

Lotus Notes Module Version 2.6

Installation and User's Guide

STOREWAY DPA

STOREWAY DPA

Lotus Notes Module Version 2.6

Installation and User's Guide

Software

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Chapter 1. Lotus Notes overview

See:

["Lotus Notes architecture" page 8](#)

["Domino Server" page 9](#)

["Lotus Notes client" page 10](#)

["Lotus Notes database" page 11](#)

["Certifier ID" page 12](#)

["Lotus Notes configuration file" page 13](#)

Lotus Notes architecture

The Lotus Notes environment is client/server based architecture and has three main roles:

- > Database management.
- > Mail servers.
- > Development to create customized applications using Notes databases.

Domino Server

A Domino Server is an application and mail server which incorporates a group of integrated services which facilitate the creation of secure and interactive solutions for internet, intranets and extranets.

A Domino Server mainly comprises a Public Address Book, Lotus Notes databases which represent user mail boxes and some file systems. Databases contain documents called *notes*. Certain file systems are required when starting up Lotus Notes databases.

There are three types of Domino server:

- > The traditional server: comprises a Domino Server on a single machine.
- > The partitioned server: comprises several Domino servers on the same machine. They all have a different domain name and are independent from each other.
- > The cluster: comprises a Domino Server spread over several machines (between 2 to 6). This cluster is considered as a single machine.

Lotus Notes client

A Lotus Notes client is a programme which allows the user to communicate with the server and to perform the following operations:

- > Open Lotus Notes databases on the Domino Server and/or on one's own machine.
- > Log into the Domino Server thanks to the Lotus Notes ID associated with each user.
- > Manage the Domino Server via the administration console.
- > Be in possession of a server console to dialogue directly with the server by sending it instructions from a command line.

Lotus Notes database

A Lotus Notes database is the principal working document for the storage and exchange of information.

The Lotus Notes databases have the file extension `.nsf` and the Lotus Notes database models `.ntf`.

EXAMPLE: Lotus Notes databases:

Mail server (`user.nsf`)

Public address book (`names.nsf`)

Lotus Notes log (`log.nsf`)

Lotus Notes administration help (`helpadmin.nsf`)

Certifier ID

The Lotus Notes security environment is based on ID files. Each organization ID file must be validated for a main organization certifier.

The main certifier is represented by the **cert.id** file.

Lotus Notes configuration file

All server-specific files are located in the Lotus Notes installation directory: certificate files, data files etc.

WARNING: Among these critical Notes environment files, only the notes.ini file can be located in a different directory from Lotus Notes.

If this is the case, the backup administrator must ensure this file is backed up, particularly for the standard server backup which hosts the Lotus Notes application.

Chapter 2. Installation

This chapter explains how to install the StoreWay DPA Client for Lotus Notes and describes the steps to follow to configure the Lotus Notes application using the administration interface.

See:

["installation prerequisites" page 15](#)

["Installation procedure" page 16](#)

["Configuration" page 17](#)

installation prerequisites

Supported systems

The StoreWay DPA Client for Lotus Notes module is available for the following operating systems :

- > Microsoft Windows NT 4.0
- > Windows 2000/2003

This list may change. Consult the Lotus Notes update to find out which operating systems are supported.

The earliest supported version of Lotus Notes is 5.02.

Installation procedure

Using the StoreWay DPA Client for Lotus Notes module does not require any specific installation other than the client agent. **The choice of the Lotus Notes application must be specified during the agent installation.**

NOTE: If the agent was already installed without the application, you must uninstall it then reinstall it.

WARNING: If the mailboxes (.nsf databases) are in a different directory from the Lotus Notes installation partition where notes.ini is located, you need to copy notes.ini to the 2nd file tree and create a 2nd application with the correct notes.ini destination path.

1 Starting the installation process.

Insert the CD-ROM **StoreWay® DPA Initial Setup (Windows), Agents (Windows, Linux, Netware, MAC OS), Graphical User Interface Setup, ASM & Disaster Recovery Agents Windows) Version X.X.XXX** on the Windows server you wish to protect.

2 Select the language.


3 Follow the installation steps:

- Select the install directory.
- Select the StoreWay DPA.
- Choice of the application to hot back up: Lotus Notes in our case.

Configuration

The configuration consists of defining a Lotus Notes application using the administration interface.

Before creating the application, the system on which Lotus Notes is installed must be created in the administration interface.

