Technical User Manual

StorageCenter Console – Version 5.0

February 2008
Version 1.0

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1 Introduction

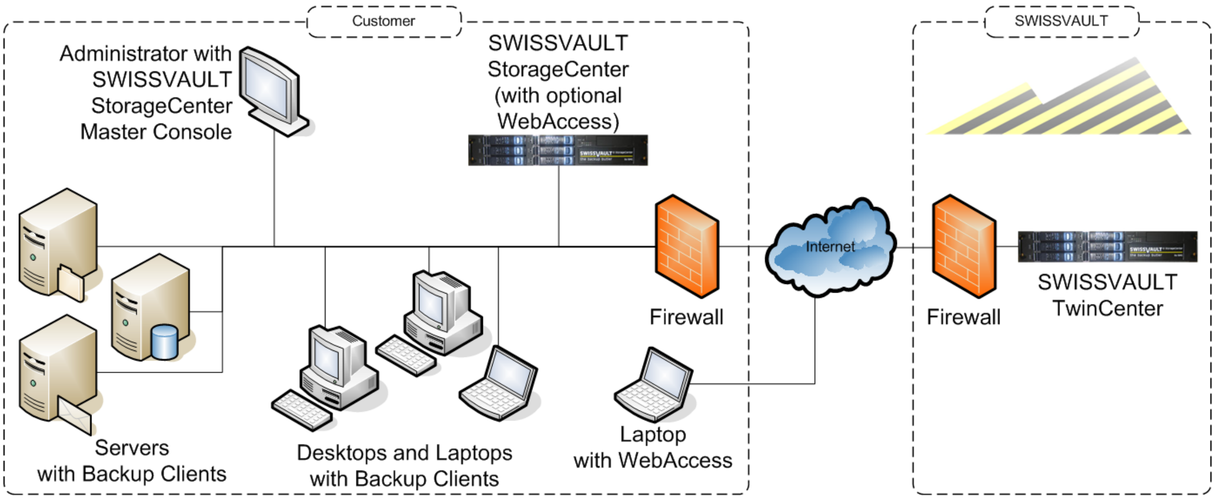
The SWISSVAULT StorageCenter consists of the 'Name-Server' and one or more 'File-Servers' which may run on the same or separate physical servers. The Name-Server handles user authentication and group management, and the File-Server is the file storage system.

The StorageCenter Console is used to manage and administer these servers, the Backup Accounts, and Backup Groups. It provides remote access to Server Edition Backup Clients to manage all Backup Accounts from one central point and an Enterprise Reporting Suite is also available.

In order to run, the Name-Server and File-Servers need signed certificates and an activation key, obtainable from SWISSVAULT. The SWISSVAULT Name-Server and File-Servers will only receive incoming connections once a valid activation key and valid certificates are present. The Backup Client software uses these certificates to authenticate the servers and initiate SSL communications. The certificate and activation requests are part of the StorageCenter installation process.

1.1 Overview

SWISSVAULT consists of 4 major components:



StorageCenter Server

Name-Server – User authentication database
File-Server – File storage system
WebAccess – Optional component to support secure browser access for remote users
ReportServer – Optional component to populate data into a database for reporting

StorageCenter Console

Management – Controls servers, licences and manages user groups and users
Deployment Module – Pre-deployment customisation tool

Client Software

Backup Client – End user application

TwinCenter Server

File-Server – Mirrored file storage system of StorageCenter Server

1.2 StorageCenter Console Requirements

Operating System

- Microsoft Windows Server 2003, or
- Microsoft Windows 2000 Server
- Windows XP Service Pack 2

Processor & Memory

- Pentium III processor with 256MB memory above operating requirements

Disk Space

- 100 MB

Other

- 800 x 600 Resolution, 256 colors
- Microsoft .NET Framework Version 2.0
- Network interface card or a virtual network adapter card
- Internet access to download and install the software.

2 StorageCenter Console

The StorageCenter Console controls the Name- and File-Servers, is used to create and configure Backup Groups and to manage Backup Accounts. It allows you to add additional File-Servers, to configure Mirror-Servers, and to manage licences and plug-ins. StorageCenter Console features and functions are grouped in an easy to use and understandable layout:

- **Account Management**
  Backup Groups and Accounts, and licensing are managed from this section. Server Edition Remote Management is included and provides the functionality to remotely modify file selections, change configuration settings or to initiate a backup or restore.
- **Activity**
  Current Backup Account connections and StorageCenter activities are displayed in this section. Connections/Activities include Backups, Restores, Month-ends, Mirror Activity and Account Moves.
- **StorageCenter Configuration**
  Name-Server, File-Server and Mirror-Server configuration.
- **Reports**
  Enterprise Reports provides a wide range of predefined reports as well as the ability to create customised reports even for a specific Backup Account. Reports can be initiated ad hoc, or scheduled and emailed.
- **User Access Management**
  Access Management to the StorageCenter Console. Only the functions and permissions enabled by the Backup Administrator will be available to the user logging in with an audit trail logged.
- **Diagnostics**
  displays the raw output supplied by the selected Name-Server or File-Server(s) in separate tabs for each server.

The above-mentioned sections are discussed in the following chapters. Please note that the default administrative account name in the StorageCenter Console is **admin** (case sensitive) with the master password as specified during the StorageCenter installation.

2.1 Installation

Run the StorageCenter Console installer and follow the on-screen prompts. No additional settings are required, simply specify the install location and select whether the installer must create desktop and Quick Launch icons.

Open the StorageCenter Console and provide the Name-Server credentials that you want to connect to. Click **Save & Connect.** Please note that only the functions and permissions enabled by your Backup Administrator will be displayed in the StorageCenter Console when you log in.

2.2 Backup vs. Access

In the StorageCenter Console, we differentiate between Backup Groups and Access Groups as well as Backup Accounts and Access Users. This terminology was added to ensure that you do not get confused between the two. Access Groups and Accounts are related to the User Access Management functionality.

2.3 Menu Options

Four menu items are fixed, regardless of the node selected. From the **File** menu, you can close the application. The **View** menu is used to switch between different nodes and to enable the Activity and/or Diagnostics windows at the bottom of the Console.

The **StorageCenter** menu enables you to add, remove, edit and switch between different Name-Servers, should you manage multiple Name-Servers. The StorageCenter Console **Assistant** can be opened from the **Help** menu. This action panel displayed to the right of the detail area provides intuitive help for the available panes.

The **Tools** menu is used to change global settings. In the **Connection** tab you can specify your preferred configuration settings to connect to the Internet.

The **Display** tab provides a range of different display settings. **Colour Options** provides the functionality to visually alert you when certain parameters are met in the Account Management pane. These colours may be changed according to your preferences and the options are:

- Number of days since last backup with 30 days and red as the default colour
- Percentage of account limit used set to 90% with green as the default colour
- Disabled group with red as the default colour
- Disabled user with grey as the default colour
- User over Limit with yellow as the default colour.
- Gridlines with a very light blue (#F0F0FF) as the default colour.

The **Export to CSV** option, also available from the **Tools** menu, enables you to export the Backup Groups and Backup Accounts information to a CSV file. This is only available in the Account Management pane, on Groups and Account level.

In the **Plug-ins** section you can choose how allocated plug-ins must be displayed in the Account Management pane. The default selection, **Combo box**, displays a plug-in drop-down list if more than one plug-in is installed. Multiple lines are used with the **List** option as each plug-in is listed in a new line.

You can specify the preferred style and icon size of the **Main Toolbar**, e.g. select the Icons Only style to remove the toolbar text. The **Position dialogs relative to current monitor** option is very useful if dual view monitors are used. With this option enabled, dialog windows (e.g. when configuring a group or server) will be displayed in the same screen as where the StorageCenter Console is currently displayed.

The **Fixed Views** tab enables you to choose whether the **Activity** and **Diagnostics** sections must be displayed as additional panes in the left-hand section or always visible at the bottom of the StorageCenter Console. As with the main toolbar, you can change the style and icon size, and you can choose the layout of the two sections in **Orientation**.

Depending on the selected node, you may notice an additional menu item, e.g. **Accounts** in the Account Management node or **Storage** in the StorageCenter Configuration node. These menu options are the same as the available toolbar buttons.

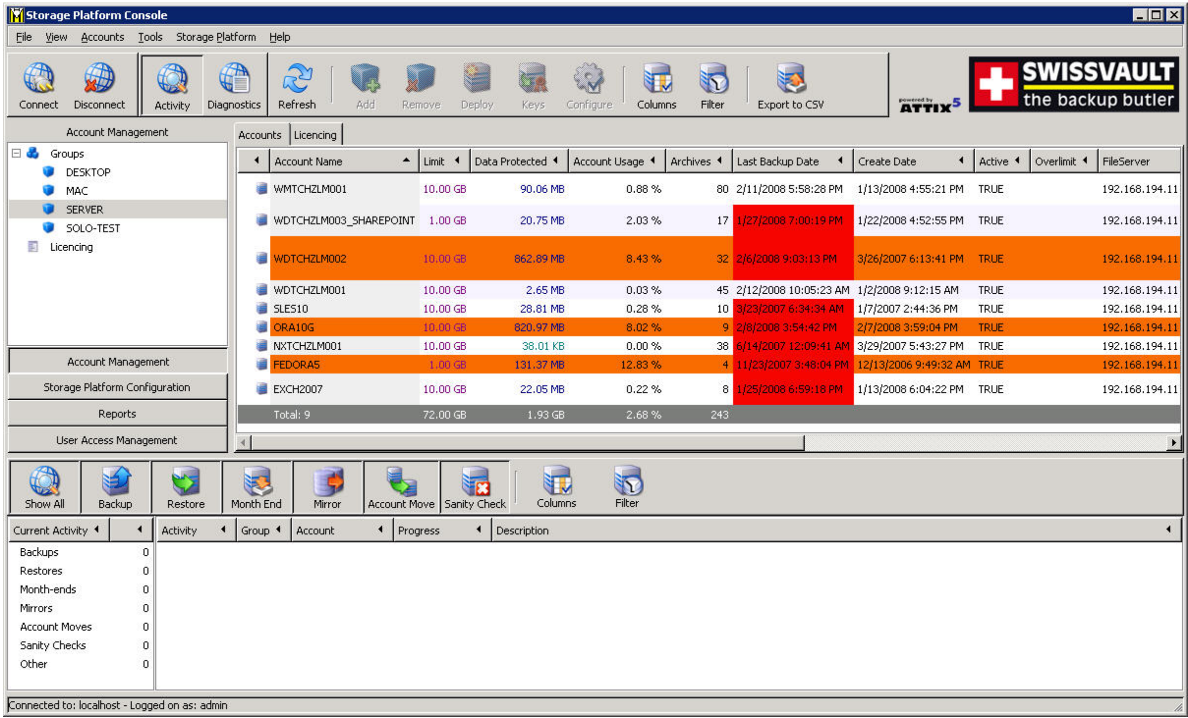
2.4 Toolbar Buttons

The Connect/Disconnect buttons are shortcuts to connect to or add another Name-Server; the functionality is also available in the **StorageCenter** menu. The toolbar is customised according to the node selected in the navigation area apart from the Refresh and **Configure** buttons that are available in most nodes.

