

NovaBACKUP Cloud (formerly xSP) **Storage Server** *User Manual*



NovaStor / September 2018

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NovaStor Storage Server

Installation

To start installation, click or run the Setup executable to begin the installer wizard. After a few seconds, the NovaStor Storage Server Wizard will open. Click next, and the License Agreement screen opens.



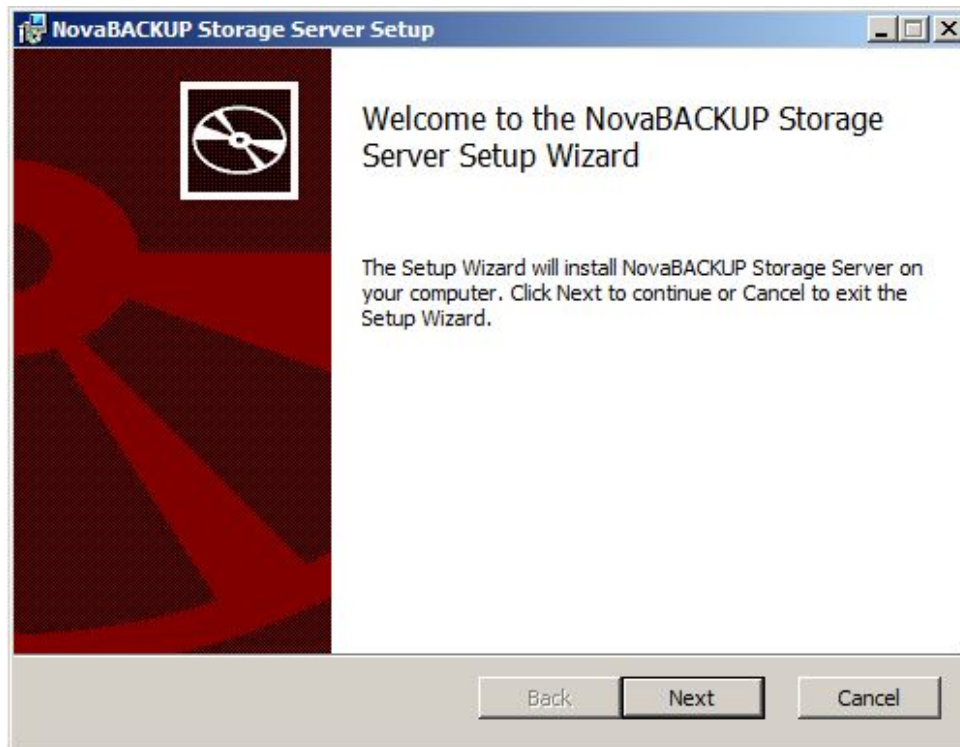
The NovaStor Storage Server installer and Configuration Manager are compatible with Windows Server 2012 Core. Simply run the setup program from the command prompt and follow the instructions below. The storage server and related utilities are installed in the \Program Files\NovaStor Storage Server folder on your system drive. All of the programs may be run from the command line. For additional information, see the Command Line Reference section of this document

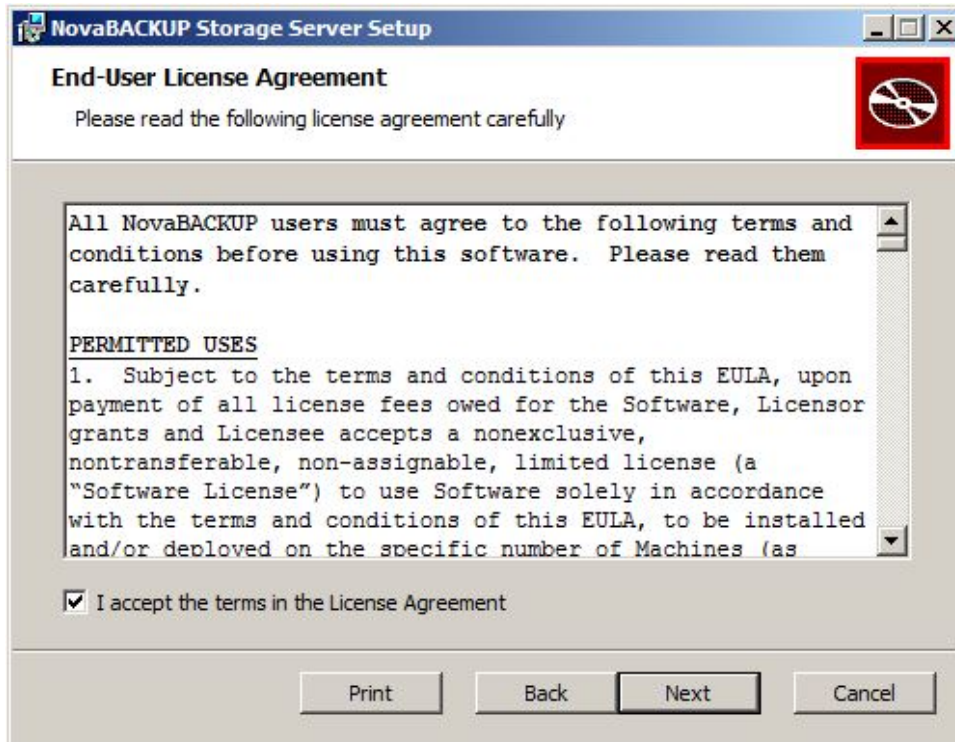
Step 1



This window explains the prerequisites needed in order for you to be able to install NovaStor Storage Server.

Once all the components are installed, checking the NovaStor Storage Server box and clicking install will prompt the NovaStor Storage Server Setup Wizard.



Step 2

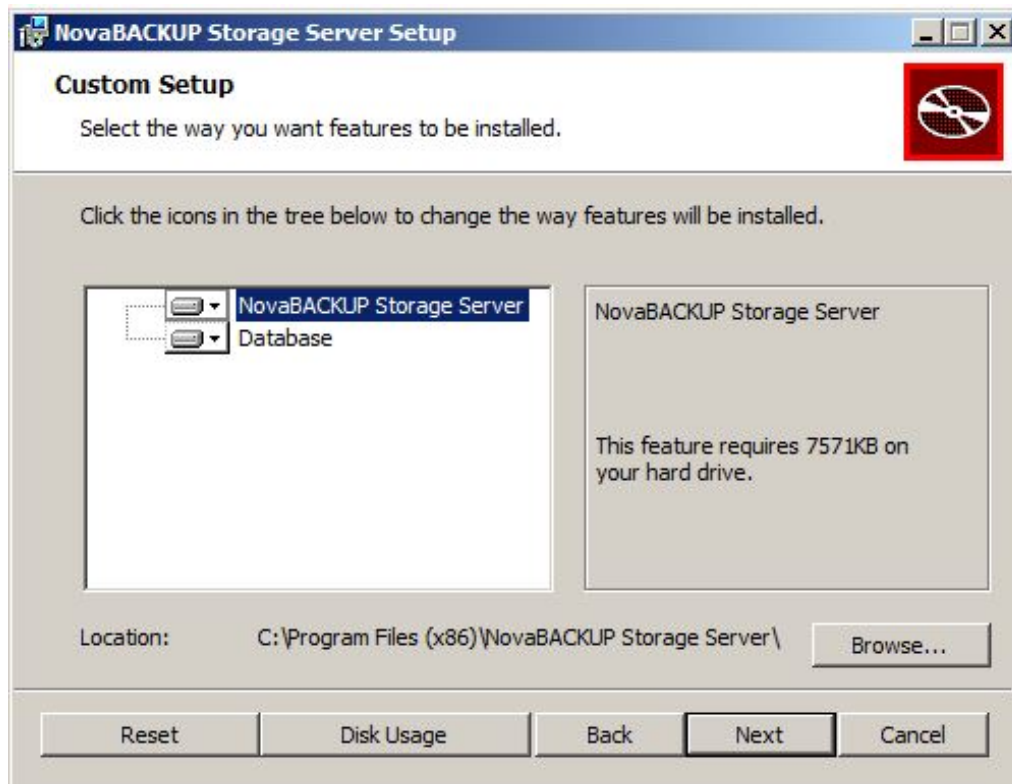
If you accept the terms of the license, click inside the box to I accept the terms in the License Agreement.

Click next to move to the next installation step.

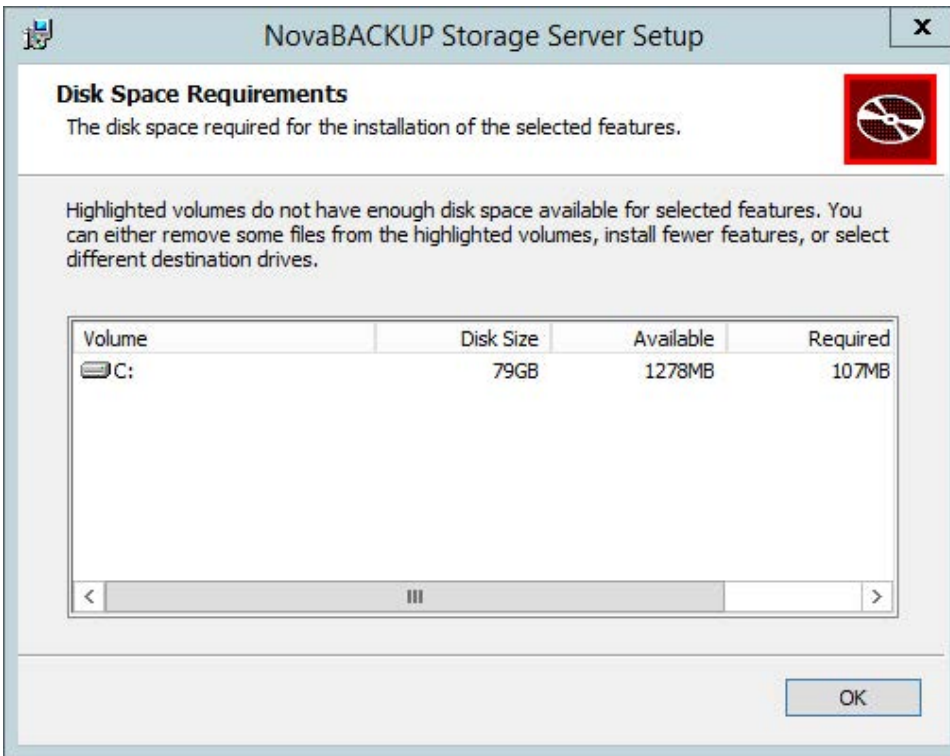
Step 3

The Custom Setup screen opens:

In this screen, the default location for the data files is shown. You can also select a different location by clicking on Browse and selecting an alternate location. If you are unsure of the amount of space available on your drives, clicking on Disk Usage will open the following screen:



Step 4



Click OK to return to the Setup Screen

NovaStor recommends that you use the C: drive for the SQL databases associated with the NovaStor Storage Server. Once you have selected the target drive, or if you choose to go with the defaults, press Next, and you will advance to the Service Account screen.



If you are performing an Upgrade, you do not need to re-install the database portion unless you want to install a "dummy" database. If you do this, you must edit your backup server.ini to the correct database after install before the backup server connects to the original database.

Press Next to move to the next step in installation.

Step 5

NovaBACKUP Storage Server

SQL Database Server Instance

Enter the server instance on which the database will be installed.

SQL Server: .sqlexpress

Authentication

Windows

SQL Server

Username: sa

Password:

Database Name: BackupServer

Back Next Cancel



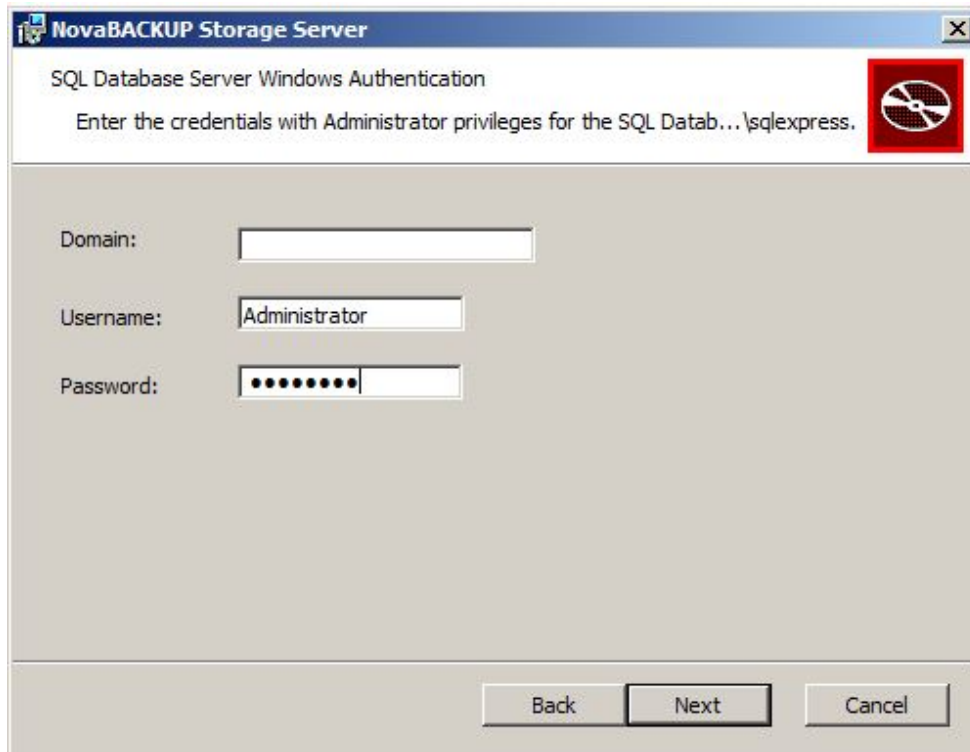
If you are browsing for SQL instance and cannot see anything listed, the SQL Browser service will need to be turned on for you to be able to have the instances automatically detected in the wizard.

The SQL Server names available on the network are retrieved by the NovaStor Storage Server installer. The server instances shown may not be the instance you choose to use. The data-base name field at the bottom will be the name given to the database when it is created. The default is always BackupServer, but this can be changed to anything you like.

Click Next to continue.

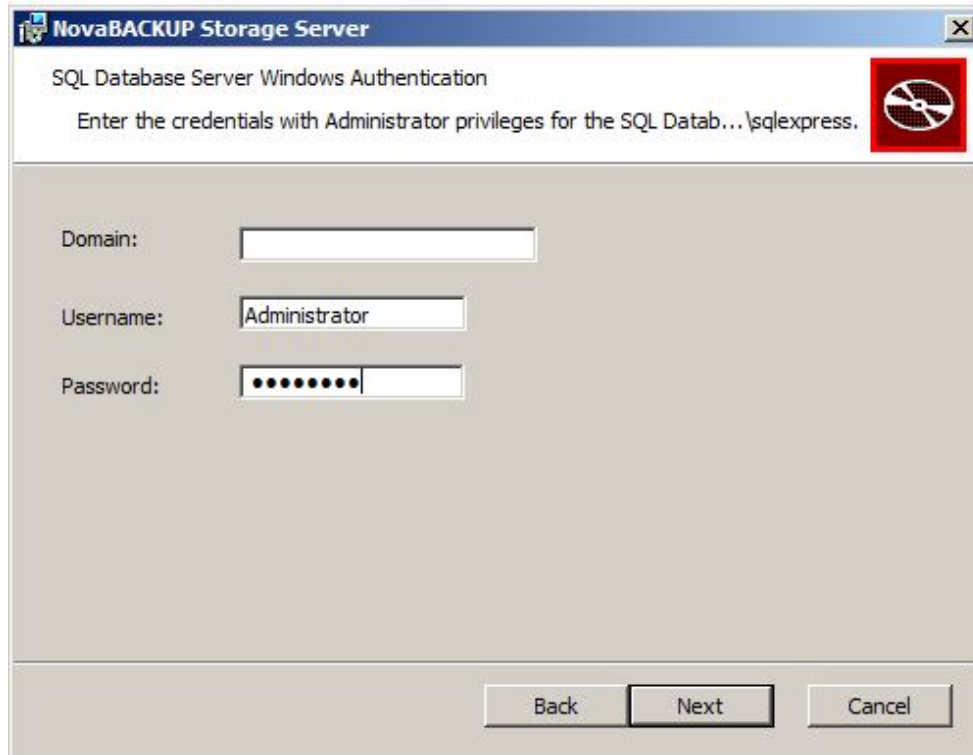
Step 6

This screen will ask for your Windows Administrator username for the machine with SQL installed on it. Adding the domain name is optional.



