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SHOW101 Step by Step: Install, manage and configure DAOS and ID Vault

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Agenda

- ID Vault - What It Is
- Creating an ID Vault
- Managing ID Vault
- Resetting Passwords
- Setting up a security policy for ID Vault
- Auto processing requests
- A bit more about how it works and limitations
- Please complete your evaluations

First The Why

- ID Vault removes the pain from
 - Password Recovery
 - by allowing password resets without access to the id itself
 - Lost ids
 - by re-distributing the vault copy
 - Users with multiple id copies (we know you're out there)
 - by keeping multiple copies in sync
 - User renames
 - Re-issuing the keys
 - by doing both without needing any user involvement

So...

- It makes you happy because you can keep your environment secure and not wait on users to complete your work
- It makes users happy because they have one sync'd id and can easily get a password reset
- It makes audit happy because you no longer have that backup directory of id files "just in case"

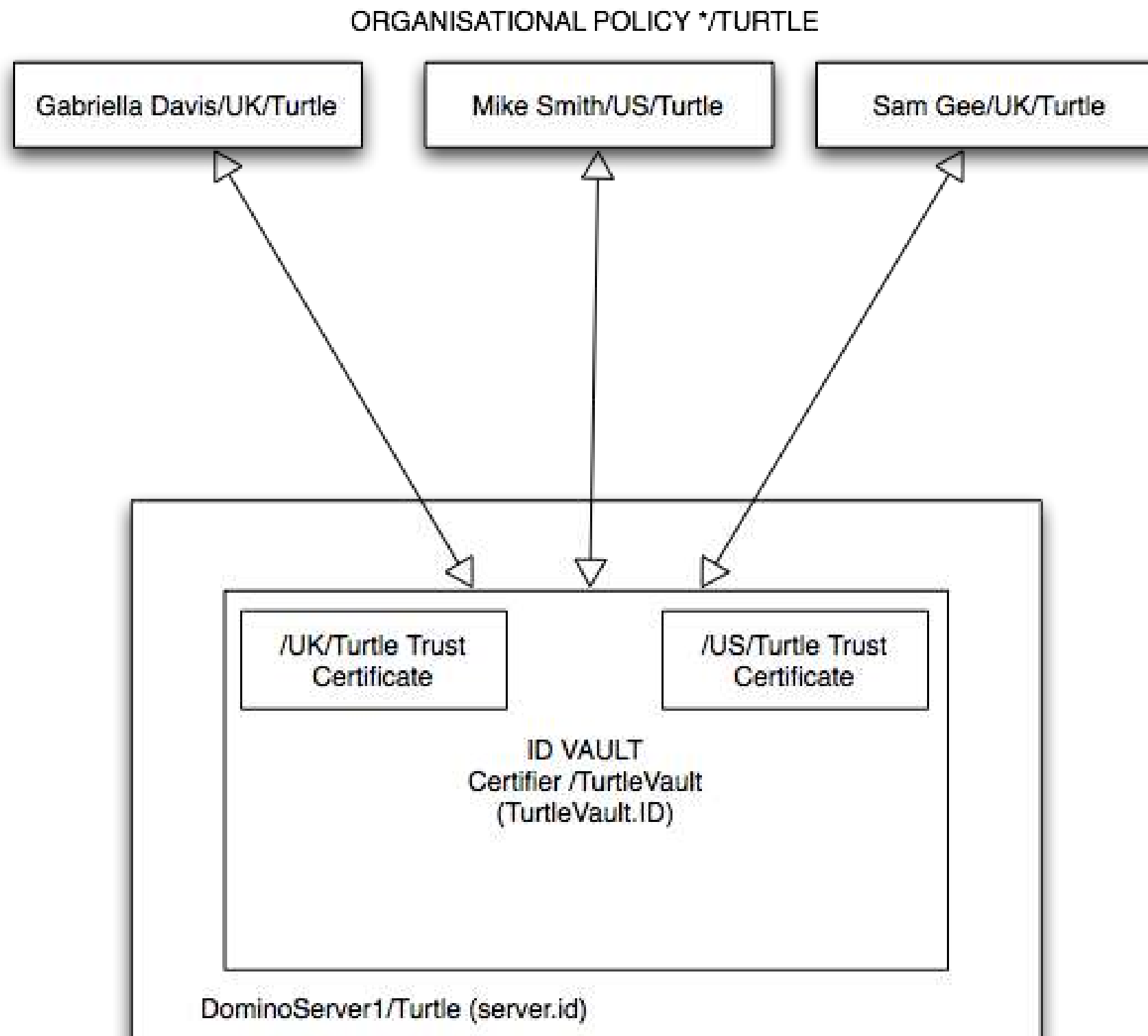
How Does It Work - Downloading IDs

- If no ID exists on the workstation the notes.ini fields keyfilename and keyfilename_owner are used to identify which ID should be downloaded
- The ID can only be downloaded if the user knows the password for the ID stored in the Vault
 - So you can't hack a notes.ini file to steal someone's ID unless you already know their password

How Does It Work - Updating IDs

- When a user connects to their home server the client asks for a list of servers containing a vault that matches their security policy
 - the server chosen from the list is random and is then cached for a few sessions so think about where you are placing your ID Vaults
- If a change is made in the vault (such as a password reset) that is downloaded to the client as they login
- If a change is made on the client version of the id then it is uploaded to the randomised ID Vault server

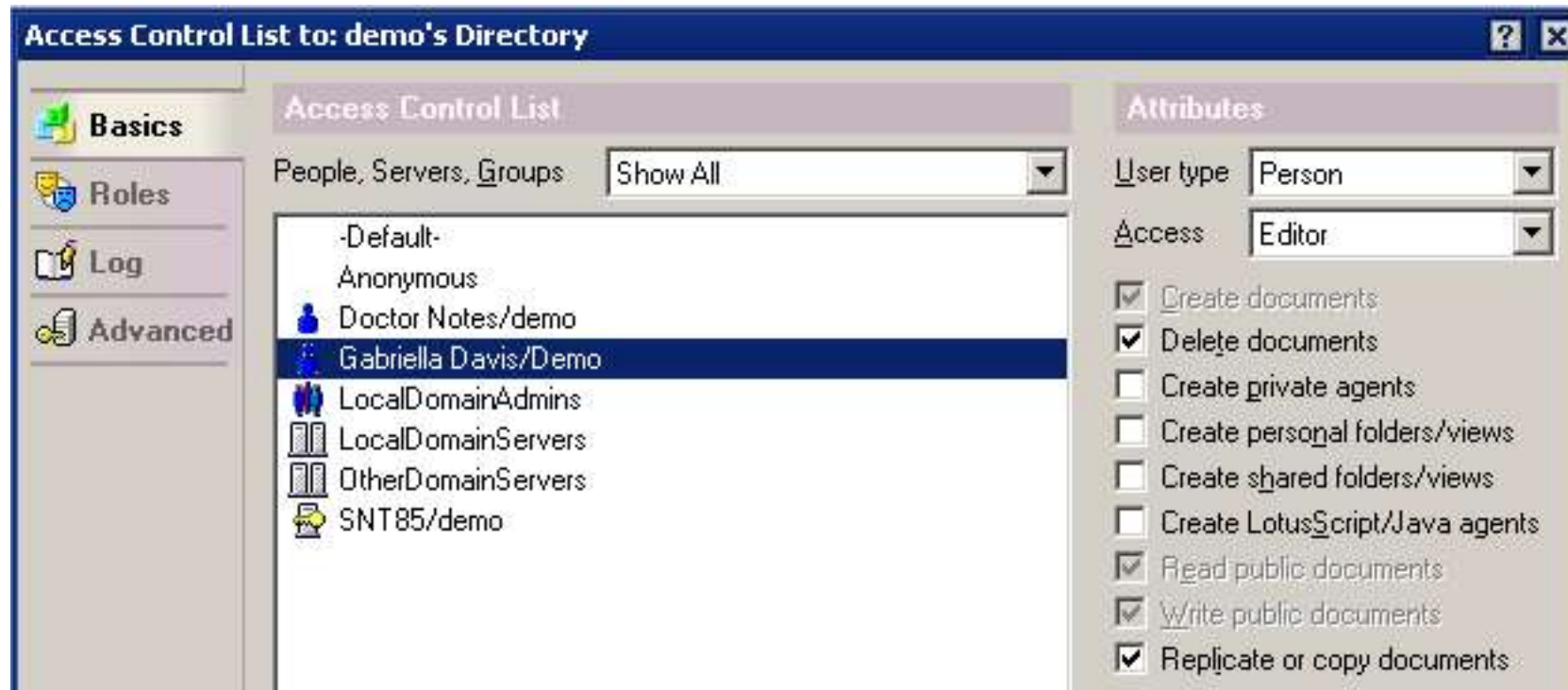
How Secure Is It



Let's jump right in and create an ID Vault

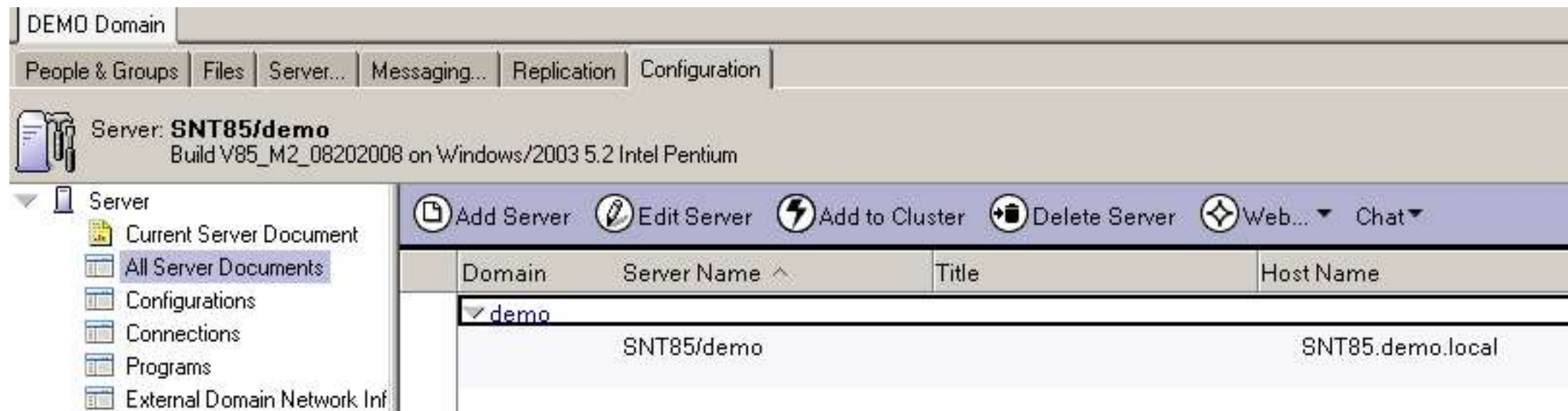
- Verify you have the access required to create the Vault on the server(s) you are using
- Create the Vault
- Check that everything created correctly

Editor Access to the Domino Directory



- Go to 'People and Groups' tab
- File- Application - Access Control
- Ensure you or your group membership has Editor access (no specific roles)

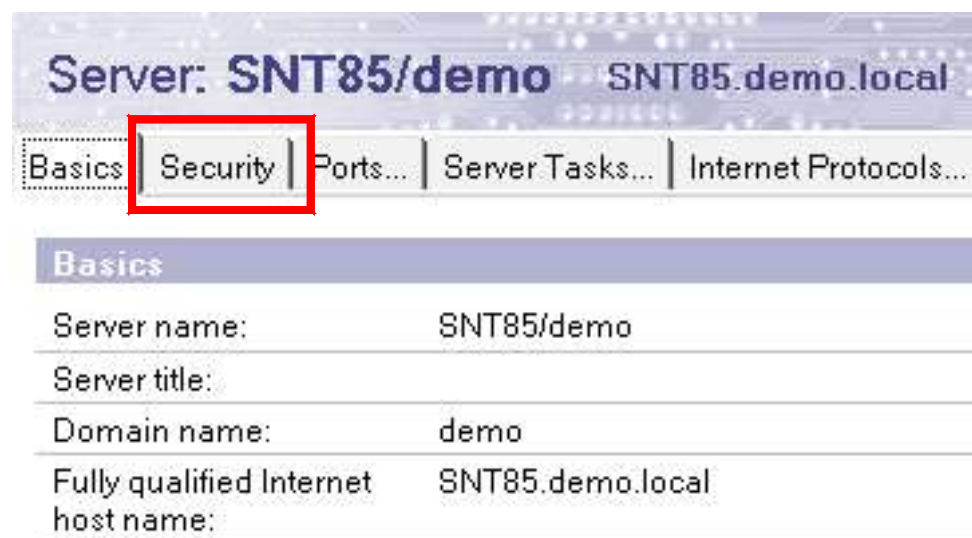
What rights do you need to create an ID Vault?



- Rights to create databases and templates
- Click on Configuration Tab
- Select and Open Server Document

Rights to create databases and templates

- Click on Server document 'Security Tab'



Rights to create databases and templates

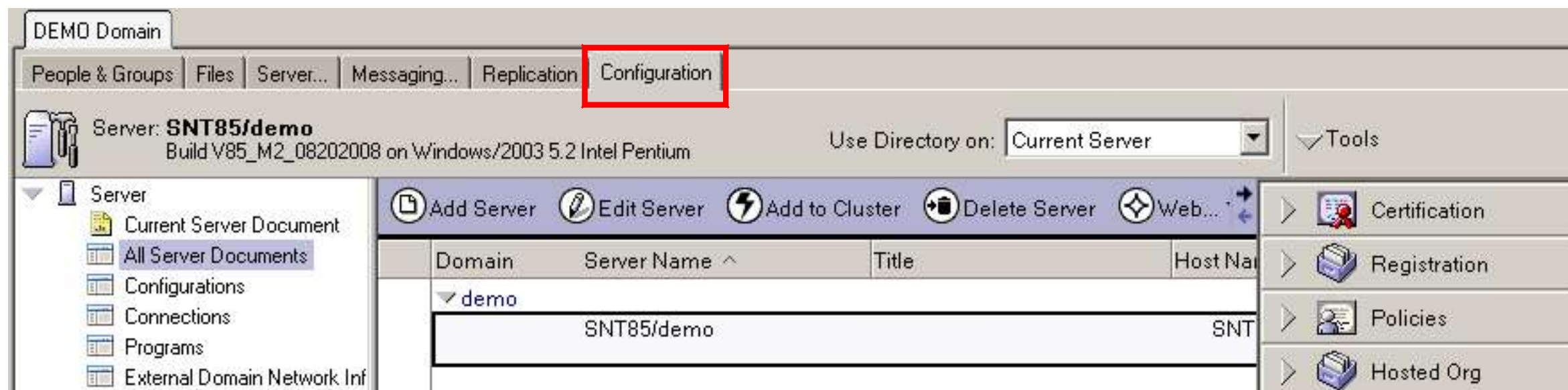
- Ensure your name or group is entered in the fields for
 - Create new databases and templates

Server Access	Who can -
Access server:	All users can access this server
Not access server:	
Create databases & templates:	LocalDomainAdmins
Create new replicas:	
Create master templates:	
Allowed to use monitors:	*
Not allowed to use monitors:	
Trusted servers:	

You may have to wait...

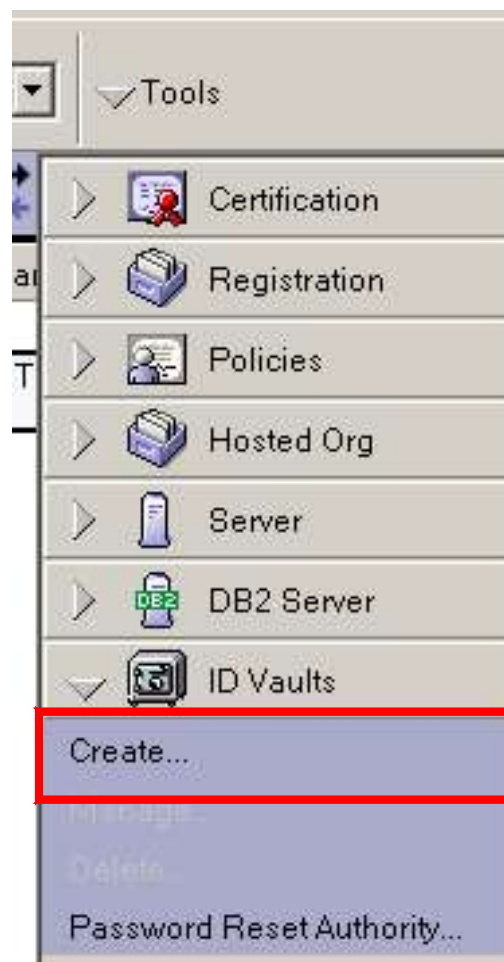
- If you modified the server document then it will cache
 - give it up to 30 mins or exit and start the server
 - don't do 'server restart'

Creating the ID Vault

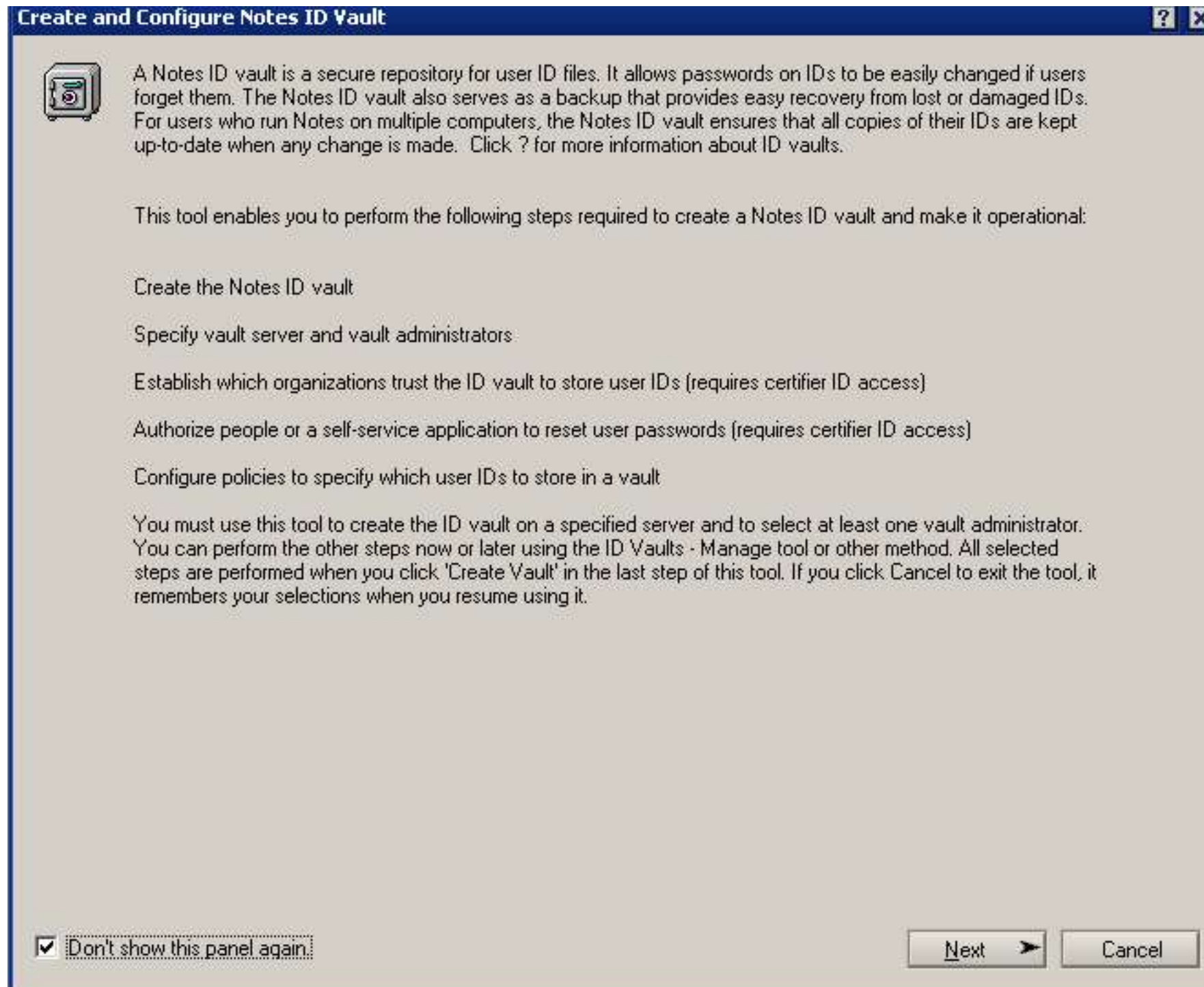


Creating the ID Vault

- Select from right hand 'Tools' menu
-or top "Configuration" menu
- Tools - ID Vaults - Create



Creating the ID Vault



Add a name and description for this vault instance

Create and Configure Notes ID Vault

Specify a name and description for the Notes ID vault.

Notes ID vault name
DemoVault

Notes ID vault description (optional - will also be Notes ID vault database title)
The primary vault for the demo certifier and related OUs

The name you specify is used to form the hierarchical name, the database file name and the ID file name for the Notes ID vault. The name can not be the same as any organization or organizational unit. Example: 'ACMEVault' results in the hierarchical vault name '/ACMEVault', the vault database file name 'acmevault.nsf' and the vault ID file 'acmevault.id'. Once the Notes ID vault is created in the last step of this tool, you cannot change its name.

Step 1 of 10

Next > Cancel

Setting a password for the ID Vault

- An ID vault id is created automatically
- the password you set must be used when Administrators attempt to create or delete replicas of the ID Vault itself

Create and Configure Notes ID Vault

Specify a password and file location for the vault ID file.

Vault ID password

Password: Verify:

Vault ID file location

C:\Program Files\IBM\...\Data\ids\vault\demovault.id

This step obtains the information to create the vault ID file. Specify a password that is at least eight characters long and that conforms to secure password rules. Vault administrators are prompted for the vault ID file and password when they add or remove replicas of the ID vault. Making a backup copy of the ID file is recommended.

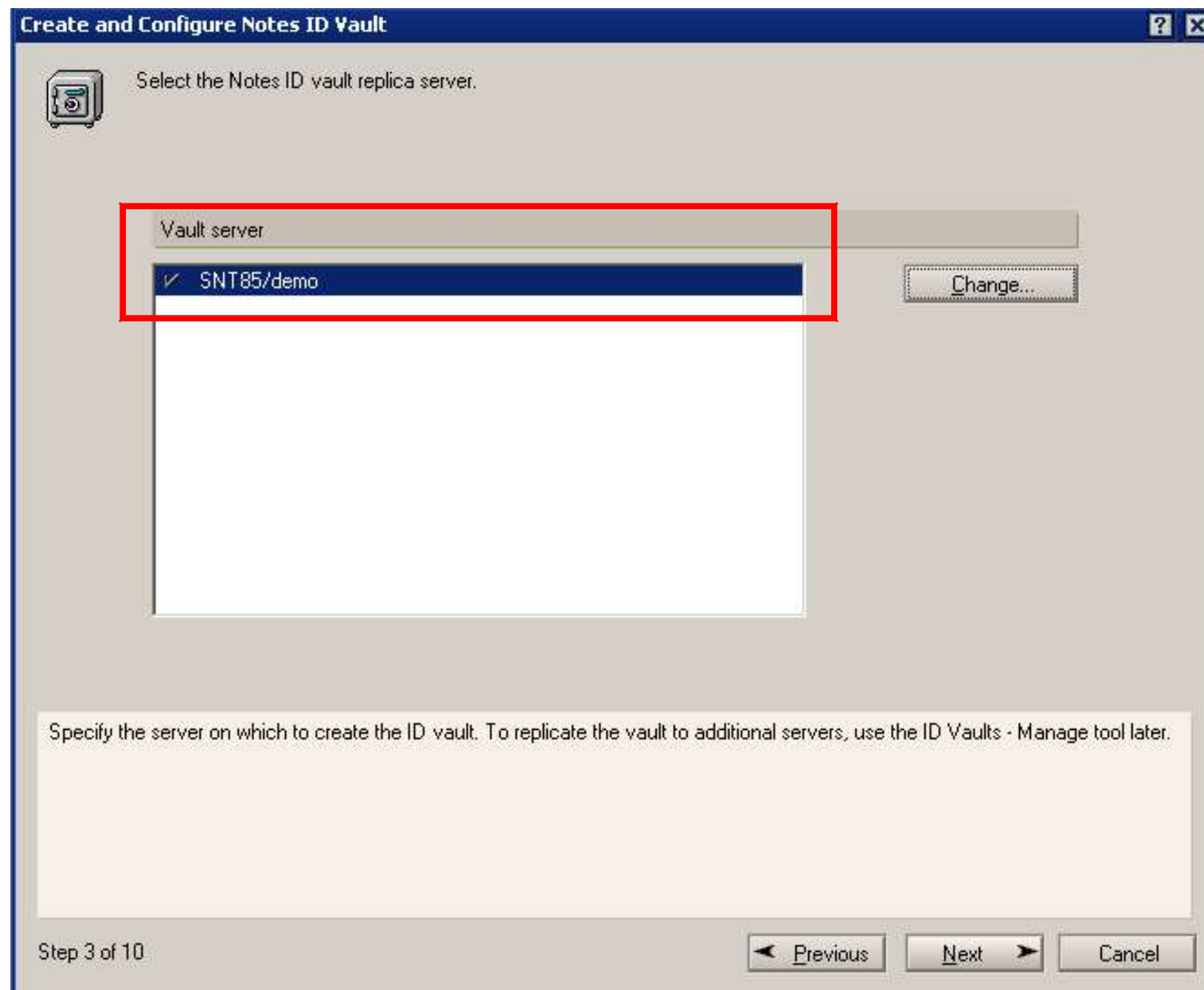
Step 2 of 10

- Backup the vault id once it's created and any time you change its password

- The Vault ID and Server ID for the ID Vault server are the 2 keys to keeping your vault and the ids in it secure

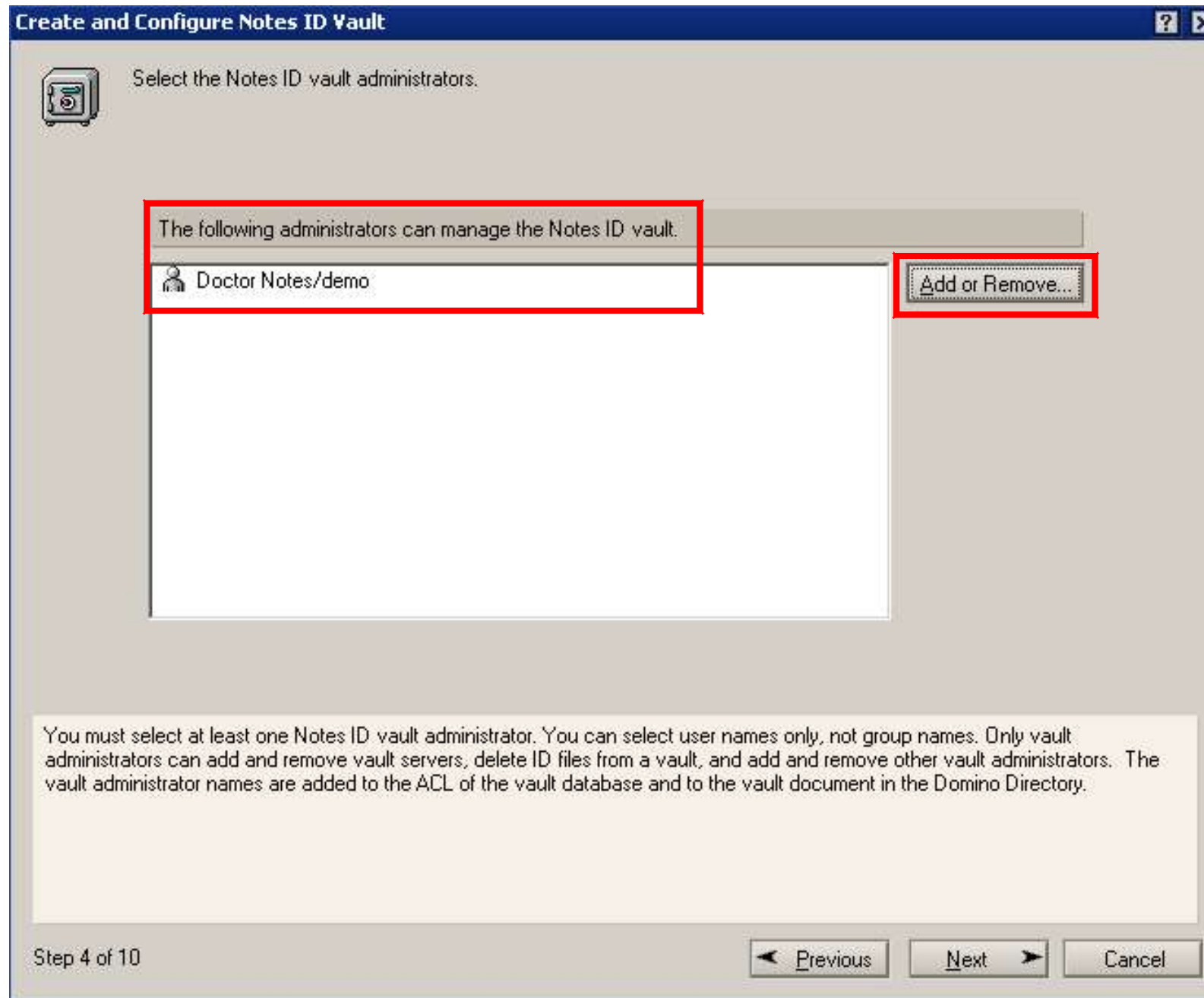
- Keep both your server and server id secure by password protecting the server id itself.

