriverShim.jar are the Java files that direct synchronization between Notes and eDirectory.
- ◆ **NDSRep:** NDSRep is a Lotus Domino server add-in process to enable data synchronization. NDSRep 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 eDirectory.
- ◆ **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.

2

Installing and Configuring the Driver

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® eDirectory™ and Nsure™ Identity Manager side, and tasks you do after the installation. The order in which you do these tasks is very important. Complete the tasks in the order listed.

- ◆ “Where to Install the Driver” on page 13
- ◆ “Meeting Requirements for the Driver” on page 14
- ◆ “Preparing Lotus Notes for Synchronization” on page 14
- ◆ “Setting Up the Driver” on page 15

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 “Meeting Requirements for the Driver” on page 14.

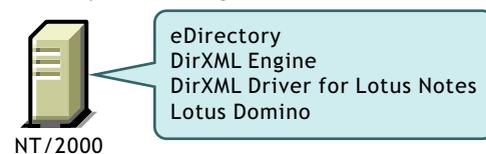
Installing Locally

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

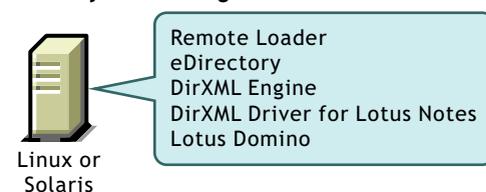
If you are using Linux or Solaris, you must always load the driver using Remote Loader, even if the driver is installed on the same machine as eDirectory and Identity Manager.

IMPORTANT: Regardless of whether you pick a local or remote installation, the driver must always run on the same computer where the Lotus Domino server is installed.

Local System Configuration



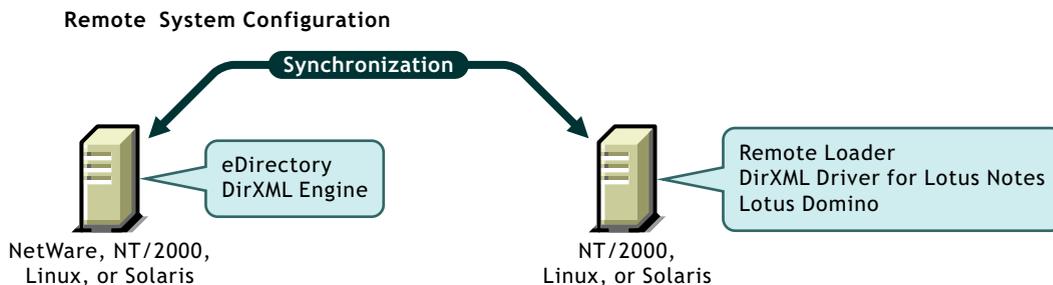
Local System Configuration



Installing Remotely

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

IMPORTANT: Regardless of whether you pick a local or remote installation, the driver must always run on the same computer where the Lotus Domino server is installed.



Meeting Requirements for the Driver

The DirXML Driver for Lotus Notes must always run on the same computer where the Lotus Domino server is installed. This 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
 - ◆ Solaris
 - ◆ Linux

Use the operating system versions required by Lotus Domino.

Preparing Lotus Notes for Synchronization

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

- ◆ [“Collecting Configuration Information” on page 15](#)
- ◆ [“Creating Lotus Notes Accounts” on page 15](#)
- ◆ [“Providing Access to Certifiers and ID Files in the Lotus Notes Infrastructure” on page 15](#)

Collecting Configuration Information

You'll 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 will be defined during the process.

See the list in [“Importing the Driver Configuration” on page 16](#).

Creating Lotus Notes Accounts

- 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 created by NDSRep, and certlog.nsf.
- 2** If a Deny Access group doesn't already exist, create this group.
This group will hold disabled user accounts.
- 3** Collect the DirXML Association String for the Deny Access group.
This string is used by the driver to uniquely identify this object. 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 text in the Identifier field. Go to the end of the text and copy the character string from the last forward slash to the end. This will always be 32 alphanumeric characters.
 - 3d** Paste this information into a file for later use when you run the Create Driver Wizard.

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

You need to set access to all required ID files, all certifier ID files, and so forth in the Lotus Notes infrastructure. You need access to users files and access to server ID files.

Setting Up the Driver

Complete these tasks to get the driver installed, configured, and running. (If you are upgrading the driver, see [“Upgrading” on page 27](#).)

- [“Installing the Driver Shim” on page 16](#)
- [“Importing the Driver Configuration” on page 16](#)
- [“Starting the Driver” on page 19](#)
- [“Configuring Database Replication Using NDSRep” on page 21](#)
- [“Migrating and Resynchronizing Data” on page 25](#)
- [“Activating the Driver” on page 26](#)

NOTE: Most installations require some customization after installation to handle certification. Refer to [Chapter 4, “Customizing the Driver,” on page 29](#) for more information.

Installing the Driver Shim

You can install the driver shim at the same time you install the DirXML engine, or after. To install the driver shim, run the Identity Manager installation program and select the DirXML Driver for eDirectory. Instructions are in “[Installation](#)” in the *Novell Nsure Identity Manager 2 Administration Guide*.

On Windows only, you must also do the following:

- ◆ 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 dsrepcfg.ntf 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).
- ◆ Make sure that the Domino shared libraries directory (for example, C:\Lotus\Domino) is in the Windows system path.

Without this directory in the Windows system path, the JVM* might have difficulty locating the Domino shared libraries required by Notes.jar, such as nxlsbe.dll.