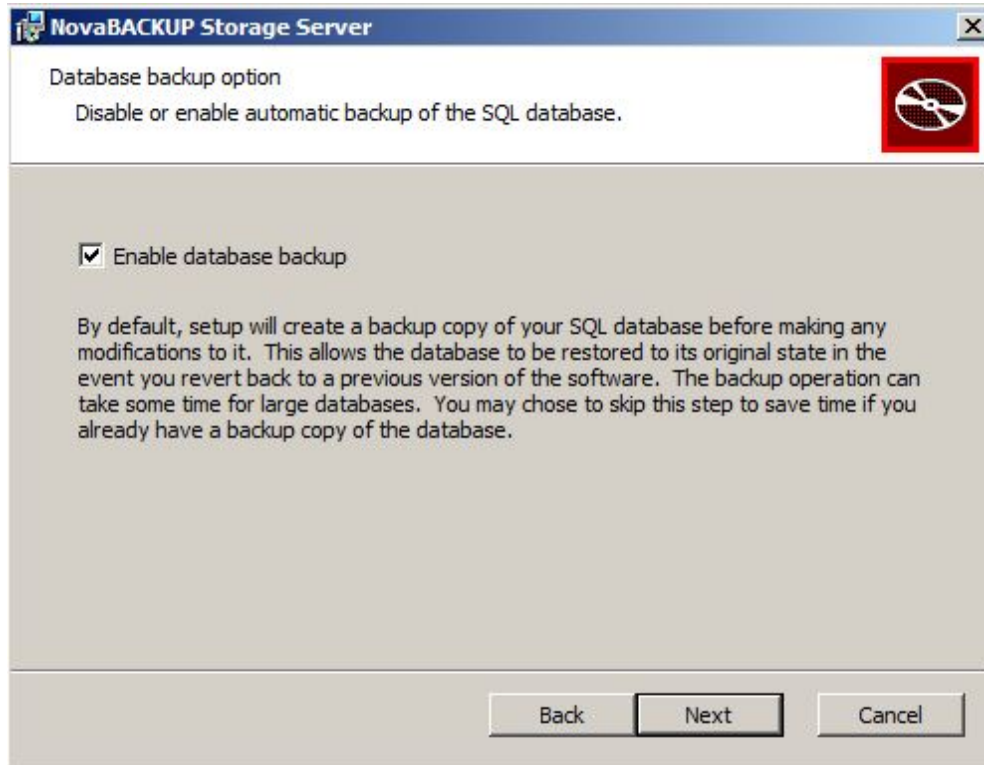
The screenshot shows a Windows dialog box titled "NovaBACKUP Storage Server". The main text reads "SQL Database Server Windows Authentication" and "Enter the credentials with Administrator privileges for the SQL Datab... \sqlexpress.". There is a red warning icon on the right. Below the text are three input fields: "Domain:" (empty), "Username:" (containing "Administrator"), and "Password:" (containing ten dots). At the bottom are three buttons: "Back", "Next", and "Cancel".

Click Next.

Step 7

The screenshot shows a Windows dialog box titled "NovaBACKUP Storage Server". The main text reads "SQL Database Server Windows Authentication" and "Enter the credentials with Administrator privileges for the SQL Datab... \sqlexpress.". There is a red square icon with a white circle and a diagonal line through it. Below the text are three input fields: "Domain:" (empty), "Username:" (containing "Administrator"), and "Password:" (containing seven dots). At the bottom are three buttons: "Back", "Next", and "Cancel".

If this is a new installation, as opposed to an upgrade, then you will be prompted for the name and password for the backup administrator account. Enter the required information and click Next.

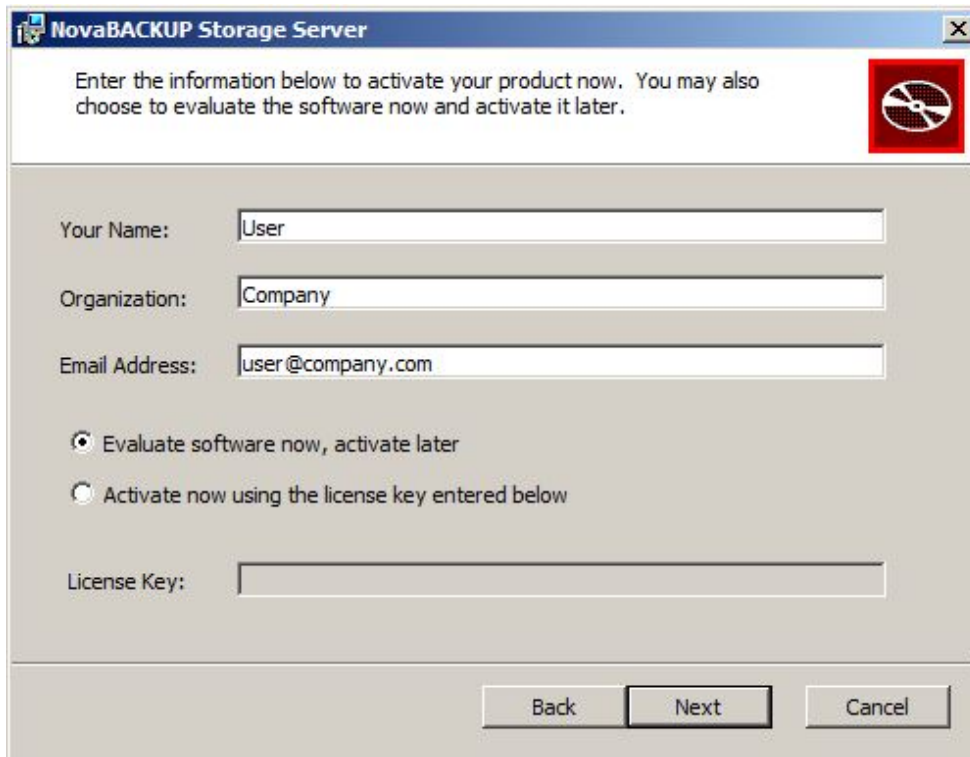
Step 8

If you are updating the backup server, and a database already exists, then you will be prompted to enable database backup. Setup will automatically create a backup copy of the database if this option is enabled. If you have taken steps to backup the database manually prior to running setup, then you can reduce installation time by turning off this option.

This option is enabled by default to ensure that the database can be restored to its state prior to upgrading if necessary.

Click Next to continue.

Step 9



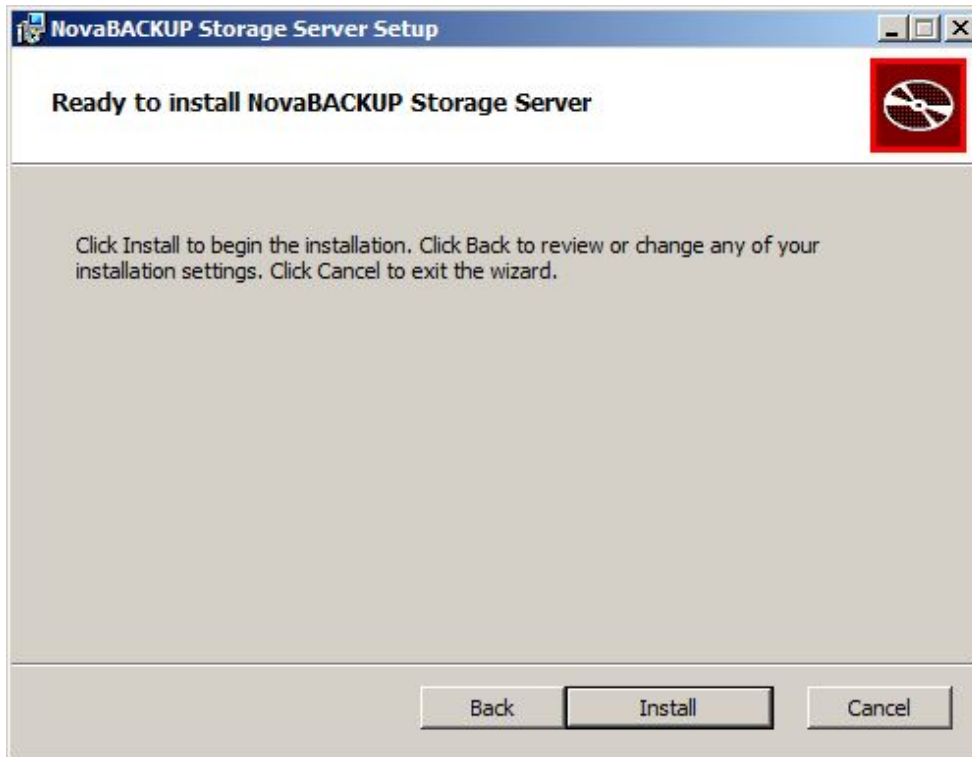
The screenshot shows a Windows-style dialog box titled "NovaBACKUP Storage Server". The dialog contains the following elements:

- A header bar with the title and a close button (X).
- Instructional text: "Enter the information below to activate your product now. You may also choose to evaluate the software now and activate it later." A red CD-ROM icon is positioned to the right of this text.
- Three text input fields:
 - "Your Name:" with the text "User" entered.
 - "Organization:" with the text "Company" entered.
 - "Email Address:" with the text "user@company.com" entered.
- Two radio button options:
 - Evaluate software now, activate later
 - Activate now using the license key entered below
- A "License Key:" text input field, which is currently empty.
- Three buttons at the bottom: "Back", "Next", and "Cancel". The "Next" button is highlighted with a darker border.

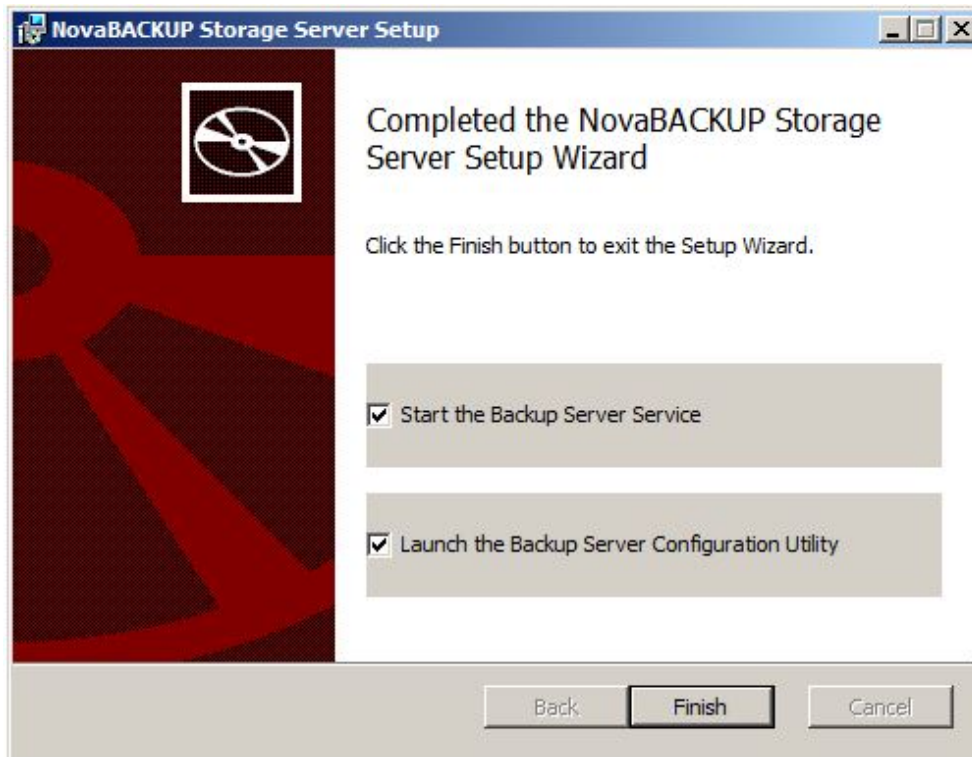
Enter your contact information which will be needed in the event you require technical support. All fields are required to activate the software. The license key is not needed if you are choosing to evaluate the software. Evaluation software may be activated later using the Configuration Manager, as discussed in the Licensing section.

Click Next to continue. There may be a short delay as your information is registered.

At this point the installer has all the information required. Click the Install button to install the software.

Step 10

A new installation should complete within a few minutes, whereas the time needed to perform an upgrade will depend on the size of the existing database. For large databases the installation could take hours. Once the software is installed you will be presented with the screen shown on the next page.

Step 11

The Final screen shows Start the Backup Server Service and Launch the Backup Server Configuration Utility. These items are checked by default, and will run, if checked, once you click Finish.



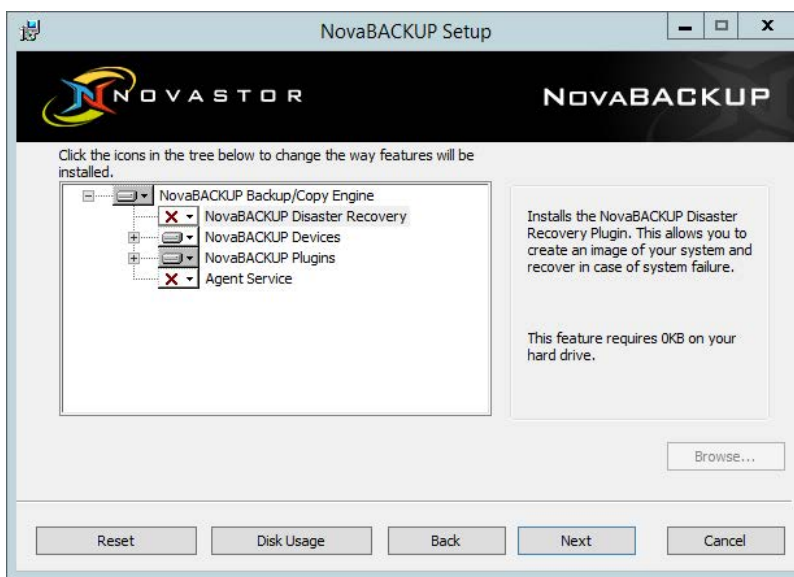
A good practice is to go to Windows services and set the service to run with your Administrator credentials before starting the service and the Configuration Manager.

xSP Local Restore

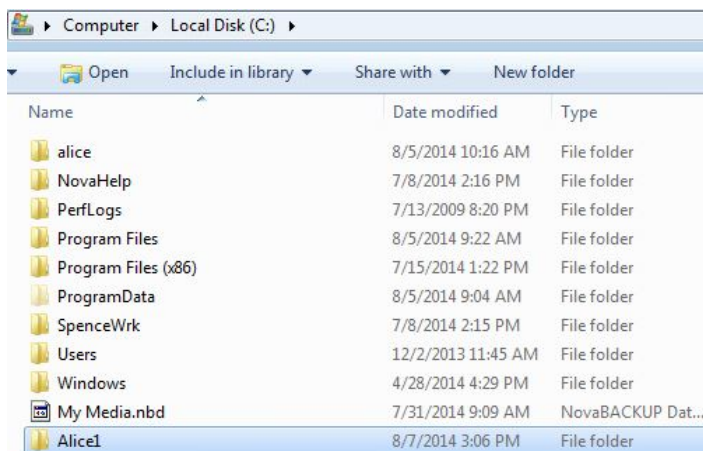
Use local restore if you wish to restore from Server Storage that has been copied to your computer rather than connecting to the Backup Server online.

xSP Local Restore Setup

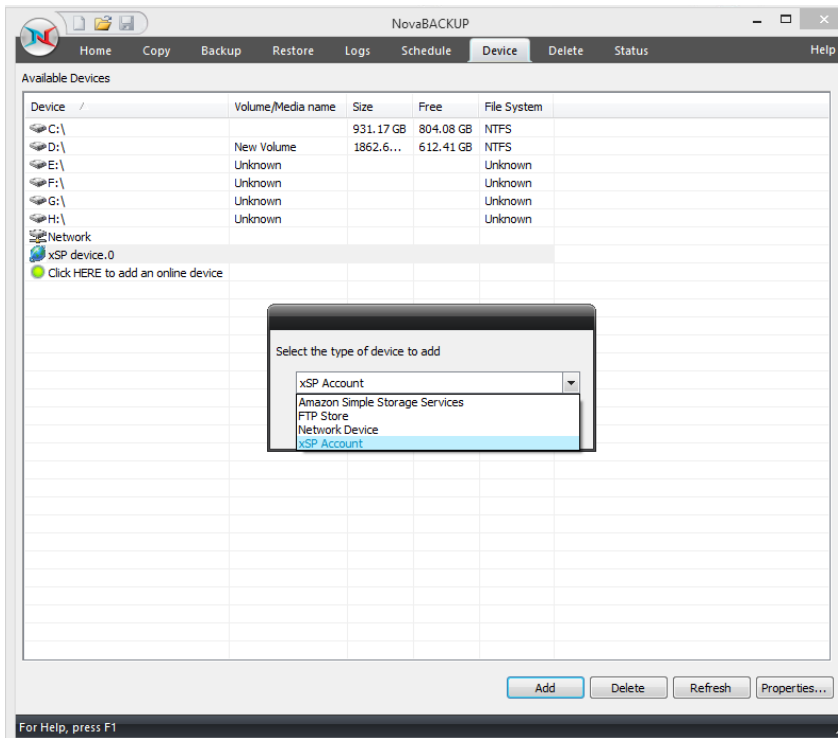
1. Install the xSP client on the machine you want to restore files.
NOTE: You may use the custom install and disable the Disaster Recovery and Agent Service feature for a quick use.