- 1 Log on with an administrator account to the administration interface using a web browser.
- 2 Select the **configuration/Systems** menu.
- 3 Create an application by clicking .
- 4 Select the type of application **Lotus Notes** then validate by clicking **create**.
- 5 Configure the application by entering these parameters:
 - Application Name: this will be used to identify the application in the interface. You can enter the name of your choice.
 - Related system (the server where the application is installed).
 - The Lotus Notes installation: enter the full notes.ini path (for example: **C:\lotus\domino**).
 - The associated backup profile(s).

NOTE: It may be necessary to create a second Lotus Notes application if the .nsf databases are in a different partition.

- 6 Click **create** to finish the declaration.

The creation is confirmed for the presence of a new object in the list of declared systems.

Chapter 3. Backup

The StoreWay DPA Client for Lotus Notes module enables you to perform backups in a Lotus Notes environment (databases and critical files) without preventing access to the databases.

See:

["Backup method" page 19](#)

["Backup configuration" page 20](#)

Backup method

The backup of Lotus Notes databases with the **StoreWay DPA Client for Lotus Notes** module encompasses the complete Lotus Notes environment:

- > Configuration files.
- > Mailboxes.
- > Databases

The principle of full/incremental backup can be applied to this environment. However, incremental backups will be significant because the granularity is at database (nsf) level.

Backup configuration

Objects to back up

To back up the entire Domino Server, you need to define the application root « / » object to back up. This is positioned on the installation directory defined in the parameters when the application is declared.

The declaration is performed at either application level or in the associated profile.

WARNING: In certain cases the backed up data may be inconsistent (for example, during replications). It is therefore recommended to programme frequent backups.

Chapter 4. Restoration

The StoreWay DPA Client for Lotus Notes enables simple and rapid restorations all the notes contained in each Lotus Notes database.

You can not only retrieve a missing database after a handling error or disk failure, but also restore a database as it was at a given moment thanks to the Time Navigation feature.

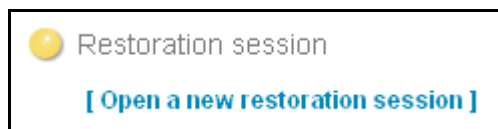
This chapter presents a few restoration principles, describes the restoration interface and the methods used to restore. Recommendations are provided to ensure the restoration runs smoothly.

Full restoration

- 1 Install the Lotus Notes product without starting the Lotus service.

WARNING: Ensure you respect the installation directory.

- 2 Open a restoration session on the Lotus application. In the StoreWay DPA interface, open **operations/Restoration**, select the Lotus application in the left-hand navigation menu and click [**Open a new restoration session**].



- 3 Click **time navigation**.
- 4 Select the date in the past to return to. If you wish to restore the latest backed up version, select **past** without changing the date proposed. Click **choose the date**.
- 5 Select the Domino object and click **add to cart**.
- 6 Click **restore**.
- 7 In the restoration options screen, leave default options. Validate by clicking **restore**.

The following screen shows the restoration progress.



- 8 When the restoration is over, start the Lotus Domino service on the server (**Start/Programs/Lotus Applications/Lotus Domino Server**).
- 9 Select **Start Domino as a Window's service**.

The service is now operational.

Restoring a mailbox or an individual database

When the Lotus service is being executed, the backup agent cannot overwrite a Lotus Notes object (mail box, document database etc.). To only restore a single element, there are two methods:

- > Stop the Lotus service and restore the required object.
- > Restoration in a temporary directory for future imports by specifying the restoration path in the restoration options window.

For details on restoring objects, consult the Quick Start guide.

Chapter 5. CDP (Continuous Data Protection)

See:

["CDP Overview" page 25](#)

["Prerequisites to the installation of DiskSafe" page 26](#)

CDP Overview

The role of the CDP (Continuous Data Protection) module in a Lotus Notes environment is to back up in real time, new or modified disk blocks. This guarantees not only global environment consistency and the restoration down to Email or event granularity. Once the snapshots are mounted, the restoration is extremely rapid and reliable for Lotus Notes data in their entirety and particularly for the following databases:

- > Mail databases
- > Archive databases
- > Public address books
- > Lotus Notes log
- > Lotus Notes administration help

Prerequisites to the installation of DiskSafe

- > DiskSafe is installed and configured. See the DiskSafe for Windows Module documentation.
- > Application partitions protected by the DiskSafe agent. For this, ensure you select the Domino Server application partition protection.

WARNING: Application databases can be physically stored in different logical partitions in the Domino Server. To check this, consult the notes.ini file which describes how applicative and systems partitions are used.

