

Use QNAP NAS for Backup



BACKUP EXEC 12.5 WITH QNAP NAS



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Note:

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Intended Audience

The guide is intended for system administrators and backup administrators who are familiar with storage and backup technologies.

This document assumes that the reader is familiar with the following topics:

- Backup Exec
- Active Directory
- Windows Server administration
- iSCSI

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Before starting

If you are using Windows Server 2008 R2, make sure you have an up-to-date version of Backup Exec to avoid the following error:

<u>336357</u>: Remote Windows Server 2008 R2 backup fails with error - 0xe000fec9 - A failure occurred accessing the Writer metadata

http://support.veritas.com/docs/336357

Definition:

- BE stands for Backup Exec
- IDR stands for Intelligent Disaster Recovery

Notes:

- This application note has been written and tested with Symantec BE SP3 with Windows Server 2008 R2 and with Windows Server 2003 SP2 (for IDS), in **Active Directory environment** for accessing the shared folders.
- This application note describes the connection between BE 12.5 and a QNAP NAS, and specific points you have to pay attention. **It will not describe full usage of the backup software**.
- You must use a domain user account to connect to the shared folders on QNAP NAS with BE 12.5 if the NAS has been joined to an Active Directory.
- In this application note we use a domain called 'adtest.local'. This is an example and needs to be changed to match your domain information.
- Please read Symantec BE documentation for more information about the backup software.
- To use file archive bit, the NAS firmware must be updated to version 3.3.0 or later (for more details, please refer to page 29).

Minimal configuration:

- You need a shared folder on the QNAP NAS, with Read/Write access granted to a domain user.
- BE services on the Windows server must run with the same domain user account used for the shared folder on the NAS (to be described later), with administrative privileges on that server.
- For Active Directory integration, make sure:
 - $_{\odot}$ $\,$ You have the DNS entry of your NAS on the DNS server $\,$
 - $_{\odot}$ The Windows server with BE is the client of the correct DNS server: your domain DNS server.
 - The DNS suffix has been correctly set up in the Windows server with BE.
- If necessary, you can use an iSCSI drive to store the backups from Backup Exec.



Backup Topology



Backup Exec is composed of 3 parts:

- A central backup server (BE 12.5 Server): It controls and manages the backup source and destination.
- Backup source: It can be a server or PC with Backup Exec agent installed on it, or a standard network shared folder (NAS).
- Backup destination: It can be the backup server itself or network storage connected by iSCSI or Microsoft Networking.

Backup Exec Server 12.5 for Windows can be used with QNAP NAS:

- To back up data to QNAP NAS
- To back up data from QNAP NAS

You can back up the shared folder contents of QNAP NAS with Backup Exec server to a backup storage device. You can also back up the data from an iSCSI drive through Backup Exec agent running on a server and also the contents of a shared folder.

There are two possible configurations to back up data to QNAP NAS:

- Back up to an iSCSI drive: It is easier to set up. You only need to create an iSCSI target and LUN on the QNAP NAS and connect to the NAS from a server running Backup Exec Server.
- Back up to a shared folder: It requires more settings on Backup Exec. You need to set additional configuration in order to browse the NAS shared folders correctly and to authenticate the user account used to connect to the shared folder where the backup data will be stored.

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Back up to an iSCSI drive on QNAP NAS

Create an iSCSI target on the NAS

Create an iSCSI target on the NAS and connect the iSCSI drive to your Windows server. For the instructions, see this application note: <u>http://qnap.com/pro_application.asp?ap_id=135</u>

For example, if you have connected your iSCSI drive as M:\ on your server, you can use the new iSCSI drive as the media repository and specify the Backup-to-Disk Folder to M:\

Connect BE to the iSCSI drive (NAS) as a media repository

In this example, the BE server is named 'TESTSERVER'.

Start your BE console. Go to 'Devices', locate your BE Server. Right click 'Backup-to-Disk Folders' and select 'New Backup-to-Disk Folder' in order to add a backup destination.





