NovaStor xSP Client
User Manual

February 2018

Features and specifications are subject to change without notice.
The information provided herein is provided for informational and planning purposes only.

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Installing the Software

Installing from downloaded file:

To install NovaStor xSP clients, which use NovaBACKUP software, locate the downloaded installer .exe file and right-click on the **Setup-NB*.exe** program and then select "Run as administrator". It is required to be logged in to Windows with an Administrator account for the software installation. You may need to to temporarily disable Anti-Virus + Anti-Malware real-time scanner and Firewall software for the install - **How-to** here.

Command Line Installation

Installing NovaBACKUP software via command line:

NovaBACKUP client Installer fails on activation of either trial or licensed version; workaround install via command line.
View this NovaBACKUP Knowledge Base article here.

NovaBACKUP client Installer fails on activation of either trial or licensed version. This is most likely due to a .NET Framework related issue - troubleshooting steps are in the KB article here, on your system. Here are the two workaround steps to attempt to get NovaBACKUP client to install:

1. Install NovaBACKUP client (Setup-NB-xx.exe) via a silent command line, using the following instructions from another KB article.

If that does not work then attempt a command line installation of NovaBACKUP software via an **Administrative Command Prompt, this method will bypass the activation phase of the Setup program but you will later have to activate the software after loading NovaBACKUP:**

On the same PC, start an **Administrative Command Prompt** by right-clicking on Command Prompt and do "Run as Administrator" on it and then issue this command after changing to the folder where the Setup program is located first and this example assumes your Setup program is named "Setup-NB*.exe", if your Setup program is named something different then make sure you take note of the file name for the Setup .exe program to change it in the first portion of the command line that you will be issuing to the Administrative Command Prompt below. The first line of this command assumes that your Setup-NB*.exe downloaded setup program, typically this would be loc-ated in your own user's Downloads folder, so the first command shows you how to change to your own user's Downloads folder:

cd\Users\Your.User.Name\Downloads

After changing to the correct folder where NovaBACKUP's Setup-NB*.exe is located, then issue this command:

Setup-NB*.exe /Log /q /noreboot /ComponentArgs "Backup Client":"/q /prop REBOOT=ReallySuppress /log c:\Quiet_Install_ Setuplog.txt"

Paste that entire command in directly, starting with "Setup-NB". Make sure to change the first "Setup-NB*.exe" part of that com-mand to match the file name of the setup .exe installer that you downloaded so that the above command can work.

When that task runs you can see that it is running by looking at your Windows Task Manager and in the Processes or Details area look for "Setup-NB-*.exe" in the list of processes running and when it is done it will no longer list that processes as being active when it is done running.

Now look for the NovaBACKUP desktop shortcut to see if it was created after that install completed. If it is in fact listed then the soft-ware is installed. Now you can launch the software and attempt activation directly from the program.

2. Then open the NovaBACKUP client software and follow the prompts that will come up just after launching the application to register the software.

System Requirements

Requirements that need to be met in order to install and use NovaStor xSP clients (NovaBACKUP software).

View the NovaBACKUP System Requirements PDF document here to know the specific system requirements that the NovaBACKUP software requires to be in place before it can be utilized for installation, backup and restore operations.

Specific requirements exist for NovaBACKUP to be able to function properly with the installed Microsoft Operating System version and service pack level, Microsoft Hyper-V version and service pack level, Microsoft Exchange version and service pack level, Microsoft SQL version and service pack level, and VMware version.

Getting To Know the User Interface

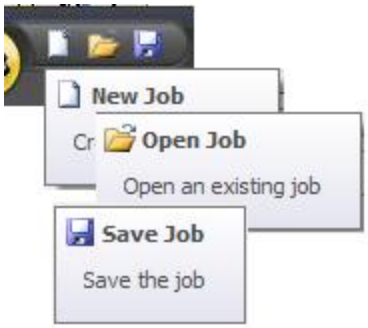
The User Interface

The user interface consists of a single main screen. At the top of this screen you'll find the "Launch Button", "Quick Access Toolbar" and a set of seven tabs.

Launch Button

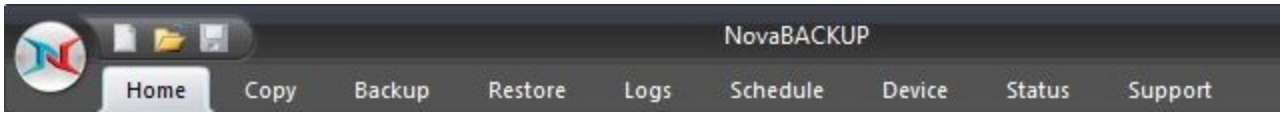
The Launch Button is in the top-left corner of NovaBACKUP. It provides fast access to files and frequently used commands. From here, you can quickly create a new job, open, run and save an existing job, or import previous backup jobs.

Quick Access Toolbar



From here, simply click on the appropriate icon to create a new job, open an existing job or save the current job.

Tabs



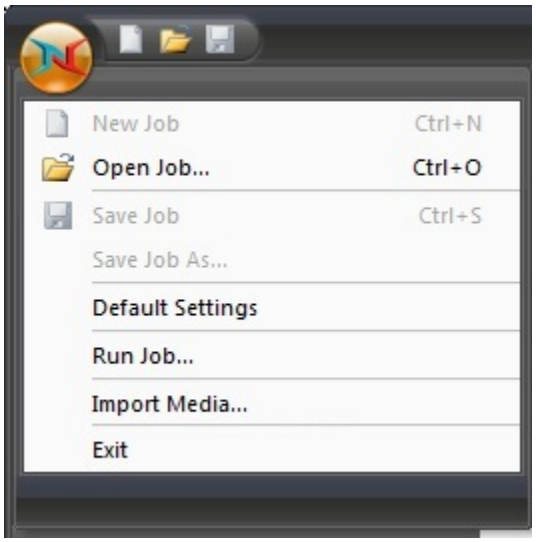
The Home tab contains convenient information about your previous and next scheduled backup as well as useful shortcuts and the
"Quick Select" feature. The Backup tab allows you to select files and folders to backup. Similarly, the Copy tab allows you to select files and folders to be copied to another destination. The Restore tab enables you to make selections in order to restore files and folders. The Schedule tab provides a means to schedule backup jobs to run at a future time/date. The Logs tab provides access to logs for pre-viously run jobs. The Device tab provides a means to configure and view backup devices. The Status tab give you a method to view the progress of the currently running job.

The file lists in the Backup, Copy and Restore tabs look very similar to the Windows Explorer, which makes it familiar and easy to use. Selected files can be browsed by expanding the drives or network resources in the tree view display on the left-hand side. Next to each folder and file is a check box. These are used for adding and removing files from the selection list.

Note: The name of the currently selected job is listed at the top of the NovaBACKUP program window.

Launch Button

The Launch Button is in the top-left corner of NovaBACKUP. It provides fast access to files and frequently used commands. From there, you can quickly cre-ate a new job, open, run and save an existing job, or import previous backup sets.

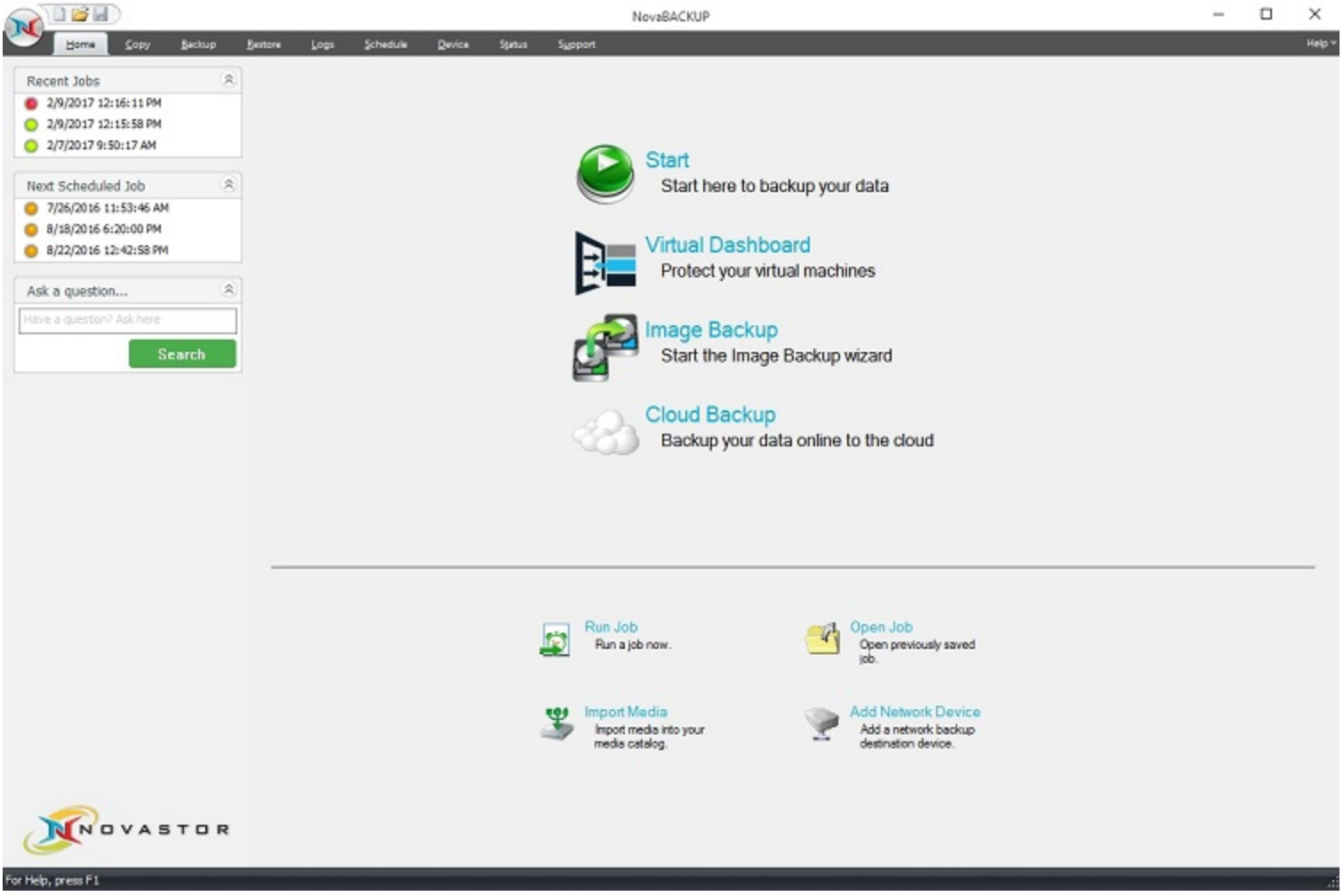


Item	Detail
New Job	This will allow you tocreatea new jobbased on the tab selected.
Open Job	This will allow you to open a previously savedjob.
Save Job	This will allow you to save the current job.
Save Job As	This will allow you to save the current job using a different name.
Default Settings	Default Settings.
Run	This will allow you to run a previously saved job

Job	
Import Media	This will allow you to import backup jobs that do not appear in the Restore View. These backup jobs are usually created with previous installations of or from other computers run-ning NovaBACKUP.
Recent Files List	From this list, you can select a recently used job.
Exit	This exits the application.

Home Tab

On this tab, you will find the task window on the left containing summary information on the most recent and next scheduled oper-ations, the link to configure global settings and display the help file.



Left panel items:

Click on any of the "Recent Tasks" items to open the corresponding log file for review.

Click on any of the "Next Scheduled Task" items to open the corresponding schedule to view or edit.

Main selections:

Start

Start here to backup your data.

Virtual Dashboard

The Virtual Dashboard is where all VMware and Hyper-V backups that are capable of restoring individual files take place. It is also the center of VMware and Hyper-V replication operations. These backups are not the same as backups that are done through the Backup tab.

Image Backup

The Image Backup selection opens the screen from where an image backup or restore operation can be performed, or image backup jobs can be created and scheduled.

Cloud Backup

Click Cloud Backup to setup a cloud backup device through our network of selected partners.

Utilities:

Run Job- Clicking this link allows you quickly select a specific Backup, Copy or Restore task to run. After making your selection, click "Run" and the specific task will be performed immediately.

Open Job -Select this link to open a previously save Backup, Copy or Restore job permitting the job to be updated, saved or run.

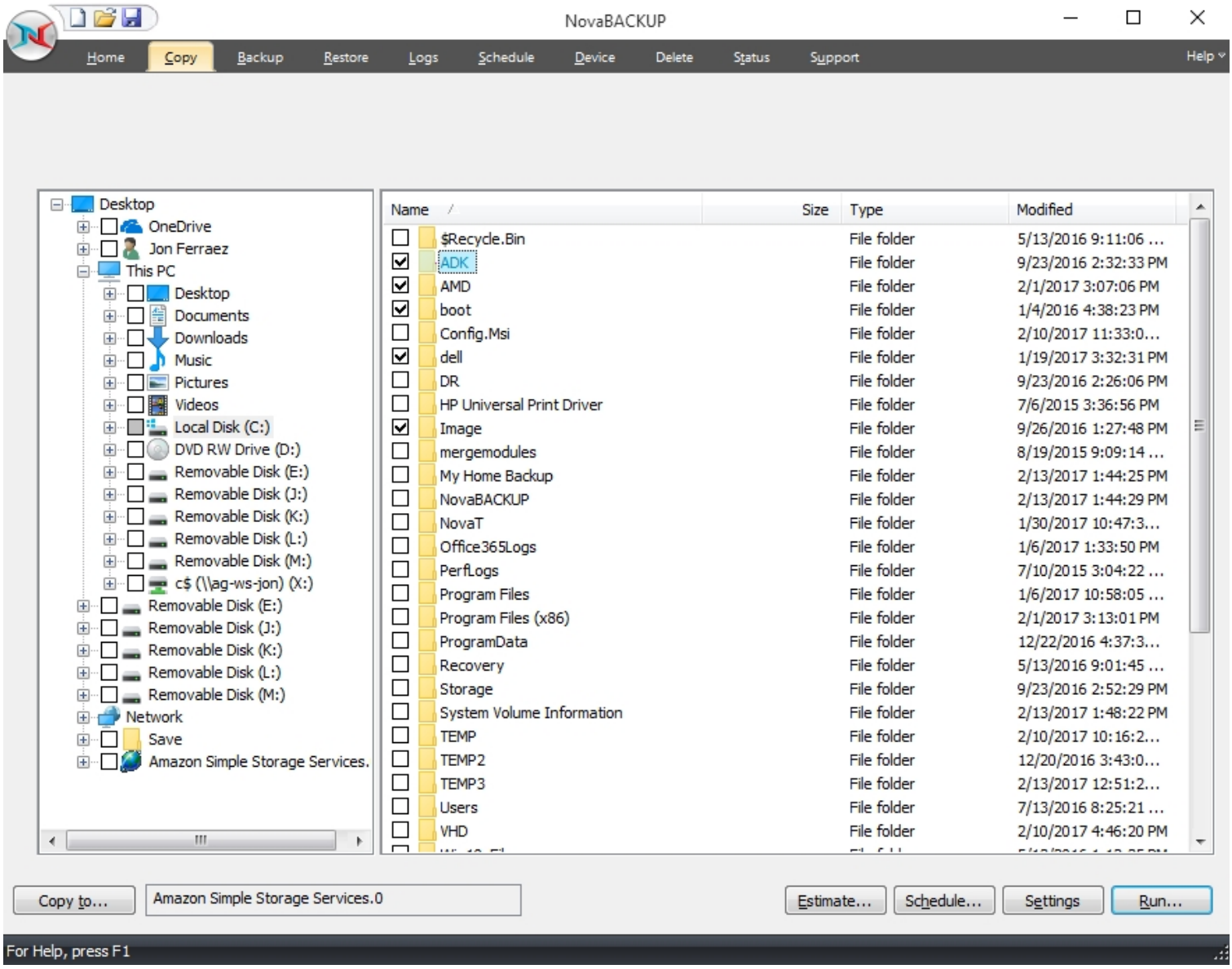
Import Media- This link launches the Import Media function allowing you to add details for media not already saved to the current NovaBACKUP database. For example, media from another system or installation of NovaBACKUP.

Add Network Device – Click this link to create a new network storage device. Once the device is created you can manage the device as well as all other deices by clicking the device tab.

Copy Tab

From here, you can create a job that will copy the files/folders you specify from one location to another. The different options available allow you to adjust the copy job to your specific needs.

What are copy jobs?*Copy jobs are combinations of directories and files that are selected as well as any of the options (including filters) that go along with that specific copy job. Copyjobs differ from backup jobs in that they result in the exact same set of files being "copied" or transferred to the destination device including: Hard Disk, Network Drive, and online storage. Note: Copy jobs DO NOT permit the use of tape.*



Button Functions

"Copy To" Button

Click this button to display a dialog showing all available devices. From here, select the destination device and/or path you want to use for this job

"Make Folder" Button

By highlighting an existing path and clicking this button, you are able to create a new, empty folder

"Estimate" Button

This will allow you to find out the estimated number of files and size of the current copy job. Once selected a "Estimate" box will appear with the following information:

Files

This indicates the Count (number of files) and Size (In Gigabytes) that you have selected for the job. This is especially helpful if the size of a copy is an issue when attempt to copy files to external devices with limited space such as USB Devices.

Folders

This indicates the number of folders that you have selected for the job.

"Schedule" button

This button is used for the schedule options. Within this window, you will be able to schedule the job as well as name it. You have various scheduling options including; one time, minute, hourly, daily, weekly, or monthly. You may also set the time and date of when the job will run.

"Settings" button

This will take you to the Advanced options for this specific copy job. Refer to the Copy Job Settings Topic for further information

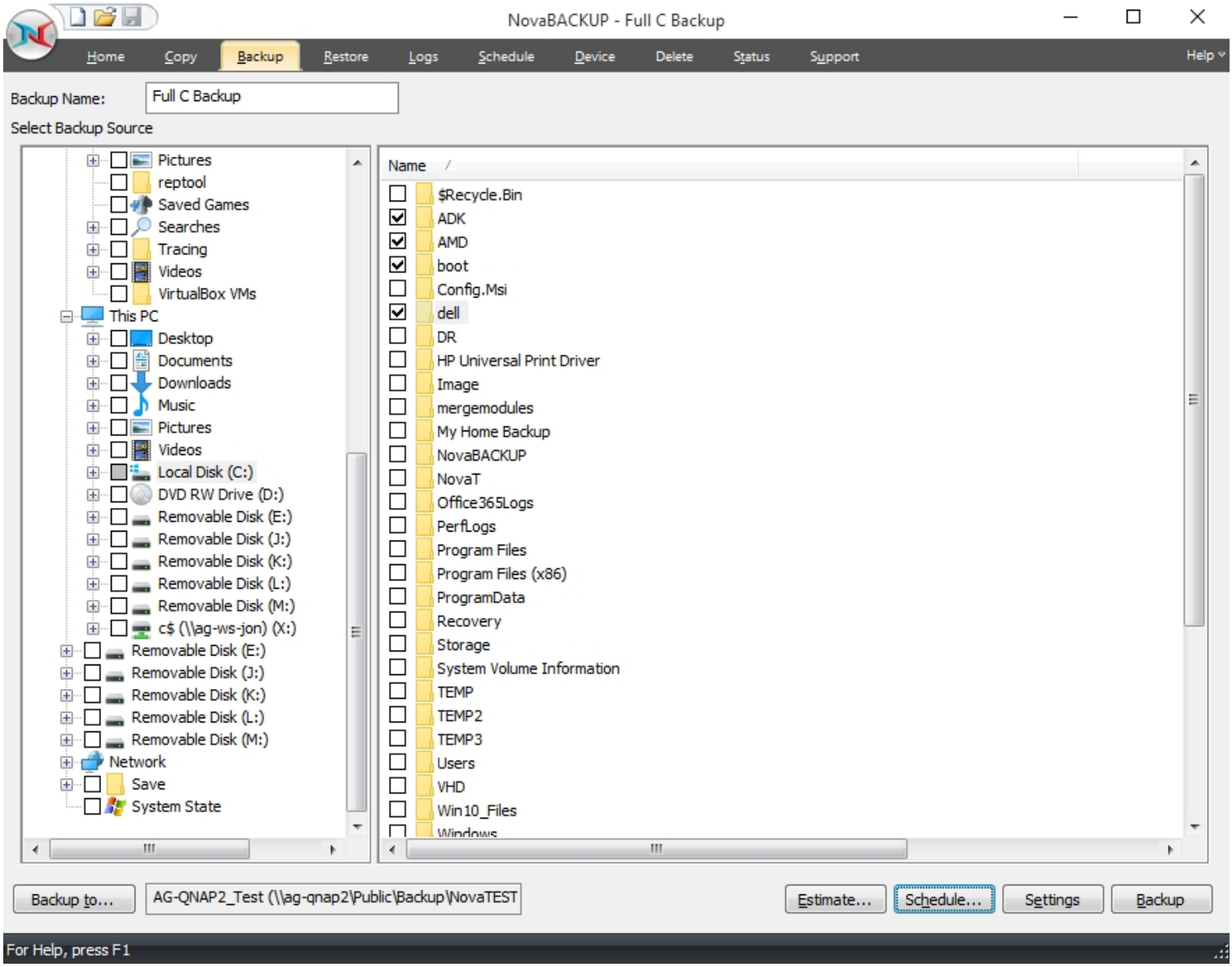
"Copy" button

This button starts the selected copy job immediately.

Backup Tab

Using this tab, you can create a backup set that will include the files that you specify. The different options available allow you to adjust the backup job to your needs.

You may select items from the "Select Backup Source" pane. Folders and volumes will be on the left and files on the right. You may select a descriptive name for the backup job by enter it in the "Backup Name" field at the top. This will allow you to clearly identify each job on a specific media.



Backup Job Name

In this text box, you can input an optional name for the current backup job you are creating. Be sure not to confuse this with the file-name of the backup job. The backup job name is essentially a descriptive name that you have assigned to the actual backup job file. A default job name will be assigned to each new backup indicating the date and time within the name. This name structure is just one way to help organize your backup jobs.

What are backup jobs?*Backup jobs are combinations of directories and files that are selected for backup as well as any of the options (including filters) that go along with that specific backup. Backup jobs are used to allow one or more collections of files to be backed*

up at different times. For example, one backup job could be created for accounting data, and another backup job could be created for important data that changes daily. The important data might be backed up daily or even hourly, while the accounting data could be backed up at the end of the week.

Remember that setting a backup job name is optional and is meant to aid in managing backup jobs. For instance, under the Logs Tab, which will be discussed later, a listing of previous backup activity can be seen. Each of these logs is indicated by a Backup Job Name and a date. If you do not specify a Backup Job Name for any of your backup jobs, it will be a daunting task to differentiate the several backups solely by the dates and times of each of the backups. Thus, it is highly recommended that you assign a name to each of your backup jobs in order to ease your ability to distinguish the different backups.

Button Functions

"Estimate" Button

This will allow you to find out the estimated number of files and size of the current backup job. Once selected a "Estimate" box will appear with the following information:

Files

This indicates the Count (number of files) and Size (In Gigabytes) that you have selected for the job. This is especially helpful if the size of a backup job is an issue when attempting to backup files to external devices with limited space such as USB Devices.

Folders

This indicates the number of folders that you have selected for the job.

"Schedule" button

This button is used for the schedule options. Within this window, you will be able to schedule the job as well as name it. You have various scheduling options including; one time, minute, hourly, daily, weekly, or monthly. You may also set the time and date of when the job will run.

"Settings" button

This will take you to the Advanced options for this specific backup job. Refer to the Backup Job Settings Topic for further information.

"Backup To.. " button

Click this button to display a dialog showing all available devices. From here, select the backup destination device and/or path you want to save the backup to

"Backup" button

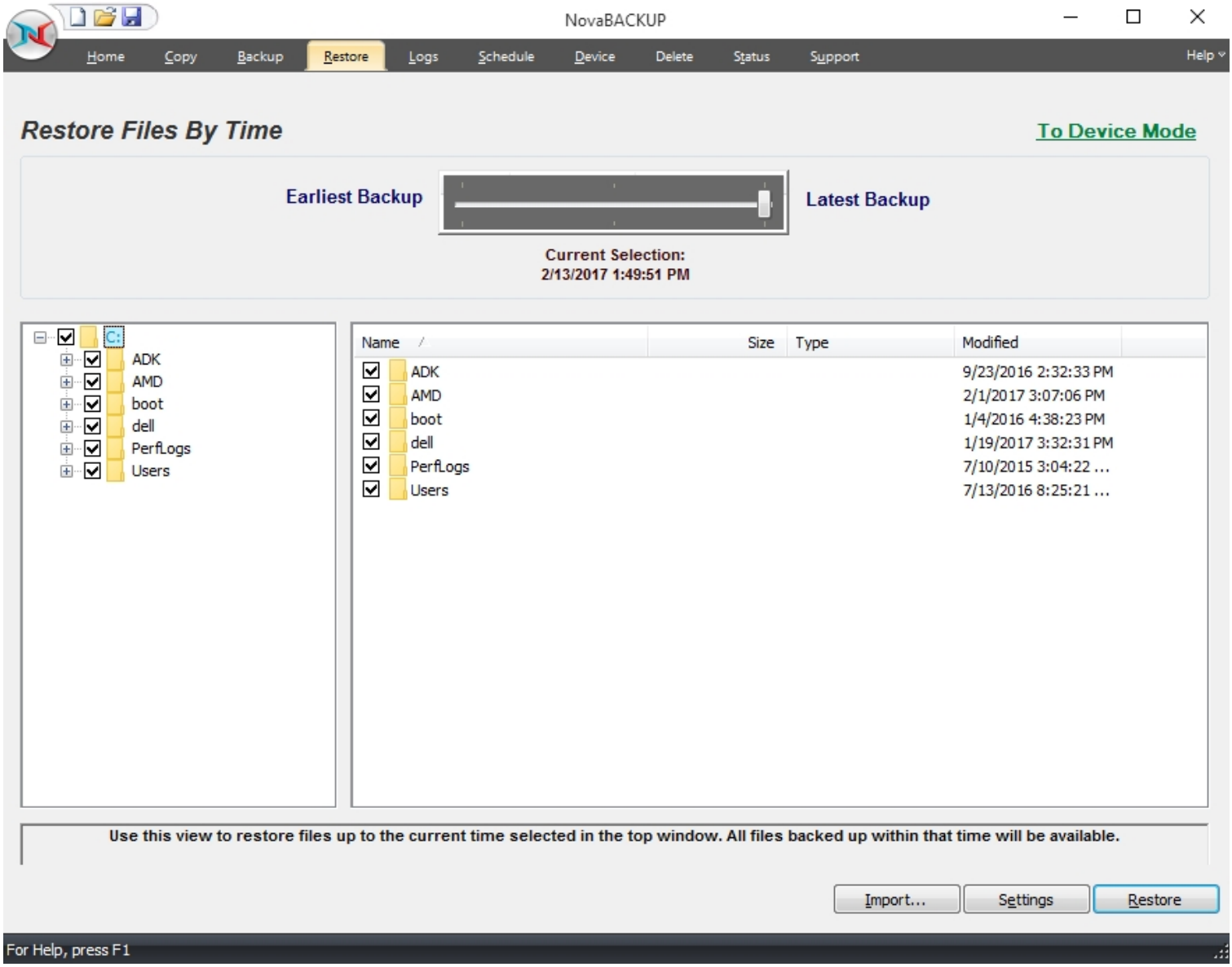
This button starts the selected backup job immediately.

Restore Tab

Under the Restore tab you will find all the folders/files from previous backups that you can restore either to the original or alternate loc-ation.

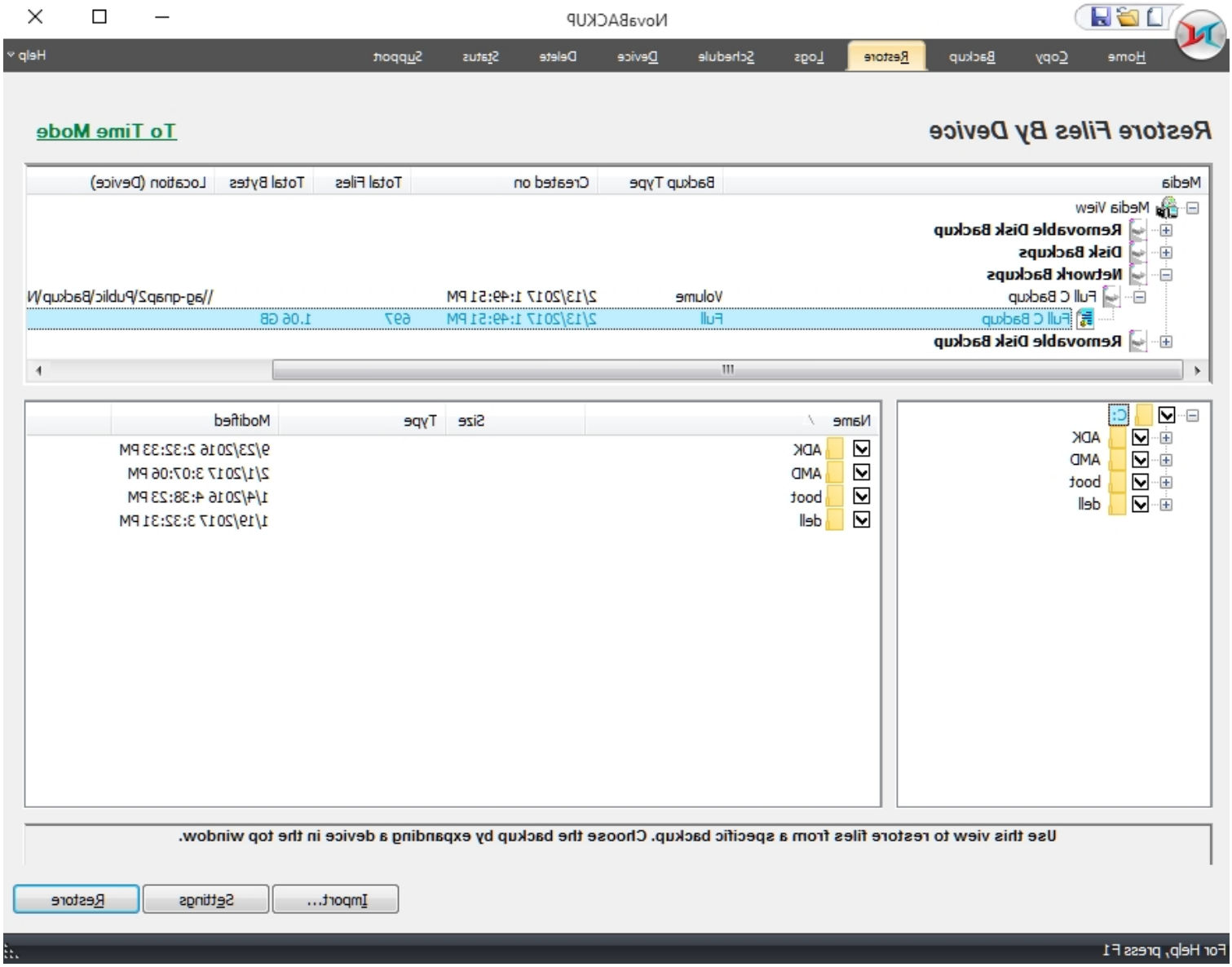
Restore Files By Time

This 'Time Slider' view uses a patent pending technology to provide a single restorable fileset without the need to select the backup source device. Using the slider, files are listed based on the range of time the backup has run.



Restore Files By Device

This view displays a restorable fileset contained in a specific backup. Use the device view in the upper window to select the location of the backup and the backup session containing the files available to restore.



Why don't I see any media listed?

If you are unable to see anything populated in the media view, you might need to perform an import on the media which is explained below in the import section.

Select Backup Job

From the Media View in the top window, you will see a list of available backups that you can restore from. Simply select the backup you would like to restore by double-clicking the entry and a listing of the folder/files included in that backup will appear in the win-dows below.

The Media View - Restore Mode

This window allows you to view all available backups to restore from, based on the database of backup jobs and folder/file selections cataloged within the database. All backups are categorized by destination type (Disk, Removable Disk, Internet, and Tape) and fur-ther categorized by backup job name. This view is similar to the Media View as seen in the Backup mode. However, only des-tinations with backups available for restoration will be listed.

Select Restore Item(s)

These selection windows are similar to the ones seen on the Backup Tab. Here, a listing of files and folders will be displayed once a backup job has been selected for restoration. The only files and directories that will be listed are the ones that were included in the backup job that you are restoring. In the selection windows, you can select files and/or folders just as you did in the Backup Tab when you selected the files for backup.

By default, if you are restoring files to their original location, files that already exist in that location will not be overwritten by the files that are to be restored. Check your Restore Setting to alter this.

Button Functions

"Import" Button

This button will allow you to import backup jobs that are not in the currentNovaBACKUPdatabase. Simply click on the button and browse to the backup job that you desire to import. Once imported into database, the backup job will then be listed in the media view, and available for restoration.

"Settings" Button

This button will allow you to access some options that you have in the restore process. These options are discussed in Restore Job Settings Topic.

"Restore" Button

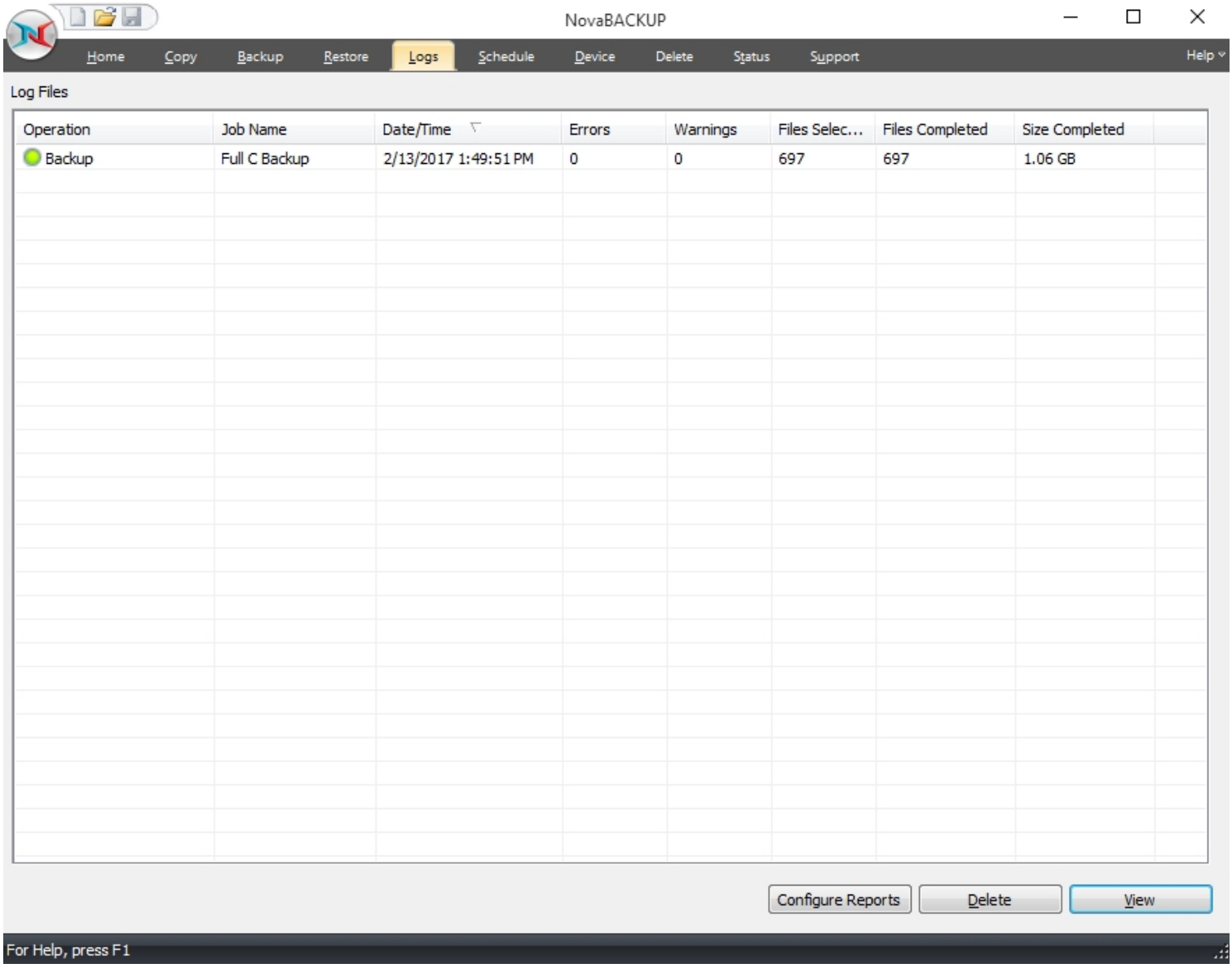
Once you have selected the files, folders, or drives that you want to restore, you may press this button to start the restore immediately.

If you are restoring from a complete set of spanned media, you should always select the first piece of media as your first restoration media. NovaBACKUP will prompt you to insert each subsequent piece of media if necessary. You must have all media available to do

the restore. If your backup consists of 5 pieces of media and media #3 is corrupt/missing/damaged, you will only be able to restore data from the first two pieces of media.

Logs Tab

From here, you can quickly determine the status of a Copy, Backup, Restore or Retention job that was performed.



The columns in the summery view include:

Operation: Includes - Copy, Backup, Restore & Import.

You can quickly determine the status of the backup by the color-coded icon next to each operation:

Operation completed successfully

Operation completed, but had warnings

Operation had errors

Job Name: The name of the job for this log file

Date/Time: The Date & Time the specific job was run

Errors: The number of errors encountered after running the job

Warnings: The number of warnings encountered after running the job

Objects Selected: The number of objects selected before running the job

Objects Completed: The number of objects successfully completed after running the job

Size Completed: The total size of all objects successfully completed after running the job

You can quickly sort the logs view by clicking on the appropriate column heading at the top of the window

Button Functions

Configure Reports

Click this button to use the summary reports feature.

Delete Button

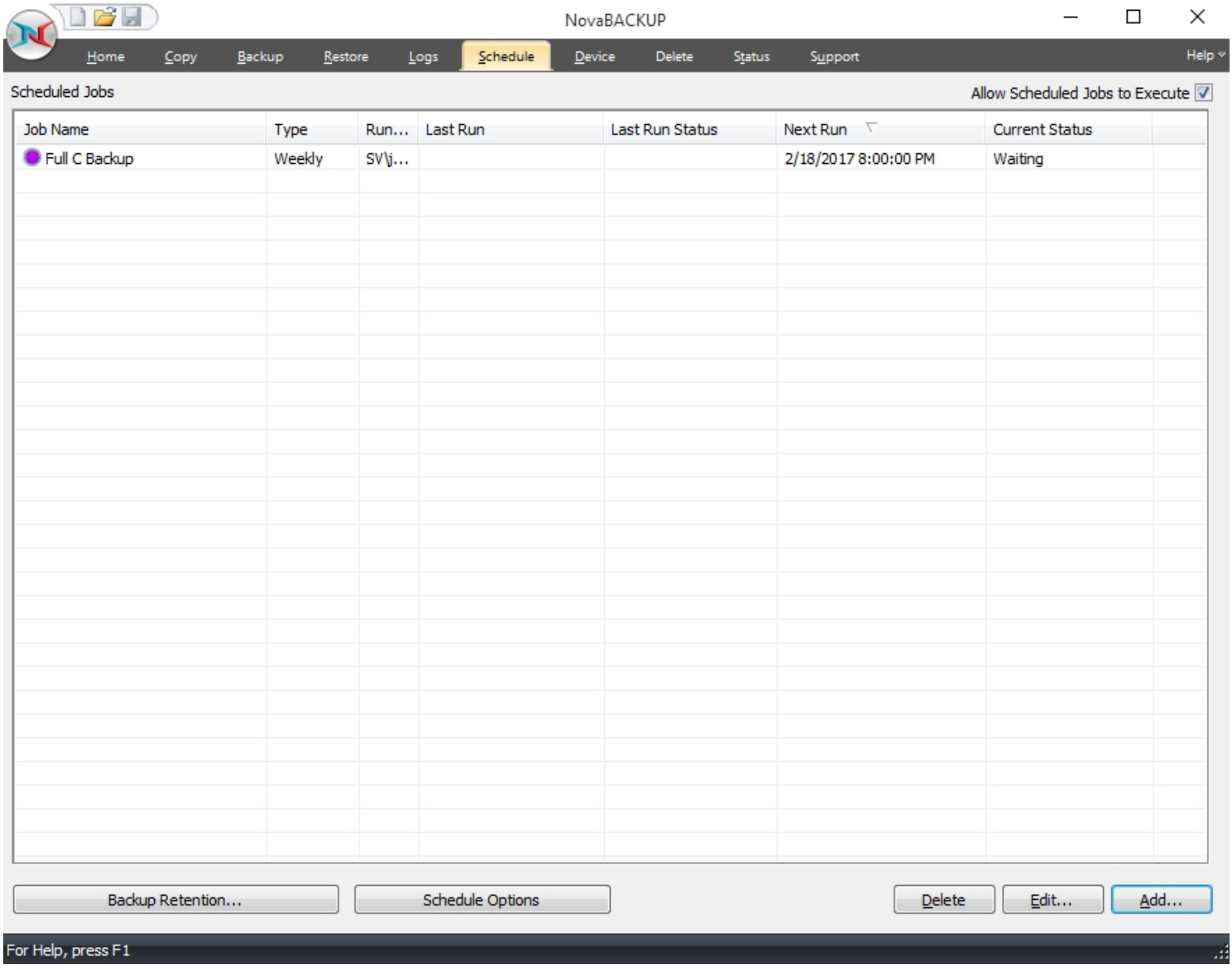
To delete a log file, simply select the log file and press the*Delete*button. To delete multiple log files, you may select more than one by using the Shift and/or Ctrl buttons on your keyboard to select the logs and pressing the Delete button.

View Button

To view the log file, select the log you would like to open and press the View button. Alternatively, you may also simply double-click the log file you want to view. For further details, see theUsing the Logssection.

Schedule Tab

From this tab you are able to view, modify, add, run, and delete scheduled tasks.



Remember: *You can quickly disable all schedules from running by unchecking the option - "Allow scheduled jobs to execute"*

The initial view contains an overview of all scheduled jobs including the following columns:

Job Name: Job or Script Name

Type: The "Type" of schedule set - includes (One Time, Minute, Hourly, Daily, Weekly, Monthly)

Run As: Account used to run the job,

Last Run: When the job last ran

Last Run Status: The status the last time the job ran - includes:

Completed - The scheduled job completed with no information (log)

Completed with info - The scheduled job completed successfully and a log was generated

Completed with warnings - The scheduled job completed but had warnings

Completed with errors - The scheduled job completed but had errors

Failed - The scheduled job failed to run

Next Run: When the job is scheduled to run again

Current Status:

Waiting - Schedule is waiting to run

Running - Schedule is running

Held - Schedule has been placed on hold

Error - Schedule will not run again until the error is corrected (Invalid Credentials, no media, no device available)

Right-Click Functions

Right-clicking on any of the listed schedules displays a menu with the following functions:

New - Create a new schedule
Hold/Resume Schedule - Permits the selected schedule to be placed on hold or resumed if already held
Modify Schedule - Displays the schedule details so they can be viewed/modified
Modify Job - Displays the specific job details so they can be viewed/modified
Run Now . . - Runs the job associated with the selected schedule immediately
View Log - Displays the log details of the scheduled job the last time it was run
Delete - Deletes the selected schedule item from the list

Button Functions

Delete Button

This button will allow you to delete the selected schedule item from the list, regardless of its status.

Edit Button

This button will allow you to edit the selected schedule item.

Add Button

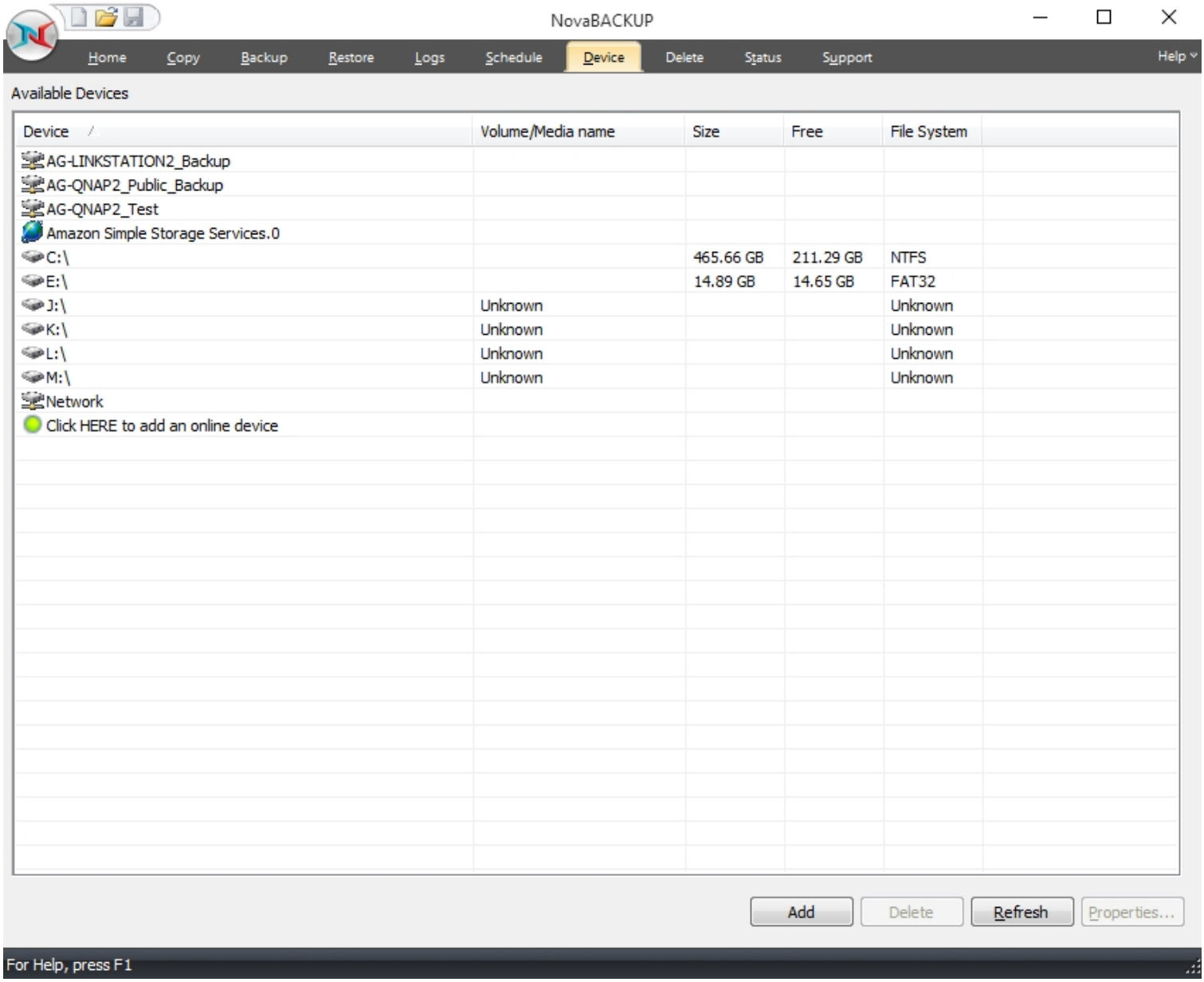
This button will allow you to create new scheduled tasks.

Backup Retention Button

Click this button to display the screen which is used to define a backup retention job.

Device Tab

The Device Tab shows a list of all available storage devices jobs can be configured to utilize. In from this tab, you're able to add, modify and delete devices



The initial view contains an overview of all scheduled jobs including the following columns:

Device - The name of the device

Volume (Media) - The name of the volume (Disk, Removable Disk) or media name (Tape)

Size - Total size of the device or media

Free - Total available size of the device or media

File System - Type of file system (NTFS, UDF, FAT32, FAT, etc)

Right-Click Functions

Right-clicking on any of the listed devices displays a menu with functions appropriate to the device:

Hard Drive, Removable Hard Drives, Networked Drives & Tape:

Import - Allows you to import backup jobs that are not in the current NovaBACKUP database

& Tape Devices

Eject Media - Eject the currently inserted media
Quick Erase Media - Performs a quick erase (header information is erased, but data remains)
Full Erase Media - All data is erased from media

Internet and Network storage devices

Delete Device - Deletes the currently selected Internet device
Properties - List the properties associated with the selected device

Button Functions

"Add" Button (Only applies to Internet and Network Devices)
Launches the Internet and Network Device dialog.