EXAMPLE:

[Notes]

Directory=d:\Lotus\Domino\Data

NotesProgram=c:\Lotus\Domino

In this example, to protect the databases bases, it is necessary to protect the partition d:\.

Chapter 6. Installing the Snapshot for Lotus Notes agent

Prerequisites

- > The StoreWay DPA Snapshot agent must be installed on the server hosting the Lotus Notes application.
- > Lotus Notes must be active before installing the StoreWay DPA Snapshot agent.
- > You must be an administrator or have the right privileges for the installation of StoreWay DPA Snapshot agent.

For more details, consult the StoreWay DPA DiskSafe for Windows documentation.

See:

["Operational mode" page 28](#)

Operational mode

- 1 Insert the CD-ROM **StoreWay DPA Initial Setup (Windows) – Agents (Windows, Linux, Netware) Graphical User Interface Setup – ASM & Disaster Recovery Agents** on the Windows server you wish to protect.

- A web page opens.
- Click **Lotus Notes Snapshot agent** and follow the setup wizard.
- Click **Finish**.

NOTE: If the web page does not open, start the installation by double-clicking the install.htm file in the CD-ROM directory.

- 2 Start the setup programme and follow the instructions until the end of the setup.
- 3 Enter the name and administrator password of the Lotus Notes server.
- 4 Enter the server and Lotus Notes database paths.
 - Enter the full path for the Lotus Notes server and applicative databases. If they are in different directories or drives, Each entry must be separated by a semi-colon «;».
 - The specified paths will be added to the environment variable **PATH** in Windows.

Chapter 7. Protection of partitions and Snapshots

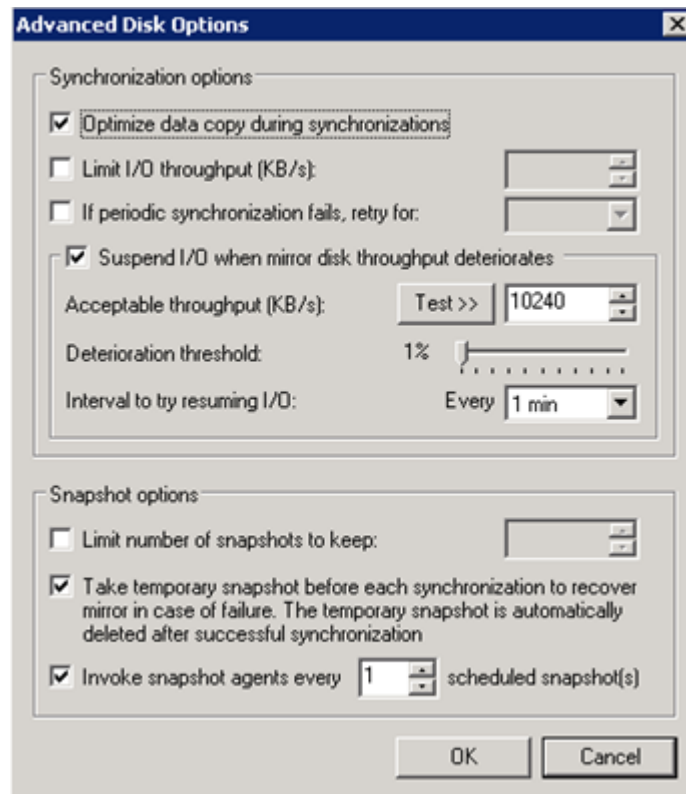
- 1 Start the DiskSafe application (**Start/Programs/DiskSafe**)
- 2 Select **Protected Storage**



- 3 Select **Disks** and check that the logical protected partitions include the Domino Server application partitions.



- 4 Check the DiskSafe configuration.
 - On **DiskSafe/Protected Storage/Disks** – Right click the disk hosting the application. Then select **Properties**. Click the **Advanced** button on the **Mode** tab.
 - In the Advanced Disk Options window, select « **invoke Snapshot agents ...** » to guarantee application consistency when the Snapshot is taken (synchronisation point).