Choosing the ID Vault Replica Server



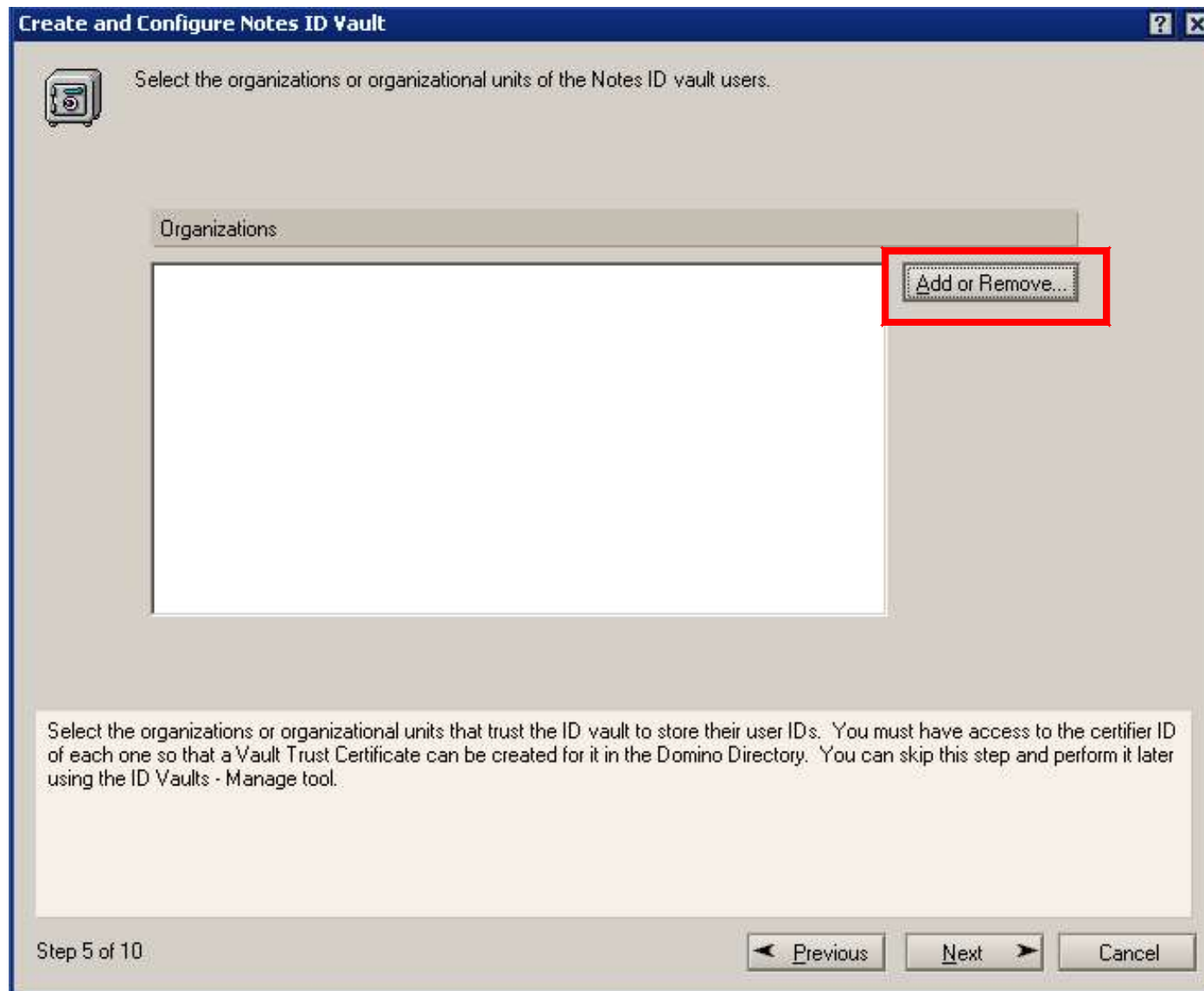
- You can specify only one server on initial creation but add

Setting up ID Vault Administrators



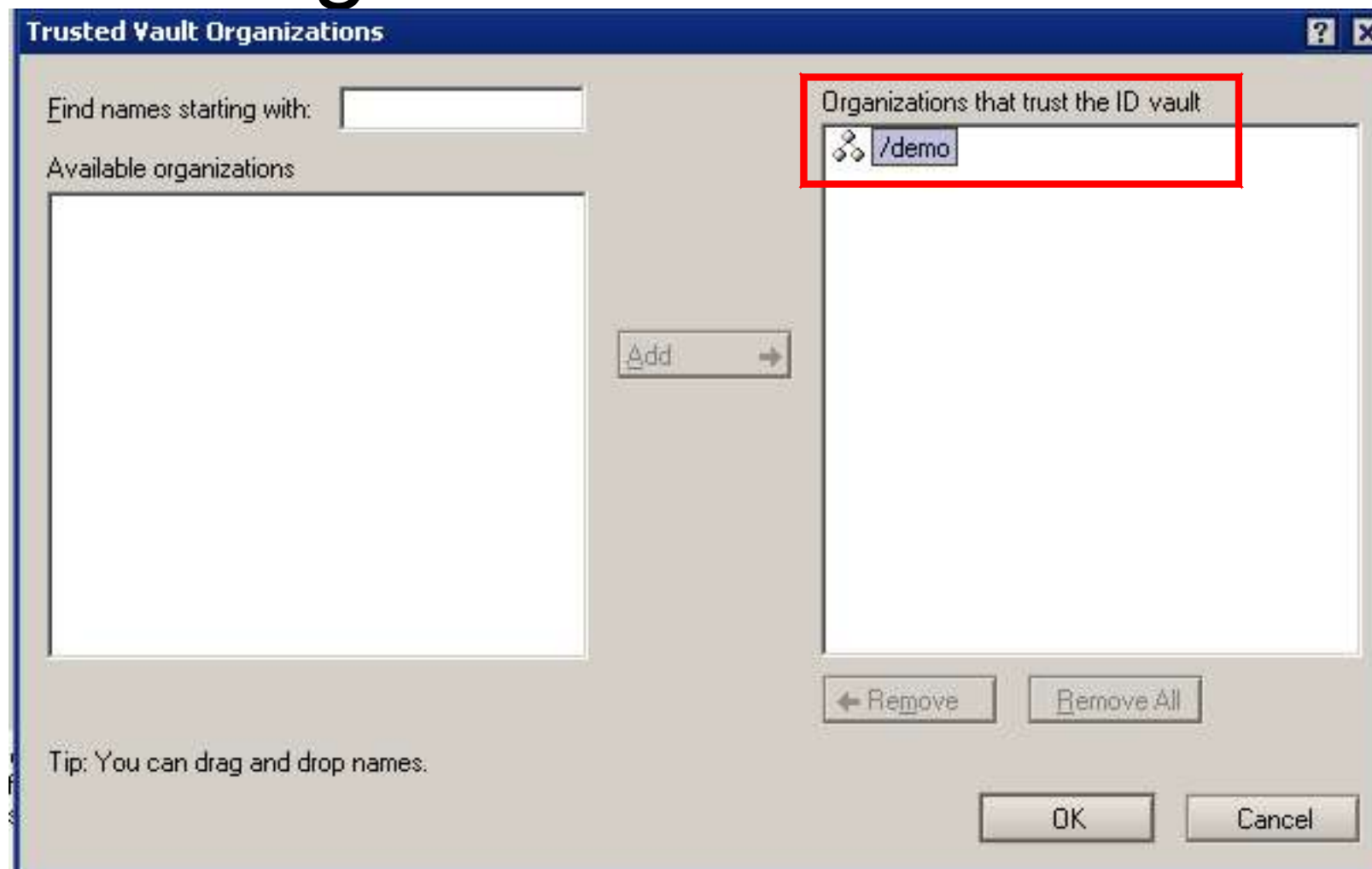
- Your name is automatically added as an administrator
- You can add other administrators and recovery authorities later

Adding organisations to the ID Vault



- A trust certificate is created between the organisation and the ID vault
- You must use a physical certifier not the CA process to do this

Selecting certifiers to add



- Later on in the process I will be prompted to point to the physical certifier
- The list of certifiers authorised for this ID Vault can be modified later
- You can only store IDs in the ID Vault if their parent certificate is also there

Users Authorised to Reset Passwords

Create and Configure Notes ID Vault

Specify names that are authorized to reset passwords.

Directory:

Available users, groups and servers

- Lotus Notes/Domino Fault Rep
- Lotus Notes/Domino Smart Up
- Mooney, Paul
- Notes, Doctor
- OtherDomainServers
- SNT85/demo

Add

Available organizational units

Add To All

Password reset authority by organization

- /demo
 - Doctor Notes/demo
 - Gabriella Davis/demo
 - Paul Mooney/demo
 - SNT85/demo**
 - Warren Elsmore/demo

Remove Remove From All

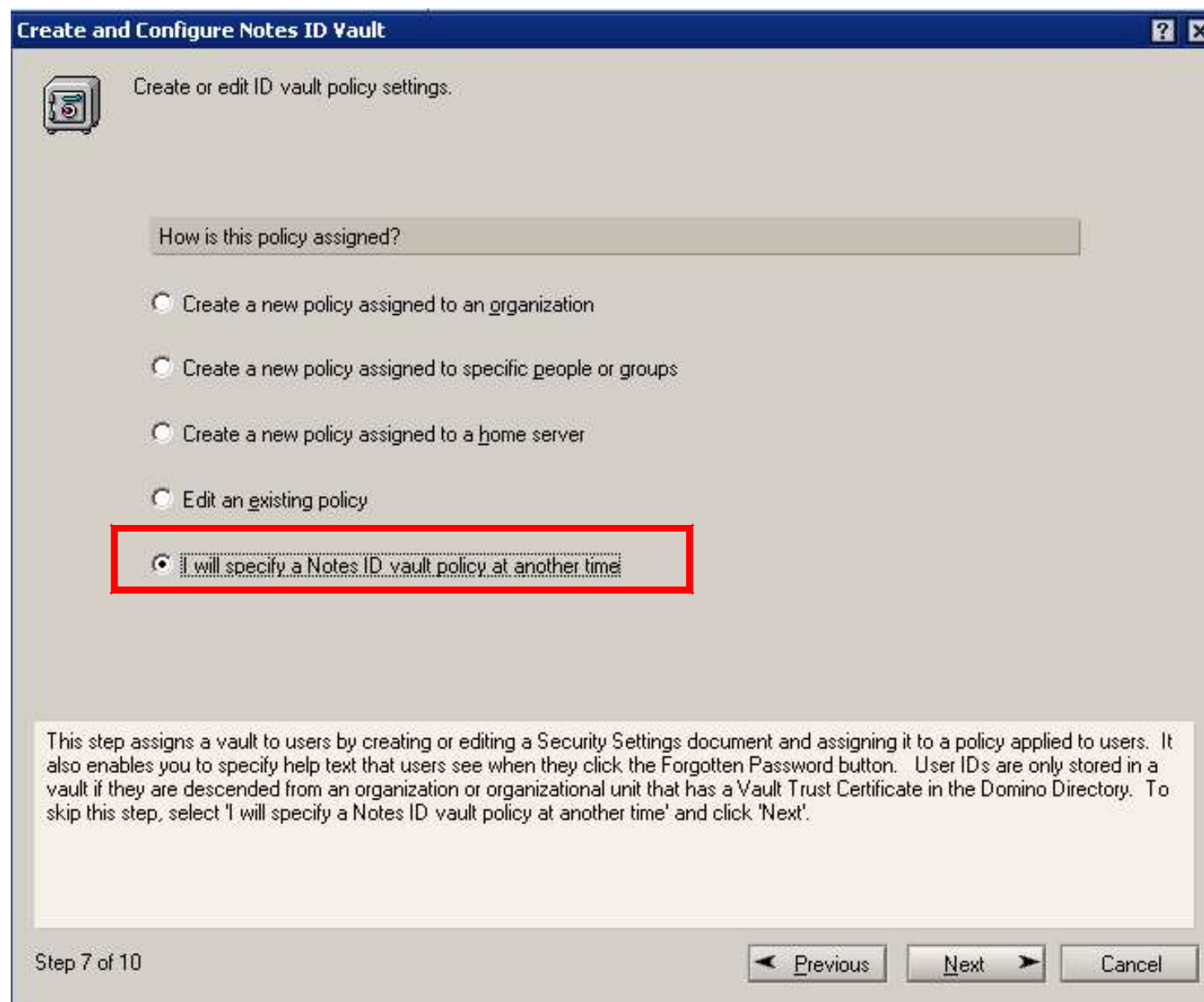
☐ Self-service password reset authority.

On the left, select the name of a user, group, server, or organizational unit to authorize to reset passwords. On the right, add the selected name to each user organization or organizational unit it will reset passwords for. Repeat to give password reset authority to additional names. A Password Reset Certificate will be created for each authorized user, group member, server, and organizational unit. To allow users to reset their own passwords using an agent, select 'Self-service password reset authority' for the user name that signs the agent and for each server on which the agent will run. For more information on password reset authority, including authorizing a non-agent self-service application, click ?

Step 6 of 10

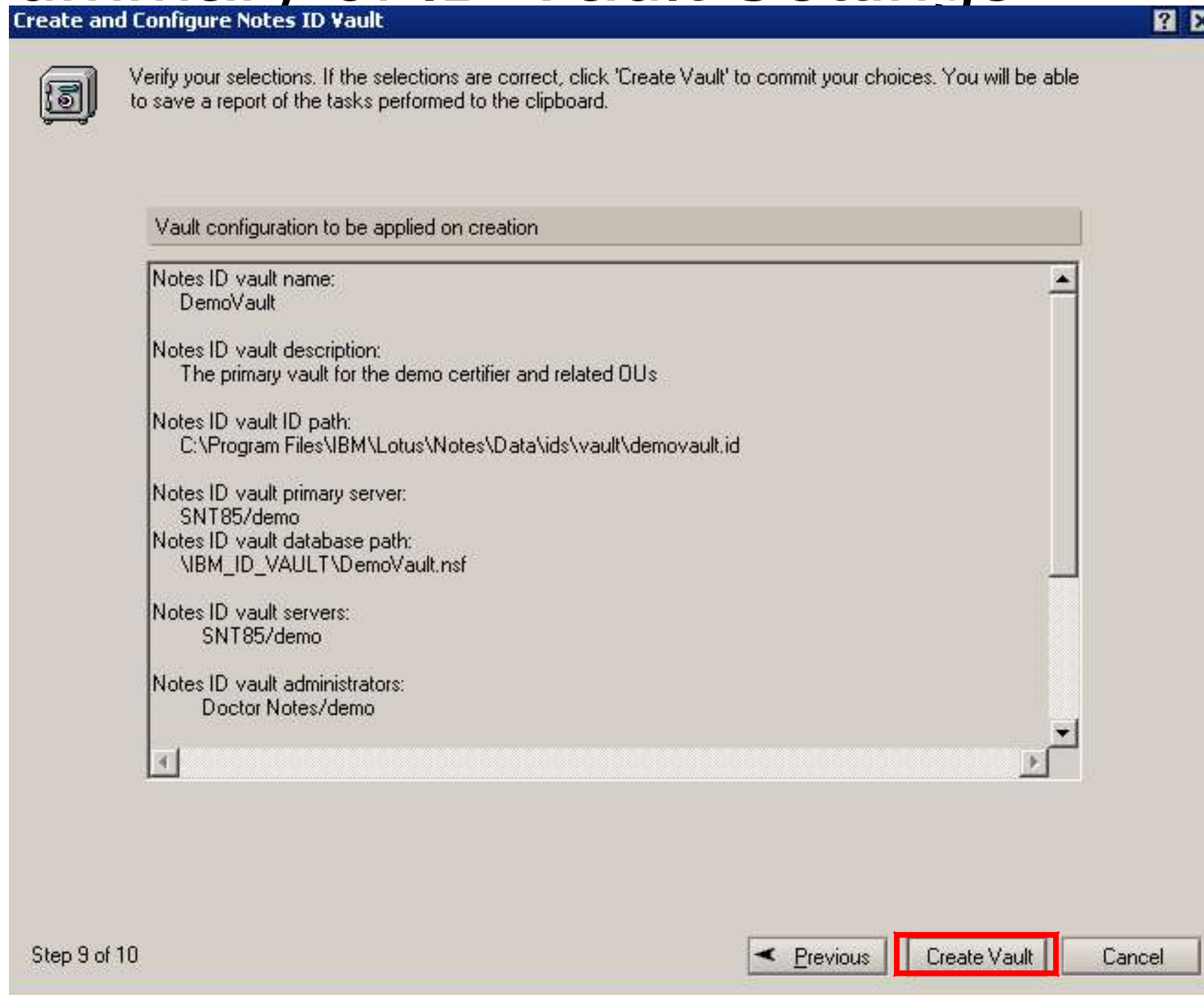
Previous Next Cancel

Applying an ID Vault To A User



- ID Vault relationships are set up in user policies
- You can configure or edit a security policy when you create the ID Vault. Or later.

Summary of ID Vault Settings



Create and Configure Notes ID Vault

Verify your selections. If the selections are correct, click 'Create Vault' to commit your choices. You will be able to save a report of the tasks performed to the clipboard.

Vault configuration to be applied on creation

Notes ID vault name:
DemoVault

Notes ID vault description:
The primary vault for the demo certifier and related OUs

Notes ID vault ID path:
C:\Program Files\IBM\Lotus\Notes\Data\ids\vault\demovault.id

Notes ID vault primary server:
SNT85/demo

Notes ID vault database path:
\\IBM_ID_VAULT\DemoVault.nsf

Notes ID vault servers:
SNT85/demo

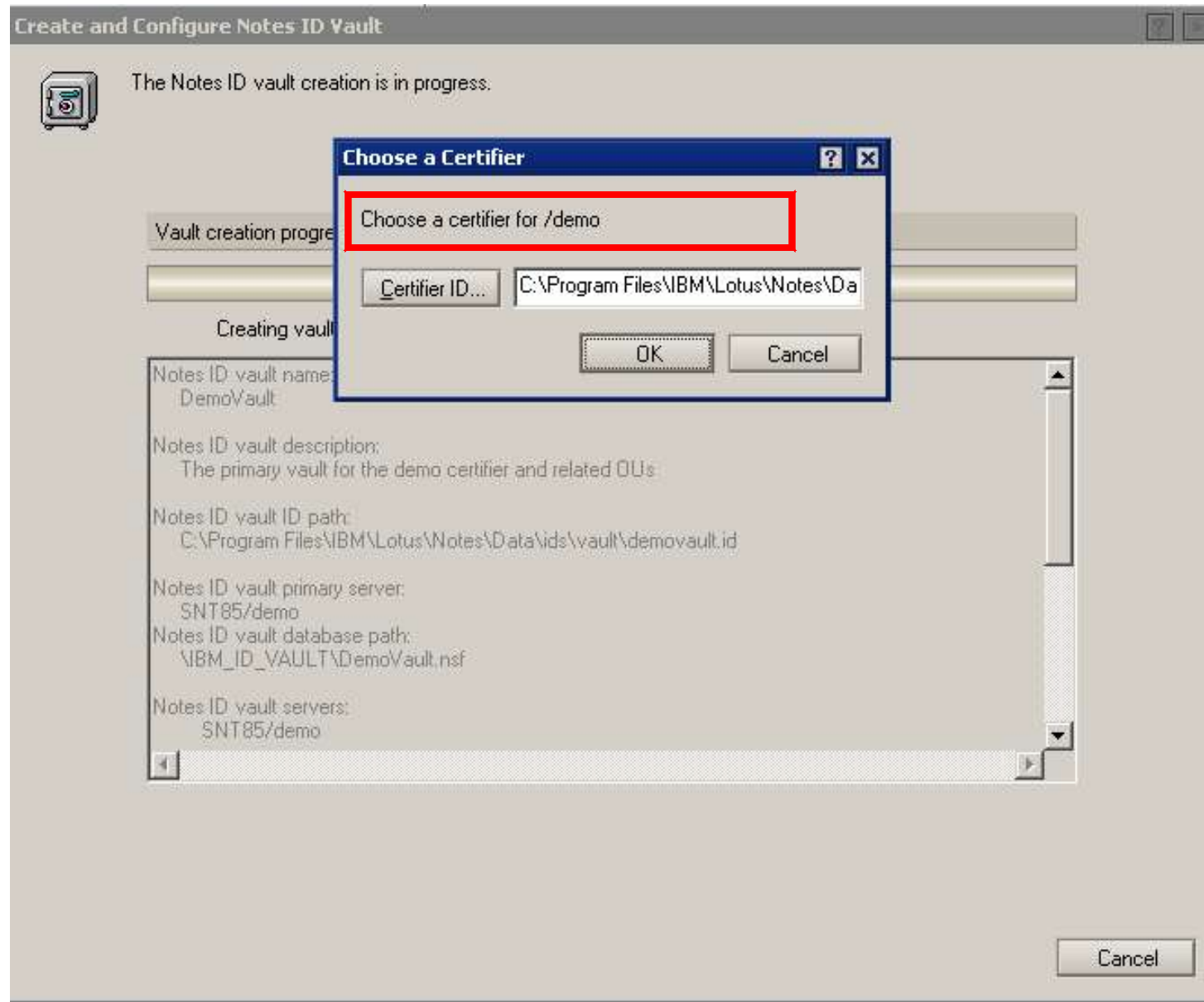
Notes ID vault administrators:
Doctor Notes/demo

Step 9 of 10

Previous **Create Vault** Cancel

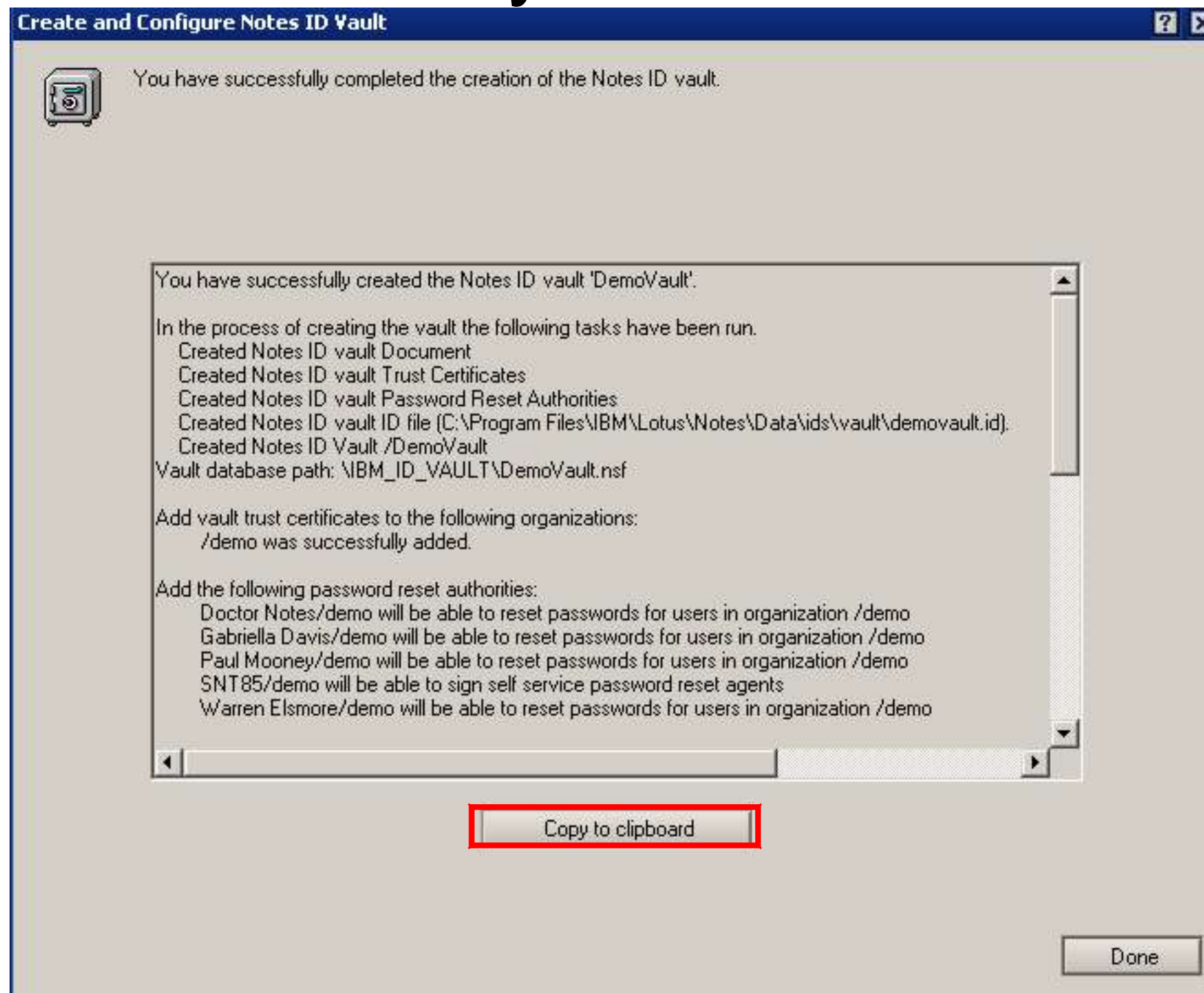
- Click 'Create Vault' on the summary screen to complete the process

Creating the ID Vault

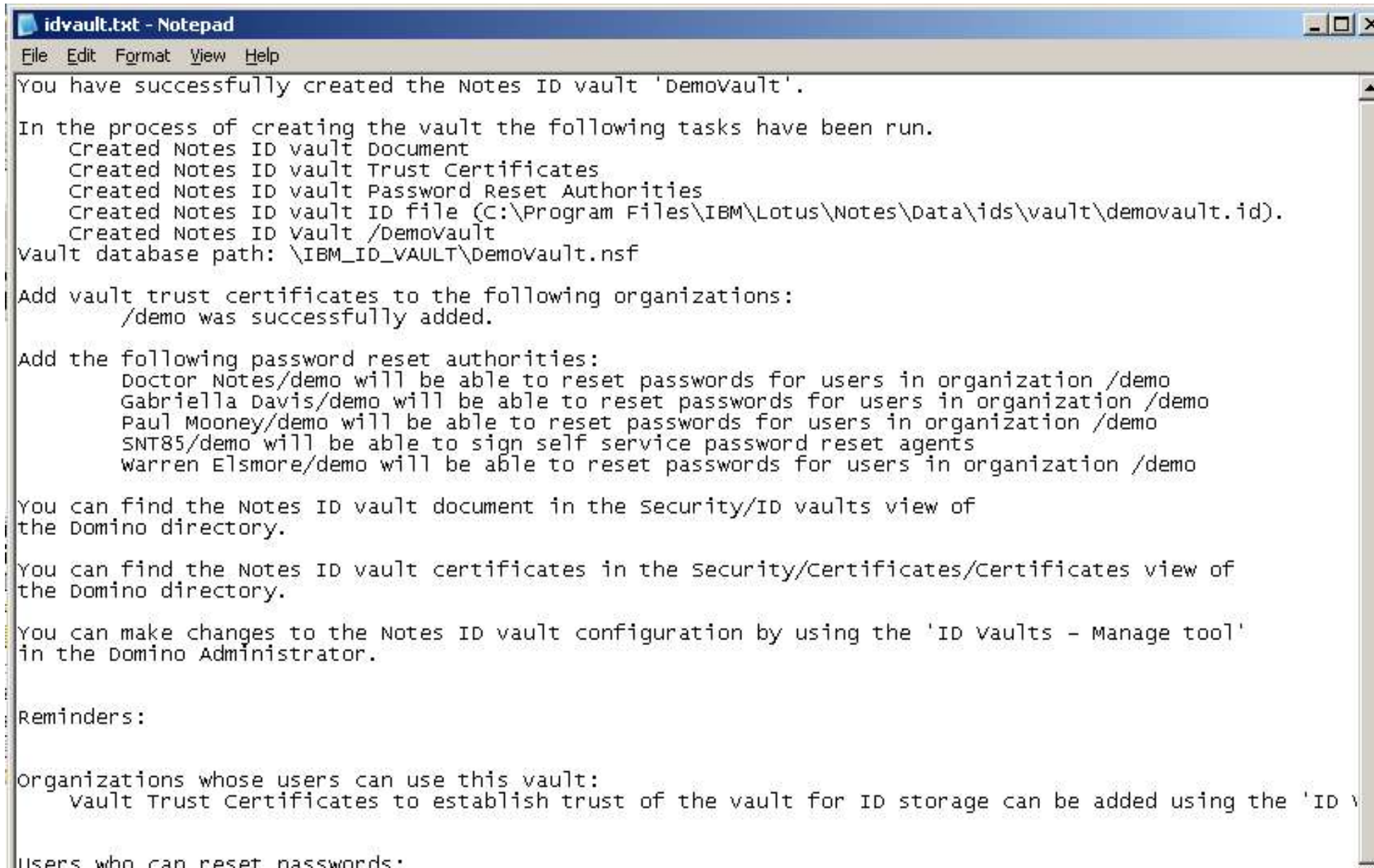


- As the ID Vault is created you will be prompted for the physical certifier and password for any organisations you specified be used