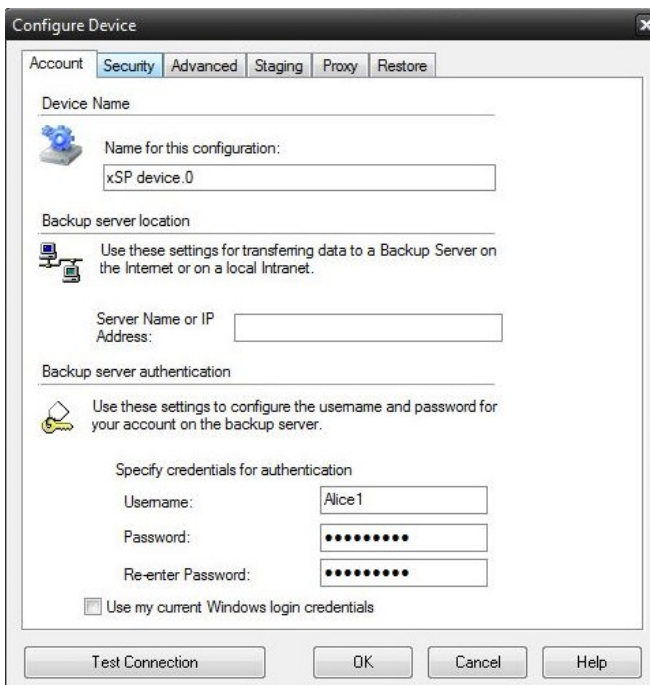
2. Copy the user's data storage folder to the local machine or a location where the client can access the files.



- On the xSP client Device tab, click **[Add]** and select the xSP Account and click **[OK]**.



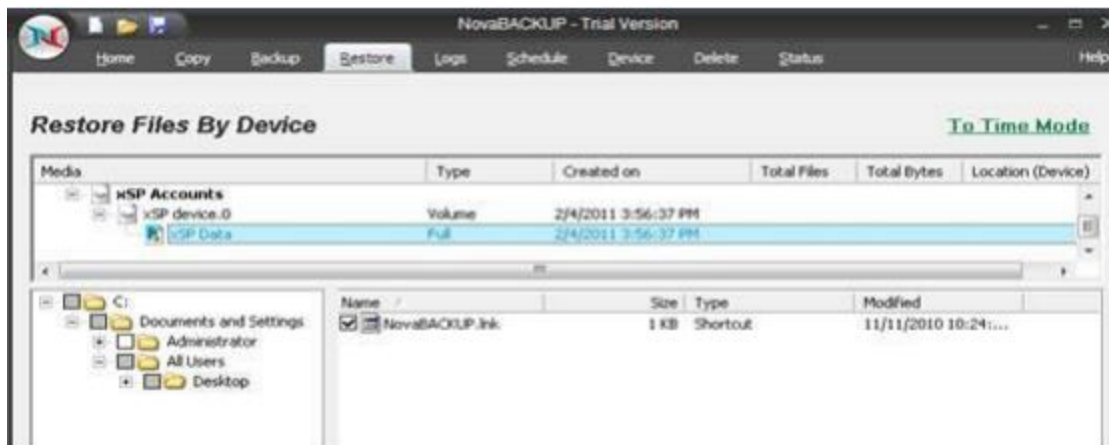
- Enter just the username and password. Don't click **[OK]** yet and go to the Restore tab.
NOTE: Leave the Server Name or IP Address field empty



5. Select the 'Restore from local server storage' checkbox and click the **[Browse]** button and locate the user data files folder you copied from [Step 2]. Click **[OK]** to continue adding the device on the client.



6. Once the xSP device has been added, you may go to the Restore tab and restore any files to an alternate location.



Remote Settings Reference

NovaStor xSP v18.5

Device Level - NovaBACKUP® xSP Device Settings				
Remote Settings Value	Description	Default Value	Variables	Maps To
PurgeOldFiles	Whether or not to remove files out of the cache directory when they have not been modified after 'PurgeFileLength'	1	0/1	n/a
SaveFullBackup	Save the first full backup to the cache directory so there is no need to send a file in full again that has changed.	0	0/1	n/a
UsePatching	Whether or not to use FastBIT	1	0/1	n/a
WaitOnLockedFiles	Try waiting 15 seconds for a locked file to unlock	1	0/1	n/a
CopyFileToWork	Copy file to work folder before backing up	1	0/1	n/a
SendDeletedFiles	Send deleted file list to the backup server.	0	0/1	n/a
ForceUsePasswordForKey	Force using the password for the secret key.	0	0/1	n/a
ForceSetSecretKey	Force the secret key to be enabled.	0	0/1	n/a
BandwidthLimited	Whether or not bandwidth limitation is enabled.	0	0/1	n/a
ServerPort	xSP Server port number.	308	Numeric	n/a
NumRetries	Number of retries that it will try to reconnect to the xSP server during a backup.	12	Numeric	n/a
RetryWaitSeconds	Number of seconds between retries to connect to the xSP server.	600	Numeric	n/a
PurgeFileLength	Number of backups that a file does not change before it is removed from the cache.	5	Numeric	n/a
LowDiskSize	Reserved amount of space on the drive xSP device temp directory is located.	500	Numeric	n/a
PatchSpeed	The compression strength FastBIT will use, 10 being the fastest and least.	10	Numeric	n/a
CompressionSpeed	Backup files are compressed and stored in the cache for later backup comparison. Slower compression, smaller files. Faster compression, larger files. 0 = slow 1 = medium (default) 2 = fast	1	1,2,3	n/a
MaxMBCopy	Max file size to copy to the temp folder.	100000	Numeric	n/a

NovaStor xSP v18.5 Remote Settings Reference

Remote Settings Value	Description	Default Value	Variables	Maps To
MaxPatchWindow	Max file size to attempt FastBIT on.	100000	Numeric	n/a
MinPatchWindow	Minimum file size to attempt FastBIT on.	0	Numeric	n/a
EncryptionType	Type of encryption to use to encrypt files.	7	Numeric	n/a
BandwidthValue	Bandwidth available to the xSP device if BandwidthLimited is enabled.	0	Numeric	n/a
ThrottleValue	CPU percentage to use when computing FastBIT patch.	100	Numeric	n/a
ManagementServerURL	CMC server URL to connect to.	<server>:<port>	AlphaNumeric	n/a
UpgradeURL	Application Update server to connect to.		AlphaNumeric	n/a

Script Level - [Logs] section of xxDef.ini

Remote Settings Value	Description	Default Value	Variables	Maps To
PrintLog			0/1	Same
MailSendAfterBackup			0/1	EmailLog
LogOption			Numeric	LogNotifyOpt
PrintOption			Numeric	LogWriteOpt

Script Level - [Email] section of xxDef.ini

Remote Settings Value	Description	Default Value	Variables	Maps To
MailSMTPAuth			0/1	SMTPAuth
UseSSL			0/1	Same
MailServer			AplhaNumeric	SMTPHost
MailUsername			AplhaNumeric	EmailUserName
MailPassword			AplhaNumeric	EmailPassword
MailFrom			AplhaNumeric	EmailSender
MailSendto			AplhaNumeric	EmailSentTo
MailSMTPPort			Numeric	SMTPPort
MailSubject			AplhaNumeric	EmailSubject
MailTimeout			Numeric	Timeout
MailRetries			Numeric	Retries
MailCCTo			AplhaNumeric	EmailSendCC
MailSenderName			AplhaNumeric	EmailSenderName

Creating a Staged Backup or Import

Staged Backup Creation

This document is going to show you how to perform a Staged Backup on the client for the RWF device and how to import it to the Storage Server. This function is most useful for very large backups that the initial backup you do not want to go over the wire.

PLEASE READ THIS ENTIRE GUIDE BEFORE BEGINNING ANY STAGED BACKUP

1. Setup the user on the Storage Server
2. **[Install]** and setup the RWF device on the client computer
3. In the RWF Configure device settings, enter the Server name, username, and password.

Configure Device

Account Security Advanced **Staging** Proxy Restore

Device Name

Name for this configuration:
xSP device.0

Backup server location

Use these settings for transferring data to a Backup Server on the Internet or on a local Intranet.

Server Name or IP Address: xxx.xxx.x.xxx

Backup server authentication

Use these settings to configure the username and password for your account on the backup server.

Specify credentials for authentication

Username: Alice1

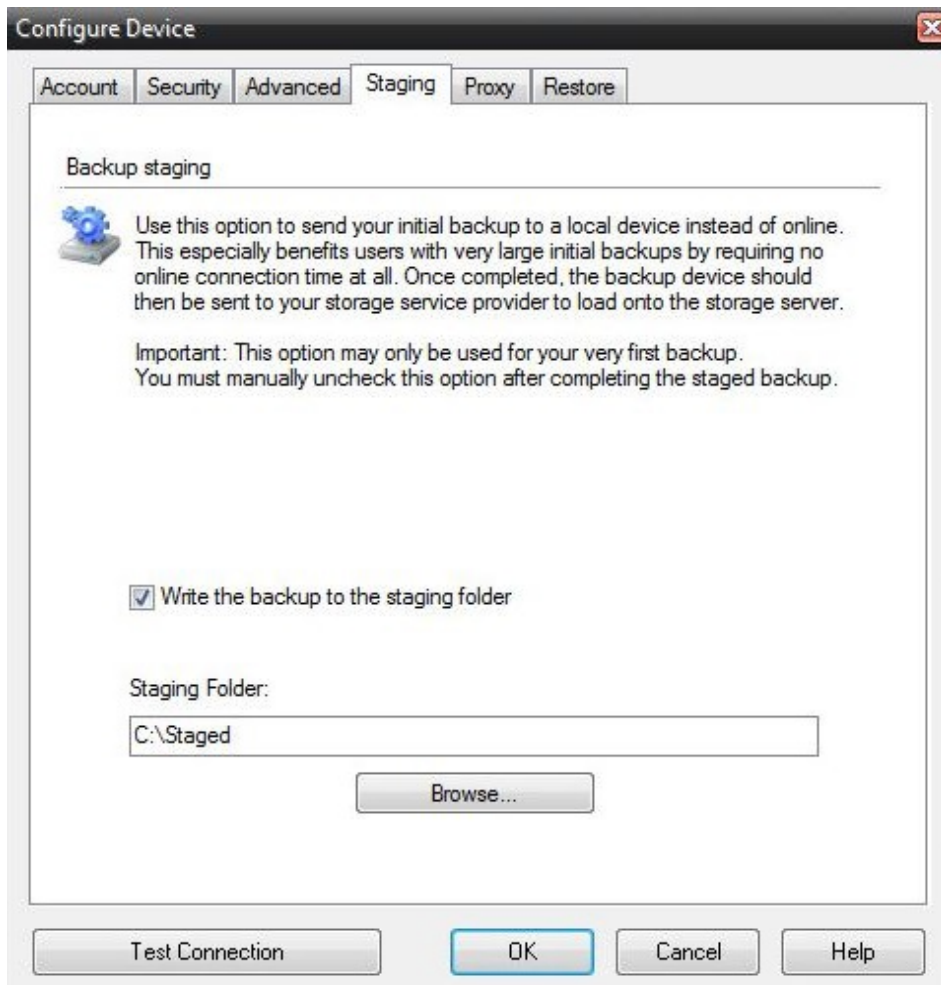
Password: ●●●●●●●●

Re-enter Password: ●●●●●●●●

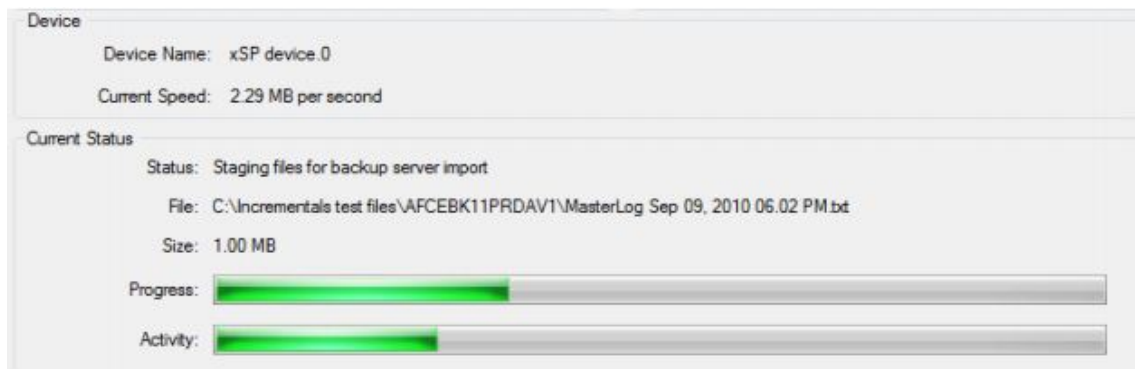
Use my current Windows login credentials

Test Connection OK Cancel Help

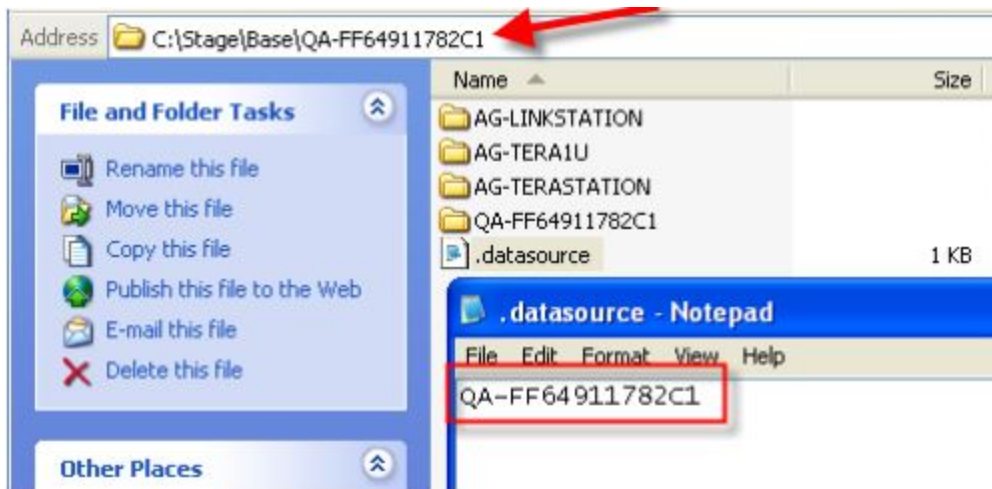
- Before you click OK, go to the Staging tab and configure the staging folder (the folder must exist first), and **[Select]** the checkbox to write the backup to the staging folder.