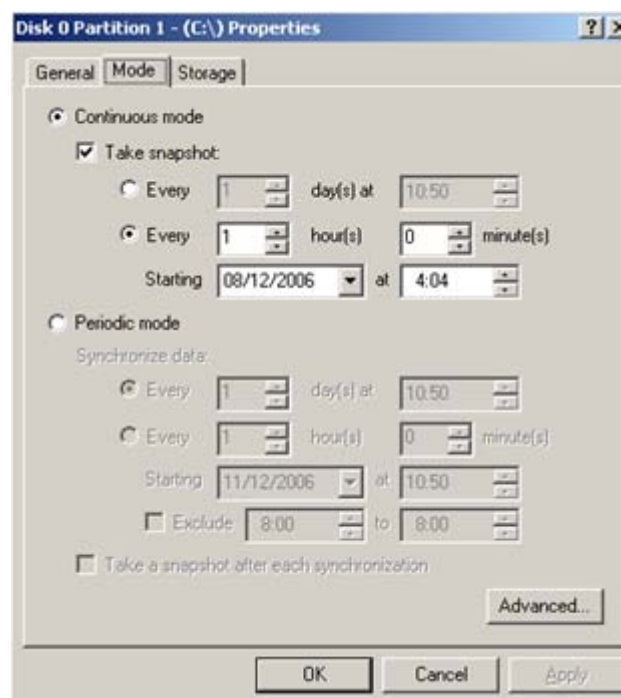


5 Modification and/or validation of synchronization periods.

- Open **DiskSafe/Protected Storage/Disks** and right click the disk hosting the application. Select **Properties**.

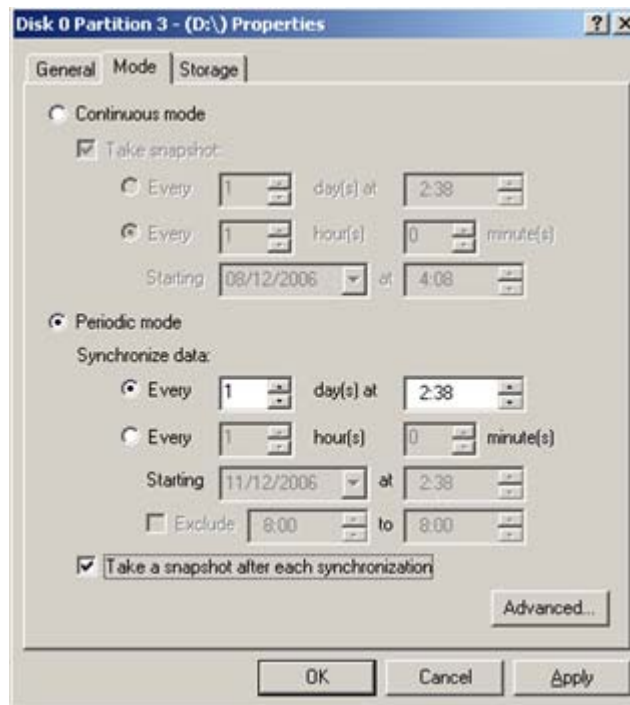
Tab Mode: programming

1 Continuous mode with the Snapshot option:



- Check the frequency and the programming.
- Continuous mode allows you to synchronize the partition hosting the data in real time.
- This mode must be accompanied by programmed Snapshots (DiskSafe for StoreWay DPA allows you to manage up to 32 SnapShots on line on the StoreWay DPA disk), to manage «versioning» in the event of database integrity problems.

2 Periodic mode with a Snapshot



- Check the frequency and the programming.
- Programmed mode allows you to synchronize at defined intervals the partitions hosting Lotus Notes databases.
- It is important that synchronizations are followed by programmed SnapShots (DiskSafe for StoreWay DPA allows you to manage up to 32 SnapShots online on the StoreWay DPA disk), to manage «versioning» in the event of database integrity problems.

Chapter 8. Restoring Lotus Notes

See:

["Managing partition Snapshots " page 33](#)