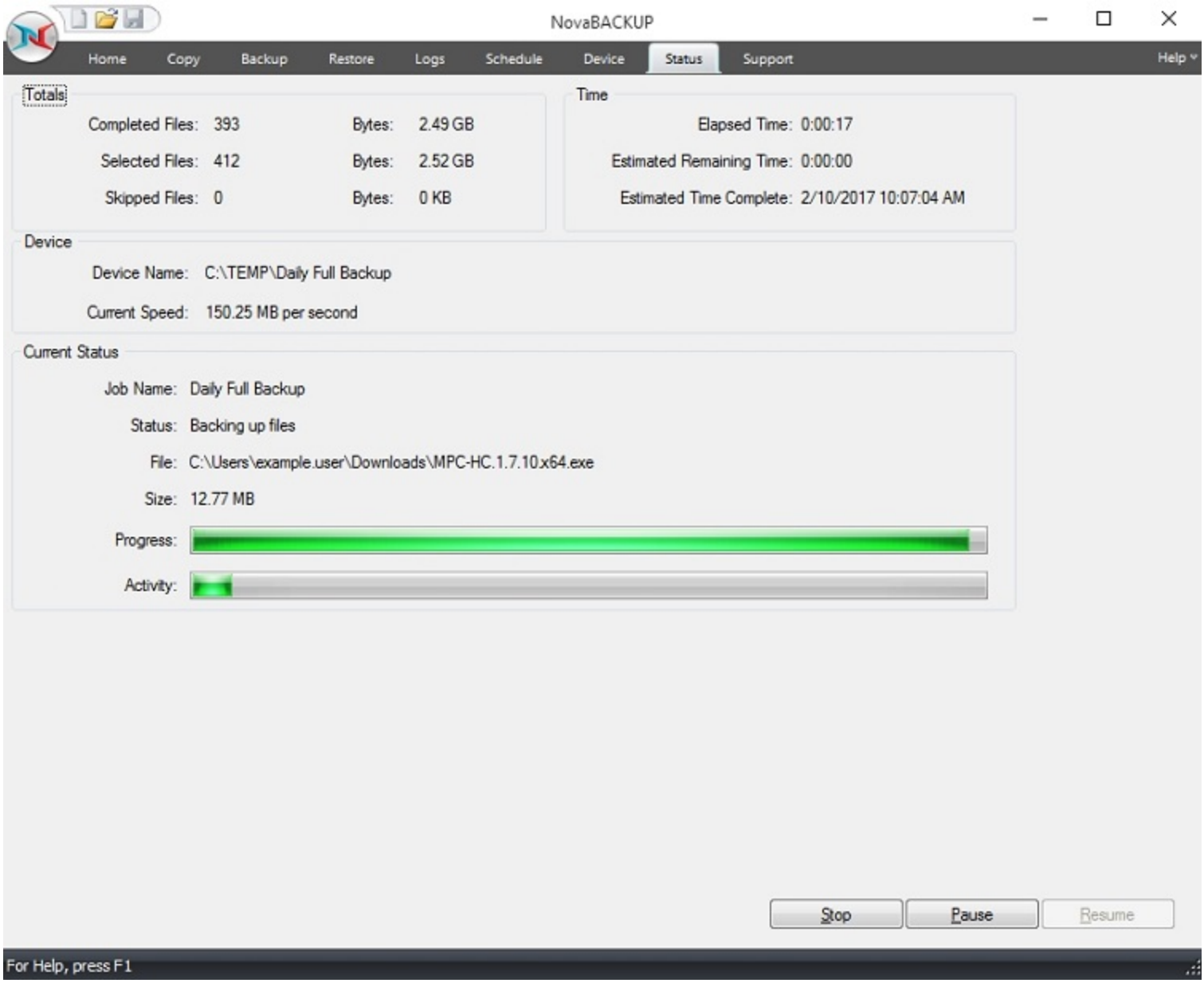
"Delete" Button (Only applies to Internet and Network devices)
Deletes the currently highlighted Internet device from the list.

"Refresh" Button
Refreshes the device view to include newly added or connected devices.

"Properties" Button (Only applies to Internet and Network devices)
Displays the properties of the highlighted Internet and Network devices. You can also display the device properties by double-clicking on the device in the list.

Status Tab

From here, you can quickly determine the status of a currently running job



The status view includes the following sections and items:

Totals

Completed Files/Bytes: The number of files and bytes successfully completed.
Selected Files/Bytes: - The total number of files and bytes selected by the job.
Skipped Files/Bytes: The number of files and bytes that were skipped while running the job.

Time

Elapsed Time: Hours:Minutes:Seconds representing the total amount of time the current job has been running
Estimated Remaining Time: Hours:Minutes:Seconds representing the estimated time remaining for the current job to complete (This figure is an estimate only - actual time may vary)

Estimated Time Completed: Date/Time representing the estimated completion time of the current job (This figure is an estimate only - actual time my vary)

Device

Device Name: The name of the device/media used for the currently running job
Current Speed: The speed (thruput) of the data being transferred for the currently running job

Current Status

Status: Status of the currently running or completed job
File: The file currently being transferred
Size: The size of the file currently being transferred
Progress: The progress bar representing the percentage completed of the currently running job (This is an approximate indication of job completion. Actual percentage may vary).

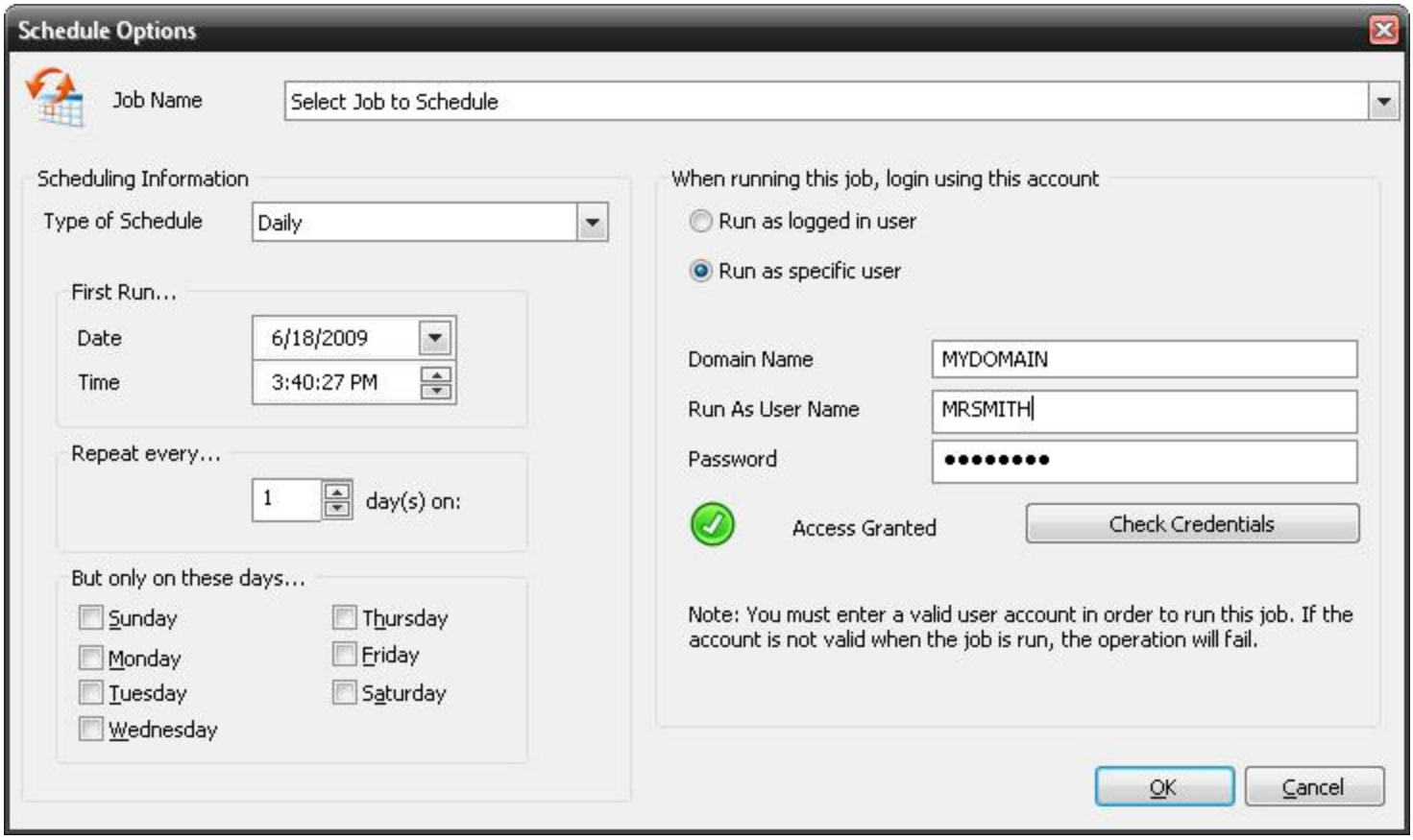
Button Functions

"Stop" Button - Stops the currently running job

"Pause" Button - Pauses the currently running job - Job remains active

"Resume" Button -Resumes the previously paused job

The Scheduler



Schedule Type

This drop-down list allows you to select whether you want the backup script to run once, hourly, daily, weekly, or monthly.

BackupJob Name

This allows you to select thejob that you would like to run. Click on the "Browse…" button next to the text box to see a list of all saved backupand copyscripts.

Start Date

Here, you may select the date on which you would like the scheduled backup to start. The default date that is selected is the current date as indicated by your computer. However, you may manually input a desired date or you can click on the "down" arrow next to the date. Doing so will give you a calendar view of the current month, see illustration.

The red square indicates the current date. The solid square indicates the date that the scheduled backup is set to start on. To select a different day to start, simply click on the desired date. To see a calendar view of the previous or subsequent months, simply click on the left and right arrows, respectively.

To quickly change the year, rather than going forward month by month, simply click on the year in the blue bar on the top of the calendar view and then scroll up and down using the arrow buttons that appear to the right of the date. To quickly select a desired month without scrolling through them, click on the current month in the blue bar and select the desired month from the list that appears.

Start Time

Using this area of the schedule will allow you to designate the time at which thejobshould occur. You can change the time using a number of different ways. After selecting the desired item to change, (the hour, the minutes, or time of day), you may use the up and down arrows to the right of the time to scroll the time up or down, respectively. You may also use the up and down arrows on the keyboard to do so or you may simply input the time using the number pad on your keyboard as well. The time of day, AM or PM, may be changed in the same manner, using the up and down arrows or by using the "A" and "P" keys on your keyboard.

When running a job, login using this account

Run as logged in user:

Run the job using the Windows login credentials in effect at that time.

Run as specific user:

Permits you to set the default system/domain account to be used for new jobs.

Domain Name: The domain name you are logging into.

Run as User Name: The user name you want the job to run as.

Password: The password for the account you want the job to run as.

Note: The account information entered here is usually account you use to login to windows. However, you may need to use a different account when backing up network/shared drives.

Important: If you have entered credentials you must click the "Check Credentials" button to validate the account you have entered before proceeding forward.

OK

After completing the setup of a scheduled job, you must press "OK" in order to complete the process.

Cancel

If you would like to exit the scheduler without setting the schedule, click on the "Cancel" to revert back to the main user interface.

Virtual Dashboard

The Virtual Dashboard is where all VMware and Hyper-V backups that are capable of restoring individual files take place. It is also the center of VMware and Hyper-V replication operations. These backups are not the same as backups that are done through the Backup tab.

In order to access the Virtual Dashboard users will need to start NovaBACKUP and then click "Virtual Dashboard" from the "Home" tab.

Adding a hypervisor

Upon opening the Virtual Dashboard users will be prompted with the option to add a hypervisor. Click the **Add** button at the top of the Hypervisor's menu. Once clicking "***Add***" users will be prompted to enter information relating to their Hypervisor.

Note: If there are already VMware hosts added through the legacy backup functionality in NovaBACKUP, those servers will already be added to the Virtual Dashboard.

Adding a VMware hypervisor

Once users are in the "***Add***" menu of the Virtual Dashboard, select VMware. Users will then have four options:

Display Name: This is the friendly name for the hypervisor. This can be anything and is designed for ease of use.

Hostname / IP Address: The Hostname or IP address of the VMware ESXi or vCenter application

Username: The username with access to the ESXi or vCenter application.

Password: The password for the user

Test / Save: Test the provided configuration or Save the provided configuration. Clicking Save will also test the credentials.

Adding a Hyper-V hypervisor

Once a user is in the "***Add***" menu of the Virtual Dashboard, select Hyper-V. Users will then be presented with two options:

Editing a local Hyper-V hypervisor

If NovaBACKUP is being installed onto a local Hyper-V host, users will not need to enter user credentials to access the Hyper-V service. Users will need to add two fields of information.

Display Name: This is the friendly name for the hypervisor. This can be anything and is designed for ease of use.

Hostname: This is the Fully Qualified Domain Name (FQDN) or hostname of the Hyper-V host.

Test / Save: Test the provided configuration or Save the provided configuration. Clicking Save will also test the credentials.

Editing a remote Hyper-V hypervisor

If NovaBACKUP is being installed on a machine to manage a remote Hyper-V host, users will need to enter user credentials to access the Hyper-V service. Users will need to add four fields of information. If the Hyper-V host is remote, check "***Connect using different credentials***".

Display Name: This is the friendly name for the hypervisor. This can be anything and is designed for ease of use.

Hostname: This is the Fully Qualified Domain Name (FQDN) or hostname of the Hyper-V host.

Username: The local or domain username with access to the Hyper-V host

Password: The password for the user

Test / Save: Test the provided configuration or Save the provided configuration. Clicking Save will also test the credentials.

Editing a hypervisor

To edit a hypervisor, click "***Add***" after selecting the hypervisor to be edited.

Removing a hypervisor

To remove a hypervisor, click "***Remove***" after selecting the hypervisor to be edited.

Note: Removing a Hypervisor will remove all protected virtual machines and their backups from the Virtual Dashboard. Removing a virtual machine removes the ability to restore that virtual machine through the Virtual Dashboard

Adding a virtual machine

After adding a hypervisor, users will be shown a selection of virtual machines available for protection. Check the box next to the virtual machine needing protection in order to add it to the list of available virtual machines.

Editing a VMware hypervisor

Once a user is in the "***Add***" menu of the Virtual Dashboard, select VMware. Users will then have four options:

Display Name: This is the friendly name for the hypervisor. This can be anything and is designed for ease of use.

Hostname / IP Address: The Hostname or IP address of the VMware ESXi or vCenter application

Username: The username with access to the ESXi or vCenter application.

Password: The password for the user

Test / Save: Test the provided configuration or Save the provided configuration. Clicking Save will also test the credentials.

Editing a Hyper-V hypervisor

Once a user is in the "***Add***" menu of the Virtual Dashboard, select Hyper-V. Users will then be presented with two options:

Editing a local Hyper-V hypervisor

If NovaBACKUP is being installed onto a local Hyper-V host, users will not need to enter user credentials to access the Hyper-V service. Users will need to add two fields of information.

Display Name: This is the friendly name for the hypervisor. This can be anything and is designed for ease of use.

Hostname: This is the Fully Qualified Domain Name (FQDN) or hostname of the Hyper-V host.

Test / Save: Test the provided configuration or Save the provided configuration. Clicking Save will also test the credentials.

Editing a remote Hyper-V hypervisor

If NovaBACKUP is being installed on a machine to manage a remote Hyper-V host, users will need to enter user credentials to access the Hyper-V service. Users will need to add four fields of information. If the Hyper-V host is remote, check "**Connect using different credentials**".

Display Name: This is the friendly name for the hypervisor. This can be anything and is designed for ease of use.

Hostname: This is the Fully Qualified Domain Name (FQDN) or hostname of the Hyper-V host.

Username: The local or domain username with access to the Hyper-V host

Password: The password for the user

Test / Save: Test the provided configuration or Save the provided configuration. Clicking Save will also test the credentials.

Backing up virtual machines

After adding a virtual machine to the list of protected virtual machines, users are able to create backup jobs that are able to restore individual files as well as directly back into the hypervisor.

When creating a backup job, files will be stored in a hierarchal folder structure rather than a single file. After selecting a target folder on the user's machine, the Virtual Dashboard will automatically create another folder labeled NovaBACKUP underneath that folder. Users may continue to select the original destination for all future backup jobs.

Example: A user selecting C:\Backups\ may continue to select this folder for all future backup jobs. After the first backup job runs, users will see a separate folder: C:\Backups\NovaBACKUP\

Backing up VMware

VMware backups created in the Virtual Dashboard can be performed from any Windows 7 or Server 2008 R2 machine or greater. It is required that your VMware server have the "vStorage API" licensed feature in place to support backup. The free edition of VMware ESXi/vSphere does NOT contain the "vStorage API" licensed feature. View the NovaBACKUP System Requirements PDF document here to know the specific requirements that we have for Hyper-V versions and service pack levels, which are required to perform backup and restore of this item.

Changed Block Tracking

Changed Block Tracking (CBT) is a VMware feature that helps perform incremental backups. After clicking on a protected virtual machine, users will see an option for CBT in the bottom right of the virtual machine's individual dashboard. Checking this box will enable CBT or show the current status of CBT on that virtual machine.

Without CBT enabled, users will be unable to create an Incremental or Differential backup.

Note: Enabling or disabling CBT may take time, as this is a VMware function change.

Setting up VMware backups

Name: The name of the backup job as it appears in the Virtual Dashboard

Type: The type of backup job to configure &endash; Full, Incremental, or Differential

Retention: In either ”Generations” (number of versions to keep or count) or ”Days old” (number of days to keep available)

Run as: Users may choose to run the job as either the current user or as a specified user

Notifications: Users may choose to enable email notification for this backup job

Schedule: Users may choose to schedule the job in a variety of methods. If no schedule is desired, users may toggle the "**Schedule**" switch in the top right to turn off the scheduler.

VMware Retention

VMware backups are able to maintain a retention value in either generations (count) or days for Full or Differential backups. In order to apply retention to an Incremental backup, users will need to target the same folder as their incremental backup with a scheduled or manually run full backup job that includes a retention value.

Full

A full backup is a backup of the entire virtual machine all at once. These backups can be very large in nature and users should be aware of how much storage space is available on the destination.

Incremental and Differential initial backups

If a user has not previously run a Full backup of a virtual machine, the initial Incremental or Differential backup job will execute as a full backup. This is intended behavior due to the required dependencies of Incremental or Differential jobs to their respective last full backup.

Incremental

Incremental backup jobs are backup jobs that base themselves on the last incremental backup job run. This means each incremental job is dependent upon the previous incremental backup in order to restore any particular file.

Differential

Differential backup jobs are backup jobs that base themselves on the last full backup job run. This means that each differential backup job is independent from each other and only the last full backup and the desired differential backup are required to restore a particular file.

Backing up Hyper-V

Hyper-V backups created in the Virtual Dashboard can be performed from either the Hyper-V 2012, Hyper-V 2012 R2, or Hyper-V 2016 host machine. Unlike VMware backups, NovaBACKUP must be installed on the Hyper-V host where the virtual machine desired to be backed up is located. View the NovaBACKUP System Requirements PDF document here to know the specific requirements that we have for Hyper-V versions and service pack levels, which are required to perform backup and restore of this item.

Setting up Hyper-V backups

When creating a new backup job, users will be presented with the following options:

Name: The name of the backup job as it appears in the Virtual Dashboard

Retention: In either ”Generations” (number of versions to keep or count) or ”Days old” (number of days to keep available)

Run as: Users may choose to run the job as either the current user or as a specified user

Notifications: Users may choose to enable email notification for this backup job

Schedule: Users may choose to schedule the job in a variety of methods. If no schedule is desired, users may toggle the "**Schedule**" switch in the top right to turn off the scheduler.

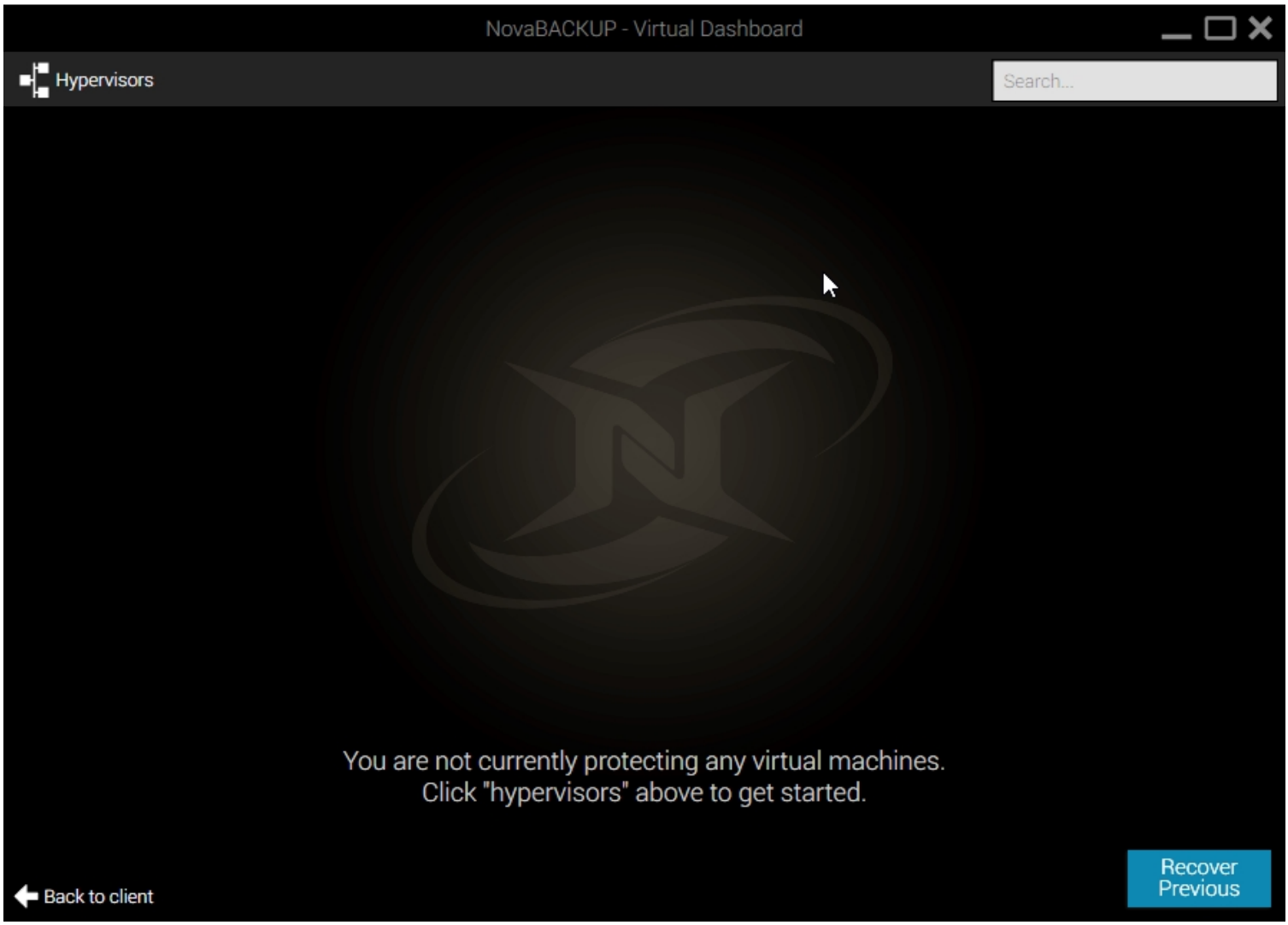
Hyper-V Retention

Hyper-V backups can currently only be run in a full mode. Retention maintains either a Generation (count) or number of Day’s.

Recover Previous Backups function

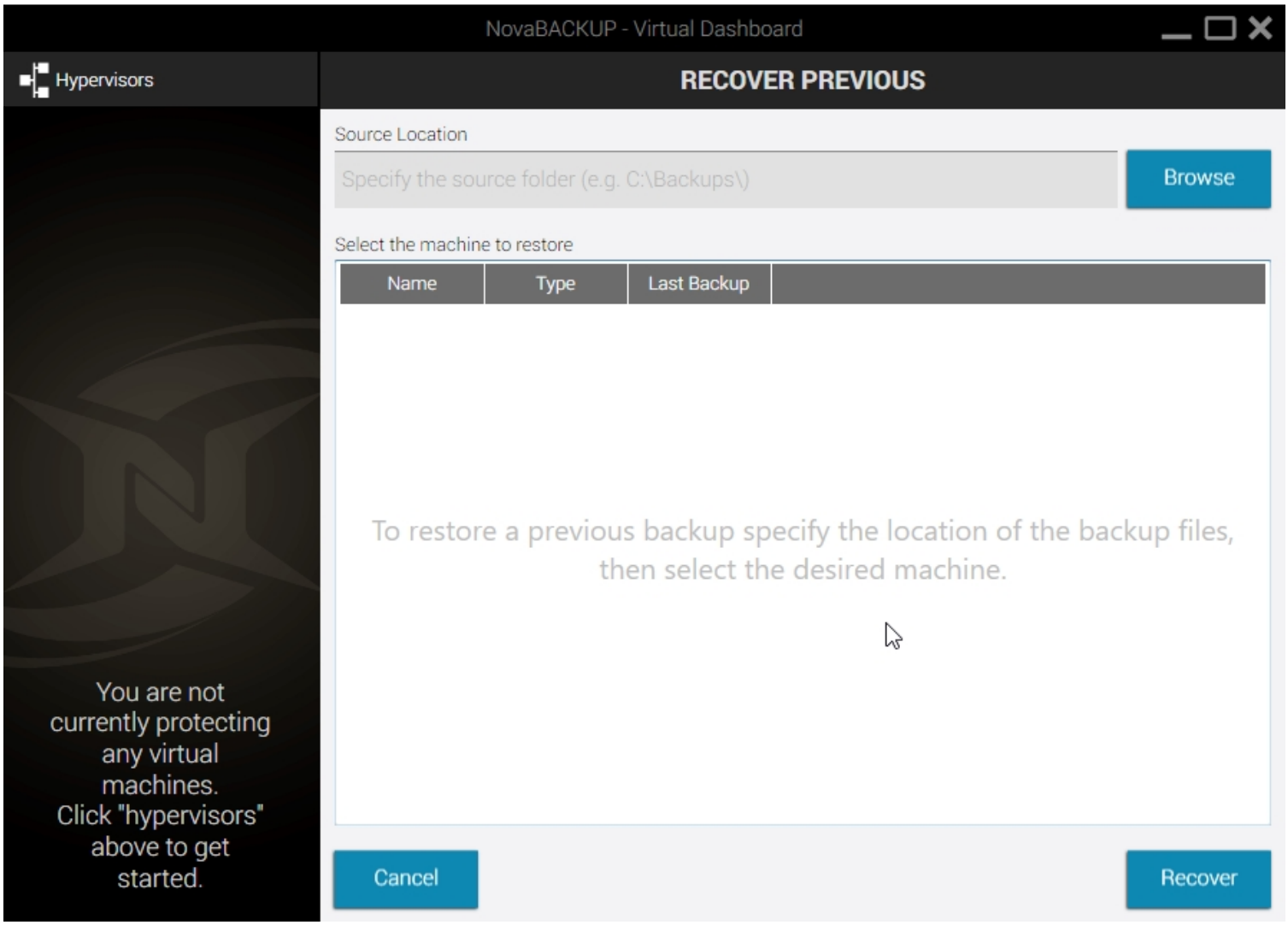
You can utilize the "Recover Previous" function inside the Virtual Dashboard's main screen to restore a previous backup that is not showing currently in your Virtual Dashboard.

Click on the "Recover Previous" button at the bottom right of the Virtual Dashboard main screen as shown in the screen shot below:



Once the "RECOVER PREVIOUS" screen is displayed you will be provided the ability to restore a previous backup created in the Virtual Dashboard.

To restore a previous backup specify the location of the backup files, then select the desired machine, as seen in the screen shot below:



Restoring VMware backups

To restore a VMware backup, browse to the previously configured VMware backup job. Immediately below the ”Run Summary” section will be a list of old and new backup job logs. Backup jobs that are still available for restore will be listed with three commands: Mount, Restore and Log. To restore a VMware backup users are given two options:

Mount (Individual file restore)

Clicking the ”Mount” button will mount the virtual machine’s virtual hard drives on the local computer as physical drives. Once the drive has been mounted a Windows Explorer will appear to browse the file structure. Additionally, if a drive is already mounted, users will be shown the current drive letter of the mounted image.

Once mounted, the Mount button will switch to Unmount. After a user is finished restoring any requested individual files from the Virtual Machine, clicking Unmount will disconnect that virtual machine's virtual hard drive.

Restore (Restore to hypervisor)

Restoring an image directly to a hypervisor

Name: The name of the backup job within the Virtual Dashboard

Target VM Name: The name of the virtual machine at its destination hypervisor.

Destination Hypervisor: This is the destination, or target, hypervisor. This will display any currently configured VMware hypervisors. If the desired hypervisor has not already been configured, users may click the blue "+" sign to add a hypervisor at this time.

Target Datastore: The target ESXi / vCenter datastore that the user wishes this VM to be replicated to

VM Folder: The target ESXi / vCenter datastore that the user wishes to replicate this virtual machine into

Restoring Hyper-V backups

To restore a Hyper-V backup, browse to the previously configured Hyper-V backup job. Immediately below the "Run Summary" section will be a list of old and new backup job logs. Backup jobs that are still available for restore will be listed with three commands: Mount, Restore and Log. To restore a Hyper-V backup users are given three options:

Mount (Individual file restore)

Clicking the "Mount" button will mount the virtual machine's virtual hard drives on the local computer as physical drives. Once the drive has been mounted a Windows Explorer will appear to browse the file structure. Additionally, if a drive is already mounted, users will be shown the current drive letter of the mounted image.

Once mounted, the Mount button will switch to Unmount. After a user is finished restoring any requested individual files from the Virtual Machine, clicking Unmount will disconnect that virtual machine's virtual hard drive.

Restore (Original Location)

Restoring to the original location allows a user to place the backed up copy of the virtual machine directly back in place to its original location in the Hyper-V server. This will overwrite any existing Hyper-V machines that might still be in place.

Restore (Alternate Location)

Restoring to an alternate location allows a user to export a copy of the backed up virtual machine to a new destination in so that it may be moved (example: restore to USB or NAS to manually move to an alternate location.)

VMware Replication

VMware Replication uses the NovaBACKUP Backup/Copy Engine to copy data from either a single ESXi / vCenter host to itself or from one host to another.

Changed Block Tracking

Changed Block Tracking (CBT) is a VMware feature that helps perform incremental backups. After clicking on a protected virtual machine, users will see an option for CBT in the bottom right of the virtual machine's individual dashboard. Checking this box will enable CBT or show the current status of CBT on that virtual machine.

Without CBT enabled, replication jobs will be transferred in full each time the job is executed, which could increase replication time significantly.

Note: Enabling or disabling CBT may take time, as this is a VMware function change.

VMware Replication Retention

VMware backups are able to maintain a retention value in either generations (count) or days for Full or Differential backups. In order to apply retention to an Incremental backup, users will need to target the same folder as their incremental backup with a scheduled or manually run full backup job that includes a retention value.

Setting up VMware replication

After clicking "***Replicate***" users are presented with the following options:

Name: The name of the backup job within the Virtual Dashboard

Target VM Name: The name of the virtual machine at its destination hypervisor. This will default to whatever the current name is plus the suffix of "***_rep***"

Destination Hypervisor: This is the destination, or target, hypervisor. This will display any currently configured VMware hypervisors. If the desired hypervisor has not already been configured, users may click the blue "+" sign to add a hypervisor at this time.

Target Datastore: The target ESXi / vCenter datastore that the user wishes this VM to be replicated to

VM Folder: The target ESXi / vCenter datastore that the user wishes to replicate this virtual machine into

Retention: The number of previously available versions stored on the target destination ESXi / vCenter. These are stored as snapshots within the ESXi / vCenter.

Schedule: Users may choose to schedule the job in a variety of methods. If no schedule is desired, users my toggle the "**Schedule**" switch in the top right to turn off the scheduler.

Hyper-V Replication

Hyper-V Replication uses the Hyper-V Replica technology through Microsoft's Hyper-V service. The Hyper-V Replica technology is a block-level, asynchronous transfer from one Hyper-V host to another. After an initial full transfer, Hyper-V maintains a regularly occuring block transfer to the alternate destination.

Requirements

In order to successfully configure Hyper-V replication, users will need to properly configure their Hyper-V hosts. Hyper-V hosts must be Hyper-V 2012 or newer and all Hyper-V hosts are required to connected to a domain (for authentication purposes). Additionally, the target or destination Hyper-V server needs to be configured as a Hyper-V Replica destination.

Setting up Hyper-V Replication

After clicking "***Replicate***" users are presented with the following options:

Name: The name of the backup job within the Virtual Dashboard

Replica Server: This is the destination, or target, hypervisor. This will display any currently configured Hyper-V hypervisors that are not the source Hyper-V. If the desired hypervisor has not already been configured, users may click the blue "r;+" sign to add a hypervisor at this time.

Retention: The number of previously available versions stored on the target Hyper-V hypervisor.

Schedule: Users may choose a schedule for when the first initial replication takes place. If no schedule is desired, users my toggle the "**Schedule**" switch in the top right to turn off the scheduler.

Note: Replication is a single-run job type and only needs to be executed once to initialize the replication. After being configured, the Virtual Dashboard reports on the current health of the virtual machine's replication.

Glossary

Backup

Backups in the Virtual Dashboard are different than traditional virtual backups from the NovaBACKUP Backup tab because they are able to restore individual files from them.

Changed Block Tracking

Changed Block Tracking (CBT) is a VMware feature that helps perform incremental backups. After clicking on a protected virtual machine, users will see an option for CBT in the bottom right of the virtual machine's individual dashboard. Checking the CBT box will enable CBT as well as it displays the current status of CBT on that particular virtual machine..

Without CBT enabled, users will be unable to create an Incremental or Differential backup.

Replication

Replication is the act of copying a virtual machine from one hypervisor to another. There are two types of replication: VMware and Hyper-V Replication.

VMware Replication

VMware Replication uses the VMware's vStorage API for Data Protection (VADP) in order to copy virtual machines from one ESXi host to another. By enabling Changed Block Tracking (CBT), users are able to perform a complete full copy followed by smaller block level changes on a schedule chosen by the user.

Hyper-V Replication

Hyper-V Replication uses the Hyper-V Replica technology through Microsoft's Hyper-V service. The Hyper-V Replica technology is a block-level, asynchronous transfer from one Hyper-V host to another. After an initial full transfer, Hyper-V maintains a regularly occuring block transfer to the alternate destination.

Retention

Retention is the act of removing older backups in order to reduce the amount of storage space required. After every backup job is run, retention is automatically performed based on the backup configuration.

Run as

Some domain or workstation configurations require running background applications as a particular user. The ***Run as*** section of each protection type allows for administrators to provide these credentials.

Image Backup Operation Type

Select the type of image backup operation that you want to perform.

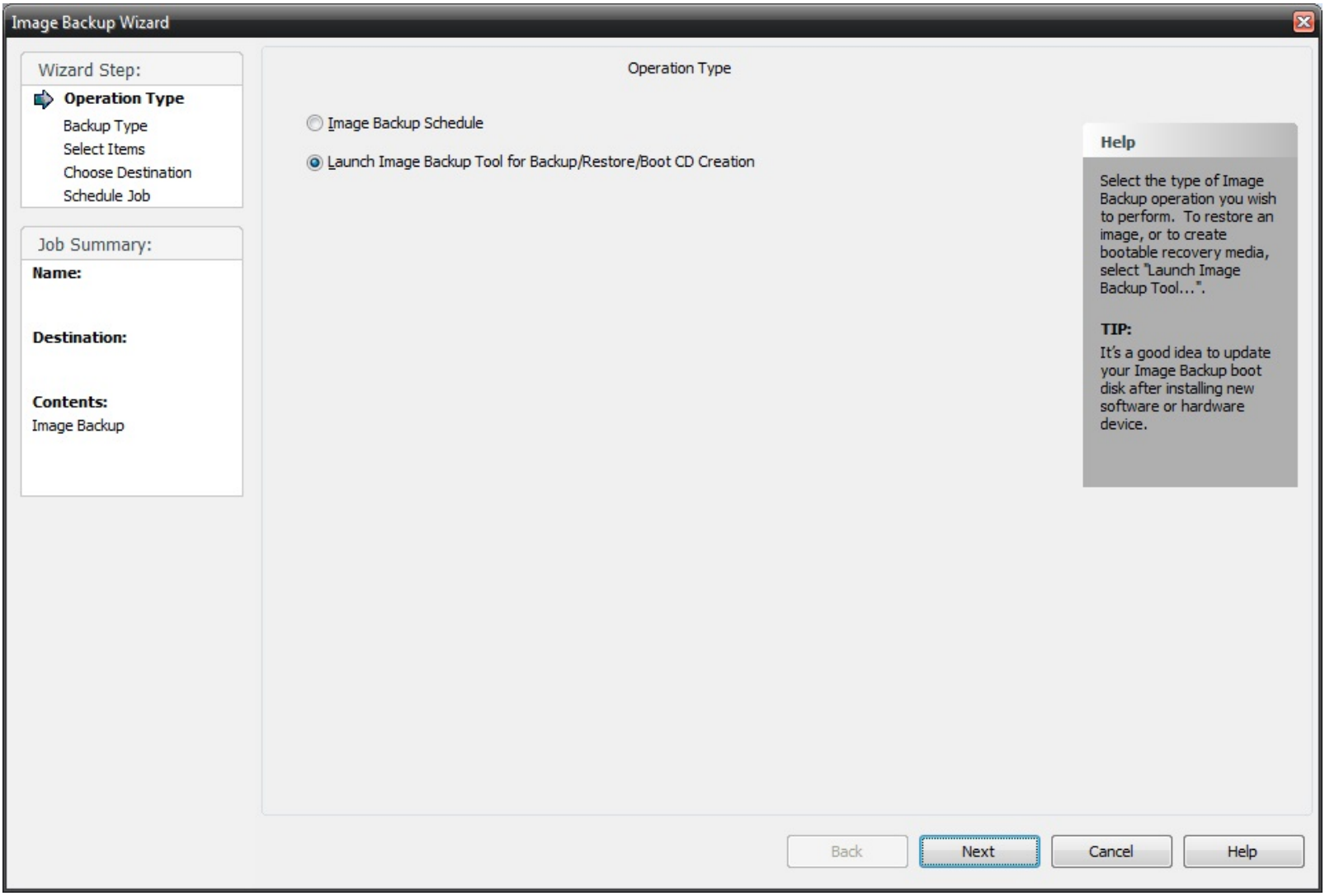
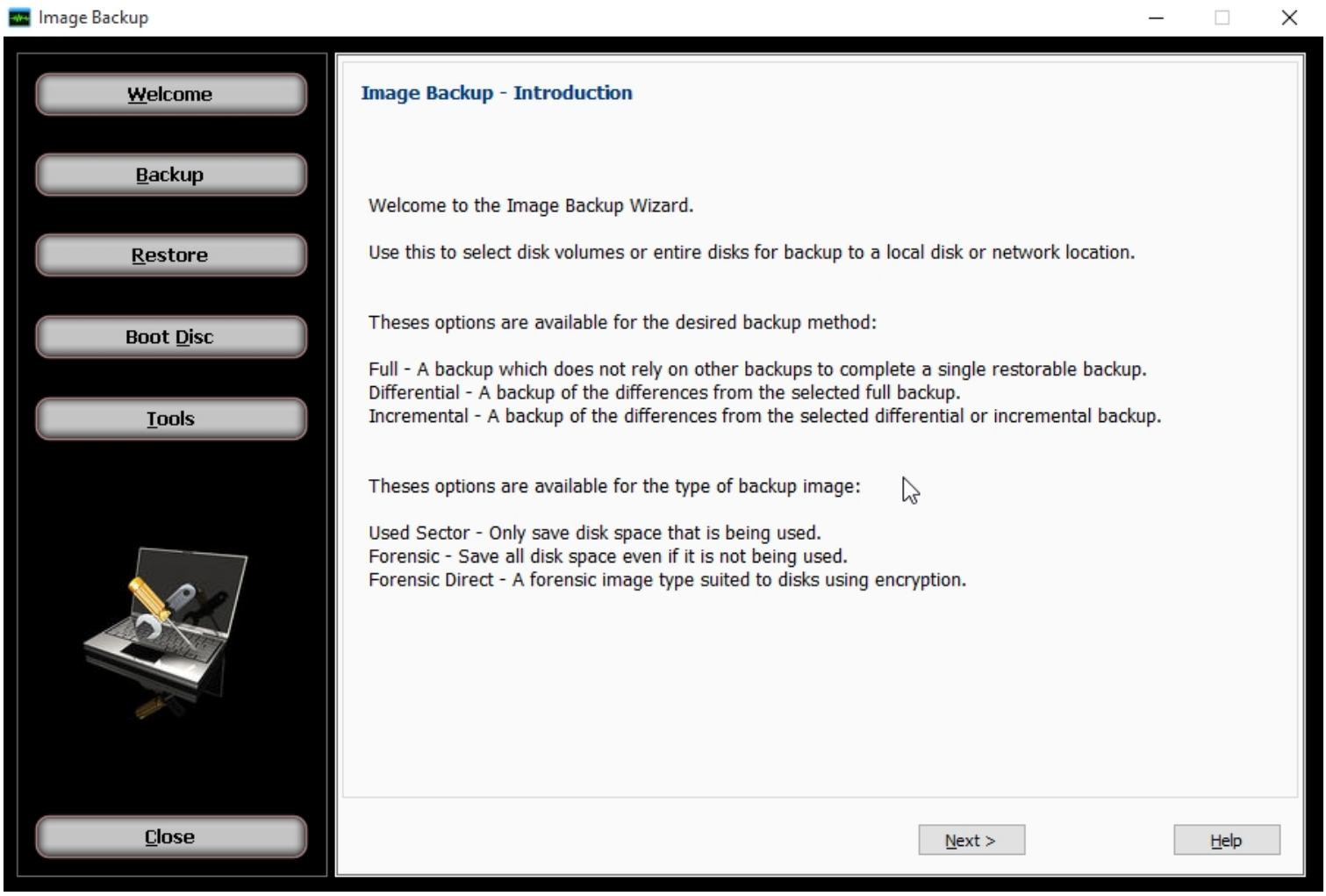


Image Backup Schedule: Setup an image backup job to be scheduled to run at a later time.

Launch Image Backup Tool: Launches the image backup tool used to backup or restore an image, mount an image, or to create an image boot disk.

Introduction

A welcome screen is presented when the Image Backup tool is launched.



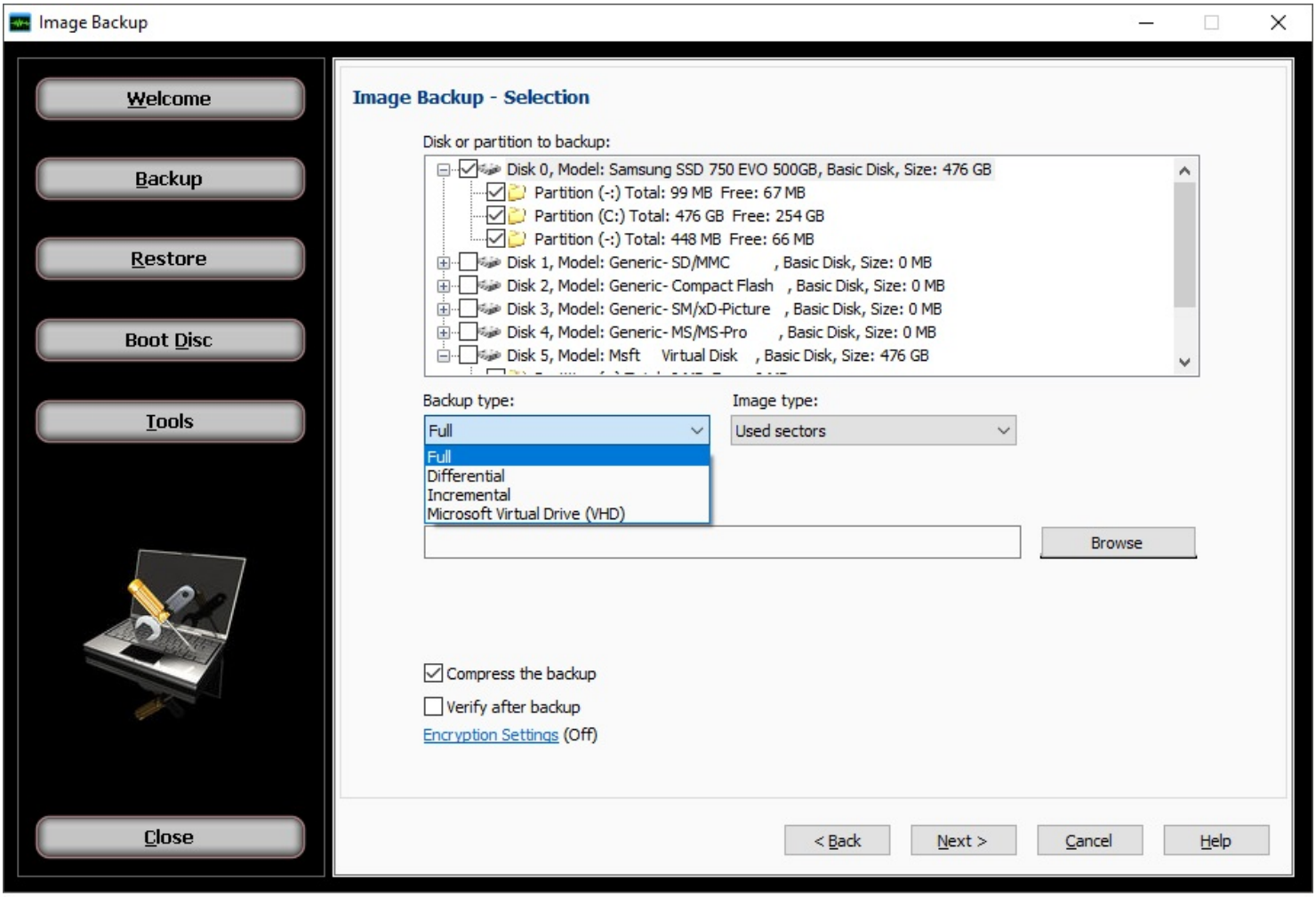
Use the buttons on the left side of the screen to manually perform an image backup or restore operation, create a boot disc, or access various disk image management tools. Creating backup images manually allows more control over where the images are stored and how they are named than do scheduled backup jobs, but requires the user to assume additional responsibility for managing the images.

You will need about 5 GB of free disk space to create a boot disc.

Press the Close button to return to the operation selection screen.

Selection

Image Backup - Selection



Use this screen to select disk volumes or entire disks for backup to a local disk or network location.

Disk or partition to backup:

Use the checkboxes to select the items you wish to backup.

Backup to:

Use the browse button to choose a location and file name to store your backup. You can navigate to the location desired or type a path into the edit box to obtain the same result. Additionally, any configured network devices may be selected as the destination path. Network device definitions may added from the Device Tab in the main backup application.

Previous backup:

This is only shown if you have selected differential or incremental backup types. It is used to select the base backup for reference when creating the new backup.

Backup options:

Use compression:

Set this checkbox to use compression when backing up. This results in a smaller output file but may increase the time required to com-plete the backup.

Verify after backup
The files that are backed up will be verified to make sure that they were written correctly. Selecting this option will increase backup time. This setting is selected by default.

Encryption settings
Click 'Encryption settings' to set backup encryption on or off. Encryption provides enhanced security by storing the backup data in a secure format.You may choose the encryption type as None (off), or one of encryption types AES 128, AES 192 or AES 256 (On). A secret key must be also be entered, which is similar to creating a password.

IMPORTANT: You will be prompted to enter the secret key to restore an encrypted backup. The restore will not be permitted unless the correct secret key is entered.

Backup type:

Select from this list to create a backup of these possible types.

Full - A backup which does not rely on other backups to complete a single restorable backup.

Differential - A backup of the differences from the previously completed full backup which you select.

Incremental - A backup of the differences from the previously completed differential or incremental backup which you select.

Microsoft Virtual Drive (VHD) - A backup to Microsoft Virtual Drive (VHD). Only one disk may be selected for backup to VHD.

The maximum size of the selected disk is 2.0 terabytes (2.0 TB).

Image type:

Select from this list to create a backup containing these possible image types.

