

READYNAS™ SOLUTIONS SERIES

Simplifying Backups

© Infrant Technologies, Inc.
3065 Skyway Court, Fremont, CA 94539
www.infrant.com

Introduction

“Backup” – arguably the single most confused and ignored subject in most homes and offices. But let’s face it, either you do it now or you’ll pay later.

In the past, you would backup your data just in case your hard disk died or you accidentally erased your files. Today, with data size growing by leaps and bounds, data loss due to a virus can set back a company by days or weeks. So, it’s no longer a question of whether you back up or not, but rather what method of backup to employ and how efficiently and effectively data can be recovered.

Understandably, there’s uncertainty and questions when you first attempt to tackle backups – should you backup to tape, which backup program works the best for your office, how much do you need to spend on backups, can you trust your backups, how easy is it to recover your data, can users backup their desktops and laptops and can they recover data on their own or do they need to go through an administrator, how quickly can data be recovered, and how secure are the backups?

Simply, is there a quick and simple backup and recovery strategy you can use without spending a fortune? For most small workgroups and office environments, the ReadyNAS™ Instant Storage device can be part of a complete backup solution. We’ll address the common concerns and see how ReadyNAS can fit in your environment.

Should you backup to tape?

The typical dilemma – tape or disk.

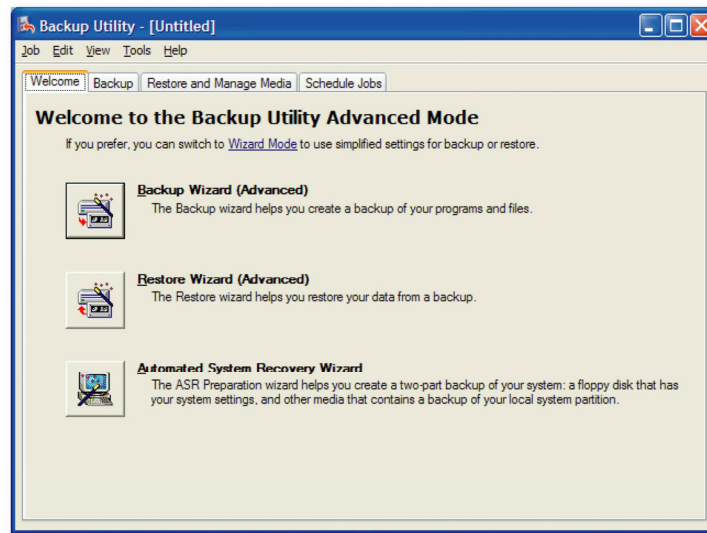
It used to be an easy decision, because disk capacity was much smaller and you were able to fit all your data on one or two tapes. Also, tape cartridges were much cheaper, and you were able to physically take the tapes with you to archive remotely.

That’s not necessarily true anymore. Unless you’re utilizing expensive tape libraries, disks can hold much more capacity, they’re cheaper, and because disks can be used in network storage devices such as the ReadyNAS, archiving remotely can be much simpler without the need to physically remove the tapes and transporting them. Also, tapes tend to need retensioning and they wear out quickly, so you never know if your recovery will succeed or not. With ReadyNAS, not only are disks much less susceptible to failure, but even if one disk fails, ReadyNAS continues to run because of the RAID 5 redundancy.

And one big advantage with disks is speed – not only in backing up data, but even more so in restoring data. With the amount of data these days, backup up to a slow media may mean going beyond the night-time backup timeframe into the workday. Disks are several order of magnitude faster than tapes. No longer do you need to keep track of which tape holds what data, much less go through the tangle of the full vs. incremental backup tapes. With ReadyNAS, restoration of data can be as simple as traversing an file explorer tree.

Which backup program?

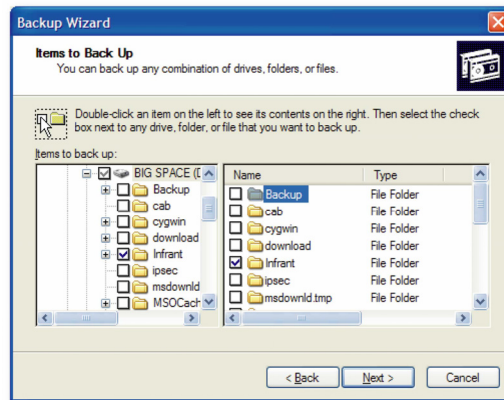
It's hard to imagine an uncomplicated backup strategy that works for your office, but with ReadyNAS, the decision on which backup program to use can be pretty straight-forward. In a predominantly Windows® office environment, backups from a Windows PC can be as easy as using the Backup tool included in each copy of MICROSOFT Windows¹. Co-developed by VERITAS, a leading backup software developer, MICROSOFT Backup is a wizard-driven program providing the capability of backing up any folder on the system onto any drive letter, whether the drive is local or remote.



For instance, you can designate a share from a ReadyNAS appliance as a mapped drive on your PC. Whether the PC is a workstation, laptop, or a server, it really does not matter. The remote share will be treated as your typical disk volume, therefore, using a backup application to store data to it is pretty much the same as copying files between two folders.