Mouse-over comments are provided for additional information about the enabled toolbar buttons. Simply move the mouse pointer over a toolbar button; the comment will be displayed within a second.

3 Account Management

Account Management is used to maintain Backup Accounts and Backup Groups – from changing the limit or disabling a Backup Account, specifying whether Backup Accounts must auto-update, to adding additional licences to a particular Backup Group and allocating User Access Roles. Remote Management for Server Edition Backup Accounts can also be initiated from this pane.



Note: you must select the applicable Backup Group or Backup Account before using the toolbar options to modify the selected component.

The default view in the Account Management pane is a summary view of all Backup Groups configured in the StorageCenter, and provides you with an overview of the default settings configured in each Backup Group. The **Columns** button in the toolbar may be used to customise which columns must be displayed.

Additional groups can be added by right-clicking on **Groups** in the left-hand pane and selecting **Add Group**, or you can use the **Add** button in the toolbar. Supply a Group Name, Group Key and Group Password (do not use any underscores in the group name). **You have to allocate licences to the group before users will be able to connect to it**. If you need to remove a group, right-click on the group and select **Remove Group** or use the **Remove** toolbar button.

Note that this will delete the group, all the user accounts and their data stored in the StorageCenter.

To create a preconfigured Desktop and Laptop Edition deployment file, select the Backup Group in the left-hand pane and click on the **Deploy** button (see Deployment Module section). Use the **Filter** button to filter the Backup Group by specifying which allocated licenses you would like to see.

3.1.1 Backup Accounts

If a Backup Group is selected all Backup Accounts are displayed in the right-hand section with individual account data such as the account limit, backup size, software version etc. It provides the Access User full control (if enabled) of the backup accounts.

The following options are applicable to Backup Accounts. Multiple users in the same Backup Group can be highlighted by using the **Shift** or **Ctrl** keys and then selecting them with your mouse. The toolbar options are:

- Change Limit
- Delete User
- Upgrade User
- Downgrade User
- Enable User
- Disable User

Advanced options are also available when you right-click on an account. Please be careful when changing any of these settings:

- Connect (if applicable)
- Change User Password
- Change File-Server
- Change Backup Group
- Advanced → Override File-Server IP
- Advanced → Sanity Checks…

3.1.2 Connect

You can connect to and administer Server Edition and Desktop and Laptop Edition backup clients from the StorageCenter Console. **Note that SE v4.4 and DL v5.0 are the minimum requirements and that Remote Management must be enabled in the Backup Client before you can connect to it**. For more information, please refer to the
Remote Management section.

3.1.3 Change Backup Group

Backup Accounts can be moved between Backup Groups on the same StoragCenter. Note that this is only available for v5 Backup Clients and that it is a very complex process, as settings must be changed on the Name-Server, File-Server and the Backup Client.

If you want to move an account, right-click on the applicable account and select **Change Group**. This option will only be available if there are multiple Backup Groups available on the StorageCenter. The **Change Group** dialog window is displayed and you must select the target group from the drop down list. The Name-Server will verify whether the required licences are available in the new group, and then initiate the process. The Backup Client will be updated during the next connection to the StorageCenter.

3.1.4 Moving Backup Accounts between File-Servers

Backup Accounts can be moved between different File-Servers, if you have more than one File-Server installed. **You will not see this option with only one File-Server.** Select the accounts you want to move, right-click on one of them, and select **Change File-Server**. Select a new File-Server from the available list and click **OK**. Refer to the Activity section to ensure that the transfer is successful.

You can **override** the File-Server address, e.g. if the IP address was changed or when instructed by an SWISSVAULT support engineer. Right-click on the Backup Account and select the **Advanced Option**. The current IP Address or DNS Name is displayed as well as the port used. Change the required settings and click **OK** to save. **Note: incorrect use may corrupt the user database.**

3.1.5 Enable Sanity Checks

It is possible to do a Sanity Check on a specific Backup Account, if you suspect that the data may be corrupt on the StorageCenter. Note that if you do the check (especially when checking patches) it may take a very long time. You may become aware of high processor usage whilst this process is running. Monitor the progress of the Sanity Check with the StorageCenter Console by looking at the File-Server status window (at the bottom) where any errors will be displayed. Please refer to the **Sanity Checks** section in the StorageCenter manual more detailed information..

To enable this option, select a Backup Account and click on **Sanity Checks…** There are three options available when running a Sanity Check:

- **Manual Sanity Check**, by retrieving the list of available backup dates from within the Backup Client.
- **Once-off Sanity Check** after the next backup.
- **Daily Sanity Check** after each backup to only verify the latest backup which is less processor intensive as it will only verify the latest backup and not all available backups on the StorageCenter.

In the **Settings** section you must specify whether the Sanity Check must apply fixes, or only report any errors, and whether patches and/or base files must be checked. If you do not select any of the options, the Sanity Check will only verify the validity of the index files.

Note that the only way for the Sanity Check to fix a problem is to remove the problem file from the backups. If this happens the Backup Client will receive an error during the next backup which will flag the particular file for a full backup. Also note that only a small number of Sanity Checks can be run at the same time so some Sanity Checks may be postponed until the next backup if too many are running.

3.1.6 Group Certificates

A group certificate can be assigned to a Backup Group, and enables the backup administrator to view the encryption keys used by the group members. When you request a group certificate, a public and private keypair is generated. The public key is used to encrypt data and only the private key can decrypt it. This keypair is stored on the administrator's machine, protected by a passphrase, which is chosen by the backup administrator when requesting the group certificate. The public key is then included in a group certificate signed by SWISSVAULT and stored with the group on the StorageCenter.

As users backup, their encryption keys are encrypted with the public key that is stored in the group certificate. These encrypted versions of the keys are then stored on the StorageCenter. You, as the backup administrator, can download the encrypted keys and decrypt them on your machine using the Backup Monitor. In order to do that you will need to provide the passphrase that decrypts the private key stored on your machine. Since the keys can only be decrypted by the private key, it is only possible for the person in possession of the private key and the passphrase to view these keys.

To add a Group certificate to a Backup Group use the Keys option the toolbar. This process must be authorised by SWISSVAULT before a certificate will be generated. The Group Certificate window will be displayed from where you can:
Request Group Certificate – to request a group certificate from SWISSVAULT. Supply all the necessary information and email the groupcert.csr to support@swissvault.ch.
Upload Group Certificate – Use this option when you received the activation file from SWISSVAULT to install the certificate.
Change Passphrase – to change the passphrase used when downloading the user information with their encryption keys.
View Certificate – to view the group certificate.

It is very important to select these certificate files for backup as you have the only copy. Locate the Certificate folder and include the following files in your backup selection:
groupcert.key
groupcert.csr
groupcert.crt

Note: When an existing group certificate has expired, do not request a new one; please zip the contents of the certificate folder and send it to **support@swissvault.ch** and request that it must be renewed. If you request a new group certificate, the current encryption keys will be lost.

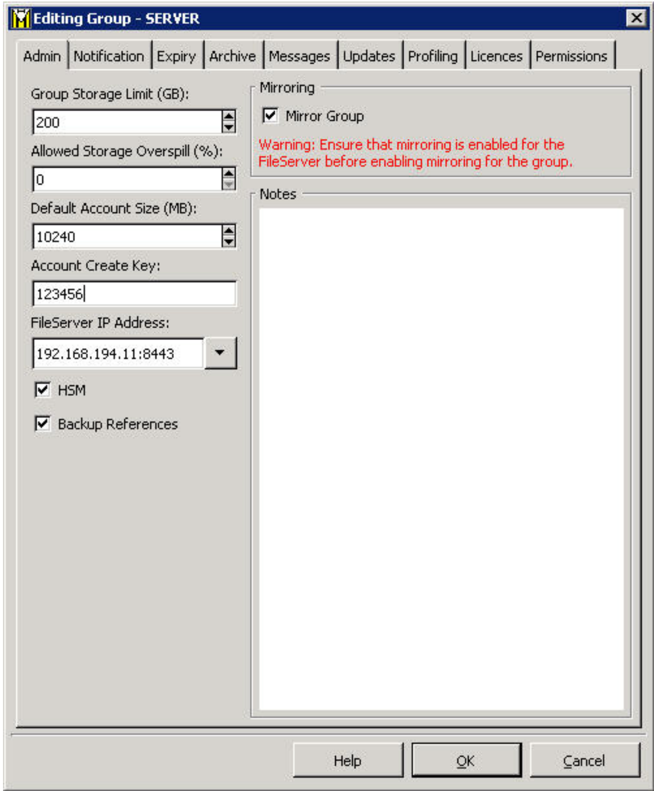
3.1.7 Account Management Licencing

The Licencing section in the Account Management navigation pane is a summary of all licences allocated to the selected StorageCenter. It displays the total amount of licences activated, the amount assigned and the amount of licences remaining.