Final Summary Screen



Store a Record of the ID Vault Summary Clipboard



```
idvault.txt - Notepad
File Edit Format View Help
You have successfully created the Notes ID vault 'Demovault'.

In the process of creating the vault the following tasks have been run.
  Created Notes ID vault Document
  Created Notes ID vault Trust Certificates
  Created Notes ID vault Password Reset Authorities
  Created Notes ID vault ID file (C:\Program Files\IBM\Lotus\Notes\Data\ids\vault\demovault.id).
  Created Notes ID vault /Demovault
Vault database path: \IBM_ID_VAULT\Demovault.nsf

Add vault trust certificates to the following organizations:
  /demo was successfully added.

Add the following password reset authorities:
  Doctor Notes/demo will be able to reset passwords for users in organization /demo
  Gabriella Davis/demo will be able to reset passwords for users in organization /demo
  Paul Mooney/demo will be able to reset passwords for users in organization /demo
  SNT85/demo will be able to sign self service password reset agents
  warren Elsmore/demo will be able to reset passwords for users in organization /demo

You can find the Notes ID vault document in the Security/ID vaults view of
the Domino directory.

You can find the Notes ID vault certificates in the Security/Certificates/Certificates view of
the Domino directory.

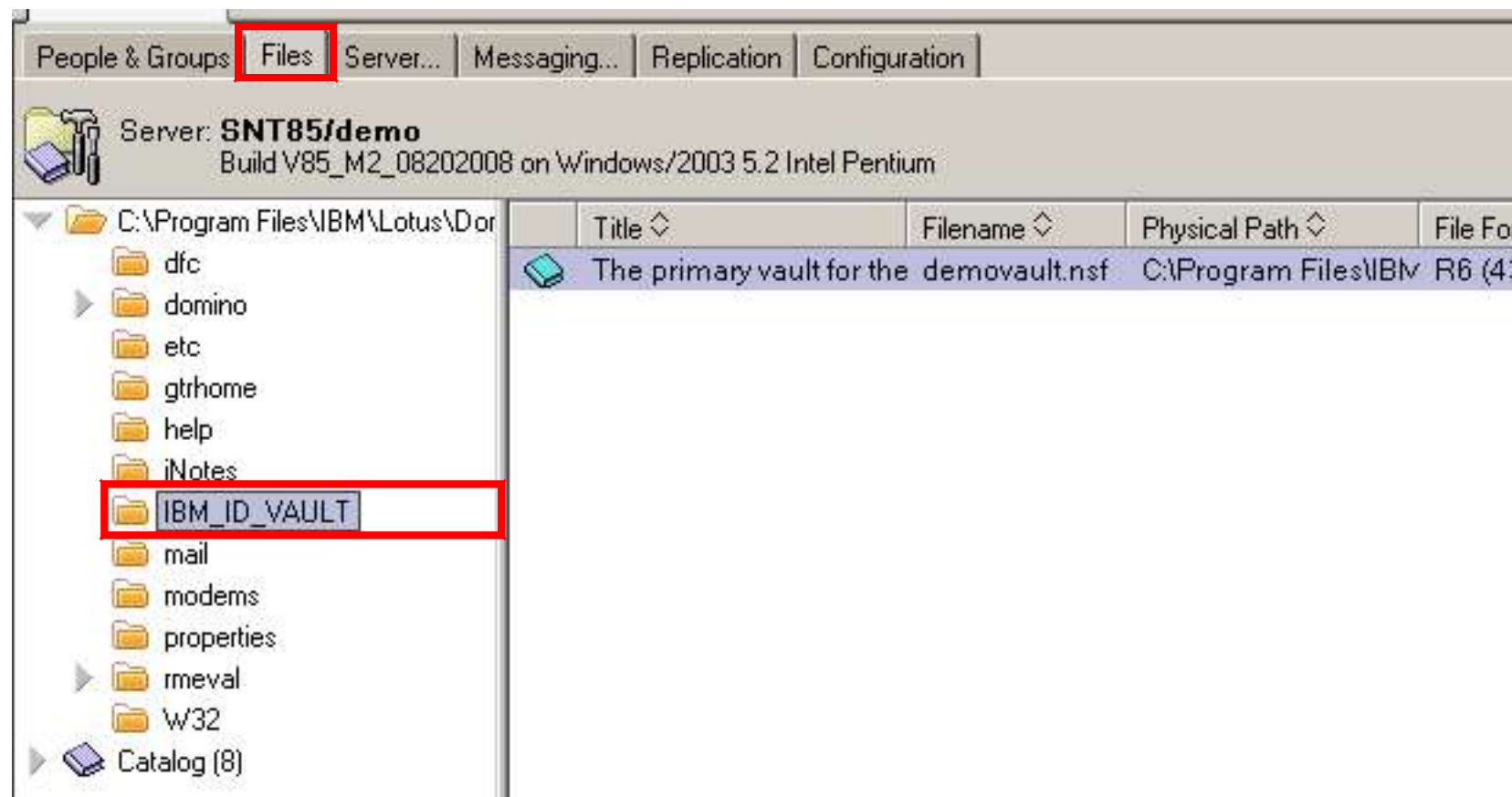
You can make changes to the Notes ID vault configuration by using the 'ID vaults - Manage tool'
in the Domino Administrator.

Reminders:

Organizations whose users can use this vault:
  Vault Trust Certificates to establish trust of the vault for ID storage can be added using the 'ID v

Users who can reset passwords:
```


Verifying the ID Vault Created Correctly



- ID Vault db with the title you specified will be in the IBM_ID_VAULT directory on the server you selected

ID Vault Document Created Under Security

People & Groups | Files | Server... | Messaging... | Replication | **Configuration**

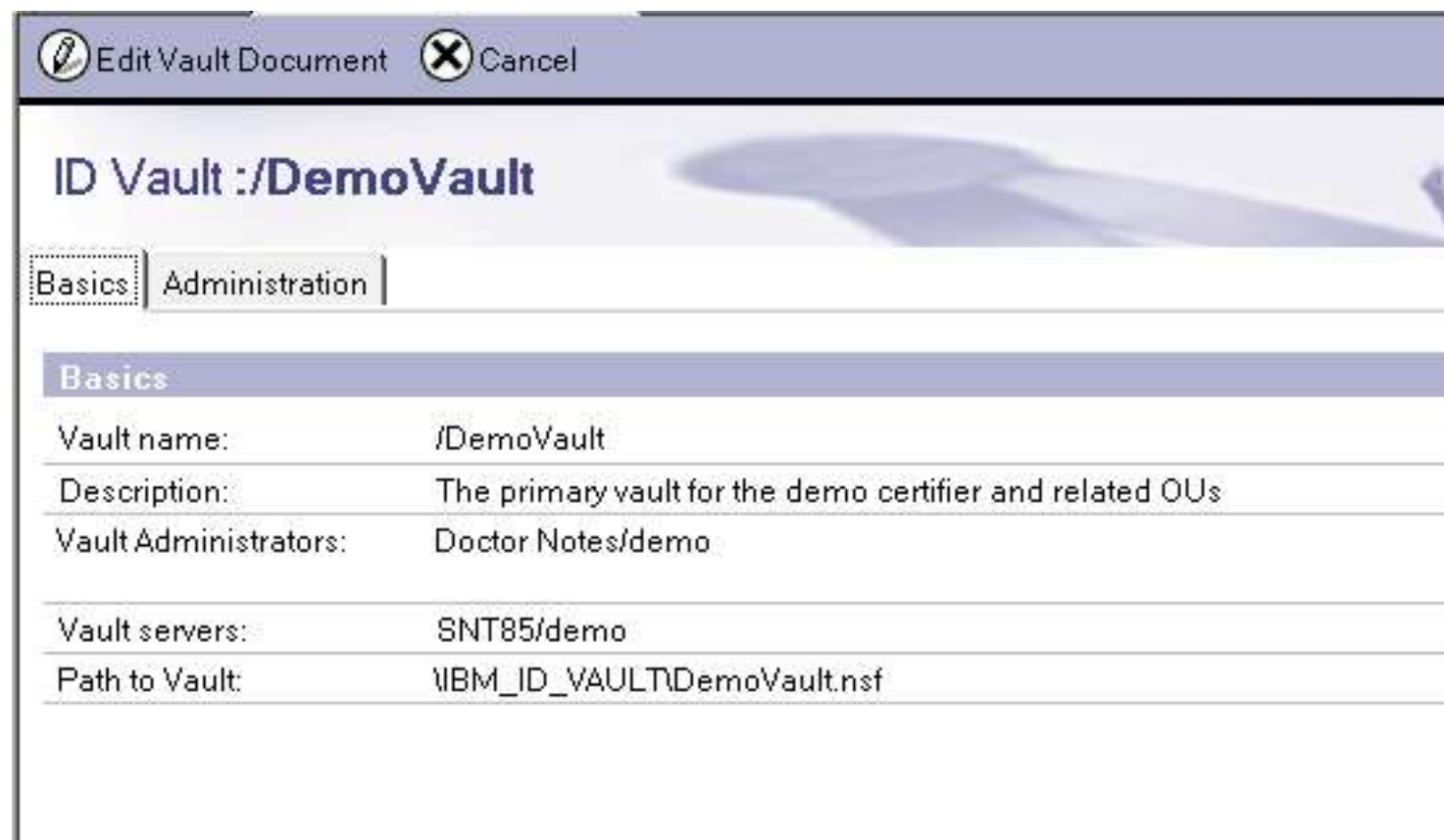
Server: **SNT85/demo**
Build V85_M2_08202008 on Windows/2003 5.2 Intel Pentium

Use Directory on: Current Server

- Server
- Messaging
- Replication
- Directory
- Security**
 - Certificates
 - ID Vaults**
- Policies
- Web
- Monitoring Configuration
- Health Monitoring
- Cluster
- Miscellaneous

Vault Name	Administration Server	Description
IDemoVault	SNT85/demo	The primary vault for the demo certifier and related OUs

View of ID Vault Document

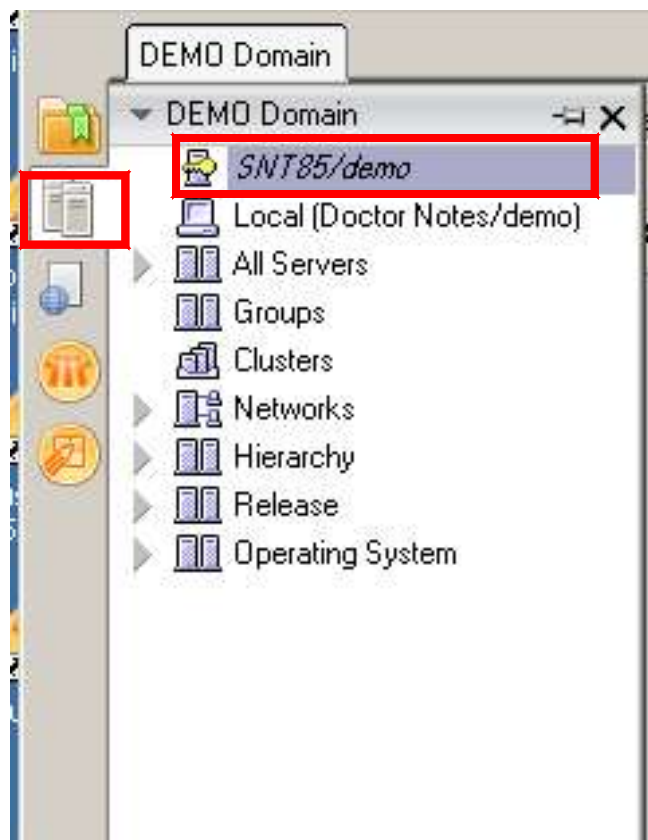


The screenshot shows a web-based interface for editing an ID Vault document. At the top, there is a header bar with two buttons: 'Edit Vault Document' (with a pencil icon) and 'Cancel' (with an 'X' icon). Below the header, the title 'ID Vault :/DemoVault' is displayed. Underneath the title, there are two tabs: 'Basics' (which is selected and highlighted) and 'Administration'. The 'Basics' tab contains a table with the following information:

Vault name:	/DemoVault
Description:	The primary vault for the demo certifier and related OUs
Vault Administrators:	Doctor Notes/demo
Vault servers:	SNT85/demo
Path to Vault:	\\IBM_ID_VAULT\\DemoVault.nsf

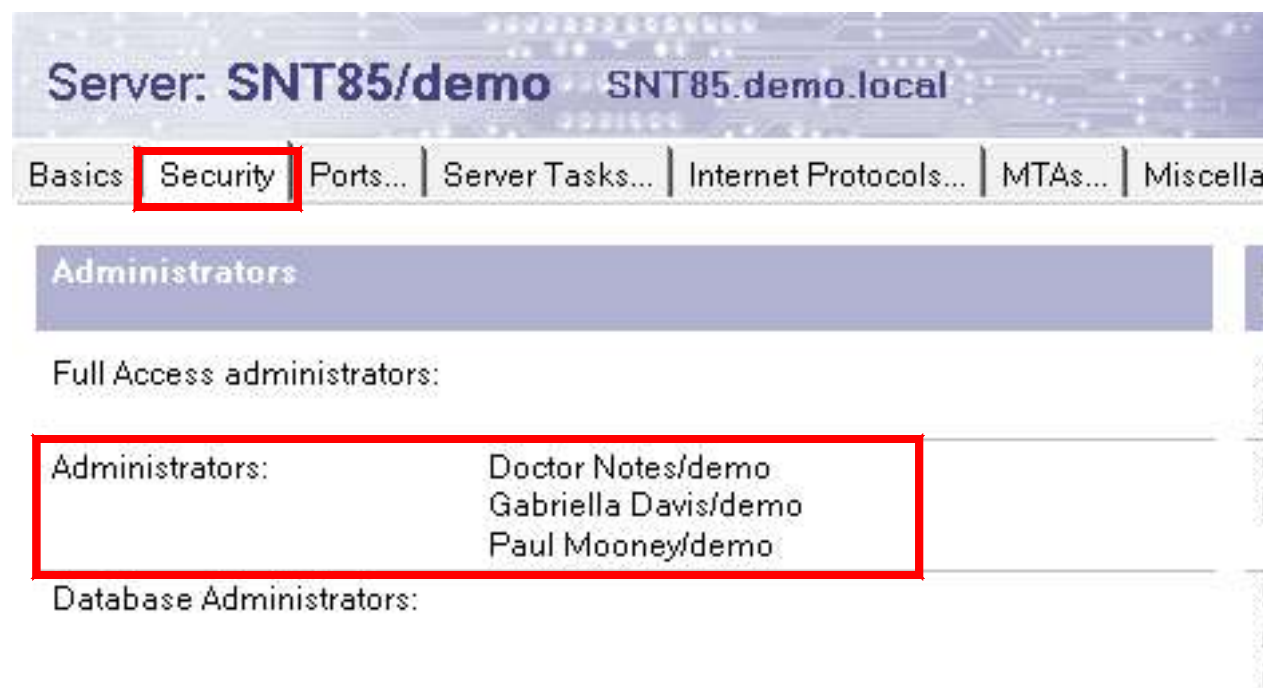
- Always use the 'Manage Vault' process rather than edit this document manually to ensure all steps are completed

Managing Vault Admins



- Make sure you have selected the server in the bookmark bar
- don't use File - Open Server
- if you find you have an empty list of 'Admins' to choose from - this could be why

Managing Vault Admins



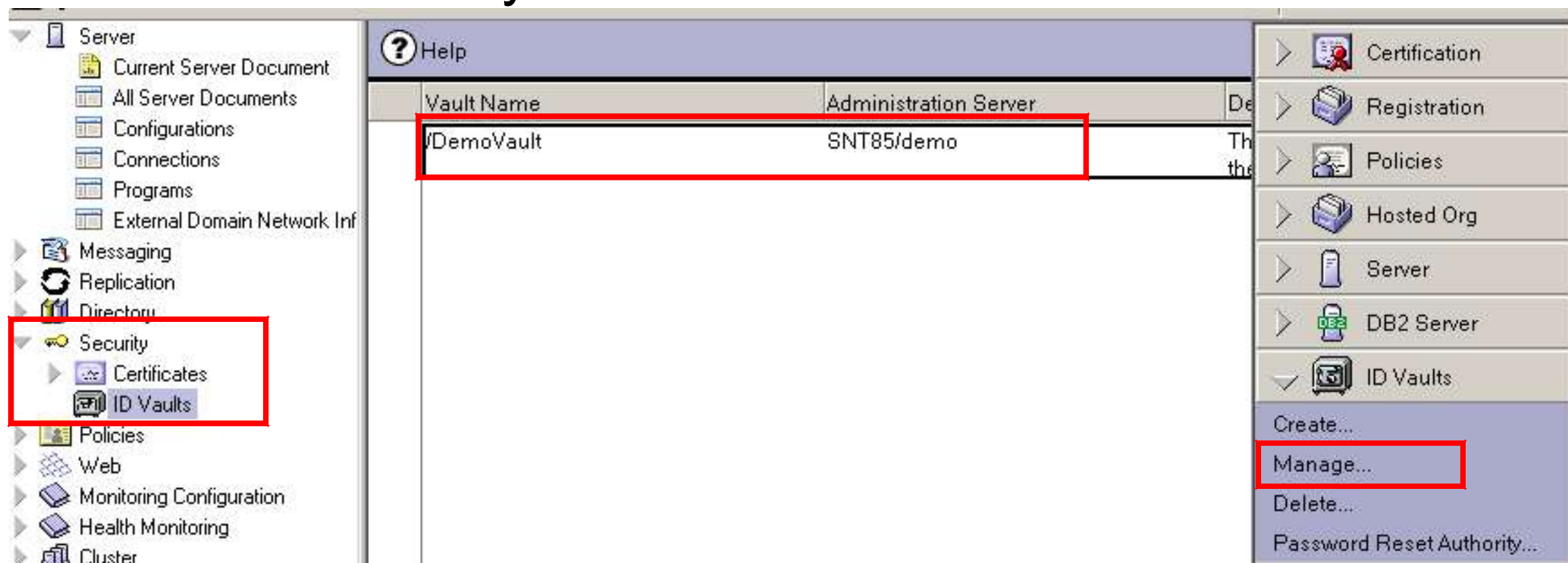
- To add someone as a Vault admin they must first have Administrator rights in the server document for the ID Vault server
- This setting caches on the server and without a restart will take a while to update

Managing Vault Admins

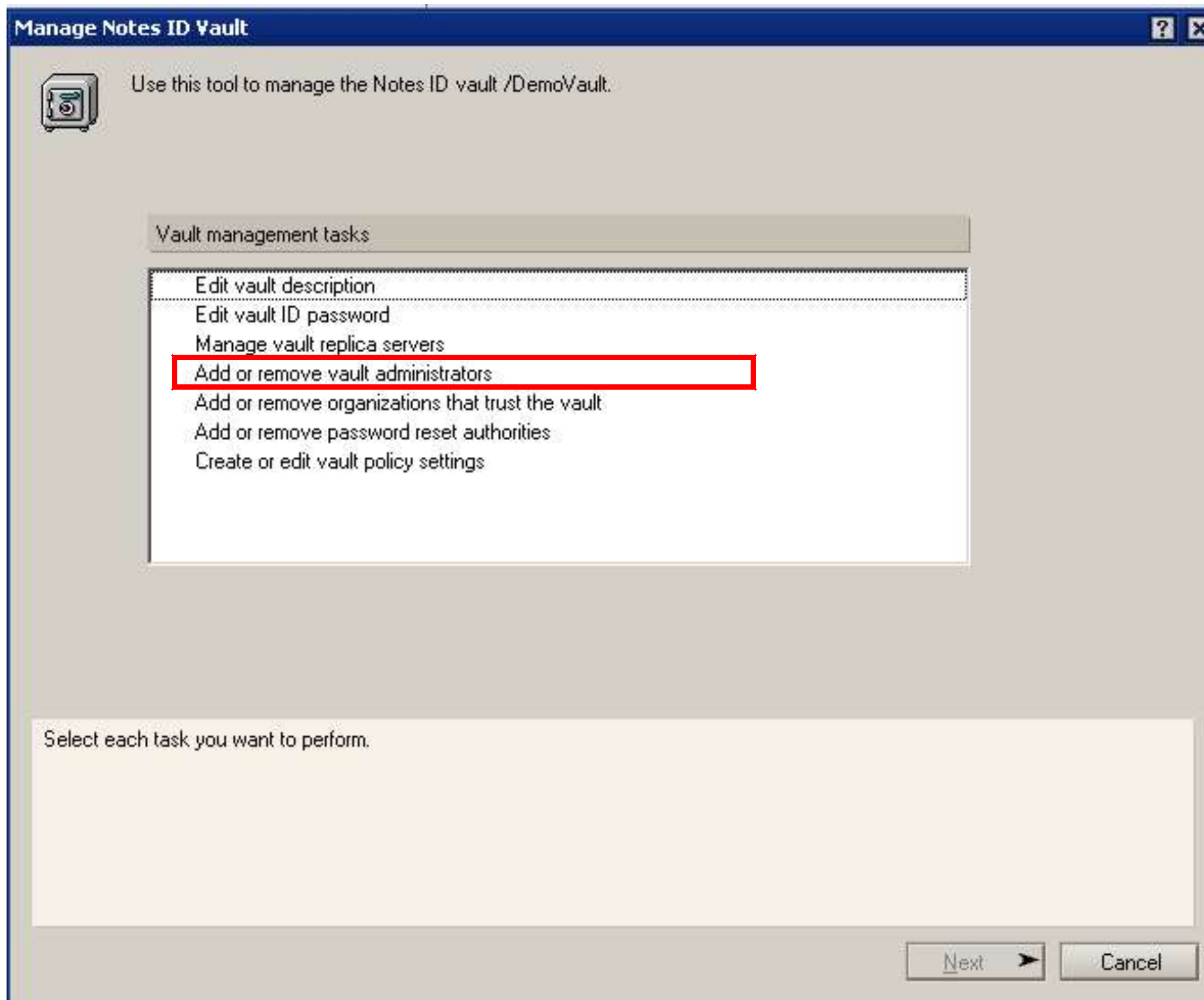
- ID Vault Admins can make changes to the Vault itself including
 - adding or removing other admins
 - adding or removing certifiers
 - creating or deleting ID Vault replicas
- You do not have to give someone ‘Administrator’ rights if they are simply resetting passwords for users
 - They don’t even need access to the user ids or to know the original user passwords

Managing Vault Admins

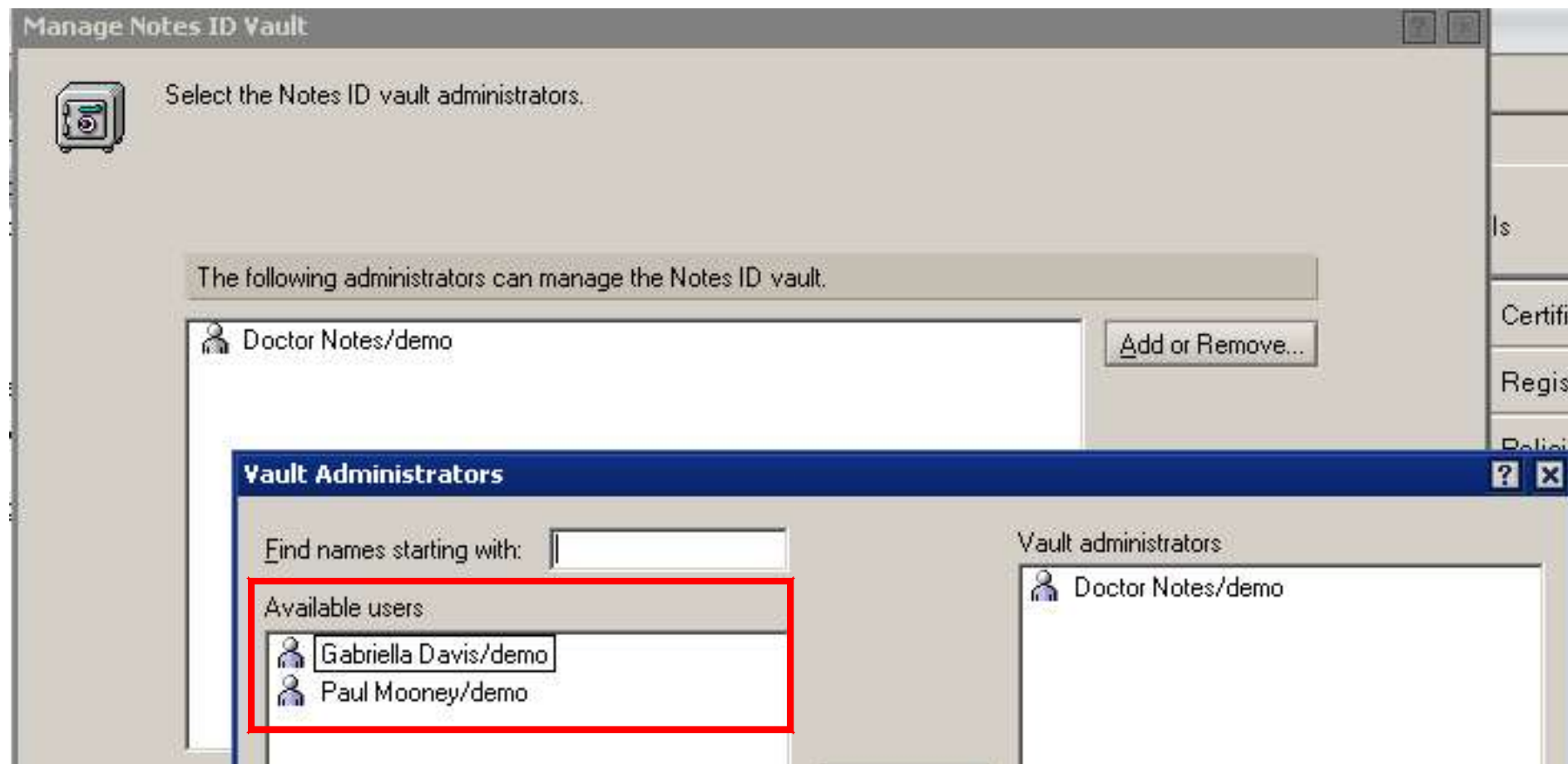
- ID Vault Security document must be selected