Enter the name of the Backup-to-disk folder that will appear in BE, for example 'My new iSCSI Backup Destination'. This name will be used in the future to select the destination of your backup jobs. Specify the path of the Backup-to-disk folder that you want to use in 'Path'. In this example, the path M:\ corresponds to the iSCSI drive which was connected previously (in Create an iSCSI target on the NAS).

<u>N</u> ame:	My new iSCSI Backup Destination
Pa <u>t</u> h:	M:N
Status:	☐ Pause ☑ Enable ☑ Online
Maximum s	ize for backup-to-disk files: 4 GB e the maximum <u>s</u> ize for backup-to-disk files number of backup sets per backup-to-disk file: 100
Concurrent	operations 1 😴 concurrent jobs for this Backup-to-Disk Folder.

Figure 2

Change other options wherever necessary (refer to Symantec documentation for more details). Then click 'OK'.

Your Backup-to-disk folder is ready to be used by BE. Please continue the application note to create a new backup job and select this Backup-to-disk folder.



Select the NAS as destination

- Start the backup wizard, choose custom settings.
- Follow the wizard until you are prompted to choose the backup device and media.

1	Which device would you like to use to back up your data?	
Му	new ISCSI Backup Destination	
	Which media set would you like to use to back up your data?	_
Kee	p Data Infinitely - Do Not Allow Overwrite	•

Figure 3

- Select your Backup-to-disk folder created previously: 'My new iSCSI Backup Destination', corresponding to the iSCSI storage on your NAS.

Note:

This solution does not require any domain integration because the iSCSI drive is directly mounted on the BE server. It is the easiest way to use QNAP NAS as a backup destination.

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Back up to a shared folder on QNAP NAS

Shared folder and permission

To use BE with the shared folders on QNAP NAS, you need to:

- Create a shared folder on the NAS to store the backup data
- Assign read/write access right of the shared folder to a domain user.

Follow the steps below to set up the connection between QNAP NAS and BE v12.5. Make sure your NAS is a member of the Active Directory. See this application note to join the NAS to an AD: <u>http://qnap.com/pro_application.asp?ap_id=153</u>

Login the NAS with an administrator account. Go to 'Access Right Management' > 'Share Folders'. Click 'New Share Folder' to create a shared folder as the backup destination. In this example, we called it 'BackupFolder'.

Folder Name:	BackupFolder 🖉
Disk Volume:	RAID 5 Disk Volume: Drive 1 2 3 4 💌
Hide Folder:	🔿 Yes 🖲 No 🕕
Lock file (oplocks):	Yes O No
Path:	Specify path automatically
	C Enter path manually
Description:	



Assign the folder access right to system administrator only.



Figure 5



The new shared folder (BackupFolder) is shown on the list.

<u> </u>			Vew Share Folder Construction Default Network Shar				
	Folder Name	Size	Folders	Files	Hidden	Action	
	BackupFolder	4 KB	0	0	No	2 3 K S	
	Network Recycle Bin 1	4 KB	0	0	No	(2)	

Figure 6

Click i (Access Control) on the same row of the new shared folder.

	٩			New Share	Folder	lestore Default Network Shares
	Folder Name	Size	Folders	Files	Hidden	Action
-	BackupFolder	4 KB	0	0	No	
	Network Recycle Bin 1	4 KB	0	0	No	

Figure 7

Select 'Domain Users' from the drop-down menu. Assign read/write access to the domain user you are going to use with BE.

Access Right to the Shar	e Folder:		×
Network Share Name: Backup	Folder		
Domain Users	Q Total: 15	M 🖪	1 /2 🕨 🚺
Name	Read only	Read/Write	Deny Access
ADTEST+administrator			
ADTEST+Guest			
ADTEST+krbtat			

Figure 8

To connect to QNAP NAS and authenticate the access correctly:

- If your NAS is joined to an **Active Directory**, you must assign the access right to a **domain user account**.