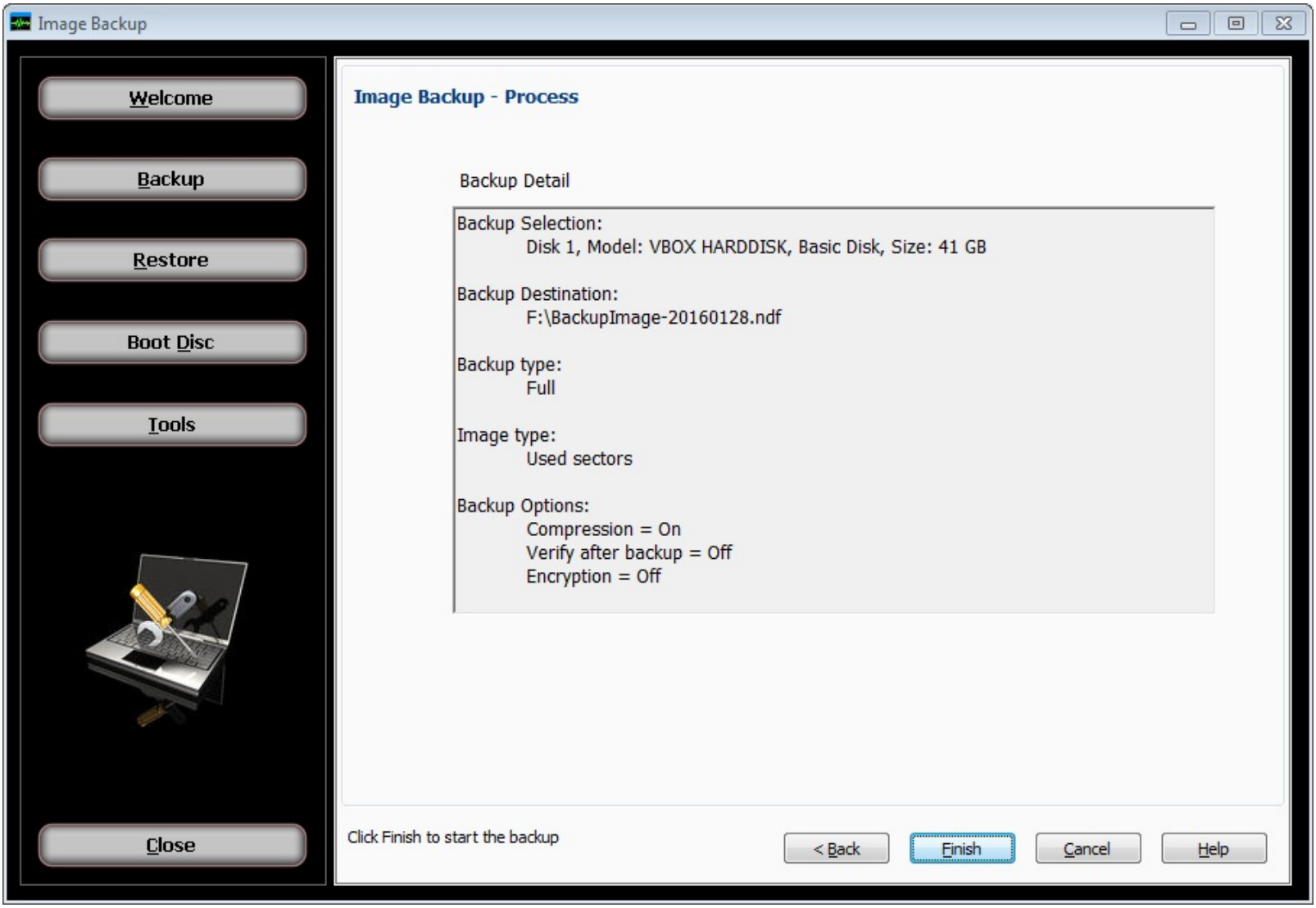
Used Sector - Only save disk space that is being used.

Forensic - Save all disk space even if it is not being used.

Forensic Direct - A forensic image type suited to disks using encryption.

Process

Image Backup - Process



This final step is used to start the backup job based on selections and options set in the previous screen.

The summary of all backup selections and options are displayed to confirm your choices. You can change any option by clicking the back button. Once changes are complete, click the next button to return to this screen.

Click the finish button to start the backup. A progress bar appears during the process with the option to stop the backup if you wish to cancel.

When the process completes, a final status message is shown to indicate success or errors. More information about the job can be found using the main backup application 'Logs' menu item.

Selection

Image Restore - Selection

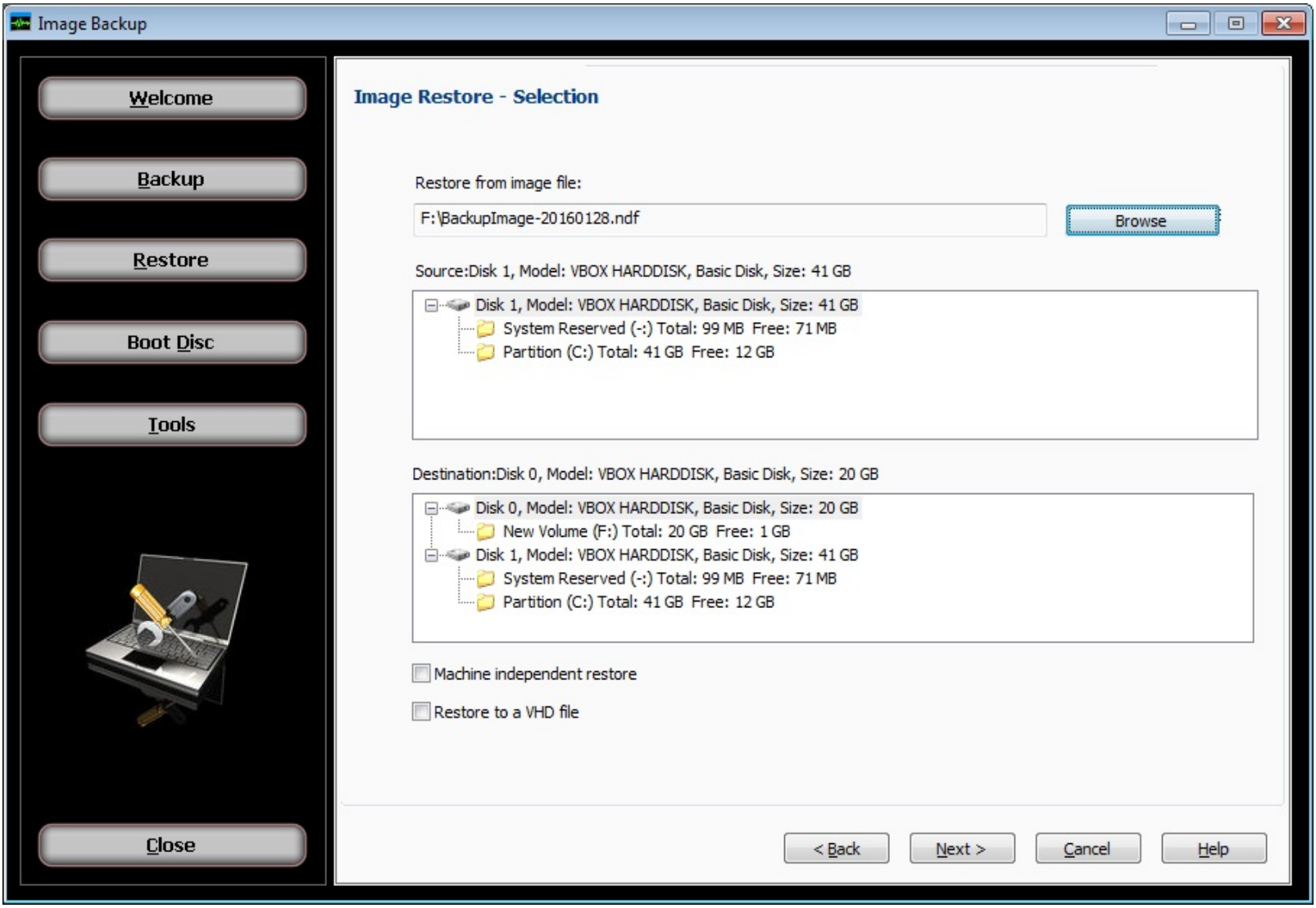
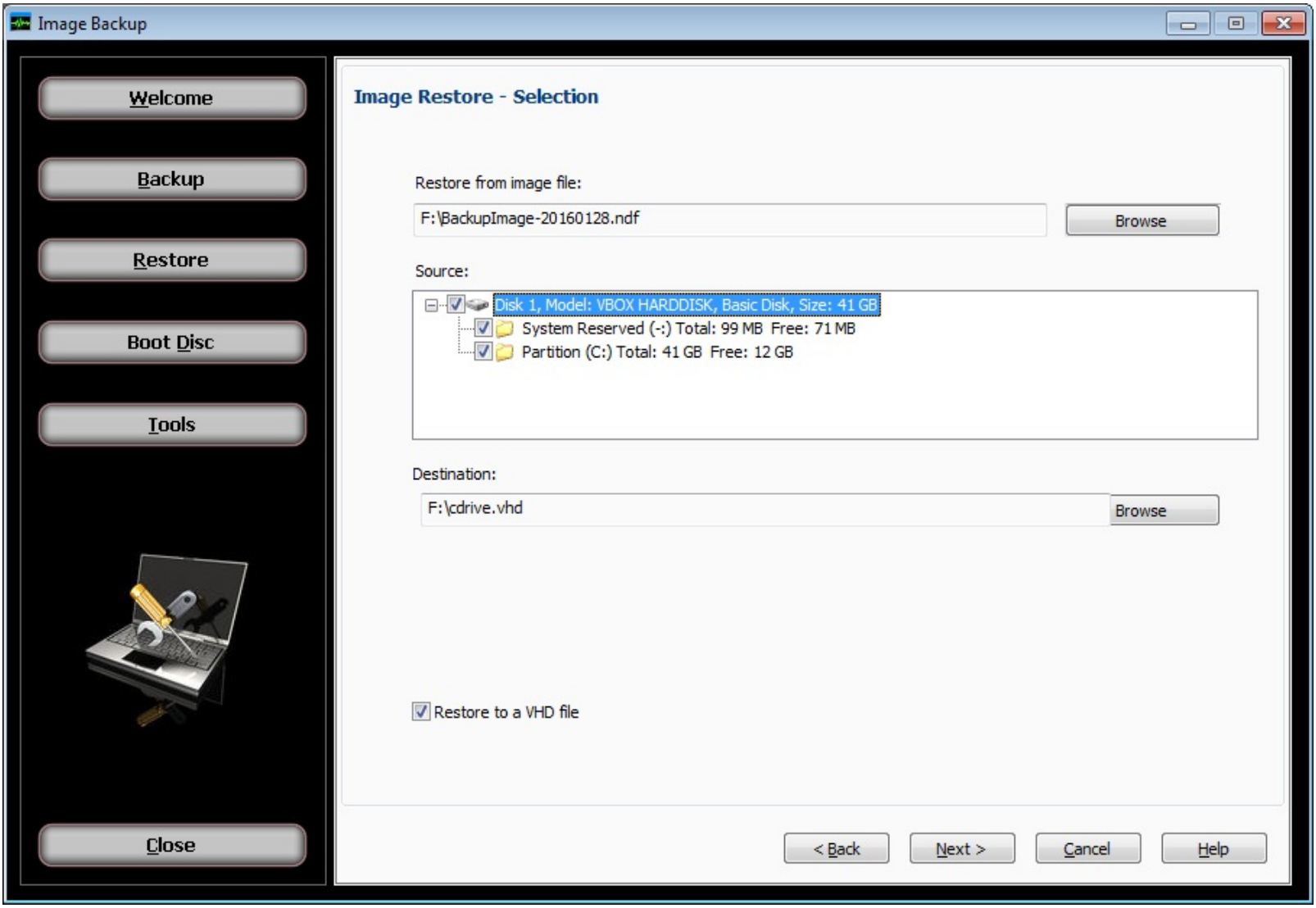


Image Backup
Welcome
Backup
Restore
Boot Disc
Tools
Close
Image Restore - Selection
Restore from image file:
F:\BackupImage-20160128.ndf
Browse
Source:Disk 1, Model: VBOX HARDDISK, Basic Disk, Size: 41 GB
Disk 1, Model: VBOX HARDDISK, Basic Disk, Size: 41 GB
System Reserved (-:) Total: 99 MB Free: 71 MB
Partition (C:) Total: 41 GB Free: 12 GB
Destination:Disk 0, Model: VBOX HARDDISK, Basic Disk, Size: 20 GB
Disk 0, Model: VBOX HARDDISK, Basic Disk, Size: 20 GB
New Volume (F:) Total: 20 GB Free: 1 GB
Disk 1, Model: VBOX HARDDISK, Basic Disk, Size: 41 GB
System Reserved (-:) Total: 99 MB Free: 71 MB
Partition (C:) Total: 41 GB Free: 12 GB
Machine independent restore
Restore to a VHD file
< Back
Next >
Cancel
Help



Use this screen to select disk volumes or entire disks from backup files stored on a local disk or network location.

Normal data recovery requires no special options, only source and destination choices. First choose the backup file, and from that backup select the item you wish to recover. Then in the destination list of existing disks, select the item to restore from the selected backup item.

Restore from image file:

This is the first choice available before any other options are shown. Use the browse button to the locate the desired backup. After confirming the selected backup file, the source list will show the backup content.

Destination: (drive list)

This list shows existing drives and volumes available to restore from the selected backup item. This list will not appear when selecting the VHD output option.

Destination: (file name)

This is used to specify the output file when selecting VHD output option. Use the browse button to select a location and file name for the output file.

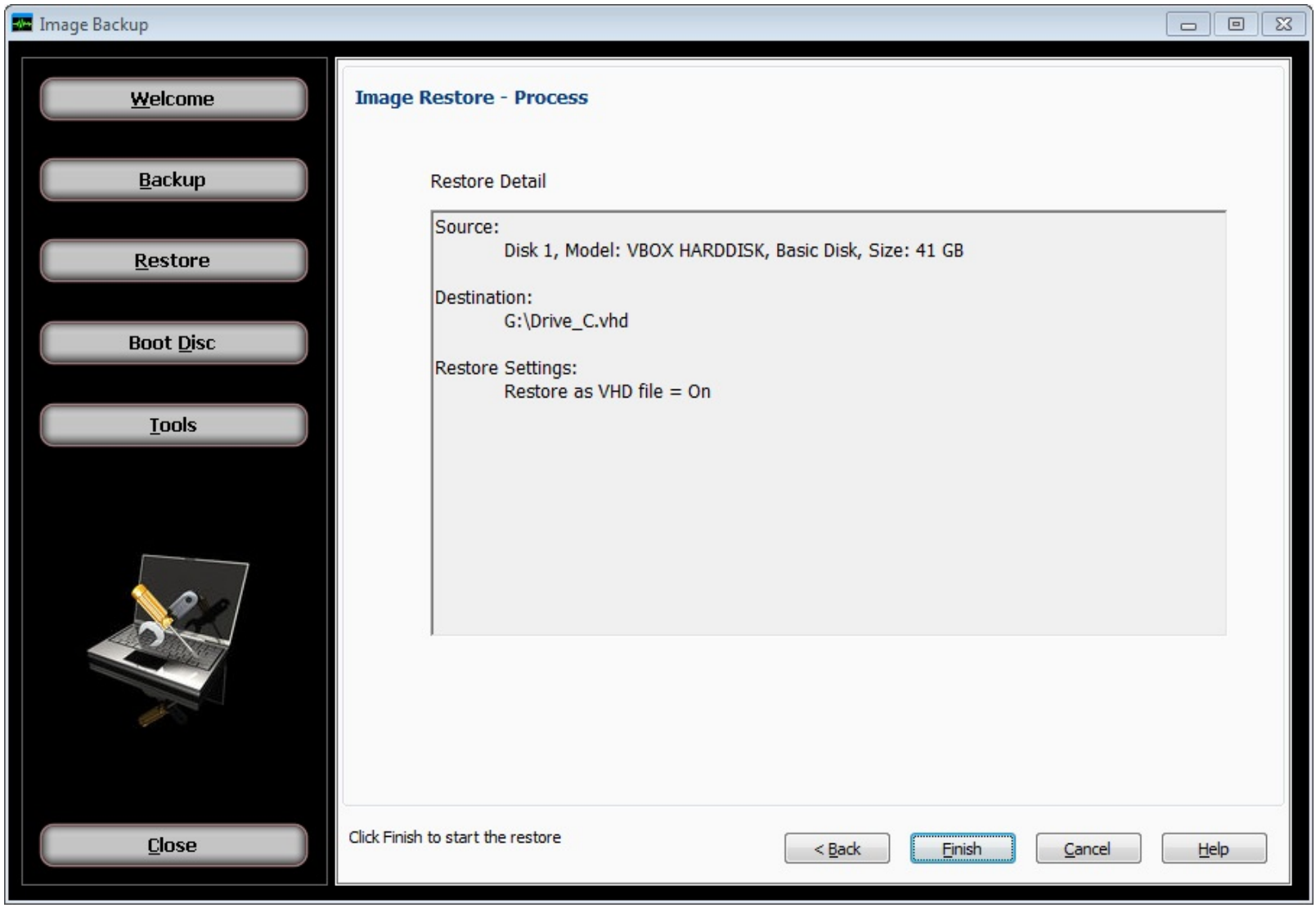
Restore options:

Restore to a VHD file - Using the selections in the backup image, create an output file instead of restoring to another disk. The output file is is created using the specified name and location and converted to a Microsoft mountable VHD format. Note that only a used sector backup can be used to create a VHD output file which will mount successfully.

Machine independent restore - Use this feature to restore an image containing the system partition onto another computer with different hardware. Note that only a volume (or partition) may be selected from the backup to perform this type of restore, and the destination must not be the current active partition.

Process

Image Restore - Process



This final step is used to start the restore job based on your selections and options set in the previous screen.

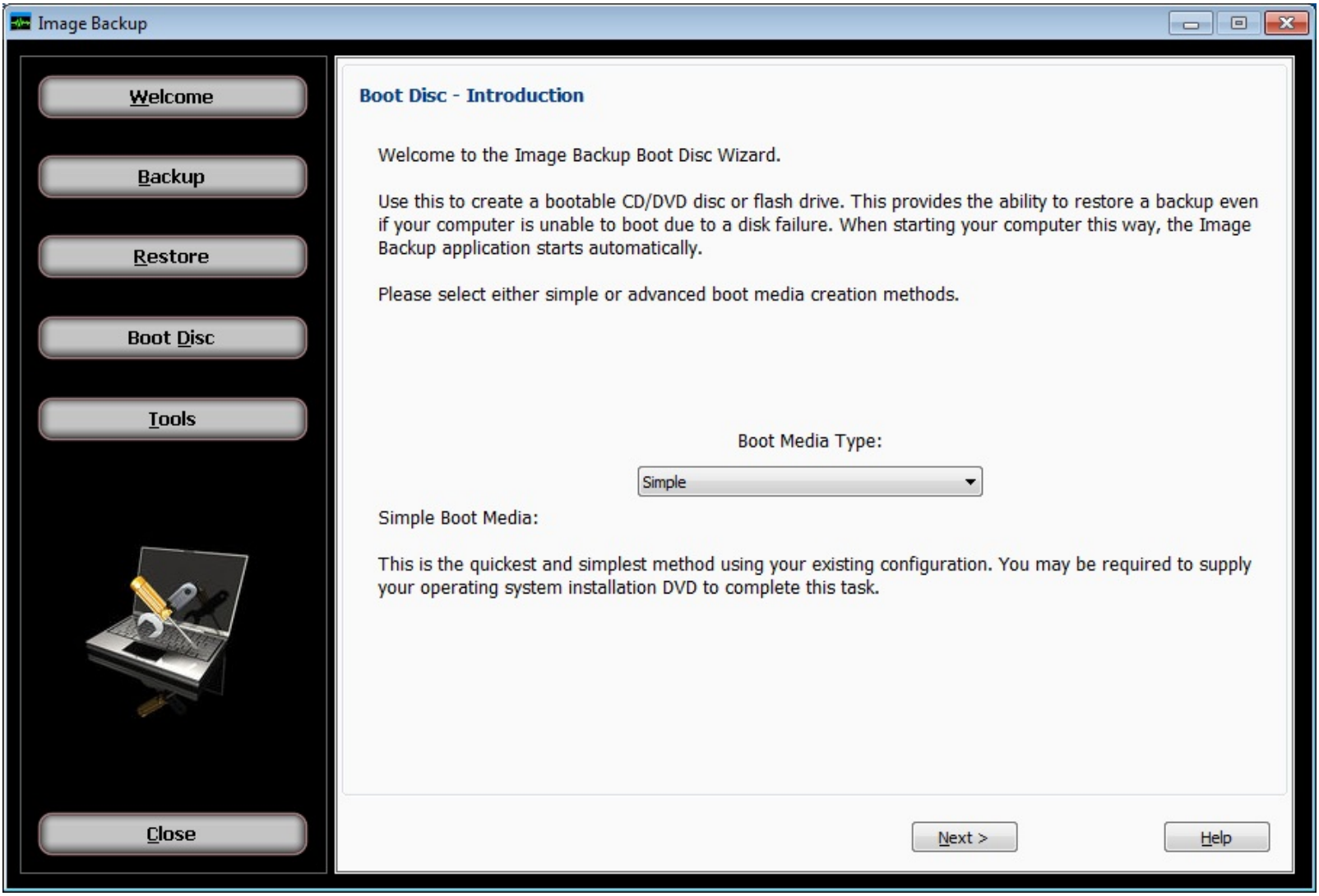
The summary of all restore selection and options are displayed to confirm your choices. You can change any option by clicking the back button. Once changes are complete, click the next button to return to this screen.

Click the finish button to start the restore. A progress bar appears during the process with the option to stop the restore if you wish to cancel.

When the process completes, a final status message is shown to indicate success or errors. More information about the job can be found using the main backup application 'Logs' menu item.

Boot Disc - Introduction and Selection

Boot Disc - Introduction and boot disc creation type selection

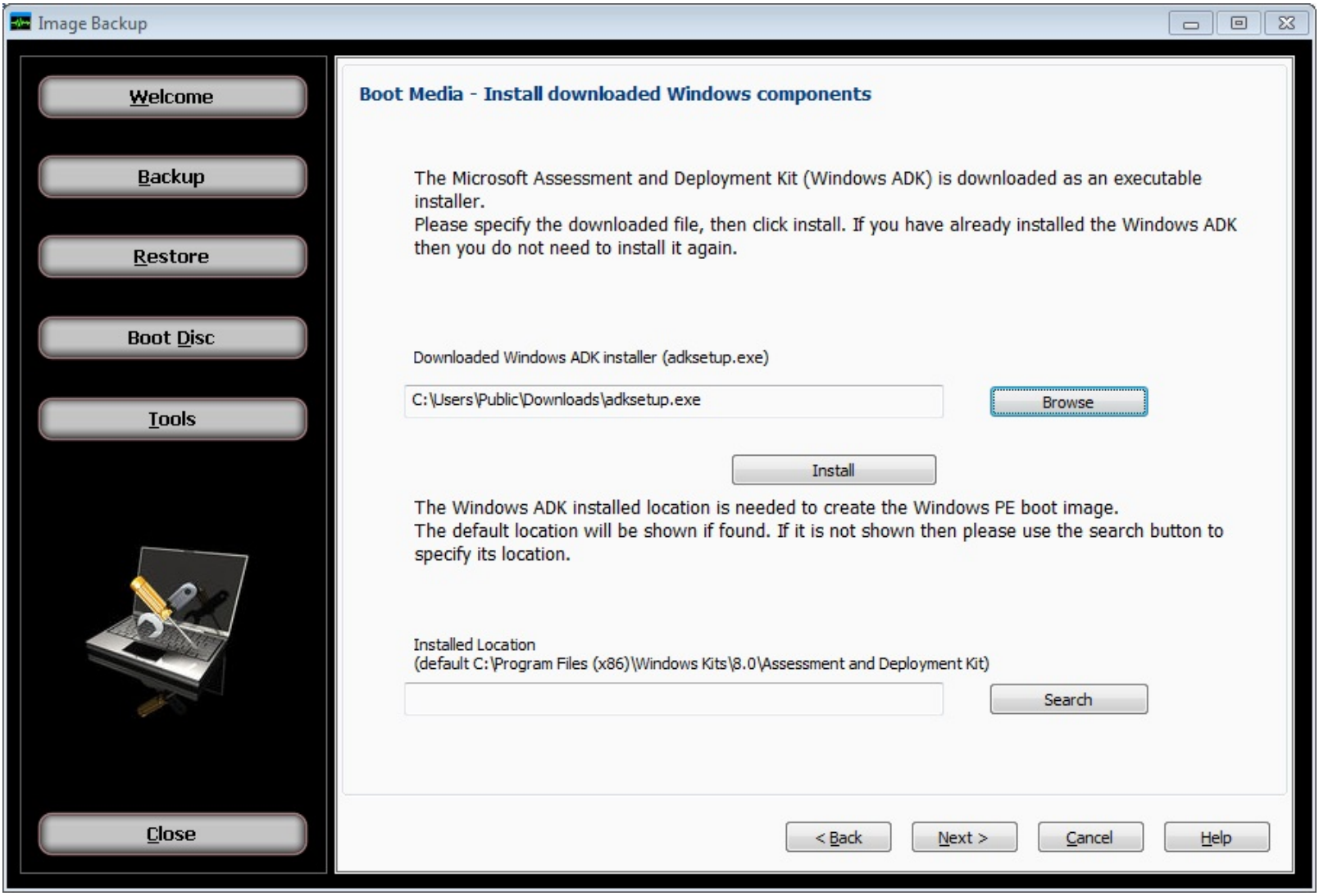


The Boot Disc Introduction screen is also used to select the type of boot disc method you prefer. In most cases the basic type is preferred since there are no additional components required to download.

However, for those users running configurations that require special handling, such as special device drivers included in the boot disc, the advanced type may be needed to create a boot disc capable of starting the system successfully.

Install Windows Assessment and Deployment Kit (ADK) components (for Advanced Boot Media mode only)

Boot Disc - Install Windows components (Advanced Boot Media mode only)



Downloaded Windows ADK file:

The Microsoft Windows Assessment and Deployment Kit (ADKis downloaded as an executable file. Use the browse button to locate the file which was downloaded in the previous step. The location and name of the file is needed so that the Windows ADK installation can be launched.

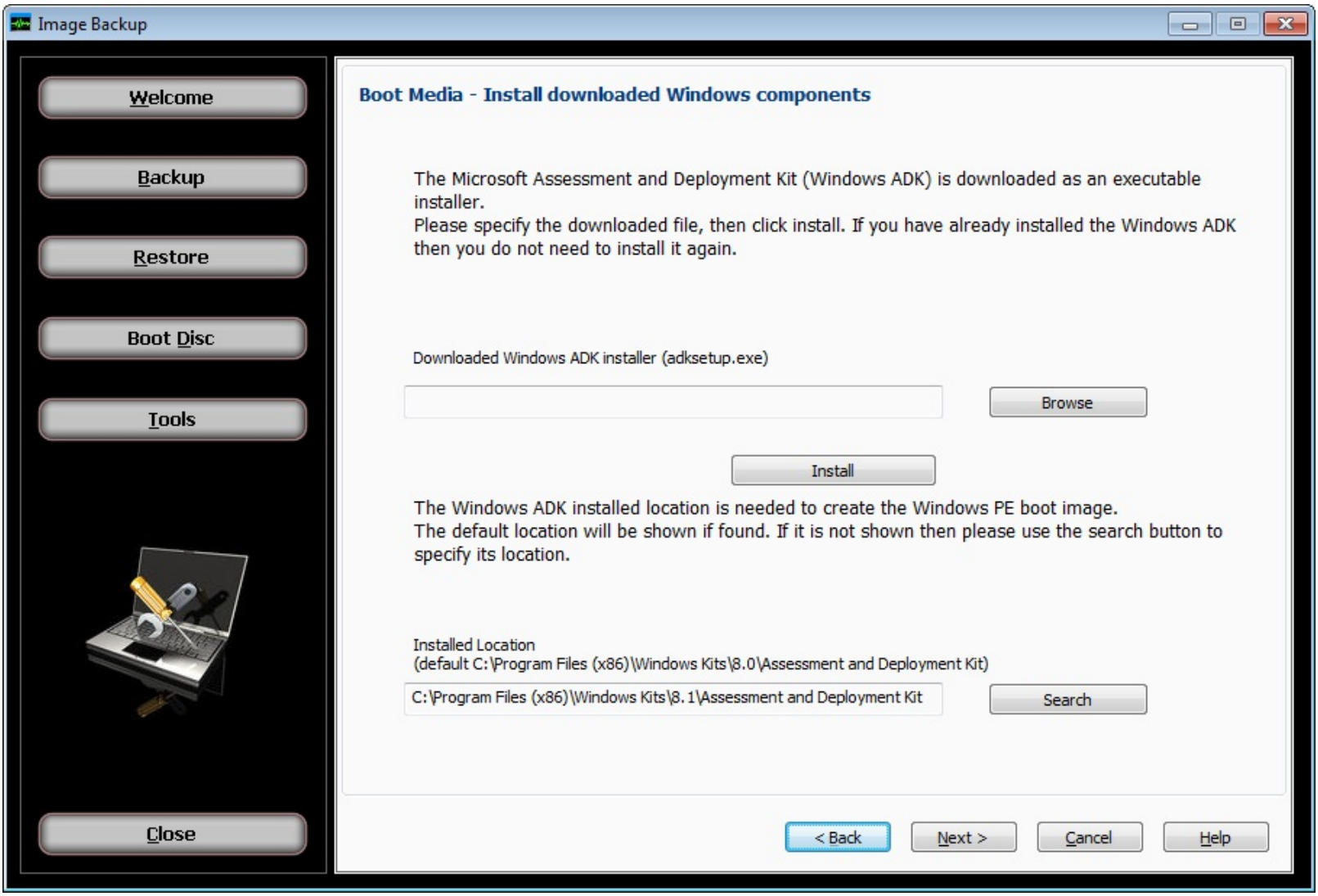
Install button:

With the downloaded Windows ADK setup file location showing above, click the install button. If you have already installed the Windows ADK then you do not need to install it again.

When clicking the install button the ADK installer is started and pre-configured to only select the component you need, which is the Windows Preinstallation Environment (Windows PE.

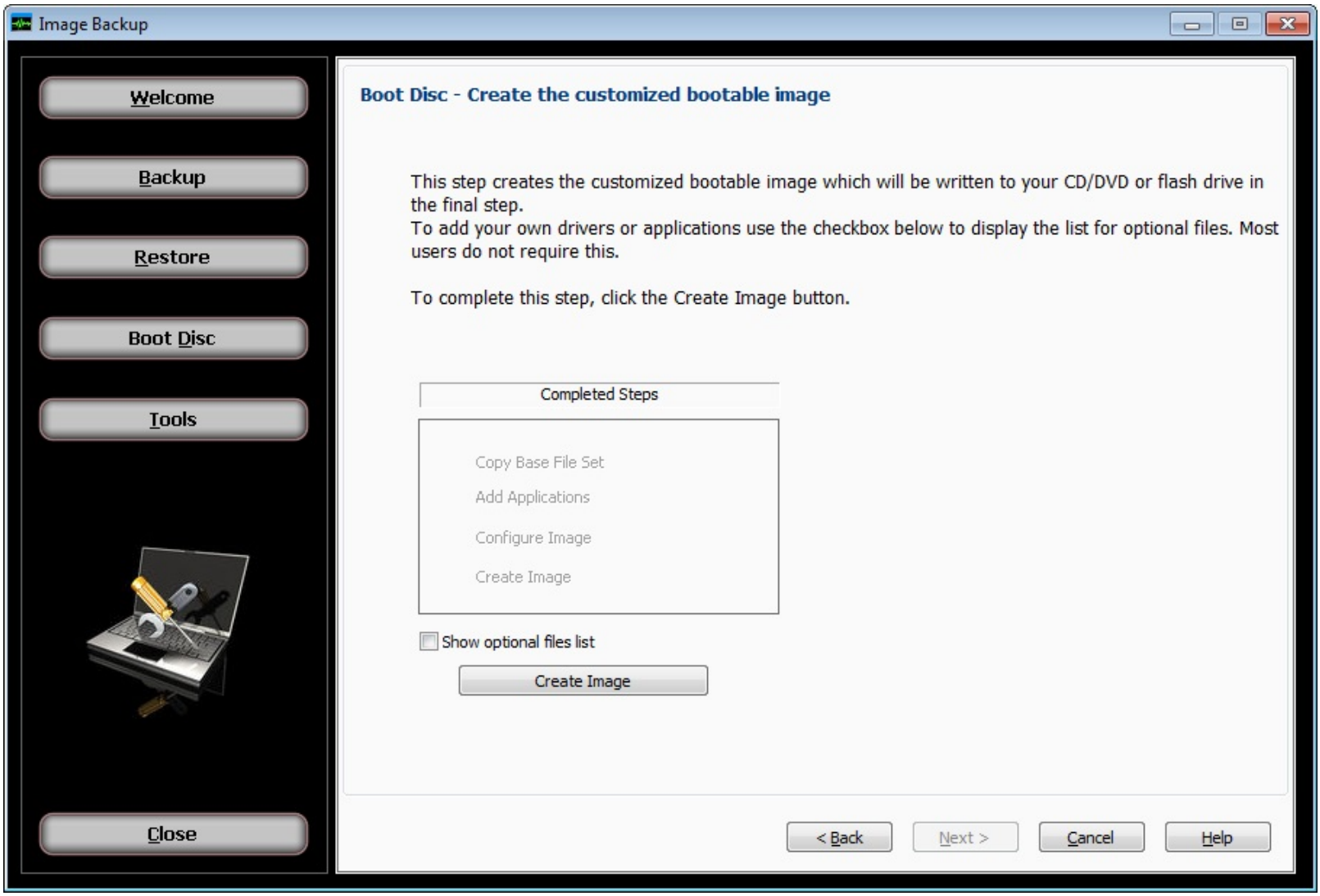
Installed location:

Once the Windows ADK has been installed, its location is needed to run the steps required to create boot image file based on the Windows PE operating system. The default location will be shown if found. If it is not shown then please use the search button to specify the folder where it has been installed.



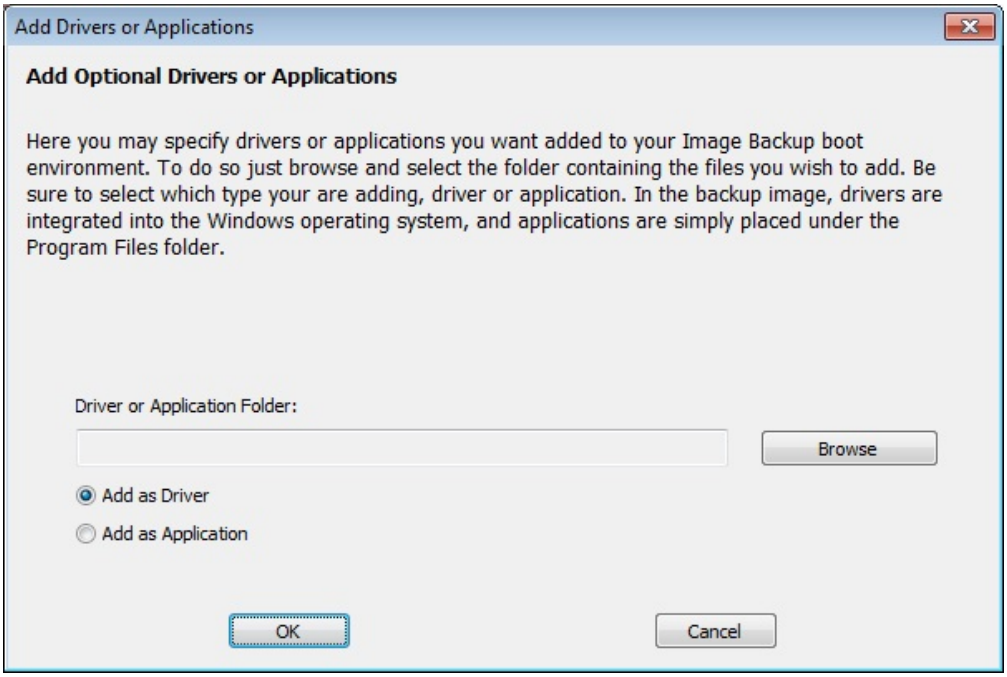
Create Boot Image

Boot Disc - Create the customized bootable image



This step creates the customized disaster recovery boot image which will be written to your CD/DVD or flash drive in the final step. To add your own drivers or applications use the optional files checkbox to show that list. Most users do not require this.

Show optional files list (Advanced Mode)

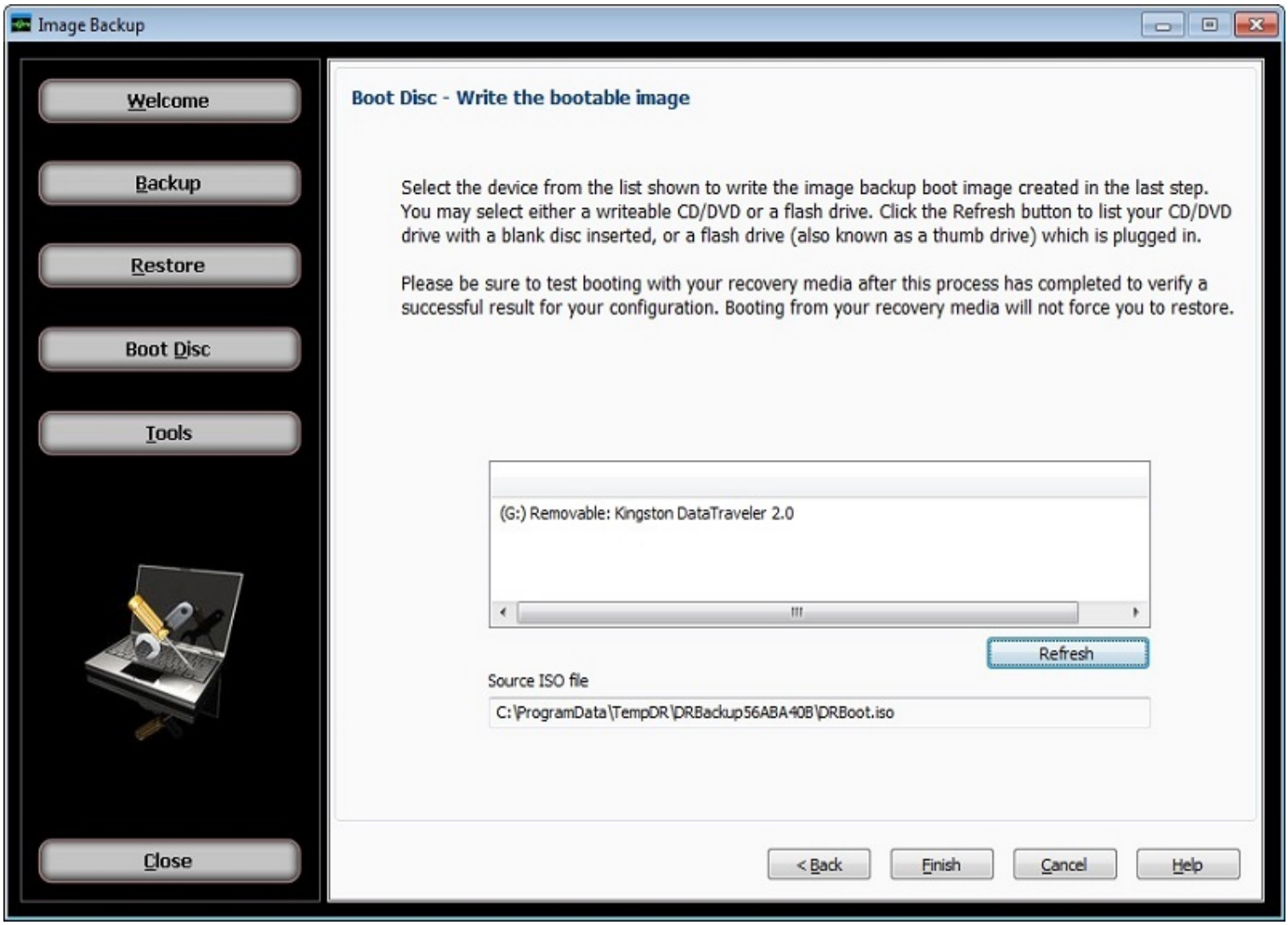


When this checkbox is set, this displays the list used to specify optional drivers or applications you can add to your boot image . Click the Add / Browse button to select the folder containing the files you wish to add. Be sure to select which type you are adding, driver or application. In the Boot Image, drivers are integrated into the Windows PE operating system and applications are simply placed under the Program Files folder. To delete any item that has been added to the list, just select that item in the list and click the Remove button.

To complete this step, click the Create Image button. This will begin the various processes needed to create the Boot Image with messages showing its progress. When the process has completed, click the next button to proceed to the last step.

Write Boot Disc

Boot Disc - Write the bootable image



Select the device from the list shown to write the bootable image created in the last step. You may select either a writ-able CD/DVD or a flash drive. Click the Refresh button to list your CD/DVD drive with a blank disc inserted, or a flash drive (also known as a thumb drive) which is plugged in. Note that not all computers are capable of booting from a flash drive.

Click the Finish button when you are ready to write the bootable image to the selected device and wait for the process to complete.

If you do not wish to write the boot media but only create the ISO file, the checkbox provides that option. If checked, you will also see the path and file name where the file will be available after clicking the finish button.

It is recommended to test booting from the selected boot device to be sure you can successfully start your computer using the boot disc or flash drive .Once the boot process completes you should see the Image Backup application started. You do not have to run an actual image backup operation when you have started your computer this way.

Tools

Tools

The Tools button will display a screen which provides a list from which the user may select a variety of functions:

Mount backup image volume to a drive letter

This provides the ability to access files in a backup image without having to run a restore operation. By specifying the backup image, the user may select from any volume listed in the backup image, then select any available listed drive letter to associate with that volume. Then after clicking the 'Mount' button, files will be available by accessing the selected drive letter the same way files are nor-mally accessed.

Mount ISO file to a drive letter

This provides the ability to access files in an ISO file without having to burn that file to a CD or DVD. By specifying the ISO file image, the user only needs to then select any available listed drive letter to associate with that ISO file. Then after clicking the 'Mount' button, files will be available by accessing the selected drive letter the same way files are normally accessed.

Unmount image from a drive letter

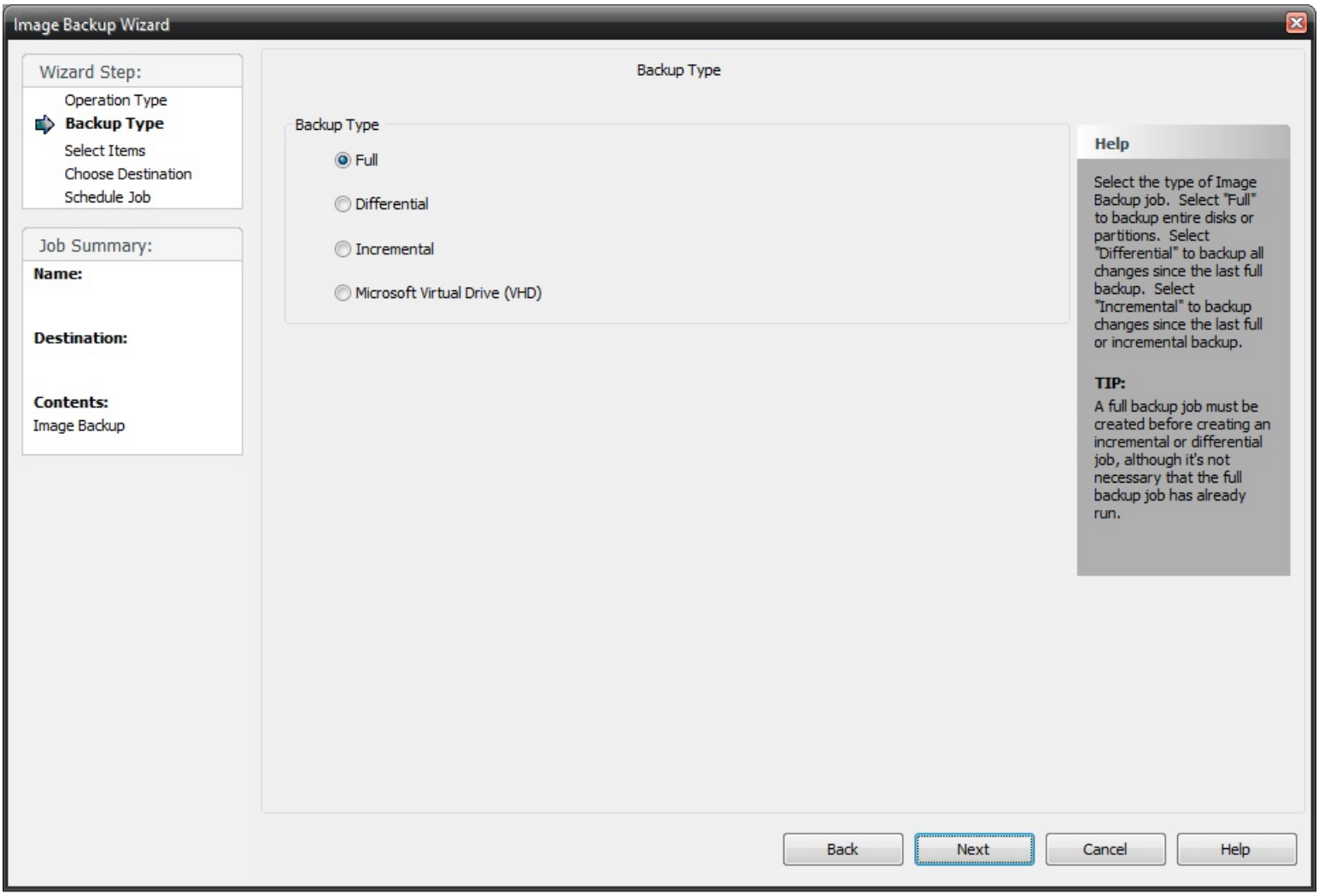
Any drive letter that exists from a mount operation may be released and made available again using the unmount function. All that is required is to specify the drive letter desired, then clicking the 'Unmount' button.

Convert backup image to a VHD

A VHD (virtual hard disk) file is normally associated with the Microsoft Hyper-V server. During restore operations, the user has the option to create VHD file output instead of performing a restore to disk operation. This tool makes the same result possible without requiring the steps normally used for restore. After selecting the source backup image and the drive desired for conversion in the backup, the user then specifies the desired output filename and location. Then after clicking the "Convert" button, the process to cre-ate the output file begins with progress displayed.

Select Backup Type

The first step in scheduling an image backup is to choose the type of job.

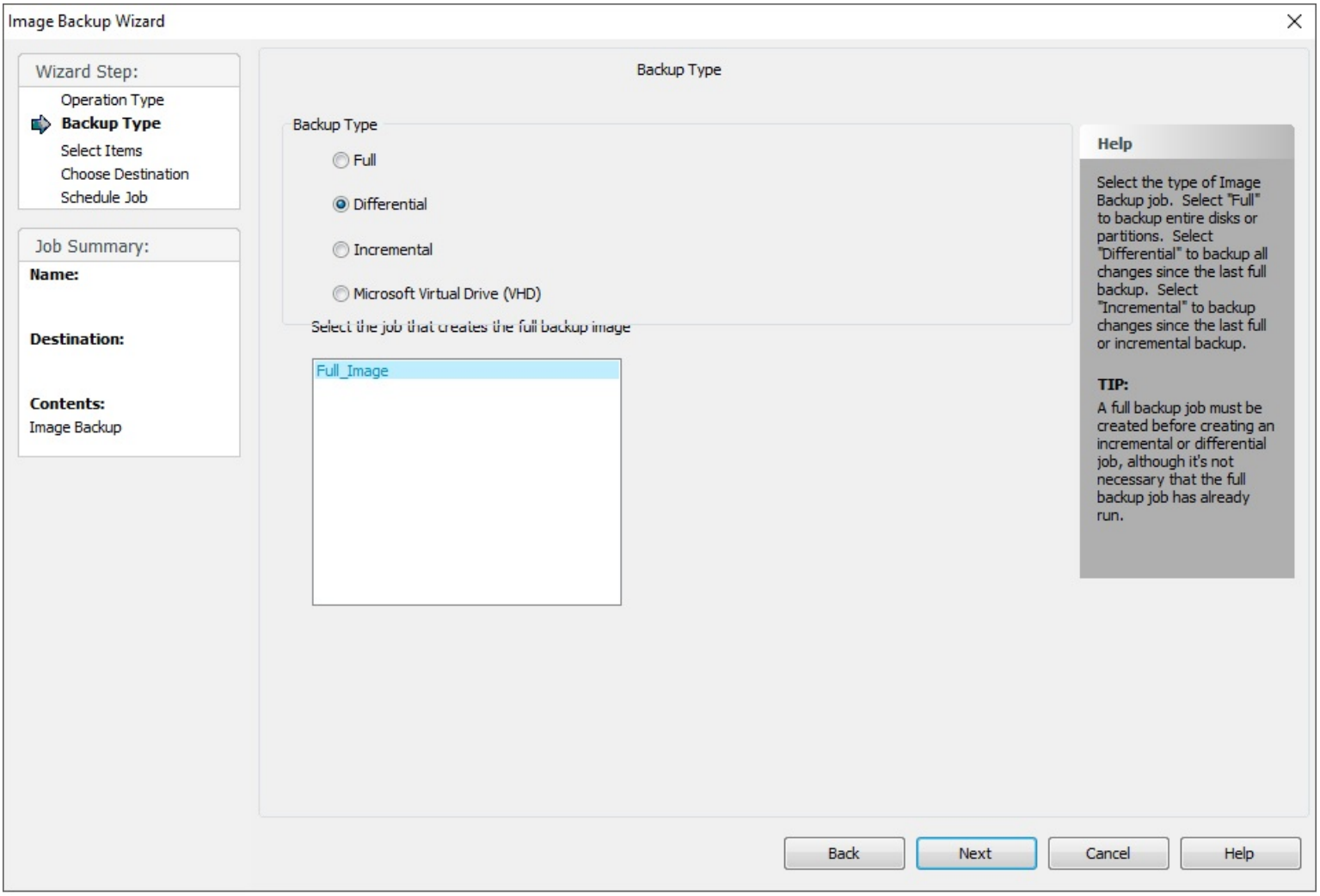


The Help panel on the right side of the screen describes the different type of image backup jobs.