Managing Vault Admins

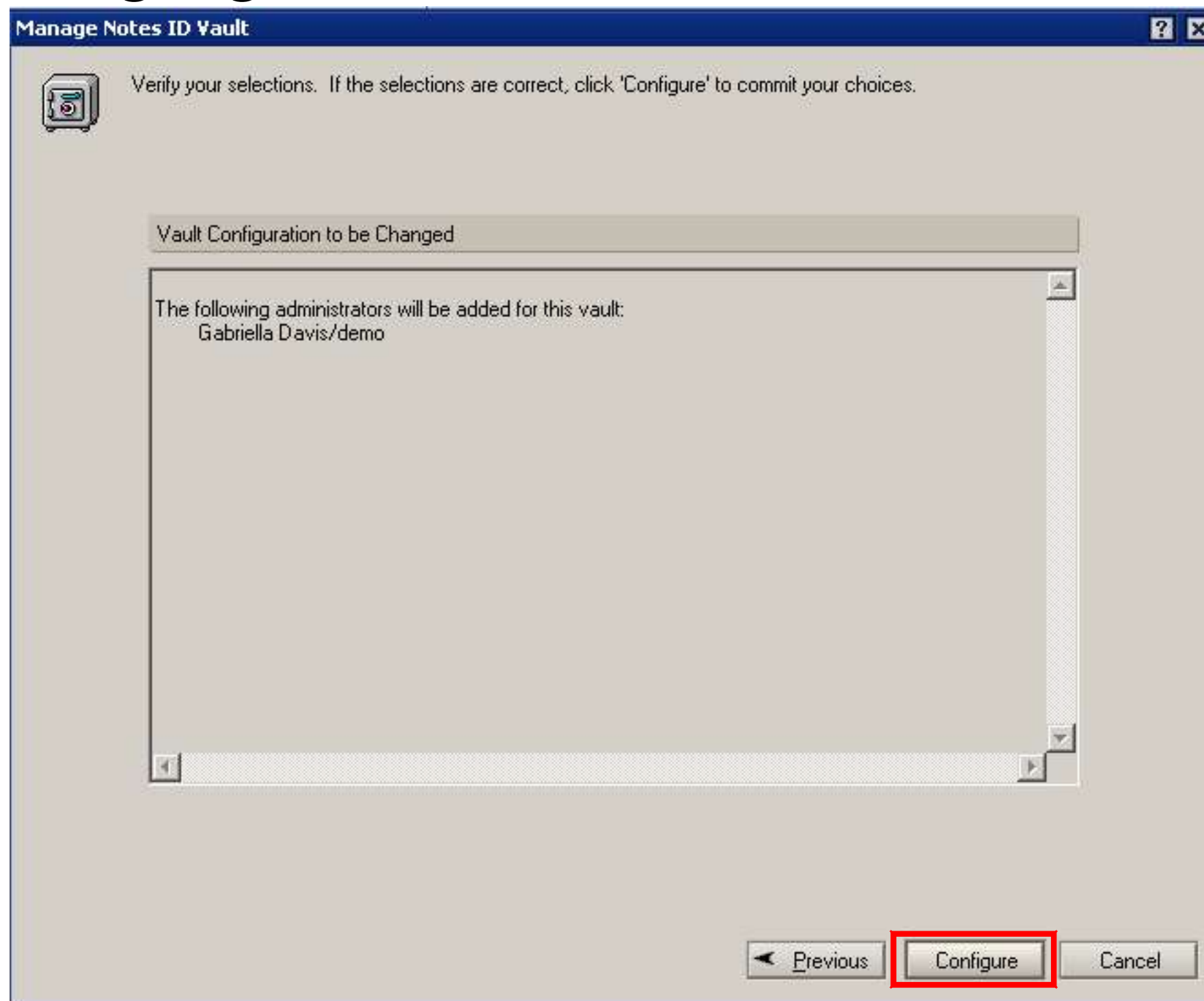


Managing Vault Admins

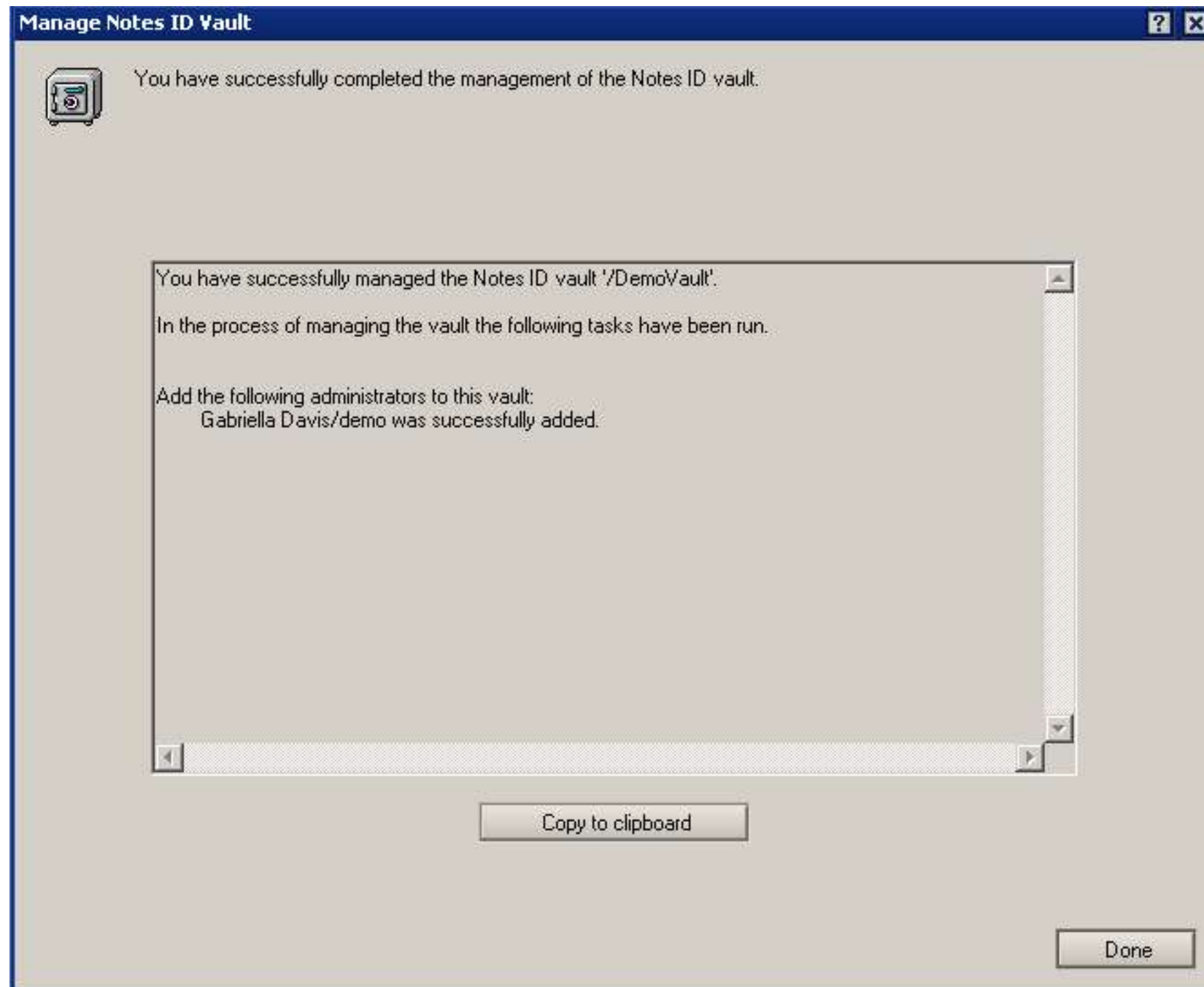


- Add or remove additional users as Administrators of this vault
- Note you can only select from those listed in the 'Administrators' field of the server document

Managing Vault Admins



Managing Vault Admins - Summary Screen



Verify Admin Change

- ID Vault Security Document

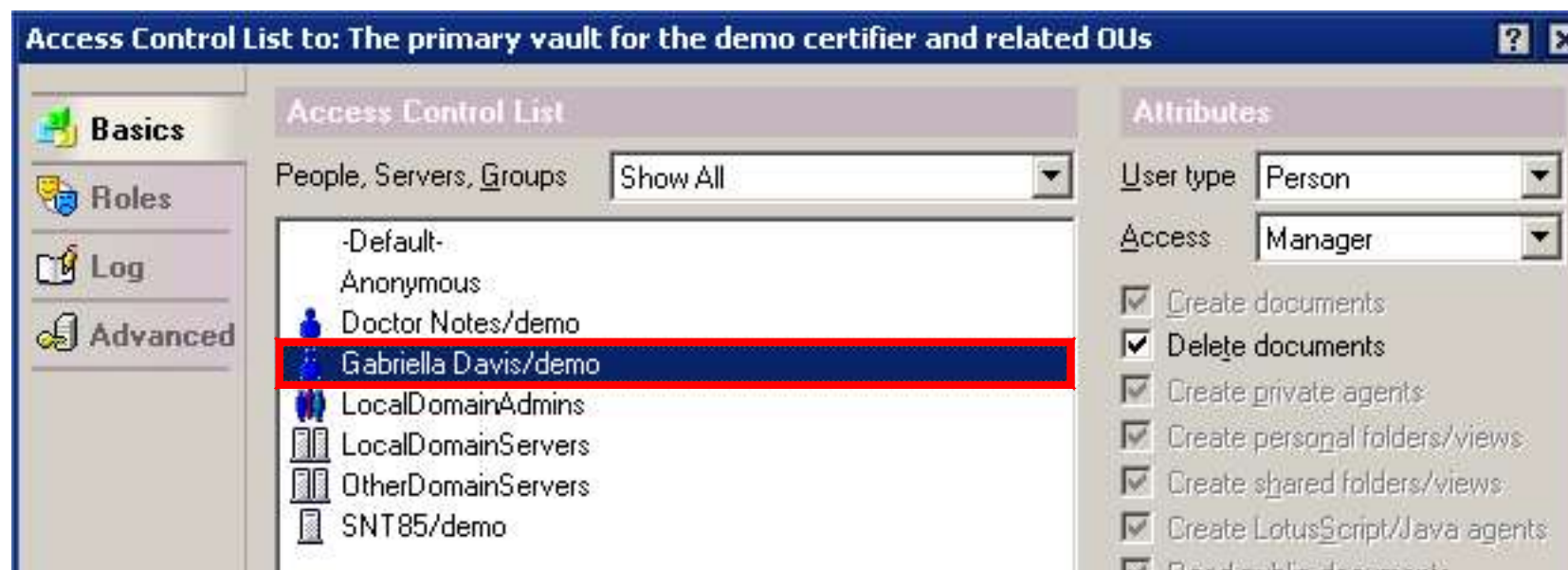
ID Vault :/DemoVault

Basics Administration

Basics

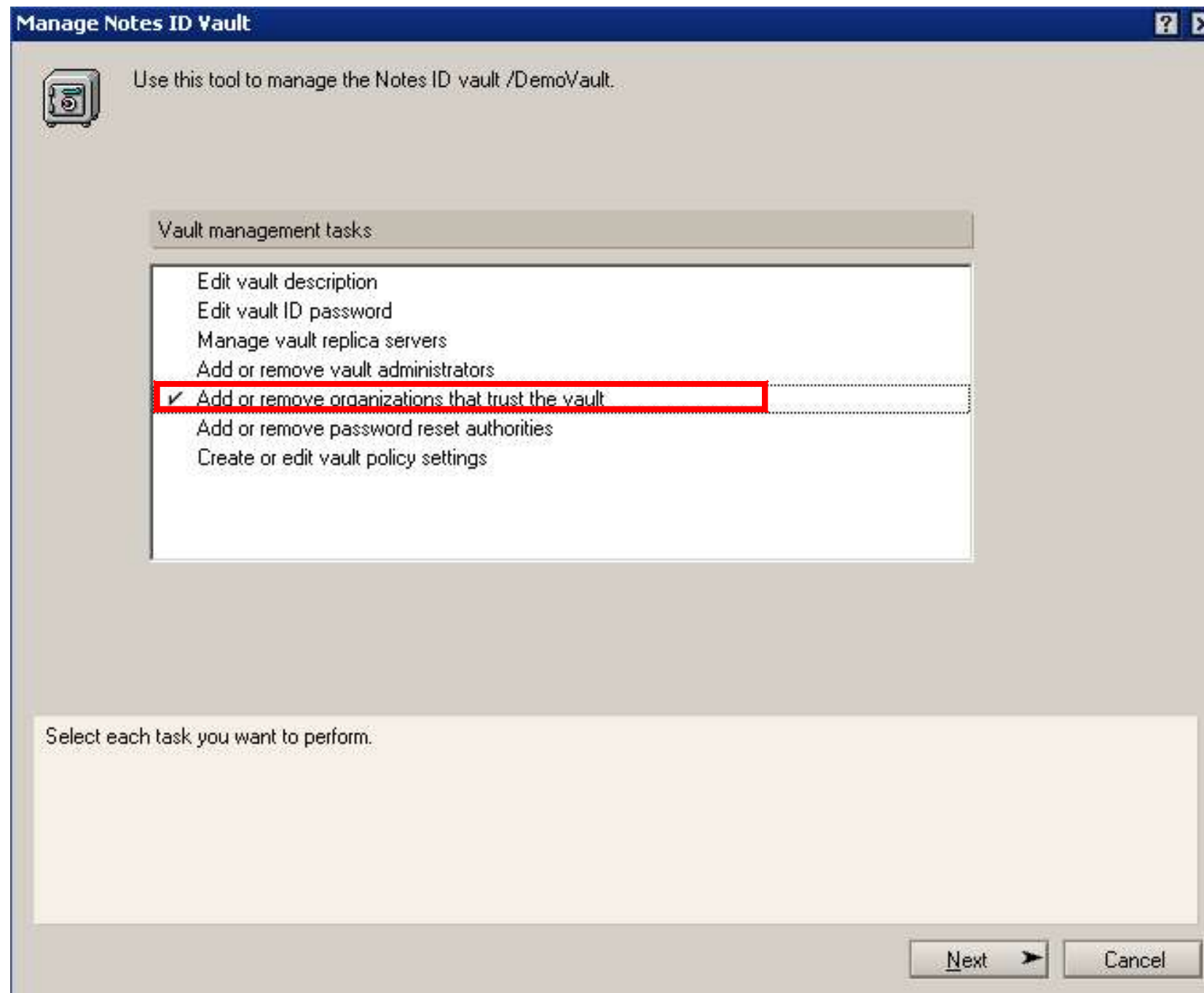
Vault name:	/DemoVault
Description:	The primary vault for the demo certifier and related OUs
Vault Administrators:	Doctor Notes/demo, Gabriella Davis/demo
Vault servers:	SNT85/demo
Path to Vault:	\\IBM_ID_VAULT\\DemoVault.nsf

Verify Admin Change



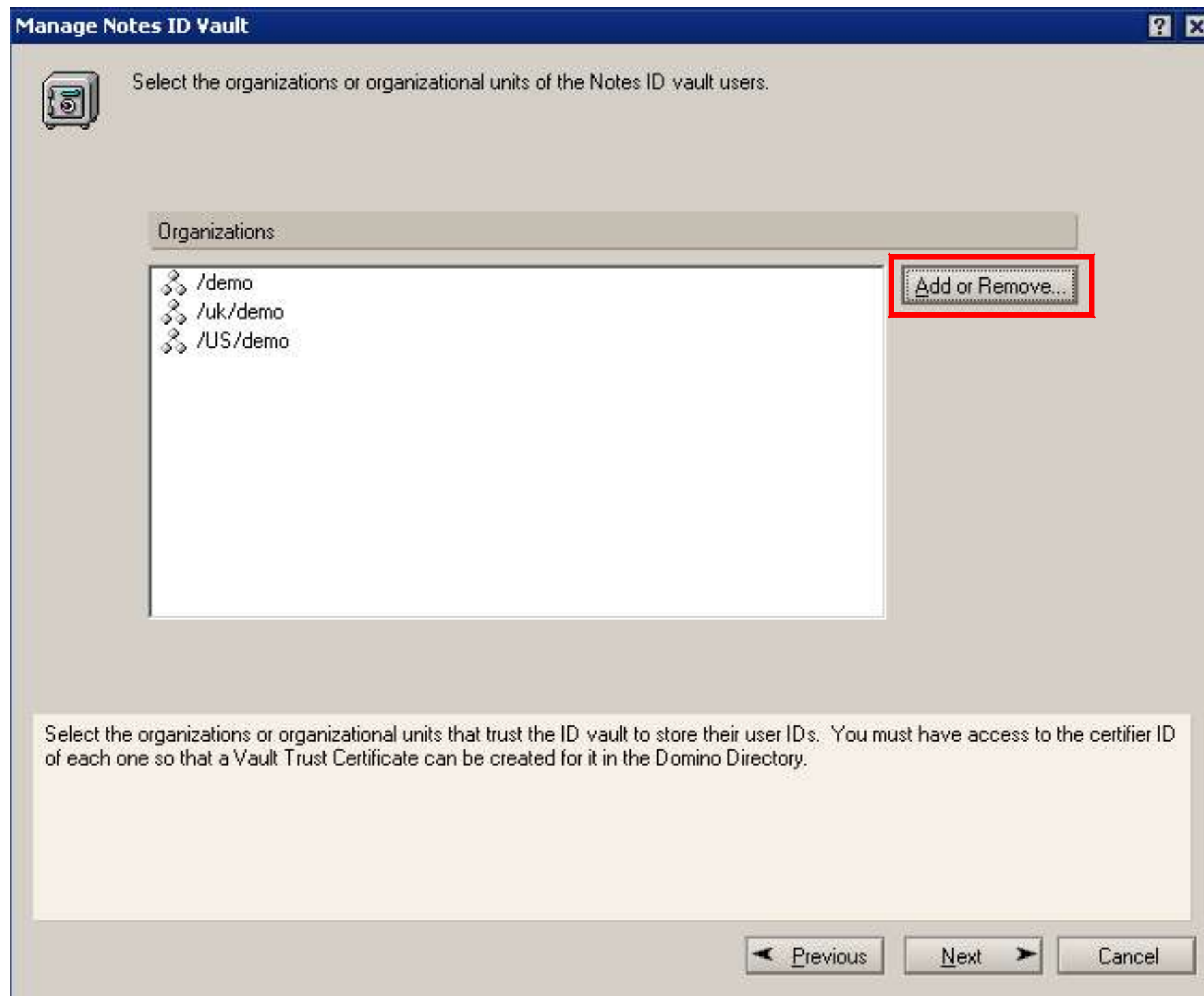
- ID Vault ACL
 - Default is Manager without the role 'Auditor'

Adding other organisations that trust the vault

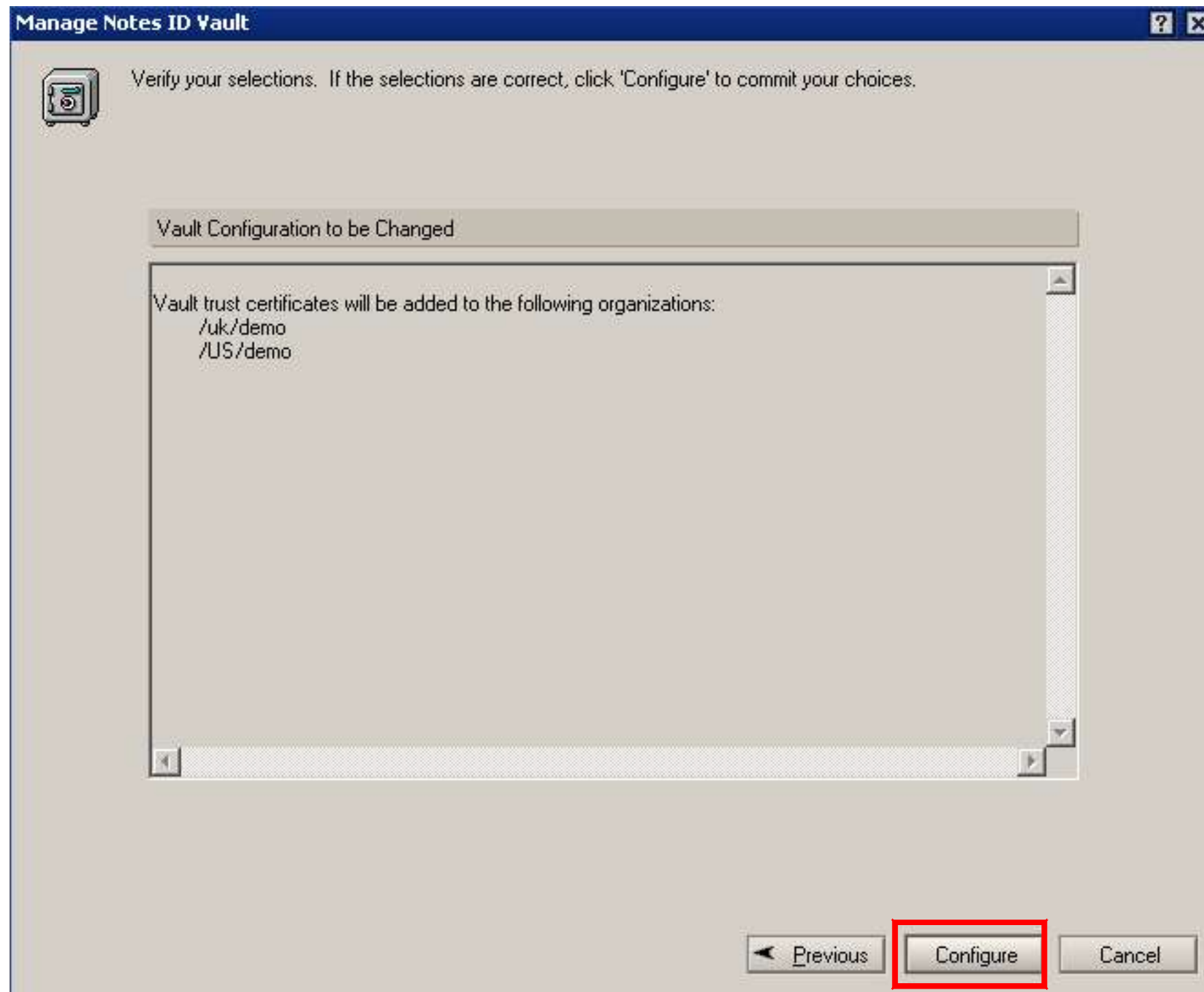


- A Vault can only store user ids if it holds a trust certificate for the parent certifier of that user

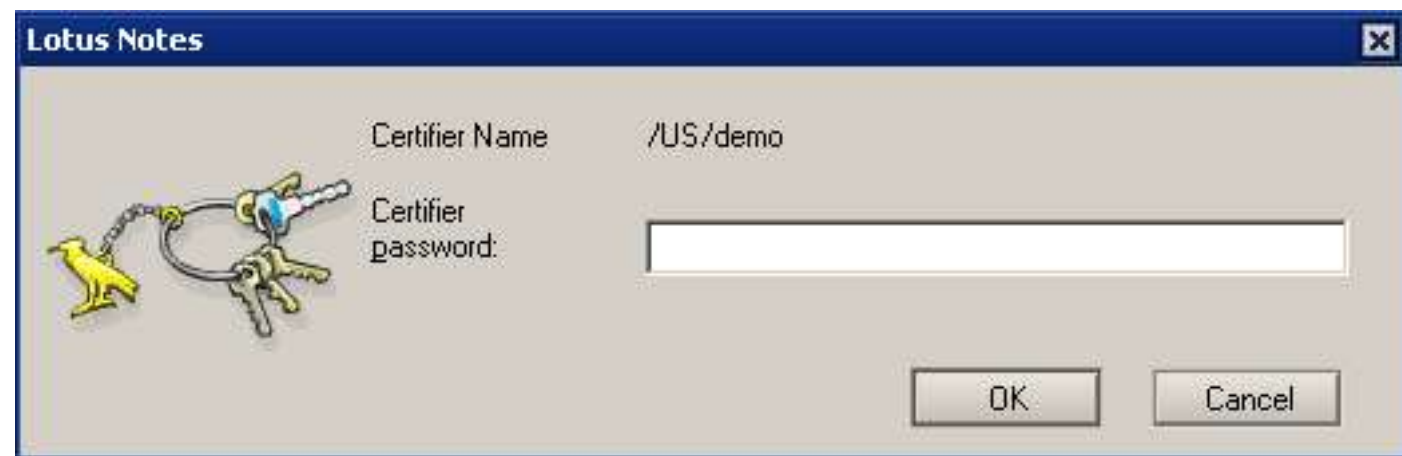
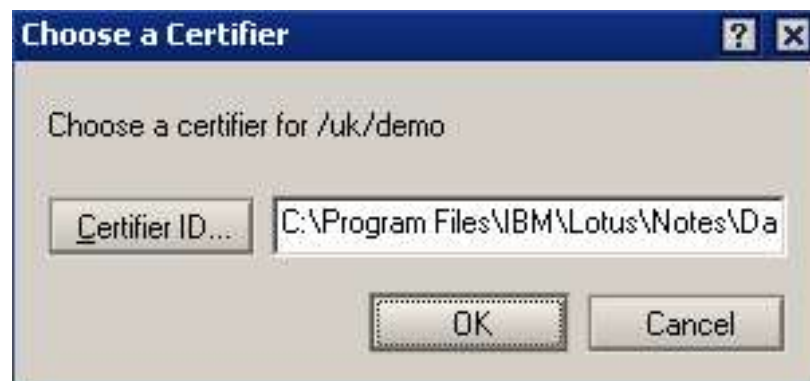
Adding other organisations that trust the vault



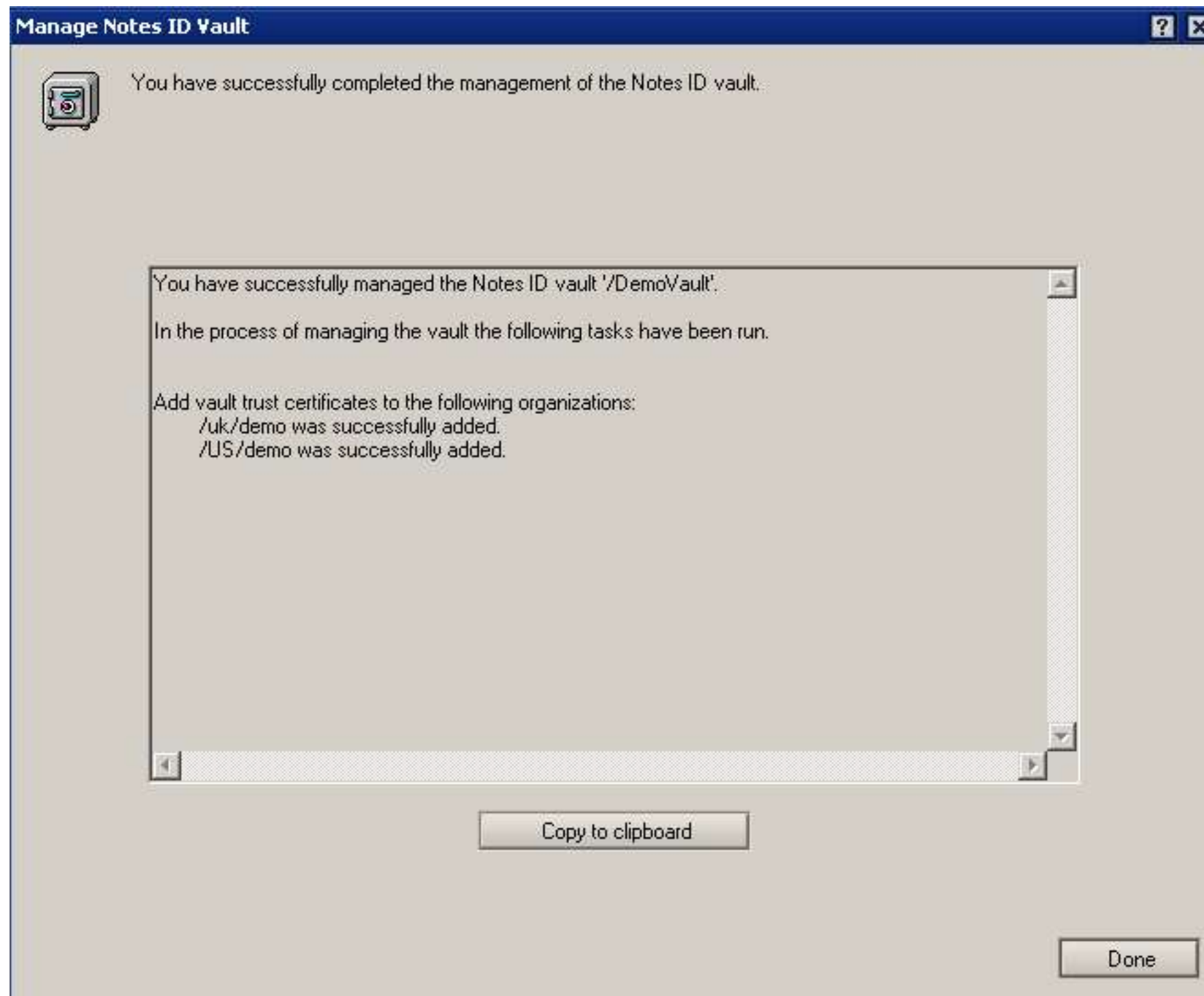
Adding other organisations that trust the vault



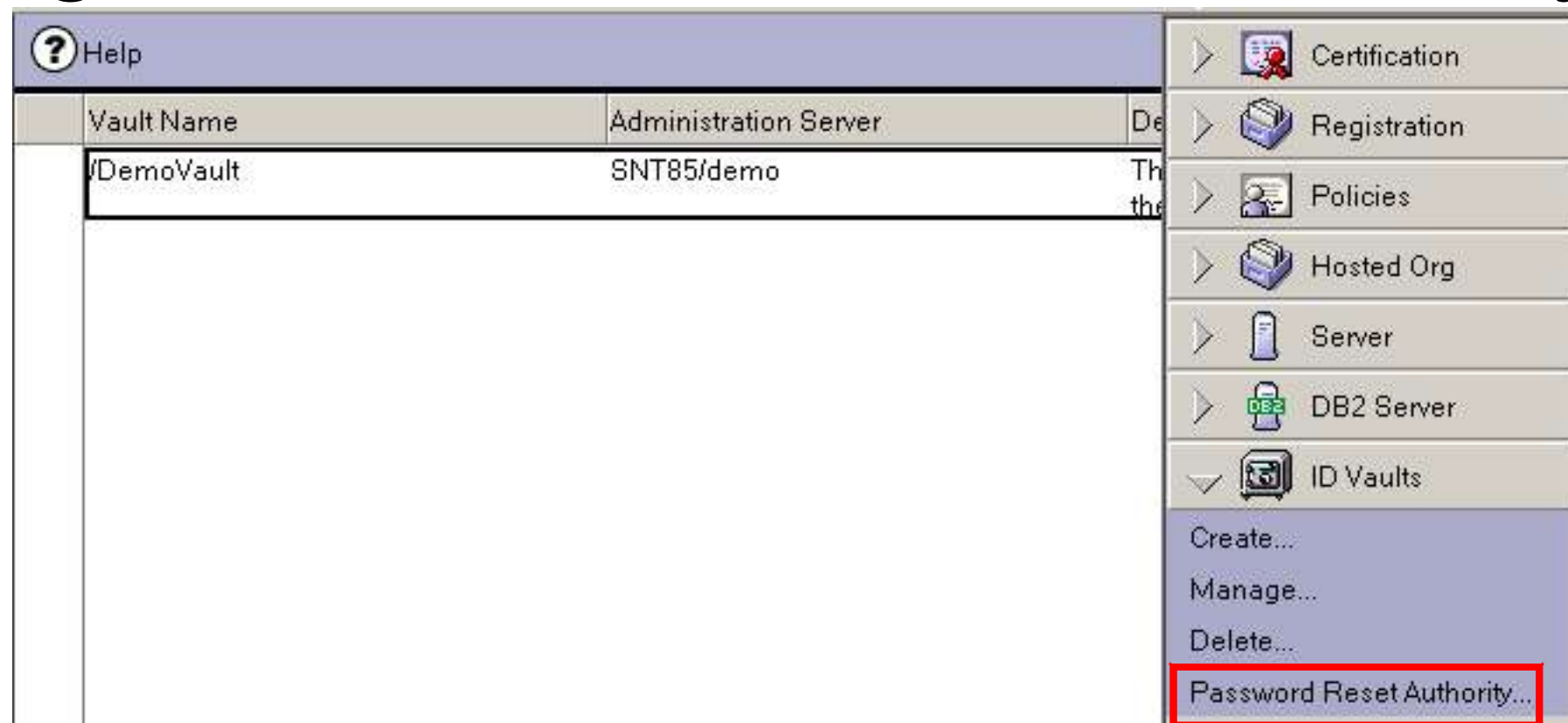
Adding other organisations that trust the vault



Adding other organisations that trust the vault



Configure Password Reset Authority



- Configuration Tab - Select ID Vault Document under Security
- Tools - ID Vaults - Password Reset Authority

Configure Password Reset Authority

Authority To Reset Passwords

Specify names that are authorized to reset passwords.