- If your NAS is in **standalone mode** (not joined to an Active Directory), you may use a local user account to login the NAS. The **user name and password on the NAS must be the same as the user name and password used by BE** services (to be explained later).
- It is highly recommended to use Active Directory.
- In this example the domain user we use is 'adtest\administrator'. You can use other domain user account.

The domain user must have administration privileges on the local BE server (see Symantec documentation for more details).

This domain user is chosen during BE installation.

륡 Symantec Backup E	xec (TM) 12.5 for Windows Servers
	Symantec Backup Exec Services Enter Service Account Information
 Welcome License Menu License Keys Local Options Credentials Settings Install 	 Enter the user name and password of an account that has local administrative privileges for the Backup Exec services to use. If you install the Backup Exec database to a SQL Server instance on a different computer, enter a domain account that also has local administrative privileges on that computer. In an existing Central Admin Server Option or SAN Shared Storage Option environment, enter a domain account that also has local administrative privileges on the central administration server or primary server. If you install the Desktop and Laptop Option, enter a domain administrator account, or a standard domain account with local administrative rights. Select or enter the Domain name in the Domain list. If this computer is not a member of a domain, select or enter the local computer name in the Domain list.
Finish Support Web Site	Username administrator Password
View ReadMe	<u>B</u> ack <u>N</u> ext <u>C</u> ancel



If you have already installed BE, you can verify the user used by BE services from your Windows server in the services management console.

See the user used for 'Backup Exec Device & Media Service' in the services management console on your Windows server:

- From the server with BE server, click 'Start'.
- Go to 'Administrative Tools' > 'Services'.
- On the list, you can see the user running 'Backup Exec Device & Media Service'.
- In this example, it is ADTEST\Administrator.

🔍 Backup Exec Agent Browser	Allows the Backup Exec job engin	Started	Automatic	ADTEST\Administrator
Backup Exec Device & Media Service	Provides several COM server inter	Started	Automatic	ADTEST\Administrator
🎑 Backup Exec Job Engine	Receives job requests from the B	Started	Automatic	ADTEST\Administrator
Backup Exec Remote Agent for Windo	Provides Backup and Restore serv	Started	Automatic	Local System
🔍 Backup Exec Server	Implements job scheduling, server	Started	Automatic	ADTEST\Administrator
🔍 Base Filtering Engine	The Base Filtering Engine (BFE) is	Started	Automatic	Local Service

Figure 10

To change the domain user used by BE, follow the steps below (see Symantec documentation for more details):

From the BE console:

Select 'Backup Exec Services...' from the 'Tools' menu.



Figure 11



Click 'Services credentials...' to edit the services credentials.

ver:	Add	I <u>m</u> port List
erver Name	Server Status	<u>S</u> tart all services
TESTSERVER	Started	Stop all services
		<u>R</u> estart all services
	ſ	Services <u>c</u> redentials
		Re <u>f</u> resh
		R <u>e</u> move Servers



Enter the account information of a domain user who has administration privileges on the Windows server and read/write access to the shared folder on the NAS. In this example we use ADTEST\administrator: the username is administrator, the domain name is ADTEST. Then click 'OK'.

<u>U</u> ser name:	administrator	Cancel
Do <u>m</u> ain name:	ADTEST 💌	<u>H</u> elp
<u>N</u> ew password:	*****	
<u>C</u> onfirm passwor	d: ×****	

Figure 13



Click 'Restart all services' to restart BE services.

ver:	Add	Import List
rver Name	Server Status	<u>Start all services</u>
TESTSERVER	Started	Stop all services
		<u>R</u> estart all services
		Services <u>c</u> redentials
		Refresh
		Bemove Servers

Figure 14



Connect BE to the NAS shared folder as a media repository

Once your shared folder has been created on the NAS with correct permission (see the procedure above), you can connect your BE server to the NAS shared folder. Please follow the steps below: In BE console, go to 'Devices', develop your BE Server. Right click 'Backup-to-Disk Folders' and select 'New Backup-to-Disk Folder' in order to add a backup destination.