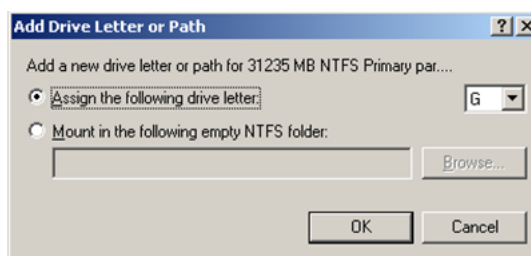
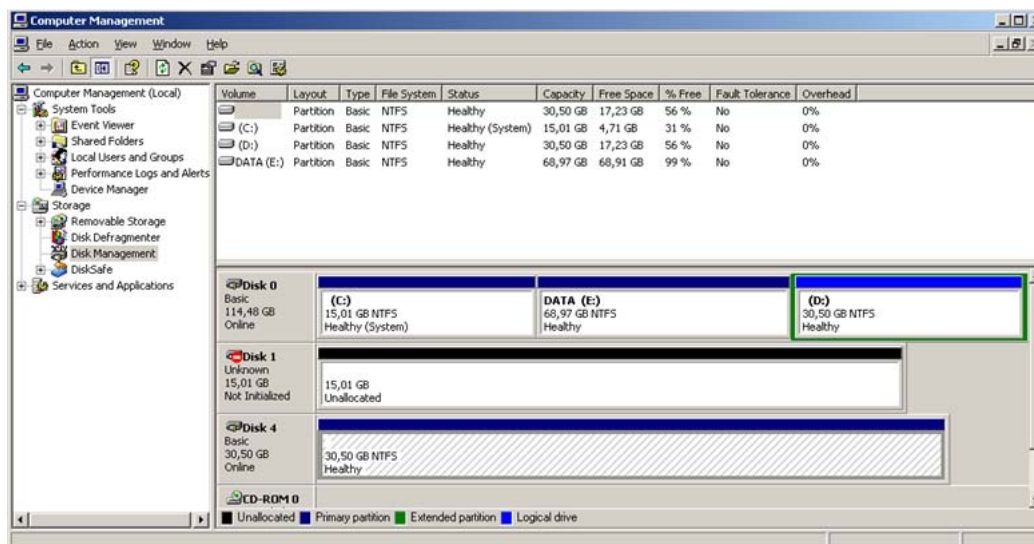
Managing partition Snapshots

- 1 To mount a Snapshot locally on the DiskSafe agent system, select the "Snapshot" partition to mount based on the date and time of the required restoration.
- 2 Display the list of available Snapshots in DiskSafe.
- 3 In DiskSafe, select **Snapshots/Disks**.
- 4 Select the required Snapshot and mount it as a virtual disk.
- 5 Select the Snapshot of your choice. Right click and select **Mount Snapshot** to mount it immediately as a local system disk.

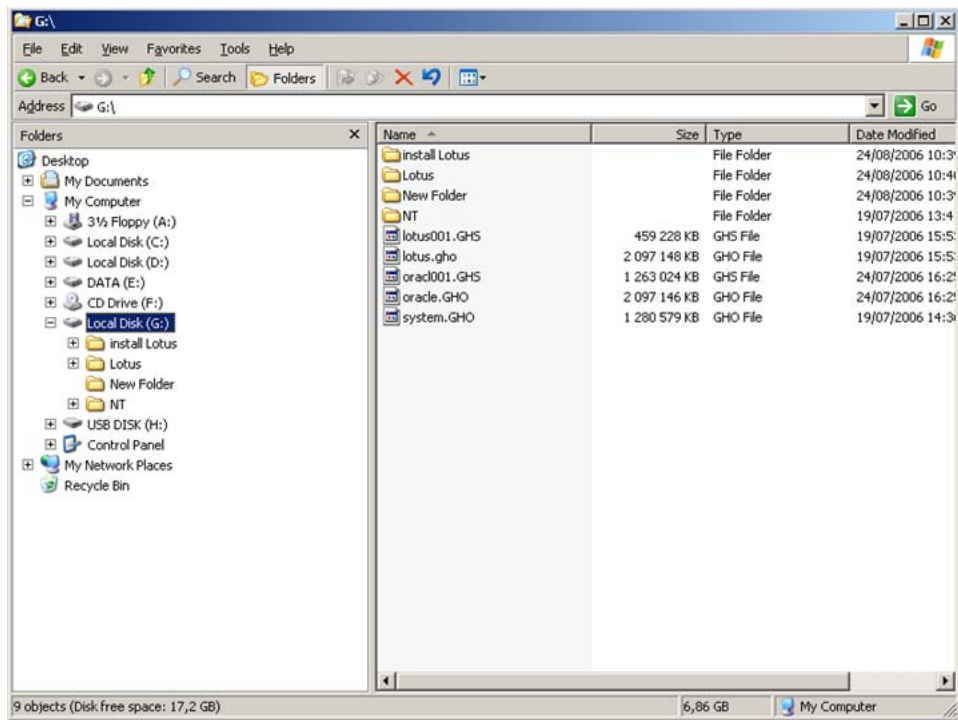
- The Snapshot mounting is displayed in DiskSafe with the flag '**Yes**' (**Mounted= Yes**) positioned next to the Snapshot.
- The mirror partition will be mounted on the first available letter and visible as a local system disk.