Directory: demo's Directory

Available users, groups and servers

- Administration Requests
- Davis , Gabriella
- Davis , Tim
- Elsmore , Warren
- LocalDomainAdmins
- LocalDomainServers

Available organizational units

- */uk/demo
- */US/demo

Password reset authority by organization

- /demo
 - Doctor Notes/demo
 - Gabriella Davis/demo
 - Paul Mooney/demo
 - SNT85/demo
 - Warren Elsmore/demo
- /uk/demo
- /US/demo

Buttons: Add, Add To All, Remove, Remove From All

☐ Self-service password reset authority.

On the left, select the name of a user, group, server, or organizational unit to authorize to reset passwords. On the right, add the selected name to each user organization or organizational unit it will reset passwords for. Repeat to give password reset authority to additional names. A Password Reset Certificate will be created for each authorized user, group member, server, and organizational unit. To allow users to reset their own passwords using an agent, select 'Self-service password reset authority' for the user name that signs the agent and for each server on which the agent will run. For more information on password reset authority, including authorizing a non-agent self-service application, click ?

Next Cancel

Configuring for additional certifiers

Authority To Reset Passwords

Specify names that are authorized to reset passwords.

Directory: demo's Directory

Available users, groups and servers

- Lotus Notes/Domino Fault Rep
- Lotus Notes/Domino Smart Up
- Mooney, Paul**
- Notes, Doctor
- OtherDomainServers
- SNT85/demo

Available organizational units

- *uk/demo
- *US/demo

Buttons: Add, Add To All, Remove, Remove From All

Self-service password reset authority: ☐

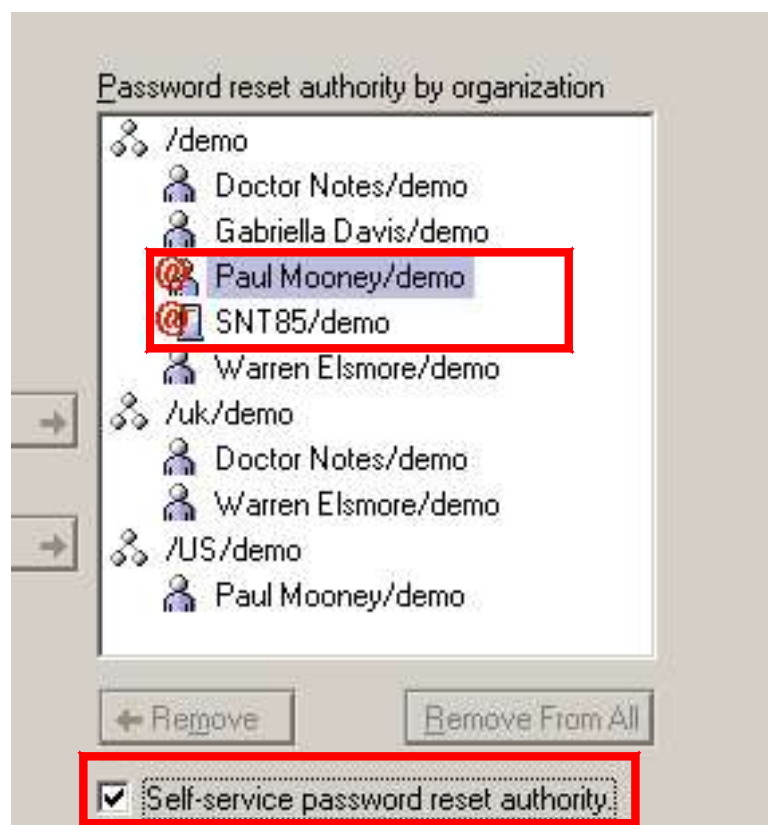
On the left, select the name of a user, group, server, or organizational unit to authorize to reset passwords. On the right, add the selected name to each user organization or organizational unit it will reset passwords for. Repeat to give password reset authority to additional names. A Password Reset Certificate will be created for each authorized user, group member, server, and organizational unit. To allow users to reset their own passwords using an agent, select 'Self-service password reset authority' for the user name that signs the agent and for each server on which the agent will run. For more information on password reset authority, including authorizing a non-agent self-service application, click ?

Buttons: Next, Cancel

Password reset authority by organization

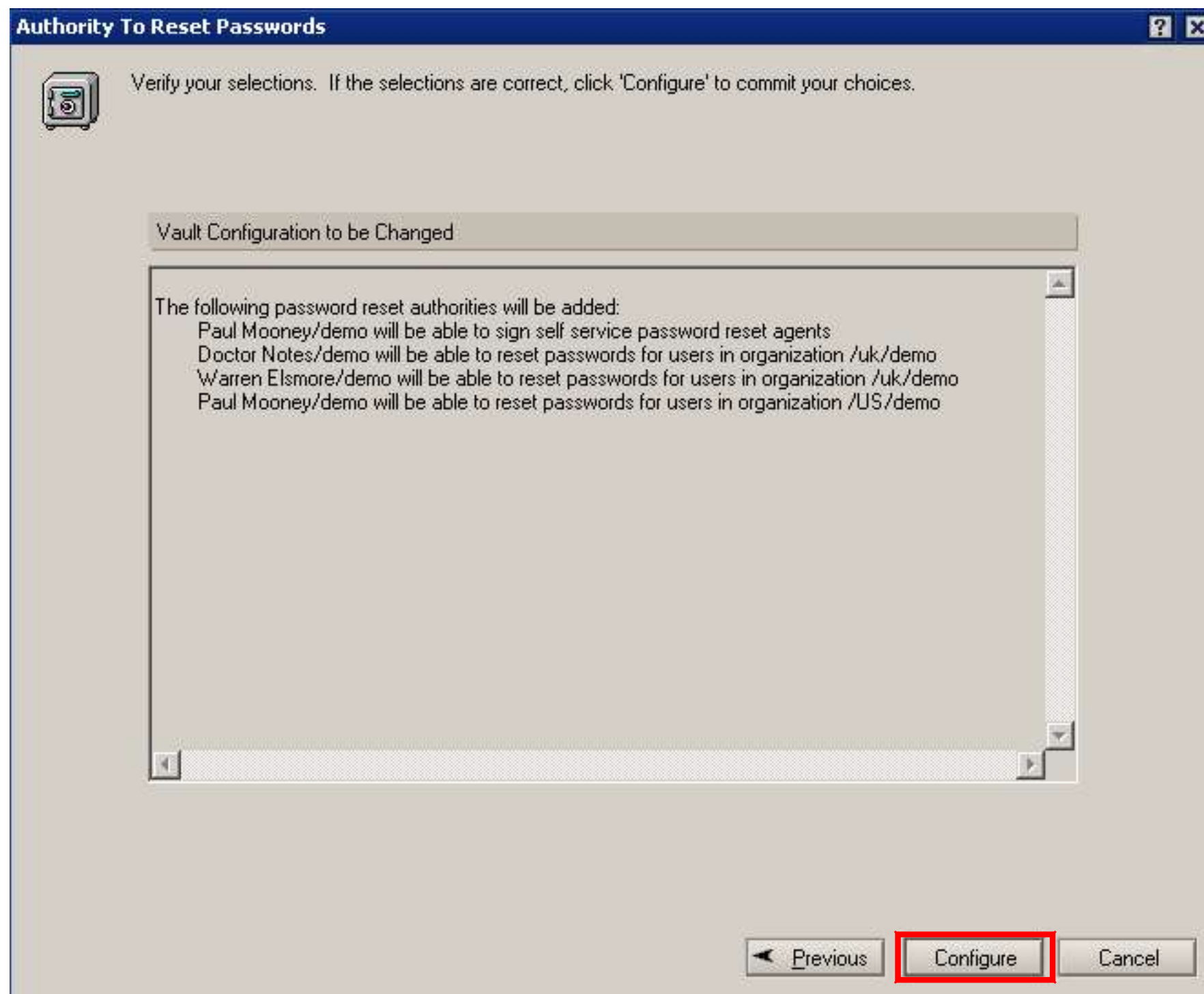
- /demo
 - Doctor Notes/demo
 - Gabriella Davis/demo
 - Paul Mooney/demo
 - SNT85/demo**
 - Warren Elsmore/demo
- /uk/demo**
 - Doctor Notes/demo
 - Warren Elsmore/demo
- /US/demo
 - Paul Mooney/demo**

Configuring for additional certifiers

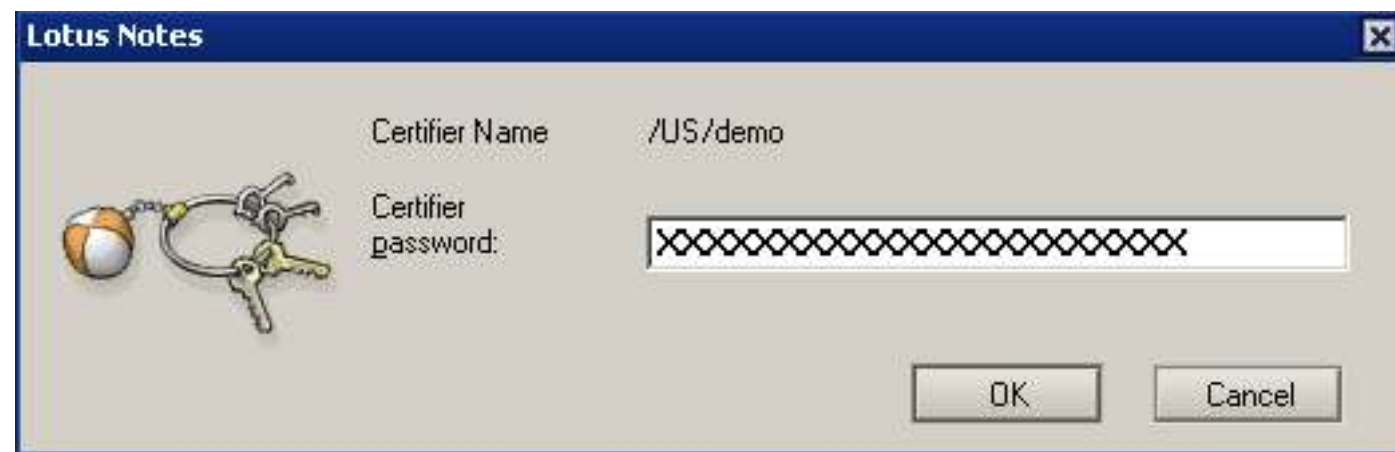
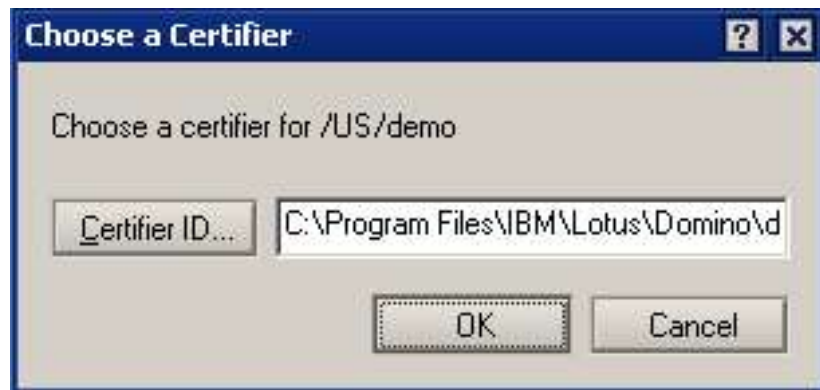


- If you are planning to use an application for auto processing password resets you will need a server authorised as 'Self Service Password Reset Authority' and also an agent signer
 - In this example an agent running on SNT85/Demo and signed by Paul Mooney/demo can process requests

Complete Configuring for Password Reset Authority



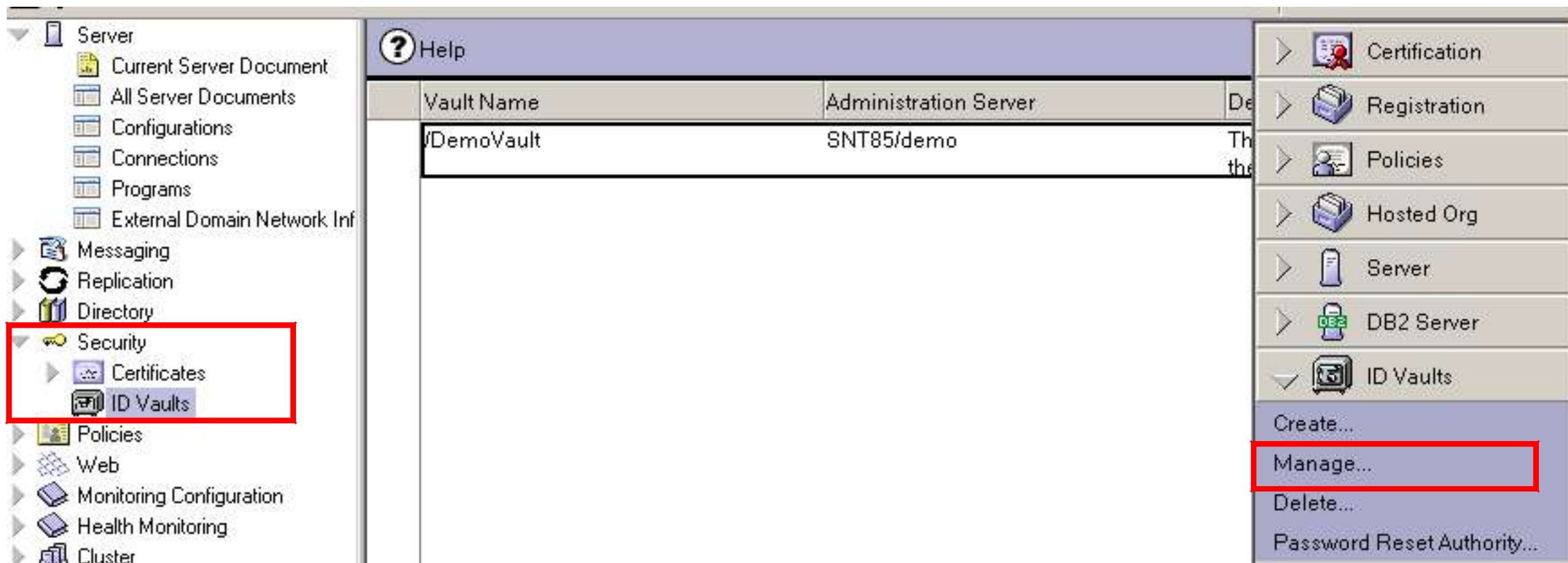
Complete Configuring for Password Reset Authority



Setting up a Policy to use the ID Vault

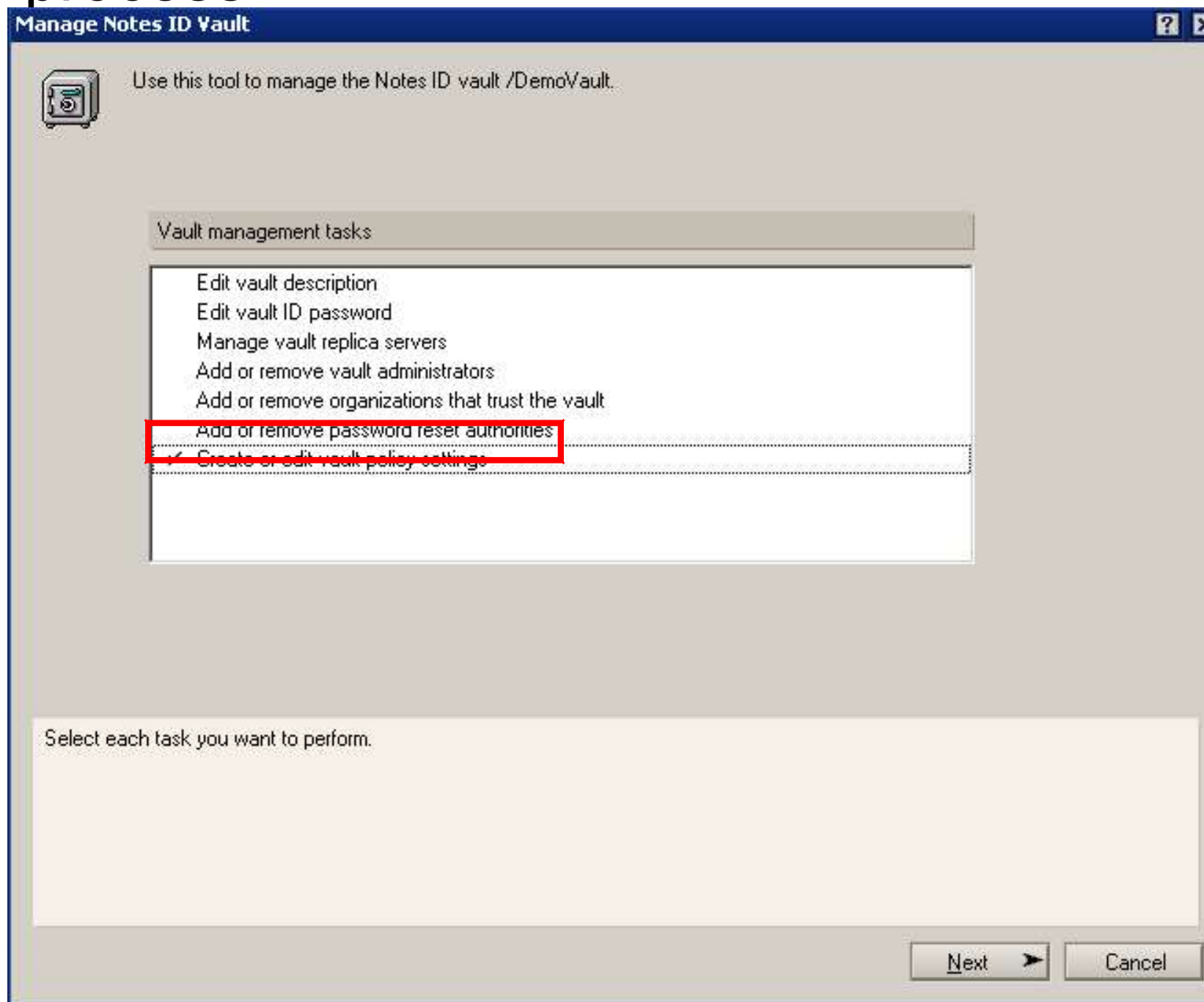
ID Vault Security document must be selected
Select Tools - ID Vault - Manage

- Configuration tab - Policies
- Tools - Policies - Create

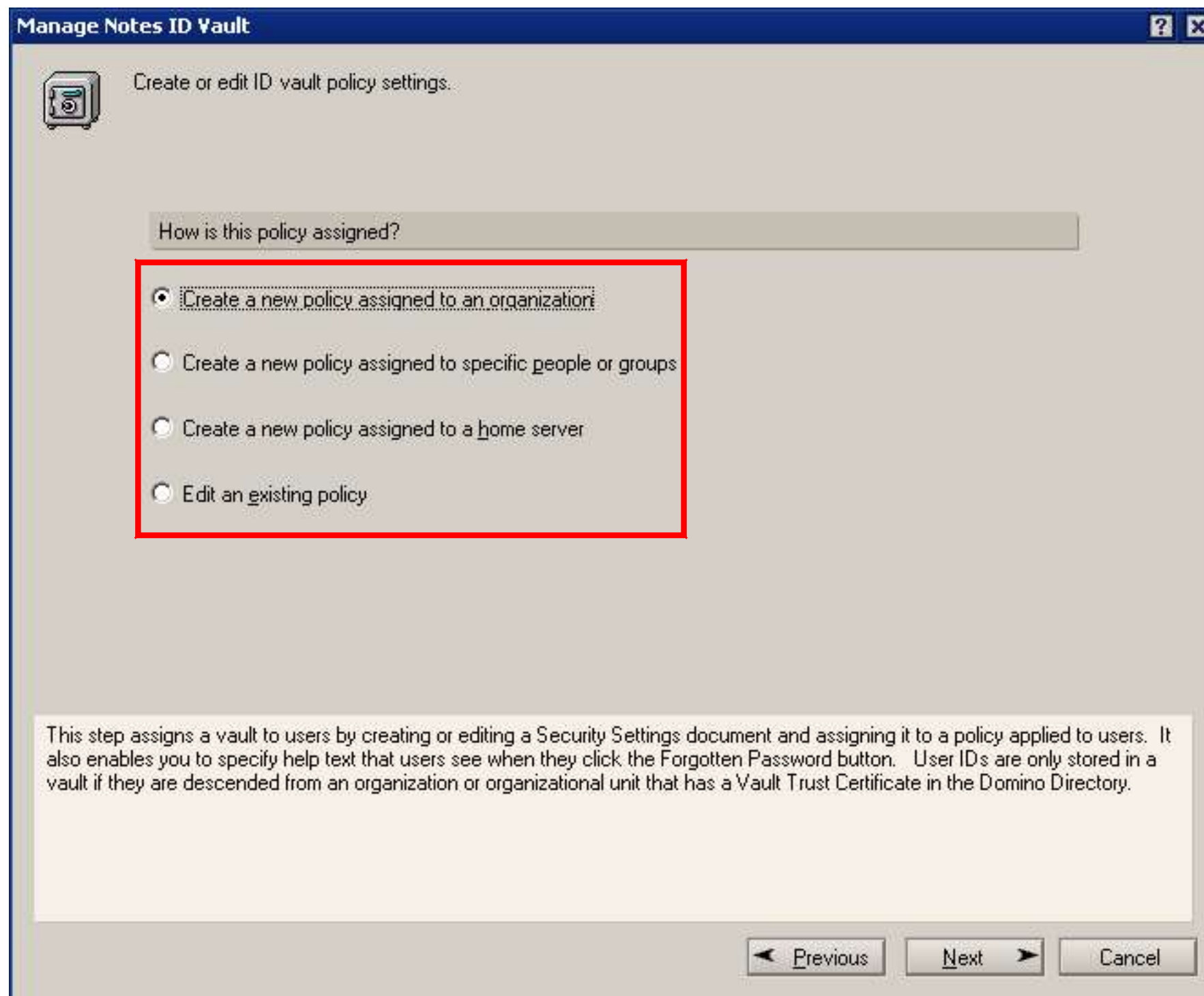


Create or edit vault policy settings

- If you work with policies you can create the security policy outside of this process



Select the type of policy to create or edit



Manage Notes ID Vault

Create or edit ID vault policy settings.

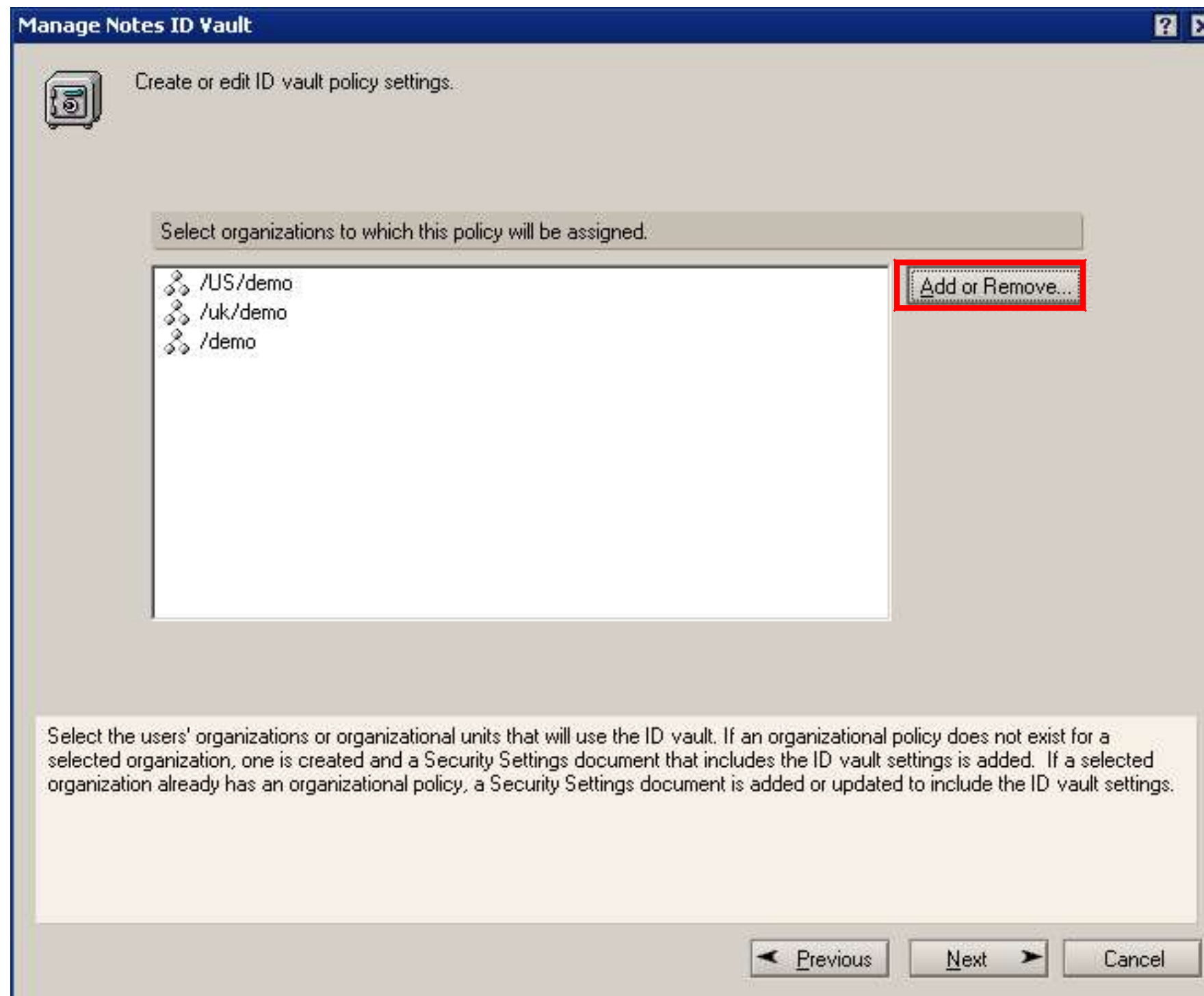
How is this policy assigned?