In 'Name' enter the name of the Backup-to-disk folder that will appear in BE, for example 'My New Backup Destination'. This name will be used in the future to select the destination of your backup jobs. In 'Path' specify the path of the Backup-to-disk folder that you want to use. You can specify the path manually browse the Active Directory or browse the Windows Network to obtain the Shared Folder list (see below).

1. Specify the NAS shared folder as the destination in 'Path'.

New Backup-to-Disk	Folder	Comments? 🗙
General Advanced		
Name	Mu Neu Rockup Destination	_
Pa <u>t</u> h:	Nqnap-nas2.adtest.local\BackupFolder	<u> </u>
Status:	E Pause	
	Enable	
	☑ Online	
Backup-to-disk file	management	-
<u>M</u> aximum size for	backup-to-disk files: 4 GB 💌	
Allocate the m	aximum <u>s</u> ize for backup-to-disk files	
Maximum n <u>u</u> mber	of backup sets per backup-to-disk file: 100	
- Comerciant an esti		
	concurrent jobs for this Backup-to-Disk Folder.	
	OK Cancel	Help



You can use different paths to connect to the same destination, depending on your network configuration:

- \\x.x.x.x\BackupFolder (No name resolution)
- Or
- \\qnap-nas2\BackupFolder (NetBIOS name resolution or DNS name resolution if the DNS suffix is set up correctly)
- Or
- \\qnap-nas2.adtest.local\BackupFolder (**preferred**, DNS Name resolution. `adtest.local' has to be replaced by the domain name)
 - 2. Or browse to the NAS using Active Directory (the NAS must be joined to the Active Directory):

Click the browse button.







- Develop 'Active Directory Domains'.
- Develop your domain. In this example the domain is 'adtest.local'.
- Develop the server where is your shared folder. In this example we created the shared folder 'BackupFolder' on the QNAP NAS named 'qnap-nas2'.
- Select the shared folder to use for backup. In this example we use the shared folder 'BackupFolder' created previously.
- Then click 'OK'.

Figure 18



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3. Or use the NetBIOS name resolution on the same subnet by browsing Microsoft Windows Network.

New Backup-to-Disk Folder

Click the browse button.

D-ul-	
-'aţh:	
Status:	Eause
	I Enable
	I∕ _ <u>O</u> nline
Backup-to-o	disk file management
Maximum s	ize for backup-to-disk files: 4 GB 💌
C Allocat	e the maximum size for backup-to-disk files
Maximum r	number of backup sets per backup to disk file
Maximum r	umber of backup sets per backup-to-disk file: 100
Maximum r Concurrent	umber of backup sets per backup-to-disk file: 100 operations
Maximum r - Concurrent <u>A</u> llow	umber of backup sets per backup-to-disk file: 100 operations 1 😤 concurrent jobs for this Backup-to-Disk Folder.
Maximum r Concurrent Allow	umber of backup sets per backup-to-disk file: 100 operations 1 😤 concurrent jobs for this Backup-to-Disk Folder.
Maximum r Concurrent Allow	number of backup sets per backup-to-disk file: 100 operations 1 🔮 concurrent jobs for this Backup-to-Disk Folder.
Maximum r - Concurrent <u>A</u> llow	number of backup sets per backup-to-disk file: 100 operations 1 🔄 concurrent jobs for this Backup-to-Disk Folder.
Maximum r Concurrent <u>A</u> llow	umber of backup sets per backup-to-disk file: 100 operations 1 🛃 concurrent jobs for this Backup-to-Disk Folder.