3.2 Backup Groups

To configure any of the Backup Group settings, select the group and click on the **Configure** button in the toolbar, or double-click on the group name. A window is displayed with the following tabs and options:

3.2.1 Admin



Maximum Total Storage (GB)
The group limit is the total amount in GB that can be allocated to Backup Account limits. You will not be able to add additional users when this limit has been reached.

Allowed Storage Overspill (%)
The Allowed Storage Overspill percentage setting on Backup Group level enables you to specify the percentage that the Backup Accounts may overspill their account limits during the backup process, to ensure that the backup is completed successfully, even if additional files were added to the Backup Selection. Such accounts will be visibly flagged and notification can also be enabled to notify the user in the Backup log, and/or email the Backup Administrator.

Default Account Size (MB)
The default account size to be allocated to new Backup Accounts on creation.

Account Create Key
This key is needed to create new Backup Accounts for this group. It is used during the Deployment process for the Client software and prevents unauthorized accounts being created.

File-Server IP Address
New Backup Accounts can be allocated to a specific File-Server if there are multiple File-Servers available. Using this functionality, you can ensure that all accounts in a particular group reside on the same File-Server. Automatic allocation is enabled by default.

HSM (Archiving)
You have the option to enable/disable HSM per Group, if HSM (Account Archiving) is configured. This feature is especially handy if you only have to archive a couple of Backup Groups in the StorageCenter. This setting is enabled by default. If HSM is enabled, you can also enable **Backup References**. Using Backup References, users can view a list of data that was archived from the StorageCenter to the specified HSM directory. All archived folders are displayed with a greyed-out folder and the user can browse through the available backup dates. These files can, however, not be restored until the data is moved back to the applicable folder on the StorageCenter by one of the backup administrators.

Mirroring
This setting is enabled by default. If mirroring is enabled and you want to exclude this group from being mirrored, remove the tick in the checkbox.

Notes
This section can be used to add group contact detail of everyone involved in managing this Backup Group, for example, the account manager, default technical contact etc.

3.2.2 Notification

Group Administrator
This list of users will receive email notification whenever information related to this group is available, for example when an account is utilising the Allowed Storage Overspill functionality. This will ensure that the administrator can either upgrade the Account limit, or reduce the size of the backup selection.

Over Limit Notification
When a backup account exceeds its account size, a message is displayed in the Desktop and Laptop Edition client to notify the user. Supply contact information, if needed.

3.2.3 Expiry

This tab allows you to specify whether the Backup Group is a registered or an evaluation group. You can also specify when the group must be disabled (in DD/MM/YY format), after which users in that group will not be able to connect to the StorageCenter any more. Instead of disabling the entire group at a certain date, individual evaluation accounts can automatically be disabled and deleted after a specified amount of days. Specify this option to allow users to evaluate the software for a specified amount of days.

Users backing up to an evaluation group or with evaluation accounts will see a countdown to the expiry date in their backup summary screen, displayed after each successful backup (e.g. "Your evaluation account will expire in 6 days"). Users in an evaluation group will always see a client banner displayed with each backup, as specified in the "Client Banner URL field". "Default" displays the default banner as configured in the Name-Server Defaults tab. This banner can contain product features or information on how to upgrade an account. The banner URL should point to an HTML file with the following format:

```
<HTML>
<CENTER>
<A HREF="http://link here"><IMG SRC="Image here" BORDER=0 WIDTH=468 HEIGHT=60></A>
</CENTER>
</HTML>
```

You can also disable a particular group manually by enabling the **Group is disabled** checkbox. The Backup Accounts will not be deleted, but users will not be able to connect to the StorageCenter.

3.2.4 Archive

By default, user data is stored for one to two calendar months. All backups for the current month and the month immediately proceeding the current month are retained on the server. Older data will be deleted but a specified number of month ends can be stored. This means that a user can always retrieve a specific version of a document or file that was backed up either during the current month or during the preceding month. During the first backup in a new month, the backups for the preceding month are kept and the backups for the month before that are consolidated into a single backup set.

To give an example, if users begin their backups during January, then by the end of February, they can recover from any specific backup during January and February. When they do their first backup in March, all backups in January are consolidated into a month-end backup set.

Then during March, they can access any backup taken during March and February and also the consolidated backup for January. With the default setting to keep only 1 consolidated month-end backup, when they do their first backup in April, the backups for February are consolidated into a month-end backup set and the month-end backup for January is deleted. Specify 0 to keep month ends indefinitely. **Note: the server will eventually run out of hard drive space if you specify 0.**

NEVER delete any files, including Month-ends from the StorageCenter Data subfolders; the StorageCenter will automatically do maintenance on these folders when needed. Manually deleting files will lead to data loss.

3.2.5 Messages

Specify a message that will be displayed in the summary screen after each backup. It may contain HTML, e.g. …. If you specify **Default**, the message specified in the Name-Server Defaults tab will be displayed. **Note: This may include a href tag using http but not https.**

3.2.6 Updates

The StorageCenter can automatically update the Desktop and Laptop Edition and the Server Edition Backup Clients during the backup process, should there be any updates available. The default setting is **StorageCenter default**.

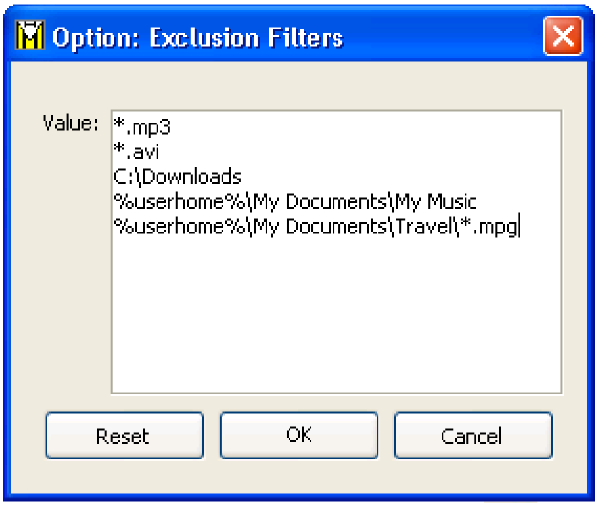
3.2.7 Profiling

Dynamic Profiling enables you to propagate certain client side settings from the StorageCenter to the Backup Clients. Note: These settings take priority over any settings specified in the Backup Client. Click in the **Enable Profiling** checkbox to configure the Profiling settings.

In the **Option Enforcement** section, the available options are grouped the same way as found in the actual Backup Client **Options and Settings** section, ranging from the Backup Schedule to System Filters and Advanced Options. For detailed information, please refer to the Backup Client user manual.

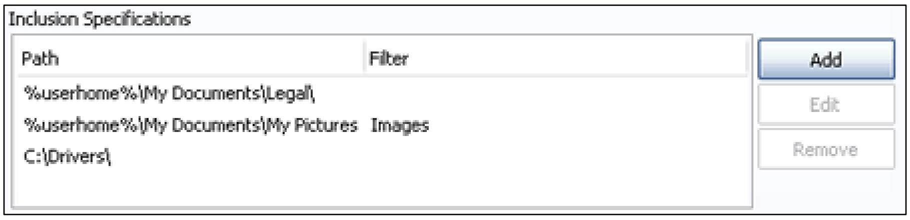
When you double-click on an entry in the **Available Options** section (or select the entry and then click on the **>>** button) a popup window will prompt you for the required setting. Select/specify the required setting(s) and click OK. This entry will now be in the **Enforced Options** section and overwrite the setting in the Backup Client.

System Filters Note: the Exclusion Filters option is very powerful as you can use the %userhome% directive, filename wildcards, exact folders and even a combination of all three to specify an exclusion. Each entry must be added in a new line, as displayed in the screenshot. Using the screenshot example, the exclusions will ensure that no **mp3** or **avi** files anywhere on the system can be backed up.
The **C:\Downloads** folder and subfolders will be excluded.
The **C:\Documents and Settings \UserName\My Documents\My Music** folder and subfolders will be excluded (where UserName is the user's login name.
Any mpg file in C:\Documents and Settings\UserName\My Documents\ Travel (but not subfolders) will be excluded.



To remove a particular setting, select the entry and then click on the **<<** button. When a setting is removed, the Backup Client will revert back to the original setting before the option was enforced.

The **Inclusions** section enables you to configure filter, file and folder inclusions that will be added to the backup selection lists of all Backup Clients in the specific group. First you must create the list of filters in the **Available Filters** box e.g. **Filter name**: MS Outlook email and **Filter extensions**: *.pst;*.dbx;*.wab – the Deployment Module provides more examples. Next, you must use the **Inclusion Specifications** box to specify the inclusions. You have the option to include a filtered folder, a complete folder, or single files.



Note that you can also use the %userhome% directive as discussed in the previous section.

When the Backup Client connects to the StorageCenter, it will receive the Dynamic Profiling settings specified in this tab and these changes will be implemented in the Backup Client. If any of these changes are modified by the user, they will revert back to the Dynamic Profiling settings during each backup.

The Backup Client can connect to the StorageCenter for Profiling updates by clicking on the **Retrieve Settings** button in the **Options** / **Account and Security** section.