- Click **[Test Connection]** to verify **[OK]** to accept the changes and continue to add the RWF device.
- Your first backup should now be going to your staging folder.



7. Make sure the **.datasource** file appears in the staged data and that it contains the computer name where the Staged was performed.



8. **NOTE:** The user must NOT do a backup until the staged backup is imported to the backup server, so disabled any schedules that may be setup for the user.
9. When the import is done on the Storage Server side (before running your second backup), go back to Configure Device and [UNCHECK] the staging option below and click [OK]

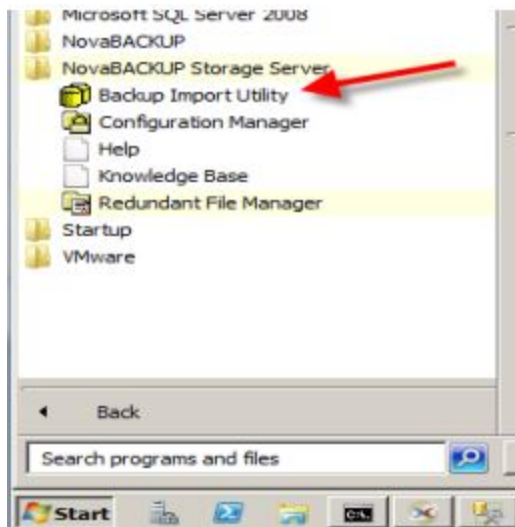


Import

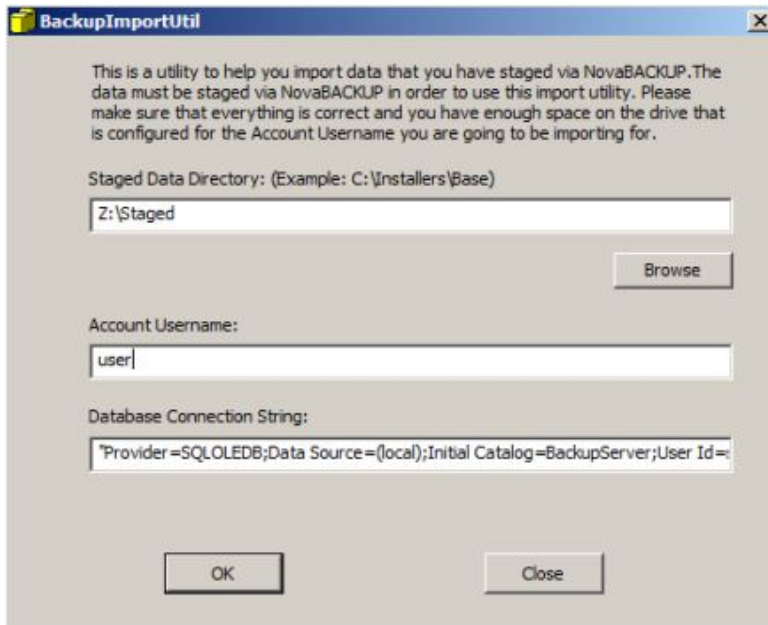
Get the user's staged data on the storage server or accessible to the storage server via UNC path or USB drive.

BACKUP IMPORT UTILITY

1. From the Storage Server, launch the Backup Import Utility

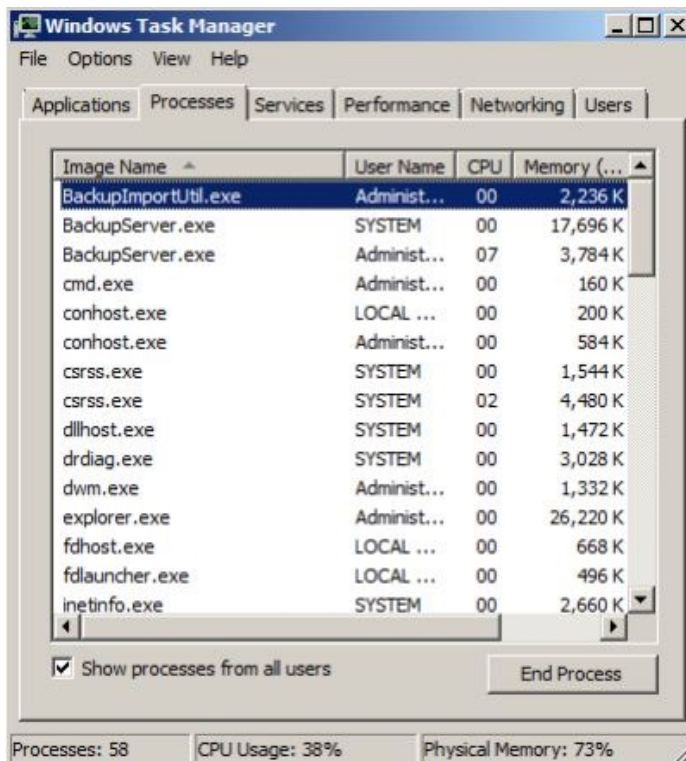


2. Point the user's **BASE** folder and [**Enter**] the account username

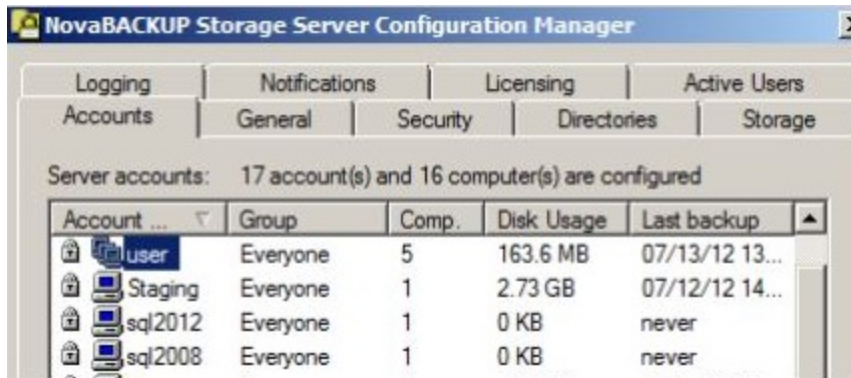


3. Click [OK] to start importing the staged backup to the Storage Server.

NOTE: There is no real 'progress' indicator when the import is done. If you check the windows task manager, you will see another copy of BackupServe.exe running. One of them will close when the import is done.



4. After the import is done, **[Close]** the Import utility and go to the Configuration Manager to verify the user's Disk Usage.



The screenshot shows the 'NovaBACKUP Storage Server Configuration Manager' window. It has a menu bar with 'Logging', 'Notifications', 'Licensing', and 'Active Users'. Below that is a sub-menu bar with 'Accounts', 'General', 'Security', 'Directories', and 'Storage'. The main area displays 'Server accounts: 17 account(s) and 16 computer(s) are configured'. A table lists the accounts with columns for 'Account ...', 'Group', 'Comp.', 'Disk Usage', and 'Last backup'.

Account ...	Group	Comp.	Disk Usage	Last backup
user	Everyone	5	163.6 MB	07/13/12 13...
Staging	Everyone	1	2.73 GB	07/12/12 14...
sql2012	Everyone	1	0 KB	never
sql2008	Everyone	1	0 KB	never

Complete

Congratulations! You have now finished running a Stage backup and Import process for the user. At this point the client software can do backups and restores from the storage server. Make sure to uncheck the 'Write the backup to the staging folder' on the client side before the user performs its next backup (Step 9).

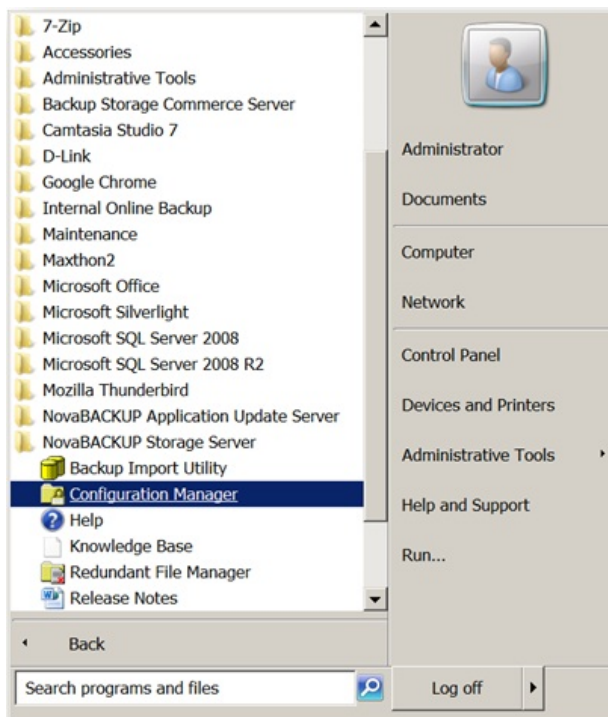


Configuration Manager

Getting Started

The NovaStor Storage Server Configuration Manager is your primary access point for managing NovaStor Storage Server. The Storage Server Configuration Manager provides you with access to all the main configuration menus required to manage your Storage Server.

The NovaStor Storage Server Configuration Manager is launched from the Start Menu. When the Start Menu is opened, move the mouse over **All Programs** until the additional program screen opens, or click on All Programs to reveal the additional programs available. Then, click on **NovaStor Storage Server** and select **Configuration Manager**, as shown here:



Left-click on the **Configuration Manager** menu item to open the NovaStor Storage Server Configuration Manager.

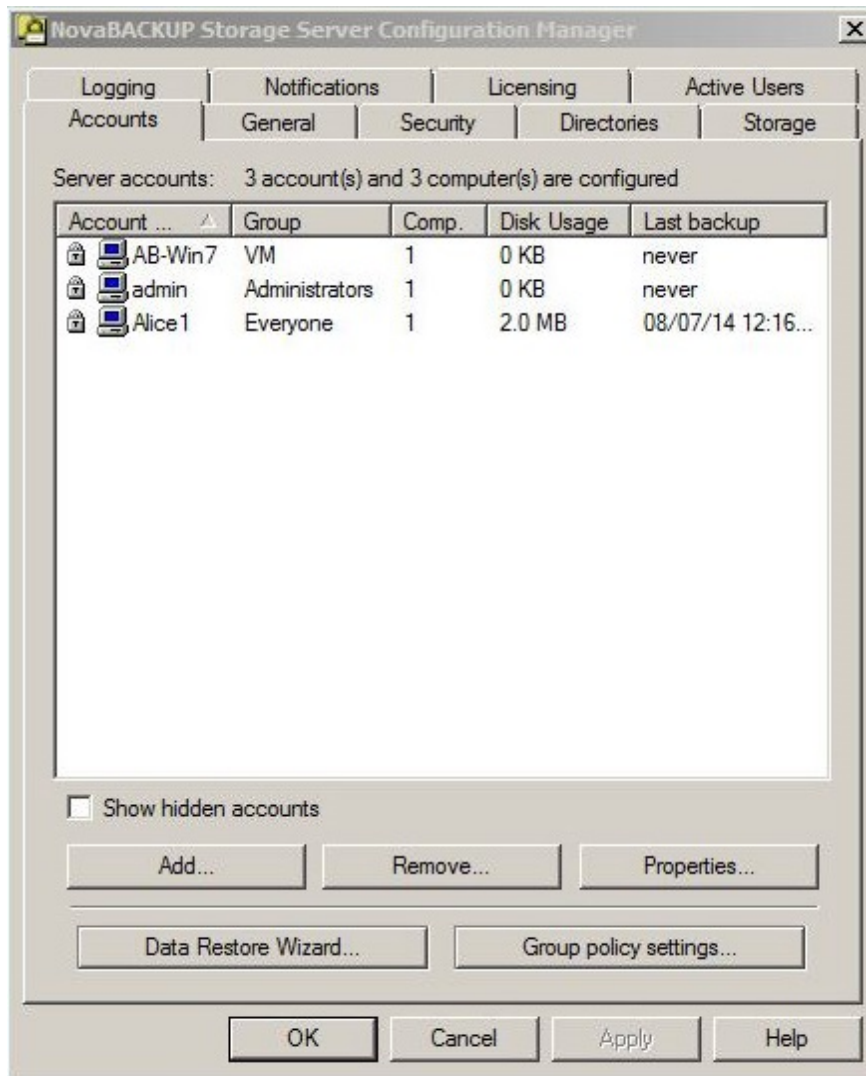


The NovaStor Storage Server Configuration Manager is compatible with Windows Server 2012 Core. Simply run the BackupServerUtil.exe program from the command prompt. It is installed in the \Program Files\NovaStor Storage Server folder on your system drive. For additional information, see the Command Line Reference section of this document.

Accounts Tab

Accounts

This is the tab that is opened by default, as shown below. The primary function of this tab is to enable you to add, remove, or view the Properties of your client accounts that use this Storage Server for their backups.



Accounts management screen:

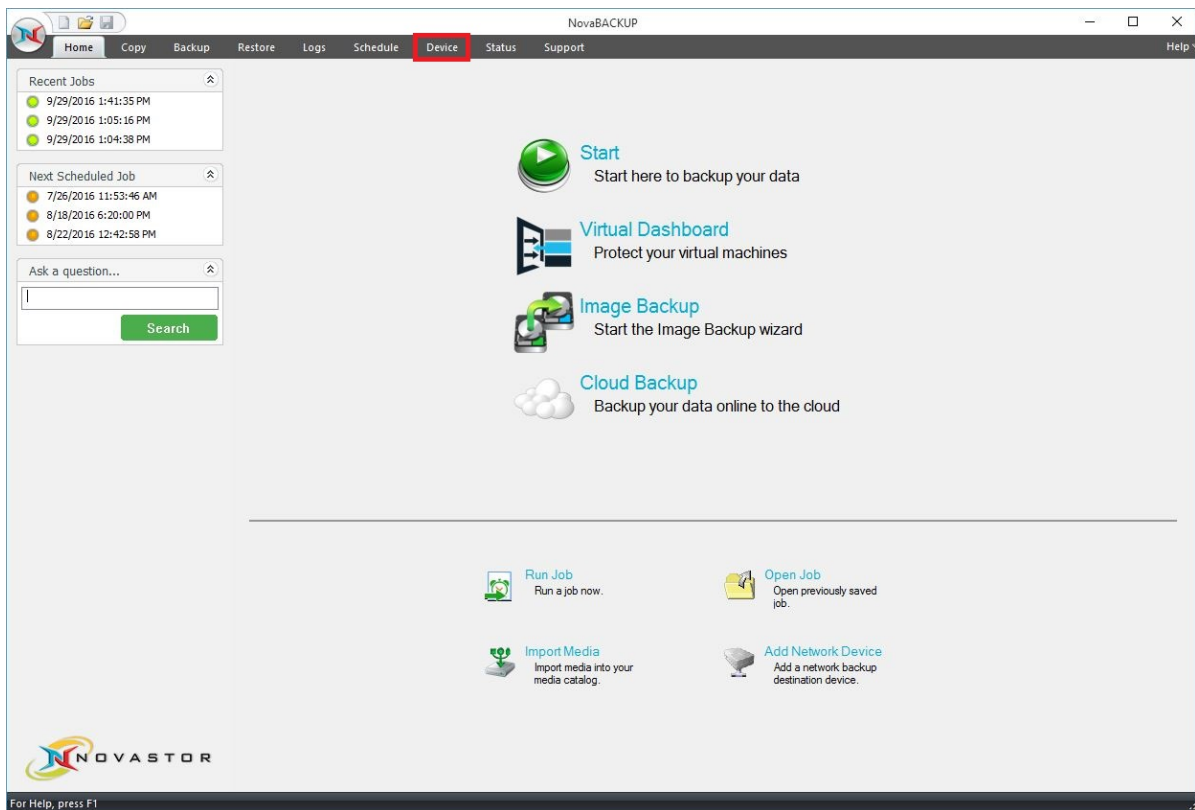
You can access the account properties and add or remove an account all on the same screen. The Accounts Properties Screen shows the properties of the account you have selected, and the Accounts Add Screen has not yet been populated with account information. In addition, you can create and manage Groups in this screen.