Figure 19

Comments? ×

- Develop 'Domains'.
- Develop 'Microsoft Windows Network'.
- Develop your domain. In this example the domain is 'ADTEST'.
- Develop the server where is your shared folder. In this example we created the shared folder 'BackupFolder' on the QNAP NAS named 'QNAP-NAS2'.
- Select the shared folder to use for backup. In this example we use the shared folder 'BackupFolder' created previously.
- Then click 'OK'.





New Backup-to-	Disk Folder	Comments? 🗙
General Advar	nced	
<u>N</u> ame:	My New Backup Destination	
Pa <u>t</u> h:	\\qnap-nas2.adtest.local\BackupFolder	<u></u>
Status:	☐ Pause ☑ Enable ☑ Online	
⊟Backup-to-di Maximum siz ⊡ Allocate Maximum n <u>u</u>	sk file management ze for backup-to-disk files: 4 GB 💌 the maximum <u>s</u> ize for backup-to-disk files ymber of backup sets per backup-to-disk file: 100	
Concurrent o	perations concurrent jobs for this Backup-to-Disk Folder.	
	OK Cancel	<u>H</u> elp

Figure 21

After you have specified the Name and Path, you can change other options wherever necessary (refer to Symantec documentation). Then click 'OK'.

Your Backup-to-disk folder is ready to be used by BE. Please continue the application note to create a new backup job and select this Backup-to-disk folder.

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Once you have added your NAS as Backup-to-disk in BE, this Backup-to-disk folder will be available and ready to be used as a backup destination.



Figure 22

On the same window you can see information of your new backup destination.

General	
Name:	My New Backup Destination
Status:	Ready
Provider:	Backup-to-Disk
Path:	\\qnap-nas2.adtest.local\BackupFolder
Type:	Backup-to-Disk Folder

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Select the shared folder as the backup destination

- Start the backup wizard, choose custom settings.
- Follow the wizard until you are prompted to choose the backup device and media.

Backup Device and Media Your backup must be targeted to a particular device and media set.	*
Which device would you like to use to back up your data? My New Backup Destination	
Which media set would you like to use to back up your data? Keep Data Infinitely - Do Not Allow Overwrite	

Figure 24

- Select your Backup-to-disk folder created previously (My New Backup Destination) corresponding to the shared folder on your NAS.
- Complete the wizard until the end.

When you run the backup job, the backup data will be stored in 'My New Backup Destination' corresponding to the shared folder on the NAS.

For the other options regarding backup with Backup Exec, please refer to Symantec documentation.

QNAP[°]

Restore with Intelligent Disaster Recovery (IDR) from the NAS

Symantec IDR allows you to restore a complete server after a disaster, for example in case of hardware failure, even if the system cannot start anymore, by booting the server on a recovery CD. You can back up your servers with IDR backups, store your backups on QNAP NAS, and restore the complete server.

This solution has been tested with a Windows Server 2003 R1 SP2 backup. You have to create an IDR backup first to be able to restore the data using IDR. Please refer to Symantec documentation to learn how to use IDR and create the recovery CD.

- Boot the server you want to restore using the IDR CD.
- Select Automated Recovery.
- Follow the wizard to restore the server until you are prompted for the Restore Method.
- You can use your Windows server with BE media server. Select the option 'Install networking and then restore from a remote media server'. The remote media server is the BE server that manages the backup stored on QNAP NAS.

elect Restore Method You can choose to restore via a local device or across t	the network.	
Disaster Recovery is now ready to automatically restore device.	your data. Select a method for accessing the med	lia
C Use locally attached media device		
Select this option if you have locally drives, autoloaders, or backup-to-dis	connected backup media devices such as tape sk folders.	
C Install networking, and then restore from the install networking.	m remote backup-to- <u>d</u> isk folders.	
Select this option if your backup-to-	disk folders are on remote computers.	
Install networking, and then restore from the install networking.	m a remote media server	
Select this option if you want to sub	mit the restore jobs to a media server	
Click Next to continue.		
	<back next=""> Quit</back>	Help

Figure 25

When prompted for the network configuration, remember to set up your network configuration by clicking 'Configure'. For example, if you do not use DHCP, you may need to set up the IP address, the DNS or WINS server, and add your domain DNS suffix.