After installation, you must set up the driver as explained in the next section, “[Importing the Driver Configuration](#)” on page 16.

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.

Import the Notes driver configuration, following the instructions in “[Creating a Driver Object](#)” in the *Novell Nsure Identity Manager 2 Administration Guide*.

Provide the following information, then continue with “[Starting the Driver](#)” on page 19.

Import Prompt	Description
Notes User ID	Enter the Notes User ID this driver will use for Notes Authentication (in fully qualified canonical form: i.e. 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 will prevent 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: i.e. cn=NotesServer/o=Organization):

Import Prompt	Description
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
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 new Named Passwords feature. See "Using Named Passwords" on page 30 .
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.EXE. The path should be relative to the Domino server's data directory.
Certify new Notes Users?	Should the driver 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?	Should Notes 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?	Should Notes store new users 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.
Minimum Notes Password Length:	Enter the minimum password length 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?	Should the driver create a mail file for users certified to Notes on the subscriber channel?

Import Prompt	Description
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 file name (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: i.e. 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.
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 loop back from occurring, or No to allow event loop back:
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
Check Attributes	Shall all attributes be checked for each object event?
Write Time Stamps	Shall driver time stamps be written to each synchronized object?
Enable Role-based Entitlement features	Select Yes if you are using the Entitlements Driver and would like to include the role-based entitlement features provided by this driver configuration. This is a design decision. Don't choose this option unless you have reviewed the information about Role-Based Entitlements in the <i>Novell Nsure Identity Manager 2 Administration Guide</i> .
Install Driver as Remote/Local	Configure the driver for use with the Remote Loader service by selecting Remote, or select Local to configure the driver for local use. If Local is selected, skip the remaining prompts

Import Prompt	Description
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. Host Name or IP Address and Port; ###.###.###.###:####
Driver Password	(Remote Driver Configuration only) The Driver Object Password is used by the Remote Loader to authenticate itself to the DirXML server. It must be the same password that is specified as the Driver Object Password on the DirXML Remote Loader.
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 DirXML Remote Loader.

Starting the Driver

This section includes information about what must be in place when the driver is started, both the first time and subsequent times, and gives steps for how to start the driver.

- ◆ [“Starting the Driver for the First Time” on page 19](#)
- ◆ [“Starting the Driver After the First Time” on page 20](#)
- ◆ [“Launching the Driver with Linux or Solaris” on page 20](#)
- ◆ [“Steps for Starting the Driver” on page 20](#)

Starting the Driver for the First Time

The first time the driver runs, it searches for the Domino Server (specified in 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, then the NotesDriverShim attempts to create dsrepcfg.nsf using the database template dsrepcfg.ntf that ships with the driver.

If dsrepcfg.ntf is not found, or this initial dsrepcfg.nsf creation process fails, then the Publisher channel shuts down.

If dsrepcfg.nsf is successfully created, and contains data specifying an appropriate update database file (usually named ndsrep.nsf), the NDSRep loads successfully with the following command at the Domino Console, where *instance* represents the name of the driver:

```
load ndsrep instance
```

A driver name (or unique instance name set up for this driver) is required to load NDSRep at the server console.

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

We recommend that the notes.ini file be updated to load NDSRep automatically, after the initial configuration and start-up has been validated.

Starting the Driver After the First Time

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

NDSRep must be launched using the driver name as a parameter:

```
load ndsrep mydriver1
```

To load NDSRep, you must use the appropriate instance name:

```
load ndsrep instance
```

```
load ndsrep instance
```

After NDSRep is loaded, all TELL commands are issued to this instance of NDSRep using the instance name.

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

Launching the Driver with Linux or Solaris

For Linux and Solaris, sample scripts are provided to demonstrate how to launch the driver. By default they are installed to /usr/lib/dirxml/rules/notes. The scripts are named as follows:

- ◆ rdxml.startnotes
- ◆ rdxml.stopnotes
- ◆ findDomino

Also included in the same directory is a sample Remote Loader configuration file for the Notes driver. You might need to change the configuration ports that are referenced in this file.

- ◆ rdxml.confignotes

We recommend that you copy all four files to the location where you intend to launch your driver on the Domino server, such as /local/notesdata or /home/notes.

Make sure that the scripts have file access for execution.

These sample scripts work in a variety of situations. If they do not work in your environment, you might need to edit them appropriately.

These scripts allow you to start the Remote Loader for the driver using rdxml.startnotes and stop the Remote Loader for the driver using rdxml.stopnotes.

The sample scripts produce a Remote Loader trace log for the driver that can be used for troubleshooting.

Steps for Starting the Driver

- 1** (Windows only) Make sure you have copied the necessary files, as described in [“Installing the Driver Shim” on page 16](#).
- 2** In iManager, select DirXML Management > Overview.
- 3** Locate the driver in its driver set.
- 4** Click the driver status indicator in the upper right corner of the driver icon, then click Start Driver.

- 5 (Windows only) 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.

Synchronization takes place on an object-by-object basis as changes are made to individual objects. If you want to have an immediate synchronization, you must initiate that process as explained in [“Migrating and Resynchronizing Data” on page 25](#).

Configuring Database Replication Using NDSRep

Complete the following sections to configure replication using NDSRep:

- ◆ [“Setting up NDSRep” on page 21](#)
- ◆ [“Loading and Controlling NDSRep” on page 21](#)
- ◆ [“Setting Up Multiple Instances of NDSRep” on page 24](#)

Keep in mind that NDSRep does not launch successfully unless the DirXML Driver for Lotus Notes has been started at least once.