Incremental and differential jobs reduce the amount of space needed for the backup by only saving changes made since a previous backup. Differential backup jobs save the changes made since the last full backup. Incremental backup jobs save the changes made since a previous incremental backup, or since the last full backup if no previous incremental backup exists. The space savings comes at the cost of slower image restore operations since multiple incremental or differential backup files may need to be applied to the full backup file in order to arrive at the desired restore point.

If an incremental or differential backup type is selected, then a list of scheduled full backup jobs is displayed, as shown below.

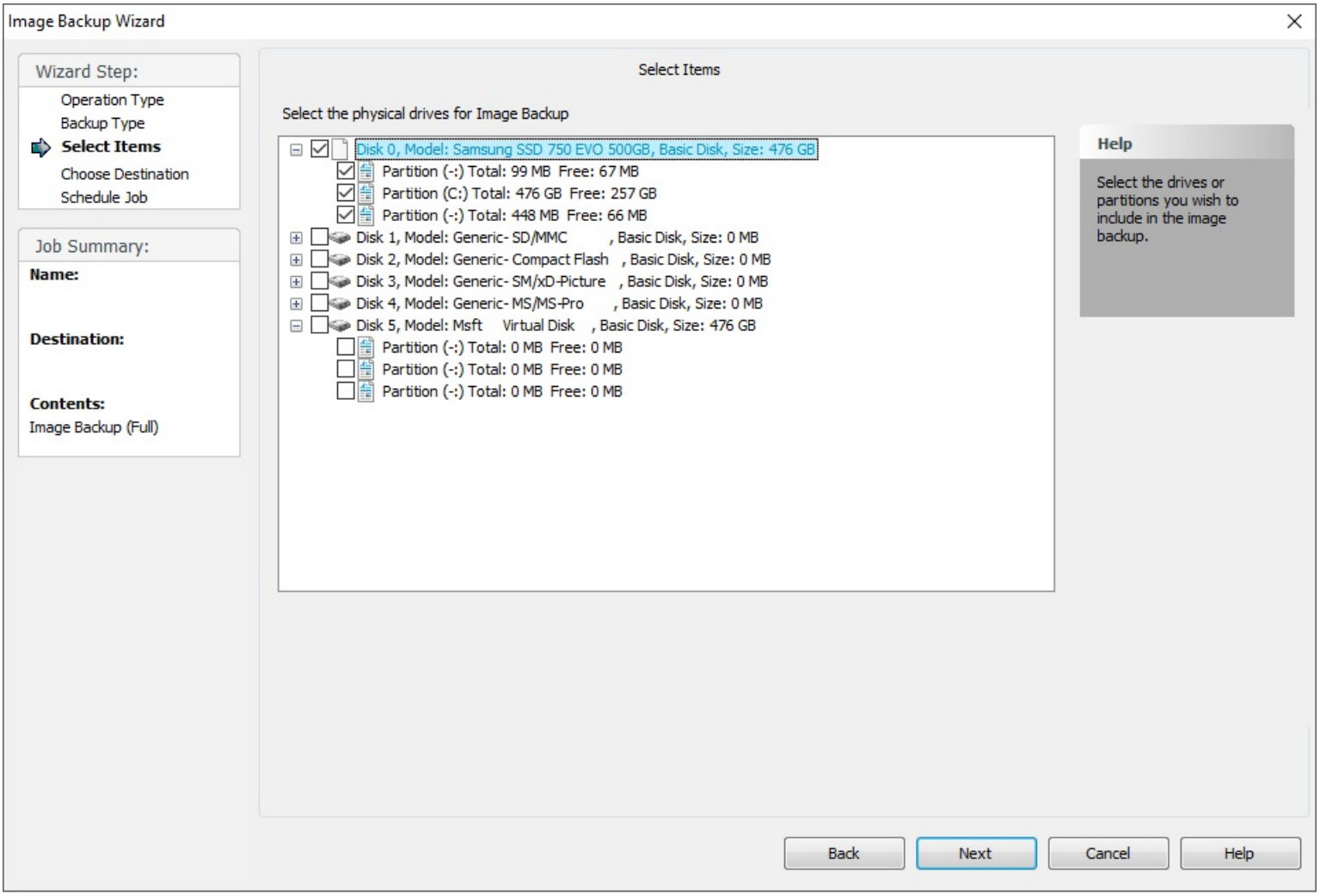
The backup type Microsoft Virtual Drive (VHD) creates an image of the hard drive and saves it to Microsoft Virtual Drive (VHD) format. This would be utilized to perform a P2V (Physical to Virtual) operation by imaging a physical machine's hard drive to be utilized as a Virtual Machine in a Microsoft Hyper-V environment.



The backup name and job name is displayed . Pick the job that generates the full backup image to be used as the base image for the differential or incremental job, then press the Next button.

Select Items for Image Backup

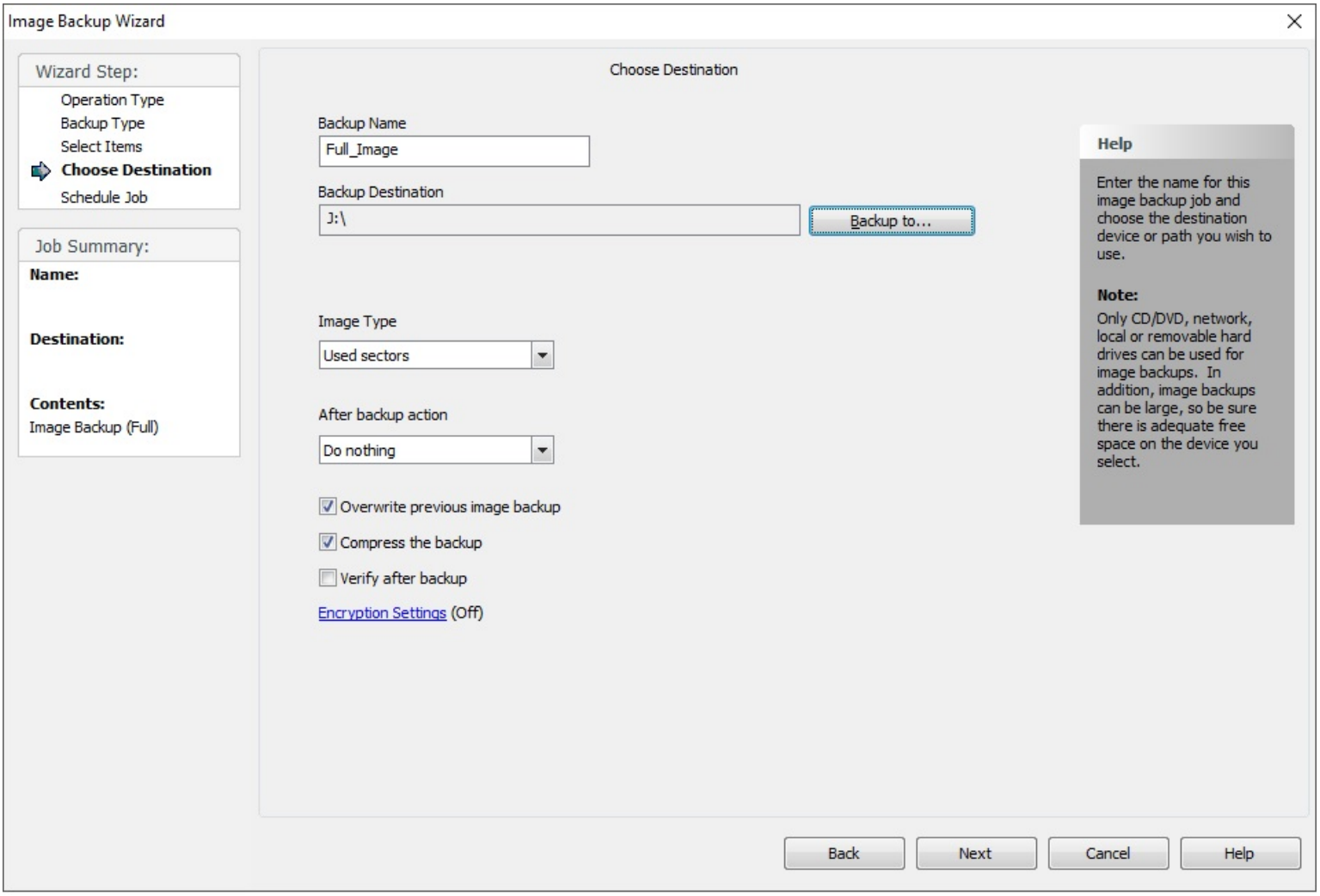
From here, select the disks and/or partitions you wish to create backup images of.



This step is only required when creating a full image backup job. Incremental and differential jobs inherit their settings from the full backup job on which they are based.

Image Backup Destination

From this screen, you will select a name, destination and other options for a full image backup. For incremental and differential jobs most of the settings are inherited from the full backup on which they are based and cannot be changed.



Backup Name: Select a descriptive name for the job.

Backup Destination: Select the destination for the backup image.

Image type:

Select from this list to create a backup containing these possible image types.

Used Sector - Only save disk space that is being used.

Forensic - Save all disk space even if it is not being used.

Forensic Direct - A forensic image type suited to disks using encryption.

After backup action Options:

After the backup job completes you can have the computer do nothing, shutdown or restart.

Do nothing

Nothing will occur after the copy job completes.

Shutdown the computer

Shutdown the computer when the copy job completes.

Restart the computer

Restart the computer when the copy job completes.

Backup options:

Overwrite previous image backup

Set this check box to use to overwrite the previous image backup. This option only applies to full or differential backups since incremental backups depend on all previous backup images being available. If the overwrite option is disabled, then a date and time stamp is added to the backup file name to make it unique.

Compress the backup

Set this check box to use compression when backing up. This results in a smaller output file but may increase the time required to complete the backup.

Verify after backup

The data that is backed up will be verified to make sure that they were written correctly. Selecting this option will increase backup time. This setting is not enabled by default.

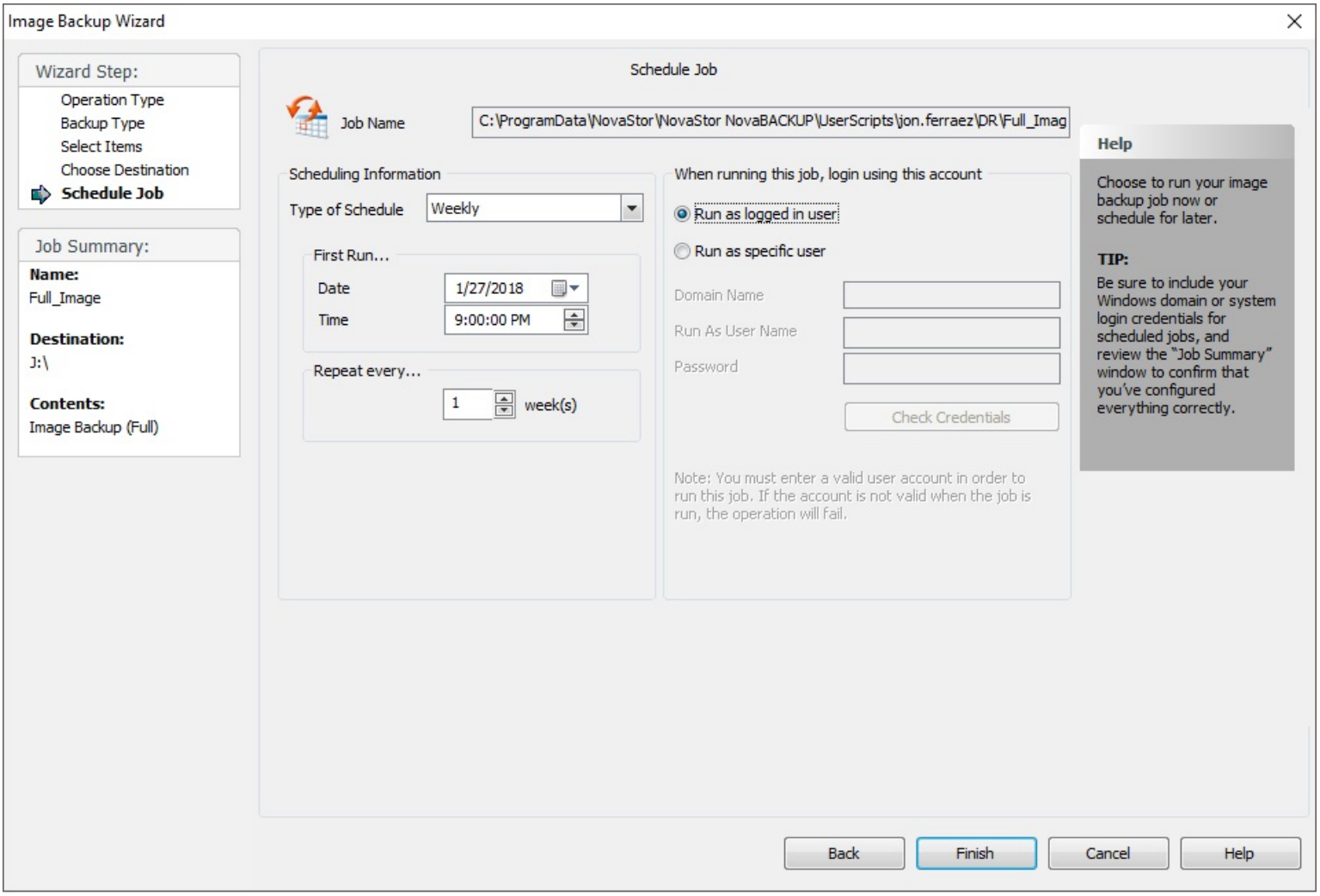
Encryption Settings

Click 'Encryption settings' to set backup encryption on or off. Encryption provides enhanced security by storing the backup data in a secure format.You may choose the encryption type as None (off), or one of encryption types AES 128, AES 192 or AES 256 (On). A secret key must be also be entered, which is similar to creating a password.

IMPORTANT: You will be prompted to enter the secret key to restore an encrypted backup. The restore will not be permitted unless the correct secret key is entered.

Completing the Image Backup Job

This is the final necessary screen when creating a backup set using the Wizard.



Type of Schedule

This drop-down list allows you to select whether you want the backup job to run once, by the minute, hourly, daily, weekly, or monthly.

Run Once: Run the job once, at the date and time specified under "Scheduling Information."

Minute: Run the job based on a minute/second increment starting at a specific date and time. Under "Scheduling Information", select the appropriate date and time the job is to start and the number of minutes and seconds between each run.

Hourly: Run the job based on an hourly increment starting at a specific date and time. Under "Scheduling Information", select the appropriate date and time the job is to start and the number of hours you want the job to repeat.

Daily: Run the job based on an daily increment starting at a specific date and time. Under "Scheduling Information", select the appropriate date and time the job is to start and the number of days you want the job to repeat. You can also select specific days to run or not run the job.

Weekly: Run the job based on an weekly increment starting at a specific date and time. Under "Scheduling Information", select the appropriate date and time the job is to start and the number of weeks you want the job to repeat.

Monthly: Run the job based on an monthly increment starting at a specific date and time. Under "Scheduling Information", select the appropriate date and time the job is to start, and the day of the month and number of months you want the job to repeat.

Run Job As . .

Run as logged in user:

Run the job using the Windows login credentials in effect at that time.

Run as specific user:

In order for the job to run, you must enter valid windows account details.

Domain Name: The domain name you are logging into.

Run as User Name: The user name you want the job to run as.

Password: The password for the account you want the job to run as.

Note: The account information entered here is usually account you use to login to windows. However, you may need to use a different account when backing up network/shared drives.

Important: You can click the "Check Credentials" button to validate the account you have entered, otherwise the credentials are checked when the Finish button is pressed.

When the Finish button is pressed the job information is saved and will appear in the application's Schedule Tab along with other scheduled backup jobs.

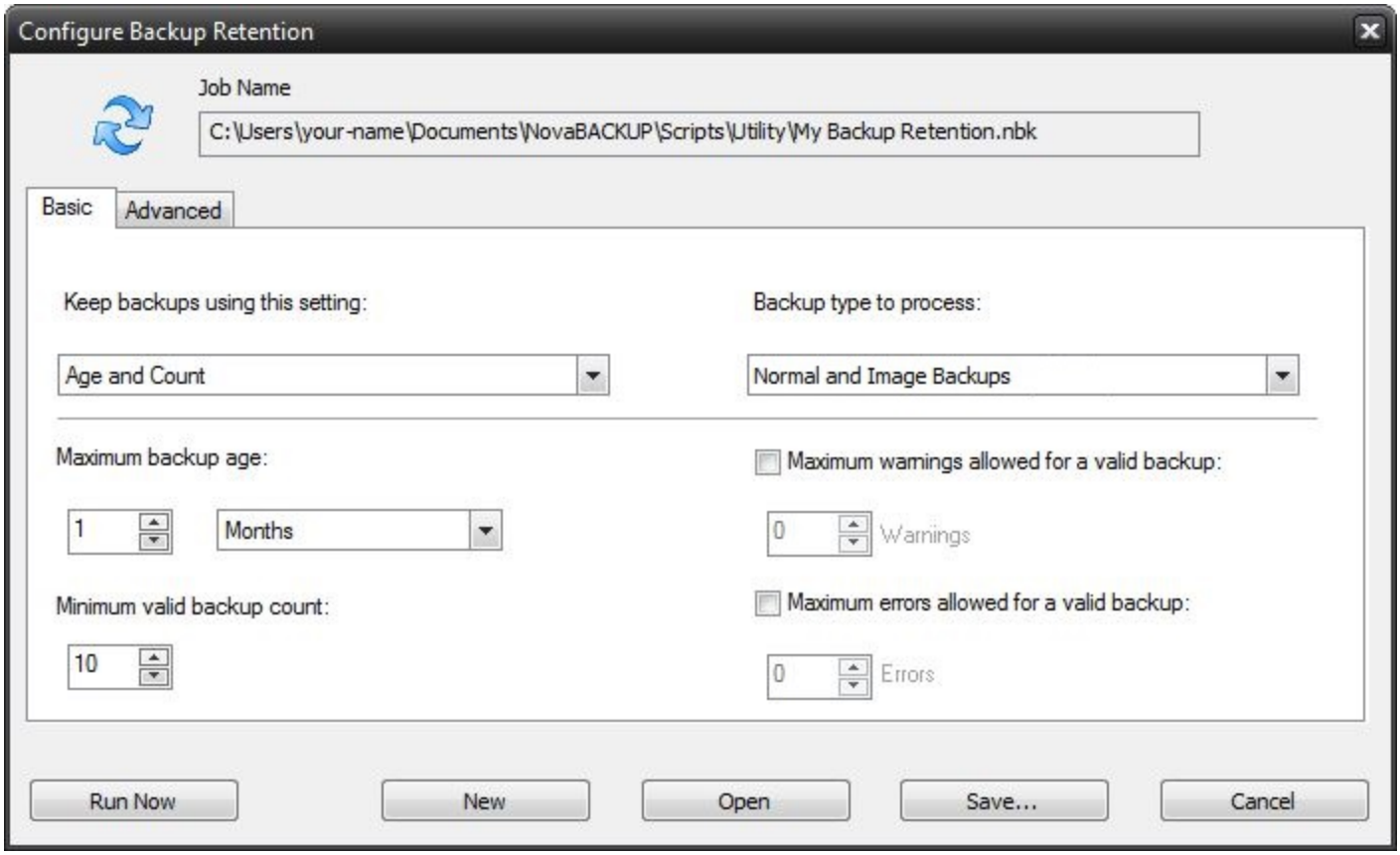
Backup Retention Overview

The backup retention feature provides the ability to create jobs to control which backups should be kept. This is useful in cases where too many backups have accumulated, storage space is running too low or you wish to keep future backups within a specified range or condition.

Backup retention jobs also check for dependencies to ensure that no backup gets deleted if another backup depends on it in order to be restored as expected. For example an incremental backup will not be deleted if an older related incremental backup remains. Also if a backup was split out to multiple files, that backup sequence will maintain its integrity by not allowing any member of that sequence to be deleted as long as others remain.

A backup retention job may be run on demand or scheduled to run automatically. To access this feature, click the schedule menu item, then click the "Backup Retention" button.

Settings contained in the basic and advanced tabs are explained in separate topics, while those common to the main screen are explained here.



Job Name

This field displays the current backup retention job script and location. If you wish to schedule a backup retention job, you will need to specify the script as it would be displayed here.

Run Now Button

Click this button to run the backup retention job using the current settings. This will also save the settings to the job script as shown in the job name field.

New Button

Click this button to open a dialog to specify a name for a new backup retention job. The new job script will have all default settings, which may then be edited and saved to the same name or to a different name.

Open Button

Click this button to open a dialog to select an existing backup retention job. This will load the job settings and set it as the current backup retention job script.

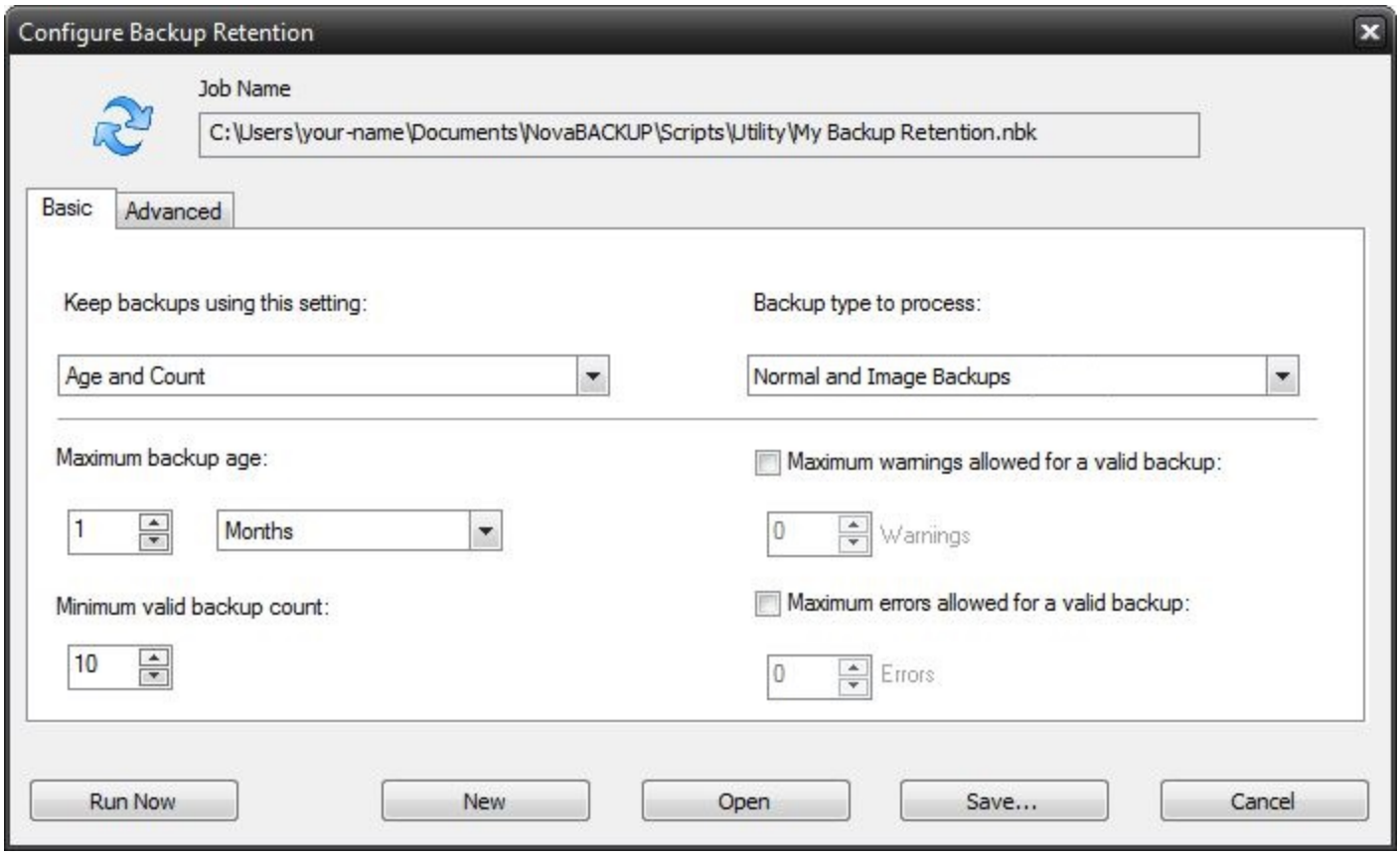
Save... Button

Click this button to open a dialog to save the settings to the current backup retention job script. You can save to the current job script name or save to a different name if preferred.

Cancel Button

Click this button to close the backup retention screen without saving any changes.

Backup Retention Basic Tab



Keep backups using this setting:

Age

Keep backups for a specified minimum amount of time.

Count

Keep a specified minimum number of backups.

Age and Count

Keep backups for a specified minimum amount of time after the minimum required count is reached.

Backup type to process:

Normal Backup

The standard backup type which is based on file selection, also known simply as file backup.

Image Backup

Disk image backup created with the Image Backup tool.

Normal and Image Backups

Both the normal file and image backups are processed. This is the same process as each type of job were run separately with all settings applied to each type of backup separately.

Minimum backup age:

This setting specifies the age when keeping backups based on a minimum age.

Minimum valid backup count:

This setting specifies the count when keeping backups based on a minimum count.

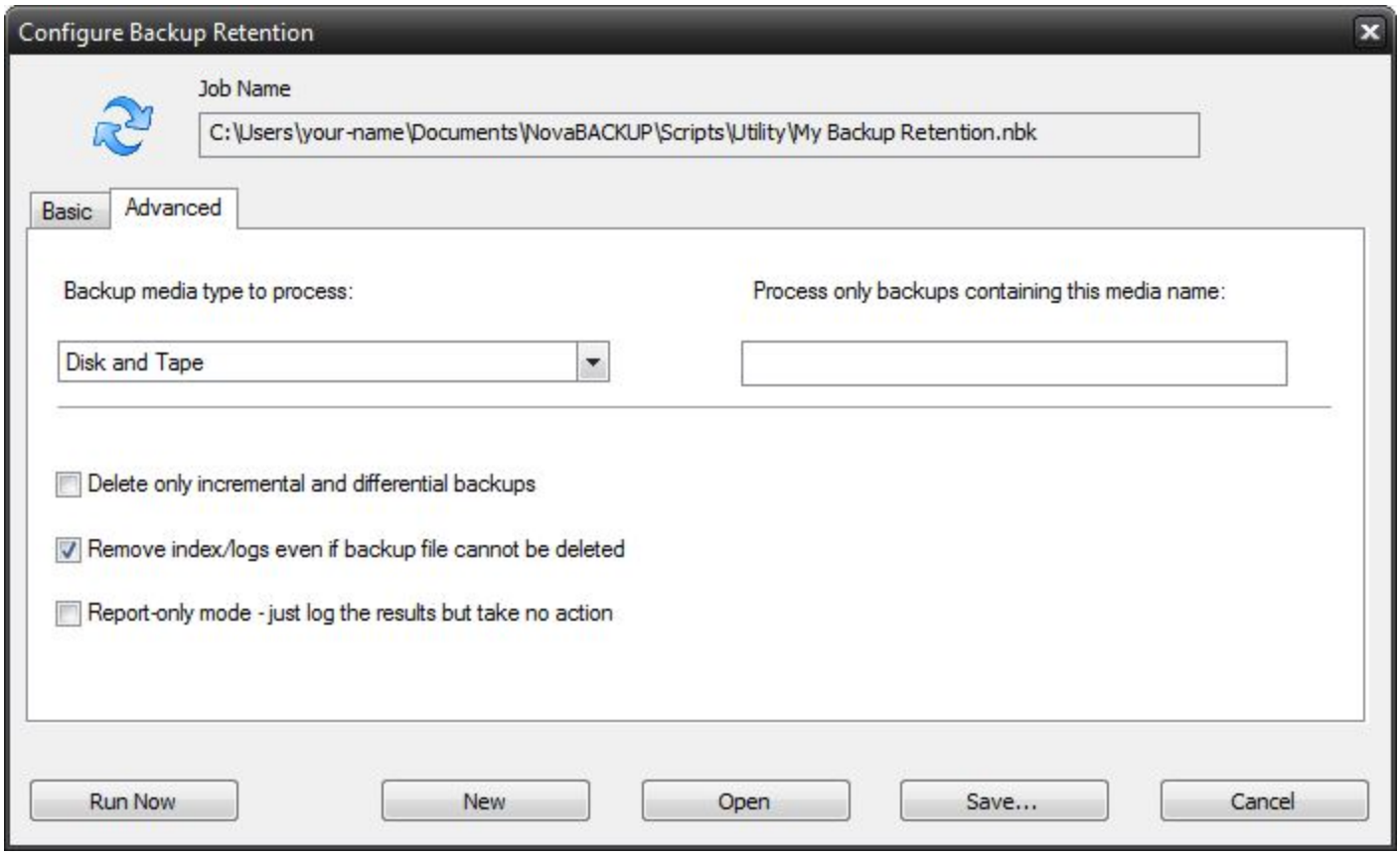
Maximum warnings allowed for a valid backup:

If this is checked, a backup will be counted as valid only if it has the set number of warnings or less.

Maximum errors allowed for a valid backup:

If this is checked, a backup will be counted as valid only if it has the set number of errors or less.

Backup Retention Advanced Tab



Backup media type to process:

Disk

Process only backups that have been saved to disk or network.

Tape

Process only backups that have been saved to tape.

Disk and Tape

Process backups that have been saved to disk, network or tape.

Process only backups containing this media name:

For normal backup types, limit the backup retention process to media containing the name specified. For image backup types, limit the backup retention process to backups with filenames containing the name specified. Just leave this setting blank to process backups of any name.

Delete only incremental and differential backups

If this is checked, only incremental and differential backups are allowed to be deleted. This will avoid the removal of any full or snap-shot backup types.

Remove index/logs even if backup file cannot be deleted

If this is checked, related content gets removed only if the backup was deleted successfully. Related content includes indexes used to list the backup and its log entries as well as actual log files. Note that this setting does not apply to tape backup, because only disk or network backups can be deleted.

Report only mode: just log the results but take no action

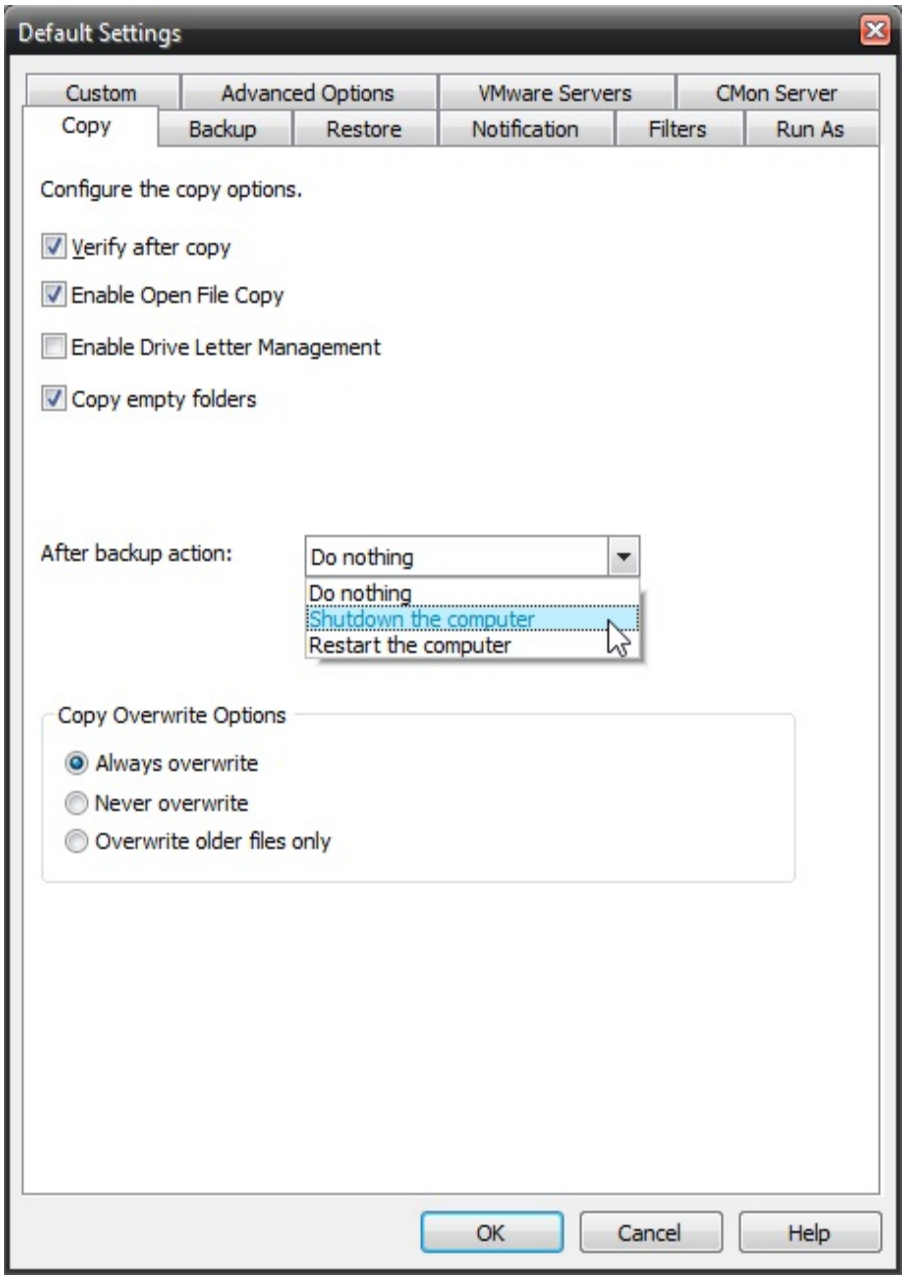
If this is checked, only the results of a retention job is logged, with no changes to the state of any backups. This is similar to a print pre-view without actually printing.

Program Settings

To access the default settings for all tasks, select "Default Settings" in the application menu by clicking the upper left graphic in the Home screen. To access options for individual tasks, press the "Settings" button in the Copy, Backup or Restore Tab to set options for that specific task.

Note:*The settings defined from in Global Settings are overridden by settings defined from the individual task settings.*

Copy Tab



Verify after copy

The files that are copied will be verified to make sure that they were written correctly. Selecting this option will increase copy time. This setting is selected by default.

It is highly recommended to select the option to verify your data after a copy job. This helps to ensure that the copied data matches the data presently on your system. If you do not select this option, and there is an error in some of your copied data, you will not be aware of the errors until you go to access the copied data.

Enable Open FileCopy
Select this option to have NovaBACKUP automatically copy open files on the local system using Volume Snapshot Service (VSS).

Enable Drive Letter Management
Select this option to have NovaBACKUP automatically select the correct removable disk device (USB) even when it's drive letter changes.

Copy empty Folders
Select this option to copy empty folders.

After copy "backup" action Options

After the copy job completes you can have the computer do nothing, shutdown or restart.

Do nothing
Nothing will occur after the copy job completes.

Shutdown the computer
Shutdown the computer when the copy job completes.

Restart the computer
Restart the computer when the copy job completes.

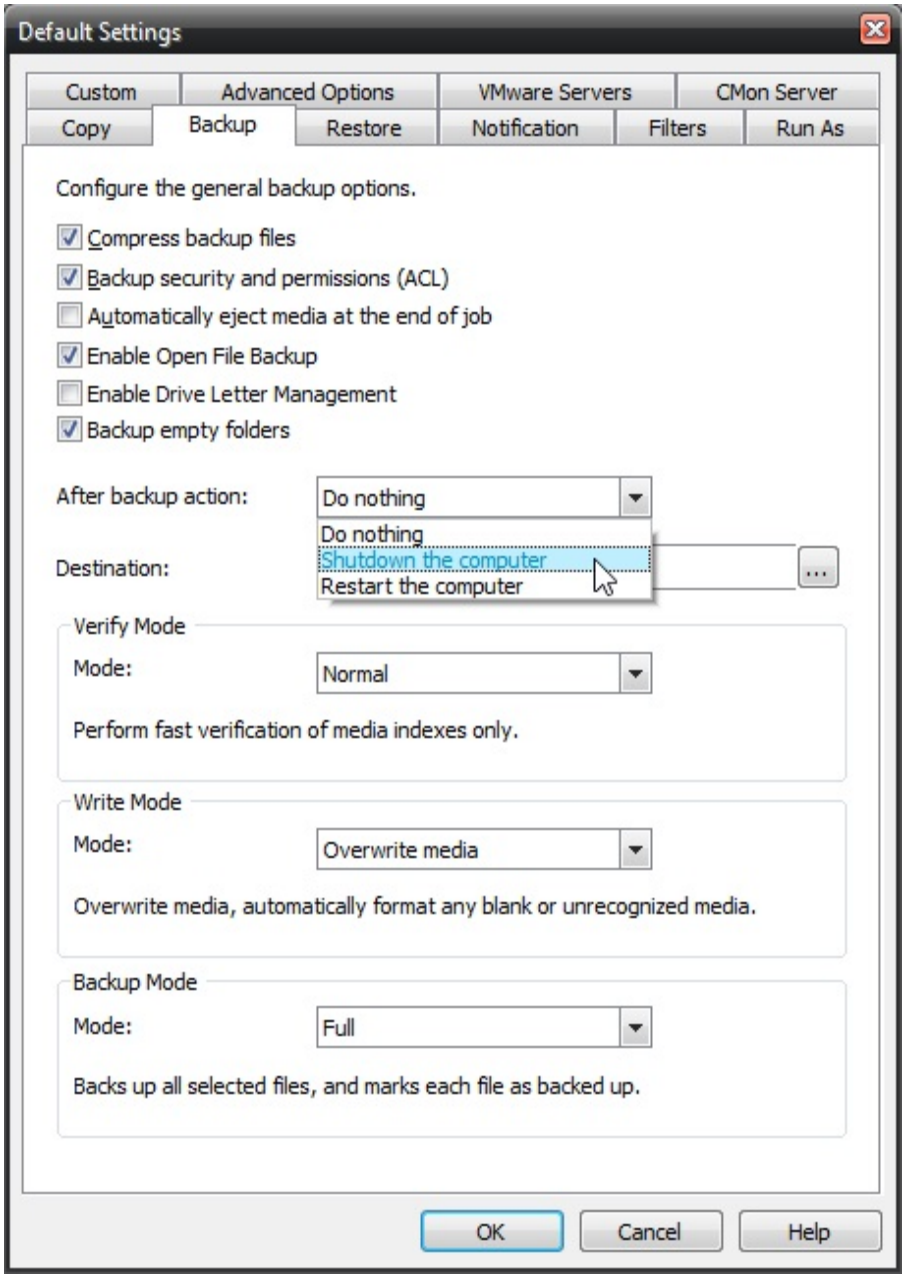
Copy Overwrite Options

Always Overwrite
Source file will always overwritean existing file of the same name on the destination.

Never Overwrite
Source file will never overwrite an existing file of the same name on the destination.

Overwrite older files only
Source file will overwrite an existing file of the same name on the destination if the destination file is older.

Backup Tab



Compress backup files

The backup files are compressed to save space. Backup speed is decreased when this option is selected. This setting is unselected by default.

Backup ACL File Permissions

Select this option to backup Access Control Lists (ACL's) in addition to file data. ACL's contain file and system permissions. This option should be enabled to maintain system security.

Automatically Eject Media. . .

Select this option to have NovaBACKUP automatically eject the media after a backup has completed (device must support media eject)

Enable Open File Backup

Select this option to have NovaBACKUP automatically backup open files on the local system using Volume Snapshot Service (VSS).

Enable Drive Letter Management

Select this option to have NovaBACKUP automatically select the correct removable disk device (USB) even when it's drive letter changes.

Backup empty folders

Select this option backup empty folders.

After backup action Options

After the backup job completes you can have the computer do nothing, shutdown or restart.

Do nothing

Nothing will occur after the copy job completes.

Shutdown the computer

Shutdown the computer when the copy job completes.

Restart the computer

Restart the computer when the copy job completes.

Destination

Select the default destination device a backup for all new backup jobs.

Verify Mode Options

The verify mode options are utilized to verify your backup to the original source. The verify modes are None, Normal, and Advanced. Normal is the default verify mode.

None

Do not perform any verification.

Normal

Perform fast verification of media indexes only.

Advanced

Perform full comparison of the backup file to the original file. The "Advanced" verification mode performs a read-back and may double backup times.

It is highly recommended to select the "Advanced" verify mode option to verify your data after a backup. This helps to ensure that the backed up data matches the data presently on your system. If you do not select this option, and there is an error in some of your backed up data, there will be errors upon restoring that data if you should need to.

Write Mode

Overwrite media:

Overwrite all recognized media. Automatically format blank or unrecognized media

Append to Media:

Append to recognized media. Automatically format blank or unrecognized media

Backup Mode

Full

Backs up all selected files, and marks each file as backed up. This is the default setting.

Incremental

Backs up (and marks as backed up) selected files that have either not been backed up previously or have changed.

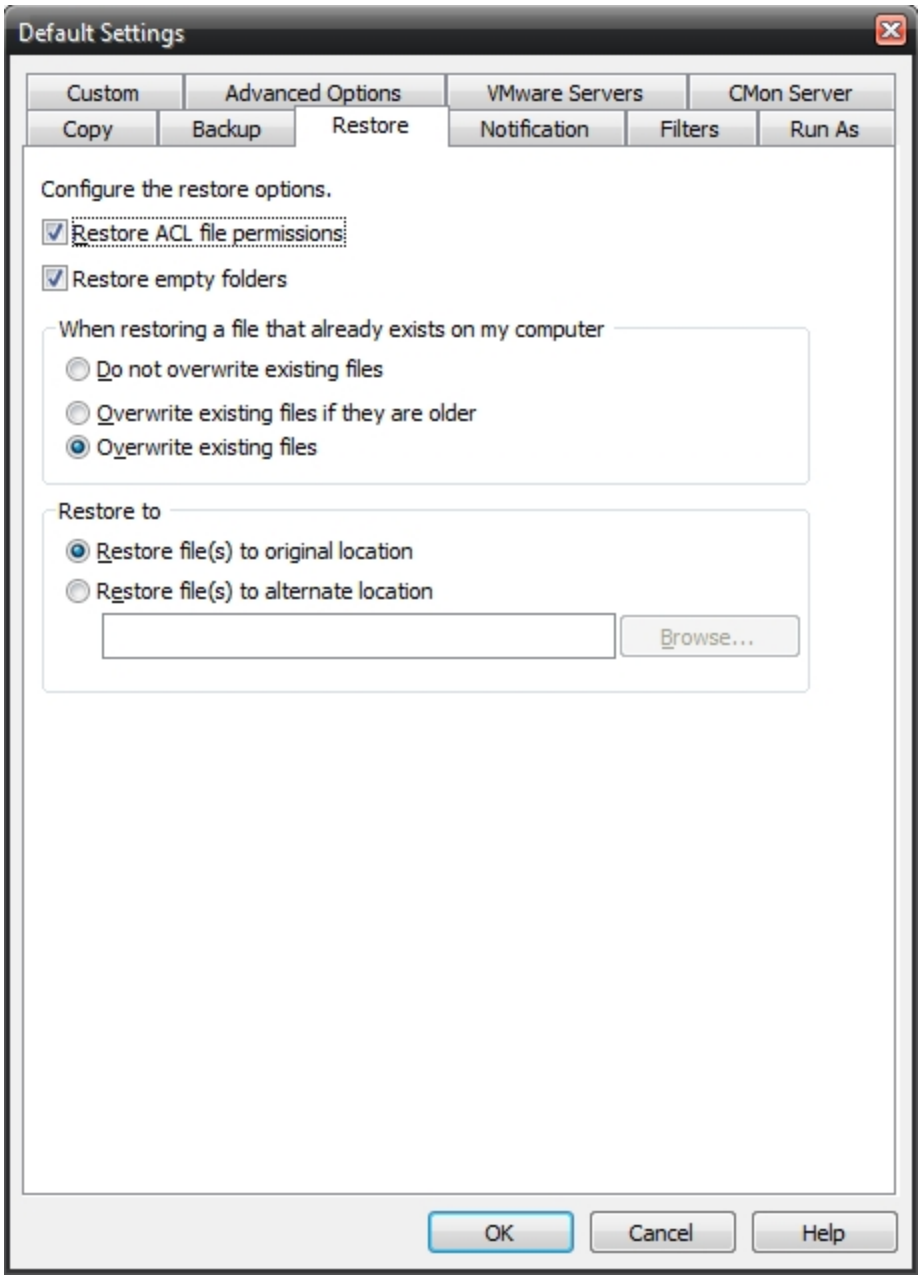
Differential

Backs up selected files that have either not been backed up previously or have changed. These backed up files are not marked as backed up, however.

Snapshot

Backs up all selected files and does not mark any files as backed up.

Restore Tab



Restore ACL File Permissions

Select this option to restore security permissions on files and subdirectories. Note that the backup ACL's option must have been selected during the original backup for them to be restored.

Restore empty folders

Select this option to restore empty folders.

Existing Files Options

The recommended setting is to not overwrite a file if it already exists on your computer. Other choices include only overwriting the file if the existing file is older or always overwriting the file.

Do not overwrite existing files

Upon restoration, files that already exist on your computer will not be overwritten by files from the backup

Overwrite existing files if they are older

Upon restoration, if a file is found to exist on your computer already, it will only be overwritten if the file on your computer is older than the one found in the backup.

Overwrite existing files

Upon restoration, if a file is found to already exist on your computer, it will always be overwritten.

Restore File Placement

The default setting is to restore the file(s) to the original location they were backed up from.