- After the network has been configured, you can connect to your Windows server with BE. In our example, we are using the server TESTSERVER in the ADTEST.LOCAL domain.

Enter the Backup Exec Serv	ice Account and passw	ord to connect to) the media serv	er where the me	dia device is
attached.]
Server Name:	TESTSERVER.ADTE	ST.LOCAL			
Domain Name:	ADTEST				
User Name:	Administrator				
Password:	•••••				
i) If the media server l	elongs to a workgroup,	then you do not	need to enter th	e domain name.	

Figure 27

The server name can be:

- TESTSERVER.ADTEST.LOCAL
- TESTSERVER
- x.x.x.x

The data restore can be done with the BE server and the backup stored on QNAP NAS.



nantec Intelliger	t Disaster Recovery for Windows Servers	×
Restoring Data The wizard is r	now restoring data to your disk.	
Status Scheduling R The restore h Waiting for Jo Status is Run	estore Job \\TESTSERVER5.ADTEST.LOCAL\C: as been redirected to \\testserver5\C: b to Start. ning	
▲ Backup Set C	eated on 3/24/2010 7:00:06 PM	
Job Name Media Label: Set: Destination: Directory: File:	Media No.: 38 NTESTSERVER5.ADTEST.LOCAL\C Total Bytes: 0 MB	
	Cancel Job	

Figure 28

You have completed the Disaster Recovery Wizard
This completes the disaster recovery process. Remove any diskettes from drive A: and Click Finish to start your original operating system. If you are restoring to a different system with multiple hard disks, make sure the BIOS is set up to boot from the correct disk.
On most systems, the BIOS menu can be accessed by using either F2 or DEL key

Figure 29

For more information about backup and restoration with BE, please refer to Symantec documentation.

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Back up the contents of an iSCSI drive

When you want to backup and iSCSI drive, you simply have to select this drive on the Backup Exec selection for the server that is using the iSCSI drive.

- Start the backup wizard
- Follow the wizard until you are prompted for the resources to back up (source selection).

In this example we want to back up an iSCSI drive, connected the server TESTSERVER with the drive letter (E:).

- Develop your server.

Select the iSCSI drive (E:**Error! Reference source not found.**) that is connected from the erver 'TESTSERVER'.

Backup Wizard		
Backup Selections You can back up data from any drive or share that is access		
What items would you like to back up?		
All Resources TESTSERVER TESTSERVER For a C System State System State		

Figure 30

- This will back up the contents of the iSCSI drive when backing up the server TESTSERVER.

Since the iSCSI drive is a dedicated storage, we cannot back up the iSCSI drive directly from BE. You must do it through the agent on the server that is using it.

- Complete the wizard until the end.

When you run the backup job, it will back up all the selected resources, including the contents of the disk (E:), corresponding to the iSCSI drive.

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Back up the data from the NAS shared folders

You can back up your shared folders using BE 12.5.

To do so, you need to grant the read/write access to the shared folder to the user used by BE Services (see Shared folder and permission page 10).

Note:

Firmware version 3.3 and above supports the file archive bit.

Firmware version 3.2 and below do not support the file archive bit.

Enable user shares selection

By default, you will not be able to select shared folders by browsing the NAS (to be explained later).

To enable the user shares selection, follow the steps below:

In Backup Exec console, select 'Options' from the 'Tools' menu.

Then Enable the selection of user shares in 'Job Defaults' > 'Network and Security'.