Setting up NDSRep

- 1 Review the information about NDSRep and starting the driver in [“Starting the Driver” on page 19](#).
- 2 (Windows only) Make sure you have copied the necessary files, as described in [“Installing the Driver Shim” on page 16](#).
- 3 If you want to autoload NDSRep, add it to the ServerTasks = line in the Domino notes.ini file to have NDSRep automatically loaded on the Domino server.

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.

- 4 (Windows only) Add c:\lotus\domino to your system path, then reboot the computer.

Loading and Controlling NDSRep

You always load and run NDSRep at the server console on the Domino server. NDSRep creates an output database (by default, ndsrep.nsf). NDSRep 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.exe into the Domino Server console.

Add NDSRep to the ServerTasks = statement in NOTES.INI and restart the Domino server, or type the following in the Notes Server Console window:

```
load ndsrep instance
```

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.

- ◆ **Controlling NDSRep:** Use the TELL commands described in the table.

The following NDSRep TELL commands allow for “on-the-fly” NDSRep parameter modification. These parameters are removed at the next auto-refresh interval:

SchVal
 SchUnits
 LoopDetect
 LoopDetectID
 OutputDB
 InputDB
 ISDirectory
 DNFormat
 SetInstance
 WriteTimeStamps
 Checkattrs
 AutoRefresh

The following NDSRep TELL command allows for “on-the-fly” NDSRep parameter modification. It is not stored in the Driver Configuration, but stays in effect until the NDSRep instance is unloaded from the Domino Server:

DebugTrace

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

Replicate
 Suspend
 Resume
 ShowConfig
 ShowFilter
 RefreshConfig

TELL Command	Description
Replicate	Forces an immediate check for updated notes.
Suspend	Suspends activity until the Resume command is given.
Resume	Sets NDSRep to resume processing timer events and replication.
SchVal <i>value</i>	Change the timer intervals between replication events. The value is changed both internally to the process and in the system registry.
SchUnits <i>unit</i>	Changes the time units applied to the TimeVal parameter. The time unit values are set both internally and in the system registry.
LoopDetect <i>on/off</i>	Determines whether a note was updated by the Notes driver.
LoopDetectID <i>dn</i>	Specifies the ID that loop detection looks for. This should be the Notes DN of the User object that the driver uses to access Notes data.
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.

TELL Command	Description
RefreshConfig	Reads NDSRep configuration information from the configuration store.
SaveConfig	Saves the current NDSRep configuration to the configuration store.
OutputDB <i>path</i>	Changes the Output database where NDSRep writes Domino directory updates
ISDirectory <i>on/off</i>	Specifies whether NDSRep is detecting changes in an address book. The default is on.
DNFormat SLASH/LDAP/ LDAP_TYPED	Specifies the distinguished name format for NDSRep. The default is SLASH. The SLASH setting is recommended.
InputDB <i>filepath</i>	Sets the fully qualified pathname of the .nsf file that NDSRep uses to access the Domino Directory. This is usually names.nsf.
AutoRefresh <i>on/off</i>	Turns the AutoRefresh feature on or off. AutoRefresh causes NDSRep to refresh its configuration information from the Windows registry as specified by the RefreshRate command.
SetInstance[<i>name</i>]	Causes NDSRep to destroy its message queue and create a new one using the new name. It also changes the configuration instances it uses.
Checkattrs <i>on/off</i>	<p>Determines whether all attributes in the Publisher filter are sent to the change database each time a Note is updated.</p> <p>The default setting is On, meaning NDSRep discovers which attributes have changed when a Note is updated and forward <i>only</i> the changed data to the DirXML driver. Setting Checkattrs to on improves efficiency, but if multiple Notes updates have occurred before replication or if replication intervals are not well aligned with the NDSRep polling interval, some data changes could be lost.</p> <p>If Checkattrs is set to Off, NDSRep synchronizes all attribute data on a changed Note. This method of managing synchronization is more reliable, but less efficient.</p> <p>To ensure that all changes are synchronized with a minimal efficiency cost, use WriteTimeStamps to allow NDSRep to reference its own time stamp.</p>
WriteTimeStamps <i>on/off</i>	<p>When Checkattrs is set to On, you can use WriteTimeStamps to cause NDSRep to write its own timestamp on the Note. The next time NDSRep processes that Note, NDSRep compares attribute timestamps to its own time stamp. The NDSRep time stamp is not subject to problems with replication intervals.</p> <p>This additional time stamp generates additional Domino replication traffic when it is updated, but is the most reliable method of identifying changed data.</p> <p>NDSRep uses Greenwich Mean Time (GMT) for the time stamp, to make it easier to handle daylight saving time.</p> <p>Default=off</p>

TELL Command	Description
DebugTrace <i>on/off</i>	<p>Causes NDSRep to output trace statements describing the decision points being examined by the process that determines which changes are written to the output database.</p> <p>Decision points are as follows:</p> <ul style="list-style-type: none"> Event Type Verifying event time stamps Loop detection E-mail writeback on looped Add events Class filtering Attribute change detection based on filter Rename/Move detection and generation <p>Because DebugTrace creates very large log.nsf files, we recommend turning on DebugTrace only when troubleshooting.</p>