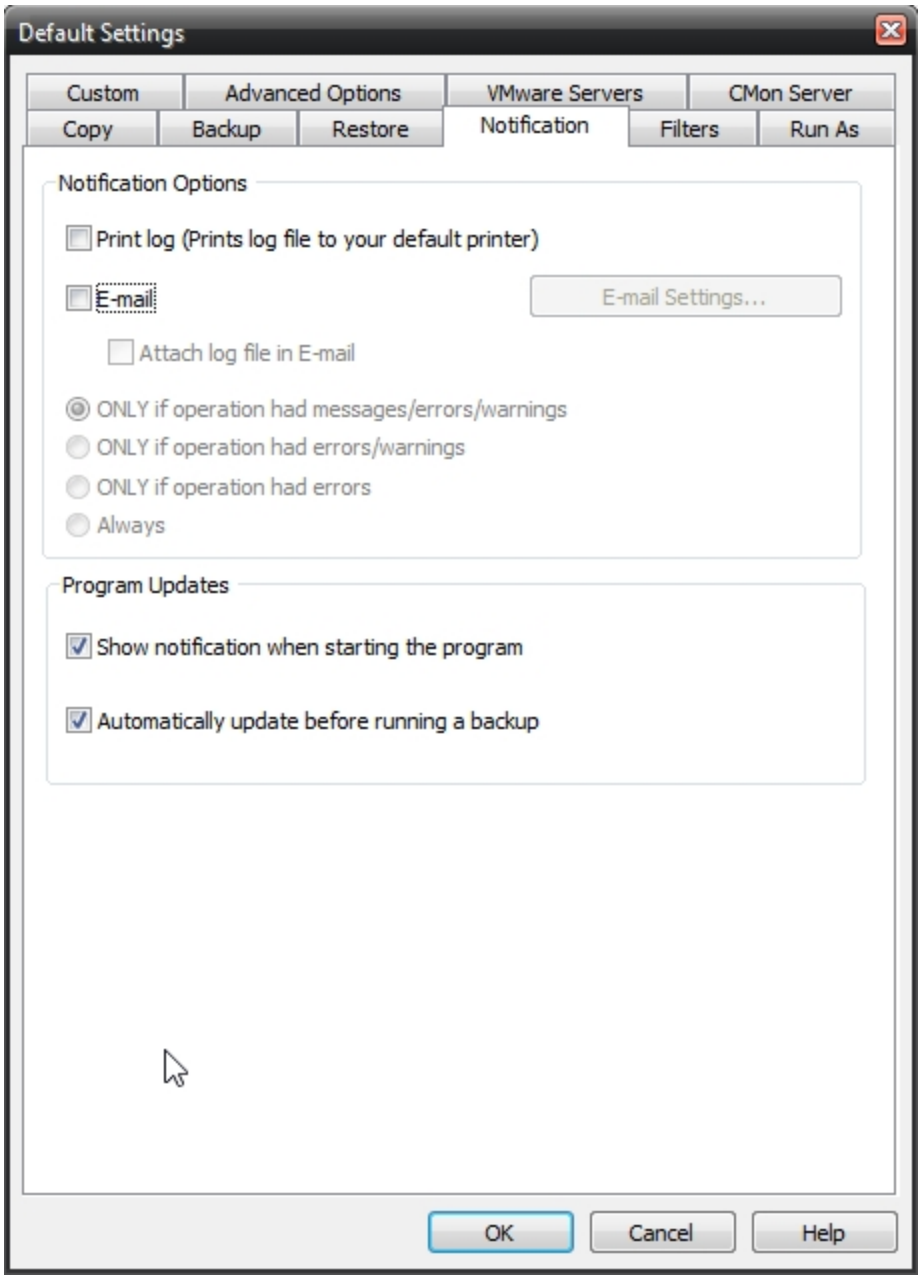
Restore file to its original location

Upon restoration, all files will be restored to their original location.

Restore file(s) to an alternate location

Upon restoration, all files will be restored to an alternate location. This location can be specified by typing the path to the restoration directory in the text box or by selecting a directory by clicking on the "Browse" button that will appear to the left of the text box when the radio button is selected.

Notification Tab



Notification Options

Email

Use this option to receive job notification in E-mail.

You have the option to allow the logs to be e-mailed to the specified email address. To utilize these settings you must first configure the e-mail options by clicking on the "E-Mail Settings" button.

E-mail Settings

Depending on your product, you may be able to choose to use the NovaBACKUP Alerts service to send your e-mail logs or to manually enter a custom SMTP configuration.

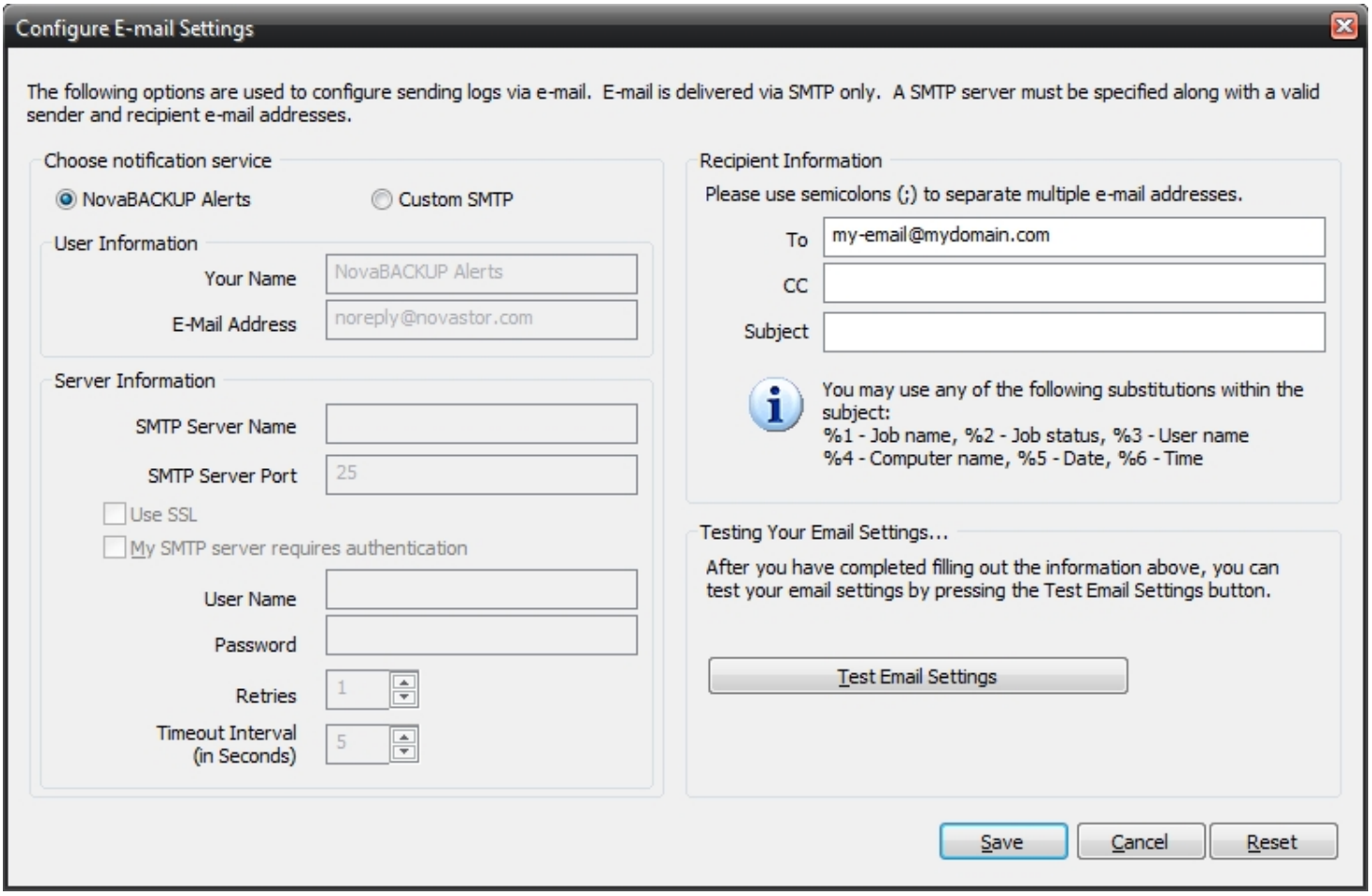
- If you choose to use the NovaBACKUP Alerts service, the only information you need to provide is the recipient e-mail address or addresses you would like to receive notifications.
- If you choose to use a Custom SMTP service, your SMTP server information may be acquired from your System Administrator or service provider.
  - You will need to input a valid e-mail addresses for both the sender and the recipient.
  - These can be the same e-mail address.
  - If your SMTP server requires authentication, you may do so by tagging the checkbox for authentication and supplying your user name and password.

NovaBACKUP Alerts

If your product supports it, you may have the ability to choose the NovaBACKUP Alerts service to send your e-mail notifications. The NovaBACKUP Alerts service is a pre-configured email notification service.

* It is not required to use this service and you should check with your System Administrator to see if sending e-mail notifications through a 3rd party service is allowed in your organization.

* By using the NovaBACKUP Alerts service, you are agreeing to our End-User Licensing Agreement and Privacy Policies.



E-mail notifications may contain custom Subject: lines. These may contain any sequence of characters that conform to Internet email standards. Recommended maximum length is less than 200 characters.

If the Subject field is left blank, NovaBACKUP inserts a default subject.

A custom subject may contain the following substitution variables:

Substitution Variable	Contents
%1	The job's name.
%2	Job's completion status.
%3	User name of the logged-on user under whom the job ran.
%4	Host name - name of the computer that ran the job.
%5	Date when the job finished. Format is the locale set on the computer. Timezone is the local time zone of the computer (local time, not GMT).
%6	Time when the job finished, formatted in locale format as set by the computer. Timezone is local to the computer running the jobs (local time, not GMT).

Example, if the custom "Subject:" string is

MyCorp node %4 job %1: %2 at %6 %5

the notification email's "Subject:" appears as

MyCorp node RSRCH-SS-0987 job Daily: successful at 10:32:55pm 2/14/2017

Be sure to test your settings by clicking the "Test Email settings" button

Print Log

Here, you have the option to print the log automatically to your default printer.

Notification Conditions

These options determine when NovaBACKUP sends a notification message.

- ONLY if operation had messages/errors/warnings
- ONLY if operation had errors/warnings
- ONLY if operation had errors
- Always

Program Updates

When a program update is available, display the option to install it when the program starts.

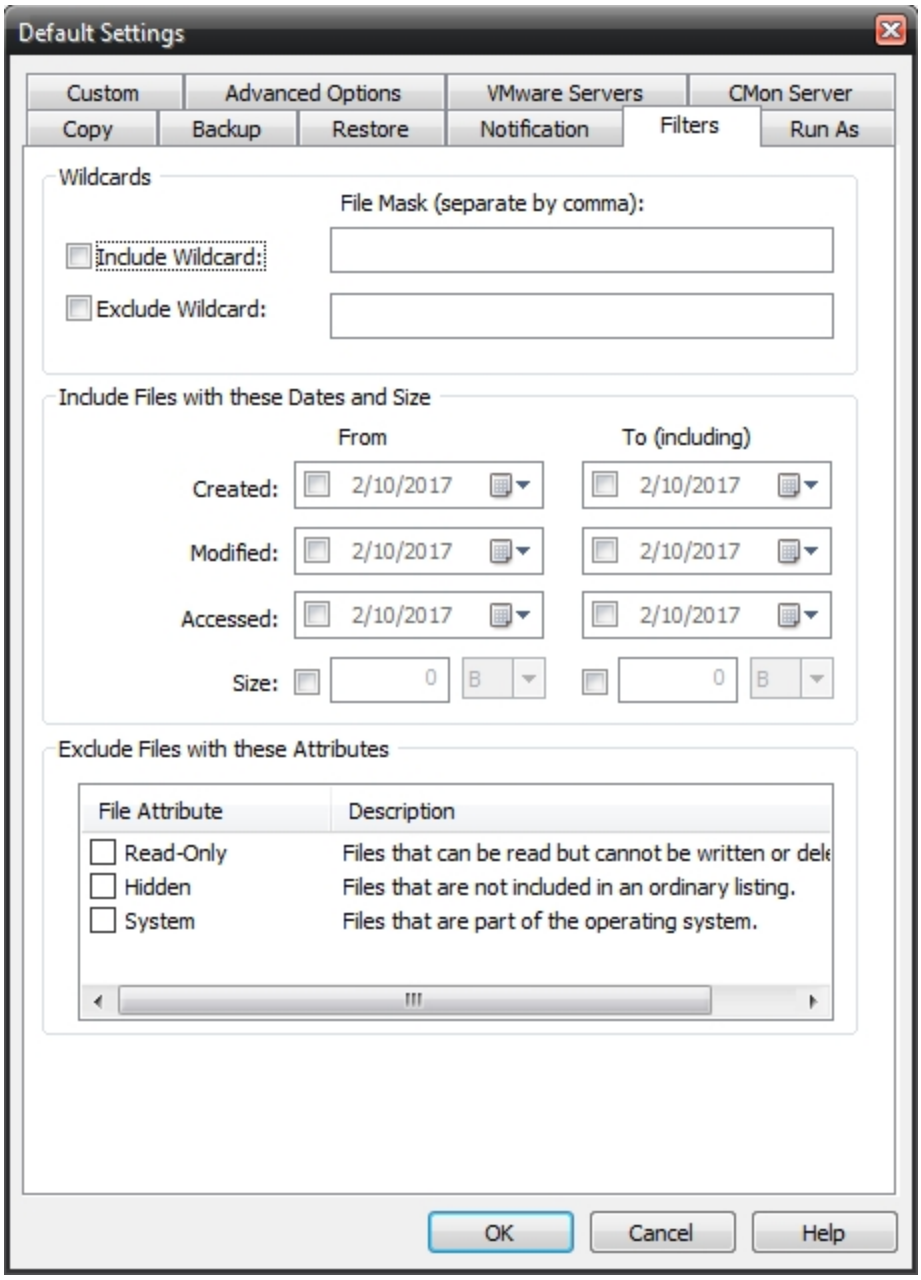
Show notification when starting the program

When a program update is available, display the option to install it when the program starts.

Automatically update before running a backup

When a program update is available, install it before starting the next backup.

Filters Tab



Wildcards

IncludeWildcard: Enter all wildcards for files you want to include in the default job separated by a comma (example: *.doc,*.xls,*.dat)

ExcludeWildcard:Enter all wildcards for files you want to include in the default job separated by a comma (example: *.doc,*.xls,*.dat)

Include Files with these Dates and Size

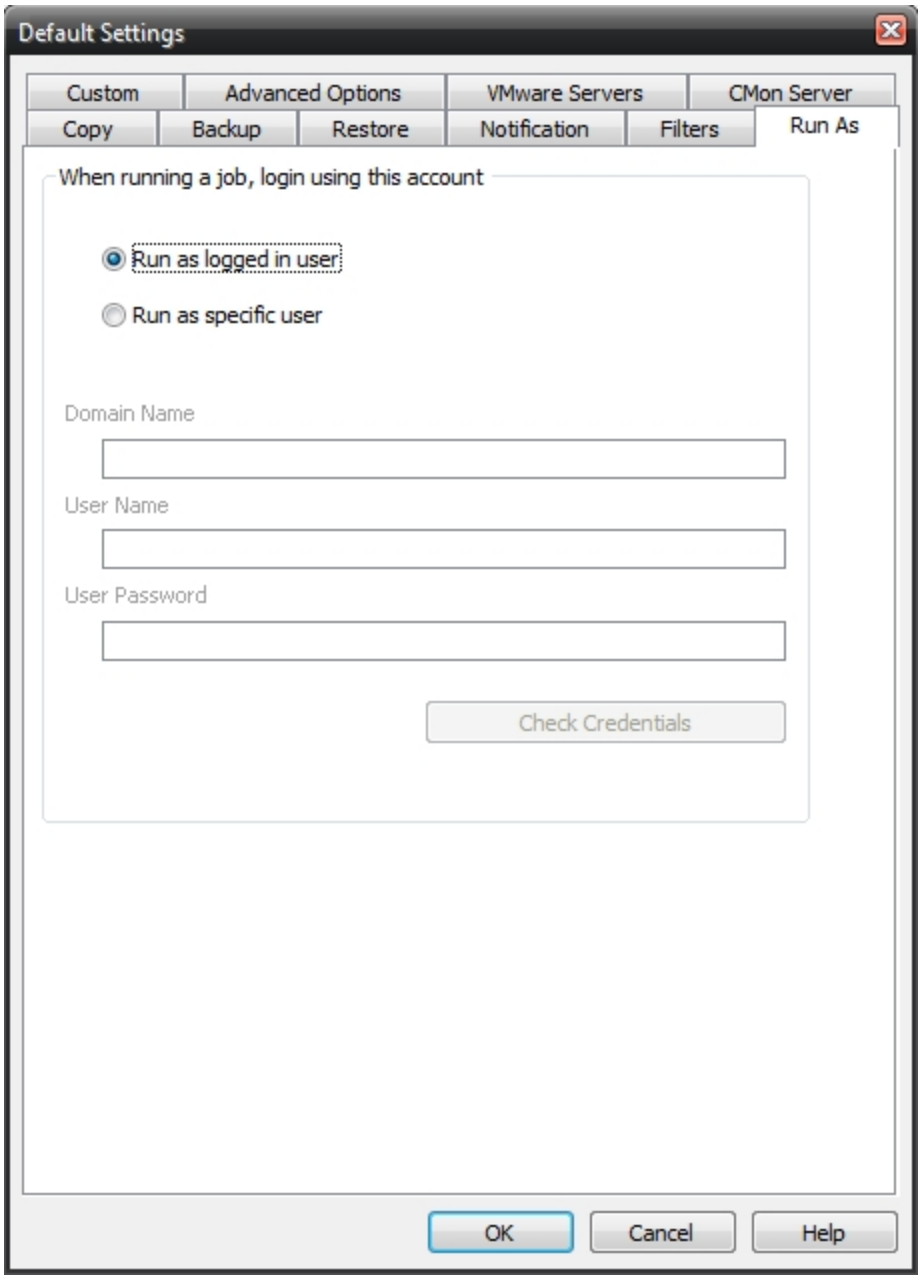
Under this section, you can create an include filter by selecting dates that files were last created, modified, or accessed or by there file

size that you wish to ensure are included in your backup. This is helpful if you want to reduce the time or file size of a backup. You may want to exclude older files that are no longer accessed or larger files you have already backed up..

Exclude Files with these Attributes

Under this section, you can create an exclude filter based on the file attributes: "Read Only", "Hidden" and "System". For example, if you would to exclude System or Hidden files, check the appropate box next to the attribute.

Run As Tab



When running a job, login using this account

Run as logged in user:

Run the job using the Windows login credentials in effect at that time.

Run as specific user:

Run the job using the specified credentials.

Domain Name: The domain name you are logging into.

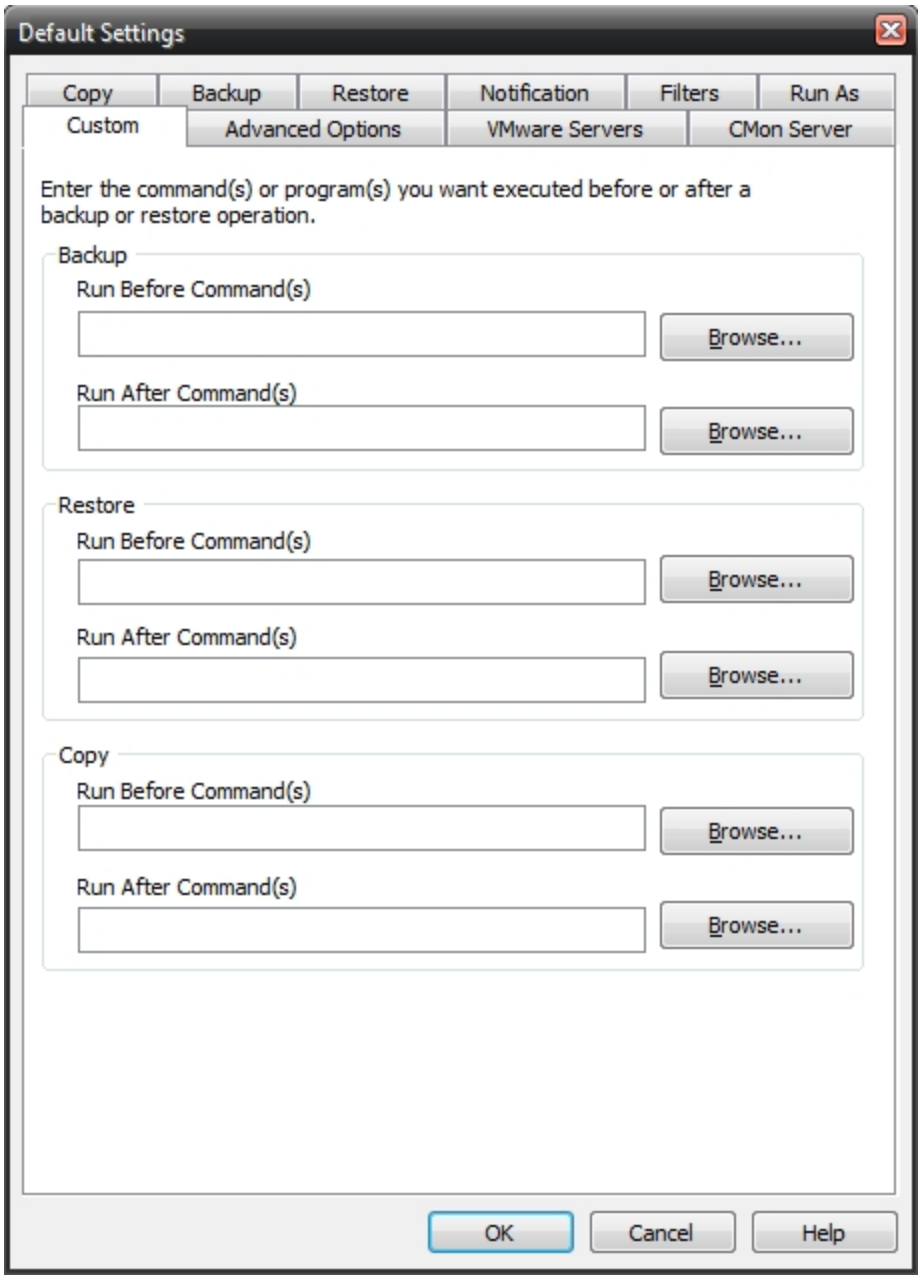
Run as User Name: The user name you want the job to run as.

Password: The password for the account you want the job to run as.

Note: The account information entered here is usually account you use to login to windows. However, you may need to use a different account when backing up network/shared drives.

Important: If you have entered credentials you must click the "Check Credentials" button to validate the account you have entered before proceeding forward.

Custom Tab

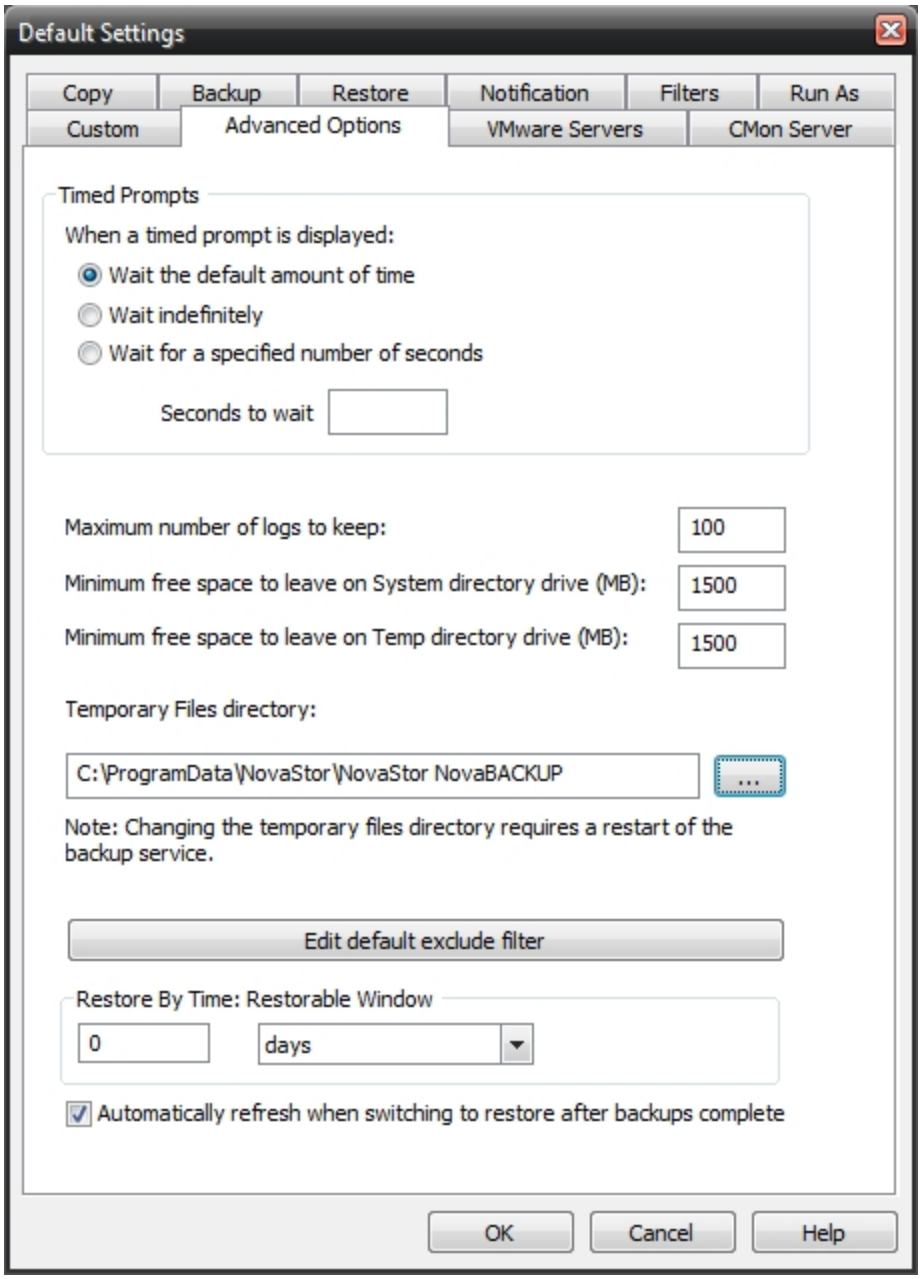


This feature enables a command to run before or after a backup, restore or copy job

To select which program or command you would like to run before or after those operations, simply browse to the program or command using the "Browse" button.

The benefits of this feature are numerous. For instance, one would be able to stop Antivirus scanning by issuing a command to their Anti-virus program prior to NovaBACKUP beginning the backup. Alternatively, a command can be issued at the end of the backup to begin an anti-virus scan. Also one could issue a command to close a database at the beginning of a backup and reopen it at the end of a backup

Advanced Options Tab



Timed Prompts

When prompts or dialogs are displayed, select the action you want performed.

This option is useful in allowing fully unattended operation or permitting the administrator to respond to specific issues or requests.

Maximum number of logs to keep

This value limits the number of logs saved to disk. The most recent logs up to the maximum will remain available.

"Minimum Free Space" settings

This values represent the minimum amount of free disk space that must be available on the System (OS) and Temp drive (if different) in order for jobs to run.

"Temporary files directory"

Directory used to stage working files used by NovaBACKUP. If your system is running low on space, you can move this directory to another drive.

"Edit default exclude filter"

Select this option to add or edit folders, files or file types that should be excluded from jobs regardless of selection.

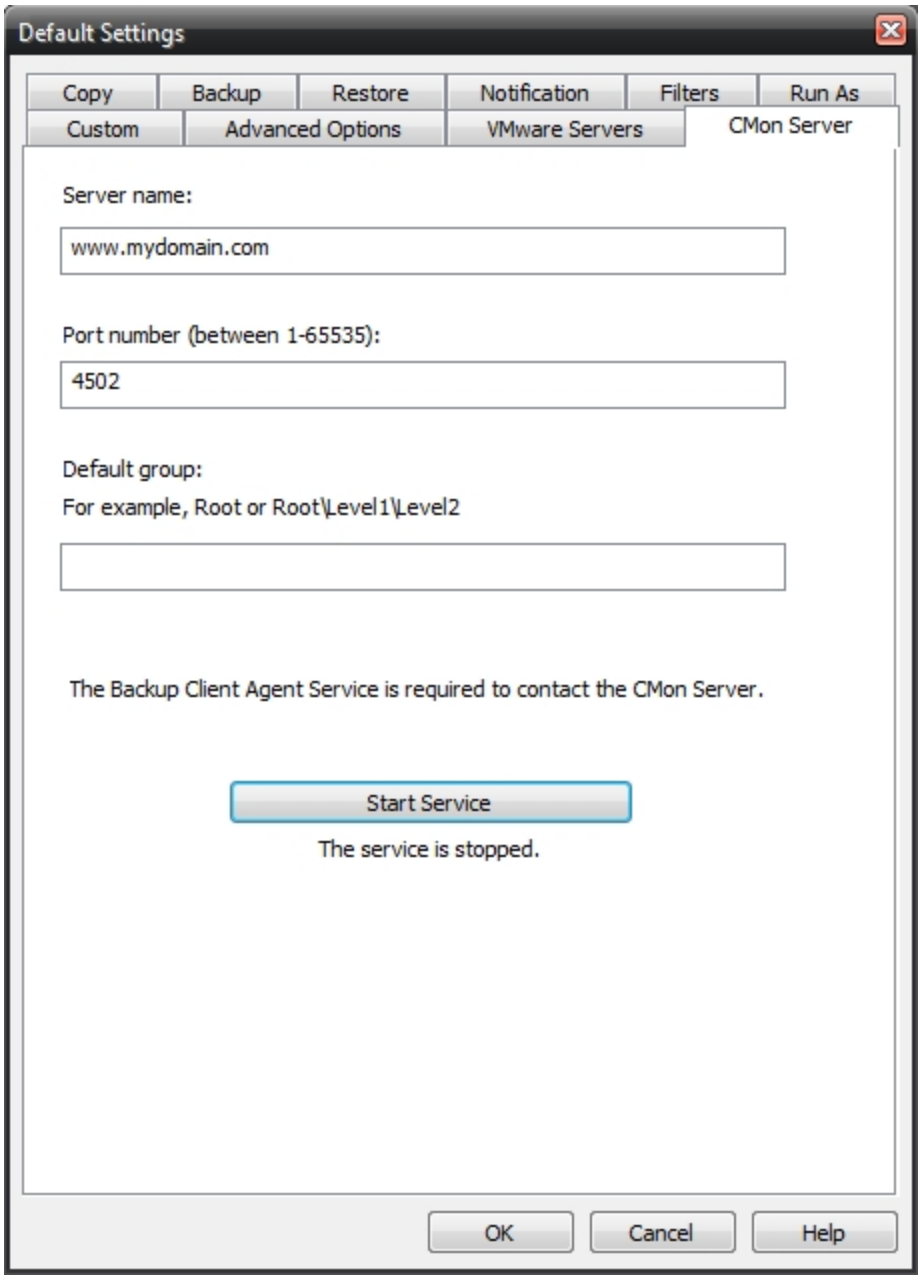
"Restore By Time: Restorable Window"

Use this option to restrict the time range in effect for the Restore Files By Time view. A setting of zero will have no effect. Otherwise the value set here will define the time in effect from the current time selected moving back in time. This setting has no effect in the Restore Files By Device view.

"Automatically refresh when switching to restore after backups complete"

Use this option to make the Restore By Time view automatically build a new filelist when switching to the restore view after a backup has completed.

CMon Server Tab

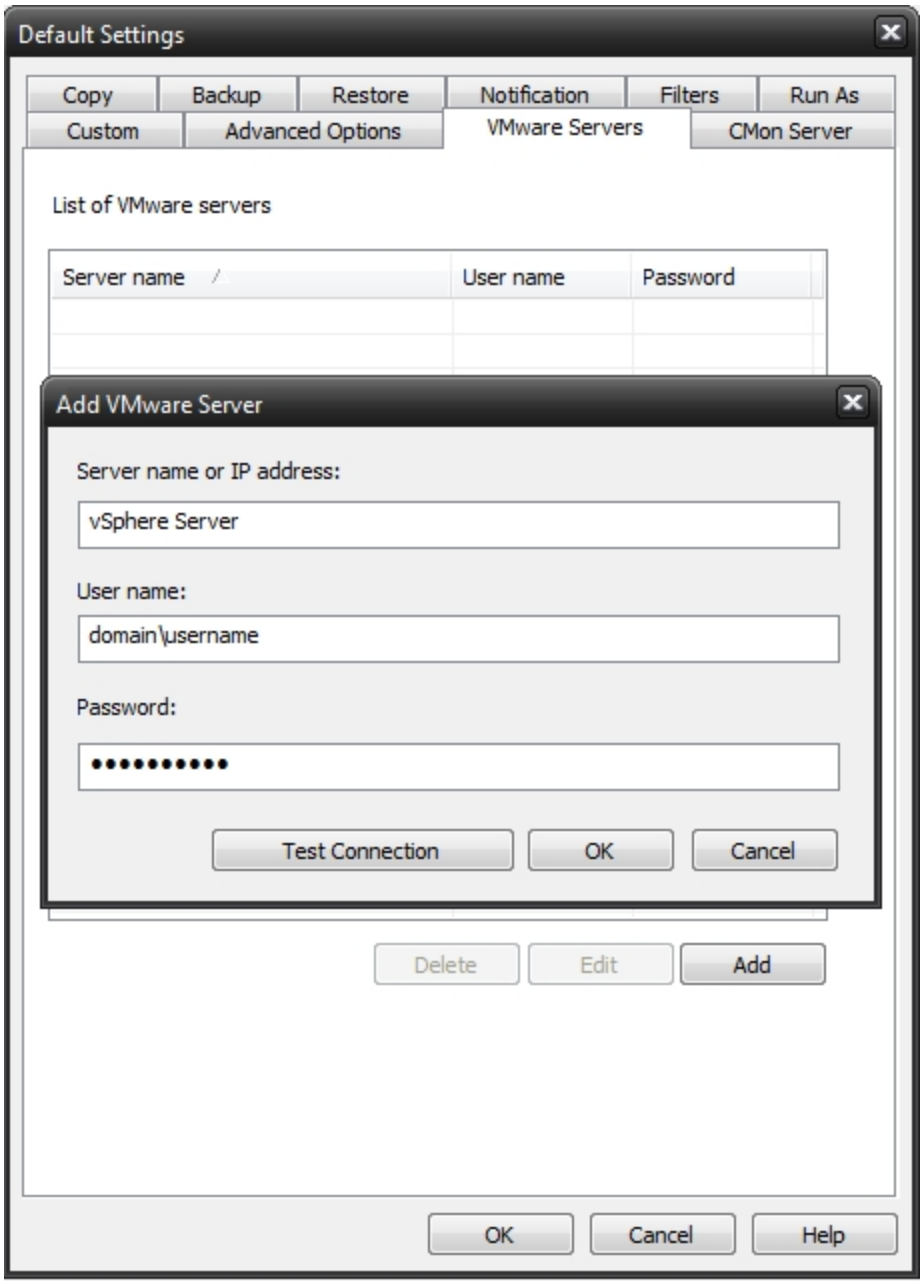


If utilizing NovaBACKUP CMon, this screen may be used to specify the server name and port to access the NovaBACKUP CMon (Central Monitoring Console) application in your environment. NOTE: CMon has to be installed and running prior to configuring this screen.

Default Group: Use this setting to specify the group name to use when adding this client to the CMC - Central Management Console. If this setting is not specified, this client will be added to the default group. This setting is not currently applicable to NovaBACKUP CMon.

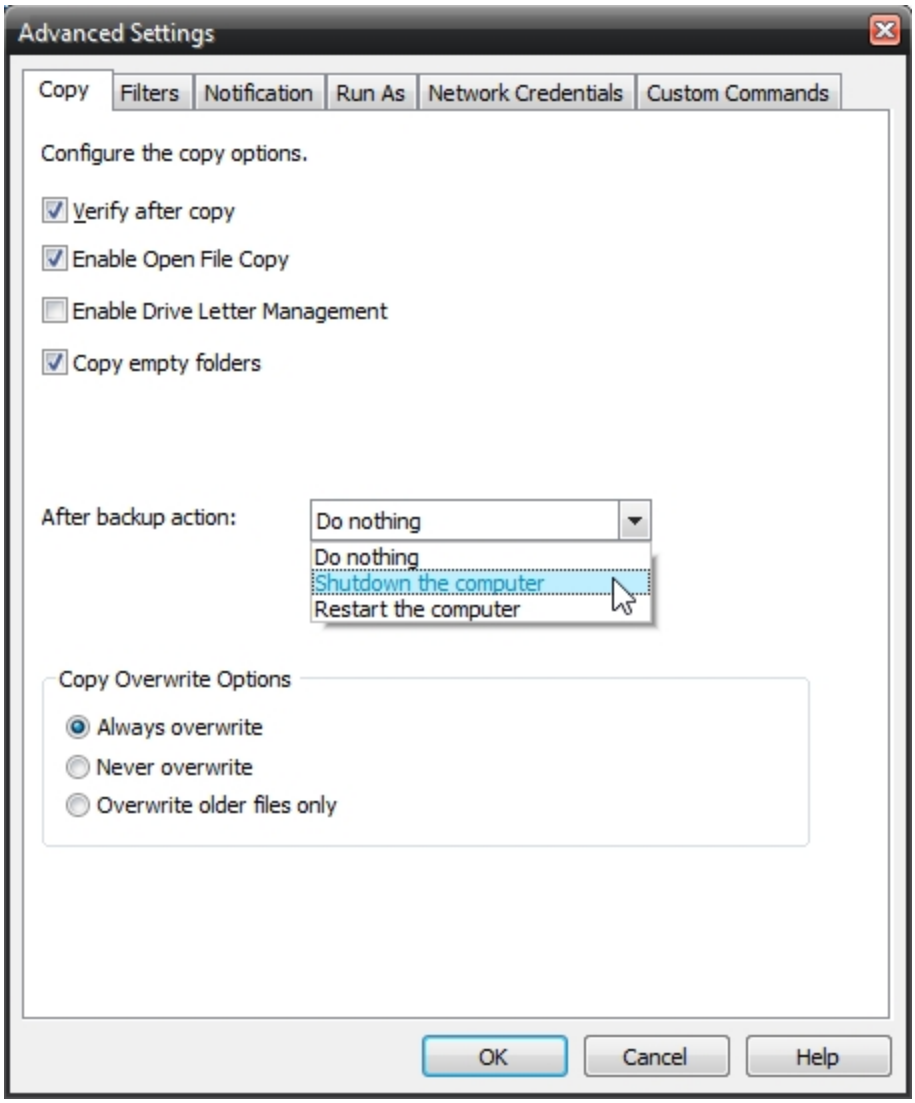
NOTE: The "Default group" setting is NOT CURRENTLY APPLICABLE to CMon; if using the CMon you will leave this field blank. This setting is only applicable if you utilize the older CMC (Central Management Console) and not CMon (Central Monitoring Console). For those utilizing CMC you can use this setting to specify the group name to use when adding this client to the central management console. If this setting is not specified, this client will be added to the default group. For CMon to create groups you will create your the Groups inside the CMon application and not here. If using the CMon all of your Agents will be placed in the "Pending" group which is already created for you. You will log in to CMon and go to Agents & Groups and create your group(s) there and then you can assign your agent(s) to group(s).

VMware Servers Tab



For those licensed to use the VMware Plugin, this tab is used to add a new connection to an ESX(i) or vSphere server.

Copy Job Options



Verify after copy

The files that are copied will be verified to make sure that they were written correctly. Selecting this option will increase copy time. This setting is selected by default.

It is highly recommended to select the option to verify your data after a copy job. This helps to ensure that the copied data matches the data presently on your system. If you do not select this option, and there is an error in some of your copied data, you will not be aware of the errors until you go to access the copied data.

Enable Open FileCopy
Select this option to have NovaBACKUP automatically copy open files on the local system using Volume Snapshot Service (VSS).

Enable Drive Letter Management
Select this option to have NovaBACKUP automatically select the correct removable disk device (USB) even when it's drive letter changes.

Copy empty folders
Select this option to copy empty folders.

After copy "backup" action Options

After the copy job completes you can have the computer do nothing, shutdown or restart.

Do nothing

Nothing will occur after the copy job completes.

Shutdown the computer

Shutdown the computer when the copy job completes.

Restart the computer

Restart the computer when the copy job completes.

Copy Overwrite Options

Always Overwrite

Source file will always overwritean existing file of the same name on the destination.

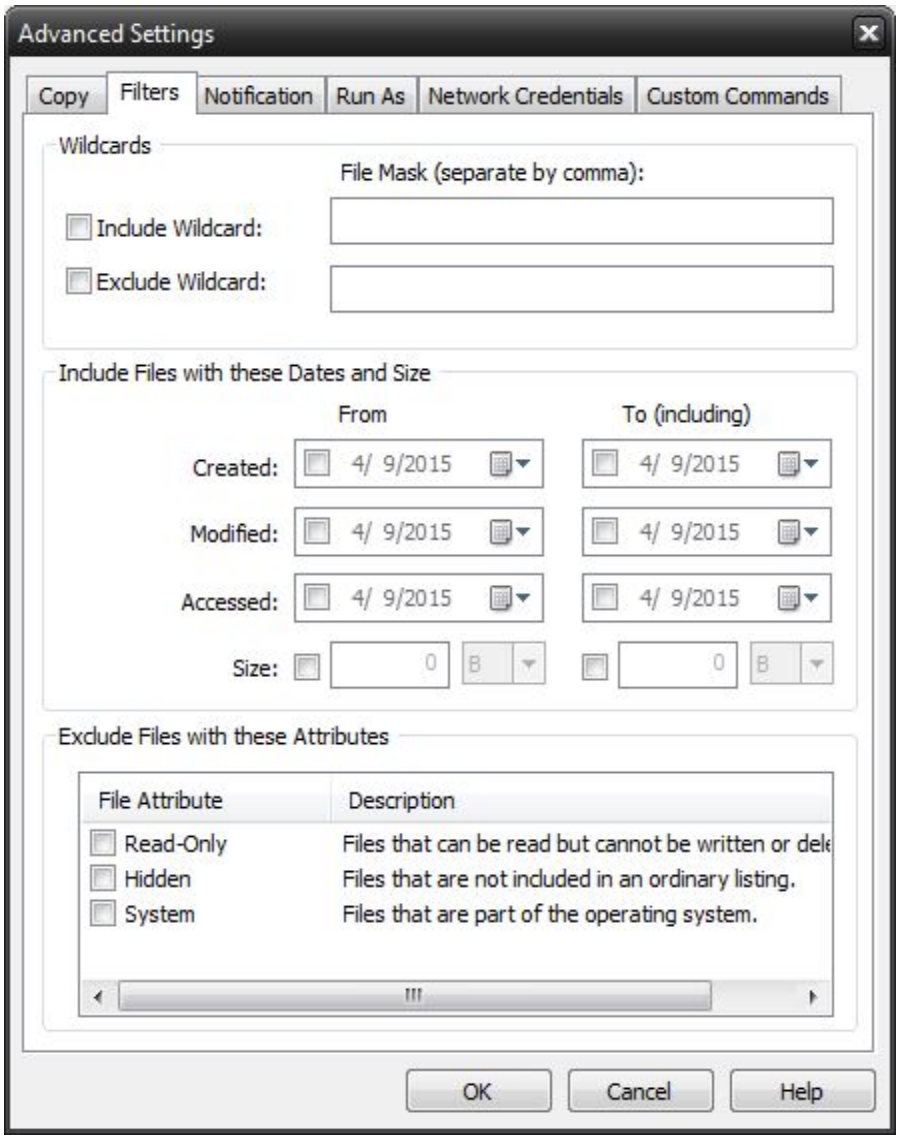
Never Overwrite

Source file will never overwrite an existing file of the same name on the destination.

Overwrite older files only

Source file will overwrite an existing file of the same name on the destination if the destination file is older.

Copy Job Filters



Wildcards

IncludeWildcard: Enter all wildcards for files you want to include in the default job separated by a comma (example: *.doc,*.xls,*.dat)

ExcludeWildcard:Enter all wildcards for files you want to include in the default job separated by a comma (example: *.doc,*.xls,*.dat)

Include Files with these Dates and Size

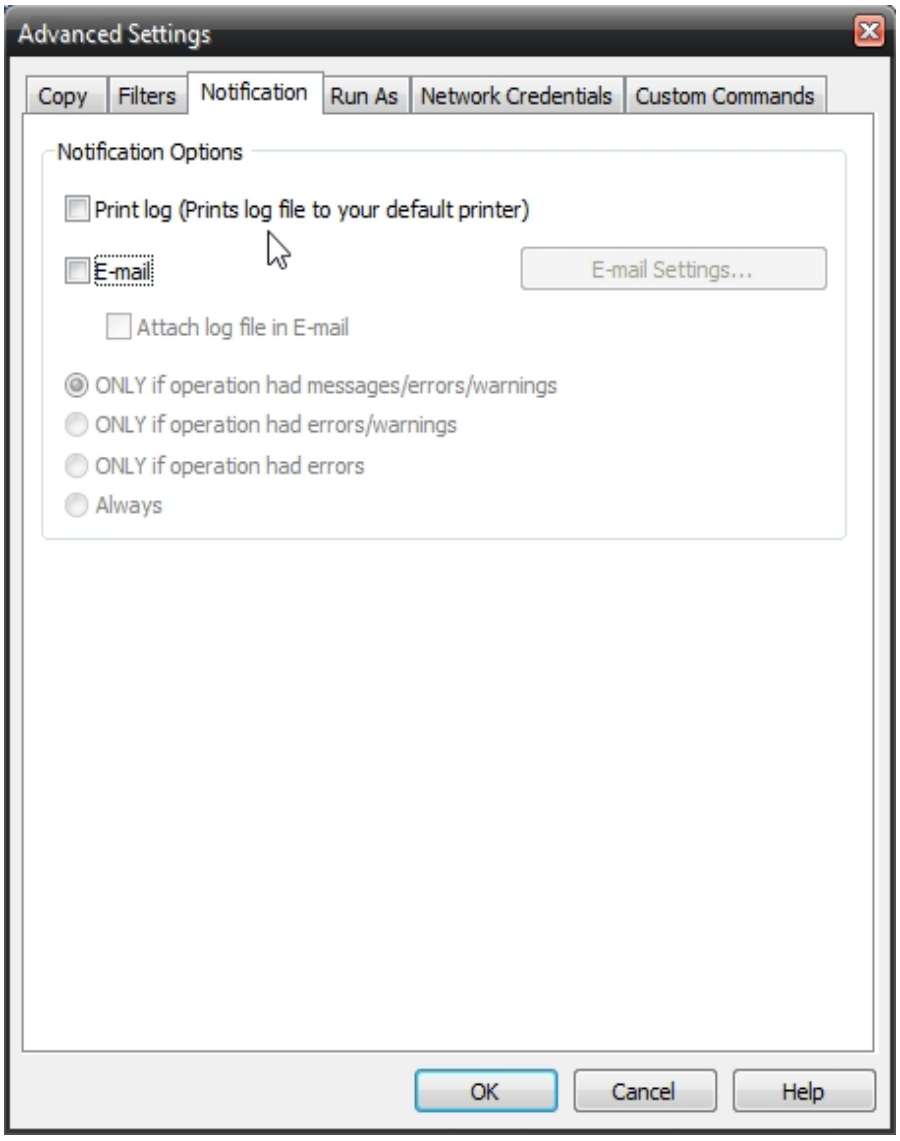
Under this section, you can create an include filter by selecting dates that files were last created, modified, or accessed or by there file size that you wish to ensure are included in your backup. This is helpful if you want to reduce the time or file size of a backup. You may want to exclude older files that are no longer accessed or larger files you have already backed up..

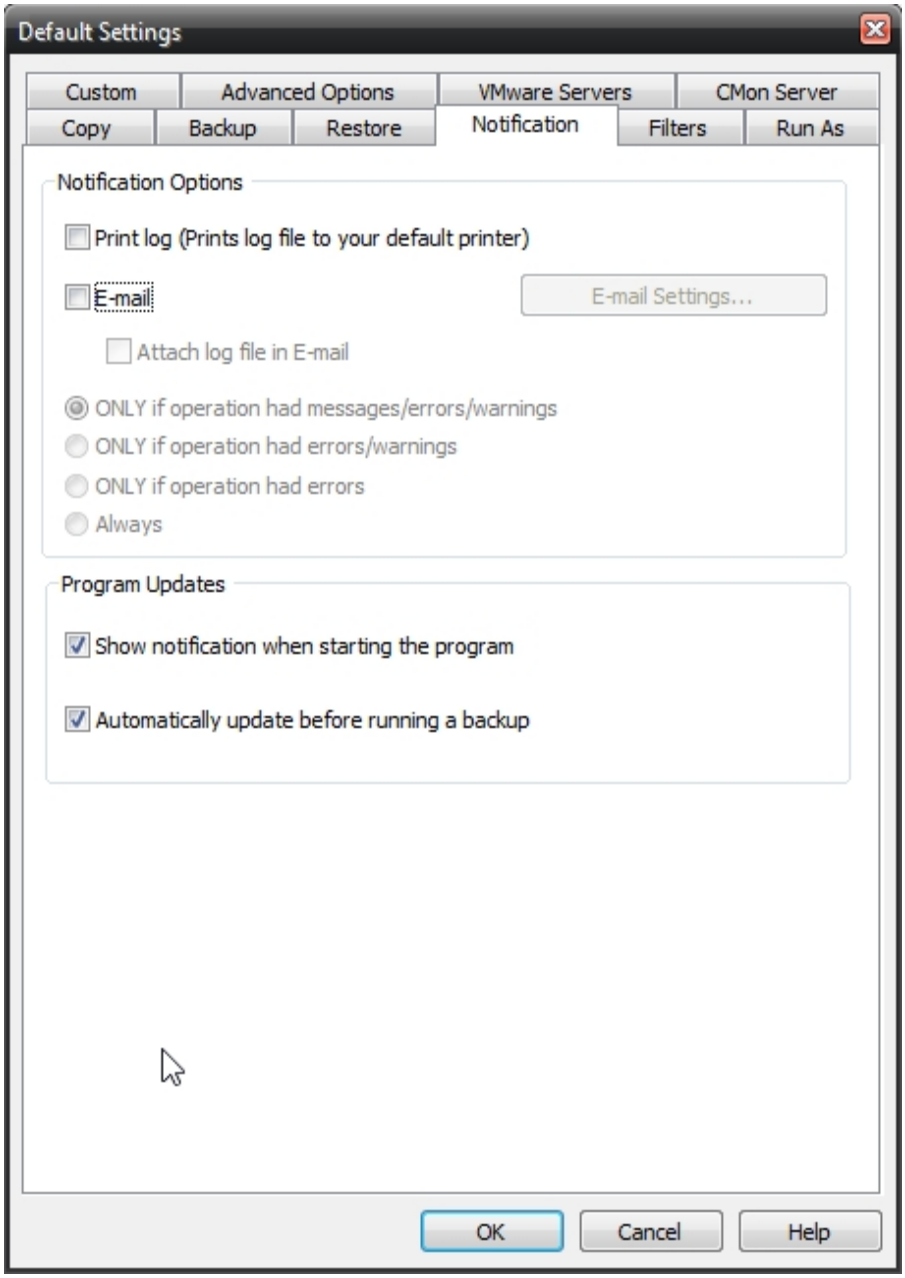
Exclude Files with these Attributes

Under this section, you can create an exclude filter based on the file attributes: "Read Only", "Hidden" and "System". For example, if you would to exclude System or Hidden files, check the appropate box next to the attribute.