- ☒ Create a new policy assigned to an organization
- ☐ Create a new policy assigned to specific people or groups
- ☐ Create a new policy assigned to a home server
- ☐ Edit an existing policy

This step assigns a vault to users by creating or editing a Security Settings document and assigning it to a policy applied to users. It also enables you to specify help text that users see when they click the Forgotten Password button. User IDs are only stored in a vault if they are descended from an organization or organizational unit that has a Vault Trust Certificate in the Domino Directory.

Previous Next Cancel

Which certifiers are associated with this policy



Setting up a user prompt

- This is what the user sees when they select 'Forgot Your Password'
- You have 8 lines to write and can also use HTML to point to a link or button



Verifying policies

The screenshot shows the Lotus Symphony interface for managing policies. On the left, the 'Policy Namespace' tree shows a hierarchy: 'Organizational Policies' (3 items) -> 'demo' (3 items) -> '*demo' (1 item) -> 'uk' (1 item) -> '*uk/demo' (1 item) -> 'US' (1 item) -> '*US/demo' (3 items). The right pane shows the details for the selected policy, '*demo'.

Policy : */demo

Basics | Comments | Administration

Basics

Policy name: */demo Create Child

Policy type: Organizational

Description: Vault policy for DemoVault

Category:

Setting Type	Setting Name
Registration:	
Setup:	
Archiving:	
Desktop:	
Security:	DemoVaultVaultSetting
Mail:	

- These were created automatically by the Manage ID Vault process
- You could create and manage them manually

Adding an HTML link in the forgotten password help text

- 1. The link must be a full HTML link, including the tags
- 2. The tags are case sensitive, you must use upper case.
- 3. The target for the link must be enclosed in quote characters (").
- 4. The link must be the last part of the custom message. If you include the link in the middle of the message, any text after the link will be discarded.

The screenshot shows a web interface titled "Security Settings : DemoVaultVaultSettingd". Below the title is a navigation bar with links: Basics | Password Management | Execution Control List | Keys and Certificates | Si. The main content area is titled "ID Vault Options:". It contains two rows of settings. The first row is "Assigned vault:" with a value of "/DemoVault". The second row is "Forgotten password help text:" with a text area containing an HTML link: [Forgot your password?](#). Below this is a row for "Enforce password change after password has been reset:" with a value of "Yes".

ID Vault Options:	
Assigned vault:	/DemoVault
Forgotten password help text:	Forgot your password?
Enforce password change after password has been reset:	Yes

Editing an ID Vault Security Policy

Security Settings : DemoVaultVaultSettingd

Basics | Password Management | Execution Control List | Keys and Certificates | Signed Plug-ins | Portal Server | ID Vault | C

ID Vault Options:		How to apply this setting:	Inh pa
Assigned vault:	/DemoVault	<input type="checkbox"/> Don't set value	<input type="checkbox"/>
Forgotten password help text:	Call the helpesk on x3100 where you will asked to confirm your identity. Or click below.Reset	<input type="checkbox"/> Don't set value	<input type="checkbox"/>
Enforce password change after password has been reset:	Yes	<input type="checkbox"/> Don't set value	<input type="checkbox"/>

Automatic ID Downloads:		How to apply this setting:	Inh pa
Allow automatic ID downloads:	Yes	<input type="checkbox"/> Don't set value	<input type="checkbox"/>
Allow ID downloads for:	1 days	<input checked="" type="checkbox"/> Don't set value	<input checked="" type="checkbox"/>
	0 hours		
ID download authorization failure message:			

Automatic ID Downloads

- Enabling 'Yes' for automatic ID downloads means an id is downloaded to whatever clients need it with no limit on the number of times they can be downloaded
 - If you know that a user has only 1 pc to work on then you can limit this by choosing 'no' and setting a number of downloads per user
- You can also control how long after an id change can that id still be downloaded
 - If you restrict it to 1 day then after than one day the id will no longer automatically download
- You can present a customised message to the user explaining that their updated id tried and failed to download and why

Limiting the number of ID downloads

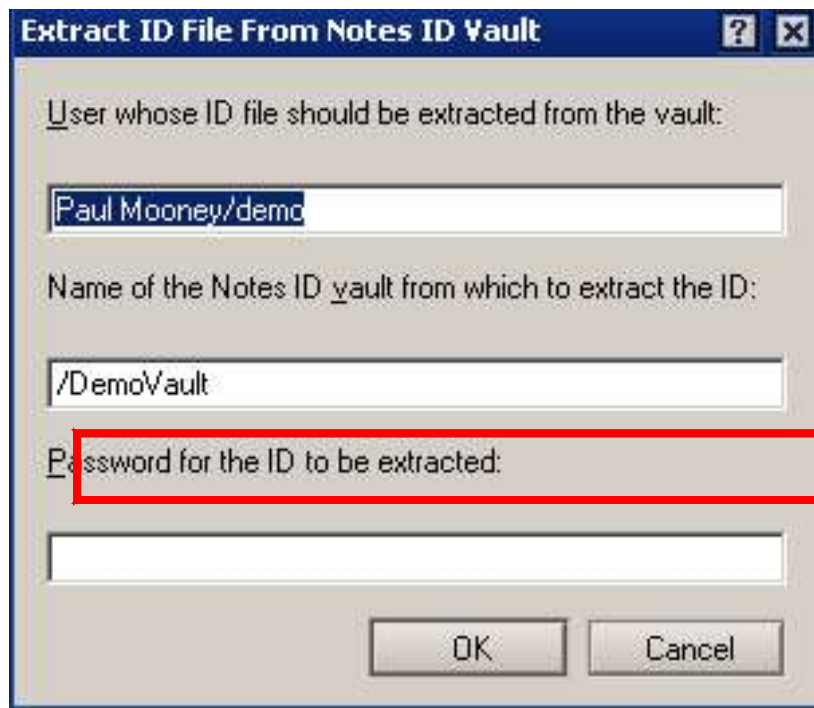


- Domino Administrator - People and Groups Tab
 - Select a Person
 - Tools - ID Vaults - Set ID download count



- If you haven't set the policy to allow unlimited downloads you might want to restrict how many times an updated id can be downloaded

Extracting an ID from the Vault



- Domino Administrator - People and Groups Tab

- Select a Person

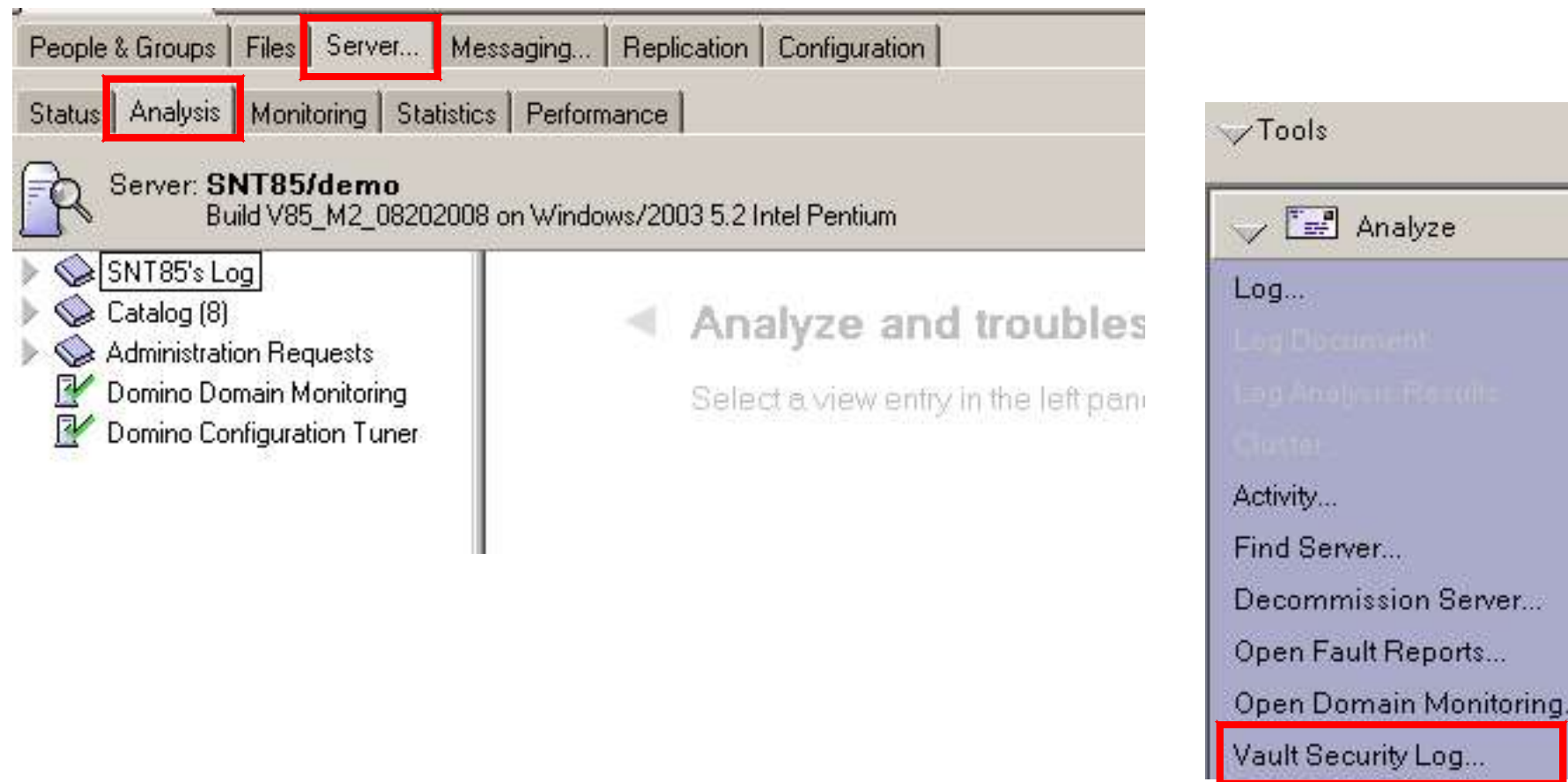
- Tools - ID Vaults - Extract ID from Vault

- The password you will be asked for is the user id password not the vault password

- [Auditor] role in the ID Vault ACL allows the id to be extracted without requiring the user password

- SECURE_DISABLE_AUDITOR=1 disables the Auditor feature from that server

ID Vault Logging and Events



- Review all Vault activity for a date range
- Domino Administrator - Server Tab - Analysis
 - Tools - Analyze - Vault Security Log

Deleting IDs or Marking Them Inactive

Delete Person

Use this tool to delete users and their associated data from your Domino domain in the background using the Administration Process.

Selected: demo's Directory (names.nsf) on SNT85/demo
Paul Mooney/demo

What should happen to the user's mail database?

☒ Do not delete the mail database.
☐ Delete the mail database on the user's home server.
☐ Delete mail replicas on all other servers.

What should happen to the user's ID in the ID vault?

☒ Mark the ID as inactive and keep the ID in the vault.
☐ Delete the ID from the vault.

Optional:

Add deleted user to Deny Access Group: Groups... Clear

<No Deny Access Group selected or available>

☐ Delete user's Windows account, if existing.
☐ Delete user from this Domino Directory immediately.

The Administration Process will not delete these users' mail files.

OK Cancel

- Deleting an ID stored in the Vault can now be part of the “Delete Person” process
- Deleting the id removes it from the vault
 - Marking it inactive leaves it in the vault but inaccessible

Deleting an ID Vault

The screenshot shows the Lotus Symphony Administrator interface. On the left, a tree view shows the 'ID Vaults' folder selected under the 'Security' category. In the center, a table lists the vaults:

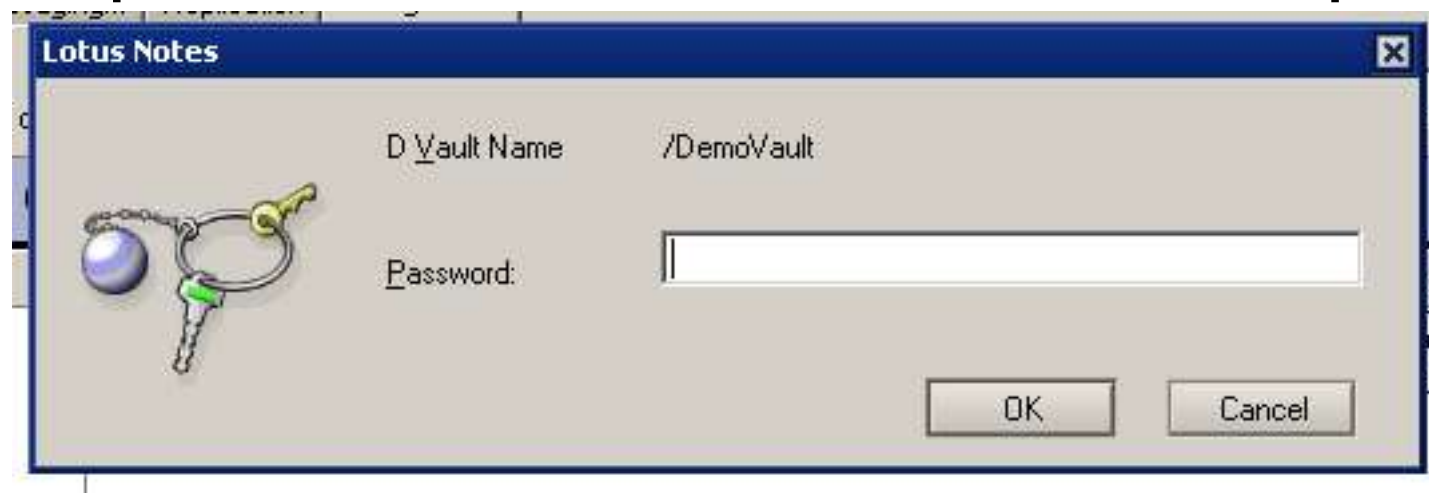
Vault Name	Administration Server	Description
DemoVault	SNT85/demo	The primary vault for the demo certifier

On the right, a context menu is open for the 'ID Vaults' folder, with the 'Delete...' option highlighted.

- Select the ID Vault document in Administrator
- If the vault is a replica choose 'Manage' and then "Manage Vault Replicas"
- If it's the primary ID Vault then choose 'Delete' from the ID Vaults menu
- Make sure you have removed all other replicas via ID Vault - Manage - Manage Vault Replicas first

Deleting an ID Vault

- Enter the password for the ID Vault when prompted



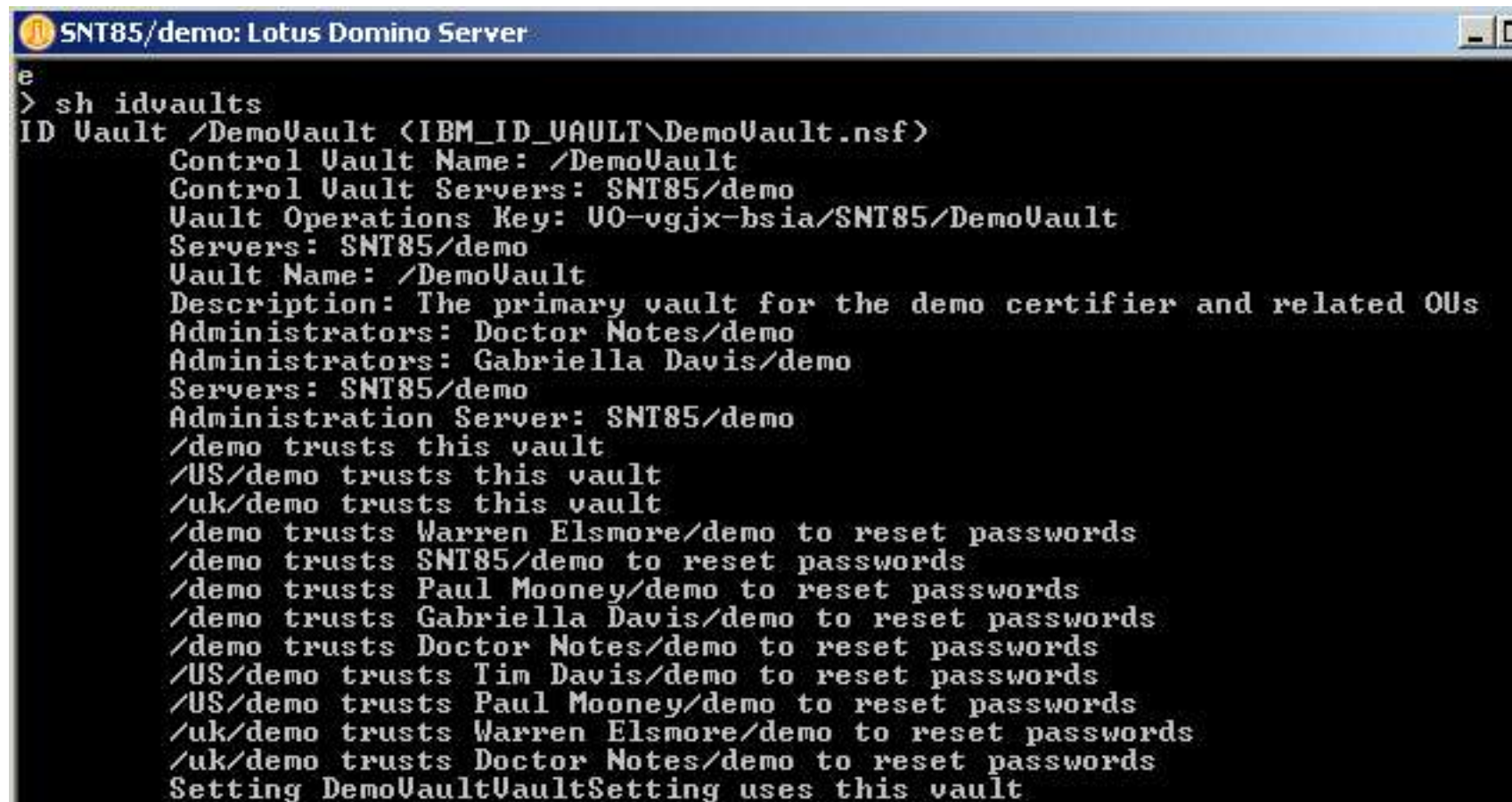
- The ID Vault is deleted by the server
 - If the database is open the ID Vault will try to delete it later
 - It will try once a day
 - "show idvaults" on the server console will also force a retry

Deleting an ID Vault - What Happens

- The database in the IBM_ID_Vault directory is deleted
- Deletes all Vault Trust Certificates for the vault from the Security - Certificates view of the Domino Directory.
- Deletes the vault document from the Security - ID Vaults view of the Domino Directory.
- Removes the vault name from all Security Settings documents that specify it.

ID Vault Problems or Status

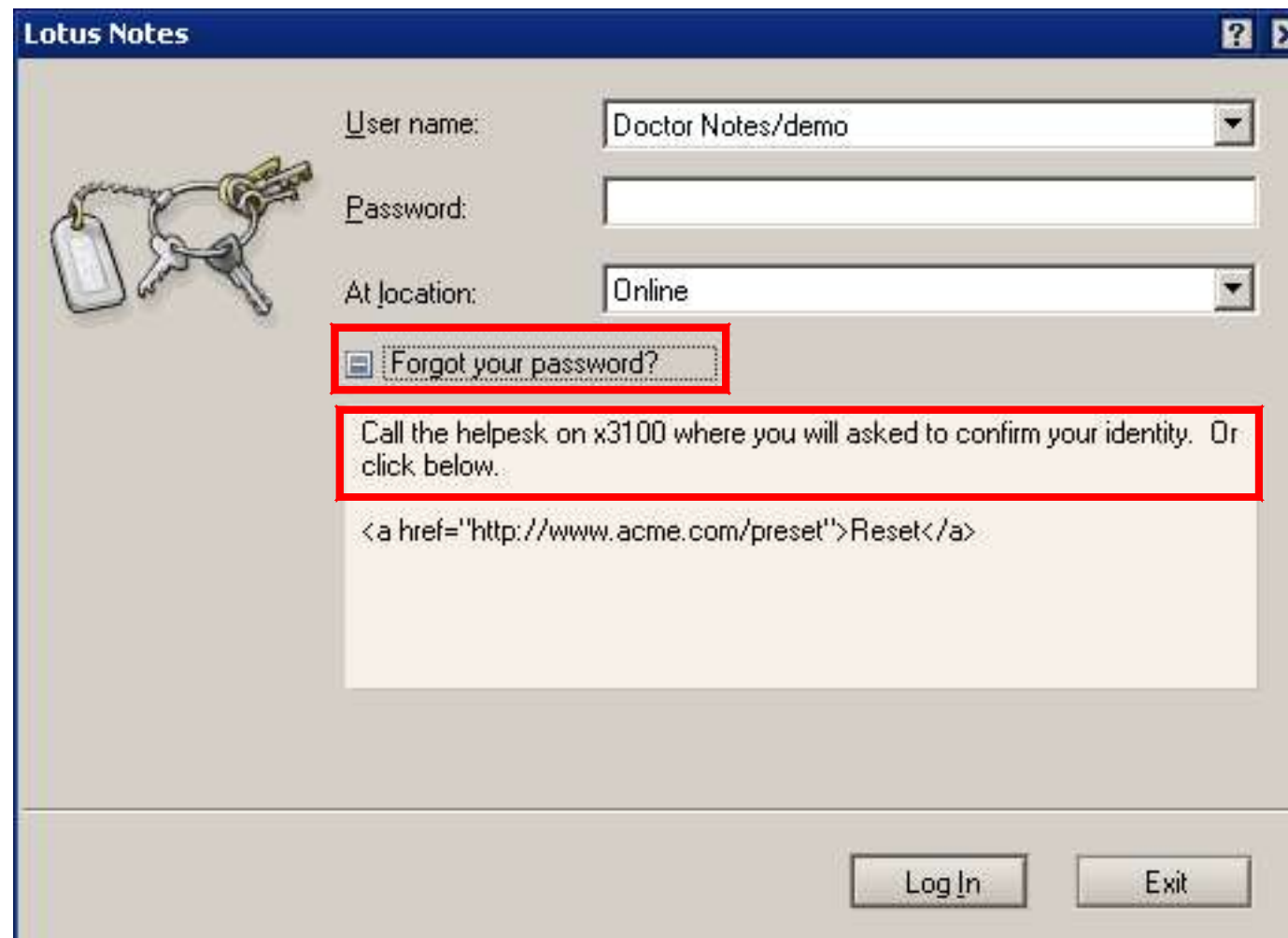
- On server console type “sh idvaults”



```
SNT85/demo: Lotus Domino Server
e
> sh idvaults
ID Vault /DemoVault <IBM_ID_UAULT\DemoVault.nsf>
Control Vault Name: /DemoVault
Control Vault Servers: SNT85/demo
Vault Operations Key: UO-vgjx-bsia/SNT85/DemoVault
Servers: SNT85/demo
Vault Name: /DemoVault
Description: The primary vault for the demo certifier and related OUs
Administrators: Doctor Notes/demo
Administrators: Gabriella Davis/demo
Servers: SNT85/demo
Administration Server: SNT85/demo
/demo trusts this vault
/US/demo trusts this vault
/uk/demo trusts this vault
/demo trusts Warren Elsmore/demo to reset passwords
/demo trusts SNT85/demo to reset passwords
/demo trusts Paul Mooney/demo to reset passwords
/demo trusts Gabriella Davis/demo to reset passwords
/demo trusts Doctor Notes/demo to reset passwords
/US/demo trusts Tim Davis/demo to reset passwords
/US/demo trusts Paul Mooney/demo to reset passwords
/uk/demo trusts Warren Elsmore/demo to reset passwords
/uk/demo trusts Doctor Notes/demo to reset passwords
Setting DemoVaultVaultSetting uses this vault
```

Resetting Passwords

User Interface When Forgetting Their Password



The screenshot shows the Lotus Notes login window. On the left is an illustration of a keychain with two keys. The login fields are as follows:

- User name:
- Password:
- At location:

Below these fields is a link labeled "Forgot your password?" which is highlighted with a red rectangular box. Below this link is a text box containing the following text:

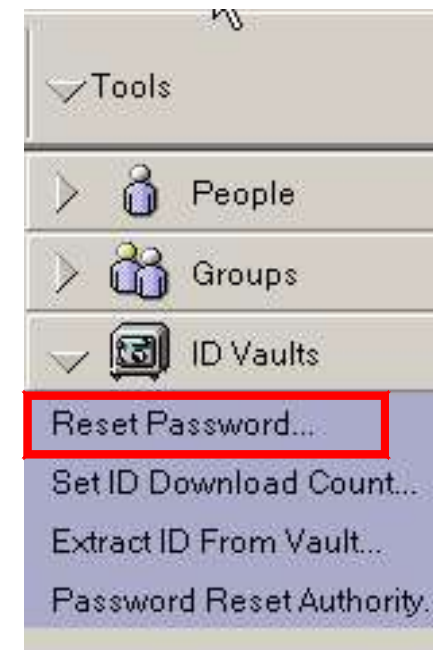
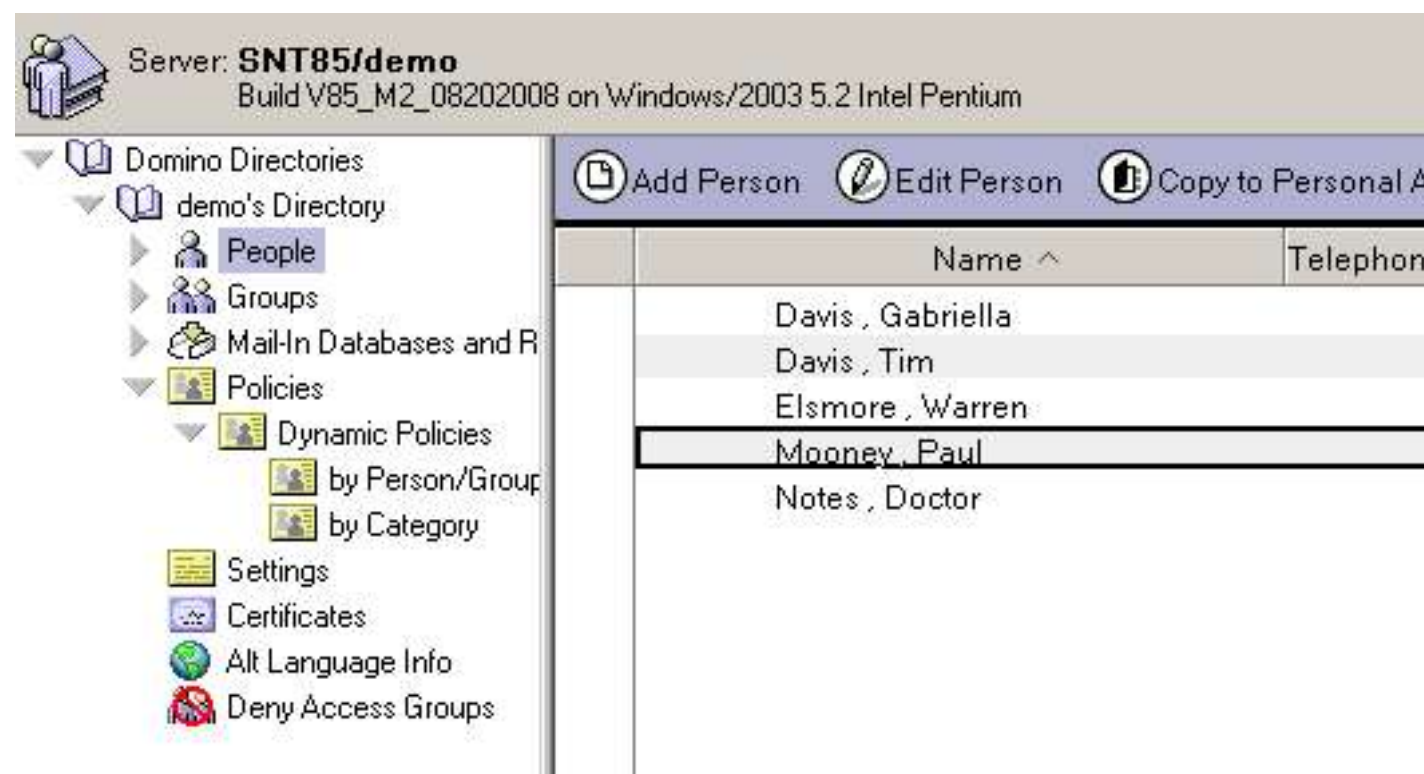
Call the helpesk on x3100 where you will asked to confirm your identity. Or click below.