3.2.8 Licences

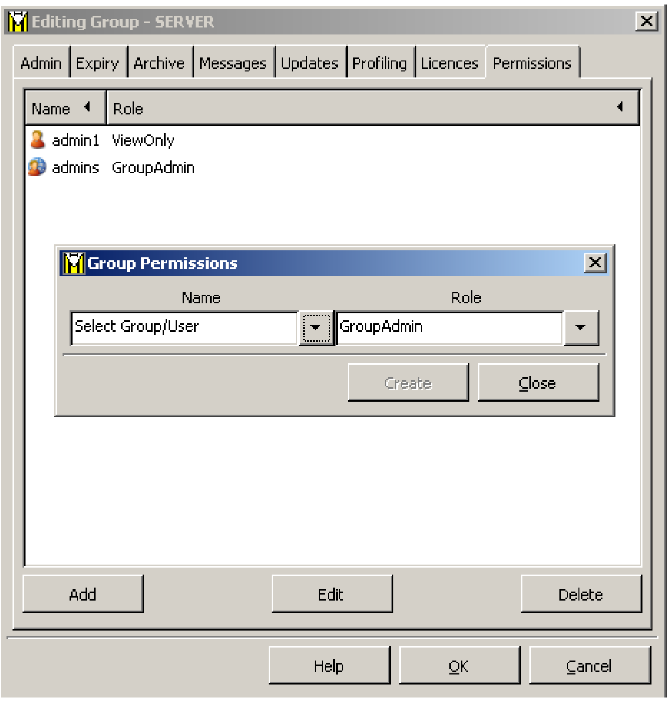
This tab is used to assign Licences and Plug-ins the selected group. The allocated licences on the StorageCenter are displayed and you can use the **Add** or **Remove** buttons to modify the licence pool.

Multiple licences can be highlighted by using the **Shift** or **Ctrl** keys on your keyboard, and then selecting them with your mouse. This enables you to add or remove multiple licences at the same time. The **Total** column displays the total amount allocated to the group. The **Assigned** column displays the amount already assigned to users and the **Remaining** column the amount that you can still assign.

At the bottom of the page you have the option to specify whether licences should be allocated automatically when a Backup Client requests any licences or plug-ins. If this setting is enabled, the

StorageCenter will automatically assign licences to the Backup Clients during their first backup, if there are licences available.
Note: only disable this setting if you can control the StorageCenter using the available XML calls, otherwise you will not be able to allocate the licences.

3.2.9 Permissions



Note: Please refer to the User Access Management Assistant before configuring this tab. Access Users/Groups must be created and configured before you can assign Permissions to a group.

Use the **Add** button to assign Access Users or Access Groups. In the Group Permissions window select the **Name** in the left-hand drop-down list, its coinciding **Role** in the right-hand drop-down list, and then click on the **Create** button. The Group Permissions window will remain open, to add additional Users/Groups. Click **Close** when you are done. Use the **Edit** and **Delete** buttons to change the permissions or delete any of the existing entries.

Only permissions configured in the User Access Management pane will be available to the Access Users when they log in with their user accounts.

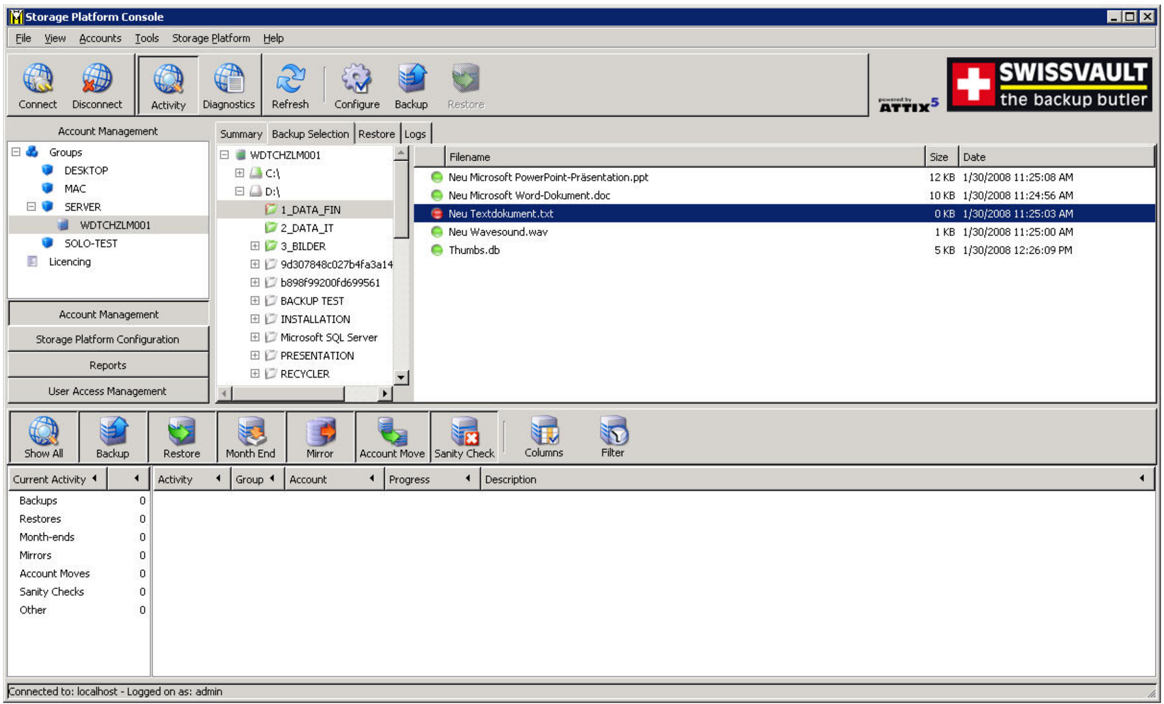
3.3 Remote Management

You can connect to and administer Server Edition backup clients from the StorageCenter Console.

Note that v4.4 is the minimum requirement for Server Edition and v5.0 for Desktop and Laptop Edition backup clients. Remote Management must be enabled in the Backup Client before you can connect to it.

Two connection options are available in the Backup Client; using your StorageCenter Access Account to connect, or the standard SE Remote Management username and password. You must use Access Accounts in order to limit Remote Management functionality according to Access Role. You have full access using the standard Remote Management username and password.

Using this feature you can initiate backups and restores, modify the backup selection, view log files and configure a number of options ranging from the backup schedule to file exclusions and patching settings.



To connect to a backup account, double-click on the account name in the Account Management pane (or right-click, **Connect**) after selecting the applicable group in the navigation area. Supply the IP Address and port number if needed as well as the username and password, and then click on **OK**. Four tabs are displayed: **Summary, Backup Selection, Restore** and **Logs**.

The first tab provides a **Summary** of the Backup Client with information ranging from the Account limit, software version and Operating System to the Backup Schedule and installed plug-ins.

The Summary tab displays Backup Account information and configuration settings. Use the Backup Selection tab to modify the backup selection on the remote machine and then click on the **Backup** toolbar to initiate the backup process. If the previous backup failed for any reason, the StorageCenter Console will prompt whether the previous backup must be resumed. To restore files and folders, select them in the Restore tab then use the **Restore** toolbar button to initiate the restore process.

You will notice a Backup or Restore **Cancel** button if one of these processes is active and you can use it to cancel the current process. Backup and Restore Logs can be accessed in the **Logs** tab. To only view a summary of the Logs, click the **Summary** button.

To change the backup schedule or any of the other advanced options, click on the **Configure** toolbar button. All available settings and options are displayed in the following tabs. **Please read through this section carefully before changing any of the settings. Incorrect settings could cause serious problems or even stop the Backup Client from functioning.**

3.3.1 Account Settings

Security Settings
The Security window allows you to select whether the Backup Client must remember the Backup Account password during backups and restores. Two options are available:

- **Remember password for backup and restore:** The Backup Client remembers the user password when doing a backup or restore. This is the default setting.
- **Prompt for password on restore:** The Backup Client prompts for the user password during the restore process.

3.3.2 Schedule

The automatic daily backup schedule can be modified in this section, as well as the advanced schedule. Note: You are advised not to disable automatic backups as you will then have to manually initiate all backups.

3.3.3 Patching

Patching is the process where only the differences in files are extracted to minimize the amount of data that has to be transferred to the StorageCenter. There are two types of patching available, binary patching (the default option) and delta blocking.

Please refer to the User Manual for additional information if you are not accustomed with this functionality before changing these settings.

3.3.4 Advanced Options

The Backup Client can be configured to **Always connect to the StorageCenter** during each backup to update the last backup date stamp, even if there were no changes made to the backup set. With this setting enabled, the StorageCenter will always be up to date with the latest backup date.

SSL Encryption can be disabled to improve the transfer time during the backup and restore processes. Note: By disabling SSL encryption, you are lowering the security level when transferring files to and from the StorageCenter. This setting should only be used in a secure environment.

Complete compression/patching before sending data to the StorageCenter. Enable this option if you do not want to make use of multiple thread backups to speed up the backup process, typically needed when using a dial-up account. With this setting enabled, the Backup Client will compress all new files and patch all modified files before starting to transmit data to the StorageCenter.

Verify account limit before compression/patching. With this setting enabled, the Backup Client verifies the backup account limit on the StorageCenter before starting with the compression and/or patching processes. It is useful to flag account limit issues before starting with these processes.

Enable Volume Shadow Copying to backup locked files enables you to backup locked files without using third party open file management software. This is currently only available on Windows XP and Windows 2003 Server Operating Systems. ***Note: Disable the checkbox if you are using the Open File Manager plug-in for a specific application or database.***

Number of Backup/Restore attempts before cancelling - By default, the Backup Client tries to connect to the StorageCenter four times before cancelling the backup process. If you have a poor connection to the Internet, you may want to consider increasing the number of attempts. The backup will continue from the previous point of failure. It will not resend the entire backup.

Connection Retries - By default, the Backup Client will try to reconnect to the StorageCenter after 60 seconds, should the connection be dropped. This setting enables you to increase/decrease the duration between the retries.