Type topic text here.

Copy Job Notification





Notification Options

Email

Use this option to receive job notification in E-mail.

You have the option to allow the logs to be e-mailed to the specified email address. To utilize these settings you must first configure the e-mail options by clicking on the "E-Mail Settings" button.

E-mail Settings

Depending on your product, you may be able to choose to use the NovaBACKUP Alerts service to send your e-mail logs or to manually enter a custom SMTP configuration.

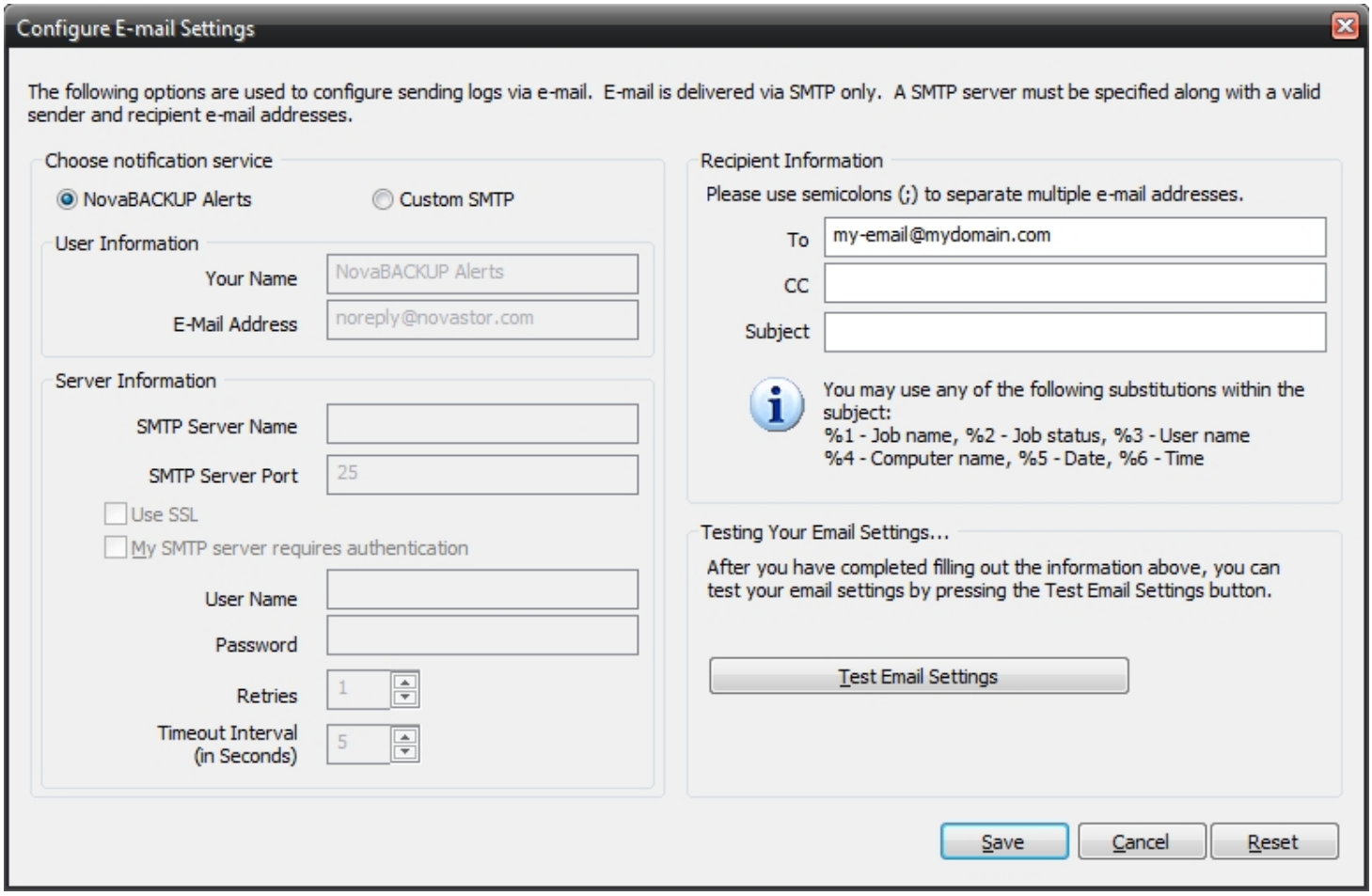
- If you choose to use the NovaBACKUP Alerts service, the only information you need to provide is the recipient e-mail address or addresses you would like to receive notifications.
- If you choose to use a Custom SMTP service, your SMTP server information may be acquired from your System Administrator or service provider.
  - You will need to input a valid e-mail addresses for both the sender and the recipient.
  - These can be the same e-mail address.
  - If your SMTP server requires authentication, you may do so by tagging the checkbox for authentication and supplying your user name and password.

NovaBACKUP Alerts

If your product supports it, you may have the ability to choose the NovaBACKUP Alerts service to send your e-mail notifications. The NovaBACKUP Alerts service is a pre-configured email notification service.

* It is not required to use this service and you should check with your System Administrator to see if sending e-mail notifications through a 3rd party service is allowed in your organization.

* By using the NovaBACKUP Alerts service, you are agreeing to our End-User Licensing Agreement and Privacy Policies.



E-mail notifications may contain custom Subject: lines. These may contain any sequence of characters that conform to Internet email standards. Recommended maximum length is less than 200 characters.

If the Subject field is left blank, NovaBACKUP inserts a default subject.

A custom subject may contain the following substitution variables:

Substitution Variable	Contents
%1	The job's name.
%2	Job's completion status.
%3	User name of the logged-on user under whom the job ran.
%4	Host name - name of the computer that ran the job.
%5	Date when the job finished. Format is the locale set on the computer. Timezone is the local time zone of the computer (local time, not GMT).
%6	Time when the job finished, formatted in locale format as set by the computer. Timezone is local to the computer running the jobs (local time, not GMT).

Example, if the custom "Subject:" string is

MyCorp node %4 job %1: %2 at %6 %5

the notification email's "Subject:" appears as

MyCorp node RSRCH-SS-0987 job Daily: successful at 10:32:55pm 2/14/2017

Be sure to test your settings by clicking the "Test Email settings" button

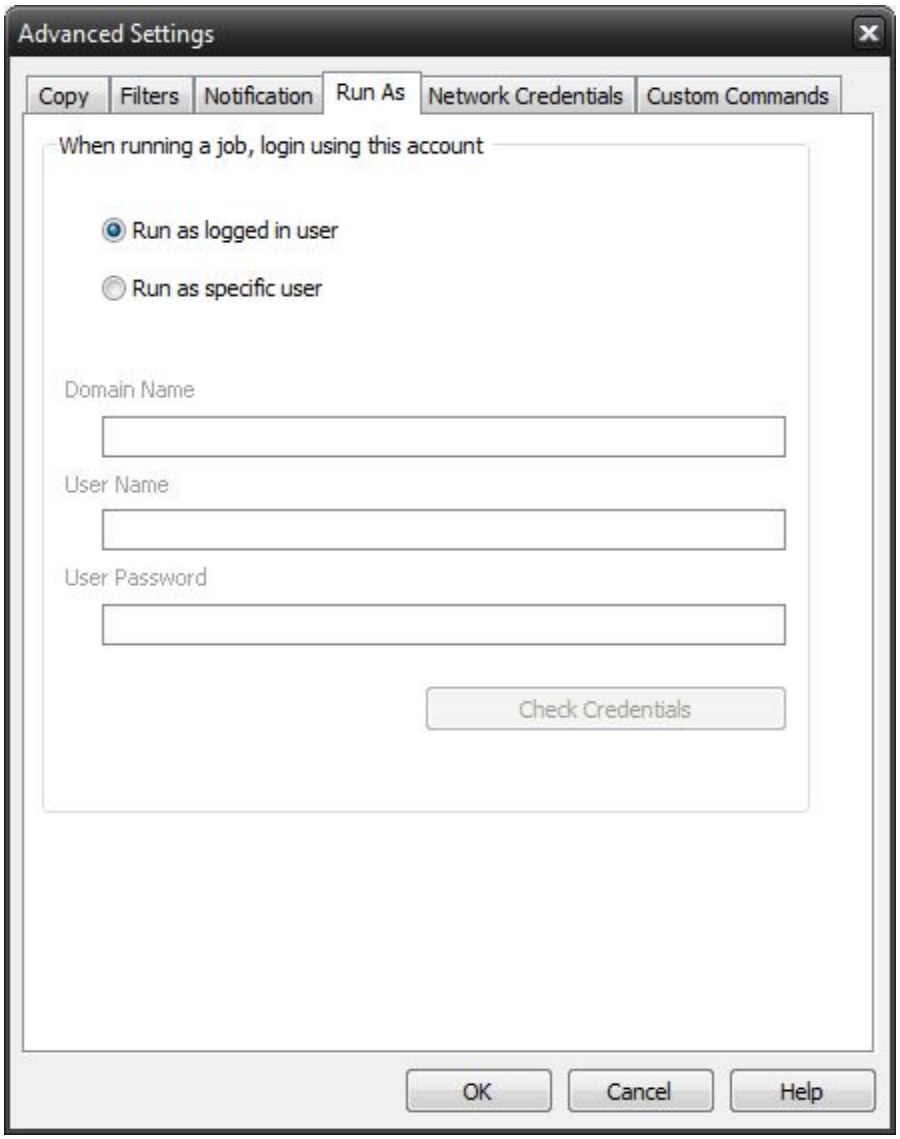
Print Log

Here, you have the option to print the log automatically to your default printer.

Notification Conditions

- ONLY if operation had messages/errors/warnings
- ONLY if operation had errors/warnings
- ONLY if operation had errors
- Always

Copy Job Run As



When running a job, login using this account

Run as logged in user:

Run the job using the Windows login credentials in effect at that time.

Run as specific user:

Run the job using the specified credentials.

Domain Name: The domain name you are logging into.
Run as User Name: The user name you want the job to run as.
Password: The password for the account you want the job to run as.

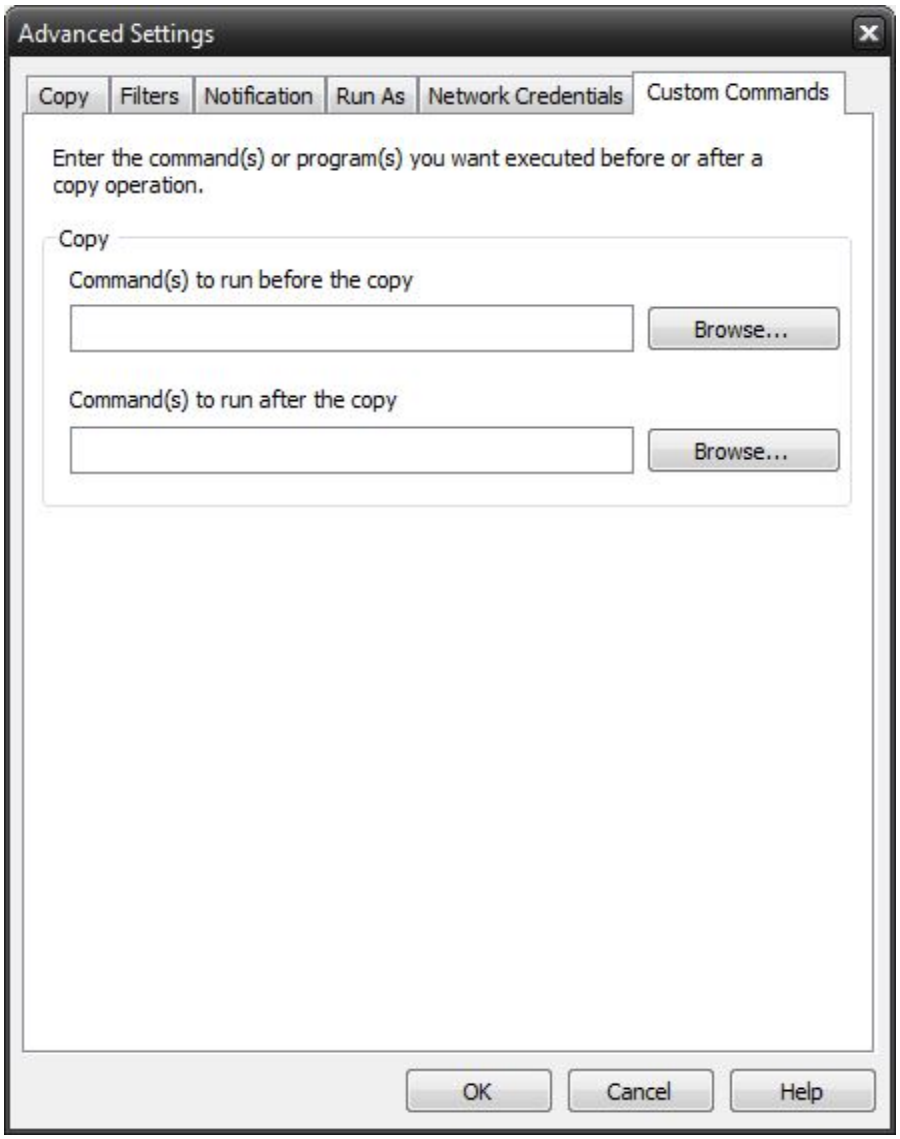
Note: The account information entered here is usually account you use to login to windows. However, you may need to use a different account when backing up network/shared drives.

Important: If you have entered credentials you must click the "Check Credentials" button to validate the account you have entered before proceeding forward.

Copy Job Network Credentials

This option may be used to access devices on the network which require different credentials than the defaults.You may use different credentials for this purpose than those set in the "Run As" Tab.

Copy Job Custom Commands

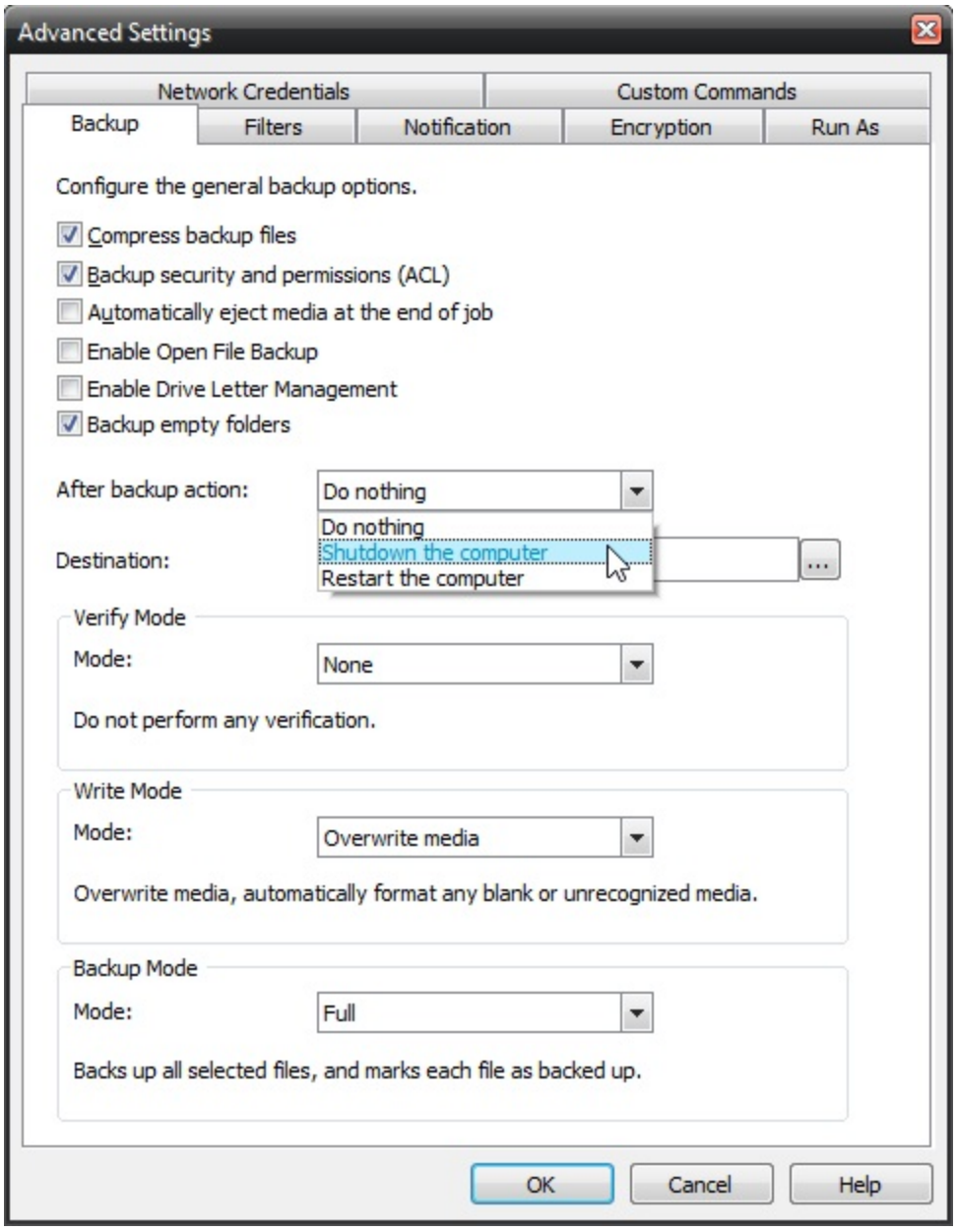


This feature enables a command to run before or after a copy job

To select which program or command you would like to run before or after the copy operation, simply browse to the program or command using the "Browse" button.

The benefits of this feature are numerous. For instance, one would be able to stop Antivirus scanning by issuing a command to their Anti-virus program prior to NovaBACKUP beginning the copy job. Alternatively, a command can be issued at the end of the job to begin an anti-virus scan. Also one could issue a command to close a database at the beginning of a job and reopen it at the end of a job.

Backup Job Options



Compress backup files

The backup files are compressed to save space. Backup speed is decreased when this option is selected. This setting is unselected by default.

Backup ACL File Permissions

Select this option to backup Access Control Lists (ACL's) in addition to file data. ACL's contain file and system permissions. This option should be enabled to maintain system security.

Automatically Eject Media. . .
Select this option to have NovaBACKUP automatically eject the media after a backup has completed (device must support media eject)

Enable Open File Backup

Select this option to have NovaBACKUP automatically backup open files on the local system using Volume Snapshot Service (VSS).

Enable Drive Letter Management
Select this option to have NovaBACKUP automatically select the correct removable disk device (USB) even when it's drive letter changes.

Backup empty folders
Select this option to have backup empty folders.

After backup action Options

After the backup job completes you can have the computer do nothing, shutdown or restart.

Do nothing

Nothing will occur after the copy job completes.

Shutdown the computer

Shutdown the computer when the copy job completes.

Restart the computer

Restart the computer when the copy job completes.

Destination

Select the default destination device a backup for all new backup jobs

Verify Mode Options

The verify mode options are utilized to verify your backup to the original source. The verify modes are None, Normal, and Advanced. Normal is the default verify mode.

None

Do not perform any verification.

Normal

Perform fast verification of media indexes only.

Advanced

Perform full comparison of the backup file to the original file. The “Advanced” verification mode performs a read-back and may double backup times.

It is highly recommended to select the "Advanced" verify mode option to verify your data after a backup. This helps to ensure that the backed up data matches the data presently on your system. If you do not select this option, and there is an error in some of your backed up data, there will be errors upon restoring that data if you should need to.

Write Mode

Overwrite media:

Overwrite all recognized media. Automatically format blank or unrecognized media

Append to Media:

Append to recognized media. Automatically format blank or unrecognized media

Backup Mode

Full

Backs up all selected files, and marks each file as backed up. This is the default setting.

Incremental

Backs up (and marks as backed up) selected files that have either not been backed up previously or have changed.

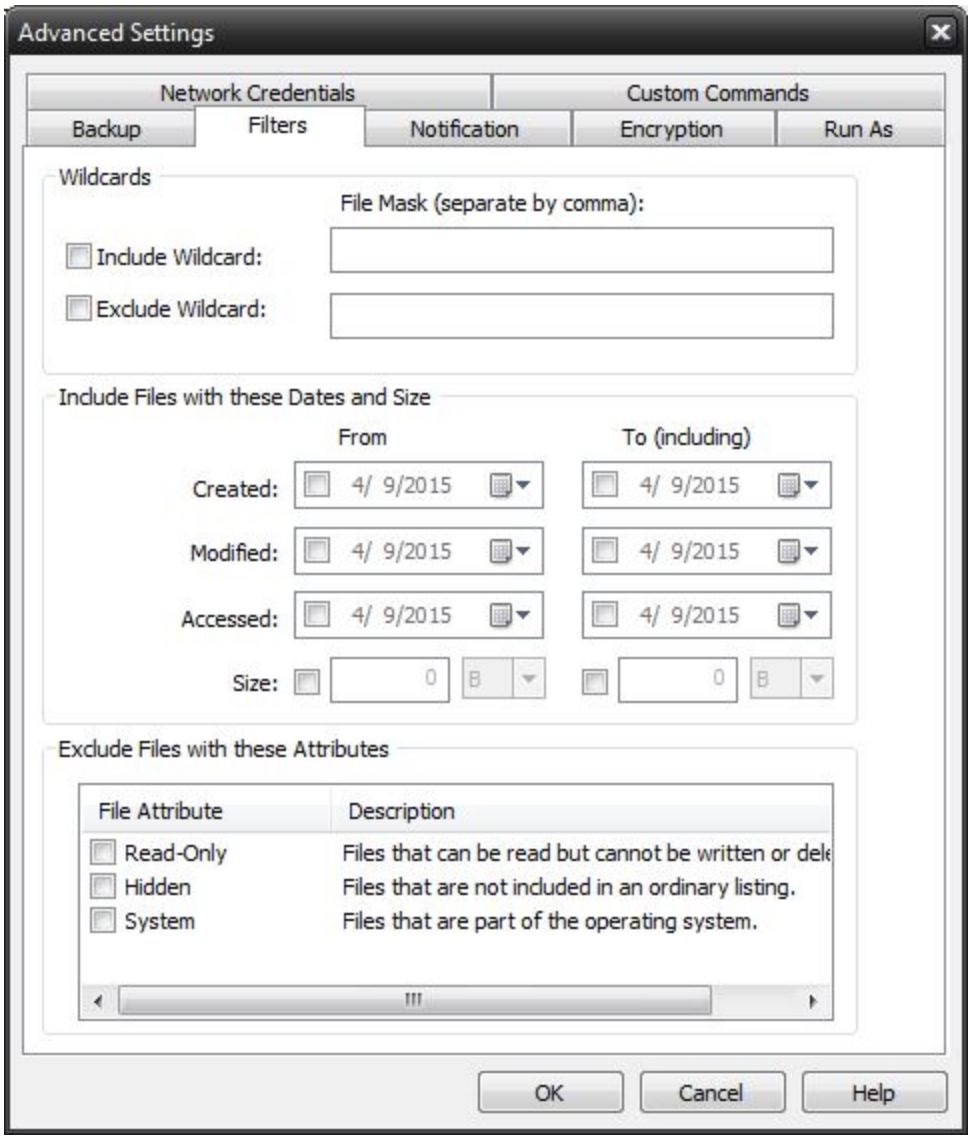
Differential

Backs up selected files that have either not been backed up previously or have changed. These backed up files are not marked as backed up, however.

Snapshot

Backs up all selected files and does not mark any files as backed up.

Backup Job Filters



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ExcludeWildcard:Enter all wildcards for files you want to include in the default job separated by a comma (example: *.doc,*.xls,*.dat)

Include Files with these Dates and Size

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Exclude Files with these Attributes

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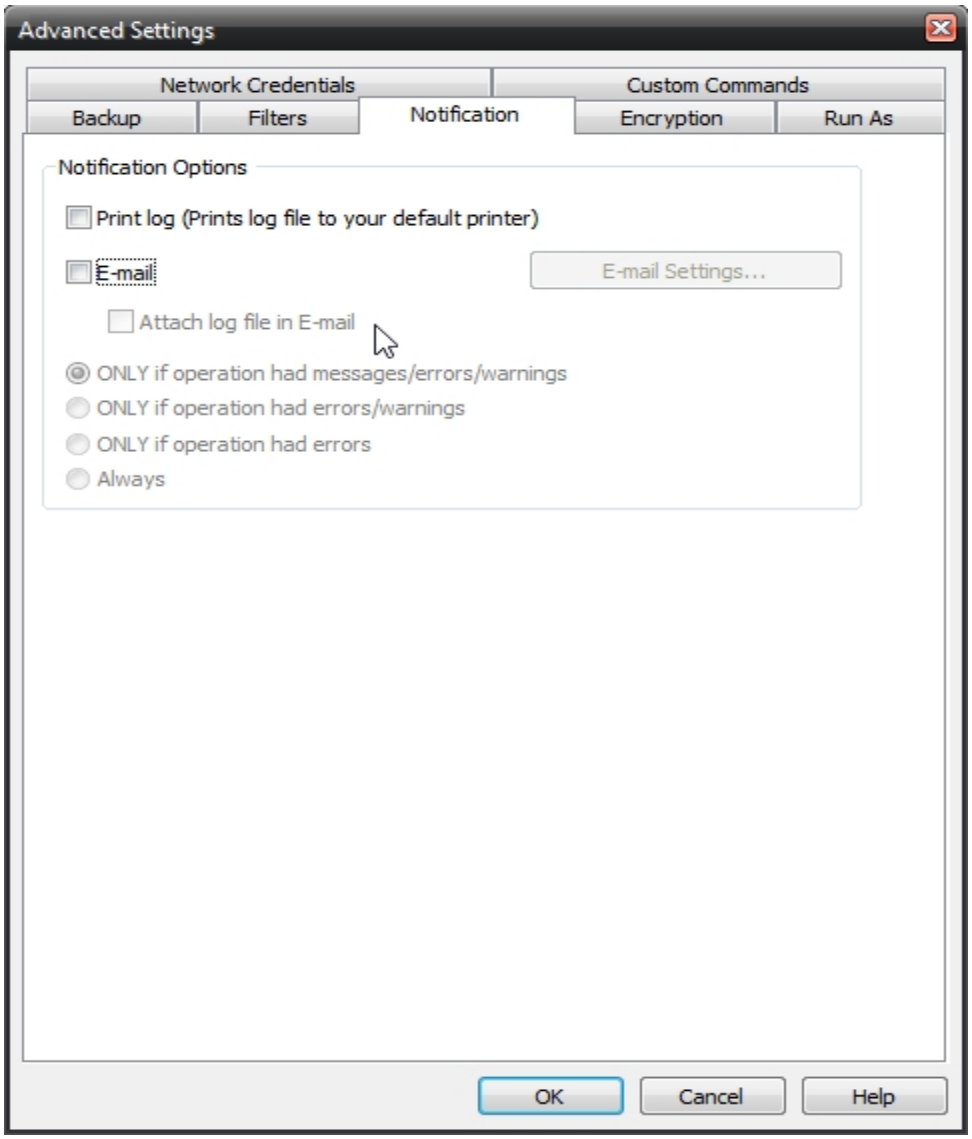
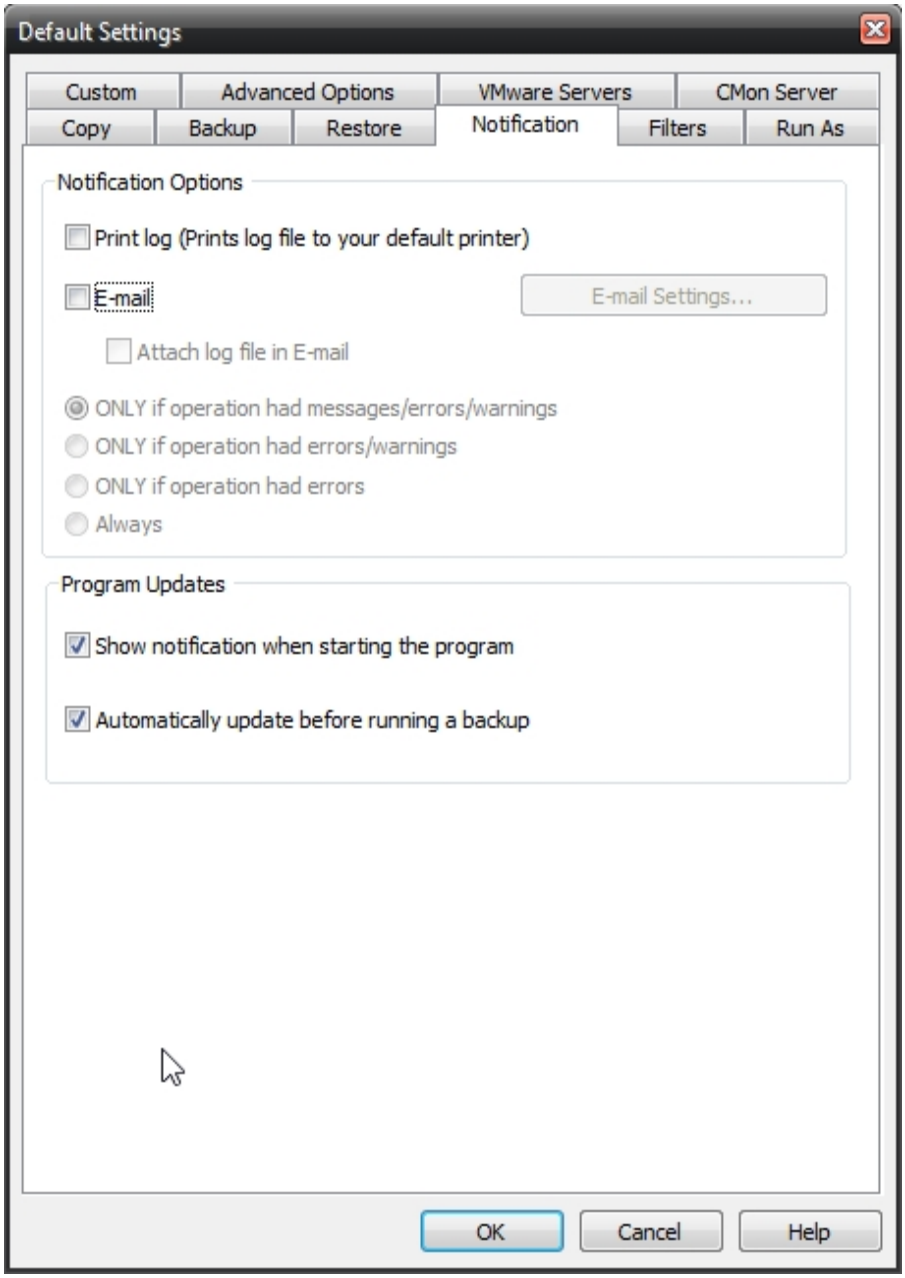
Backup Job Notifications





Notification Options

Email

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E-mail Settings

Depending on your product, you may be able to choose to use the NovaBACKUP Alerts service to send your e-mail logs or to manually enter a custom SMTP configuration.

- If you choose to use the NovaBACKUP Alerts service, the only information you need to provide is the recipient e-mail address or addresses you would like to receive notifications.
- If you choose to use a Custom SMTP service, your SMTP server information may be acquired from your System Administrator or service provider.
  - You will need to input a valid e-mail addresses for both the sender and the recipient.
  - These can be the same e-mail address.
  - If your SMTP server requires authentication, you may do so by tagging the checkbox for authentication and supplying your user name and password.

NovaBACKUP Alerts

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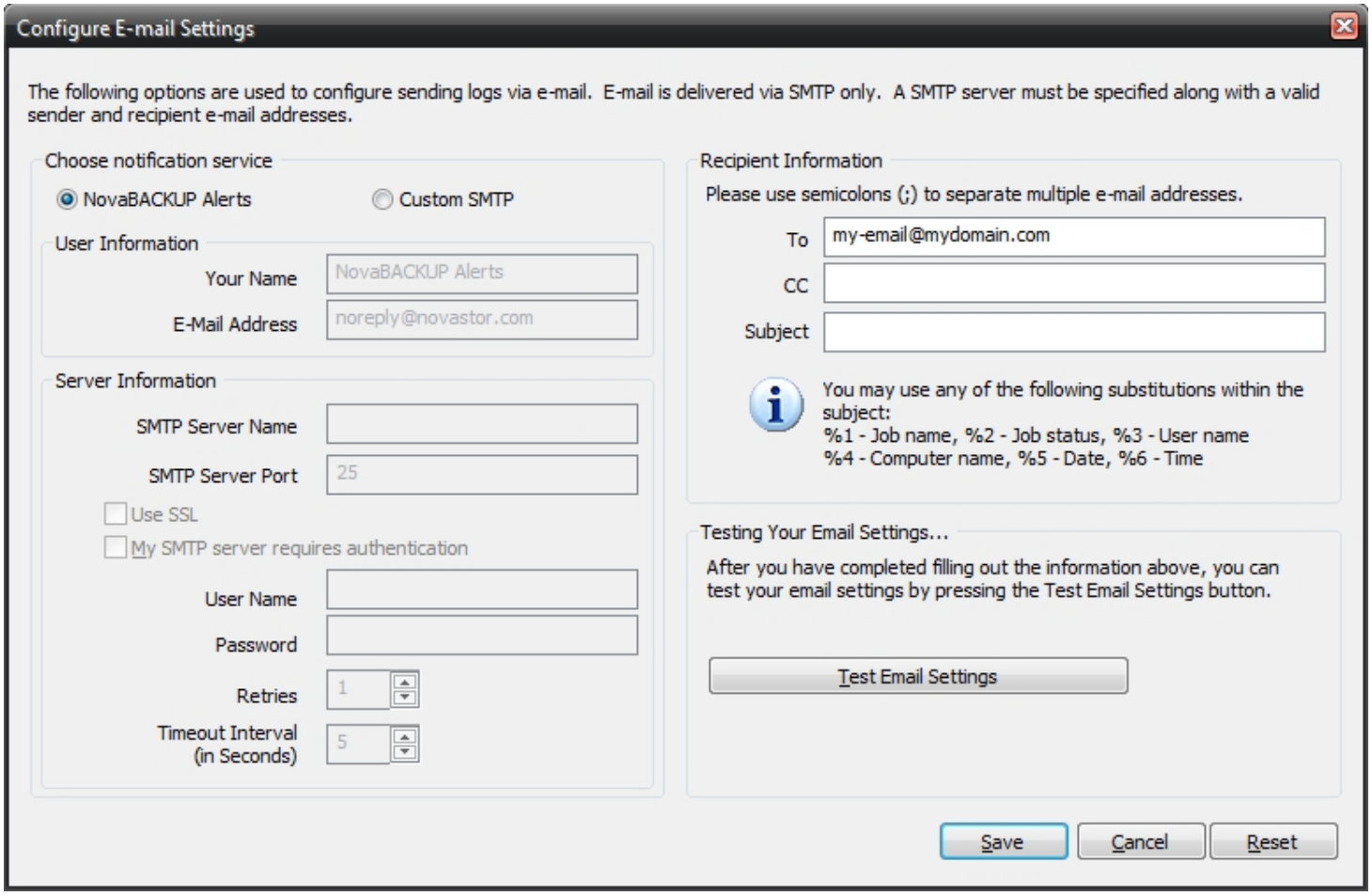


E-mail notifications may contain custom Subject: lines. These may contain any sequence of characters that conform to Internet email standards. Recommended maximum length is less than 200 characters.

If the Subject field is left blank, NovaBACKUP inserts a default subject.

A custom subject may contain the following substitution variables:

Substitution Variable	Contents
%1	The job's name.
%2	Job's completion status.
%3	User name of the logged-on user under whom the job ran.
%4	Host name - name of the computer that ran the job.
%5	Date when the job finished. Format is the locale set on the computer. Timezone is the local time zone of the computer (local time, not GMT).
%6	Time when the job finished, formatted in locale format as set by the computer. Timezone is local to the computer running the jobs (local time, not GMT).

Example, if the custom "Subject:" string is

MyCorp node %4 job %1: %2 at %6 %5

the notification email's "Subject:" appears as

MyCorp node RSRCH-SS-0987 job Daily: successful at 10:32:55pm 2/14/2017

Be sure to test your settings by clicking the "Test Email settings" button

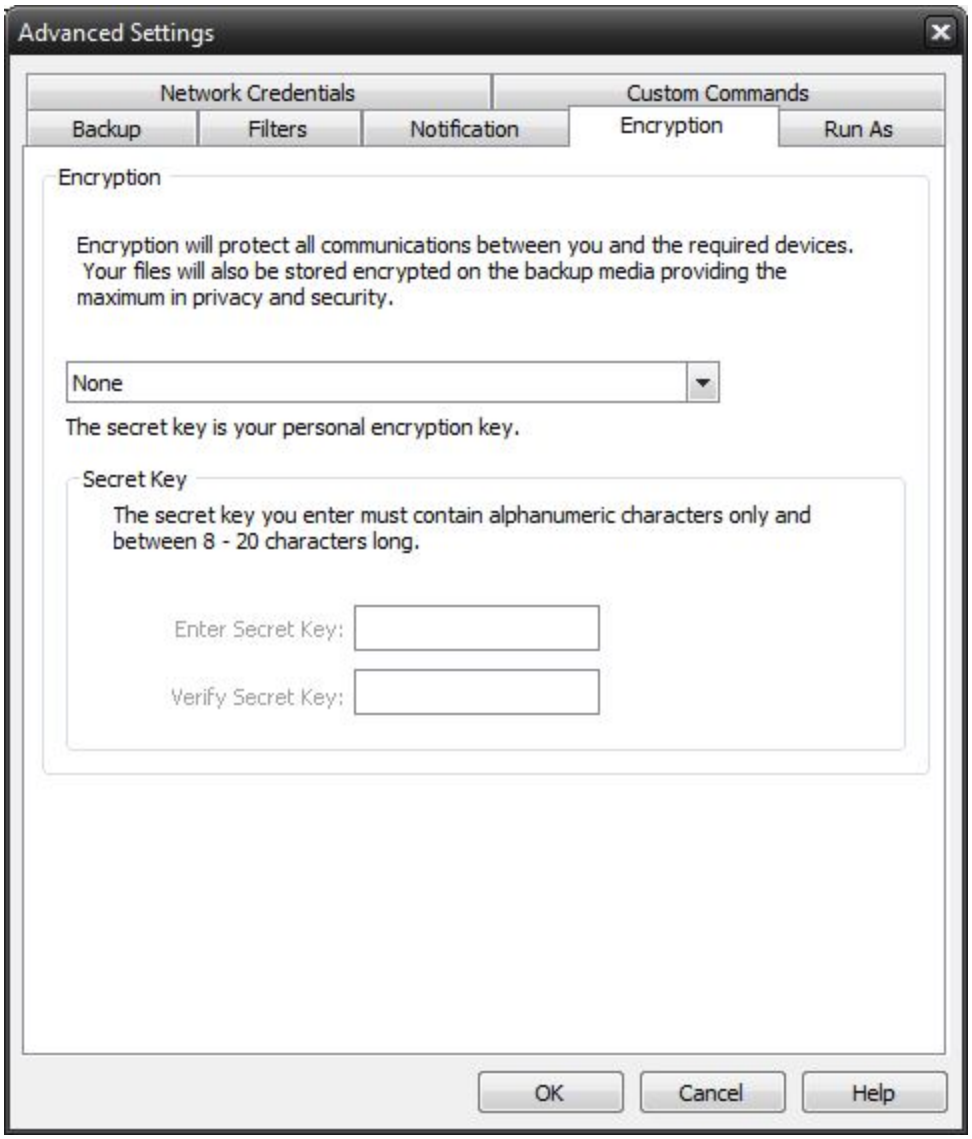
Print Log

Here, you have the option to print the log automatically to your default printer.

Notification Conditions

- ONLY if operation had messages/errors/warnings
- ONLY if operation had errors/warnings
- ONLY if operation had errors
- Always

Backup Job Encryption



Encryption

Encrypt Files on backup

Encryption protects files as they are backed up to the selected device. In addition, files are maintained encrypted on the destination media for added security.

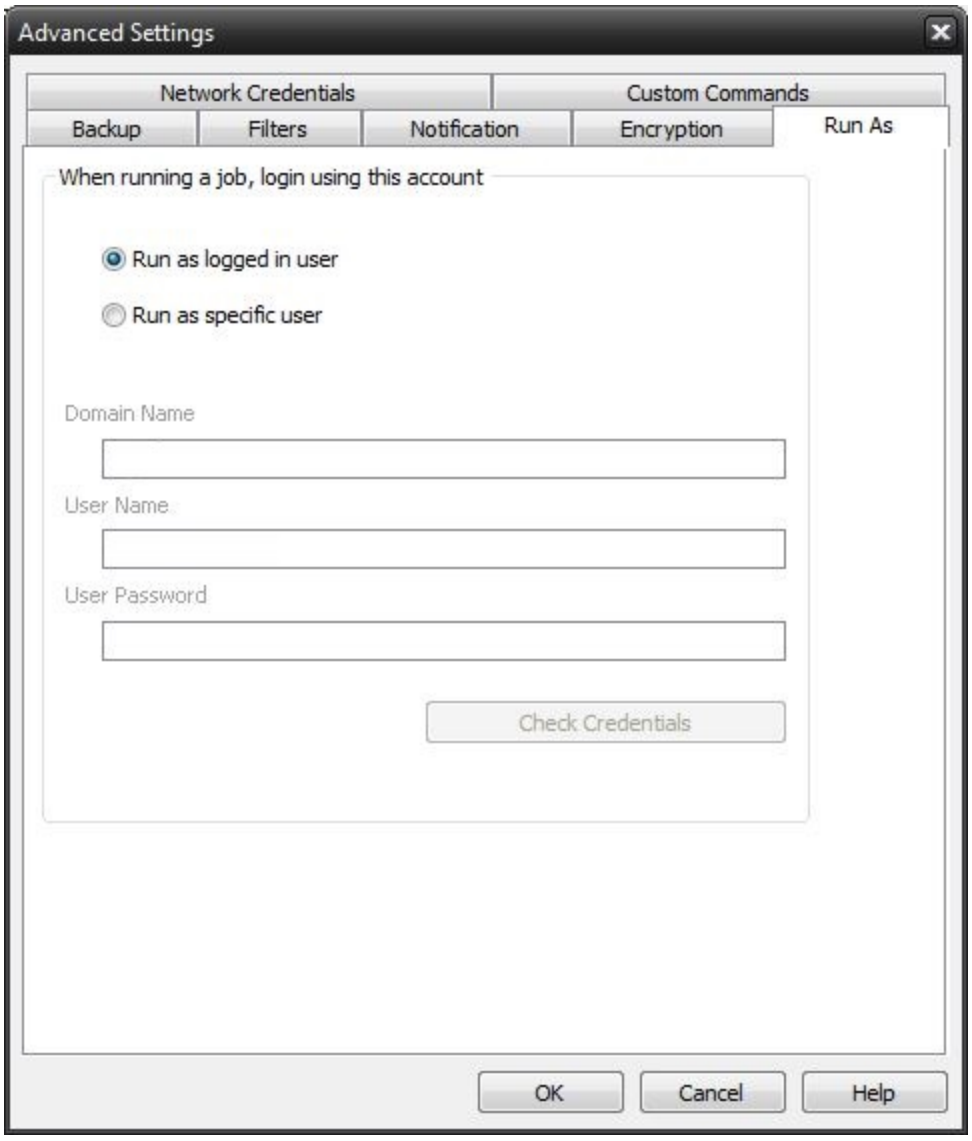
Secret Key

Encryption Key used for this particular backup job. Select a key containing from 8 to 20 characters

For added security, select a secret key that contains a combination of upper/lower case characters as well as numbers, punctuation and symbols.

Select a secret key that you will be able to remember. If you forgot your secret key, you will not be able to restore the data from the destination media.

Backup Job Run As



When running a job, login using this account

Run as logged in user:

Run the job using the Windows login credentials in effect at that time.

Run as specific user:

Run the job using the specified credentials.

Domain Name: The domain name you are logging into.

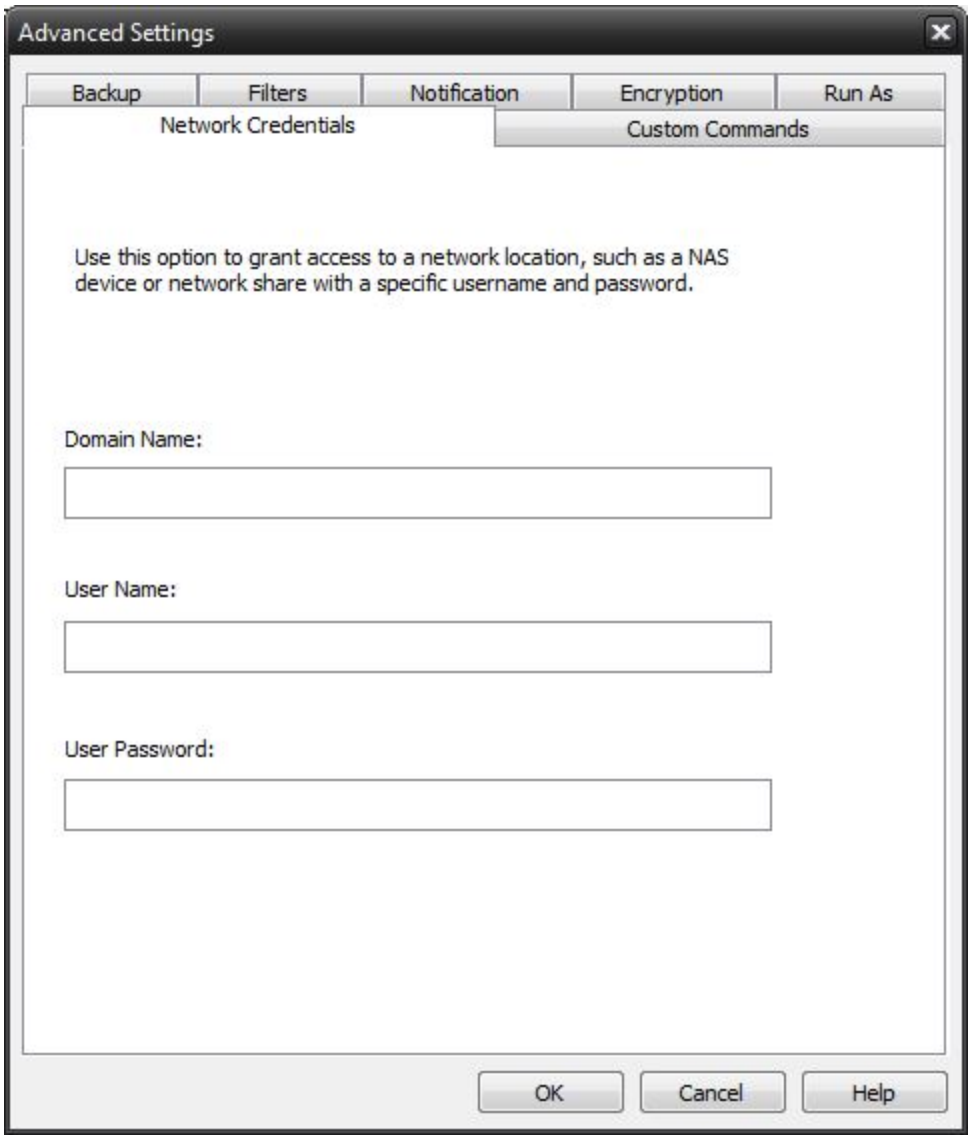
Run as User Name: The user name you want the job to run as.