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_name
```

NDSRep will be loaded and referenceable using TELL commands by the value of *instance_name*.

- ◆ By default, NDSRep stores configuration data for instances in a common Notes database (dsrepcfg.ntf).
- ◆ When modifying notes.ini to auto load multiple instances of NDSRep, simply insert `ndsrep instance_name` 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 29](#)

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 eDirectory to an application. When you migrate an object, the DirXML 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 eDirectory. When you migrate an object, the DirXML engine applies all of the Matching, Placement, and Create rules, as well as the Publisher filter, to the object. Objects are migrated into eDirectory using the order you specify in the Class list.
- ♦ **Synchronize:** The DirXML engine looks in the Subscriber class filter and processes all objects for those classes. Associated objects will be merged. Unassociated objects will be processed as Add events.

To use one of the options explained above:

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

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 *Novell Nsure Identity Manager 2 Administration Guide*.

3 Upgrading

In this section:

- ◆ “Upgrading on Windows” on page 27

Upgrading on Windows

In this section:

- ◆ “Preparing to Upgrade” on page 27
- ◆ “Upgrading the Driver Shim and Configuration” on page 27

Preparing to Upgrade

Make sure you have reviewed all TIDs and Product Updates for the version of the driver you are using.

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.

Upgrading the Driver Shim and Configuration

- 1** When you install Nsure™ Identity Manager 2, make sure you select the option to install utilities. This installs the movecfg.exe utility necessary for upgrading, noted in **Step 5**. Instructions are in “**Installation**” in the *Novell Nsure Identity Manager 2 Administration Guide*.
- 2** You can install the upgraded driver shim at the same time you install the DirXML engine, or after. To install the driver shim, run the Identity Manager installation program and select the DirXML Driver for eDirectory. Instructions are in “**Installation**” in the *Novell Nsure Identity Manager 2 Administration Guide*.

The new driver shim replaces the previous one.

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

- 3** Convert your existing configuration from 1.x to 2.0 format, using the wizard.
See “**Upgrading a Driver Configuration from DirXML 1.x to Identity Manager Format**” in the *Novell Nsure Identity Manager 2 Administration Guide*.
- 4** Unload all instances of ndsrep.exe from the Domino Server Console.
- 5** Use the movecfg.exe utility to upgrade the placement of configuration parameters, as described in “**Using the Movecfg.exe Utility**” on page 45.
You can use a batch file such as the example provided in “**Example Batch File to Use**” on page 46.

The movecfg.exe utility is installed in the utilities directory if you select the option to install Utilities during DirXML 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 one, 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).

NOTE: 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 21](#)), 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
```

NOTE: If you have multiple instances of NDSRep, you must do this for each one.

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 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 2 format.

10 Activate the driver. See [“Activating the Driver” on page 26](#).

11 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 [“Customizing the Driver” on page 29](#).

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

12 When your changes are complete, restart the driver.

4

Customizing the Driver

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

- ◆ [“Determining eDirectory Object Placement When a Notes Object is Moved” on page 29](#)
- ◆ [“Automatically Determining Which Certifier to Use” on page 30](#)
- ◆ [“Using Named Passwords” on page 30](#)
- ◆ [“Using Driver Parameters” on page 31](#)
- ◆ [“Overriding Driver Parameters” on page 38](#)
- ◆ [“Additional Sample Style Sheets” on page 42](#)
- ◆ [“Synchronizing a Database Other Than Names.nsf” on page 43](#)
- ◆ [“Schema Mapping Type and Form” on page 43](#)
- ◆ [“Move/Rename” on page 44](#)

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.

Determining eDirectory Object Placement When a Notes Object is Moved

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

PLACEMOVE.XSL is an Input Transformation style sheet that contains logic to determine eDirectory™ object placement when an associated Notes object is moved. A Move is done by Nsure™ 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 eDirectory, so it isn't possible to provide a parent association. Also, the driver has no reference of the eDirectory namespace or containment, and therefore can't provide a parent dest-dn.

As a result, it is necessary to provide a rule that has the ability to map the Notes OU DN to the eDirectory OU DN. PLACEMOVE.XSL shows how to do this mapping. In the following example from PLACEMOVE.XSL, change the first path to reflect the Notes containment. Change the second path to the target eDirectory container.

```
<xsl:when test="string($dn) = '\dirxml\engineering'">
  <xsl:value-of select="'wazzup_labs\notes\users\eng'"/>
</xsl:when>
```

Add a when statement for each Notes OU that contains objects to be synchronized with eDirectory.

NOTE: The Notes driver does not support moves or renames from eDirectory on the Subscriber Channel.

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, 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.

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>
</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 ["Overriding Driver Parameters" on page 38](#) for more information about these parameters.

Using Named Passwords

The DirXML engine provided with Identity Manager 2 supports a new way of securing the passwords you need to use in your driver policies. The sample driver configuration shows an example.

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.xml sample style sheet, listed in [“Additional Sample Style Sheets” on page 42](#).

Using Driver Parameters

To change driver parameters, edit the Driver Parameters page.

- 1** In iManager, click DirXML Management > 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.

In this section:

- ♦ [“Driver Options” on page 31](#)
- ♦ [“Subscriber Options” on page 33](#)
- ♦ [“Publisher Options” on page 35](#)

Driver 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.