WARNING: The partition is mapped temporarily during the restoration phases. Do not mount it automatically at system start up.

- In the case where the partition is not mapped automatically, use the Disk Manager to select the mirror partition and allocate it a logical letter.



- Once the mirror disk is mounted, its contents is directly accessible via the Explorer:



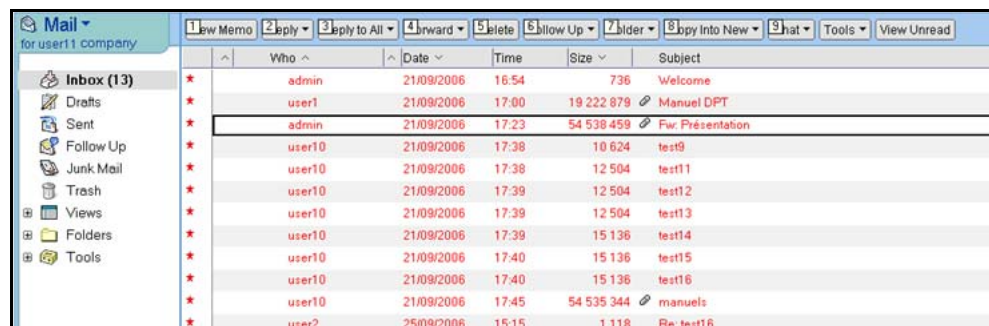
Chapter 9. Selective restoration of Lotus Notes objects

Lotus Notes objects can be restored directly from a virtual drive and sent to the Domino Server.

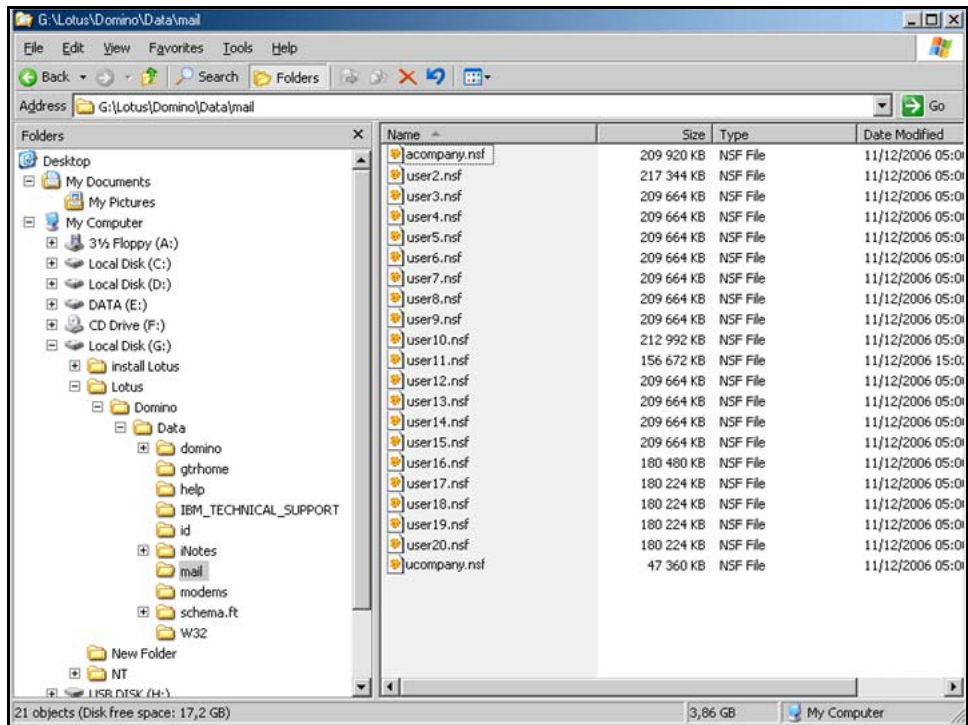
EXAMPLE: Mail database « user11 » on the Domino Server.