Password: The password for the account you want the job to run as.

Note: The account information entered here is usually account you use to login to windows. However, you may need to use a different account when backing up network/shared drives.

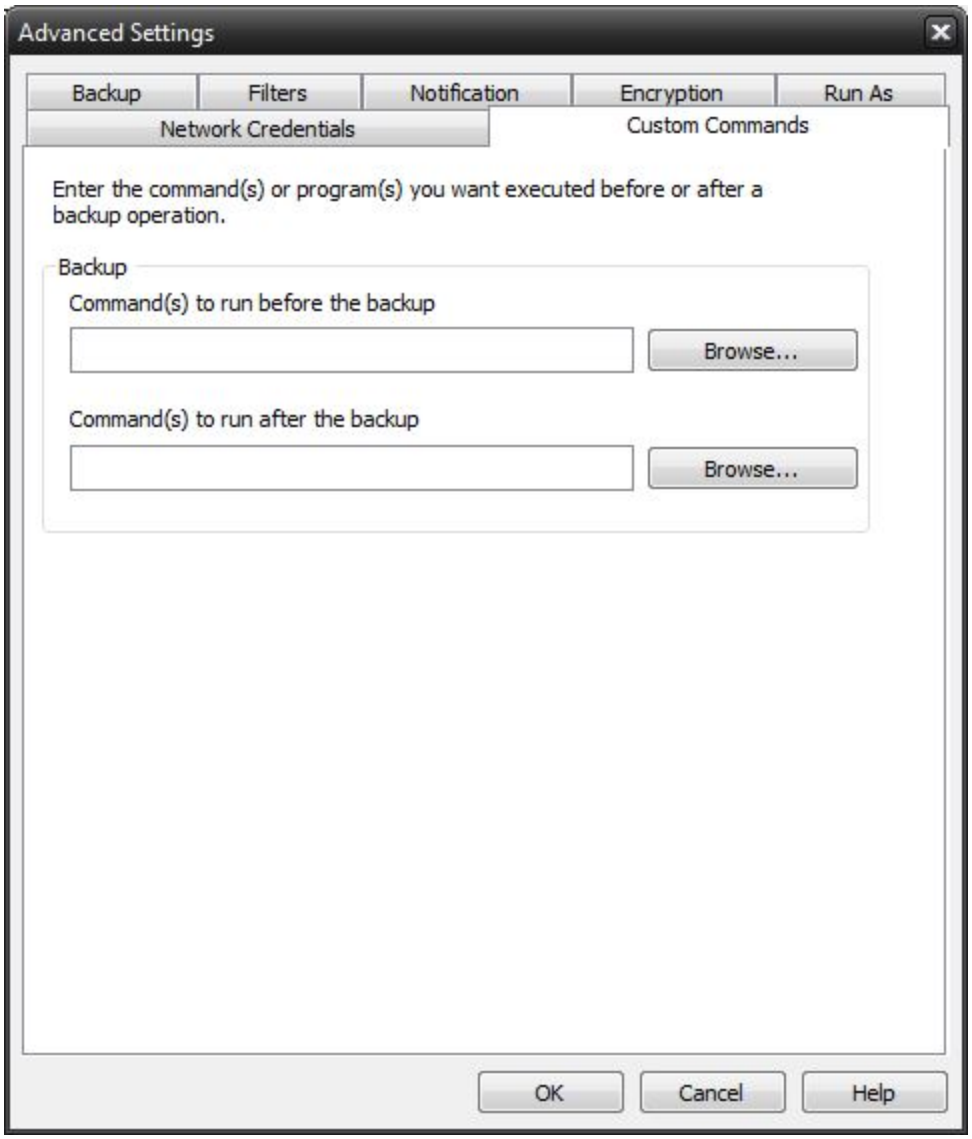
Important: If you have entered credentials you must click the "Check Credentials" button to validate the account you have entered before proceeding forward.

Backup Job Network Credentials



This option may be used to access devices on the network which require different credentials than the defaults. You may use different credentials for this purpose than those set in the "Run As" Tab.

Backup Job Custom Commands

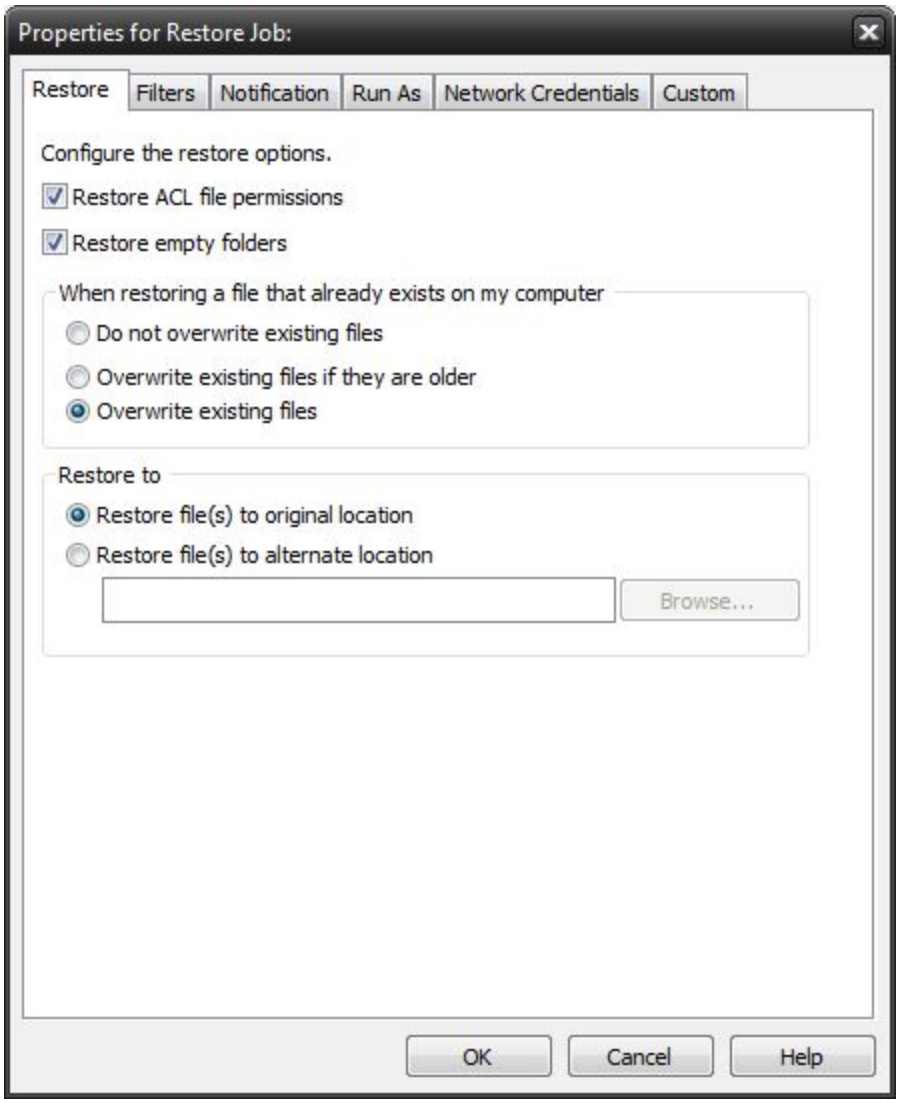


This feature enables a command to run before or after a backup job

To select which program or command you would like to run before or after the copy operation, simply browse to the program or command using the "Browse" button.

The benefits of this feature are numerous. For instance, one would be able to stop Antivirus scanning by issuing a command to their Anti-virus program prior to NovaBACKUP beginning the backup job. Alternatively, a command can be issued at the end of the job to begin an anti-virus scan. Also one could issue a command to close a database at the beginning of a job and reopen it at the end of a job.

Restore Job Options



Restore ACL File Permissions

Select this option to restore security permissions on files and subdirectories. Note that the backup ACL's option must have been selected during the original backup for them to be restored.

Restore empty folders

Select this option to restore empty folders.

Existing Files Options

The recommended setting is to not overwrite a file if it already exists on your computer. Other choices include only overwriting the file if the existing file is older or always overwriting the file.

Do not overwrite existing files

Upon restoration, files that already exist on your computer will not be overwritten by files from the backup

Overwrite existing files if they are older

Upon restoration, if a file is found to exist on your computer already, it will only be overwritten if the file on your computer is older than the one found in the backup.

Overwrite existing files

Upon restoration, if a file is found to already exist on your computer, it will always be overwritten.

Restore File Placement

The default setting is to restore the file(s) to the original location they were backed up from.

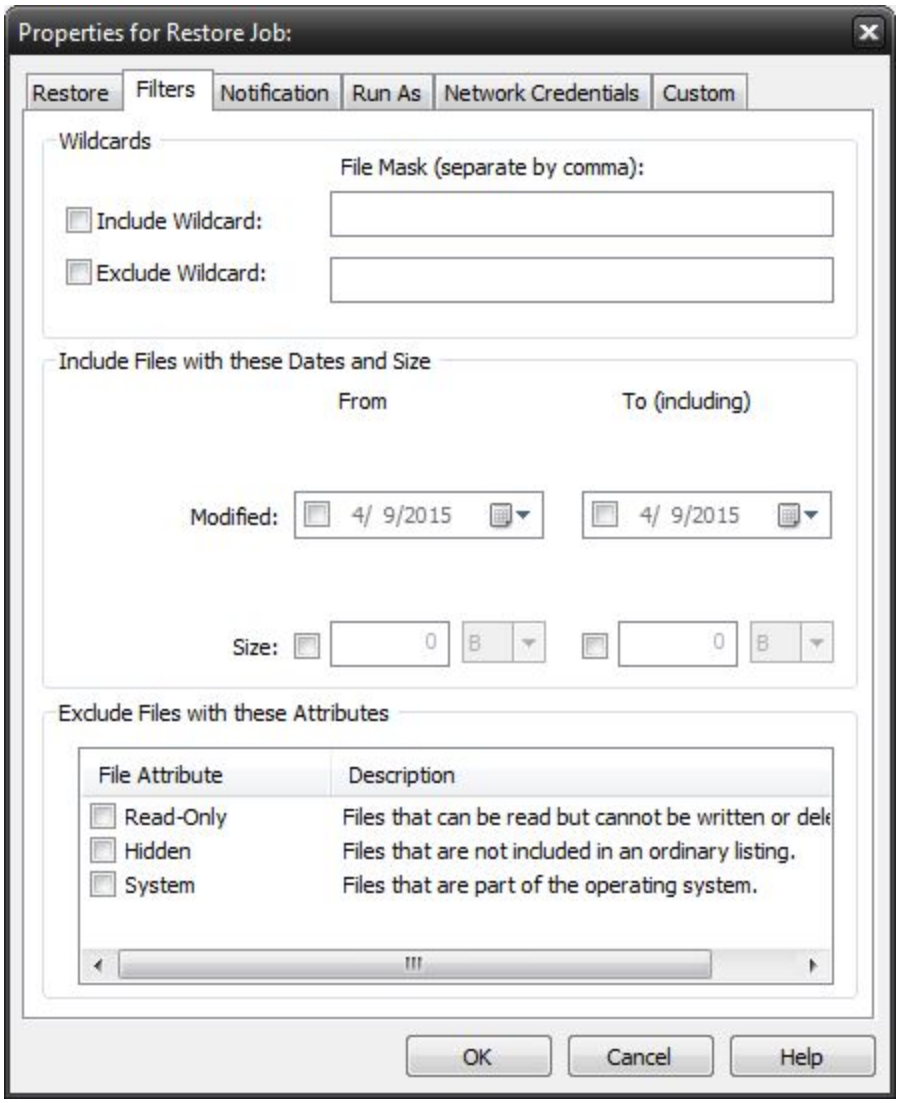
Restore file to its original location

Upon restoration, all files will be restored to their original location.

Restore file(s) to an alternate location

Upon restoration, all files will be restored to an alternate location. This location can be specified by typing the path to the restoration directory in the text box or by selecting a directory by clicking on the "Browse" button that will appear to the left of the text box when the radio button is selected.

Restore Job Filters



Wildcards

IncludeWildcard: Enter all wildcards for files you want to include in the default job separated by a comma (example: *.doc,*.xls,*.dat)

ExcludeWildcard:Enter all wildcards for files you want to include in the default job separated by a comma (example: *.doc,*.xls,*.dat)

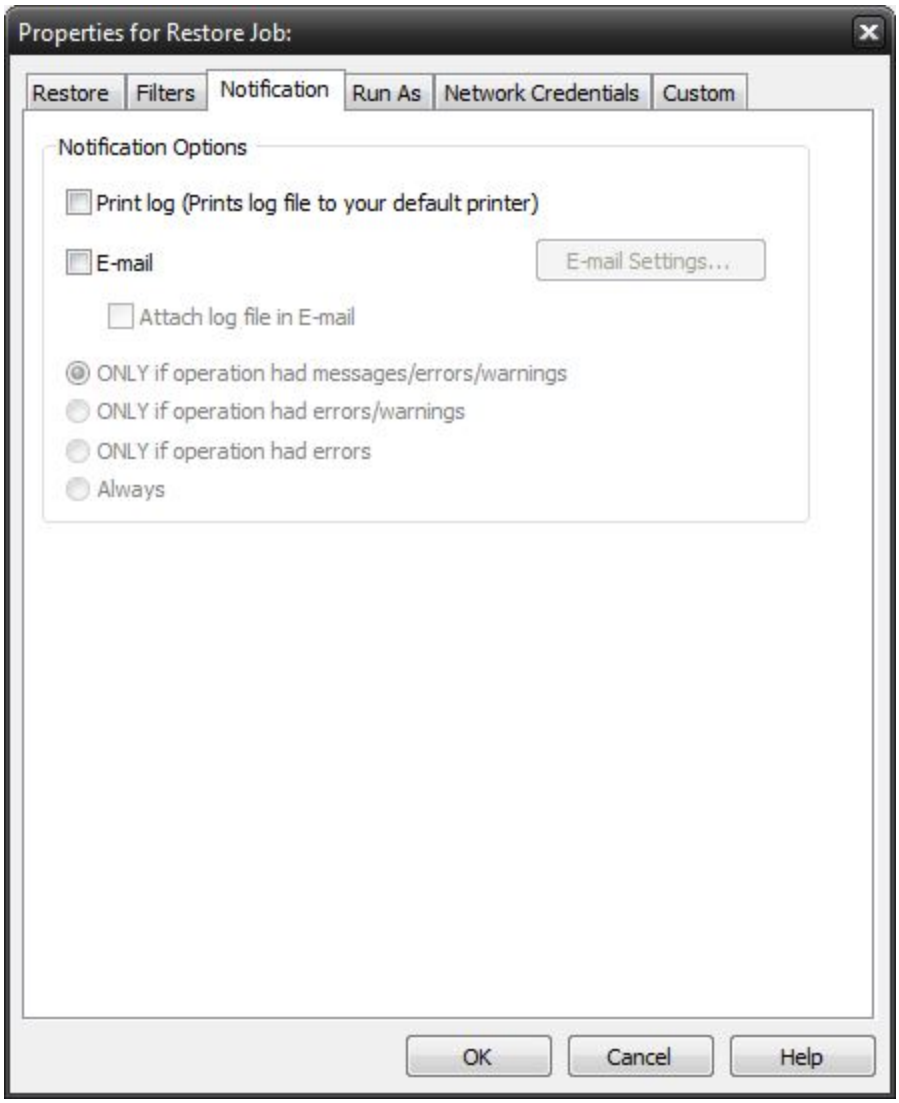
Include Files with these Dates and Size

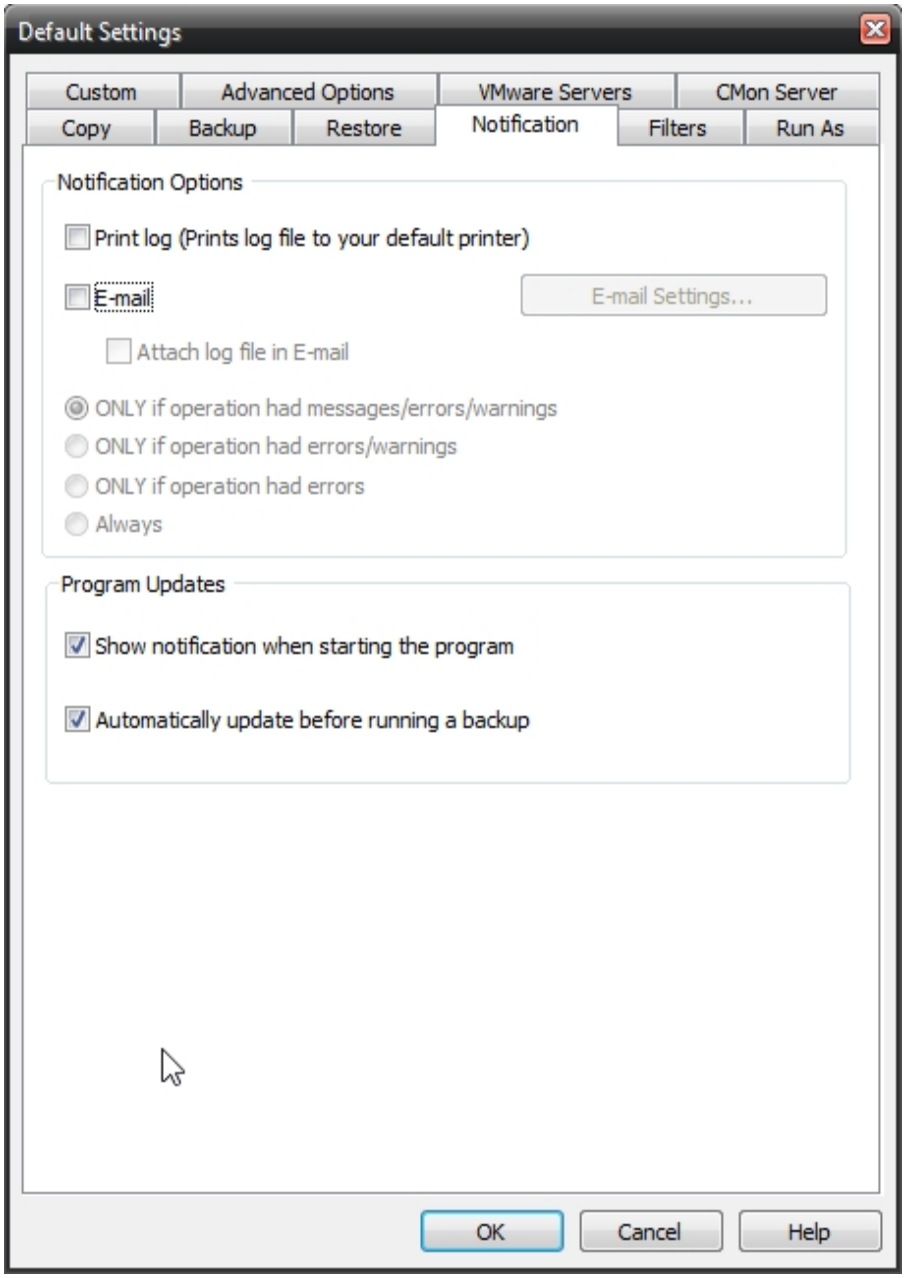
Under this section, you can create an include filter by selecting dates that files were last created, modified, or accessed or by there file size that you wish to ensure are included in your backup. This is helpful if you want to reduce the time or file size of a backup. You may want to exclude older files that are no longer accessed or larger files you have already backed up..

Exclude Files with these Attributes

Under this section, you can create an exclude filter based on the file attributes: "Read Only", "Hidden" and "System". For example, if you would to exclude System or Hidden files, check the appropate box next to the attribute.

Restore Job Notification





Notification Options

Email

Use this option to receive job notification in E-mail.

You have the option to allow the logs to be e-mailed to the specified email address. To utilize these settings you must first configure the e-mail options by clicking on the "E-Mail Settings" button.

E-mail Settings

Depending on your product, you may be able to choose to use the NovaBACKUP Alerts service to send your e-mail logs or to manually enter a custom SMTP configuration.

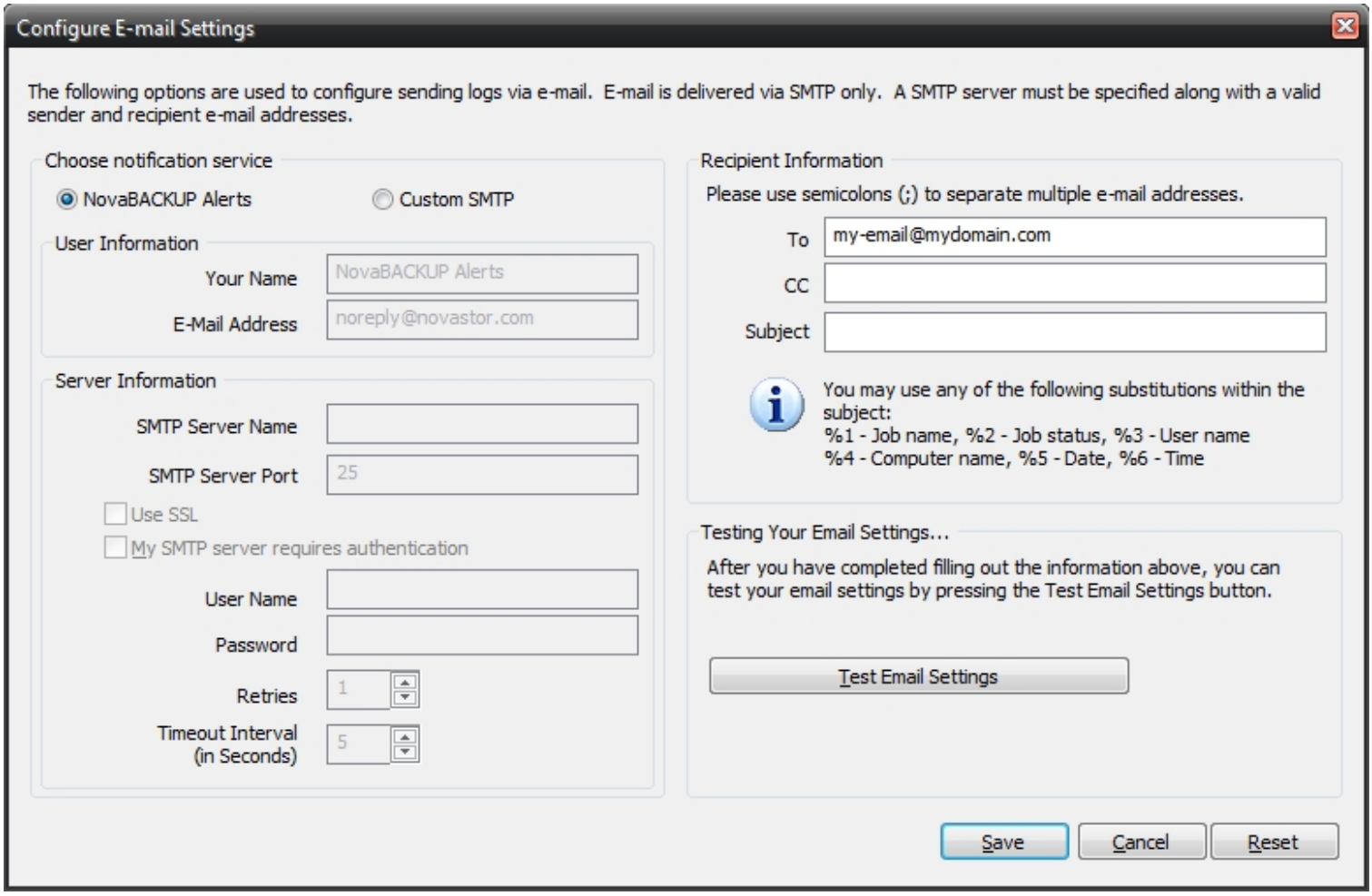
- If you choose to use the NovaBACKUP Alerts service, the only information you need to provide is the recipient e-mail address or addresses you would like to receive notifications.
- If you choose to use a Custom SMTP service, your SMTP server information may be acquired from your System Administrator or service provider.
  - You will need to input a valid e-mail addresses for both the sender and the recipient.
  - These can be the same e-mail address.
  - If your SMTP server requires authentication, you may do so by tagging the checkbox for authentication and supplying your user name and password.

NovaBACKUP Alerts

If your product supports it, you may have the ability to choose the NovaBACKUP Alerts service to send your e-mail notifications. The NovaBACKUP Alerts service is a pre-configured email notification service.

* It is not required to use this service and you should check with your System Administrator to see if sending e-mail notifications through a 3rd party service is allowed in your organization.

* By using the NovaBACKUP Alerts service, you are agreeing to our End-User Licensing Agreement and Privacy Policies.



E-mail notifications may contain custom Subject: lines. These may contain any sequence of characters that conform to Internet email standards. Recommended maximum length is less than 200 characters.

If the Subject field is left blank, NovaBACKUP inserts a default subject.

A custom subject may contain the following substitution variables:

Substitution Variable	Contents
%1	The job's name.
%2	Job's completion status.
%3	User name of the logged-on user under whom the job ran.
%4	Host name - name of the computer that ran the job.
%5	Date when the job finished. Format is the locale set on the computer. Timezone is the local time zone of the computer (local time, not GMT).
%6	Time when the job finished, formatted in locale format as set by the computer.

Timezone is local to the computer running the jobs (local time, not GMT).

Example, if the custom "Subject:" string is

MyCorp node %4 job %1: %2 at %6 %5

the notification email's "Subject:" appears as

MyCorp node RSRCH-SS-0987 job Daily: successful at 10:32:55pm 2/14/2017

Be sure to test your settings by clicking the "Test Email Settings" button

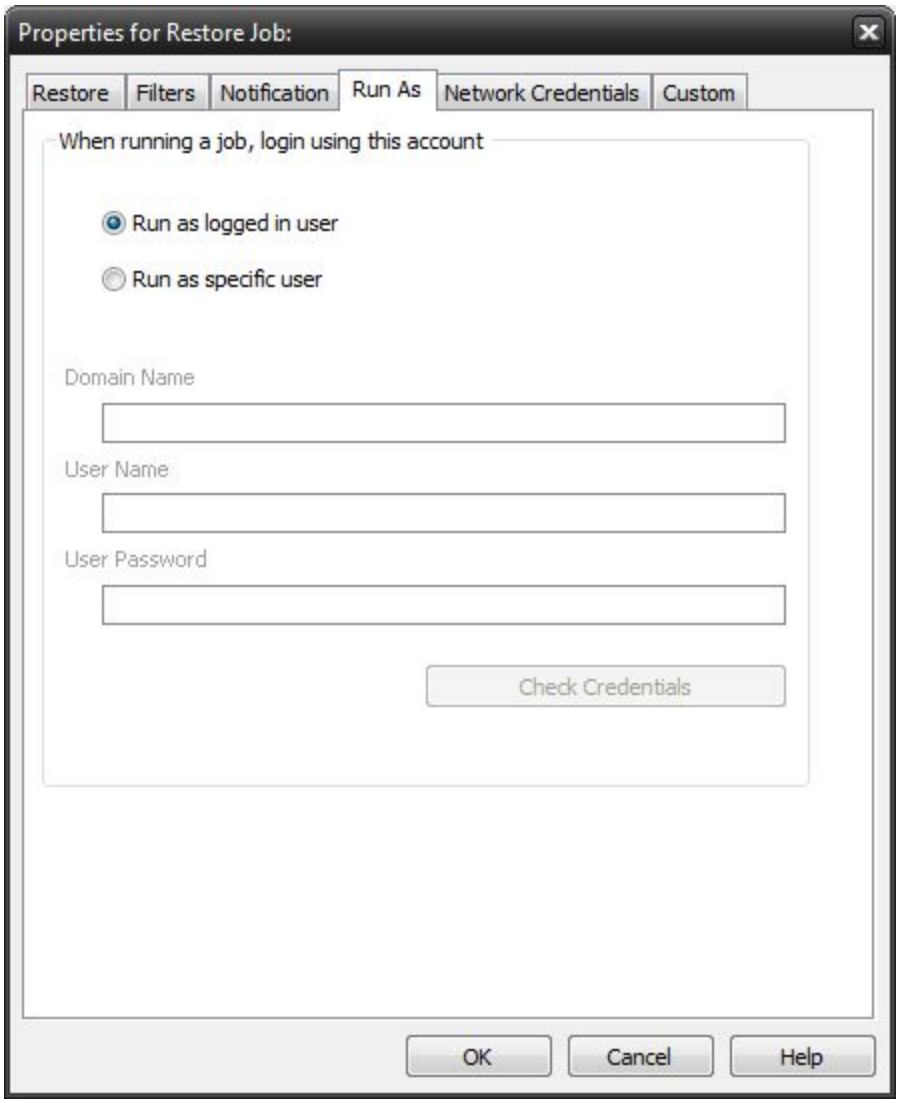
Print Log

Here, you have the option to print the log automatically to your default printer.

Notification Conditions

- ONLY if operation had messages/errors/warnings
- ONLY if operation had errors/warnings
- ONLY if operation had errors
- Always

Restore Job Run As



When running a job, login using this account

Run as logged in user:

Run the job using the Windows login credentials in effect at that time.

Run as specific user:

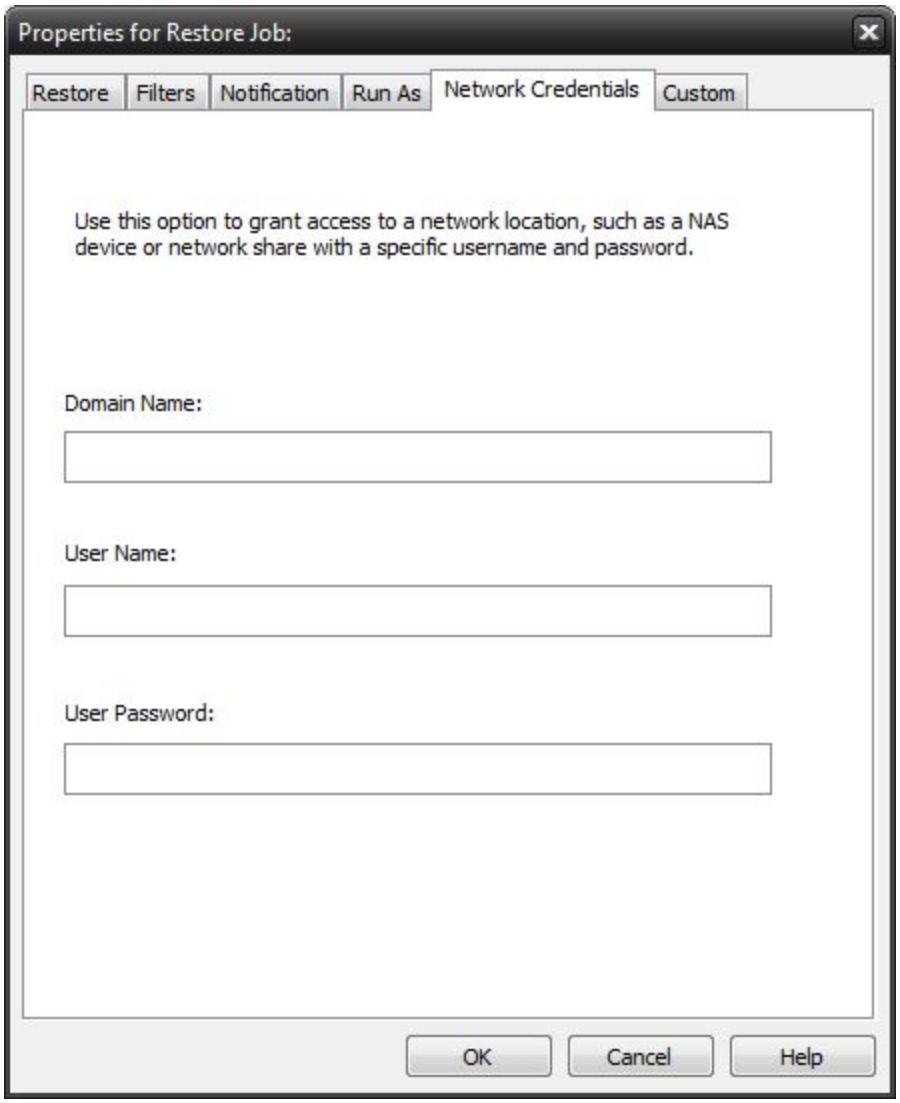
Run the job using the specified credentials.

Domain Name: The domain name you are logging into.
Run as User Name: The user name you want the job to run as.
Password: The password for the account you want the job to run as.

Note: The account information entered here is usually account you use to login to windows. However, you may need to use a different account when backing up network/shared drives.

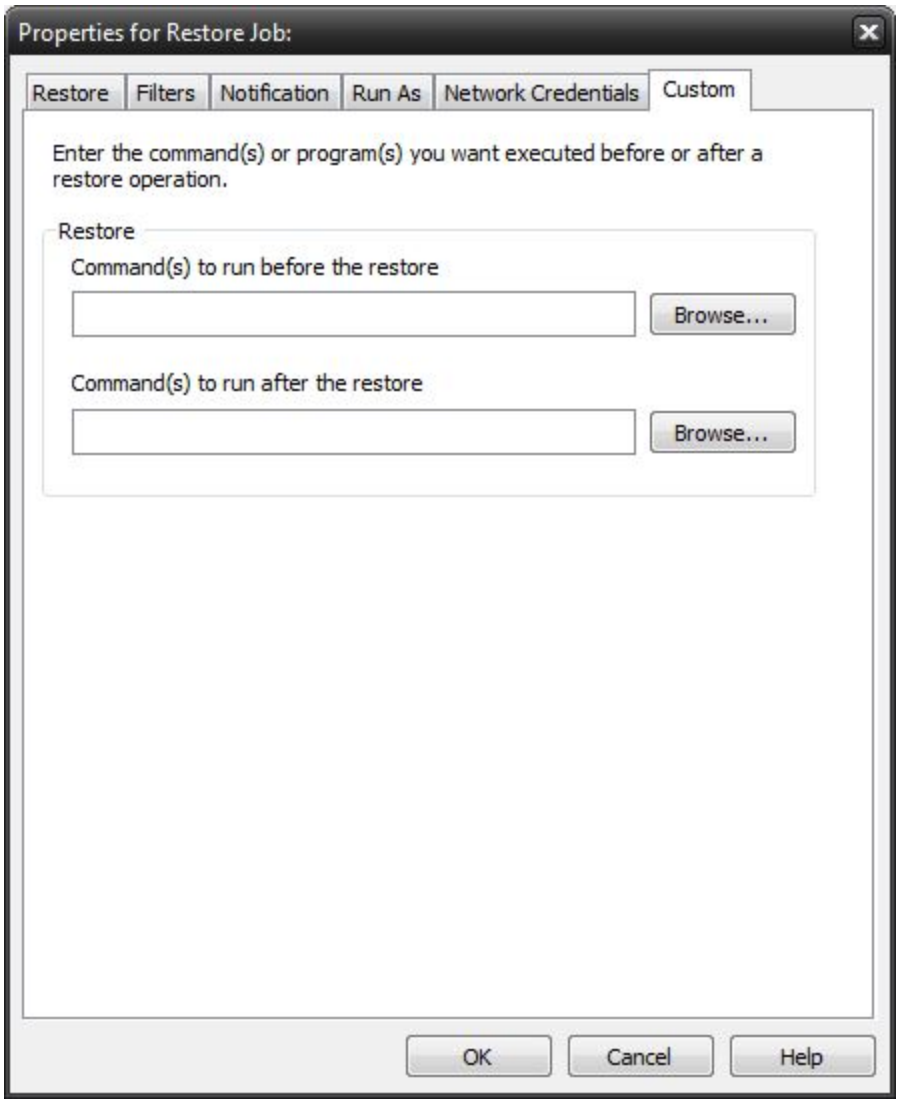
Important: If you have entered credentials you must click the "Check Credentials" button to validate the account you have entered before proceeding forward.

Restore Job Network Credentials



This option may be used to access devices on the network which require different credentials than the defaults.You may use different credentials for this purpose than those set in the "Run As" Tab.

Restore Job Custom Commands



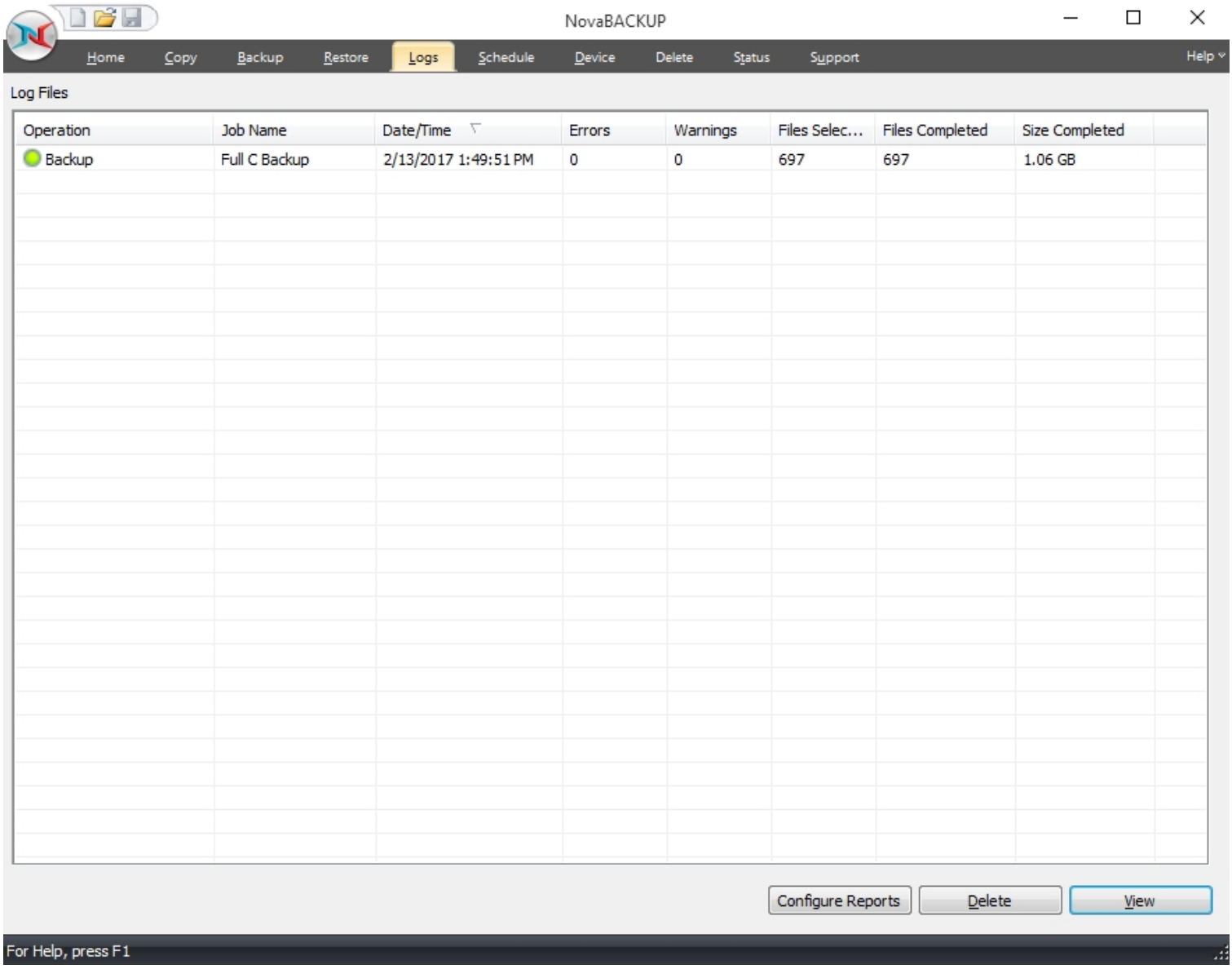
This feature enables a command to run before or after a restore job

To select which program or command you would like to run before or after the copy operation, simply browse to the program or command using the "Browse" button.

The benefits of this feature are numerous. For instance, one would be able to stop Antivirus scanning by issuing a command to their Anti-virus program prior to NovaBACKUP beginning the restore job. Alternatively, a command can be issued at the end of the job to begin an anti-virus scan. Also one could issue a command to close a database at the beginning of a job and reopen it at the end of a job.

Logs Tab

From here, you can quickly determine the status of a Copy, Backup, Restore or Retention job that was performed.



The columns in the summery view include:

Operation: Includes - Copy, Backup, Restore & Import.

You can quickly determine the status of the backup by the color-coded icon next to each operation:

- Operation completed successfully
- Operation completed, but had warnings

Operation had errors

Job Name: The name of the job for this log file

Date/Time: The Date & Time the specific job was run

Errors: The number of errors encountered after running the job

Warnings: The number of warnings encountered after running the job

Objects Selected: The number of objects selected before running the job

Objects Completed: The number of objects successfully completed after running the job

Size Completed: The total size of all objects successfully completed after running the job

You can quickly sort the logs view by clicking on the appropriate column heading at the top of the window

Button Functions

Configure Reports

Click this button to use the summary reports feature.

Delete Button

To delete a log file, simply select the log file and press the*Delete*button. To delete multiple log files, you may select more than one by using the Shift and/or Ctrl buttons on your keyboard to select the logs and pressing the Delete button.

View Button

To view the log file, select the log you would like to open and press the View button. Alternatively, you may also simply double-click the log file you want to view. For further details, see theUsing the Logssection.

Viewing the Logs

Job Summary section

The top half of the log viewer displays the job summary. This section lists settings which apply to the job and a summary of the job status. A disabled setting is marked with a red 'X', and an enabled settings is marked with a checkmark.

Events section

The bottom half of the log viewer displays the job events. There are four types of events: Error, Warning, Informational, and Files. Each type can be shown or hidden by clicking its associated button.

When the log is first opened, the file list is not displayed. To see the list, click the 'Files' button. Each file entry in the list can be expanded to display additional details about that file.

Saving as a file

Logs displayed in the viewer can be saved as either HTML or Text files.

Click the 'save' icon at the top left of the viewer window. Browse to the desired location to save the file. Enter the filename, select ’r;HTML’ or ’r;TXT’ file type, then click the 'Save' button.

Printing

Click the print icon at the top left of the viewer window to launch a print preview window displaying the html formatted log.

Use page settings to adjust how the printed log will look. For example, the 'Print Background Colors and Images' option is disabled by default, but should be checked to print the log as shown. Access page settings by clicking the gear icon at the top of the print preview window.

The log viewer supports printing a file list of up to 500 entries. To print a log containing more than 500 file entries, you must click the 'files' button to hide the file list if it is currently displayed. To print a log containing over 500 file entries, save the log as a .txt file then use a text editor to open and print the file.

Opening a different log

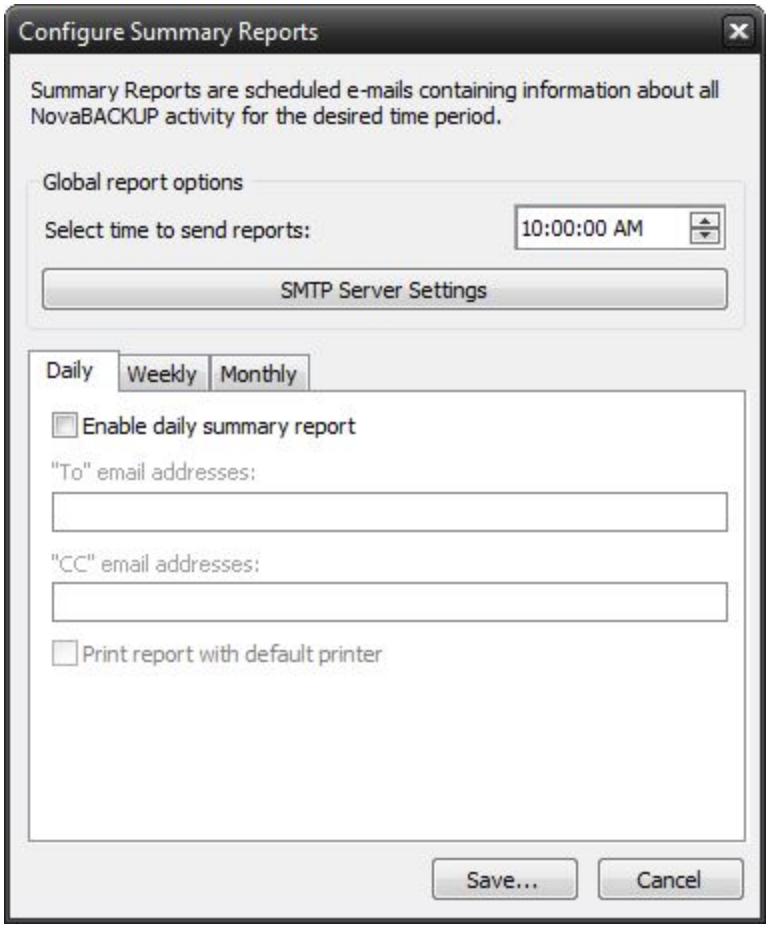
After the log viewer is opened, click the 'open' icon at the top left of the viewer window to open a new log. This will display the 'open file' dialog. Browse to the log file to view, then click the 'open' button to view the log.

Summary Reports

Summary reports are scheduled reports which provide an aggregated view of recent jobs performed by NovaBACKUP. Summary reports include information about backup jobs such as:

- When the job was performed
- When the job finished
- The destination of the data
- The job type
- Whether the job was scheduled or run manually
- The number of files selected for backup and the number of files completed
- The total size for the job once completed

Configure Reports



Global report options

Scheduled time

The selected time is when any / all reports will be sent. If multiple reports are scheduled to be sent on a particular day, they will be sent individually.

SMTP Server settings

The SMTP server settings for all reports to be sent with.

Note: Summary Reports default to using the new NovaBACKUP Alerts service.

Daily Reports

The daily report sends a report which summarizes the last 24 hours since the scheduled time.

Enable daily summary report

Check this box to enable or disable the daily summary report

To / CC addresses

Enter the e-mail addresses you wish to receive the report. Separate multiple addresses with a semicolon (;).

Print report with default printer

Print the report with the default printer (if available)

Weekly Reports

The weekly report sends a report which summarizes the last 7 days since the scheduled time.

Enable weekly summary report

Check this box to enable or disable the weekly summary report

To / CC addresses

Enter the e-mail addresses you wish to receive the report. Separate multiple addresses with a semicolon (;).

Day of week to send reports

Choose which day of the week the report is sent.

Print report with default printer

Print the report with the default printer (if available)

Monthly Reports

The monthly report sends a report which summarizes the last month since the scheduled time.

Note: If the current month does not have this date available, the report will process on the 1st of the next month.