Parameter	Description	XML to Define Driver Parameters
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.	<code><notes-domain display-name="Notes Domain Name">Provo</notes-domain></code>
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).	<code><server-id-file display-name="Server ID File">/local/notesdata/server.id</server-id-file></code>

Parameter	Description	XML to Define Driver Parameters
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: Driver Configuration > Authentication > Specify the application password	<user-id-file display-name="User ID File">/local/notesdata/notedrv.id</user-id-file>
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.	<cert-id-file display-name="Certifier ID File">/local/notesdata/cert.id</cert-id-file>
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 encrypted and securely stored with the Driver Configuration. When securely stored in this fashion, the password can then be referenced by the DirXML engine or a driver using the key name specified. (In this example, defaultCertPwd.)	<cert-id-password display-name="Certifier Password" is-sensitive="true" type="password-ref">defaultCertPwd</cert-id-password>
Directory File or Input Database	The file name of the database to be synchronized with eDirectory. Specify this item without full path information.	<directory-file display-name="Directory File">names.nsf</directory-file>
Notes Address Book	Specify Yes if the input database (directory file) is a Notes Address book; otherwise, specify No.	<is-directory display-name="Notes Address Book? (Yes/No)">Yes</is-directory>
Update File of Output Database or ndsrep polling cache	The filename of the database used to cache database changes that need to be published to eDirectory. The default is ndsrep.nsf. Specify this item without full path information. 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.	<update-file display-name="Update File">ndsrep.nsf</update-file>

Subscriber 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.

Parameter	Description	XML to Define Driver Parameters
Certify/Register Users	<p>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.</p> <p>This default setting can be overridden using the XML <certify-user> attribute tag.</p>	<cert-users display-name="Certify Users? (Yes/No)">Yes</cert-users>
Create Mail DB	<p>This parameter indicates the default behavior for the driver regarding e-mail account creation. Yes indicates the driver by default attempts to create a Notes Mail database when adding a new user.</p> <p>This default setting can be overridden using the XML attribute tag <create-mail>.</p>	<create-mail display-name="Create Mail DB? (Yes/No)">Yes</create-mail>
Mail File Storage Location	<p>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.</p>	<mailfile-path display-name="Mail File Storage Location">mail</mailfile-path>
Template for mail file creation	<p>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.</p>	<mailfile-template display-name="Template for Mail File creation">mail6.ntf</mailfile-template>
Notes Mail Server Name	<p>The DN of the Notes Server that holds the mail files.</p> <p>This default setting can be overridden using the XML <mailserver> element as a child of the add event element.</p>	<mail-server display-name="Notes Mail Server Name">cn=Server1/o=Org</mail-server>
Mail File ACL Level	<p>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.</p> <p>This default setting can be overridden using the XML attribute tag <mailfile-acl-level>.</p>	<mailfile-acl-level display-name="Mail File ACL Level">MANAGER</mailfile-acl-level>
Internet Mail Domain Name	<p>Obsolete in version 2.0.</p>	<internet-mail-domain display-name="Internet Mail Domain Name">mycompany.com</internet-mail-domain>

Parameter	Description	XML to Define Driver Parameters
ID File Storage Location	<p>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.</p> <p>This default setting can be overridden using the XML attribute tag <user-id-path>.</p>	<pre><cert-path display-name="ID File Storage Location" >c:\lotus\domino\data\ids\people</cert-path></pre>
Registration Log File	<p>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.</p>	<pre><cert-log display-name="Registration Log File">certlog.nsf</cert-log></pre>
Update Address Book	<p>This parameter indicates the default behavior for the driver regarding placing registered user objects in the Notes Address Book. Setting the flag to Yes causes registered users to be placed in the address book. Setting the flag to No 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.</p> <p>This default setting can be overridden using the XML attribute tag <update-addressbook>.</p>	<pre><update-ab-flag display-name="Update Address Book? (Yes/No)">Yes</update-ab-flag></pre>
Store ID in Notes Address Book	<p>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.</p> <p>Setting the flag to Yes causes registered user objects in the Notes Address Book to be created with an attached user ID file.</p> <p>Setting the flag to No causes registered user objects in the Notes Address Book to be created without an attached user ID file.</p> <p>This default setting can be overridden using the XML attribute tag <store-useridfile-in-ab>.</p>	<pre><store-id-ab-flag display-name="Store ID in Notes Address Book? (Yes/No)">Yes</store-id-ab-flag></pre>
North American Server	<p>North American Server User ID file (certifier) property. Set to Yes only if the Domino Server is in North America. According to Domino registration requirements, this attribute is required for user ID file creation.</p>	<pre><north-american-flag display-name="Is North American Server?">Yes</north-american-flag></pre>
Expiration Term	<p>The default expiration term (specified in years) for newly created Notes User ID files.</p> <p>This default setting can be overridden using the XML attribute tag <expire-term>.</p>	<pre><expiration-term display-name="Expiration Term in Years">2</expiration-term></pre>
Minimum Notes Password Length	<p>The default minimum password length (0-16 characters) for newly created Notes User ID files.</p> <p>This default setting can be overridden using the XML attribute tag <minimum-pwd-len>.</p>	<pre><minimum-pwd-len display-name="Minimum Notes Password Length (0 - 16)">5</minimum-pwd-len></pre>

Parameter	Description	XML to Define Driver Parameters
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>.	<default-password display-name="Default Notes Password">notes</default-password>
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>.	<default-http-password display-name="Default HTTP Password">notesweb</default-http-password>
Notes Web (HTTP) Password Set	Set the parameter to Yes to allow the Notes driver to set or to change the Web (HTTP) password attribute on user objects. Set the parameter to No to disallow the Notes driver from setting or changing the web (HTTP) password attribute on user objects.	<allow-http-password-set display-name="Allow Notes Web (HTTP) password to be set">Yes</allow-http-password-set>

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.