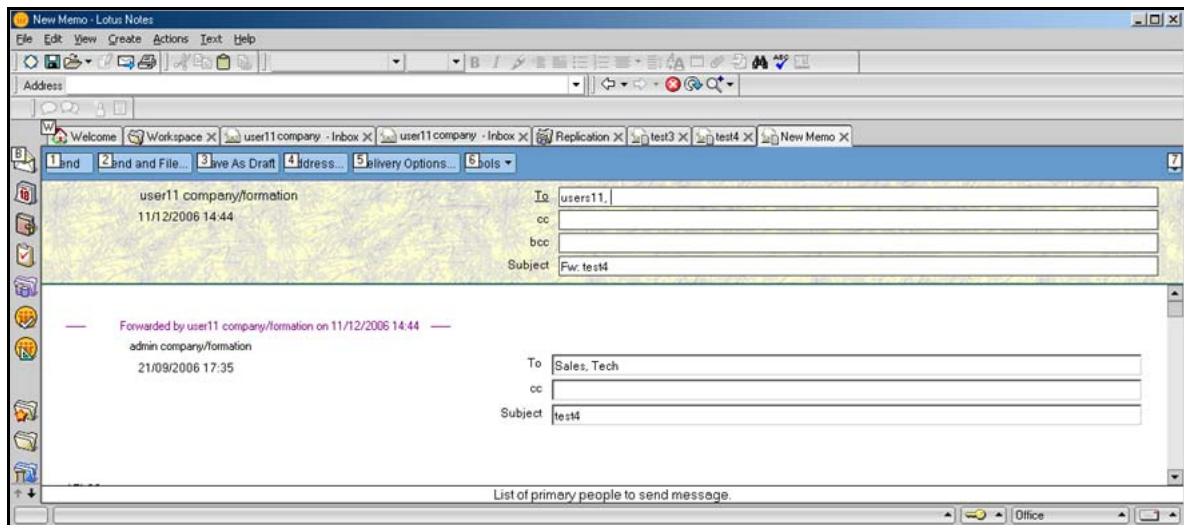
> Deleting Emails "test1";"test2";"test3";"test4";"test5";"test6";"test7";"test8".



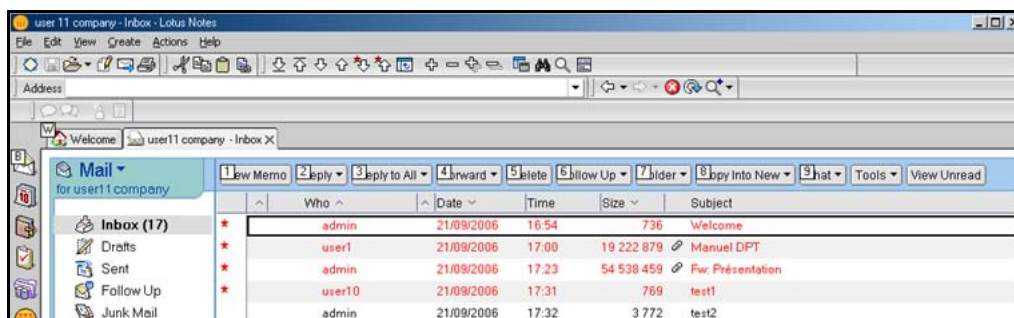
> Opening the «user11» database on the locally mounted mirror partition.



> Selective redirection of Emails to the Domino Server.



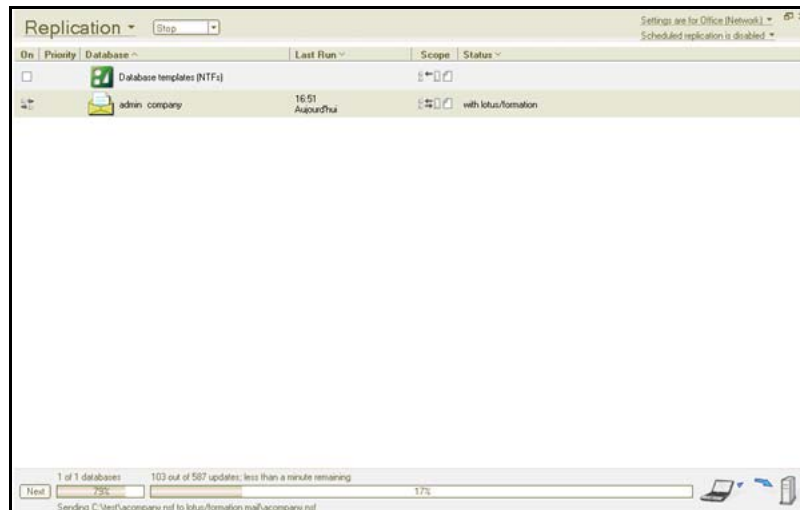
> Restoration of selected objects on the Domino Server.