Enable monthly summary report

Check this box to enable or disable the monthly summary report

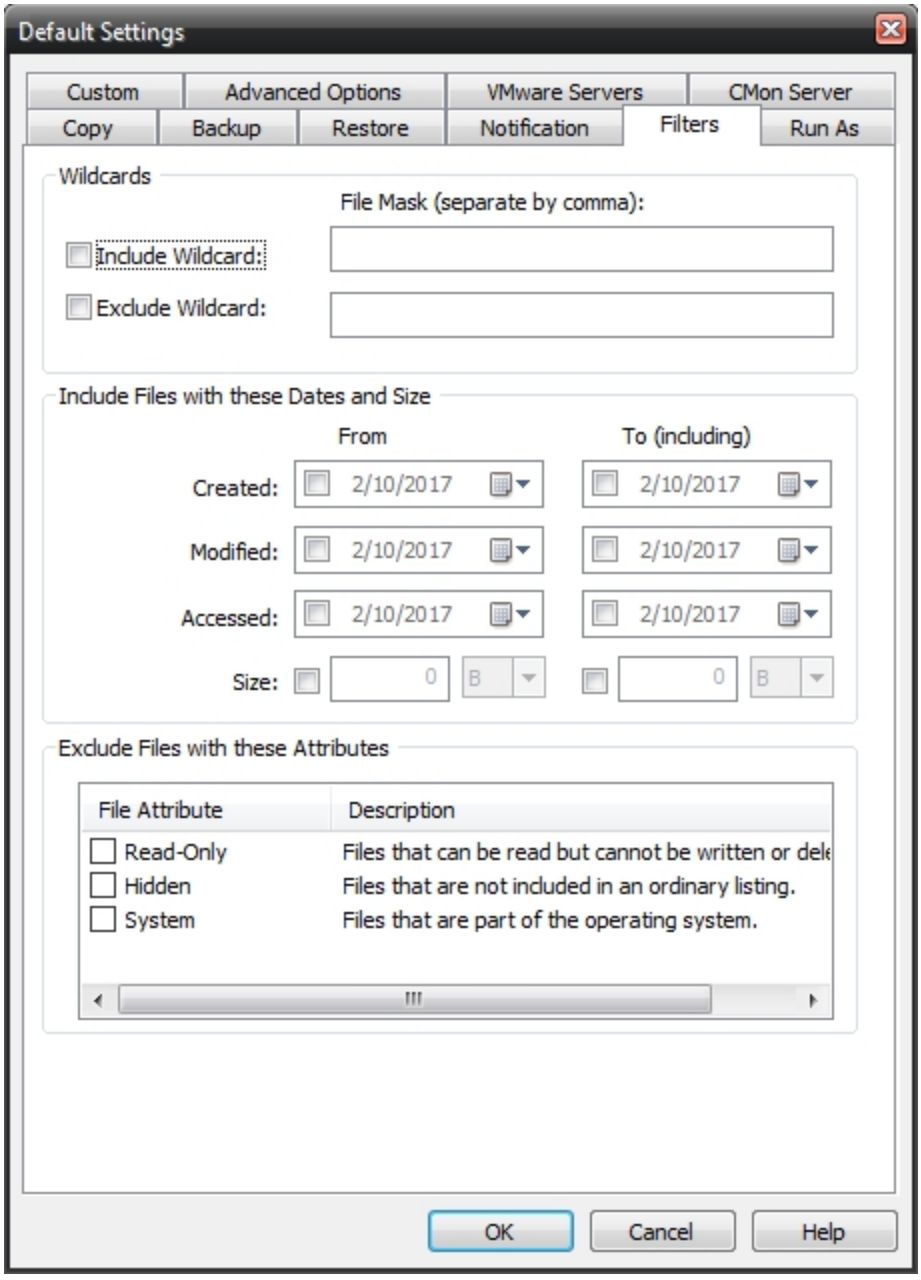
To / CC addresses

Enter the e-mail addresses you wish to receive the report. Separate multiple addresses with a semicolon (;)

Print report with default printer

Print the report with the default printer (if available)

Filters Tab



Wildcards

IncludeWildcard: Enter all wildcards for files you want to include in the default job separated by a comma (example: *.doc,*.xls,*.dat)

ExcludeWildcard:Enter all wildcards for files you want to include in the default job separated by a comma (example: *.doc,*.xls,*.dat)

Include Files with these Dates and Size
Under this section, you can create an include filter by selecting dates that files were last created, modified, or accessed or by there file size that you wish to ensure are included in your backup. This is helpful if you want to reduce the time or file size of a backup. You may want to exclude older files that are no longer accessed or larger files you have already backed up..

Exclude Files with these Attributes
Under this section, you can create an exclude filter based on the file attributes: "Read Only", "Hidden" and "System". For example, if you would to exclude System or Hidden files, check the appropate box next to the attribute.

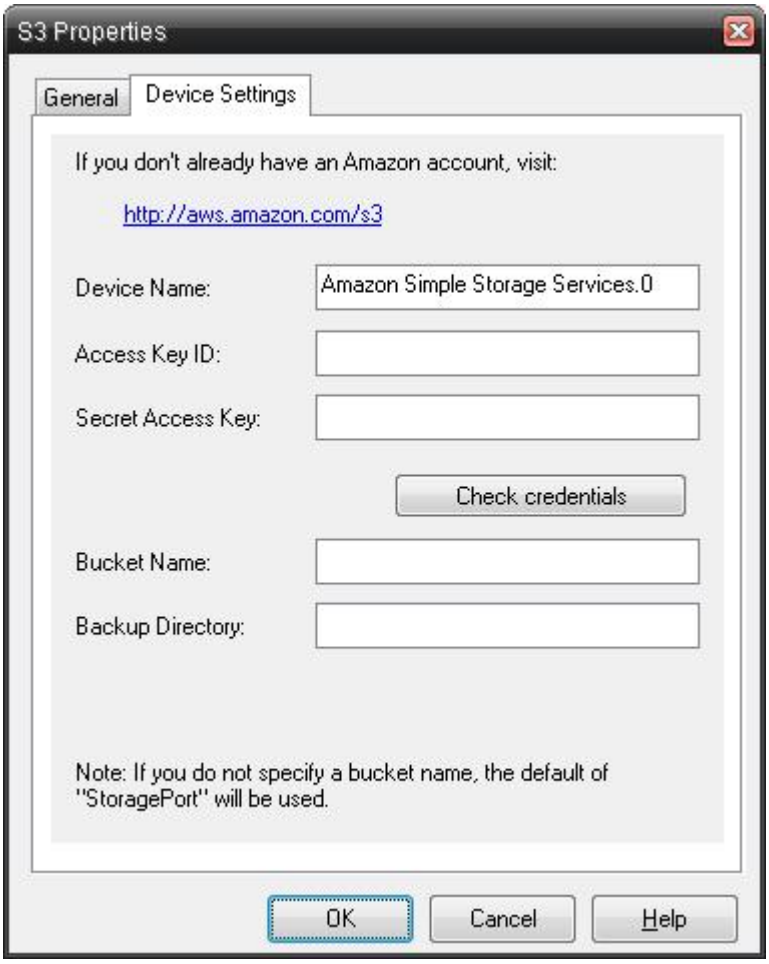
Online Storage Devices

NovaBACKUP includes the ability to backup to a number of online storage devices including Amazon's Simple Storage Service (S3) and NovaStor Web Storage Service (xSP).

Once you have configured an online storage device, you can utilize that device just as you would a local device. You will be able to perform backup and copy jobs to your configured online storage devices as well as local devices adding additional levels of protection to your data by permitting both local and remote backups to be performed.

Configuring S3 Storage Device

Select "Amazon Simple Storage Service " from the "Add Device" option drop down. This will display the S3 properties dialog



Device: Enter the name for this device.

Access Key ID: Enter the Amazon S3 Access Key ID for your account login.
Secret Access Key: Enter the Amazon S3 Secret Access Key for your account login.
Click "Check Credentials" to confirm your settings for Access Key ID and Secret Access Key.
Bucket Name: Enter the name of the S3 Bucket you want your data stored in.
Backup Directory: Enter the directory you want your data stored within the S3 Bucket.

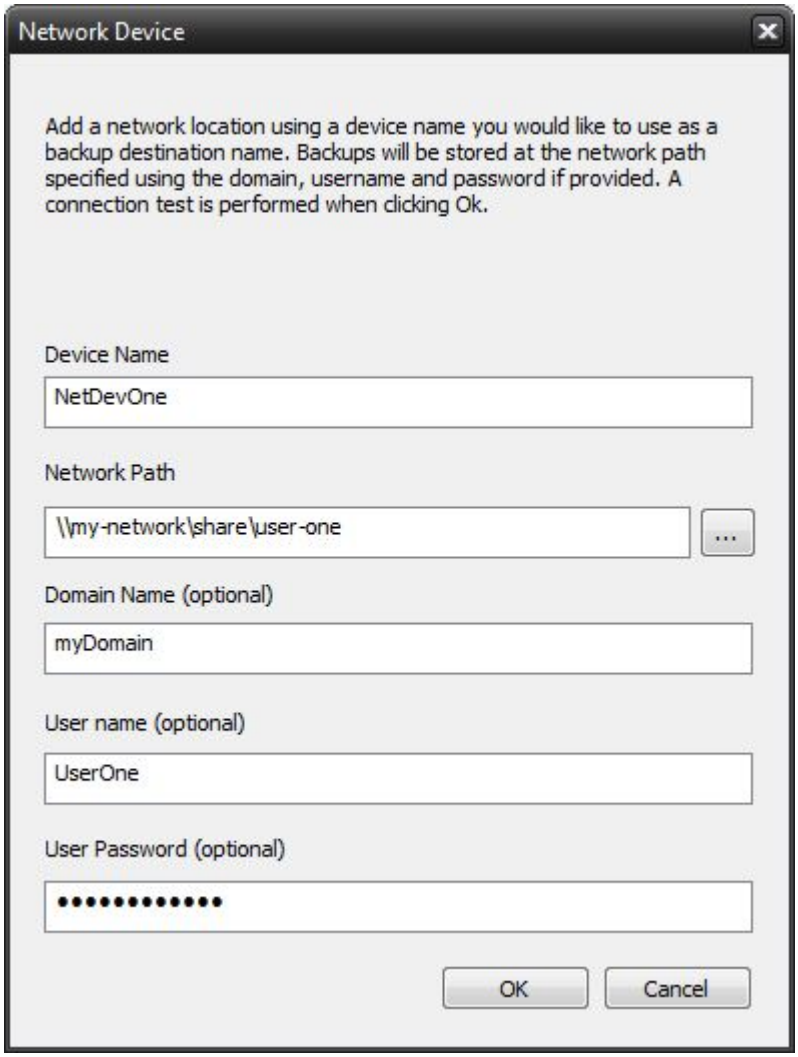
Network Device Overview

A network device may be used in cases where the user wishes to refer to a network location and related permissions as a named device for convenient reference like any other backup device. For example you may wish to store backups to \\my-network\share\user-one along with its required username amd password credentials, but would like to refer to this using one simple name, such as "NetUserOne". Network devices provide this convenience and allow several different named devices to exist as may be desired for any configuration.

Network devices may be created by clicking on "Add Network Device" in the home tab view, or by clicking the "Add" button in the device tab view.

For tips on backing up to a network device, such as a NAS, as well as help creating your network device, please follow the NovaBACKUP Knowledge Base article here.

Network Device Settings



This screen is displayed when adding a network device, or when right clicking on the device listed in the device tab to view the its properties. The following values may be entered, some of which are optional as noted.

Device name
This name entered here is used to identify the device. This name will appear when devices are listed to reference this device throughout the application.

Network Path
This is the path where backups are to be stored using this device.

Domain Name
This optional parameter is used to specify the domain for the network path. When no value entered the current domain, if any, will be in effect.

User Name

This optional parameter is used to specify the user who has permission to access the network path.

User Password
This optional parameter is used to specify the user's password who has permission to access the network path.

xSP Storage Device Overview

The xSP storage device is used for backup to an online server.

To access settings first select the device tab.

To add a new device click the Add button then select the xSP device type.

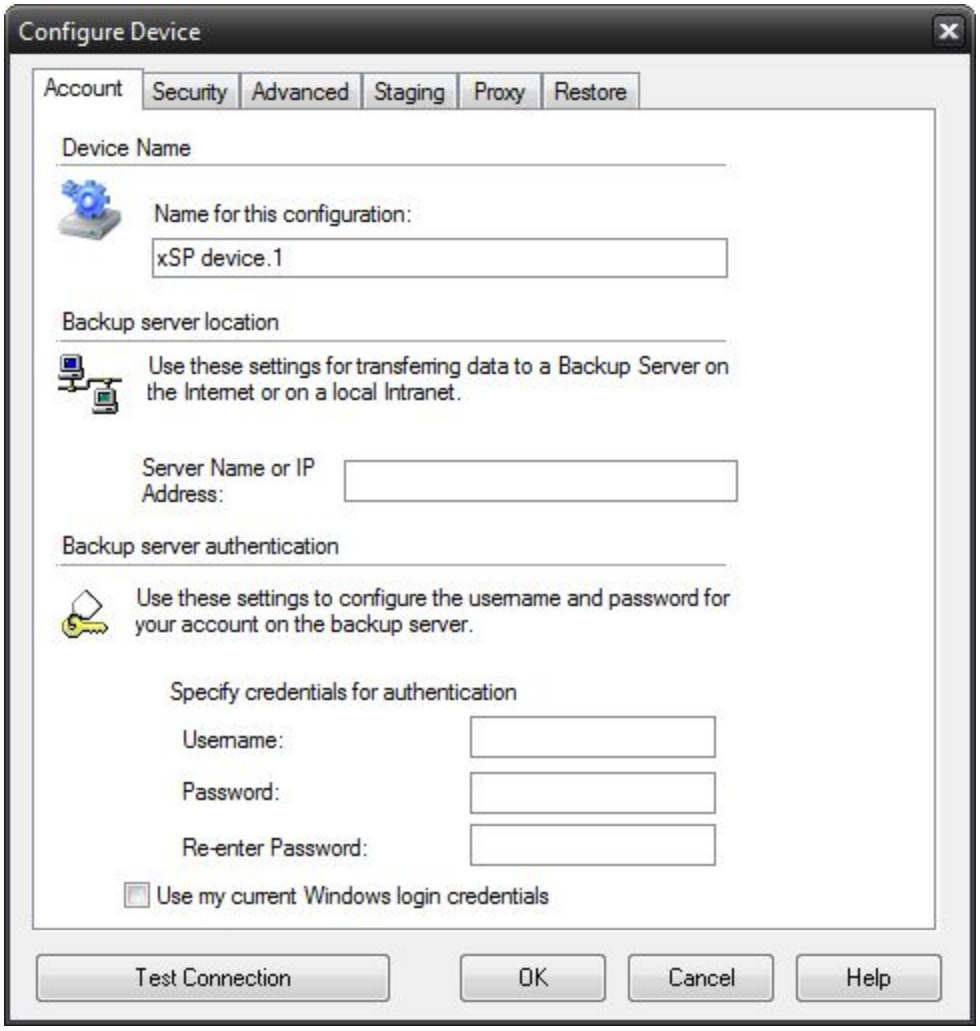
To edit an existing device select its name in the device list then click the properties button, or right click then select properties.

The configure screen will be displayed when adding a new device or selecting properties. Use the configure screen to edit all settings for the xSP device.

Click Test Connection if you wish to just test the specified settings.

Click OK to commit the settings or Cancel to avoid making changes.

xSP Account Settings



Device Name

• Name for this configuration

This field is used to specify any name you wish to identify the device.

Backup server location

• Server Name or IP Address

This field is used to specify the IP address or the host name of the backup server. If this value is already populated, you can disregard this entry. If this value is unknown, it can be obtained from the network administrator or backup service provider.

Backup server authentication

To enter specific credentials:

• Username: Enter in the unique username used to access the backup server.

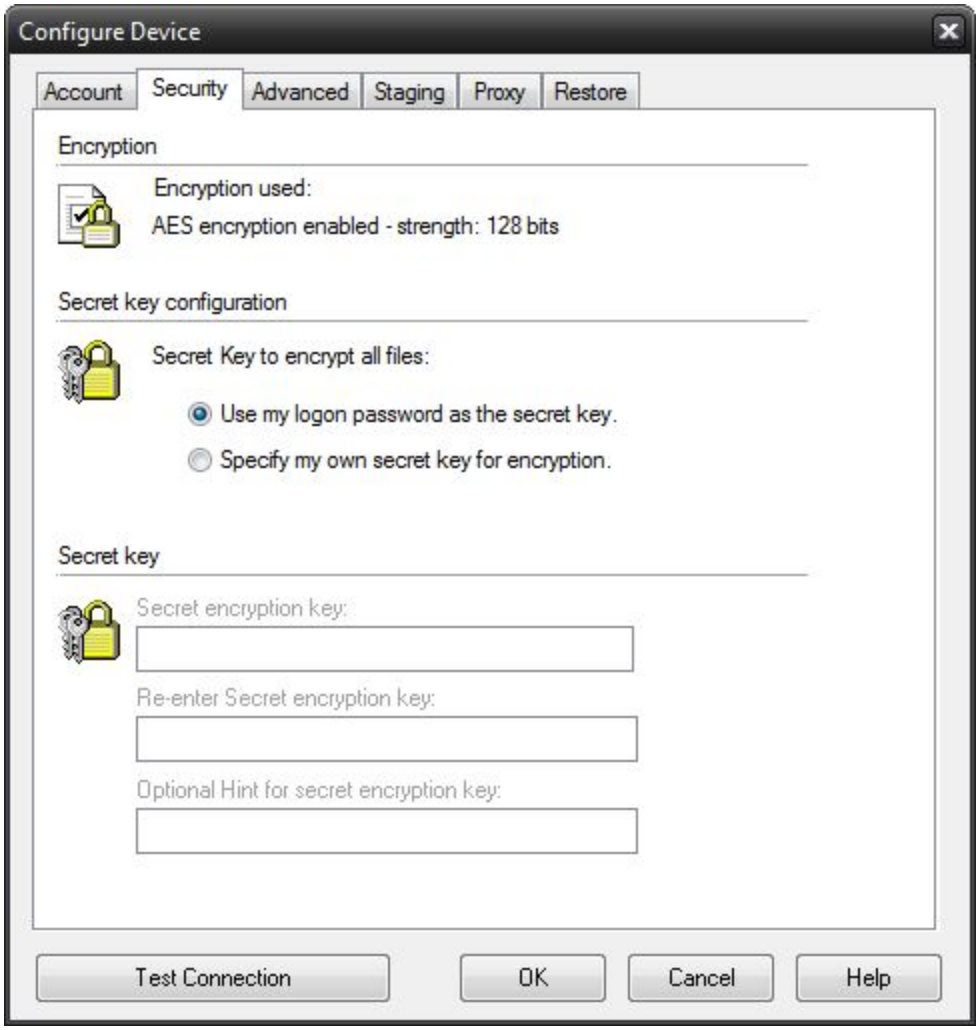
• Password: This is your logon password

• Re-Enter Password: Re-enter your password to confirm

To use your current Windows login credentials:

• Selecting this option will use the current Windows login credentials for authentication on the backup server.

xSP Security Settings



Encryption

• Encryption used

Indicates the encrytpion type in effect.

Secret Key Configuration

• Use my logon password to encrypt my files

This option will cause the backup server logon password to be used to encrypt all files.

• Set a special secret key to encrypt my files

This option will allow a private secret key of your choosing to be specified for file encryption.

Note: If the secret key is forgotten or lost, the backup server administrator may not be able to recover the data residing on the server.

Secret Key

The secret key is a special text string used to encrypt all data that is stored on the server. The secret key can be changed at any time in between backups or restores. If the secret key is forgotten or lost, the backup server administrator may not be able to recover the data on the server.

• Secret encryption key

This field is the secret key. The text can be any length and is case-sensitive. The secret key should be written down and kept it in a safe place so that it is not forgotten.

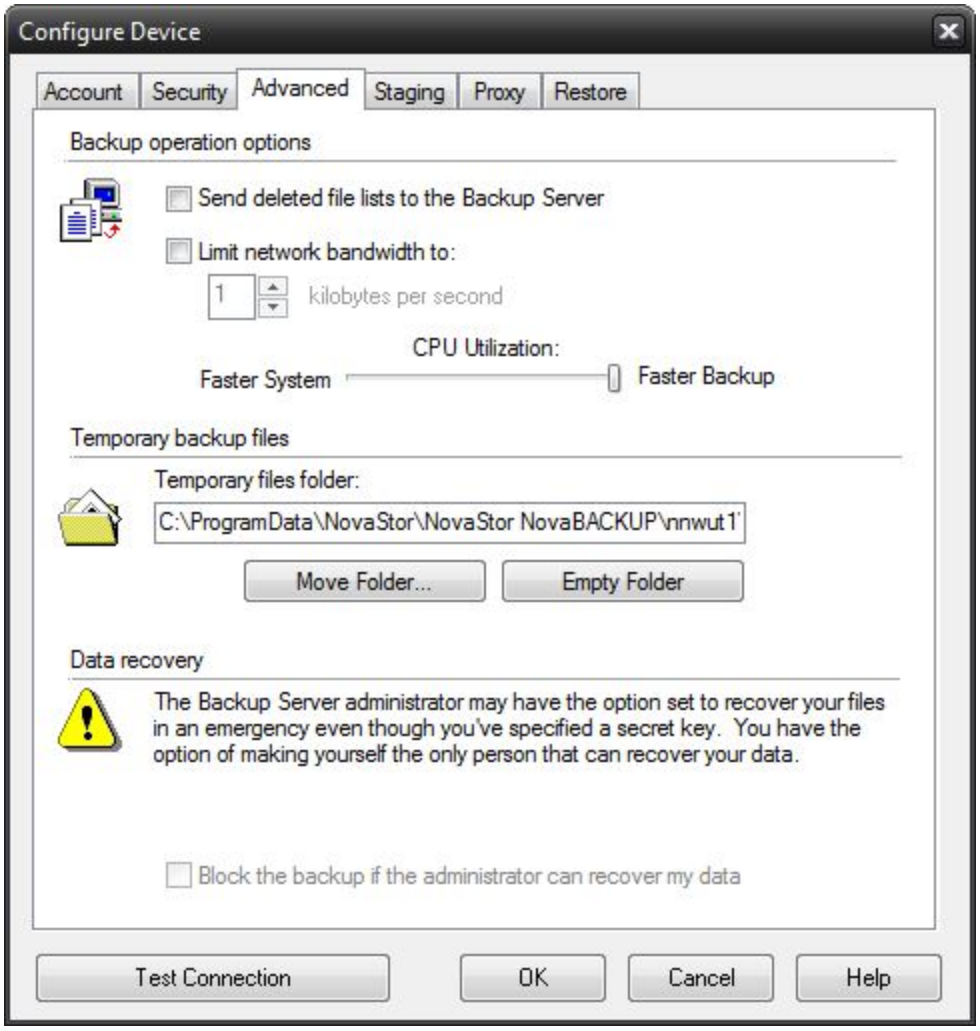
• Secret encryption key verification

This field is where the secret key should be re-typed. It is used for verification only.

• Optional hint for secret encryption key

This field is where a text phrase can be entered to allow the secret key to be remembered. If it is necessary to restore files to a fresh system and the secret key is forgotten or lost, the text phrase will be displayed so that the secret key can be recalled more easily. This field is optional. If security is a concern because somebody may be able to use the hint to guess the secret key, this field should probably be left empty.

xSP Advanced Settings



Backup operation options

• Send deleted file lists to the Backup Server

Selecting this option will allow the backup server to be notified when files are deleted or removed from the selection list. Eventually, the files will also be deleted from the backup server. This occurs after the deletion date has gone out of the scope of the allowable restore window on the backup server. The allowable restore window is configured by the backup server administrator.

• Limit network bandwidth to:

This setting can be used to reduce the amount of data sent over the network in case other processes need greater access or speed.

• CPU Utilization

This setting can be used to adjust how much CPU usage may be desired for the backup process. It may be preferable to reduce CPU usage for backup so other processes on the system can run faster.

Temporary backup files

• Temporary files folder

This option can be used to specify where the backup "work files" should be saved. These files contain important information pertaining to backups. At any point in time, the contents of this folder can be moved to a different location or the folder can be emptied. Emptying the folder will remove all the files in the disk cache.

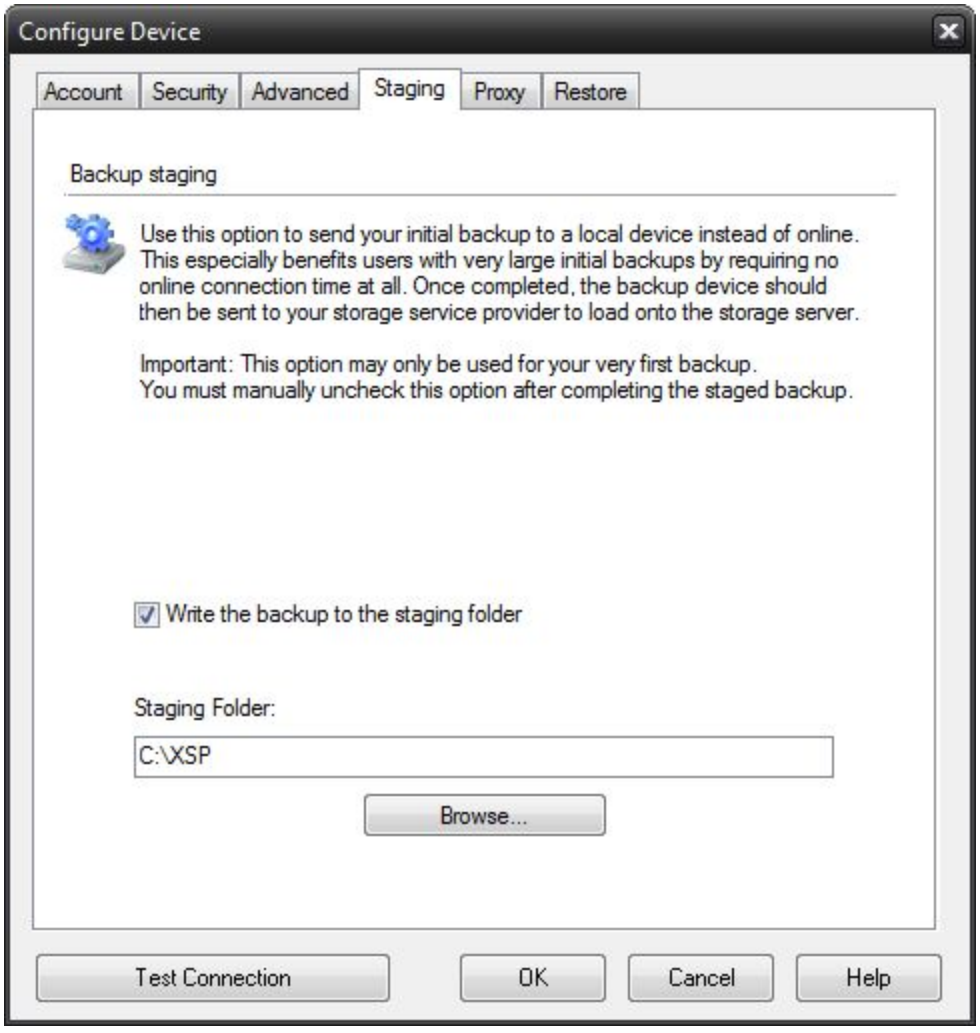
Data recovery

• Block the backup if the administrator can recover my data

In certain situations, such as a corporate environment, it may be a requirement for the corporation to have access to all the corporation's data. The backup server administrator may set an option to allow the recovery of data without requiring the secret key.

This option should be selected to guarantee that absolutely no one else is able to recover the data for this account. IF THIS OPTION IS SET AND THE SECRET KEY IS LOST OR FORGOTTEN, THE DATA CANNOT BE RECOVERED

xSP Staging Settings

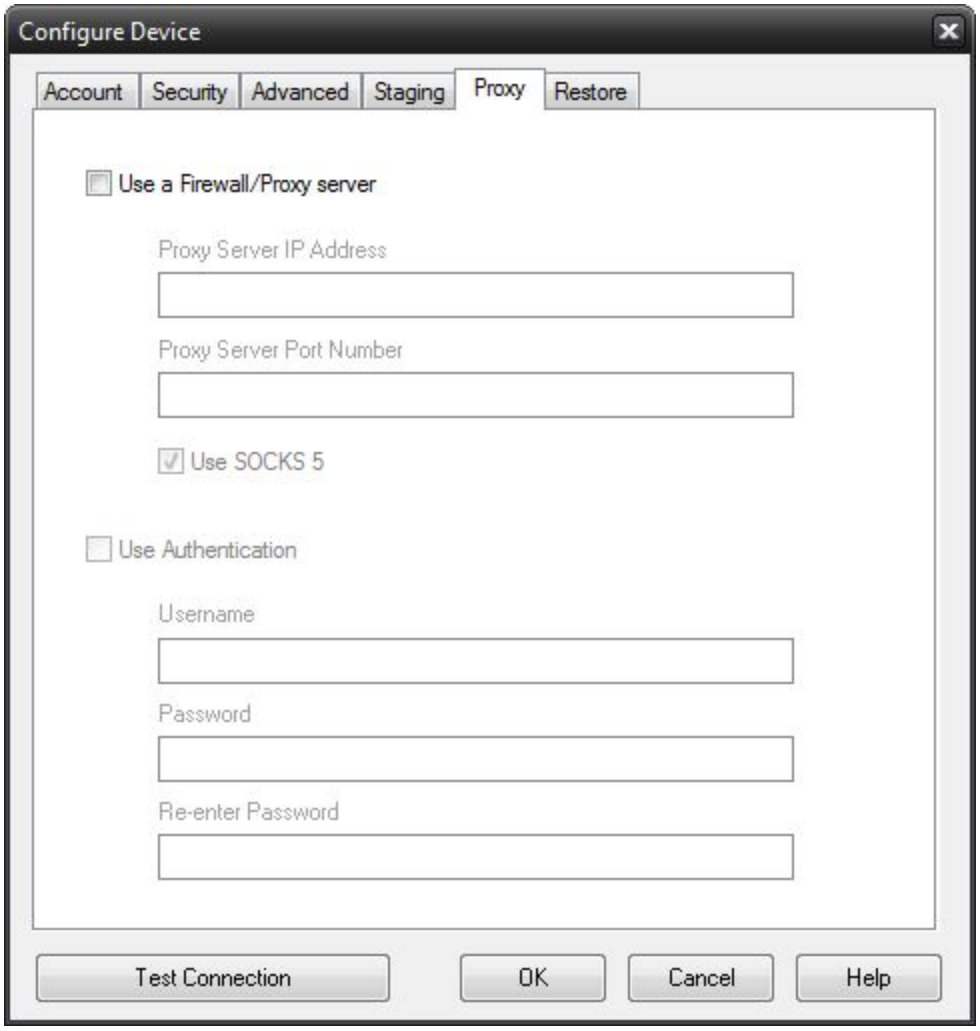


Use this option to send your initial backup to a local device instead of online.

This especially benefits users with very large initial backups by requiring no online connection time at all. Once completed, the backup device should then be sent to your storage service provider to load onto the storage server.

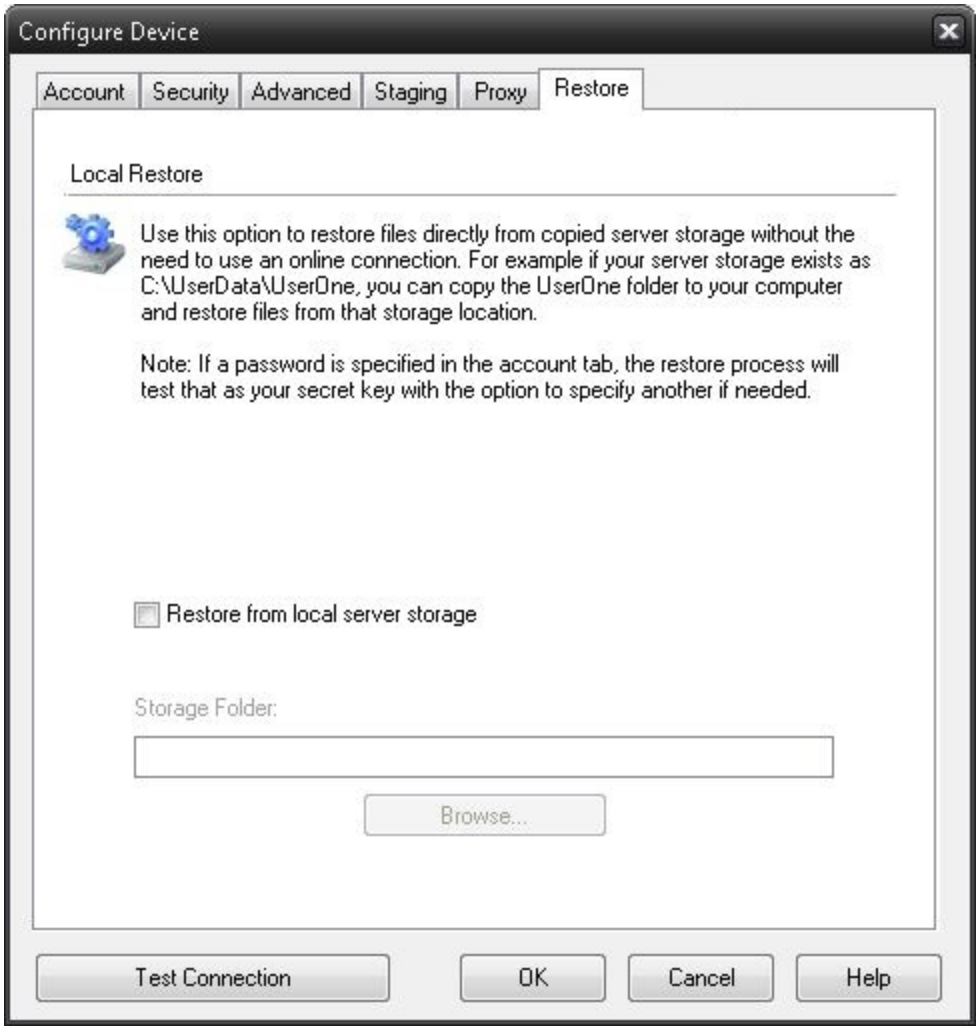
Important: This option may only be used for your very first backup. You must manually uncheck this option after completing the staged backup.

xSP Proxy Settings



Use this option to connect to your backup server through a proxy server connection.

xSP Restore Settings



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.

Restore from local storage

This must be checked to enable local restore mode.

Storage Folder

Enter the path where you have copied the server storage or use the browse button to locate that path for you.

xSP FastBIT Settings

This option is provided so that you can easily upgrade to the latest FastBIT implementation. This tab will only appear if you are not already using FastBIT3.

File Selection, System State & Registry

Overview

Security Information Backups

Depending on your system configuration, you can have special security configurations for files, drives and/or subdirectories. NovaBACKUP has full support for this information. This data is backed up each time you backup your registry. Please note that this information will ONLY be restored if you restore your registry, it is not stored on a file-by-file basis due to potential security issues.

Details on Backing Up System State Data

System state data is comprised of the following files:

- Boot files, including the system files, and all files protected by Windows File Protection (WFP).
- Active Directory (on a domain controller only).
- Sysvol (on a domain controller only).
- Certificate Services (on certification authority only).
- Cluster database (on a cluster node only).
- The registry.
- Performance counter configuration information.
- Component Services Class registration database.

The system state data can be backed up in any order. Restoration of the system state replaces boot files first and commits the system hive of the registry as a final step in the process.

System state backup and restore operations include all system state data: you cannot choose to backup or restore individual components due to dependencies among the system state components. However, you can restore system state data to an alternate location in which only the registry files, Sysvol directory files, and system boot files are restored. The Active Directory database, Certificate Services database, and Component Services Class Registration database are not restored to the alternate location.

You cannot change which components of the system state are backed up.

NOTE:*If you have more than one domain controller in your organization and Active Directory is replicated to any of these other servers, you might have to authoritatively restore any Active Directory data that you want to restore.*

For more information about authoritative restores, see the Microsoft® Windows® 2000/2003Server Resource Kit Distributed Systems Guide.

Keep the following in mind when you are backing up system state data:

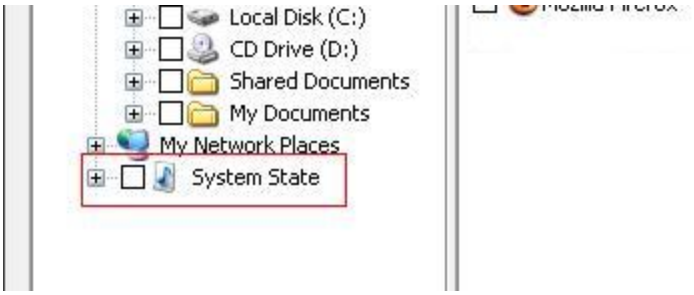
1. *You must be an administrator or a backup operator to back up files and folders.*
2. *You can only back up the system state data on a local computer. You cannot back up the system state data on a remote computer.*

To select files to be backed up from other PCs on a peer to peer network, once you click on Backup, in the left window click the plus sign next to My Network Places. Then click on Entire Network, and click on Microsoft Windows Network. There, you should find the other PCs.

To backup to a network device, it is recommended that you select the UNC path and not the mapped drive letter. Example \\server-\path and not use a drive mapping (S:\path)

Registry & System State Backup

You have the option to backup the System State with a backup. The System State will be seen as an item in the selection window while you are selecting other files and folders from the Backup Tab. All you need to do to backup the System State is to tag the checkbox next to it prior to running the backup.



What is the System State?*The System State is actually a combination of a fewthings:*

- *Boot files, including the system files, and all files protected by Windows File Protection (WFP).*
- *Active Directory (on a domain controller only).*
- *Sysvol (on a domain controller only).*
- *Certificate Services (on certification authority only).*
- *Cluster database (on a cluster node only).*
- *The registry.*
- *Performance counter configuration information.*
- *Component Services Class registration database.*

These are the items seen in the right selection window when System State is selected.

Does NovaBACKUP support backing up Active Directory?*Yes, in fact, NovaBACKUP features include the ability to backup Active Directory when you are backing up the System State.*

System State backup and restore operations include all System State data. You cannot choose to back up or restore individual components because of dependencies among the System State components. However, you can restore System State data to an altern-

ate location in which only the registry files and system boot files are restored. The Component Services class registration database is not restored to the alternate location.

Microsoft Exchange Plug-In

Using the Microsoft Exchange Plug-in

The Exchange server plug-in works on the following Microsoft Exchange server version: 2007, 2010, 2013 and 2016. View the NovaBACKUP System Requirements PDF document here to know the specific requirements that we have for Microsoft Exchange versions and service pack levels, which are required to perform backup and restore of this item.

Backup using the Exchange Plug-in

If the client is installed on one of the supported platforms listed above and you have an active Exchange plug-in, you may select your Exchange server for backup using the file selection tree or list view under the Backup Tab.

If you check the box next to the server name, all storage groups (if multiple) will be selected for backup. To select only a specific storage group, expand the Exchange Server object by clicking on the + symbol and check only the appropriate storage groups you want to backup.

Note: In order to perform a complete and accurate backup of Microsoft Exchange, you should also select the "System State" object within the same backup set. For more information, review the Backup up System State section of this help file.

Restore using the Exchange Plug-in

If the client is installed on one of the supported platforms listed above and you have an active Exchange plug-in, you may restore a previous Exchange backup using the plug-in by selecting the Exchange server using the file selection tree or list view under the Restore Tab.

Note: To restore an Exchange storage group, you must mark the database as being able to be overwritten by a restore in the properties of the exchange store you want to restore using the Exchange System Manager. You also need to dismount the store. (For more information on using the Exchange System Manager, refer to your Exchange server documentation).

This will permit you to restore the exchange storage group to the original location on the original backed up machine or on a new system with the same machine name. Also note that if you are doing a full restore of exchange you need to restore the System State BEFORE you restore the Exchange Storage Group.

Microsoft SQL Server Plug-In

Using the Microsoft SQL Plug-in

The SQL server plug-in works on the following Microsoft SQL servers: 2008, 2008 R2, 2012, 2014, and 2016. View the NovaBACKUP System Requirements PDF document here to know the specific requirements that we have for Microsoft SQL versions and service pack levels, which are required to perform backup and restore of this item.

Backup using the SQL Plug-in

If the client is installed on one of the supported platforms listed above and you have an active SQL plug-in, you may select your SQL server for backup using the file selection tree or list view under the Backup Tab.

If you check the box next to the server name, all databases will be selected for backup. To select only a specific database, expand the SQL Server object by clicking on the + symbol and check only the appropriate databases you want to backup.

Restore using the SQL Plug-in

If the client is installed on one of the supported platforms listed above and you have an active SQL plug-in, you may restore a previous SQL backup using the plug-in by selecting the SQL server using the file selection tree or list view under the Restore Tab.

If you check the box next to the server name, all databases will be selected for restore. To select only a specific database, expand the SQL Server object by clicking on the + symbol and check only the appropriate databases you want to restore.

This will permit you to restore the SQL database(s) to their original location on the original backed up machine or on a new system with the same machine name.

VMware Plug-In

Using the VMware Plug-in

The computer with NovaBACKUP installed needs to have connectivity to either the vSphere server or the ESX(i) server. NovaBACKUP can alternatively be installed on the vSphere server or on a Virtual Machine. VMware version and license requirements are contained in the NovaBACKUP System Requirements PDF document here. VMware with the vStorage API licensed feature is required to utilize the VMware plug-in for NovaBACKUP can communicate.

Backup using the VMware Plug-in

Clicking on each ESX(i) or vSphere server node will display the Virtual Machines that are available to backup. These machines may be backed up individually, or all of them may be backed up at once.

You must specify the server name and user credentials for each VMware server you want to appear in the backup file selection tree. This is provided in the VMware Servers tab in the program default settings screen.

Restore using the VMware Plug-in

Restoring a Virtual Machine is quite easy. Simply select the Virtual Machine to restore in the restore screen and click the restore button.

More Information

For additional information such as techniques for differential backup and restore please download the document detailing all the VMware plug-in features.

Hyper-V Plug-In

Using the Hyper-V Plug-in

The Hyper-V plug-in supports direct backup and restore of Hyper-V virtual machines which reside on the same system as your backup client. Unlike VMware backups, NovaBACKUP must be installed on the Hyper-V host where the virtual machine desired to be backed up is located. The virtual machines can be either running or stopped when doing a backup.

View the NovaBACKUP System Requirements PDF document here to know the specific requirements that we have for Hyper-V versions and service pack levels required to utilize the Hyper-V plug-in for NovaBACKUP.

Backup using the Hyper-V Plug-in

If you have an active Hyper-V plug-in, you may select your Hyper-V virtual machines for backup using the file selection tree or list view under the Backup Tab.

If you check the box next to the Hyper-V name, all virtual machines will be selected for backup. To select only a specific vir-tual machine, expand the Hyper-V object by clicking on the + symbol and check only the virtual machines you want to backup.

Restore using the Hyper-V Plug-in

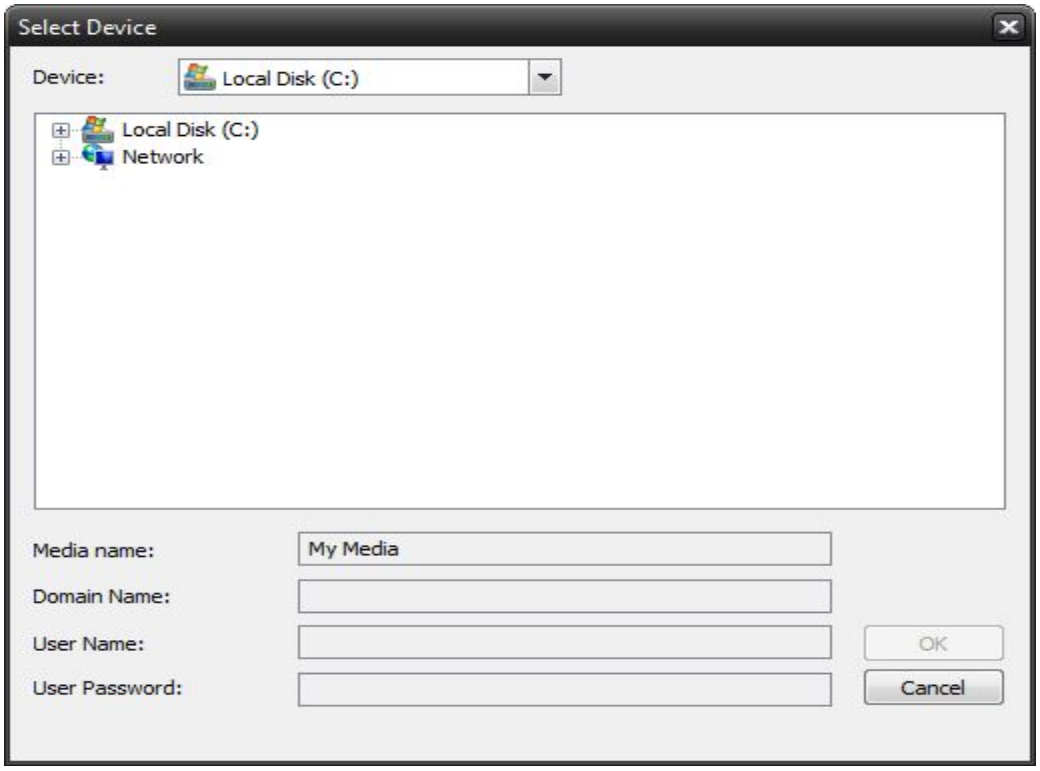
If you have an active Hyper-V plug-in, you may restore a previous Hyper-V backup by selecting the Hyper-V name using the file selection tree or list view under the Restore Tab.

If you check the box next to the Hyper-V name, all virtual machines will be selected for restore. To select only a specific virtual machine, expand the Hyper-V object by clicking on the + symbol and check only the virtual machines you want to restore. Restoring a Hyper-V virtual machine will overwrite the current version of the Hyper-V virtual machine that is there.

Importing Backups

Importing a backup from media may become necessary if your machine crashes or you wish to restore a backup created on one computer to another computer. The process is simple. To get the backup contents into the current, local NovaBACKUP database (and there-fore be able to select files, folders and drives for restoration), follow these steps: From the Restore tab, first click on the "Import" button located near the bottom of the screen. Alternatively, you can select "Import Backup Job" from the Launch Button.

If you run the import from the Restore Tab, you will receive an Import Source selection screen. (If selecting import source from the toolbar, you will forgo this window.)



Browse to the backup file you would like to import, and select it. If your backup is on a network, browse to the network location and select the backup file. Then enter the username and password for network credentials. Click OK to switch to the job status view and start the import process.

If your import source is Tape, then you will be given a Tape Drive selection screen. Select the tape device you would like to import and press "OK." A progress window will then appear and the import process will begin immediately.

If you are importing from a complete set of spanned media, you should always select the first piece of media as your first import. NovaBACKUP will then prompt you to insert each subsequent piece of media if required. It is necessary to have the complete backup, all media available to do the import and subsequent restore. For example; If your backup consists of 5 pieces of media and media #3 is corrupt/missing/ damaged, you will only be able to restore data from the first two pieces of media.

After importing the media, it may be necessary to press the "Refresh" button on the Restore tab. All imported backups will appear under an "Imported Backups" heading in the Media View.

Importing vs. Restoring

It is important to know the difference between importing and restoring. The import process does NOT restore your data to your hard drive. What it simply does is import a "listing" of available data on the imported media. This information is imported into the database and enables NovaBACKUP to create a tree listing of the data in the Restore view. From there, you will be able to select the data you would like to restore from the media and complete a restoration just like you would any other restoration.

Command Line Options

You can use the command line and several options to run your backups and other scripts. This quick method will allow a user to input a single command into a command prompt to begin running a specific NovaBACKUP job script. For more details please read the steps below.

Getting Started:

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1. To begin, open the START menu button and then select RUN.

2. Type CMD in the line provided by the RUN program.

3. This will open a ”Command Prompt” window resembling the old Microsoft DOS.

4. Now type CD C:\Program Files\NovaStor\NovaStor NovaBACKUP

5. This will change the directory you are running commands from so that you are now in the NovaBACKUP program

directory, and ready to run your command.

Syntax:

---

nscmd -u [User name] -d [Domain] -p [Password] [Options] -s [Job Script (.nbk) location]

Example 1: A basic command

nscmd -s "c:\file location\backup.nbk"

Example 2: Running a script specifying credentials and queuing

nscmd -u John -d Mydomain -p Password -q -s "c:\file location\backup.nbk"

General Options:

-q Use this option to allow queuing for the script.

-h This option will hide the console when the script runs.

IMPORTANT:

In Windows 7 operating systems and above, NovaBACKUP job script files (.nbk) are stored in these folder structures by default:

File based backup jobs are stored by default in: C:\ProgramData\NovaStor\NovaStor NovaBACKUP\UserScripts\your_username \Backup\.

File based restore jobs are stored by default in: C:\ProgramData\NovaStor\NovaStor NovaBACKUP\UserScripts\your_username \Restore\.

Image based backup jobs are stored by default in: C:\ProgramData\NovaStor\NovaStor NovaBACKUP\UserScripts \your_username\DR\.

Scripted Environment Variables

NovaBACKUP is able to use Windows environment variables in the script file. Though in order to use these variables you will have to manually edit the script file. User set environment variables are not available for use, just the default Windows environment variables.

Below is an example of a script excerpt using these environment variables, please notice that you have to define the variables that you want to use at the bottom of the script.

Example portion of a script file:

(. . .)

[select]

path.item.0=+$Env Variable.item.0$

path.numberOfItems=1

(. . .)

[device]

SessionLogicalId=0

SessionName=My Backup

SessionId=00000000000000000000000000000000000000000

MediaLogicalId=0

MediaExtension=nbd

MediaName=My Media

MediaId=00000000000000000000000000000000000000000

DeviceUnit=\\Server\HomeDrive\$Env Variable.item.1$

DeviceName=Network

DeviceId=0900dcfe0b0000f0a98187492b78000002000000

DeviceClassId=ntwk://

(. . .)

[Environment variable]

Env Variable.item.0=%USERPROFILE%

Env Variable.item.1=%USERNAME%

Env Variable.numberOfItems=2