Backup	Exec 12.5	Job Defaults Device and Media	Network and Security Network
Backup 🔻 Rest	tore 🔻	Priority and Availability Backup Backup	Enable selection of user shares Enable remote agent TCP dynamic port range: 1025 * 65535
General Tasks Rename	<u></u>	Network and Security	Network interface
Delete		Pre/Post Commands	Use any available network interface
Properties		Advanced Open File	Protocol: Subnet:
Device Tasks	۲	Advanced Disk-based Backup	Use any available protocol
Pause Enable Online		Microsoft SQL Microsoft Exchange Microsoft SharePoint	Allow use of any available network interface, protocol, or subnet for remote agent interface, protocol, or subnet



Select the shared folder on the NAS

After you have enabled the user shares selection in BSER, you will be able to select the shared folder on the NAS:

- Start the backup wizard.
- Follow the wizard until you are prompted for the resources to back up (source selection).
- Browse the Microsoft Windows Network to select the shared folders.





- Or use the `User-defined Selections'.

On Figure 34, you can see that you can add the NAS shared folder by the IP address, FQDN name or host name. Make sure your name resolution is working correctly. See Appendix on page 32.

- Or browse the Active Directory to select the shared folders.



Figure 33





Back up the data from the NAS shared folders: Important Notice

NAS firmware v3.3.0 above

With NAS firmware 3.3.0 or above, you can use the archive bit as backup reference.

Go to 'Job Setup', right click your job and select 'Properties'. Go to 'Settings' > 'General'.

Source	General	
Selections	Job name: Back	up s1
Resource Order	-	
Resource Credentials	Backup set description: [back	up s1 tull
Priority and Availability	- Backup method	
Selection List Notification	Backup method for files:	
Destination	Backup method for files:	
Device and Media	Full - Using archive bit (rese	et archive bit)
Settings		
General	Eiles accessed in 3	0 🛫 days
Advanced	and the second second	1 NY 3400 MO
Network and Security	🗌 🗌 Use the Microsof <u>t</u> Ch	iange Journal if availab
	28	

Figure 35 Details of a backup job property

The last access time for files is not supported. Backup methods using last access time cannot be used. You can use archive bit or last modified time.

NAS firmware v3.2.x or older

If you are using NAS firmware version **3.2.x** or older, **the archive bit cannot be reset** by a user other than admin, and the **last access time** is not supported. Therefore, in your backup job properties or in the backup job wizard, all the options using the archive bit or last access time cannot be used.

You can verify and change the backup method of a job.

Go to 'Job Setup', right click your job and select 'Properties'. Go to 'Settings' > 'General'.

Backup method Backup method for files:	With firmware 3.2:
Full - Using archive bit (reset archive bit) Full - Back up files Using archive bit (reset archive bit) Using modified time Copy the files Archive the files (delete files after successful copy) Differential - Back up changed files since last full Using modified time Incremental - Back up changed files since last full or incremental Using archive bit (reset archive bit) Using modified time H Working Set - Back up files Changed today Last accessed in (x) days	 The followings are not supported: Using archive bit (reset archive bit) Using archive bit (does not reset archive bit) Last Accessed in (x) days Supported features: Using modified time Copy the files Archive the files Changed today



Restore files to the NAS

You can also restore the files to the NAS.

Error in restoring data to the NAS

Keeping the default restore option will result in a failure. The NAS does not support NTFS permission so Backup Exec cannot restore the permission settings of the files.

b Log for Restore 00006			
Completed status: Failed	See error(s)		
13-13	50 SO SO SO	Expand All	Collapse All

Figure 36

In this example, we try to restore to the shared folder 'BackupFolder' created previously. The restore failed as shown in the job log: Access denied, error writing security data stream.

Click an erro	r below to locate it in the job log
Restore- 172.	17.22.159
V-79-57344-38	44 - The media server was unable to connect to th
Remote Agent	on machine 172.17.22.159.
The media ser	ver will use the local agent to try to complete
the operation	
De	0 17 00 150\DL
ResLore- MIC	2.17.22.139 Backuproluer

Figure 37



To avoid the error, do the following.

In the restore properties, go to 'Settings' > 'General'. Select 'Restore all information except security for files and directories' under 'Restoring security information'. Click 'Submit'.