Socket Timeout - The socket timeout is by default 60 seconds. If the Backup Client is connected to the StorageCenter and there is no communications between the two, this amount (in seconds) is the duration that the Backup Client will stay connected before dropping the connection.

Logging Level
You can specify the level of information that must be included in the log files. Choose between:

- Log all messages
- Suppress detail messages
- Log errors and warnings

3.3.5 Performance and Limits

Processor Usage and Disk Access
The Backup Client uses a fair portion of the available processor power to patch, compress and encrypt files while during the backup process. If you use the computer at the same time, you may experience some performance deterioration. You can lessen this effect by lowering the **Processor Usage.**

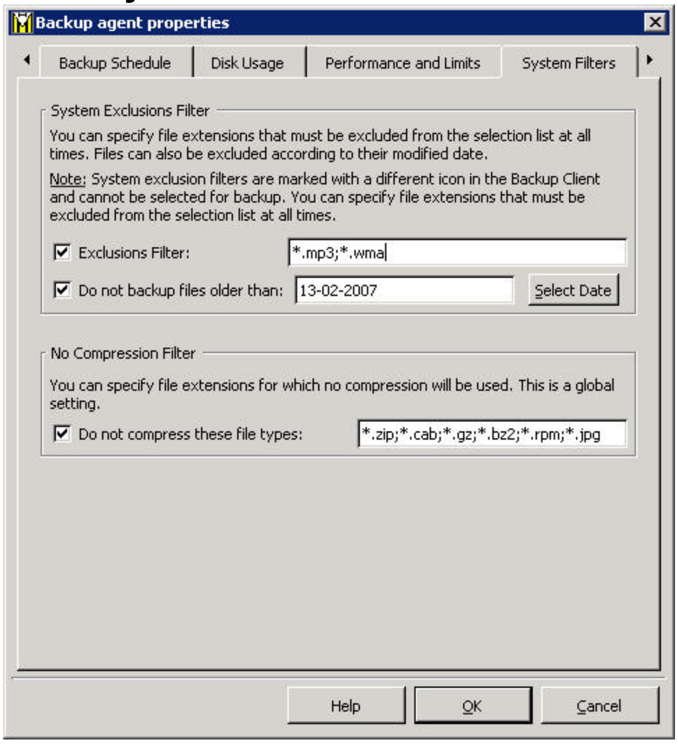
Disk Access is another setting that you can modify to limit performance deterioration. If this setting is set to high, the Backup Client will continuously use all available disk access to write to the disk, ensuring that the process completes as fast as possible. The process will take longer if you lower this setting but your other applications will still function without any interruptions.

Limits
Outgoing transfer limit - The outgoing transfer bandwidth can be limited (in kBytes/second) in case you need to allocate only a certain amount of bandwidth to the Backup Client.

Backup size restriction - You can limit the total amount of data that may be transferred during each backup. Note: If you enable this option, it may take several backups before all selected files are backed up to the StorageCenter. This feature is especially useful if you have a poor Internet connection and you encounter problems with transferring large backups.

Backup cycle - The Backup Client can be configured to cycle the backup process until all selected data has been transferred to the StorageCenter by automatically initiating subsequent backups. This setting can only be enabled if a backup size restriction has been specified.

3.3.6 System



System Exclusion Filter

The System Exclusions Filter enables you to specify any file types that you want to exclude from the backup selection list. For example, to exclude all MP3 and AVI files, specify ***.mp3;*.avi** in the text box. Separate entries with a semicolon.

You can also exclude files by enabling the **Do not back up files older than**: checkbox and specifying a date. Note that the Date Exclusions Filter uses the file modify date as reference and not the file create date.

No Compression Filter

Compression is not effective on all file types as some files may already be compressed or cannot be compressed at all. The Backup Client could spend some time and processing usage to try and compress these files. This filter enables you to specify a list of file extensions that must not be compressed during the backup process. The list of file types already specified are types known for not compressing well.

3.3.7 Mandatory Files

Mandatory files are scanned for changes, regardless of whether it appears that they have changed since the last backup. This is useful in situations where files are held open by an application - internally the file changed, but the change is not reflected in the last modified date on the file system, or in the size of the file itself.

Open File Manager/VSS enables the backup of these files without impacting the running application or corrupting the indicated file.

3.3.8 Disk Usage

Working Folders

If you have limited space on the drive where the Backup Client is installed, you can move the Temporary folders to another location. The Temp folder is used for temporary workspace when the files are patched, compressed and encrypted. The Cache, Logs and the selection database location can be changed in the **Expert tab**.

Note: Always keep these folders and the selection database on the same drive. If you move these folders and the database to a network share, please ensure that the Backup Client has the correct permissions to reconnect and write to that share.

Cache

When modifications are made to a file, the Backup Client only transmits the changes to that file, as opposed to transmitting the complete file again. This is accomplished by keeping a compressed copy of the file in a local cache and then using a sophisticated patching technique to extract the difference between the file in the cache and the one ready to be backed up.

Files are only kept in the cache for a certain amount of days. Files are added to the Cache folder if the file was modified within the Days to keep files in Cache window. Once a file has been flushed from the cache, a full copy must be backed up when any modifications are made to the file. The longer files are kept in the cache, the better the chance of only transmitting patches instead of full copies and thus reducing the amount of data that needs to be transmitted. If you have limited disk space, you may want to consider shortening the time files are kept in the cache.

Note: If you select 0 days, patching is disabled, any files in the Cache folder will be deleted, and complete files are backed up to the server during each backup.

To delete the current cache, use the **Clear Cache** button. If you delete the cache, full copies of your selected files will be re-sent to the server during the next backup. You may notice that the Backup Client will log the message **Doing monthly cache cleanup** once a month. This maintenance task is to ensure that the cache folder is up to date by deleting any files that fall outside the **Days to keep files in Cache** window.

3.3.9 Exclusions

Backup Professional enables you to specify File and Folder Exclusions. These files and folders are excluded from the backup selection, no matter where they are located on the available drives or volumes. **Note: these entries are case sensitive; you have to ensure that you specify exact matches.**

To add an exclusion, click on **Add folder** or **Add file**, specify the name and click **OK**. To modify any of the exclusions, select the entry and click on **Edit**, or double click on the exclusion name. To remove an entry, select the file and click **Remove**.

Click on **OK** at the bottom of the Exclusions tab to save your changes

3.3.10 Expert

The Expert tab contains all variable settings not found on any of the other Backup Client configuration tabs. These entries are saved in the a5backup.properties file and the file also includes plug-in settings, if installed. Please use with caution, as incorrect use may alter the backup and restore procedures.

Use the buttons on the left to **Add**, **Edit** or **Remove** properties. Settings can be imported and exported by using the **Save As** and **Load From** buttons, and **Refresh** will update the Backup Client Properties section with any recent changes.

3.4 Backup Client Auto Update

Upgrading Backup Clients manually is a time consuming exercise. Backup Professional allows you to automate this process. Desktop and Laptop Edition and Server Edition can automatically be updated with the latest software version and service pack during the backup process.

Note: In Server Edition, this functionality is available from v4.1 clients and onwards. Any Desktop and Laptop Edition from v3.0 can automatically be upgraded.

SWISSVAULT creates these Update Packs that are distributed to the various Name-Servers. The Name-Server then distributes the update packs to the different clients as they are requested.

3.4.1 Enabling Auto Update in the StorageConsole

Auto Update can be enabled for the complete StorageCenter, or you can enable it per Group. **Note: You have to configure Auto Updates before you can enable it.**

StorageCenter Configuration – Open the StorageCenter Configuration section, select the Name-Server and click **Configure** in the toolbar. Enable the checkbox in the **Defaults** tab next to **Auto Update Backup Client**; ensure that the **Update File Search path** is correct and click on **OK**. Auto Update is now enabled. All groups are set to use the default setting in the StorageCenter by default, so all groups are now enabled.

Backup Group level – Open the Account Management section, select the Backup Group and click **Configure** in the toolbar. Open the **Updates** tab and select the applicable **Auto Update Backup Client** option.

3.4.2 Desktop and Laptop Edition Update Process

If Auto Update is enabled, the StorageCenter verifies the Desktop and Laptop client version as it connects to the StorageCenter during the backup process. If a Backup Client is running a previous version of the software, the update is made available and the Desktop and Laptop client will download and install the update automatically.

3.4.3 Server Edition Update Process

Server Edition Backup Clients from version 4.1 can automatically be upgraded to the latest version.

You must upgrade the Server Edition Backup Clients to v4.4 and later in order to use the Remote Management functionality available in the v5 StorageCenter Console.

If you want to manually upgrade the SE backup clients, please follow these steps:

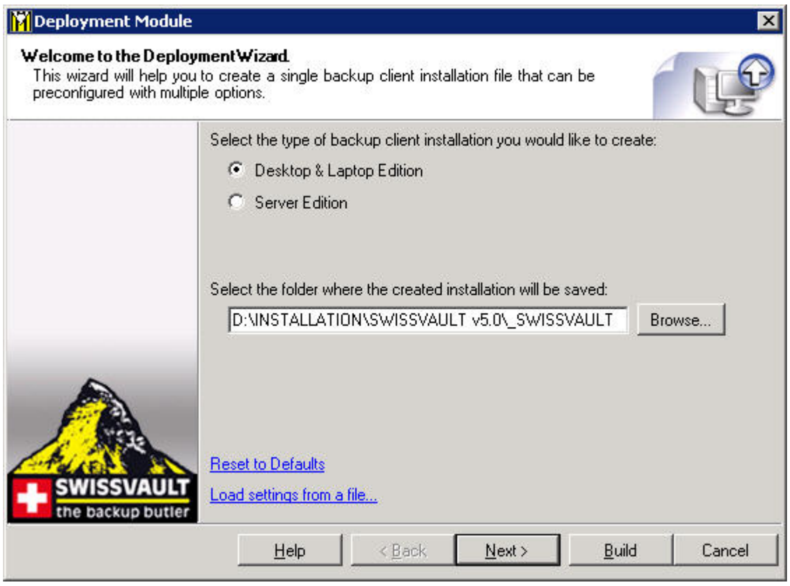
- Close the Backup Client interface and the SE Runner (5 icon) in the system tray.
- Run the SE Installer. The SE Installer retrieves the Install location from the backup service and cannot be changed as you are upgrading an existing SE client. **Click Next**.
- Click **Upgrade** to continue with the upgrade procedure. The SE Installer will stop the SE service, if it is running, and upgrade the software. The SE Installer will prompt whether it should start the backup service if it was not running.
- A message will prompt you whether the Backup Client should be opened after the upgrade has been completed. Click **NO** and then **Finish** to complete the upgrade.
- Now run the Plug-in Installer to upgrade any installed plug-ins. Existing plug-ins are marked with a blue icon and will automatically be upgraded when you click **Next**.