[Reset](http://www.acme.com/preset)

At the bottom right of the window are two buttons: "Log In" and "Exit".

To reset a user password as an authority

- Domino Administrator - People and Groups Tab
 - Select a Person
 - Tools - ID Vaults - Reset Password



To reset a user password as an authority



The 'Reset User's Password' dialog box contains the following elements:

- Icon of a key and a keyboard.
- Text: "Use this tool to reset the user's password."
- Buttons: "Reset Password", "Cancel", and "Random Password".
- Text field: "User name: Paul Mooney/demo".
- Section: "Password reset and notification".
- Text: "How to notify:" followed by a dropdown menu showing "In person".
- Text field: "New password: c7XFzjBZ".
- Text field: "Confirm new password: c7XFzjBZ".



- When resetting a user password you have the option of
 - Notifying the user in person
 - Emailing an encrypted message to their Manager with the password enclosed
- Once you've reset the password the user can use this new one to login

Autoprocessing Reset Password Requests

- A sample password reset application is available on the server
 - open pwdresetsample.nsf
 - set -Default- to Editor in the ACL
 - set whoever is to be the agent signer as 'Manager' in the ACL
 - sign the agent with the 'Manager's id
- Put a copy of the database on any server you want to enable password reset on
 - These needn't be ID Vault servers but they must run HTTP
- Ensure the agent signer has the right to run restricted lotuscript agents on those servers
 - That setting is in the server document - security tab

Autoprocessing Reset Password Requests

- Each server id the database is installed on and the agent signer id must be configured as Password Reset Authorities in the ID Vault
 - They must also have the checkbox "Self Service Password Reset Authority selected"
- To request a password reset the user browses to
 - <http://servername/pwdresetsample.nsf>



The screenshot shows a web interface for resetting a password. It features the IBM logo on the left and the title "Reset User Password - Web Sample" on the right. Below the title, there are two input fields: "Enter new password:" and "Confirm new password:". A "Reset My Password" button is located below the input fields.

- Obviously you need to know your HTTP password to reset your Notes ID password

So a summary of the good stuff.....

- ID Vault means user ids are held securely and encrypted on Domino servers and not in the Domino Directory or on a file server somewhere
- Since ID Vault downloads the ID for each user as they log in you don't need to distribute ids to the desktops for new users
- You also don't need to worry about ids being kept in sync since ID Vault takes care of that too
- if the user changes their password or their id it is uploaded to the ID Vault in the background and downloaded to their other machines when they go to use them
- User renames and certificate rollovers no longer require any user involvement
- Passwords can be reset by helpdesk people with no access to the ids themselves and no knowledge of existing passwords

You know there has to be a BUT.....

- If the user ID is stored in a mail file, the ID Vault can only update that in v8.5.1 or later
- Smartcard enabled ids can't be stored in the ID Vault
- A Vault must be contained within a single Domino Domain
- All users of a Vault must be in that Domain
- If a client isn't connected to the network the ID from the vault can't download so if they change their password in the office and then work offline at home - their id will still have the old password until they sign online
- If you use the CA process the id that is stored in ID Vault on registering a user doesn't contain the hierarchical certificate and will not be usable when it downloads to the workstation on setup
- You need to switch to that user's id and access the server so the certificates are updated and a new copy of the ID is sent to the vault

Mandatory Fix

- Technote 1381146 published on the 15th April 2009 specifies that 85IF3 for Domino 8.5 is a mandatory fix for those running ID Vault
- FP1 for 8.5 also contains several subsequent fixes for ID Vault
- or 8.5.1 !

Right - onto DAOS!

- Key Infrastructure factor of ND8.5.x
- Radical change in messaging architecture design
 - IBM states you may save approximately 40% disk space
 - We have seen 60-80% savings
- Think!.... before you implement
 - I will get back to this bit...
- You're gonna love this....

What is DAOS?

- Say it with me...
- It
- Is
- NOT
- Shared
- Mail!!!!
- :)

What is DAOS?

- Domino Attachment Object Service
- Attachments are removed from Domino databases
- Stored on the File Store
 - Body holds a “ticket” referencing the database
- Single copy stored for multiple identical attachments
 - ie when you mail 20 people with attachment - only 1 copy of the attachment is stored.
 - All mail files link to the attachment

How does DAOS work?

- DAOSManager

- Operates with and beneath the domino server level
- Requires ODS51 and transactional logging

- NLO files (Notes Large Object)

- Format that all attachments are stored in on file system
- 'cause storing them as normal attachments would of been a bit silly
- Encrypted with server key
- You can disable this
- Filename is based on checksum of contents

How does DAOS work?

- Tickets
 - References in the body of documents “pointing” to the NLO files
- DAOSCatalog
 - Database containing list of all NLO’s and references
 - Refcount=Number of times it the NLO attachment is referenced in data
 - DAOSMgr looks this up if it needs to
 - DAOSCAT.nsf... System application.. won’t open
 - When the refcount=0
 - There are no references to the attachment anywhere
 - i.e. The NLO can now be pruned

Mythbusting DAOS

- There is NO DIFFERENCE to end user experience
 - Even users with local replicas
- You can have 1 server using DAOS and another server not using DAOS
 - Even in a cluster
 - Does not work with DB2 enabled databases
- It operates underneath the domino server layer
 - Works with transactional logging
 - At some points.... even domino doesn't know DAOS is running!

How much performance improvement can I get?

- Disk space?

- It depends....

- Type of site

- Small site (single server)

- Massive savings

- Large distributed team site over multiple servers

- Less savings

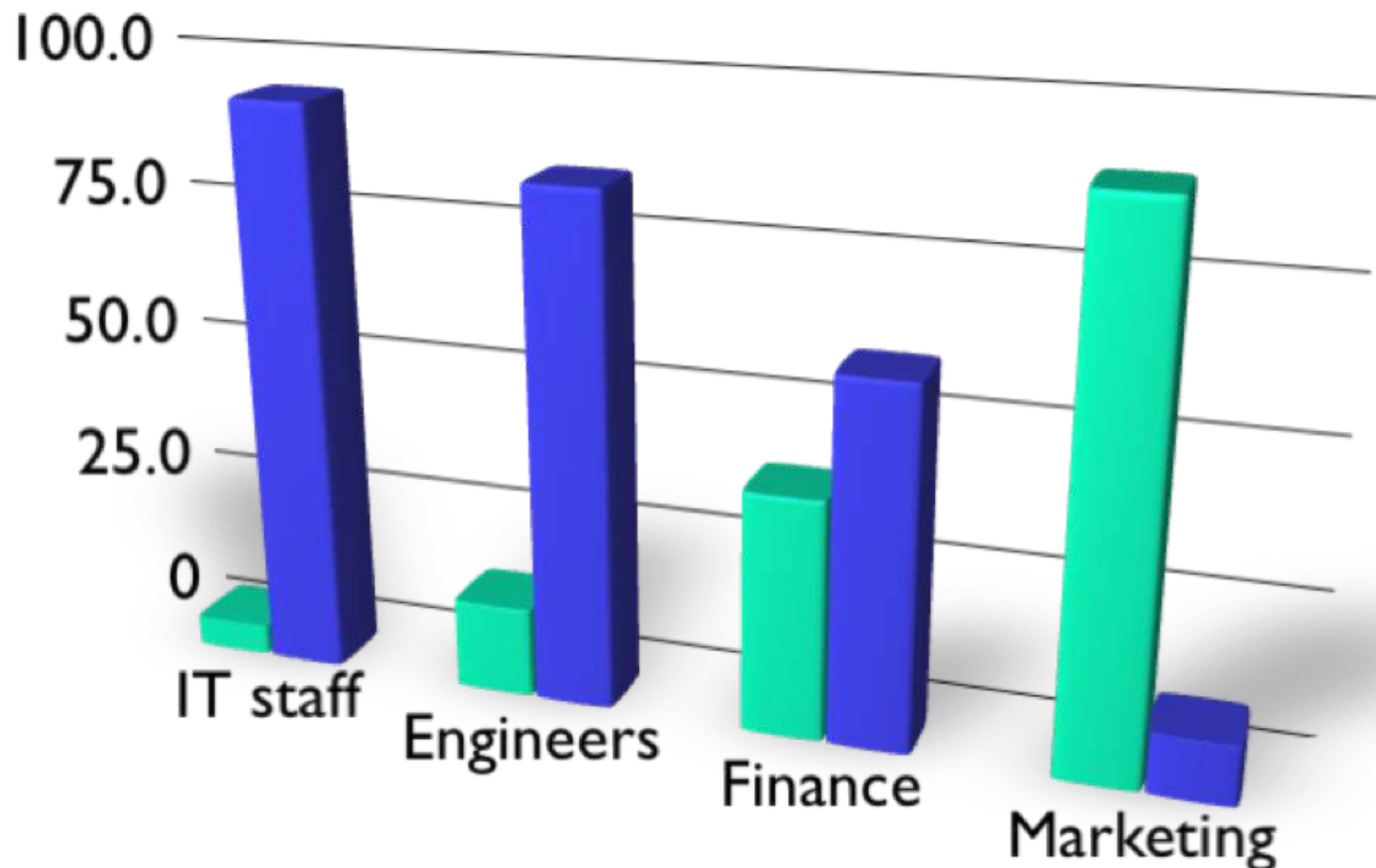
- Type of users

- Technical users tend not to reply with attachments

- Marketing however..... ;)

- Usually, the dumber the better for saving space!

User Stupidity study : Space saving



Attachment Duplicates



Understand "anykey"

How much performance improvement can I get?

- View index rebuilds
 - The update task gains greatly from DAOS
 - Less for it to scout through rebuilding views

The sweet spot

- The database now has “sizes”
 - Logical - the size of the database as if the attachments were in the database as normal
 - Physical - the actual physical size of the nsf
- Quotas use the logical size!
 - Yay!
- See for yourself

Filename	Physical Path	File Format	Logical Size	Physical Size
bbuchan.nsf	C:\Program Files\IBM	R85 (51:0)	145,105,620	12,320,768
cmiller.nsf	C:\Program Files\IBM	R85 (51:0)	45,366,627	12,320,768
dnotes.nsf	C:\Program Files\IBM	R85 (51:0)	314,979,231	12,845,056
ebrill.nsf	C:\Program Files\IBM	R85 (51:0)	145,105,620	12,320,768
...

Required for DAOS to work...

- Files running ODS 51
- Transactional logging enabled
- Database property for DAOS enabled on mail files
- File store for storing NLO files

What I am going to teach you...

- Upgrade the Domino server to ODS 51
- Implement transactional logging(txn) on the server
- Implement DAOS on mail files
- Take existing attachments out of mail files
- Run though DAOS interface and commands











In the beginning...

- The platform...
 - SNT85.demo.local
 - Windows 2003 RC2 Standard edition
 - Loopback adapter installed
 - Workgroup
 - 192.168.1.33
- Domino
 - 8.5 server
 - SNT85/demo
 - Domain name = demo
 - all passwords = lotusnotes
 - 10 mail files registered
 - ODS43
 - No Transactional logging

In the beginning...

- 10 Mail files in use....
- 1.21 GB data in use in mail files

bbuchan.nsf	156,160 KB	IE
cmiller.nsf	58,624 KB	IE
dnotes.nsf	322,048 KB	IE
ebrill.nsf	156,160 KB	IE
efitzger.nsf	58,624 KB	IE
gdavis.nsf	58,624 KB	IE
mwhite.nsf	58,624 KB	IE
pmooney.nsf	156,416 KB	IE
tduff.nsf	92,928 KB	IE
welsmore.nsf	156,160 KB	IE








	Title	Filename	Physical Path	File Format	Logical Size	Physical Size	M
	Bill Buchan	bbuchan.nsf	C:\Program Files\IBM	R6 (43:0)	159,907,840	159,907,840	
	Chris Miller	cmiller.nsf	C:\Program Files\IBM	R6 (43:0)	60,030,976	60,030,976	
	Doctor Notes	dnotes.nsf	C:\Program Files\IBM	R6 (43:0)	329,777,152	329,777,152	
	Ed Brill	ebrill.nsf	C:\Program Files\IBM	R6 (43:0)	159,907,840	159,907,840	
	Eileen Fitzgerald	efitzger.nsf	C:\Program Files\IBM	R6 (43:0)	60,030,976	60,030,976	
	Gab Davis	gdavis.nsf	C:\Program Files\IBM	R6 (43:0)	60,030,976	60,030,976	
	Matt White	mwhite.nsf	C:\Program Files\IBM	R6 (43:0)	60,030,976	60,030,976	
	Paul Mooney	pmooney.nsf	C:\Program Files\IBM	R6 (43:0)	160,169,984	160,169,984	
	Tom Duff	tduff.nsf	C:\Program Files\IBM	R6 (43:0)	95,158,272	95,158,272	
	Warren Elsmore	welsmore.nsf	C:\Program Files\IBM	R6 (43:0)	159,907,840	159,907,840	

Phase 1... - Raising the ODS

- Start the Domino server
- Modify the notes.ini
- Save the notes.ini
- Compact the server
- Check the ODS

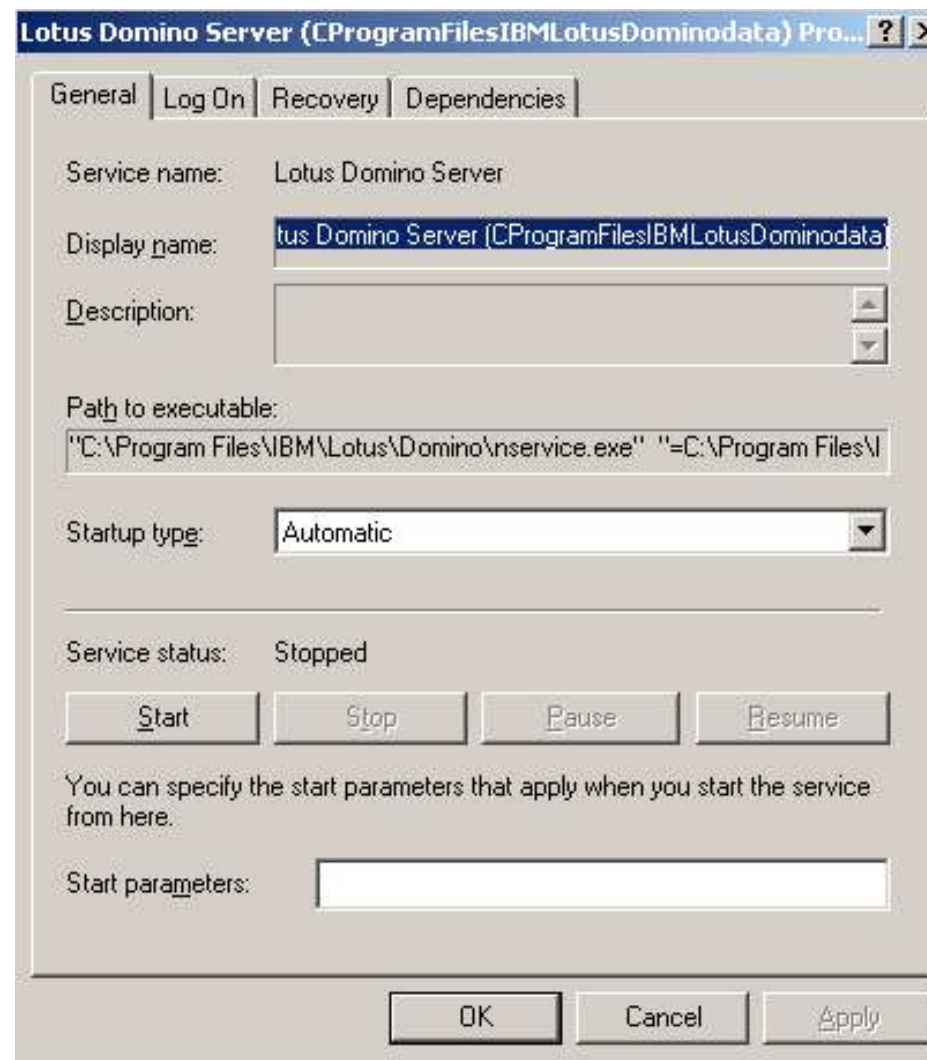
Start the Domino server

- Start the Domino server.....
- Go to the services panel in windows
- Start/Administrative Tools/Services
- Double click on Lotus Domino Server

	Logical Disk Manag...	Configures...		Manual	Local System
	Lotus Domino Diagn...		Started	Automatic	Local System
	Lotus Domino Serv...			Automatic	Local System
	Lotus Notes Diagno...	Performs di...	Started	Automatic	Local System
	Messenger	Transmits ...		Disabled	Local System
	Microsoft Software ...	Manages s...		Manual	Local System
	Net Logon	Maintains s...		Manual	Local System

Start the Domino server (2)

- Click on Start...



Open the notes.ini on the Domino server

- Go to the domino program directory
- Open the notes.ini file
- Add the following to notes.ini
 - create_r85_databases=1
- Save the notes.ini
 - Always have a few empty lines at the bottom of a Notes.ini
- Close the notes.ini

```
WebAdminSetup=850  
DominoConfigLevel=1  
EventSetup=850002  
DELETE_DUPLICATE_PUID_NOTES=3  
DDMSetup=850002  
ServerRestarted=0  
CONSOLE_SNT85/demo=80 300 7 110 110 778 44  
LAST_DOMINO_TIME=0081ED3480257504  
Jrn1Enbld=0  
Create_R85_Databases=1
```


Restart the Domino server

- Open the domino console on the server
- Type in “restart server”
- Wait for the server to restart

```
11/17/2008 11:56:55 PM JOM: Java Virtual Machine initialized.
11/17/2008 11:56:55 PM HTTP Server: Java Virtual Machine loaded
11/17/2008 11:56:57 PM XSP Command Manager initialized
11/17/2008 11:56:58 PM HTTP Server: Started
> RESTART SERVER
11/17/2008 11:57:14 PM AMgr: Executive '1' shutting down. Process id '2412'
11/17/2008 11:57:15 PM Index update process shutdown
11/17/2008 11:57:15 PM Administration Process shutdown
11/17/2008 11:57:15 PM Agent Manager shutdown complete
11/17/2008 11:57:15 PM Router: Mail Router shutdown
11/17/2008 11:57:16 PM XSP Command Manager terminated
11/17/2008 11:57:16 PM HTTP Server: Shutdown
11/17/2008 11:57:18 PM Event Monitor shutdown
11/17/2008 11:57:29 PM Server shutdown complete. Server will restart in 10 seconds...
```











Compact the databases on the server

- Now you have entered the notes.ini parameter
 - Ready to raise ODS
- Compact the server - ODS will raise to 51
 - Type in "load compact -C" on server
- Wait for compact to finish

```
11/18/2008 12:01:28 AM Compacted PwdResetSample.nsf, 0K bytes recovered (0%)
11/18/2008 12:01:28 AM Compacting reports.nsf (Reports for SNT85/demo)
11/18/2008 12:01:28 AM Compacted reports.nsf, 0K bytes recovered (0%)
11/18/2008 12:01:28 AM Compacting webadmin.nsf (Domino Web Administrator (8))
11/18/2008 12:01:30 AM Compacted webadmin.nsf, 0K bytes recovered (0%)
11/18/2008 12:01:30 AM Database compactor process shutdown
```

Compact the databases on the server

- Close and re-launch the Notes admin client
- Go to the files tab
- Check to see the ODS
- Should be at 51

	Title ◊	Filename ◊	Physical Path ◊	File Format ◊
	Bill Buchan	bbuchan.nsf	C:\Program Files\IBM	R85 (51:0)
	Chris Miller	cmiller.nsf	C:\Program Files\IBM	R85 (51:0)
	Doctor Notes	dnotes.nsf	C:\Program Files\IBM	R85 (51:0)
	Ed Brill	ebrill.nsf	C:\Program Files\IBM	R85 (51:0)
	Eileen Fitzgerald	efitzger.nsf	C:\Program Files\IBM	R85 (51:0)
	Gab Davis	gdavis.nsf	C:\Program Files\IBM	R85 (51:0)
	Matt White	mwhite.nsf	C:\Program Files\IBM	R85 (51:0)
	Paul Mooney	pmooney.nsf	C:\Program Files\IBM	R85 (51:0)
	Tom Duff	tduff.nsf	C:\Program Files\IBM	R85 (51:0)
	Warren Elsmore	welsmore.nsf	C:\Program Files\IBM	R85 (51:0)

Phase 2... -Implement transactional logging

- WARNING!

- Ensure your disk hardware and array can handle transactional logging
- It is STRONGLY recommended to place transactional logs on separate array/drives with separate controller

- Circular, Archive or Linear?

- Circular - txn files are reused when they are full (4GB limit)
- Archive - txn files continue to be created as needed - your backup software should remove them
- Linear - similar to Circular, but no limit on size

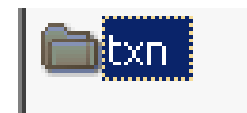
- Create the directory needed

- Enable txn logging in the server document

- Restart the server

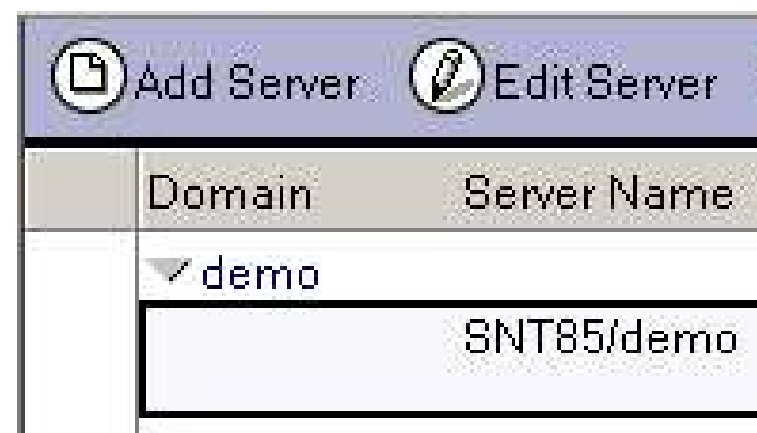
Create the directory for the txn log files

- Open your file management software on the server
- Select the drive/volume you wish to build the destination folder in
- Create the folder (here we call it txn) on the appropriate drive (here - c:\)



Enable TXN logging in the server document

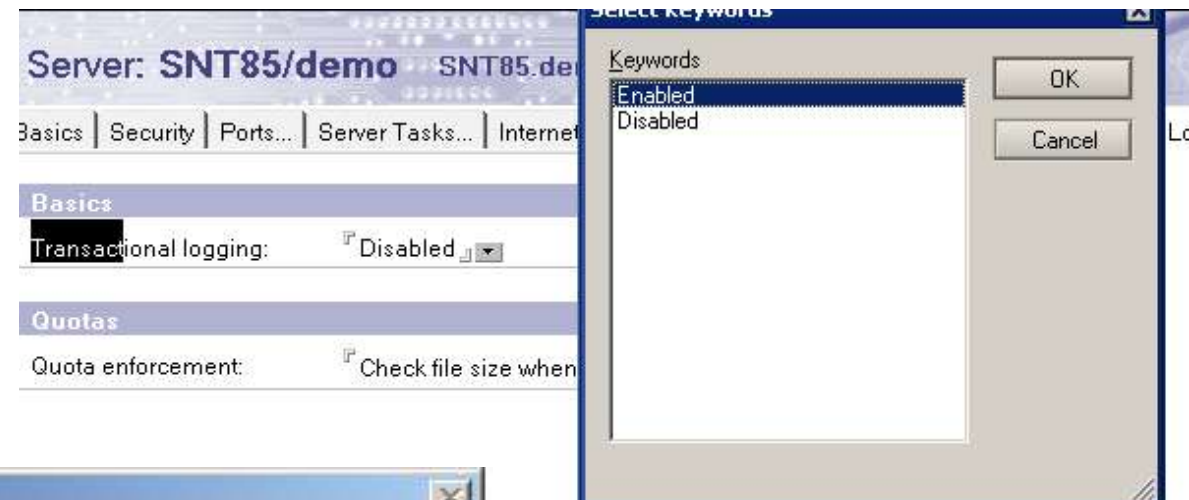
- Open the administrator client
- Go to the configuration tab
- Select the server document and click on the EDIT SERVER action



- Click on the transactional Logging tab

Enable TXN logging in the server document

- Set transactional logging to enabled.



- Accept the warning
- Remember to check your disk configuration!

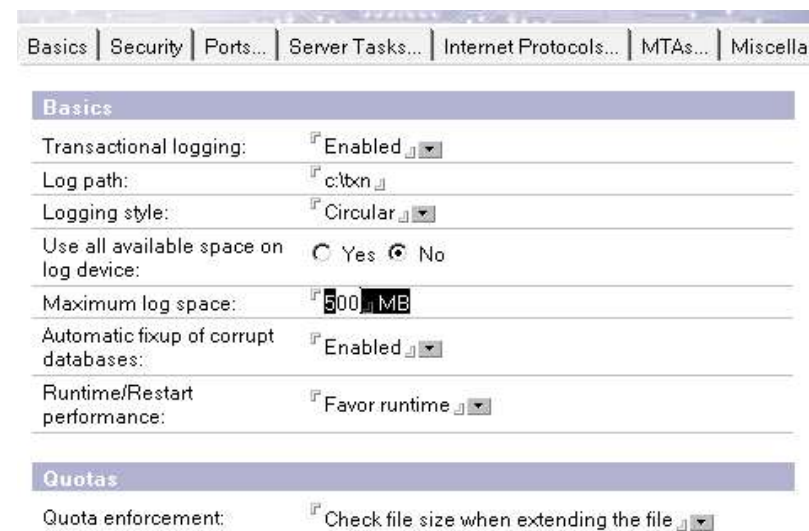
Enable TXN logging in the server document

- Choose your type of logging.
- Set the maximum log space
 - In this case, we just set it to 500MB (minimum)



- Set runtime/restart performance to favour runtime
 - That is optional

- Click on save and close



Enable TXN logging in the server document

- Go to the Domino console
- Type in RESTART SERVER

```
11/22/2008 03:42:52 PM Agent Manager: Daily Cleari
11/22/2008 03:42:53 PM HTTP Server: Daily Cleari
11/22/2008 03:42:58 PM HTTP Server: Daily Cleari
11/22/2008 03:43:00 PM Chronos: Performing hourl
11/22/2008 03:43:03 PM HTTP Server: Daily Cleari
11/22/2008 03:43:06 PM Chronos: Full text indexe
11/22/2008 03:43:08 PM HTTP Server: Daily Cleari
11/22/2008 03:43:35 PM Closed session for Doctor
1 Documents read: 2 Documents writte
11/22/2008 03:44:23 PM One-time fix-up of DDM re
11/22/2008 03:44:23 PM One-time fix-up of DDM re
11/22/2008 03:44:23 PM Cleaning duplicate DDM.NS
11/22/2008 03:44:23 PM Cleaning of duplicate DDM
documents were deleted.
11/22/2008 03:48:01 PM Admin Process: Searching
> RESTART SERVER
```

- Server will restart and you will see txn logs being created where you specified them
- Also DBID numbers being assigned to databases.



```
SNT85/demo: Lotus Domino Server

Lotus Domino (r) Server, Build U85_M2_08202008, August 20, 2008
Copyright (c) IBM Corporation 1987, 2008. All Rights Reserved.

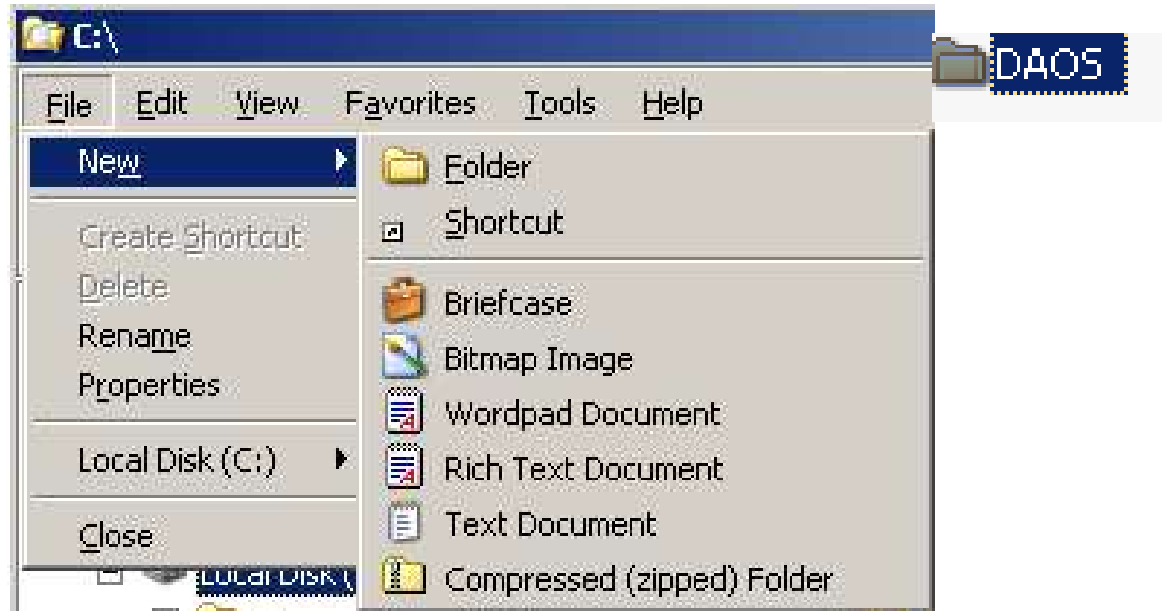
Please wait, creating new transaction logs in directory: C:\TXN\
```

Phase 3 - .. Enable DAOS on the server

- Create a directory where the attachments will be stored
 - They are not “just stored” as normal files
 - .NLO extension
- Configure DAOS in the server document

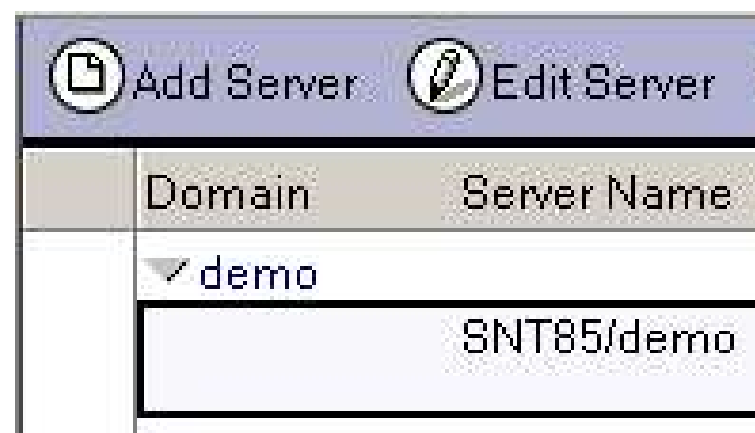
Create the directory for the .NLO DAOS files

- Open your file management software on the server
- Select the drive/volume you wish to build the destination folder in
- Create the folder (here we call it txn) on the appropriate drive (here - c:\)
- Use a FAST, LOCAL RAID ARRAY if you can
- Default directory goes under the data directory
- Bad idea IMO!