Parameter	Description	XML to Define Driver Parameters
Polling Interval	Notes Driver Shim publisher polling interval, specified in seconds.	<polling-interval display-name="Polling Interval (in seconds)">30</polling-interval>
Enable Loop Back Detection	Loopback detection parameter. Set to Yes to enable loopback detection. Set to No to disable loopback detection.	<loop-detect-flag display-name="Enable Loop Back Detection">Yes</loop-detect-flag>
Loop Back Detection User Name	Loopback detection Notes user name. By default (if this parameter is not present), the Authentication ID contained within Driver Configuration is used as the Loop Back Detection User Name. (This is standard loopback detection functionality). This parameter allows for setting the loopback detection user name to a different value.	<loop-detect-id display-name="Loop Back Detection User Name">CN=Notes Driver/O=ACME</loop-detect-id>
NDSREP Schedule Units	NDSREP polling interval unit. Valid values are SECONDS, MINUTES, HOURS, and DAYS. The default value is SECONDS.	<schedule-units display-name="NDSREP Schedule Units">SECONDS</schedule-units>
NDSREP Schedule Value	NDSREP polling interval unit value. This value is utilized in conjunction with the <schedule-units> configuration parameter.	<schedule-value display-name="NDSREP Schedule Value">30</schedule-value>
DNFormat	The Distinguished Name format used by NDSREP. Valid values are SLASH, LDAP, and LDAP_TYPED. The default is SLASH.	<dn-format display-name="DNFormat">SLASH</dn-format>

Parameter	Description	XML to Define Driver Parameters
Check Attributes	<p>NDSREP check and publish attributes parameter. Set to Yes if only modified attributes within the Publisher filter should be sent to eDirectory via the Publisher channel when a Notes object is modified. Set to No if <i>all</i> sync attributes specified within the Publisher filter should be sent to eDirectory via the Publisher channel when a Notes object is modified.</p> <p>The default value is Yes.</p>	<pre><check-attrs-flag display-name="Check Attributes?">Yes</check-attrs-flag></pre>
Write Time Stamps	<p>NDSREP write special driver time stamp on synchronized Notes parameter. Set to Yes 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 No to have NDSREP determine Notes object attribute updates based on existing Notes object time stamps.</p> <p>The default value is No.</p>	<pre><write-timestamps-flag display-name="Write Time Stamps?">No</write-timestamps-flag></pre>
Publication Heartbeat Interval	<p>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.</p> <p>If this parameter is not present, by default the publication heartbeat interval is 0.</p>	<pre><pub-heartbeat-interval display-name="Publication Heartbeat Interval (in minutes)">10</pub-heartbeat-interval></pre>
Publication Heartbeat Interval (in seconds)	<p>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.</p> <p>If this parameter is not present, by default the publication heartbeat interval is 0.</p>	<pre><pub-heartbeat-interval-seconds display-name="Publication Heartbeat Interval (in seconds)">30</pub-heartbeat-interval-seconds></pre>

Parameter	Description	XML to Define Driver Parameters
NDSREP Configuration database	<p>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.</p> <p>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.</p> <p>NDSRep load example:</p> <pre>load ndsrep NotesDriver2 -f /home/notes/mycfg.nsf</pre> <p>If this parameter is not present, by default the Configuration database filename is set to dsrepcfg.nsf and is normally located in the Domino data folder.</p> <p>If the name of your driver includes spaces, then you must put quotes around the name.</p>	<pre><config-db-name display-name="NDSREP Configuration database">/home/notes/mycfg.nsf</config-db-name></pre>
NDSREP Configuration Instance	<p>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.</p> <p>If this parameter is not present, by default the configuration instance is set to the name of the driver (the driver RDN in eDir).</p> <p>NDSRep load example:</p> <pre>load ndsrep NotesDriver2</pre> <p>If the name of your driver includes spaces, then you must put quotes around the name.</p>	<pre><instance-id display-name="NDSREP Configuration Instance">NotesDriver2</instance-id></pre>
NDSREP Configuration Auto-refresh	<p>NDSRep Configuration Auto-refresh setting. Valid settings are Yes and No. Set to Yes to have NDSRep automatically detect changes to the publisher configuration parameters. Set to No to have NDSRep ignore changes to the publisher configuration until it is restarted or manually prompted to refresh the configuration.</p> <p>If this parameter is not present, by default auto-refresh is set to Yes.</p>	<pre><auto-refresh-flag display-name="NDSREP Configuration Auto-refresh">No</auto-refresh-flag></pre>

Overriding Driver Parameters

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

An example of two overrides is shown in “[Automatically Determining Which Certifier to Use](#)” on [page 30](#). 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 will be 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-value> 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.

Parameter	XML Tag	Valid Use	Description
Certify User Flag	certify-user	As an attribute to an <add> event element	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 creating an ID file for the user). Overrides the default Certify Users flag <cert-users> in the driver configuration.
Create Mail File Flag	create-mail	As an attribute to an <add> event element	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.
MailFileTemplate	mailfile-template	As an attribute to an <add> event element	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.
Database Inheritance for Mail File Template	mail-file-inherit-flag	As an attribute to an <add> event element	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	Description
Certifier ID File	cert-id	As an attribute to an <add> event element	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.
Certifier ID File Parameter Reference	drv-param-cert-id	As an attribute to an <add> event element	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.
Certifier Password	cert-pwd	As an attribute to an <add> event element	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.
Certifier Password Parameter Reference	drv-param-cert-pwd	As an attribute to an <add> event element	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 Certifier 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.
Certifier Password Key Name Reference	named-cert-pwd	As an attribute to an <add> event element	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.
ID File Name	user-id-file	As an attribute to an <add> event element	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 absent, a default filename is generated by the Notes driver using the first and last name attributes of the user (FirstNameLastName.id).