After the upgrade, confirm that you can open the SE Backup Client and initiate a backup to the StorageCenter.

These activities are displayed in the Diagnostics window.

3.5 Deployment Module

The Deployment Module is used to create a single installation file that can be preconfigured with file selections and backup permissions to install the **Desktop & Laptop** Backup Client software on a computer.



To create a deployment file for a group, open the StorageCenter Console, right-click on the group in the left-hand pane, and select **Deploy**. The following window is displayed:

Only the Name-Server IP Address and Account Creation details are required fields. The rest of the options can be specified to customize the Desktop and Laptop Backup Client with any specific requirements.

Each deployment file can be saved and loaded again at any stage. When all details have been specified, click on **Tools** and select **Build** to create the installation file.

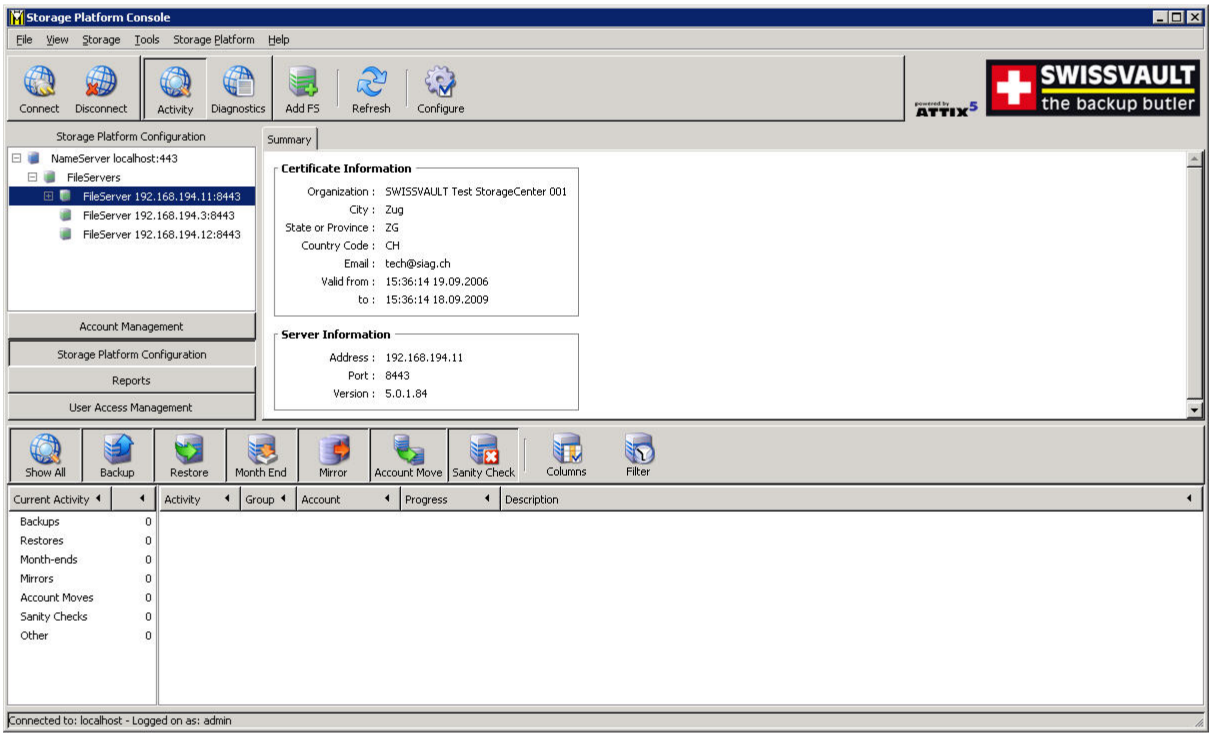
Basic Settings	
Name Server IP Address	The IP address of the Name Server. It can also be a DNS name e.g. Name-Server.company.com. The Backup Client Setup Wizard will prompt for a Name Server IP address if you leave this entry blank. Note: using a fixed IP address is more efficient. DNS name lookup may be an extra overhead in authentication, which is otherwise a very quick process. DNS names on the other hand are more flexible and easier to modify, and should always be used if there is a possibility that the users of the deployed software may ultimately migrate to another StorageCenter. In this instance a DNS name unique to the Group(s) in question is strongly recommended.
Allow Account Creation	This setting must be enabled in order for Backup Clients to create new backup accounts. Without this setting the Backup Client will only be able to reconnect to an existing backup account.
Group Name and Acc Create Key	Supplies the Group name and Acc Create Key of the group that the client will join. The Setup Wizard will prompt for a Group Name and Create Key if you uncheck this entry. This enables you to create one executable with the default settings that can be used for different groups.
Backup on System Shutdown	The Backup Client can be configured to automatically initiate a backup when a user restarts or shuts down the computer. Ask for confirmation will prompt the user whether a backup should be initiated and Show Progress will display the backup progress.
Proxy Settings	For the client to use a proxy, all the necessary settings must be configured. The backup client can also pick up the proxy settings from Internet Explorer if the Use Browser Settings option is selected.
Automatic Backups	Default settings for automatic backups. A user can modify this setting. Please note the notice in the text block on backup times.
Filters	
Default Filters	Predefined filters available in the Client software.

Initial Selection	Enable the checkbox and specify the folders and filters that will be included by default in the Backup Client. *HOME\ refers to the user home folder found in Windows 2000 and XP.
Permissions	
Users are allowed to…	Specify the permissions of Backup Client users
Exclusions	Certain types of files can be prevented from being backed up as well as files older than a specified date.
Custom Fields	
Custom fields are displayed as a separate step in the Desktop and Laptop Setup Wizard. These fields will be mandatory and the user must complete these when the backup account is created. The supplied values are then stored in the Name-Server database and can be viewed with the Backup Monitor or in the StorageCenter Console.	
Enable Custom Fields	You have to enable this checkbox before you can specify any custom fields. Supply the custom fields that you would like to see in the Setup Wizard. Each custom field must be entered in a new line.
Advanced	
JRE Install	The Java Runtime Environment is needed for the Backup Client to run. Unless a JRE of 1.4 or greater is installed on the client machines by default, enable this option
Default Connection Type	Select between a LAN (default) and dial-up connection.
Certificate Revocation List	A CRL contains a list of security certificates that have been revoked. The client program has the option to download a CRL from the server and validate that the certificates on the servers have not been revoked. If any certificate has been revoked, the client will not send any data to the server. If you do not have control over the server where the data is backed up to, it is advisable to let the client validate the server certificate against the latest available CRL.
Password Confirmation	When the user creates an account, they have to choose a password. Normally there would be a confirmation box where they must confirm this password. If the server has fixed passwords (for example with an ISP), disable the Show password confirmation box option. By default, it is enabled.

To build the deployment file, click on the **Tools** menu and select **Build**. This will open a dialog box that will prompt for a name for the EXE and where you want to save it.

4 StorageConsole Configuration

The StorageCenter Configuration pane is used to configure and maintain the Name-Server, File-Server and Mirror-Server (if installed). Please keep in mind that one StorageCenter (i.e. a Name-Server with its File- and Mirror-Servers) is managed at a time - if you administer multiple StorageCenters, please add them in the StorageCenter menu.



To view the properties of an existing Name-Server, File-Server or Mirror-Server, select the entry in the left-hand pane and click on **Configuration** in the toolbar. A window is displayed from where you can modify any of the available options. Use the **Refresh** button to refresh the current view for any recent changes.

If you have installed an additional File-Server for this Name-Server and it is not displayed in the left-hand pane, click on the **Add FS** toolbar button to add the File-Server. Supply the required File-Server information and click **OK** to save your changes. The new File-Server will be added to the list of managed File-Servers in the left-hand pane.

The Name-Server and File-Server Passwords can be changed by selecting the applicable option in the **Storage** menu.

4.1.1 Name-Server Database Backup

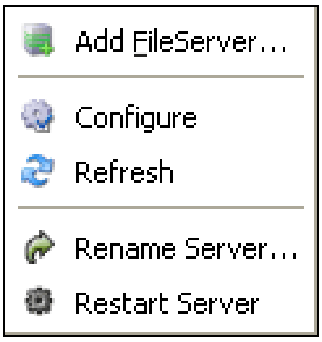
The Name-Server database, that contains the group and user tables, is automatically backed up to the File-Server every 60 minutes. This automated process enables you to restore a database not older than 60 minutes from the File-Server, should the Name-Server database fail for any reason. Activity is displayed in the Name-Server and File-Server Diagnostic windows. The Name-Server displays **Backing up database to File-ServerIPAddress** when the database backup starts and **Database backed up to File-ServerIPAddress** when the process is complete. After the File-Server has received the database, it will display **Backup database received** in the debug window.