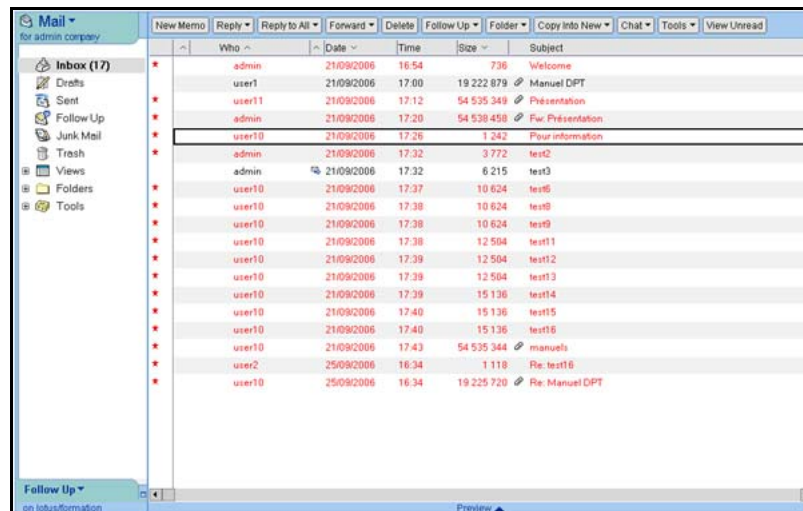
Chapter 10. Restoring in differential mode or creating «replicas»

Although it is possible to directly create a replica from a «mirror» partition, we recommend that you copy the NSF database locally. Proceed as follows:

- > Ensure you have the necessary privileges in the Access Control List to perform replication operations on the selected database.
- 1 Replication of the NSF database to the Domino Server.



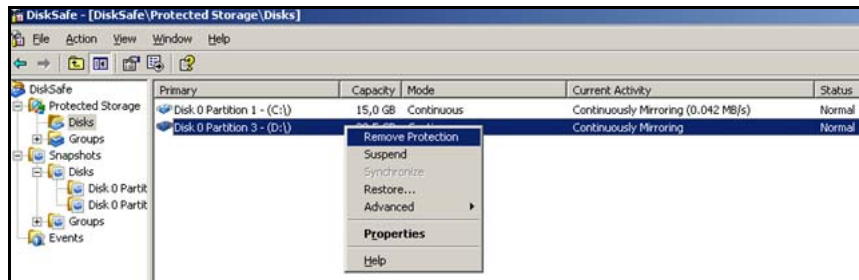
- 2 Restoration of objects on the Domino Server.



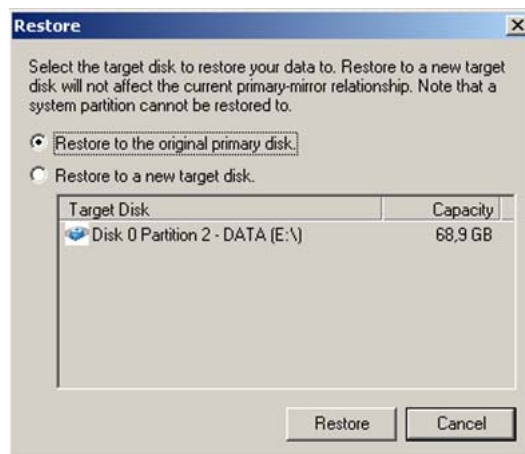
Chapter 11. Full partition restoration

To perform a total restoration of the application partition, follow these instructions:

- 1 Start DiskSafe.
- 2 In **Protected Storage**, select **Disks**. Right click on the disk hosting the application and select **Restore**.



- 3 Starting the restoration.



The **Restore** dialog box has two options:

- Restore to the Original Primary disk
- Restore to another partition (new target)

- 4 Choose the restoration mode and click **Restore**.
- 5 At the end of the restoration, restart the system.

Chapter 12. Appendix

This appendix regroups a certain number of FAQ, *Frequently Asked Questions* on the backup and the restoration with the StoreWay DPA Client for Lotus Notes agent.

See:

["FAQ" page 40](#)

FAQ

Can I back up database of another server via the network?

Yes, but you need to install a StoreWay DPA Client for Lotus Notes agent for this server.

Can I restore a full backup followed by incremental backups?

Yes. Incremental backups allow you to add Lotus Notes databases whatever the database situation. There is no dependence between full backups or incremental backups.

Is there a size limit for backed up databases?

No, there is no limitation for a StoreWay DPA Client for Lotus Notes agent. However, there are limitations on Lotus Notes databases (see Lotus Notes documentation).

Can I perform backups at any moment?

Full or incremental backups can be performed without restriction. However, you cannot perform two backups on the same database at the same time.

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