Figure 38

You will be able to restore the data to the NAS correctly.

ampleted status: Successful		
inpieted status. Successiui	Expand All	Collapse All

Figure 39



Appendix

Recommendations for the name resolution configuration:

- BE uses DNS resolution for name resolution in Active Directory:
 - Make sure your NAS name entry is created in your domain DNS Server.



 Make sure your Windows server is client of to the correct DNS server: your domain DNS server.



• Make sure your domain DNS suffix has been correctly set up in your Windows Server (see the picture below Figure 41) in the advanced network interface properties.

Network and	Sharing Center			Advanced TCP/IP Settings
00	Control Panel Network and Intern	et 🔹 Network and Sharing Center 💿 🔹 🕼 Search 🔹	Control Panel	IP Settings DNS WINS DNS server addresses, in order of use:
Control Pane	Local Area Connection Status	Local Area Connection Properties	Internet Protocol Version 4 (TCP/IPv4) Properti	172.17.23.230
Change adat Change adva	Connection IPv4 Connectivity: IPv6 Connectivity: Media Stale: Duration: Speed: Details Activity Sent Bytes: 125,077,167,018 Properties Disable	Networking Connect using: Intel(R) PR0/1000 MT Network Connection Configure This connection uses the following items: Client for Microsoft Networks QoS Packet Scheduler File and Printer Sharing for Microsoft Networks Internet Protocol Version 5 (TCP/IPv6) Internet Protocol Version 5 (TCP/IPv6) Internet Protocol Version 5 (TCP/IPv6) Internet Protocol Version 4 (TCP/IPv6) Internet Protocol Version 5 (TCP/IPv6) Internet Protocol Version 4 (TCP/IPv6) Internet Protocol Version 4 (TCP/IPv6) Internet Protocol Version 4 (TCP/IPv6) Internet Protocol Version 5 (TCP/IPv6) Internet Protocol Version 5 (TCP/IPv6) Internet Protocol Version 4 (TCP/IPv6) Internet Protocol Version 4 (TCP/IPv6) Enrotical Protocol Version 4 (TCP/IPv6) Enrotical Protocol Version 4 (TCP/IPv6) Enrotocol Versiocol Ver	General Biternate Configuration You can get IP settings assigned automatically if you this capability. Otherwise, you need to ask your net for the appropriate IP settings. • Obtain an IP address automatically • Uge the following IP address: IP address: Paddress: Subnet mask: Default gateway: • Obtain DNS server address automatically • Use the following DNS server addresses: Perferred DNS server: Alternate DNS server: Validate settings upon exit	Add Edk Remoye The following three settings are applied to all connections with TCP/IP enabled. For resolution of unqualified names: Append grimary and connection specific DNS suffixes Append parent suffixes of the primary DNS suffix Append these DNS suffixes (in order): Add Edit Remove DNS guffix for this connection: adtest.local Register this connection's addresses in DNS Use this connection's DNS suffix in DNS registration OK Cancel Advanced
See also		OK C		K Cancel

Figure 41

- If you are using DHCP, make sure your DHCP server provides the DNS suffix.

Server Manager								
Eile Action View Help								
Server Manager (WIN-2GP78EEAQHQ)	Server Options							
E P Roles	Option Name	Vendor	Value					
DHCP Server Win-20078eeachd, adtest, local Win-20078eeachd, adtest, local	015 DNS Domain Name	Standard	adtest.local					
Figure 42								

- NetBIOS name resolution works on the same subnet. If your NAS is on a different subnet, it may not appear on the list in 'Microsoft Windows Network'. In such case, you should use DNS name resolution.
- If your NAS is in standalone mode (not joined to an Active Directory) and in a different subnet or with the NetBIOS protocol deactivated on your network, you will not be able to browse the NAS. You must specify the path manually by the IP address of the QNAP NAS or the DNS name of your NAS.