Parameter	XML Tag	Valid Use	Description
ID File Path	user-id-path	As an attribute to an <add> event element	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 file will be 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 <cert-path> in the driver configuration.
Notes Minimum Password Length	minimum-pwd-len	As an attribute to an <add> event element	This tag specifies a minimum password length to apply to the User ID file of newly registered users. Value can be 0 - 16. Overrides the default Notes User ID minimum password length parameter <minimum-pwd-len> in the driver configuration.
Notes Password	user-pwd	As an attribute to an <add> event element	The user's Notes password used to create the user's ID file (certifier). Overrides the default Notes Password parameter <default-password> in the driver configuration.
Extended OU	extended-ou	As an attribute to an <add> event element	The value of the tag is appended to the generated DN based on the selected certifier when registering a user.
MailFile ACL control	mailfile-acl-level	As an attribute to an <add> event element	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 ¹ . 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.
Mail File Size Quota	mail-file-quota	As an attribute to an <add> event element	This tag specifies the value of the mail file quota (size in MegaBytes), that is applied to the e-mail database file when it is created.
Extended OU	extended-ou	As an attribute to an <add> event element	The value of the tag is appended to the generated DN based on the selected certifier when registering a user.
MailFile ACL control	mailfile-acl-level	As an attribute to an <add> event element	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 ¹ . 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.

Parameter	XML Tag	Valid Use	Description
Mail File Size Quota	mail-file-quota	As an attribute to an <add> event element	This tag specifies the value of the mail file quota (size in KB) that is applied to the e-mail database file when it is created.
Store User ID File In Notes Address Book	store-useridfile-in-ab	As an attribute to an <add> event element	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.
Registered Users in Notes Address Book	update-addressbook	As an attribute to an <add> event element	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 will cause 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.
User ID file Expiration Term	expire-term	As an attribute to an <add> event element	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.
User ID file certifier type	cert-id-type	As an attribute to an <add> event element	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.
Group Membership Removal	remove-all-group-membership	As an attribute to a <modify> or <delete> event element.	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" (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.
MailServer	MailServer	As an <add-value> child element of an <add> event.	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).
MailFile	MailFile	As an <add-value> child element of an <add> event.	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 absent, a default filename is generated by the Notes driver using the first and last name attributes of the user (FirstNameLastName.nsf).

Parameter	XML Tag	Valid Use	Description
MailDomain	MailDomain	As an <add-value> child element of an <add> event.	This element specifies the name of the Notes Mail Domain when creating an e-mail database file.
Alternate Full Name	AltFullName	As an <add-value> child element of an <add> event.	This element specifies the Alternate Full Name, an 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.
Language of Alternate Full Name	AltFullNameLanguage	As an <add-value> child element of an <add> event.	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 style sheet. See the Lotus Notes documentation for information on setting AltFullNameLanguage for a user.
InternetAddress	InternetAddress	As an <add-value> child element of an <add> event.	This element specifies the user's Internet e-mail address in the Notes Address Book.
Notes HTTP Password	HTTPPassword	As an <add-value> child element of an <add> or <modify> event.	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)

¹ ACL Description

NOACCESS
DEPOSITOR
READER
AUTHOR
EDITOR
DESIGNER
MANAGER

Notes Java ACL Constant

ACL.LEVEL_NOACCESS
ACL.LEVEL_DEPOSITOR
ACL.LEVEL_READER
ACL.LEVEL_AUTHOR
ACL.LEVEL_EDITOR
ACL.LEVEL_DESIGNER
ACL.LEVEL_MANAGER

Additional Sample Style Sheets

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

Identity Manager provides following additional sample style sheets:

- ♦ **Cert.xml:** 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 [“Automatically Determining Which Certifier to Use” on page 30](#) for more information.
- ♦ **Override.xml.** Shows an example of how to use attributes to override parameters. See the list in [“Overriding Driver Parameters” on page 38](#).
- ♦ **Placemove.xml:** An Input Transformation style sheet that contains logic to determine placement containment when synchronizing a move from Lotus Notes to eDirectory.
See [“Determining eDirectory Object Placement When a Notes Object is Moved” on page 29](#) for more information.

- ◆ **AddUniqueName.xml**. Simple example of how a unique name can be created for a Notes user.
- ◆ **EntitlementGrpCmdCompletionSS.xml**. 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.xml**. Based on Cert.xml, this shows an enhanced sample of how to utilize multiple Notes certifiers. It demonstrates using named passwords in multiple ways. See [“Automatically Determining Which Certifier to Use” on page 30](#) and [“Using Named Passwords” on page 30](#).

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.

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.

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, no Type item is written by the driver. Instead, the Class Name attribute is written to the Form item. If a Form item appears in the filter, the driver and NDSRep will 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.

Move/Rename

Move and Rename events are not supported in the default configuration. However, it is possible to synchronize a Move or Rename event in Notes across the Publisher channel and into eDirectory if you modify the default Schema Map and the default Publisher Filter.