A typical account properties screen has three tabs: General, Quota, and Settings.

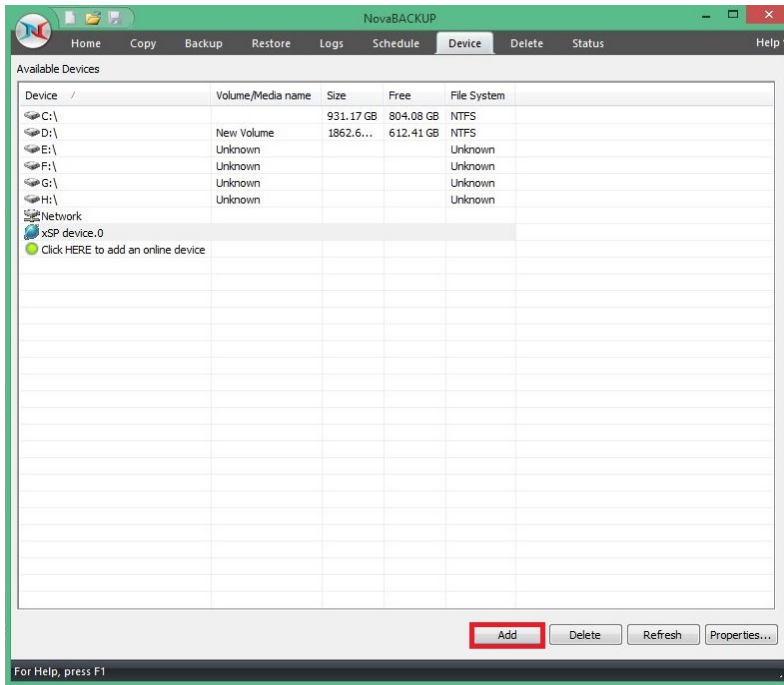
Connecting a Client

In order to see review an account's backups and be able to do a Data Restore, you must configure the account on the client side.

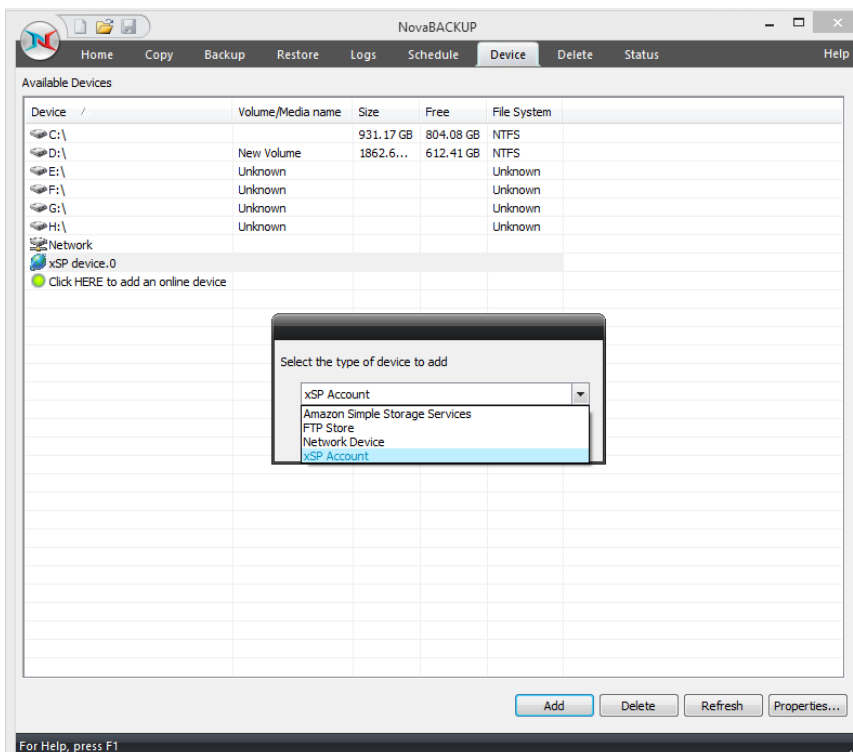
1. On the machine that has NovaStor Installed, click on the Device tab.



2. Click the Add button towards the bottom right corner of the screen and a new window should pop up.



3. On the drop down menu, select xSP device



4. A new window pops up, here, type the IP address of the machine that has NovaStor Storage Server locally installed and Type the username and password for the account you created on the NovaStor Storage Server to create the link

Configure Device

Account Security Advanced Staging Proxy Restore

Device Name

Name for this configuration:
xSP device.0

Backup server location

Use these settings for transferring data to a Backup Server on the Internet or on a local Intranet.

Server Name or IP Address: xxx.xxx.x.xxx

Backup server authentication

Use these settings to configure the username and password for your account on the backup server.

Specify credentials for authentication

Username: Alice1

Password: ●●●●●●●●

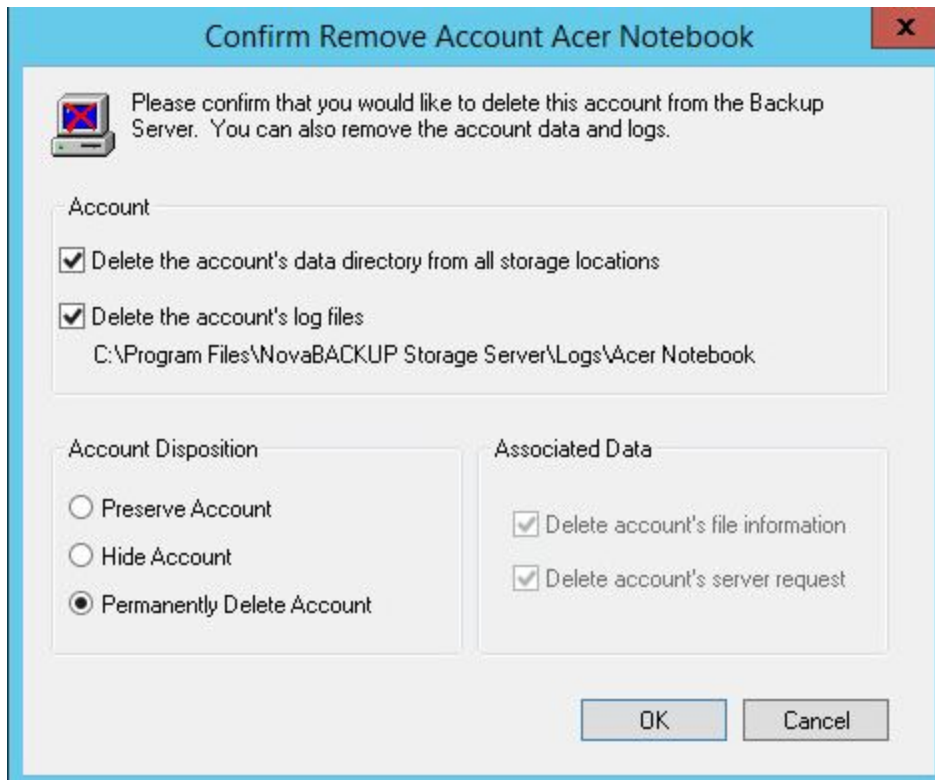
Re-enter Password: ●●●●●●●●

Use my current Windows login credentials

Test Connection OK Cancel Help

Deleting an account:

In addition to adding and modifying accounts, you can remove an account from the system by selecting the account in the list, then pressing the Remove button. A confirmation dialog will prompt you or additional instructions, as shown below.



The default action is to delete all file data associated with the account from disk storage and remove all account information from the database. You can alter the action based on your needs. For instance, you may choose to retain the account's file data and delete it manually at a later time. Each of the available options is discussed below.

Account Options

Check "Delete the account's data directory from all storage locations" to remove all the account's backed up data from the file system. This does not remove information about the files from the database. CAUTION: Once the data directory is removed, the account will no longer be able to restore any backed up files unless the database has been altered to find the files elsewhere.

Check "Delete the account's log files" to remove the account's log files from the file system. This is a housekeeping option that has no effect on the account.

Account Disposition Options

Select "Preserve account" to keep the account active in the database. Preserving the account, while removing all the associated data, has the effect of resetting the account back to its initial state.

Select "Hide account" to keep the account in the database but mark it as deleted. Hidden accounts can be restored later if needed. They are automatically restored if an account with the same name is added through the Accounts tab.

Select "Permanently delete account" to remove the account and all associated data from the database. CAUTION: Permanently deleted accounts cannot be recovered.



To view hidden accounts, check the "Show hidden accounts" checkbox on the Accounts tab. You can then use the Remove button to permanently delete the account. You cannot add hidden accounts, or change their properties.

Associated Data

Check "Delete account's file information" to remove all data about the account's backed up files from the database. CAUTION: The account will no longer have access to previously backed up files, although it can back up new files. This option is not available if the account is being permanently deleted.

Check "Delete accounts server requests" to delete the accounts request history from the database. This is a housekeeping option that has no effect on the account. This option is not available if the account is being permanently deleted.

Properties

Alice1 Properties

General | Quota | Settings | Tools

This window allows you to configure an account on the backup server.

Account name:

Reset Password:

Confirm Password:

This account is enabled

This account is an evaluation account

This account's data can be restored using the master decryption key

Number of computers that can be backed up using this account. Each computer equals one license.

Allow separate computers to backup to this account

Member of group: Restorable window:

Primary storage location:

Restrict backed up files to primary storage location

Account data folder name (must be unique):



Please be aware that you are only able to manage passwords in this screen if you have used SQL authentication during the installation. If Active Directory is handling authentication, these fields will not appear. If you want to change authentication methods after you've installed, please contact support for details on this.

The General Tab

Pictured above is the General Tab, which is used to set the general settings for a new or existing account. It specifies where the user's data will be stored, assigns the account to a group, and sets the length of time that restorable data will be held. Group information is selected from the dropdown menu. You can only select a pre-defined group to which this account can be assigned. When an account name is entered, a password is not required. A password can be added after the account is created.

Accounts tab allowed to backup files from zero or more computers. Each computer consumes one of the available licenses. The default number of computers for an account in the Administrators group is zero, which effectively prevents an Administrator account from backing up any files. The default for accounts in other groups is one computer. The number of computers assigned to any account can be set to any value from zero to the maximum number of licenses available.

Normally, an account can only have one simultaneous connection to the Storage Server, even if it is allowed to backup more than one computer. The **Allow separate computers to backup to this account** check box will enable multiple computers to simultaneously access the Storage Server using the same account.

The **primary storage location** specifies where the backup server will cache certain account information. The storage location is selected from a list of locations specified on the Storage tab, which will be discussed more in a later section. In addition to account information, this is also where an **account data folder** will be created, which serves as a repository for files that are backed up by the client that holds the account. By default, the data folder name is the same as the account name. You can change the data folder name to suit your own needs, but it must be unique across all accounts.

As the client backs up files they are stored in the data folder. If the disk that contains the folder fills up then file data will automatically be directed to an alternate storage location if one is available. The automatic redirection feature can be disabled for the account by checking Restrict backed up files to primary storage location.

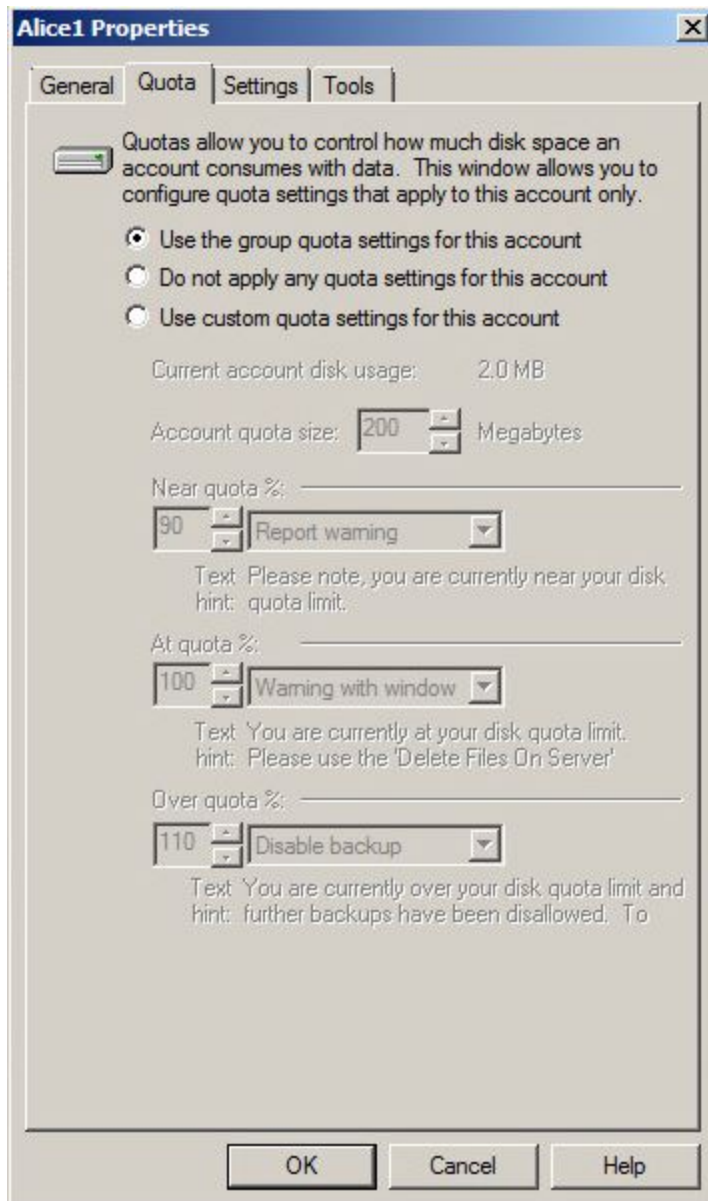


For new installations, setup creates the default storage location. C:\UserData. For upgrades from versions prior to 12.0, setup creates storage locations based on account information found in the existing database. Upgraded accounts will be restricted to the primary storage location for compatibility with the older software. After an upgrade, review the account properties to make any desired adjustments to the default settings.



As of version 13.0 it is possible to change the primary storage location even after the account has been used to back up files. The storage files will be moved from the old location to the new one, which may take a considerable amount of time for large accounts. Any unused files and directories are left in the old location and may be manually deleted after inspection by the administrator.

The Quota Tab



You can set up quotas on individual accounts or set a quota on a group. By default when you create an account, there are no quotas or limitations in place. Also note that your Storage Server can send quota related warning reports, pop-up warning windows inside the client, or even disable a client's backup. All this can be configured in this screen.

The Settings Tab

This screen enables you to add a new setting, edit the value of a setting, or delete a setting from this account. To obtain the list of available settings, please visit <http://www.novastor.com/en/documents> and download the "Remote Settings" document.

Returning to the Accounts tab will occur automatically after you press **OK** or **Cancel** in the Account Properties or Account Creation screen.

There are two more features selectable from buttons on the Accounts Tab: **Data Restore Wizard** and **Group Policy Settings**.

The Tools Tab

This tools tab provides account maintenance tools that may be required in some circumstances.