It is advisable to mirror the File-Server to an offsite location, especially if the Name-Server and File-Servers are running on the same machine to ensure that it can be restored in case the StorageCenter fails. The Name-Server database is part of the data that is mirrored to the remote Mirror-Server. In such a case, the File-Server will be recovered from the Mirror-Server before you can restore the Name-Server database from the File-Server.

Use the **Backup DB** toolbar to manually initiate the Name-Server backup procedure. To restore the database from the File-Server, open the StorageCenter Configuration pane and click on **Restore DB** in the toolbar. **Note: all existing data in the Name-Server database will be overwritten by the restore.** The backed up database will be recovered from the File-Server, and the Name-Server will restart itself to refresh all settings.

4.2 Name Server

The Name-Server is used to manage Backup Groups and to administer individual Backup Account settings. It also authenticates accounts for the backup and restore processes, and controls load balancing when multiple File-Servers are used. The Name-Server uses port 443 for all incoming connections.



Open the StorageCenter Console, select the StorageCenter Configuration pane and right-click on the Name-Server entry in the left-hand pane to view the options available in the Name-Server.

This menu enables you to add additional File-Servers, configure the Name-Server settings, and to refresh the above-mentioned components. The table below describes the available options in more detail.

Add File-Server	To add another File-Server to the Name-Server. A valid File-Server is configured during the Installation process by default. Only use this option if you have installed an additional File-Server.
Configure	Use the **Configure** option to modify Name-Server settings. The options are discussed below.
Refresh	To refresh the StorageCenter Console
Rename Server	A friendly name can be specified for each Name-Server and displayed in the left-hand pane instead of the IP Address or DNS name. Use this option to add or rename the server name.
Restart Server	To restart the Name-Server service.

Select **Configure** in the toolbar or right-click menu to open the **Configure Name-Server** window to change any of the Name-Server options. Click on any of the available tabs to view or modify the settings.

4.2.1 Defaults

Default Message
A specified message can be displayed in the Desktop and Laptop Edition Backup Client summary screen after each backup. All groups that have “Default” set as their Group Message will use this message.

Default Client Banner URL
To display an advert or banner (dimensions: 468x60) after each backup. Specify the URL where the banner will be hosted. This URL will be sent to all groups with “Default” specified as their Advert URL. The advert URL should point to a HTML file with the following format:

```
<HTML>
<CENTER>
<A HREF="http://link here">
<IMG SRC="Image here" BORDER=0 WIDTH=468 HEIGHT=60></A>
</CENTER>
</HTML>
```

Automatic Updates
To enable Auto Updates. If you enable this option, a Backup Client can automatically be updated to the latest software version during the next backup. Specify the location of the Backup Client update directory in the **Update File Search Path** section (default location displayed). Please refer to the section, **Backup Client Auto Update**, for more information.

4.2.2 Bindings

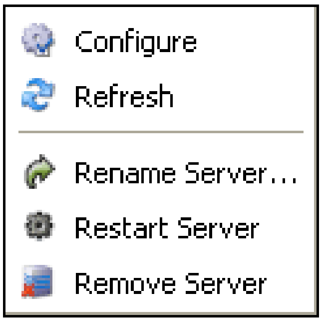
On a multi-homed system (a server with multiple IP addresses) you can select which IP address the Name-Server must bind to. Note that this option will only be enabled if more than one IP address is available. Restart the service to apply any changes.

4.2.3 CRL

You can choose whether the Name-Server must serve CRL (Certificate Revocation List) files. If you already have a CRL file saved on your server, click on **Upload CRL..**. and select the file. The file will be saved and the **Serve Certificate Revocation List (CRL)** checkbox will automatically be selected. Click on the **Automatically Downloaded From** radio button to automatically download the CRL and supply the applicable IP Address (the supplied address is an SWISSVAULT Name-Server).

4.3 File Server

The File-Server is the secure data storage system and manages the data between the StorageCenter and the Backup Clients during the backup and restore processes. It can also receive mirror data from other File-Servers.



If you right-click on the File-Server entry in the left-hand pane, a popup menu is displayed. From this menu you can select the following options:

Configure	Use the **Configure** option to modify File-Server settings. The options are discussed below.
Refresh	To refresh the StorageCenter Console
Rename Server	A friendly name can be specified for each File-Server and displayed in the left-hand pane instead of the IP Address or DNS name. Use this option to add or rename the server name.
Restart Server	To restart the File-Server service.
Remove File-Server	To remove the Server entry from the StorageCenter Console. This will not delete the actual server.

Select **Configure** in the toolbar or right-click menu to open the **Configure File-Server** window to change any of the File-Server options. Click on any of the available tabs to view or modify the settings.

4.3.1 Bindings

On a multi-homed system (a server with multiple IP addresses) you can select which IP address the File-Server should bind to. Note that this setting will only be enabled if multiple IP addresses are available.

4.3.2 Mirror To

The File-Server can be set to mirror the user accounts and the Name-Server database to another File-Server.

Different levels of mirroring are available, ranging from low to high bandwidth and server space usage and you have to select one of these options before you can configure the rest of the settings.

The table below describes the different options in detail. **Store on Remote Mirror** has four options on how to store the data on the Mirror-Server:

Type of mirror	**Data Transmitted**	**Bandwidth Usage**	**Space Needed**	**Mirror CPU power**
No Mirror	None	None	None	None
Only one backup	Only daily archives (the same data that was backed up from the Backup Client to the StorageCenter) are sent and a live copy is built on the Mirror Server. Note that only the data from the last mirror is available if you select this option.	Small	Only live copy 30%	Needed
One month,	Only daily archives (the same	Small	One month of	Needed

briefcase and settings	data that was backed up from the Backup Client to the StorageCenter) are sent and a live copy is built on the Mirror Server. These files are consolidated to one month-end at the end of the month.		archives 50%	
Exactly as here (Month-ends transferred)	The complete File-Server is mirrored, including the month-ends.	Larger	All archives 100%	None
Exactly as here (No month-end transfers)	The complete FileServer is mirrored, excluding the month-ends. The MirrorServer creates the month-ends and will retain them as per the Archiving setting on Group level	Medium	All archives 100%	Needed

Destination: Specify the Mirror-Server IP address and port and supply the mirror username, password and the preferred type of mirroring. This mirror account is administered in the **Mirror From** tab on the Mirror-Server and you must add this account on the Mirror-Server before you will be allowed to connect.

Schedule: Configure the Mirror Schedule by selecting a mirror window. You can also specify that the mirror should start every **x** minutes within the scheduled window.

Immediate Actions: Use the **Mirror Files** button to initiate the mirroring process. Progress is displayed in the Activity section. The **Restore Files** button is used to restore files from the Mirror-Server. Note: read the instructions carefully before initiating a Mirror restore. Mirror Catch-Up discussed below.

4.3.3 Mirror Throttle

The **Mirror Throttle** tab enables you to specify bandwidth usage speed limits by creating a mirror throttle schedule. Mirrored data will then only be transferred at the specified speed limits during each interval. This is very advantageous as you can limit the mirroring bandwidth during peak hours rather than having to cancel the process.

Changes are immediate, as you will see in the Activity window, where the transfer speed is displayed.

Up to six limits can be specified in the **Speed Limits** section, each displayed with a unique colour. In the **Schedule** section, you can modify the Interval duration (default 60 minutes) from 15 minutes to 1440 minutes (24 hours). After you have specified the interval duration, click on a speed limit colour in the **Speed Limits** section (or click on the **Selected Speed** colour to cycle through the available limits), and configure the **Schedule** by clicking in the desired interval boxes. The **Clear** button will reset the Schedule.

4.3.4 Mirror From

You may configure the File-Server to receive mirror information from other File-Servers. To add a Mirror-Server account, click on the **Add** button. Specify an account name and mirror password, and click on **OK**. To remove a server from the list, click on the **Delete** button and click on **Yes**. To change any one of the servers click on the **Edit** button and edit their details on the resulting dialog.

Note: If you delete a mirror client from the list you have to manually delete their mirror files from the hard drive. Their data file will be found in the LBData folder – all directories starting with <MIRROR CLIENT>_ should be deleted. For example: Company ABC was mirroring to this server and has now been deleted. To remove their data from the server, delete the folders in LBData starting with 'ABC_'.

Every night at midnight, a log file is created which logs the total usage for each mirror client. This file is located in the Logs directory (in the directory where you installed the StorageCenter) and is called

MIRRORTOTALS<date>.LOG. To force the creation of this file immediately, click on **Log Mirror Totals.**

4.3.5 Mirror Catch Up

Mirror Catch-up enables you to manually get your Mirror-Server up to date, if it is a couple of days behind and there are too much data that must be transferred over limited bandwidth.

To use the Mirror Catch-up tool, Open the File-Server **MirrorTo** tab and specify a **Destination directory**. This destination directory could, for example, be a temporary USB hard drive connected to the StorageCenter. Note that Mirror Catch-up is only available if Mirroring is enabled. To initiate the process, click Start. The StorageCenter will copy all relevant account data to the specified directory.

Note: Mirroring is disabled during this process. The StorageCenter Console will notify you when all the files have been copied to the specified location.

Next, you must import the data on the Mirror-Server. After you have attached the USB hard drive to the Mirror-Server, open the File-Server **Mirror From** tab. Note this must be the actual Mirror-Server. Specify the **Source directory on File-Server machine** and click **Start.**

The StorageCenter will transfer the data to the correct locations and notify you when the transfer is complete. Note: remember to enable Mirroring again on the main File-Server, in the MirrorTo tab, once the Mirror Catch-up is complete.

4.3.6 Restoring from a Mirror Server

Note: Restoring the data from a Mirror-Server deletes the existing data on your File-Server. Use with caution.