To enable this 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** Ensure that the Full Name attribute in the Subscriber filter is *not* enabled.
- 4** Ensure that the Public/Private AB setting is Yes in the driver configuration parameters.

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.

NOTE: Move and Rename events in eDirectory are not synchronized to Notes unless the user is a non-registered Notes user.

A

Using the Movecfg.exe Utility

The movecfg.exe utility is a Windows console command line utility to be utilized when upgrading the DirXML[®] Driver for Lotus Notes 1.x to version 2.0. It is installed if you select the option to install utilities during Nsure™ Identity Manager installation.

The movecfg.exe utility is used to move specific DirXML Driver for Lotus Notes 1.x parameters from the Windows registry to the DirXML Driver for Lotus Notes 2.x parameters location in eDirectory.

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

With version 2.0 of the DirXML 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 eDirectory. 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 eDirectory. 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 [“Example Batch File to Use” on page 46](#).

In this section:

- ◆ [“Prerequisites” on page 45](#)
- ◆ [“Example Batch File to Use” on page 46](#)
- ◆ [“Using the Movecfg.exe Utility” on page 47](#)
- ◆ [“Troubleshooting” on page 48](#)

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

Prerequisites

- ◆ DirXML utilities installed. The movecfg.exe utility is installed only if you select the Utilities option during DirXML install.
- ◆ Run movecfg.exe from the Domino Server machine. The movecfg.exe utility should be executed from the same Domino Server that launches ndsrep.exe.
- ◆ Domino Server active. The Domino Server must be up and running.
- ◆ LDAP access to eDirectory. LDAP access is required to eDirectory. User name (in LDAP form) and password must be passed as parameters to movecfg. If a password is not passed,

movecfg will prompt 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 DirXML Driver 2.0 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 which are not the default driver parameters (but are the 2nd, 3rd, 4th, etc. Notes driver parameters) the -ndsrep parameter must be utilized.

Example Batch File to Use

You can run the movecfg.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 movecfg.exe
REM               See movecfg.txt for descriptions of movecfg.exe usage parameters
REM
REM Copyright (C) 2003-2004 Novell, Inc., All Rights Reserved
REM
REM *****
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=Dominol/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 movecfg.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=Dominol/o=acme -timeout 15
-ndsrep Notes2Driver
```

Using the Movecfg.exe Utility

```
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
```

Parameter Name	Required or Optional	Description
-host <ldap host name/address>	Required	The DNS host name or the IP address of the LDAP host of the eDirectory Server.
-port <port number>	Optional	LDAP port of the LDAP host specified by the -host parameter. Default = 389
-edir-dn <login dn>	Required	The fully qualified LDAP distinguished name of the eDirectory user that updates the driver configuration. It must be in LDAP form. Example: cn=DirXMLAdmin,cn=eng,o=acme
-edir-pwd <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>	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 Name>	Required	The Domino Server Name. Example cn=NoteSrv/o=acme
[-ndsrep] <NDSREP instance name>	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>	Optional	The timeout value when attempting to connect and communicate with the LDAP host.
[-f] <ndsrep config db>	Optional	The name of the ndsrep configuration database. Default = dsrepcfg.nsf

Troubleshooting

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

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

```
<publisher-options>
  <polling-interval display-name="Polling Interval (in seconds)">30</polling-interval>
  <loop-detect-flag display-name="Enable Loop Back Detection">Yes</loop-detect-flag>
  <schedule-units display-name="NDSREP Schedule Units">SECONDS</schedule-units>
  <schedule-value display-name="NDSREP Schedule Value">30</schedule-value>
  <dn-format display-name="DNFormat">SLASH</dn-format>
  <check-attrs-flag display-name="Check Attributes?">Yes</check-attrs-flag>
  <write-timestamps-flag display-name="Write Time Stamps?">No</write-timestamps-flag>
</publisher-options>
```

- 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.

B

Updates

This section contains information about documentation content changes that have been made in this guide.

The information is grouped according to the date the documentation updates were published.

The documentation is provided on the Web in two formats: HTML and PDF. The HTML and PDF documentation are both kept up-to-date with the documentation changes listed in this section.

If you need to know whether a copy of the PDF documentation you are using is the most recent, the PDF document contains the date it was published in the Legal Notices section immediately following the title page.

The documentation was updated on the following dates:

- ◆ “March 18, 2004” on page 49
- ◆ “April 26, 2004” on page 50

March 18, 2004

- ◆ The following item has been added to “Installing the Driver Shim” on page 16:
Make sure that the Domino shared libraries directory (for example, C:\Lotus\Domino) is in the Windows system path.
Without this directory in the Windows system path, the JVM might have difficulty locating the Domino shared libraries required by Notes.jar, such as nxlsbe.dll.
- ◆ The following has been added to Step 7 about the notes.ini file, in “Upgrading on Windows” on page 27:
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"
```
- ◆ References to Password Synchronization 2.0 have been changed to Nsure™ Identity Manager Password Synchronization, to indicate that the new Password Synchronization functionality is not a separate product, but is a feature of Identity Manager.
- ◆ References to DirXML 2.0 have been changed to Identity Manager 2. The engine and drivers are still referred to as the DirXML engine and DirXML drivers.

April 26, 2004

- ◆ In the New Features section, it is noted that the driver supports Password Synchronization for set and modify for the Notes HTTP password. For the Notes ID file password, the password can be set only when it is created.
- ◆ Minor editorial changes were made.