The **Computer Editor** gives the administrator a way to change the name of one or more computers associated with an account. This should only be necessary in situations where an old or damaged computer is replaced with another having a different name. Generally, it is simpler to assign the same name to the new computer when it is configured, but there may be times when this is not feasible. Changing the name using the Computer Editor makes it possible to associate existing, backed up files with the new computer without consuming another computer license.

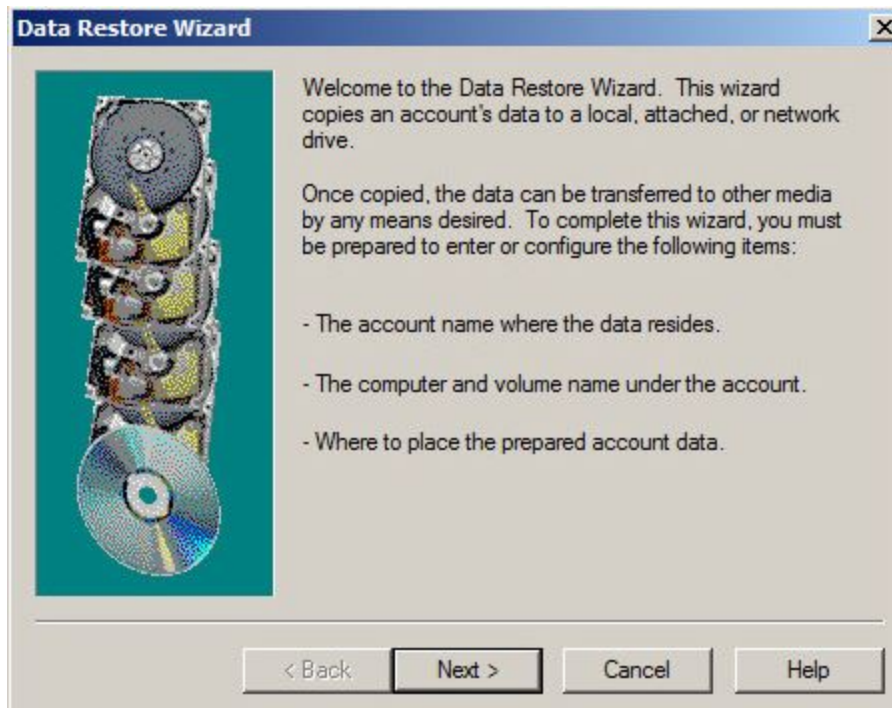
The **Storage Size Updater** scans the file system, tallies the storage space used by the account, and updates the database. This is useful in situations where accurate usage is required for billing purposes. This is normally not required for accounts that were created using version 12.5 or later of the software which maintains byte-level accuracy in the database. Older versions used a fractional accounting system that had the potential to introduce rounding errors.

Returning to the Accounts tab will occur automatically after you press OK or Cancel in the Account Properties or Account Creation screen.

Data Restore Wizard

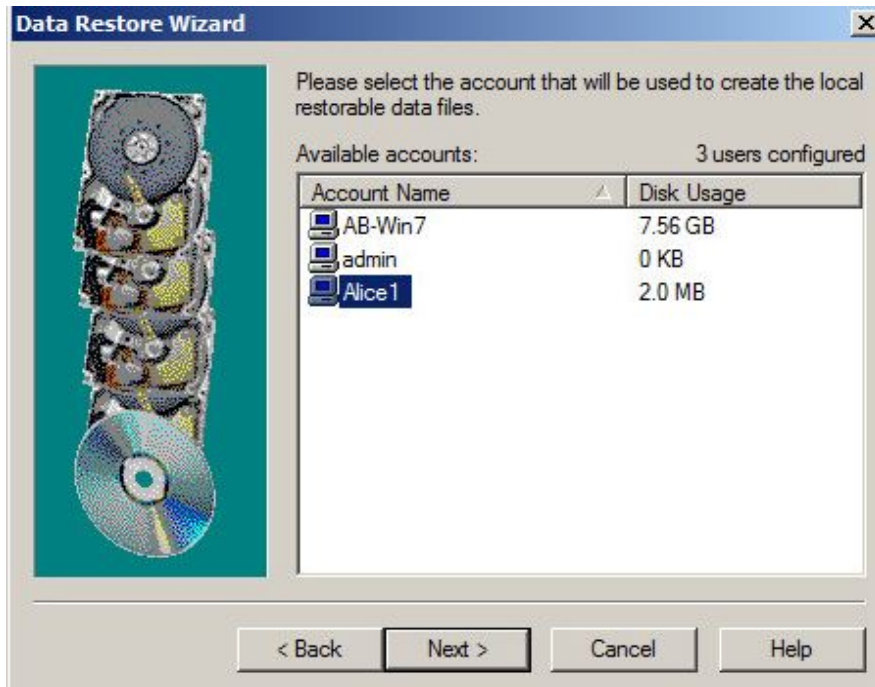
The Data Restore Wizard copies an account's backed up files to a designated output folder. If desired, the output folder can be transferred to other media, such as optical disk, by whatever means you have available. After moving this output media so it is accessible to a backup/restore client, you can then run a restore process using local restore mode without any need to connect to the Storage Server. The local restore mode can be selected by going to the restore tab in the client's account properties screen. You can then restore individual files or the account's entire backup.

The initial Data Restore Wizard screen looks like this:

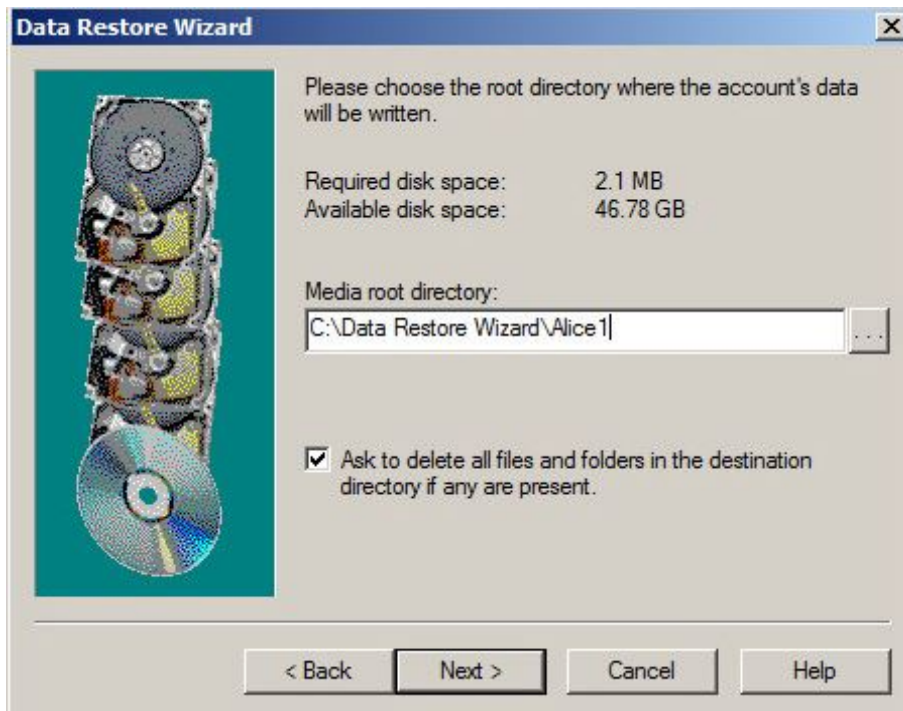


Once the wizard opens, you will see a list of accounts and the current disk usage of each. This is shown on the next page.

Here you select the account you want to restore, and press Next. Then select a volume that you wish to restore, such as the C: drive. The Data Restore Wizard will provide information about the space required to make the restore files, and then let you choose a target for the data restore files.



Press **Next**, and you will be asked to select a Media root directory to which the restore files will be written. The option to **ask to delete all files and folders in the destination directory if any are present** appears as a check box. This should be checked if a single directory is used to create restore files for multiple accounts. This way, you will be assured that the account receiving the restore data does not receive data from other accounts.



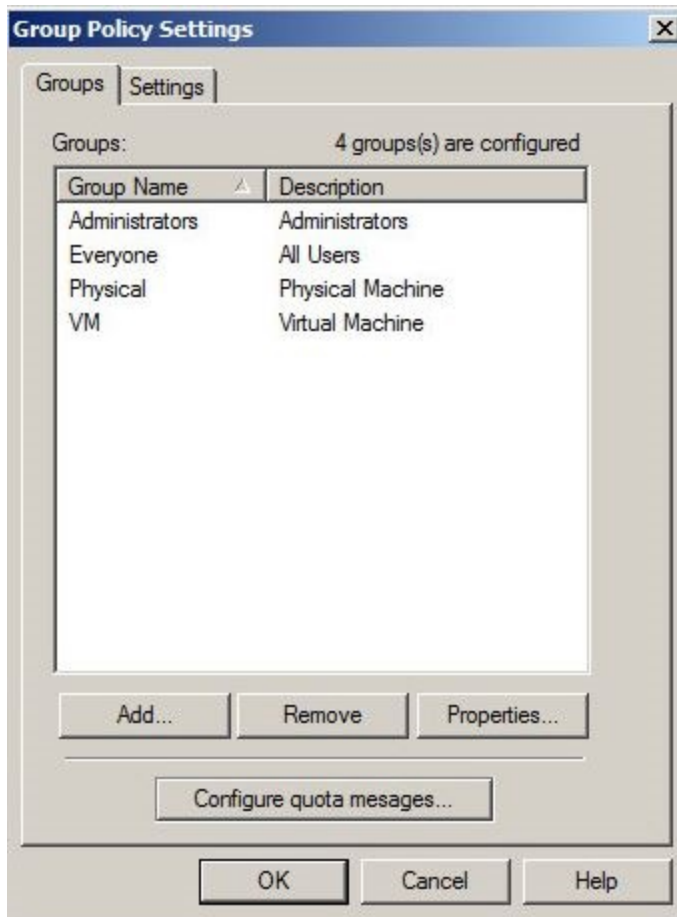
You may browse for a target directory or enter the name of a target directory. The default directory is C:\Data Restore Wizard\<<account name>.

The next screen provides information about the Data Restore process that you've configured. Press **Prepare account data now!** - And the process of creating data restore media will begin.

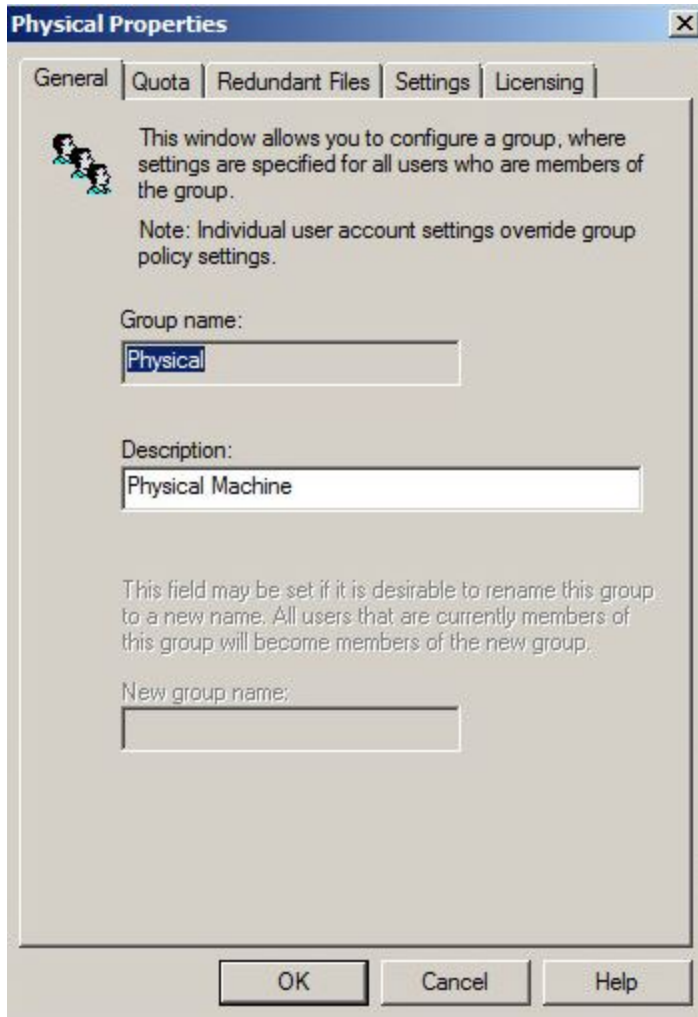
You may, of course, cancel the setup by pressing **Cancel**. You may also press the **Back** button to make changes to the data restore setup.

Group Policy Settings

Opens a list of groups, as shown below. This screen lists the Groups that are already defined, and also enables you to add, remove, or edit the properties of a group.



Click the Add button to add a new group, or click Properties to modify an existing group. In either case, you are presented with a screen similar to the one below.



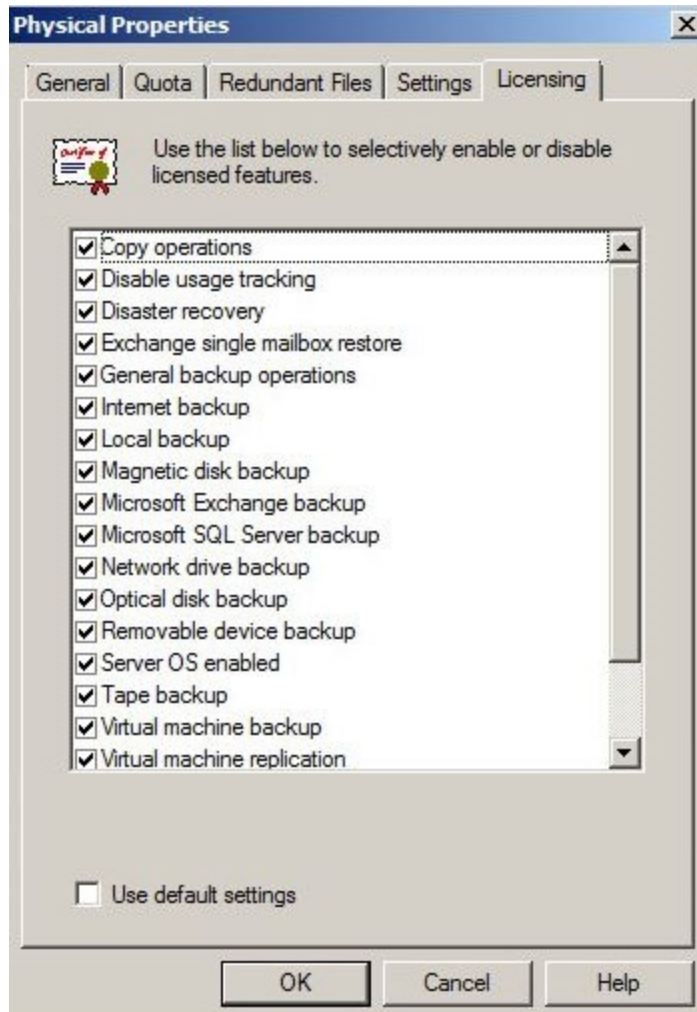
The Quota and Settings tabs serve the same function as already described in the section on account properties, except that they apply to all accounts in the group.

The Redundant Files tab is used in conjunction with the Redundant File Manager to apply a redundant file list to the group.