Enable DAOS in the server document

- Open the administrator client
- Go to the configuration tab
- Select the server document and click on the EDIT SERVER action



- Click on the DAOS tab

Enable DAOS in the server document

- Set the STORE FILE ATTACHMENTS IN DAOS to ENABLED

DAOS Settings

Store file attachments in DAOS:



- Enter the size of an attachment (in bytes) that DAOS will not bother extracting

Minimum size of object before Domino will store in DAOS:

- Set the DAOS base path
- Set the object deletion date

DAOS base path:

Defer object deletion for: days

- This specifies how long DAOS will keep an attachment even if there are no referencing documents related to it before it is pruned.

Enable DAOS in the server document

- Click on SAVE AND CLOSE



- Restart the Domino server by typing in RESTART SERVER on the console

```

2008 12:49:32 PM Index update process started
2008 12:49:32 PM Agent Manager started
2008 12:49:32 PM AMgr: Executive '1' started. Process
2008 12:49:32 PM Admin Process: SNT85/demo is the Adm
Domino Directory.
2008 12:49:32 PM DAOSMGR: DAOS Manager started
2008 12:49:32 PM HTTP Server: Using Web Configuration
2008 12:49:32 PM Administration Process started
2008 12:49:32 PM Database Server started
    
```

- Notice DAOS loading..

- Type in SHOW TASKS on the console.. .new tasks running on the console

```

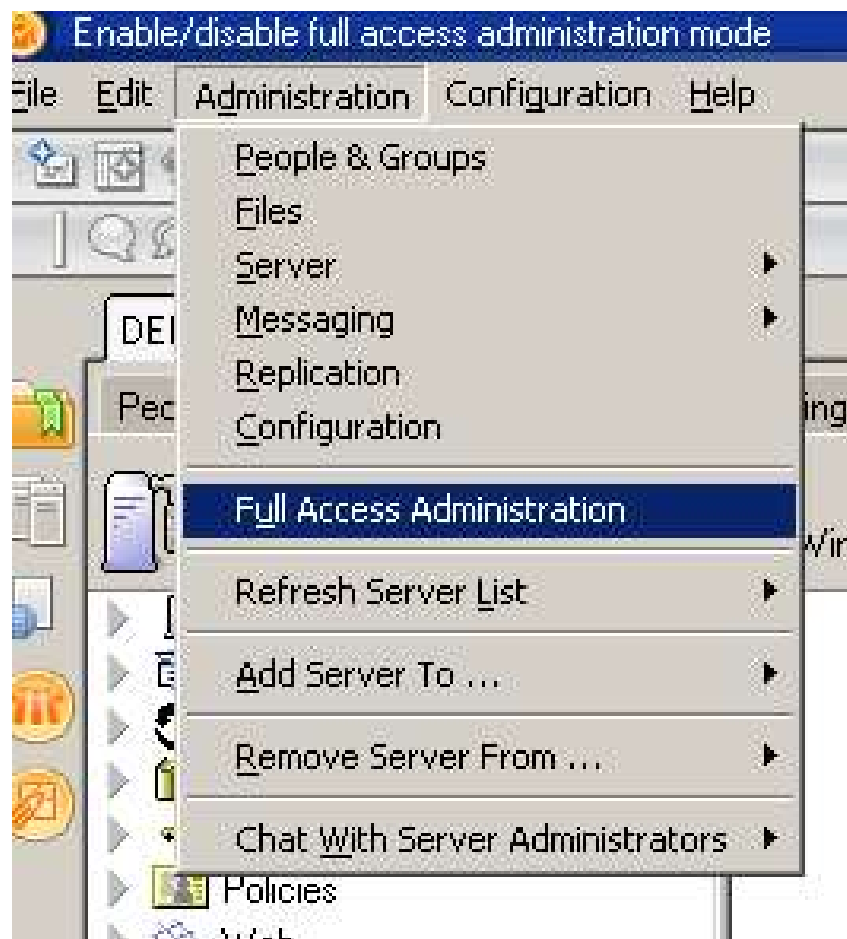
DAOS Manager Resync: Idle
DAOS Manager Prune: Idle
DAOS Manager DbDelete: Idle
DAOS Manager Idle
    
```

Phase 4 - .. Enable DAOS for selected databases

- Remember!
 - It does not just have to be mail files
 - Does not work with embedded objects
- Enable Full Access Administration
 - Or already have manager access to databases
- From admin console select databases
- Enable DAOS in advanced properties
- OR.. use a console command to enable

Enable Full Access Administration











- Ensure you have Full access Administration enabled.



You now have full access administration rights on SNT85/demo.

Select all the databases

- Click on the FILES tab on the administration client
- Go to the mail directory and select one file
- Hold down the CTRL key and press A

	Title ◆	Filename ◆	Physical Path ◆	File Format ◆
	Bill Buchan	bbuchan.nsf	C:\Program Files\IBM	R85 (51:0)
	Chris Miller	cmiller.nsf	C:\Program Files\IBM	R85 (51:0)
	Doctor Notes	dnotes.nsf	C:\Program Files\IBM	R85 (51:0)
	Ed Brill	ebrill.nsf	C:\Program Files\IBM	R85 (51:0)
	Eileen Fitzgerald	efitzger.nsf	C:\Program Files\IBM	R85 (51:0)
	Gab Davis	gdavis.nsf	C:\Program Files\IBM	R85 (51:0)
	Matt White	mwhite.nsf	C:\Program Files\IBM	R85 (51:0)
	Paul Mooney	pmooney.nsf	C:\Program Files\IBM	R85 (51:0)
	Tom Duff	tduff.nsf	C:\Program Files\IBM	R85 (51:0)
	Warren Elsmore	welsmore.nsf	C:\Program Files\IBM	R85 (51:0)

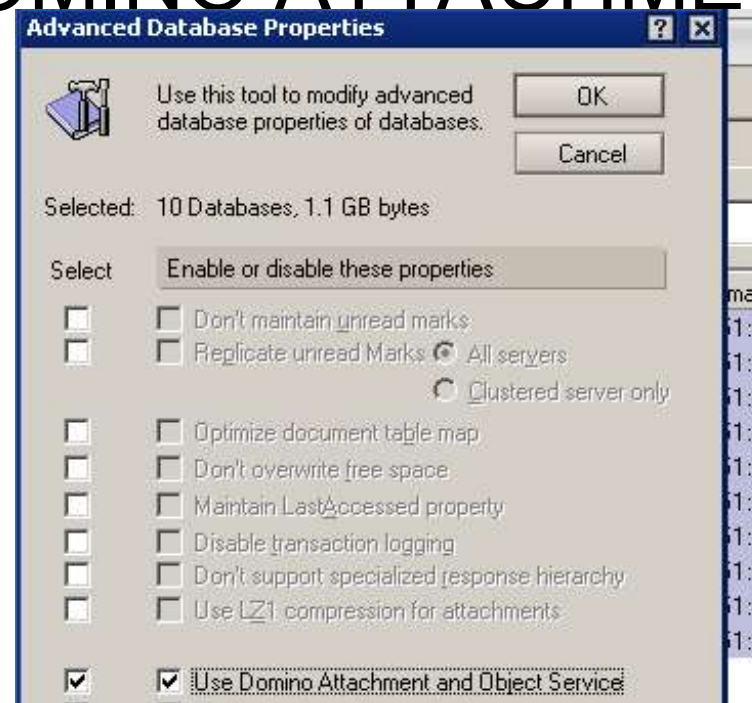
Go to advanced properties

- Right click on the databases
- Select **ADVANCED PROPERTIES**



Enable DAOS for the databases

- Select the SELECT checkbox
- Beside USE DOMINO ATTACHMENT AND OBJECT SERVICE
- Click on OK



10 databases processed - 0 errors.

Phase 5 - ..Move existing attachments to DAOS

- If you enabled the database property
 - You just need to compact -C (copy style)
 - Attachments will move to the DAOS store
- OR.....
 - You can enable the DAOS property from the console
 - Kill two birds one stone











Phase 5 - ..Move existing attachments to DAOS

- Restart the server
- On the console - type in the following
 - LOAD COMPACT MAIL\ -c -DAOS ON
- Watch your console!
 - It does not record much of a saving.....

```
f.
1/24/2008 01:21:55 PM Compacting mail\pmooney.nsf (Paul Mooney)
1/24/2008 01:22:01 PM Recovery Manager: Assigning new DBIID for C:\Program Fil
s\IBM\Lotus\Domino\data\mail\pmooney.nsf (need new backup for media recovery).
1/24/2008 01:22:01 PM Compacted mail\pmooney.nsf, 120K bytes recovered (<1%)
1/24/2008 01:22:01 PM Informational, database design compression is enabled in
database mail\tduff.nsf.
1/24/2008 01:22:01 PM Informational, DAOS has been enabled for database mail\t
duff.nsf.
1/24/2008 01:22:01 PM Informational, LZ1 is enabled in database mail\tduff.nsf
1/24/2008 01:22:01 PM Compacting mail\tduff.nsf (Tom Duff)
1/24/2008 01:22:10 PM Recovery Manager: Assigning new DBIID for C:\Program Fil
s\IBM\Lotus\Domino\data\mail\tduff.nsf (need new backup for media recovery).
1/24/2008 01:22:10 PM Compacted mail\tduff.nsf, 43K bytes recovered (<1%)
1/24/2008 01:22:10 PM Informational, database design compression is enabled in
database mail\welsmore.nsf.
1/24/2008 01:22:10 PM Informational, DAOS has been enabled for database mail\w
elsmore.nsf.
1/24/2008 01:22:10 PM Informational, LZ1 is enabled in database mail\welsmore.
sf
```

Look at the files..

- Open the admin client...
- Look at the files tab
- Select the MAIL directory

	Title ◊	Filename ◊	Physical Path ◊	File Format ◊	Logical Size ◊	Physical Size ◊	Ma
	Bill Buchan	bbuchan.nsf	C:\Program Files\IBM	R85 (51:0)	145,105,620	12,320,768	
	Chris Miller	cmiller.nsf	C:\Program Files\IBM	R85 (51:0)	45,366,627	12,320,768	
	Doctor Notes	dnotes.nsf	C:\Program Files\IBM	R85 (51:0)	314,979,231	12,845,056	
	Ed Brill	ebrill.nsf	C:\Program Files\IBM	R85 (51:0)	145,105,620	12,320,768	
	Eileen Fitzgerald	efitzger.nsf	C:\Program Files\IBM	R85 (51:0)	45,366,627	12,320,768	
	Gab Davis	gdavis.nsf	C:\Program Files\IBM	R85 (51:0)	45,366,627	12,320,768	
	Matt White	mwhite.nsf	C:\Program Files\IBM	R85 (51:0)	45,366,627	12,320,768	
	Paul Mooney	pmooney.nsf	C:\Program Files\IBM	R85 (51:0)	145,367,764	12,582,912	
	Tom Duff	tduff.nsf	C:\Program Files\IBM	R85 (51:0)	80,171,792	12,320,768	
	Warren Elsmore	welshire.nsf	C:\Program Files\IBM	R85 (51:0)	145,105,620	12,320,768	

Look at the files..

- Open your file explorer client
- Look at the mail directory

Name	Size	T
bbuchan.nsf	12,032 KB	II
cmiller.nsf	12,032 KB	II
dnotes.nsf	12,544 KB	II
ebrill.nsf	12,032 KB	II
efitzger.nsf	12,032 KB	II
gdavis.nsf	12,032 KB	II
mwhite.nsf	12,032 KB	II
pmooney.nsf	12,288 KB	II
tduff.nsf	12,032 KB	II
welsmore.nsf	12,032 KB	II

It was 1.21 GB

Now... 118MB

- OMFG!!!!

- Irish for “goodness me”

- .NLO files

- Up to 40000 files in a directory

- Up to 1000 directories

- Ergo max 40 million .nlo files (referenced by DAOS.cfa file)

Phase 6.. - Play with DAOS

- OK - its implemented....
- Lets look at stuff before we turn it off
- Paul... what happens if you disable DAOS in the server document now that attachments are already removed?
 - Well, DAOS switches to READ mode. Attachments are read from the file store, but new attachments go into the NSF as normal
- Paul.... can we pull the attachment back out of the file store and put them back in .nsf files... if we get scared or something?
 - Yes... be patient....(jeesh)
- Paul... what's this pruning thing I have heard about?
 - Well, its quite simple really...

Pruning

- You mail an attachment to 10 people...
 - DAOS stores it once
- 9 users delete the email
 - DAOS still stores the .nlo file
- Last user deletes the email
 - DAOS waits a pre-configured amount of time (from the server doc) and then removes the .nlo
 - Defer object deletion for: 30 days
 - DAOS keeps a table referencing the .nlo attachments to the documents. Once its “de-referenced” it can be pruned.
- Pruning is automatic, but you can force a prune
 - Type in TELL DAOSMGR PRUNE 0
 - It will prune any de-referenced “orphan” .nlo files
 - WARNING -have you backed them up???????

Pruning ctd...

- You can tell DAOS to prune everything that is over X amount of days old
 - Bypassing the value in the server document
 - DANGER DANGER DANGER
 - BACKUPS BACKUPS BACKUPS
 - YOU ARE NO LONGER JUST BACKING UP THE .NSF FILES - HAVE YOU GOT A RECENT BACKUP OF .NLO FILES!!!
- As you can see, I think this is an important bit
- On the console type in
 - TELL DAOSMGR PRUNE 7
 - Anything over 7 days “de-referenced” will be deleted

Checking DAOS

- Paul... Can I check DAOS overall and see if its all happy with everything, like ya know....?
- Well, yes you can...
- Type in TELL DAOSMGR STATUS

```
TELL DAOSMGR STATUS
1/25/2008 02:00:44 PM DAOSMGR: Status started
1/25/2008 02:00:44 PM threadsShouldQuit = FALSE
1/25/2008 02:00:44 PM refcount = 1
1/25/2008 02:00:44 PM threadsCreated = 3
1/25/2008 02:00:44 PM
1/25/2008 02:00:44 PM basePath = C:\Program Files\IBM\Lotus\Domino\data\
1/25/2008 02:00:44 PM baseStoragePath = C:\DAOS\
1/25/2008 02:00:44 PM storagePath = C:\DAOS\
1/25/2008 02:00:44 PM pruneInterval = 30
1/25/2008 02:00:44 PM maxFilesPerSubcontainer = 40000
1/25/2008 02:00:44 PM maxSubcontainers = 1000
1/25/2008 02:00:44 PM catalogState = SYNCHRONIZED
1/25/2008 02:00:44 PM catalogVersion = 3
1/25/2008 02:00:44 PM catalogMinVersion = 3
1/25/2008 02:00:44 PM
1/25/2008 02:00:44 PM pruneInProgress = FALSE
1/25/2008 02:00:44 PM pruneStartTime =
1/25/2008 02:00:44 PM pruneEndTime =
1/25/2008 02:00:44 PM
1/25/2008 02:00:44 PM resyncInProgress = FALSE
1/25/2008 02:00:44 PM resyncStartTime = 11/25/2008 01:50:59 PM
1/25/2008 02:00:44 PM resyncEndTime = 11/25/2008 01:50:59 PM
1/25/2008 02:00:44 PM
1/25/2008 02:00:44 PM dbdeleteInProgress = FALSE
1/25/2008 02:00:44 PM dbdeleteStartTime =
1/25/2008 02:00:44 PM dbdeleteEndTime =
1/25/2008 02:00:44 PM DAOSMGR: Status completed
```

Checking DAOS ctd...

- To check just the DAOS catalog
- TELL DAOSMGR STATUS CATALOG

```
> tell daosmgr status catalog
11/25/2008 02:03:09 PM DAOSMGR: Status CATALOG started
11/25/2008 02:03:09 PM DAOS catalog status:
11/25/2008 02:03:09 PM catalogState = SYNCHRONIZED
11/25/2008 02:03:09 PM catalogVersion = 3
11/25/2008 02:03:09 PM catalogMinVersion = 3
11/25/2008 02:03:09 PM DAOSMGR: Status CATALOG completed
>
```

Checking DAOS ctd...

- To list databases that are being managed by DAOS
- TELL DAOSMGR STATUS DBSUMMARY

```
> tell daosmgr status dbsummary
DAOSMGR: Status DBSUMMARY started
DAOSMGR: List cataloged DAOS databases
```

Database Name	Count	State
...ram Files\IBM\Lotus\Domino\data\mail\ebrill.nsf	8	Synchronized
...Program Files\IBM\Lotus\Domino\data\lndfr.nsf	0	Synchronized
...Program Files\IBM\Lotus\Domino\data\dpicfg.nsf	0	Synchronized
...am Files\IBM\Lotus\Domino\data\mail\pmooney.nsf	8	Synchronized
...Program Files\IBM\Lotus\Domino\data\lndsutr.nsf	0	Synchronized
...es\IBM\Lotus\Domino\data\help\help85_client.nsf	0	Synchronized
...m Files\IBM\Lotus\Domino\data\mail\efitzger.nsf	3	Synchronized
...rogram Files\IBM\Lotus\Domino\data\homepage.nsf	0	Synchronized
...am Files\IBM\Lotus\Domino\data\mail\cmiller.nsf	3	Synchronized
...m Files\IBM\Lotus\Domino\data\mail\welsmore.nsf	8	Synchronized
...IBM\Lotus\Domino\data\iNotes\help70_iwa_en.nsf	0	Synchronized
...IBM\Lotus\Domino\data\iNotes\help85_iwa_en.nsf	0	Synchronized
...gram Files\IBM\Lotus\Domino\data\mail\tduff.nsf	27	Synchronized
...IBM\Lotus\Domino\data\iNotes\help80_iwa_en.nsf	0	Synchronized
...am Files\IBM\Lotus\Domino\data\mail\bbuchan.nsf	8	Synchronized
...Program Files\IBM\Lotus\Domino\data\certsrv.nsf	0	Synchronized
...ram Files\IBM\Lotus\Domino\data\mail\gdavis.nsf	3	Synchronized
...Program Files\IBM\Lotus\Domino\data\certlog.nsf	0	Synchronized
...ram Files\IBM\Lotus\Domino\data\help\readme.nsf	0	Synchronized
...gram Files\IBM\Lotus\Domino\data\dfc\dfc100.nsf	0	Synchronized
...IBM\Lotus\Domino\data\iNotes\help65_iwa_en.nsf	0	Synchronized
...ram Files\IBM\Lotus\Domino\data\mail\ndnotes.nsf	61	Synchronized
...Program Files\IBM\Lotus\Domino\data\admin4.nsf	0	Synchronized
...ram Files\IBM\Lotus\Domino\data\mail\mwhite.nsf	3	Synchronized
...ram Files\IBM\Lotus\Domino\data\AgentRunner.nsf	0	Synchronized
...Program Files\IBM\Lotus\Domino\data\cppfbws.nsf	0	Synchronized
...IBM\Lotus\Domino\data\help\help85_designer.nsf	0	Synchronized
...rogram Files\IBM\Lotus\Domino\data\dbdirman.nsf	0	Synchronized
...Files\IBM\Lotus\Domino\data\iNotes\Forms85.nsf	0	Synchronized

```
DAOSMGR: Status DBSUMMARY completed
>
```


Checking DAOS ctd...

- To list databases that are being managed by DAOS
 - TELL DAOSMGR STATUS DBSUMMARY
 - It lists summary information for all databases that are DAOS enabled
- You can also get specific information for one database
 - TELL DAOSMGR STATUS MAIL\DNOTES.NSF

```
> tell daosmgr status mail\dnotes.nsf
11/25/2008 02:08:59 PM DAOSMGR: Status mail\dnotes.nsf started
11/25/2008 02:08:59 PM DAOS database status:
11/25/2008 02:08:59 PM
11/25/2008 02:08:59 PM Database: C:\Program Files\IBM\Lotus\Domino\data\mail\dnotes.nsf
11/25/2008 02:08:59 PM Database state = Synchronized
11/25/2008 02:08:59 PM Last resynchronized: 11/24/2008 01:21:28 PM
11/25/2008 02:08:59 PM Ticket count: 61
11/25/2008 02:08:59 PM DAOSMGR: Status mail\dnotes.nsf completed
>
```


Checking DAOS ctd...

- Paul... what if I wanted to know which .NLO files are associated with a particular database?
 - Well, you can list what NLO's are referenced in the database.
 - TELL DAOSMGR LISTNLO ALL MAIL\DNOTES.NSF
 - Lists all the .nlo's that are referenced
- You can also output this to a specific text file
 - TELL DAOSMGR LISTNLO -O DNOTESATTACHMENTS.TXT ALL MAIL\DNOTES.NSF
- Now lets talk disaster...
 - Someone deletes the nsf at the OS level
 - You do a restore
 - You want to check see what .nlo files are missing (if any)
- To list missing .nlo files

TELL DAOSMGR LISTNLO MISSING MAIL\DNOTES.NSF

Continuing with Disasters..

- Lets say the .nsf was deleted, and a .nlo now cannot be referenced
 - The DAOS catalog now has some mismatches between what it has listed in the catalog, and what is really there.
 - DAOS will not prune any de-referenced .nlo now
- You need to get DAOS to resync its database references with .nlo files

-TELL DAOSMGR RESYNC

```
> TELL DAOSMGR RESYNC
11/25/2008 02:31:11 PM DAOSMGR: Resync started
11/25/2008 02:31:11 PM DAOSMGR: Resync completed
>
```

- You can also force DAOS to rebuild the DAOS catalog from scratch

-TELL DAOSMGR RESYNC FORCE

```
> TELL DAOSMGR RESYNC FORCE
11/25/2008 02:32:01 PM DAOSMGR: Resync FORCE started
11/25/2008 02:32:01 PM Rebuilding the DAOS Catalog.
11/25/2008 02:32:06 PM DAOSMGR: Resync FORCE completed
```

Continuing with Disasters..

- Can I test this disaster
 - Yes, but we don't have the time in this session.
- The steps to build the disaster test are here:
 - <http://www.pmooney.net/pmooney/pmooneynet.nsf/d6plinks/PMOY-7XU8HZ>
 - Titled "Restoring an attachment a guber deleted when using DAOS (the manual way)"
 - Brings you though everything you need

Phase 7 - .. turning it off

- Ok.. you want to put the attachments back into the NSF files

-LOAD COMPACT -C -DAOS OFF

```
11/25/2008 02:38:00 PM Informational, LZ1 is enabled in database mail\cmiller.nsf.
11/25/2008 02:38:00 PM Compacting mail\cmiller.nsf (Chris Miller)
11/25/2008 02:38:05 PM DAOSMGR: DbDelete started
11/25/2008 02:38:05 PM DAOSMGR: DbDelete completed
11/25/2008 02:38:09 PM Recovery Manager: Assigning new DBIID for C:\Program Files\IBM\Lotus\Domino\data\mail\cmiller.nsf (need new backup for media recovery).
11/25/2008 02:38:09 PM Compacted mail\cmiller.nsf, 15K bytes recovered (<1%)
11/25/2008 02:38:09 PM Informational, database design compression is enabled in database mail\dnotes.nsf.
11/25/2008 02:38:09 PM Informational, DAOS has been disabled for database mail\dnotes.nsf.
11/25/2008 02:38:09 PM Informational, LZ1 is enabled in database mail\dnotes.nsf.
11/25/2008 02:38:09 PM Compacting mail\dnotes.nsf (Doctor Notes)
11/25/2008 02:38:11 PM DAOSMGR: DbDelete started
11/25/2008 02:38:11 PM DAOSMGR: DbDelete completed
>
```

Phase 7 - .. turning it off

- Look back at the admin client

Title	Filename	Physical Path	File Format	Logical Size	Physical Size	Ma
Autosave	as_dnotes.nsf	C:\Program Files\IBM	R6 (43:0)	169,082,880	169,082,880	
Bookmarks (8.5)	bookmark.nsf	C:\Program Files\IBM	R6 (43:0)	7,077,888	7,077,888	
Doctor Notes's Log	log.nsf	C:\Program Files\IBM	R6 (43:0)	1,105,920	1,105,920	
Domino Administrat	domadmin.nsf	C:\Program Files\IBM	R6 (43:0)	3,670,016	3,670,016	
Feed Content	localfeedconter	C:\Program Files\IBM	R6 (43:0)	262,144	262,144	
Headlines	headline.nsf	C:\Program Files\IBM	R6 (43:0)	458,752	458,752	
Health Monitoring	dommon.nsf	C:\Program Files\IBM	R6 (43:0)	995,328	995,328	
Java AgentRunner	agentrunner.nsf	C:\Program Files\IBM	R5 (41:0)	327,680	327,680	
Monitoring Configur.	events4.nsf	C:\Program Files\IBM	R6 (43:0)	27,262,976	27,262,976	
Notes's Contacts	names.nsf	C:\Program Files\IBM	R6 (43:0)	5,767,168	5,767,168	
Server Load Setup &	namagent.nsf	C:\Program Files\IBM	R6 (43:0)	3,407,872	3,407,872	
User Registration Q	userreg.nsf	C:\Program Files\IBM	R6 (43:0)	458,752	458,752	

- Or windows explore

bbuchan.nsf	141,824 KB	I
cmiller.nsf	44,288 KB	I
dnotes.nsf	307,456 KB	I
ebrill.nsf	141,824 KB	I
efitzger.nsf	44,288 KB	I
gdavis.nsf	44,288 KB	I
mwhite.nsf	44,288 KB	I
pmooney.nsf	142,080 KB	I
tduff.nsf	78,336 KB	I
welsmore.nsf	141,824 KB	I

Compression and DAOS

- Check your compression on notes databases
 - Ensure all your databases use the same form of compression
- If one database uses LZ1 and the other does not
 - The attachments will create different .NLO files
 - increases the number of .NLO attachments

DAOS in 851

- Super cool feature of 851 replication with DAOS
- If server A is replicating with server B
 - and they both use DAOS
- Server A will “ask” server B if it has a copy of the .NLO already
- If no
 - The attachment is replicated as normal and the .NLO is created locally
- If yes
 - Only ticket reference is sent... no need for attachment

Wrap up on DAOS

- BACKUPS BACKUPS BACKUPS BACKUPS
 - The .nlo files will be backed up by file system backup
 - Backup the .nsf files BEFORE the .nlo files
 - (If you backup .nlo files first, you may miss a new .nlo referenced by the .nsf)
- Think about DAOS and non-DAOS replicas...
 - Now you have lots more space, what about the OS limits on the NSF one?
- What you save... depends on your business
- Performance improvements
 - disk... indexes....

Thank you...

Paul Mooney

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Blog: <http://www.pmooney.net>

Gabriella Davis

Email; Gabriella@turtlepartnership.com

Blog: <http://blog.turtleweb.com>

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