If you want to restore data from a Mirror-Server please do the following steps in this order:

- Open the StorageCenter Console, select the File-Server and open the **MirrorTo** tab in the right-hand pane.
- Click on **Restore From Mirror**. The File-Server will restore the mirrored data from the Mirror-Server. This **deletes and replaces the existing File-Server** and includes the user accounts data and the Name-Server database. Note that mirroring is disabled when you click on this button to ensure that no scheduled mirrors will be initiated during the restore process.
- After the restore has been completed, click on the Name-Server in the left-hand pane and open the **Admin** tab.
- Click on **Restore Database**. This will restore the Name-Server database from the File-Server to the Name-Server.
- Enable mirroring again in the File-Server **MirrorTo** tab.

5 Reports

The Reports pane can be divided into two groups, Standard Reports and Enterprise Reports. Standard Reports are installed by default and can be used by any Admin user. If you do not see the Enterprise section in the left-hand pane, it is not installed and/or activated. Please contact your Service Provider for additional information.

5.1.1 Standard Reports

The following reports can automatically be emailed to specified email addresses to notify you of certain activities on the StorageCenter:

- **Overview Report** – this report enables you to receive an overview of all activities on the StorageCenter. Information includes Account Information, Backup Status, Mirror Status and Usage Status. Any account issues will also be highlighted in the report.
- **Licence Report** – This csv file reports on all licences allocated in the StorageCenter, sorted by Group.
- **File-Server Disk Space Report** – this report will give you an indication of how much hard disk space is used and available on the File-Server.
- **Mirror Report** – Notification after mirroring was completed successfully. Information includes the mirror duration, the number of accounts mirrored and the amount of data that was transferred.
- **Group Expiry Report** – to notify you before any of the StorageCenter Groups expire.
- **StorageCenter Expiry Report** – you can be notified x days before the StorageCenter expires.

Before you can enable these reports, you must supply valid SMTP settings that will be used when the reports are emailed. Click on the **Standard** entry in the left-hand pane, click **Configure** in the toolbar, and supply the SMTP settings. Report logging is displayed in the StorageCenter Diagnostics window.

5.1.2 Standard Reports Configuration

To enable any of the reports, select the report in the left-hand pane and click on the **Configure** button in the toolbar. You can also double-click on the report entry. Click in the checkbox next to **Enable this report** and supply the required Report Configuration settings. Multiple e-mail addresses can by entered in the **To** field by separating them with commas.

The BillingReport.csv file is automatically attached to the licence report and includes the StorageCenter licence information, specified per group. Additional files may be attached by supplying the filename and its full path. Start each file in a new line.

Specify when you would like to email the reports in the **Report SyncSchedule** section. Choose between Daily, Last Day of the Month or specify a date in the x Day of the Month.

Use the **Email this report now** button to manually send the report to verify that all settings are correct, or if you only want to run the report once. The StorageCenter Diagnostics window displays the necessary logging information.

6 User Access Management

User Access Management enables the Backup Administrator to create StorageCenter Access Users, Groups and Roles. These Roles are then assigned to Backup Groups in the Account Management pane and when Access Users connect to the StorageCenter Console, they will only see the applicable panes and options that they are allowed to manage. This enables you to provide the same application to e.g. your support staff, helpdesk and financial department.

Note: User Access Management must be configured before you can configure access to Backup Groups in the Account Management pane.

The default administrative account name in the StorageCenter Console is admin with the master password as specified during the StorageCenter installation. You have complete access to all options and settings when using this username; please be careful when sharing the account password. You are advised to create separate administrative Access Users for your support engineers, to ensure that changes to the StorageCenter can be tracked and audited.

6.1.1 Access Users

To add a new Access User, open the User Access Management pane, click on **Access Users** in the left-hand pane, and then **New User** in the toolbar. Specify the required Access User credentials. Enable the **Admin user** checkbox if you are creating an admin user. Note that admin users have full access to all panes. Click **Create** to add the user. To modify the properties of an existing user, select the Access User and click **Configure** in the toolbar.

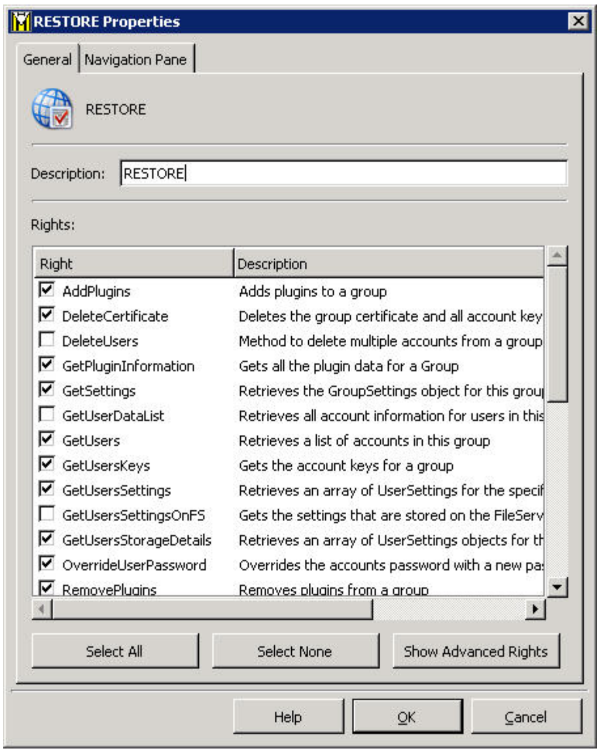
The **Member Of** tab enables you to add the user to an Access Group. Groups may also be added or removed from this tab. To delete a user, select the entry and click on **Delete User** in the toolbar.

6.1.2 Access Groups

Access Management Groups are useful if there are multiple users supporting multiple groups as you can add all Access Users to a particular Access Group and then assign the applicable Role to the Access Group, rather than assigning the same Role to multiple users.

6.1.3 Access Roles

Two predefined Access Roles are included in the StorageCenter Console, Group Admin and View Only. Group Admin enables the Access User to administer the Backup Group where it has been allocated to with general group permissions enabled. The Group Admin role also provides access to the Activity section and Enterprise Reports, if it is installed. Access Users with the View Only role can access the Account Management pane and view all Backup Accounts in the Backup Group, but cannot modify any settings. Use the **Configure** button in the toolbar to view the list of rights allocated to a role, or to modify the role. Access Roles can also be copied and used as templates for additional roles. Right-click on the applicable role, select **Copy Role** and supply a unique name.



Open the User Access Management pane and select **Roles** in the left-hand section to Add, Delete or Configure Roles.

When you create a **New Role** or **Configure** an existing role, the properties window is displayed, as demonstrated in the image.

All available rights are displayed in this window and a description of each right is also provided to assist you. Enable the checkboxes next to the rights that you want to allocate to the role.

You can also specify which panes must be available in the StorageCenter Console in the **Navigation Pane** tab, with Account Management and Activity enabled by default. Note that all allowed panes are filtered to only display the Backup Groups/ Accounts that the Access User is allowed to see. Click **Create/OK** to save your settings.

Existing roles can be deleted by selecting the applicable role and then clicking on the **Delete Role** toolbar button.

Roles are assigned to an Access User/Group in the Account Management pane. Select the applicable group, click on **Configure** in the toolbar and open the **Permissions** tab (see example below).

SE Remote Management note: SE Remote Management is enabled by default in the Group Amdin role. To disable, remove the **SE_Rights** from the role. If you connect using the standard SE Remote username and password, the **SE_Rights** are ignored – you must use your StorageCenter Access Account in order to limit Remote Management rights.

6.1.4 User Access Management Example

Create two Access Users (e.g. GroupAdmin and GroupViewer, with pass as password) and use the two Access Roles (Group Admin and View Only) that are already configured in the Access Management tab.

To see the difference between the two, go to the Account Management tab, select a group and click on **Configure** in the toolbar. Select the last tab, **Permissions**. This tab is used to assign Access Users to the selected group.

Click on the **Add** button; in the Users section select GroupAdmin and assign the Group Admin role. Click **Create** to add the user. Repeat the process and add GroupViewer with the View Only role. Use the **Disconnect** button on the toolbar to disconnect and then click **Connect** again. When you are prompted to provide your login credentials, use GroupAdmin or GroupViewer.

Open the Account Management pane to see the difference in functionality when logging in with the two users.

7 Activity & Diagnostics

The **Activity** and **Diagnostics** sections are additional sections that provide information and updates about the StorageCenter activities. You have the option whether these sections must be displayed as additional panes in the left-hand section or always visible at the bottom of the StorageCenter Console.

7.1.1 Activity

The Activity pane displays all current connections and activities on the StorageCenter. Connections/Activities include:

- Backups
- Restores
- Month-ends
- Mirrors
- Account Moves
- Sanity Checks

Activities can be filtered by using the toolbar buttons.

All activities are displayed by default. You can click on the **Show All** button in the toolbar if all activities are not displayed, rather than selecting them again one at a time. Columns can be sorted by clicking on the column headers.

Activities can also be filtered to only display a particular group(s) by clicking on the **Filter** button in the toolbar.

7.1.2 Diagnostics

The Diagnostics section displays the raw output supplied by the selected Name-Server or File-Server(s) in separate tabs for each server.

If you right-click in the title section, a list of all available Name and File-Servers are displayed and you can select the desired Name or File-Server that you would like to monitor. You can also use the **Show Tabs for All Servers** to view all managed servers.

If you right-click in the diagnostics output window you can **Copy** the information, e.g. to email the output to a support engineer. **Flush buffer** clears the current output window.

The right-click Filter option enables you to filter or highlight a particular word or phrase.

8 SWISSVAULT Support

Für weitere Fragen stehen wir Ihnen gerne zur Verfügung.

Hinweis: Sie können uns auch ein Email schreiben support@swissvault.ch, welche wir innerhalb von kurzen Reaktionszeiten gerne beantworten werden.

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