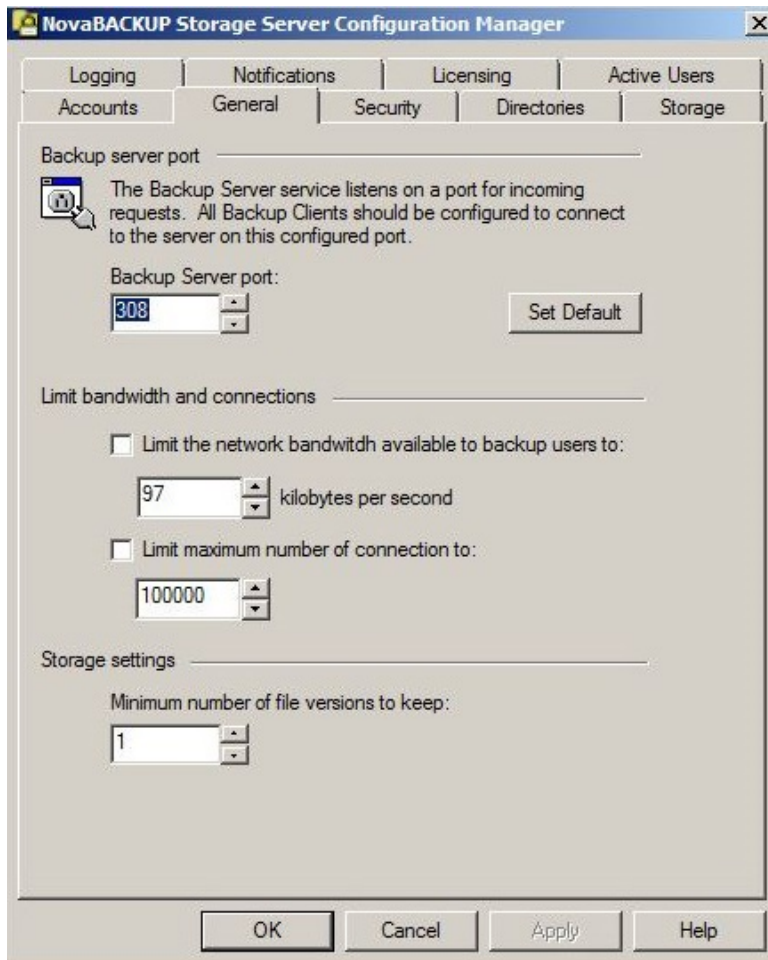
Click on the name of a feature to display a brief description below the list. Check the Use Default Settings box to enable all the features permitted by your license.

The licensing tab, as illustrated below, allows the administrator to enable or disable licensed features for the group. In this example, members of the 20 GB group are not allowed to backup virtual machines.



General Tab

The General Tab has some powerful features that enable you to control certain global settings. The default Storage Server port is 308. Unless you have a reason to change the port, it should remain at 308. If you want to change the port number, you may do so by scrolling up or down in the **Storage Server port**: window, or by typing in a new port number. When that number is entered, press **Set Default** to save the new port as the default.

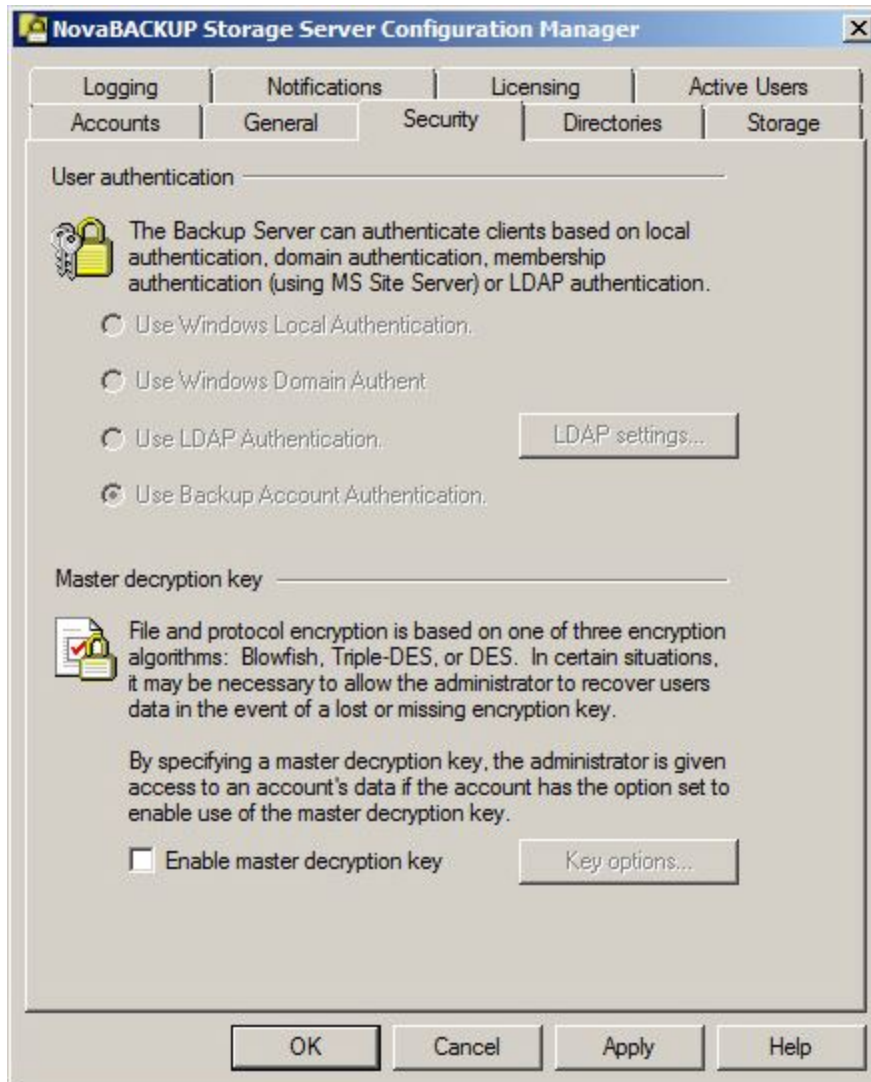


If you change the server port, be aware you will need to edit the client's backupclient.ini file so that the server and client communicate over the same port. You can ask Support for more info about this.

The **Limit bandwidth and connections** section of the General tab allows you to create bandwidth limits for backup users. If you are running other processes on your computer besides functioning as a Storage Server, you may choose to create bandwidth limits.

Security Tab

The Security Tab defines the authentication method you have chosen during the install.

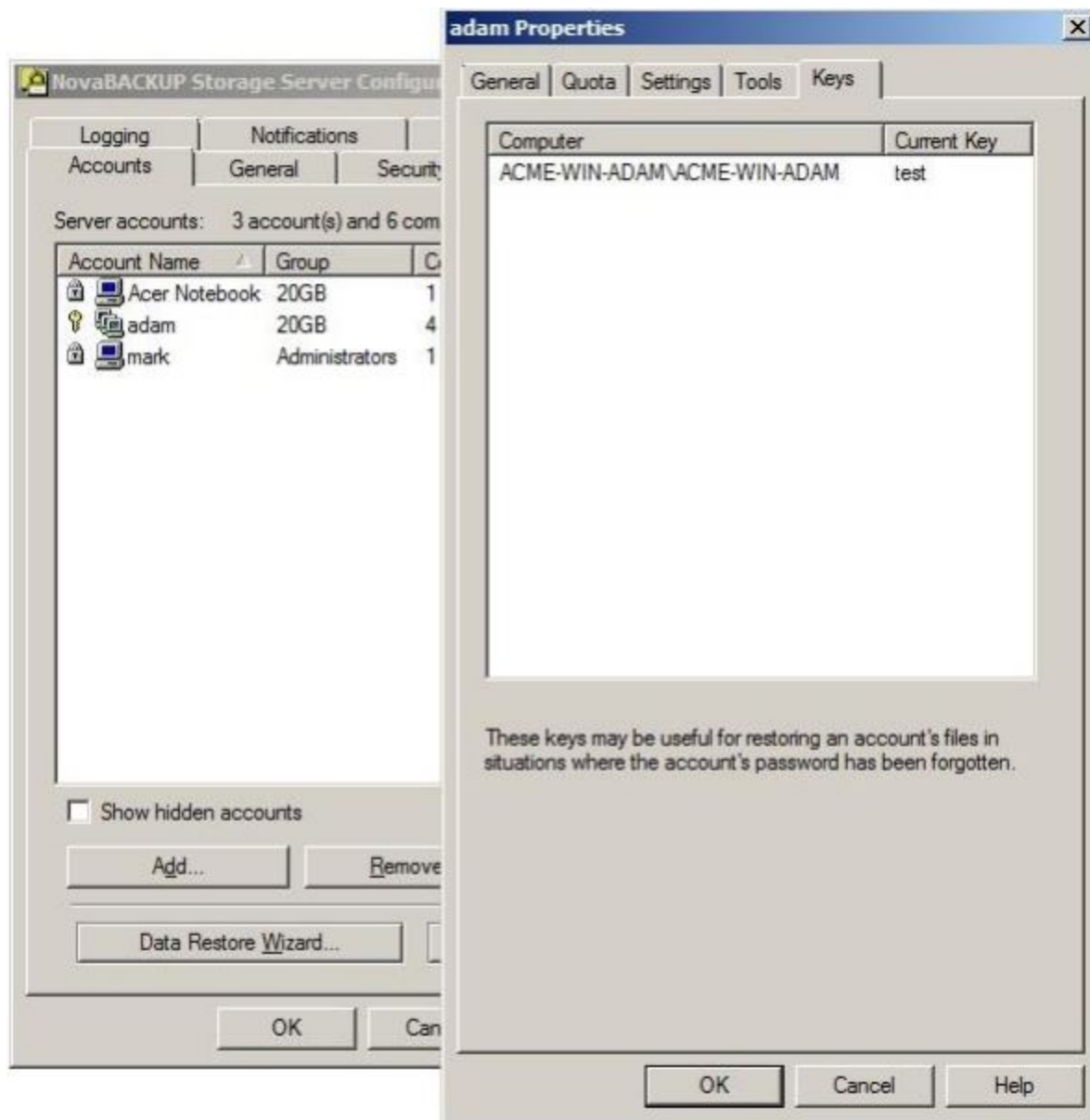


A word about the master decryption key:

The master decryption key is a key that can be used to decrypt user backups. This little feature is often overlooked but it can be extremely valuable. In the event that a user loses or forgets his or her decryption key, use of the master decryption key may be the only way to restore the user's data.

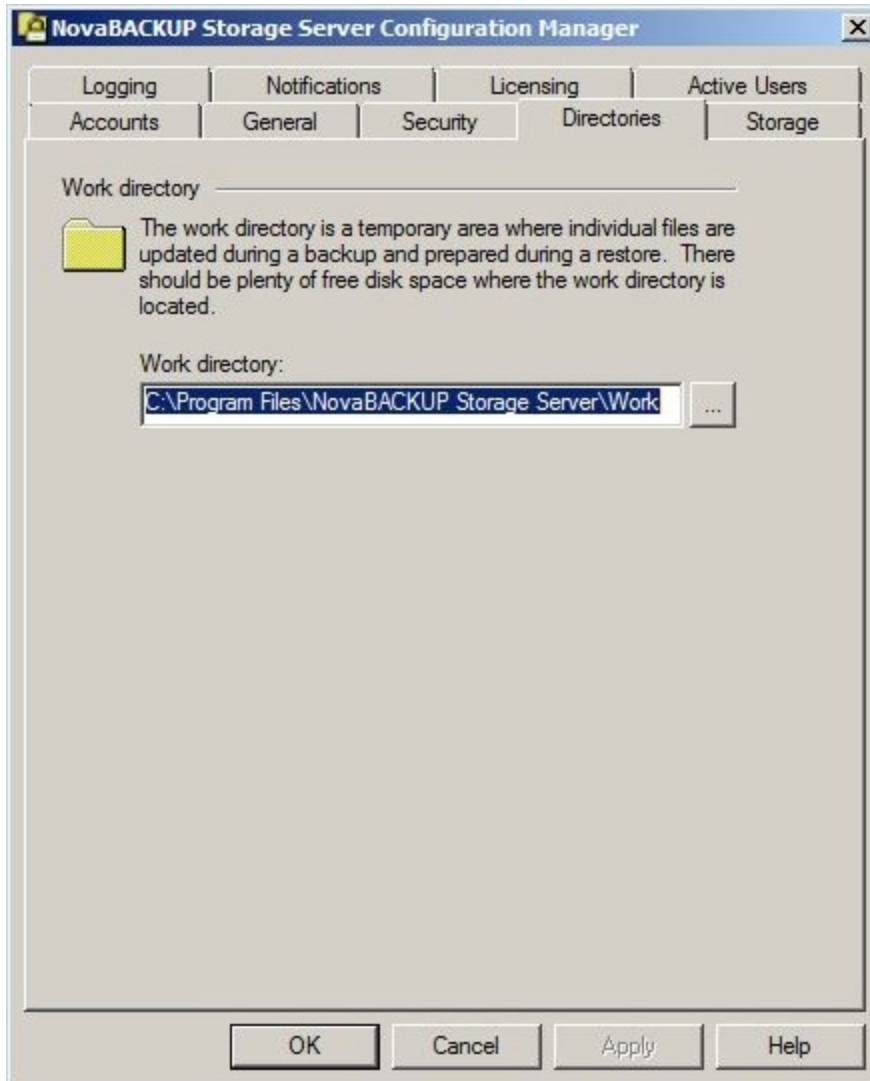
The user may choose to disable the master decryption key using an option in its client software. Although this may be perceived as providing protection from inappropriate activities by the backup service provider, it is also making recovery of data nearly impossible if user encryption keys are lost or forgotten.

If the master decryption key feature is enabled, and the account has been configured to use the feature, then a small key appears to the left of the account name in the accounts list, as shown below for the "adam" account. In addition, "Keys" tab will appear on the account's Properties screen. By clicking on the tab, and entering the master encryption key when prompted, the administrator can view keys used by the account. The key, in turn, can be used to log into the account and restore files.



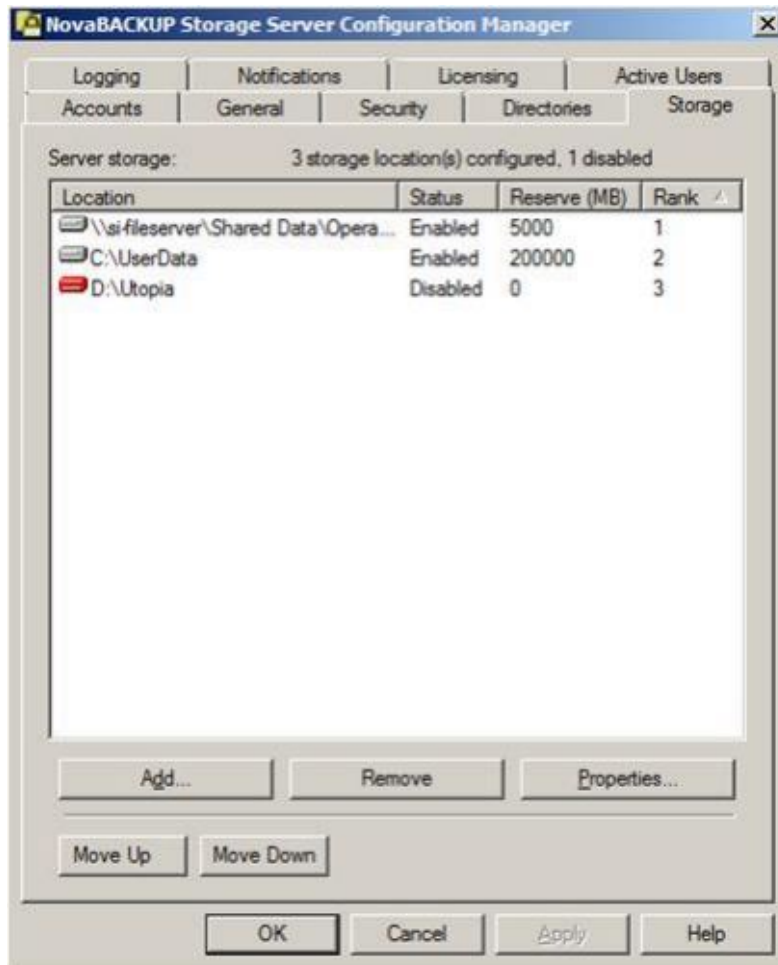
Directories Tab

The Directories Tab specifies the location for the work directory used to store temporary files during the file rollup and restore processes. The amount of work space needed will depend on the number of concurrent jobs and the size of the account's files. Since this number can vary greatly for different environments it is recommended to specify a location that will always have a large reserve of disk space.



Storage Tab

This tab provides a way to define multiple storage locations for backed up files. Each time the server gets a request to store a file it looks at the accounts primary storage location (see Accounts tab) and checks if the free space is greater than the reserve specified for the location. If free space is greater than the reserve, then the file sent to that storage location, otherwise the test is repeated on all other defined locations, in order of rank, until a usable location is found. If none is found, then the backup is aborted.

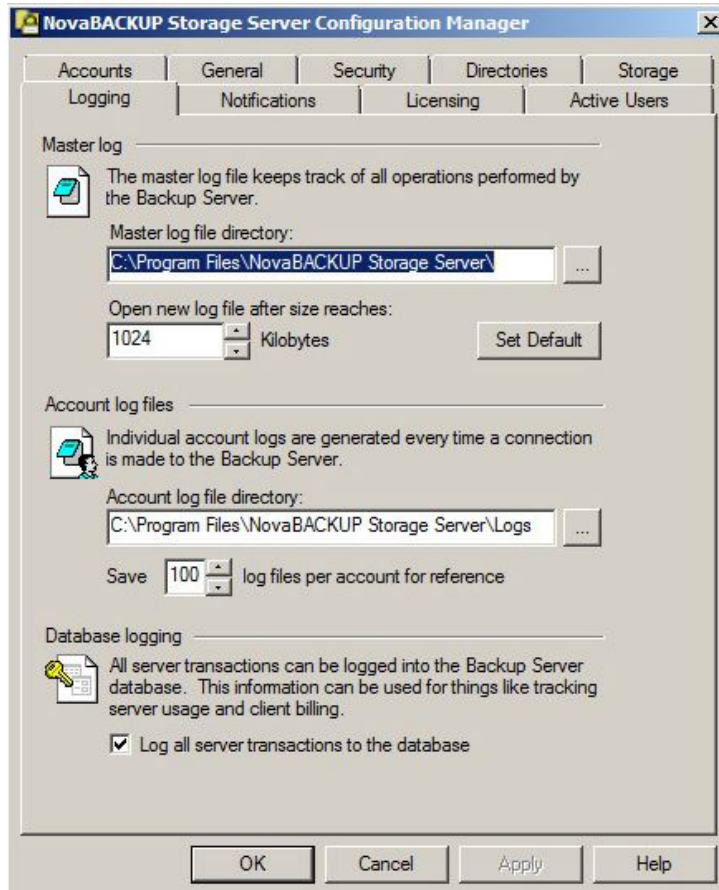


The reserve is only a guideline, not a hard limit. Patches to a file (incremental changes) are always stored in the same location as the original file. Also, the server cannot split a large file across multiple locations. Therefore, ensure there is an adequate margin to allow existing files to grow as incremental patches are applied. Leave extra room if you anticipate your users will be storing very large files. A red disk icon indicated the location does not exist. The server will attempt to create it the first time a request is made to store a data there.

Use the Add button to define a new storage location. Use the Properties button to view or modify a location's settings. Use the Remove button to delete a storage location. You cannot remove a storage location if any accounts are using it. Use the Move Up and Move Down buttons to adjust the rank of the selected storage location. Changes are not saved until you press the Apply or OK buttons.

Logging

The logging tab provides the administrator with control of storage server logging through the screen shown below.



The master log contains information describing the overall operation of the storage server. The name of the file is **masterlog.txt**. By default it is created in the same directory in which the storage server was installed. The logging tab allows the administrator to specify an alternate location for the file and limit its size.

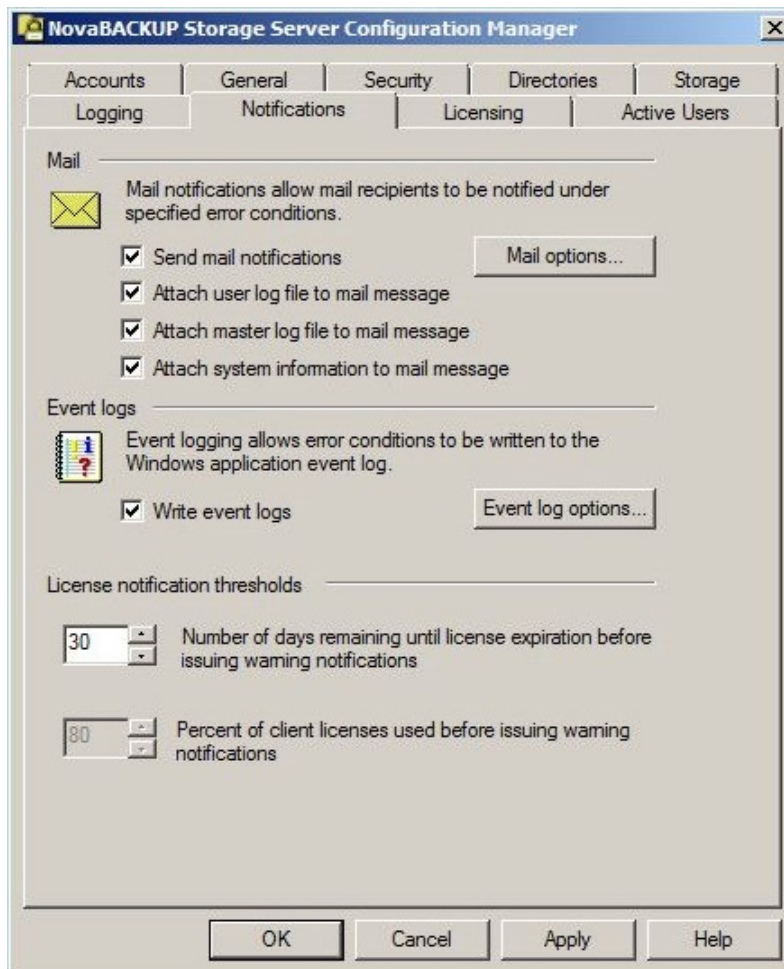
The account log files contain information describing work requests made to the storage server from a particular account. They are saved in a subdirectory having the same name as the account. The logging tab allows the administrator to specify a location where the subdirectories are created. By default, they are created in a directory named Logs, which in turn is in the same directory in which the storage server was installed. In addition to the location, the administrator can limit the number of log files saved per account.

Unless instructed to do otherwise, the storage server maintains a log of account requested in the SQL database, in a table named Requests. The information in this table can be used for billing purposes and to monitor account activity. The administrator can disable this feature if the information is not needed, and thus reduce some system overhead.

Notifications Tab

The Notifications tab is used for the following purposes:

- Enable or disable email notifications
- Enable or disable event logging in the Windows event viewer
- Set the thresholds that determine when license notifications are sent
- Specifying what e-mail attachments are included in error notifications



If you enable any mail notification, you will have to enter the specific mail settings.

In order to set the mail options, you must first click in the **Send mail** notifications box on this tab, and then click the **Mail Options** button. This will open the **E-Mail Configuration Menu**

E-Mail Configuration

General | Error Conditions | Quota

The following addresses represent the e-mail recipients for error messages. E-mail is delivered using SMTP only. An SMTP server must be specified along with valid 'From:' and 'To:' or 'Cc:' addresses.

SMTP Server Address: Server Port:

From:

To: (separate multiple addresses with a semicolon)

Cc: (separate multiple addresses with a semicolon)

Friendly address names can be specified using the following:
Friendly Name<email@address.com>

User Name

User Password

Use SSL

OK Cancel Help

The E-Mail Configuration menu requires the SMTP Server Address, From: To: and also allows you to send multiple copies. You may also use Secure Socket Layer (SSL) to send your messages. The E-Mail Configuration screen looks like this:

Additionally you can select the Error Conditions that will trigger the sending of E-Mail, as shown on the next page.



You may also send E-Mail to inform you when a user account reaches certain quota thresholds. The three thresholds are:

- Account reaches "Near quota % threshold"
- Account reaches "At quota % threshold"
- Account reaches "Over quota % threshold"

The mail system can be set to attach user log files to the mail message, so that you can quickly identify which user accounts may be having problems or approaching quota limits.

If you choose to write event logs, you will be able to set event log options.



The errors that you select will be written to the Event Log when they occur. When you have put a check mark in the box next to each system error you want added to the log, clicking the **Set default** button will save these conditions. You can also set Quota issues that can be saved in the Event log.

Licensing Tab

The Licensing Tab is used to get information about the Storage Server and to register or renew a license. It also contains the registration information required in order to obtain technical support.

Enter a license or updating to a new license:

Clicking on the Licensing tab will open the licensing screen. This screen provides the Storage Server Licensing information (including current status and licensing mode) and allows you to activate the software if you skipped this step during installation. To activate, enter your contact information and license key in the spaces provided and click the Activate License button.

NovaBACKUP Storage Server Configuration Manager

Accounts | General | Security | Directories | Storage
 Logging | Notifications | Licensing | Active Users

Backup server licensing

Server licensing is tracked on a per computer basis or on a time basis.

Server version: 16.1.507.0
 --- activation info ---
 Evaluation: yes
 Evaluation days: 30
 --- server info ---

License Identification Number:

Your name:

Your company:

Your email address:

Activate license

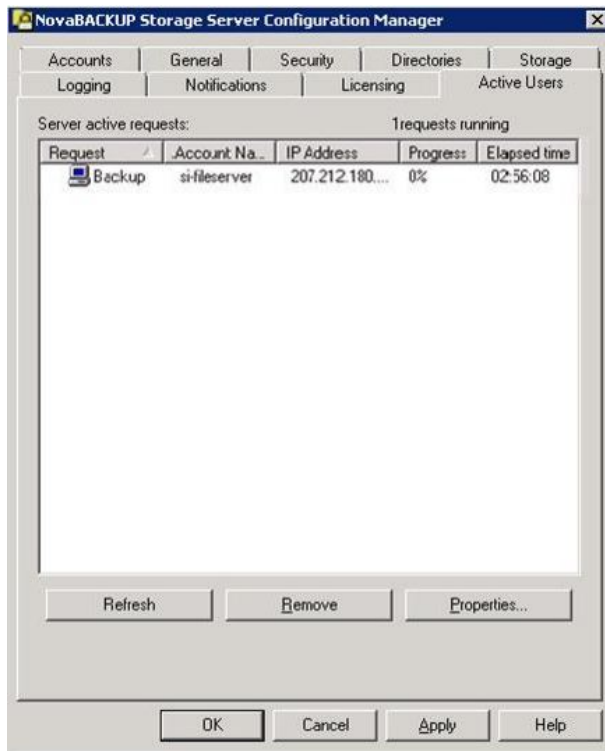
Copyright (c) 1987-2014 NovaStor Corporation. All

OK Cancel Apply Help

The activation process should complete after a few seconds. There may be a short delay if online activation is not available, in which case you will be presented with instructions for performing an off-line activation.

Active Users Tab

The Active Users tab is primarily an informational tab that provides information about backups and current connections to the NovaStor Storage Server.



Keep in mind that this screen will only display the accounts that were connected to the server when you started the configuration manager. If an account connects while this screen is open, it has to be refreshed or close and re-open the configuration manager.

The purpose of this tab is to determine the cause of any system slowdowns or other performances issues, and to get a quick look at the current server status. If, for example, a customer reports that a backup is going very slowly, you will be able to open **Storage Server Configuration Manager** and then open the **Active Users** tab, and you will be able to see what processes were running at the time the user reported the issue.

In this screen, you can determine the Account Name and IP Address of the users who were using the Storage Server before the Storage Server Configuration Manager was launched. You can also see the type of request the user made (backup or restore, for example), how much time has elapsed since the process started, and the percent of progress the user's request has made in completing the request.

Command Line Reference

This section describes the command line options for the programs installed by NovaStor Stor-age Server. Bold text represents an executable file name. Italic text in angle brackets represents values supplied by the user. Non-italic text in entered exactly as shown. Text in square brackets is optional and may be omitted from the command. The vertical bar (|) indicates that either the text before or after the bar may be entered as part of the command.

BackupServer.exe

This is the main backup server program. This program normally runs as a Windows service, but can be run from the command line to perform certain utility functions. The general format for the command line is:

BackupServer [*<command>* ,*<options>*]

where *command* is one of the commands described below. Each command has options that are specific to it.

apfmigration -u *<user-account-name>* [*&endash;c <connection-string>*] [*-d <data-directory>*] [*-a <account-profile-path>*]

This command is used to populate the database from information stored in a user's data directories. It is typically used to moving an account from one server to another, or repairing a damaged database. Use the *&endash;c* option to override the default database connection string. Use the *&endash;d* option to override the default user data directory name. Use the *&endash;a* option to override the default path to the account's cached profile.

storagemigration [*&endash;c <connection-string>*] [*-v*] [*-t*]

This command is used to fix storage errors that were known to occur in some backup file storage files prior to version 11.5 of NovaStor Storage Server. The errors were a result of backing up certain combinations of files within the same folder that had non-ASCII characters in their file names. This command should only be used if recommended by NovaStor technical support. Use the *&endash;c* option to override the default database connection string. The *&endash;v* option enables verbose mode. The *&endash;t* option enables test mode. No changes are made to the file system when test mode is enabled.

rollback [*-v*][*-t*]

This command is used to undo changes made by the *storagemigration* command. The *&endash;v* option enables verbose mode. The *&endash;t* option enables test mode. No changes are made to the file system when test mode is enabled.

stageddatamigration *&endash;s <staged-data-directory>* -u *<user-account-name>* [*&endash;c <connection-string>*]

This command is used to import staged data that was created by a NovaStor application on another computer. Use the *&endash;c* option to override the default database connection string.

updatediskusage –u <user-account-name>|*

Calculates the amount of server disk space used by a specified user account and updated the total recorded in the SQL database. Updated the disk usage for all users if "r;*" is given as the account name. Older versions of the software used a floating point number to represent disk usage. Rounding errors could affect the accuracy of this number over time and render it unsuitable for billing purposes. This command may be used to correct the stored value. As of version 13.0 the usage is stored as a byte count and is no longer subject to rounding errors. However, the command may still be useful for correcting totals in cases where the file system was modified outside of software control.

remove

Removes the program from the list of Windows Services. This command is used by the uninstaller and should not be run manually.

uninstall

This command is the same as the remove command

add

Adds the program to the list of Windows services. The command is used by the installer and should not be run manually.

install

This command is the same as the add command.

manual

This command runs the storage server as a normal program as opposed to a Windows service. It is intended for debugging and should not be run manually.

Use the –h or –help options without a command to display a brief command summary.

BackupServerUtil.exe

This is the GUI Configuration Manager utility used to configure the storage server. The command line format is:

```
BackupServerUtil [/debug] [/userinfo <user-account-name>|*] [/nolastbackup] [<alternate-config-file-name>]
```

The /debug option records diagnostic information in &ldots;

The /userinfo option creates a report describing the amount of disk space and computer licenses used by a user account, along with the number of backup server requests made by the account. If "r;*" is given as the user account name, then a report for all accounts is created.

The /nolastbackup option suppresses display of the last backup date and time on the user accounts tab. Use this option to leave more room for displaying other account information.

An alternate configuration file may optionally be specified. By default, the program uses the **backupserver.ini** file residing in the same folder as itself.

BackupImportUtil.exe

This is the GUI backup import utility for importing staged backup data. It is a wrapper for the backup server's stageddatamigration command and is provided for convenience. This program has no command line options.

Redundant File Manager.exe

This is the GUI Redundant File List Manager utility. This program has no command line options.

Uninstall.exe

This program is invoked when the software is removed through the Control Panel. It should not be run manually. To remove NovaStor Storage Server from the command line, start by opening regedit and expanding the following key:

HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall

Examine the subkeys to find one for NovaStor Storage Server and copy the value for "r;UninstallString" to the command line. Execute the command to initiate the uninstall sequence.