¹ Some system vendors will not install the Backup utility by default. You may need to install it manually from the included Windows CD.

With MICROSOFT Backup and others, you can specify which folders to backup, the backup strategy (normal, incremental, differential, copy, daily) and the backup schedule (once, hourly, daily, weekly, at logon, at logout, at idle), and use it to perform file recovery from the backups.



How much to spend on backups?

If MICROSOFT Backup can fulfill your requirement, your investment in a backup program will be minimal or none. If you prefer to use a different backup application, check if it supports mapped drives. Most modern mainstream backup applications do.

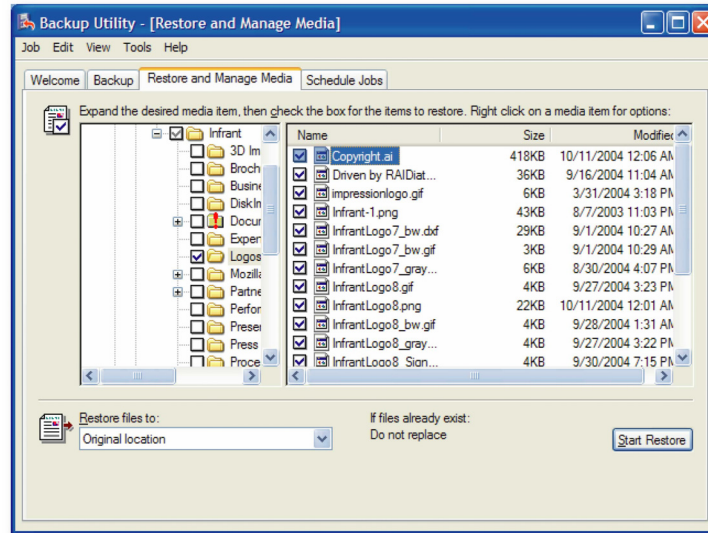
Can you trust your backups?

Most backup applications, including MICROSOFT Backup, support data verification so that you can be sure data is written to the media successfully. Unfortunately with tapes, even if the verification succeeds, if the tape cartridge is stored for any length of time, the tape itself can degrade and render all or most of the data on it useless. Remember, since tapes are sequential devices, a failure in one spot will effect the recovery from the rest of the device.

With ReadyNAS, not only will the verification of data finish quicker, if anything goes wrong on the device, you will be alerted before it becomes catastrophic. If a disk fails, you will be requested to replace it immediately to maintain redundancy. If a fan fails, or the temperature exceeds a safe range, you will be alerted. If the power fails and you have a UPS connected, you will be warned, and if the UPS battery is drained, the ReadyNAS appliance will automatically shutdown to prevent any data loss.

Restoring from Backups

An important consideration when selecting a backup solution is how easy it is to recover a file when the file is lost, corrupted, or infected. Backup programs typically store their data and control information in a vendor-unique formatted raw data file. You will need to use the restore option of the backup program to recover any file from the backup.



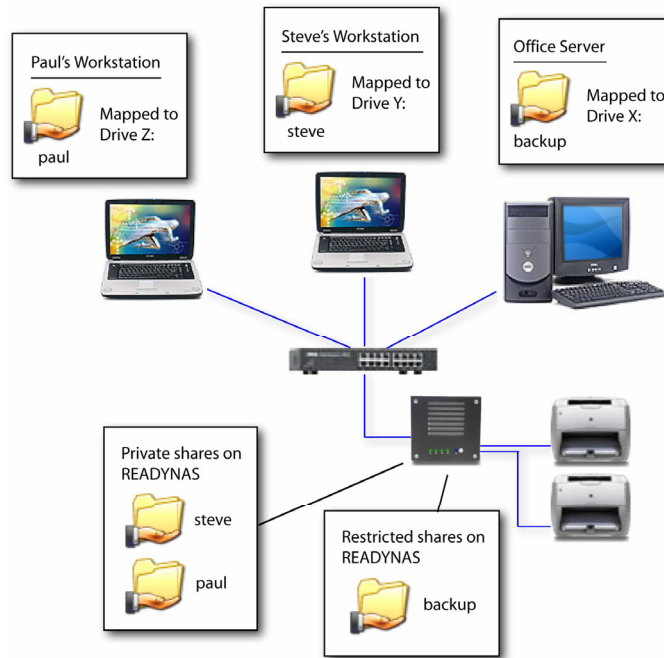
In the case of MICROSOFT Backup, you can select the desired backup data file and use the program's explorer tool to parse through the folders and select individual files or folders you wish to restore. Other backup programs have similar capabilities.

Backing up Desktops and Laptops

Backups in the office typically involves backing up the server to a secondary storage. But most offices ignore the possibly more important data residing on individual desktops and laptops. Up to now, there really hasn't been a good backup solution for these systems. Moreover, people understandably tend to shy away from backing up potentially sensitive data on public backup shares.

There are solutions where backups of desktops and laptops are initiated from the backup server through the use of an agent on each client. Aside from the inherent security risk it poses, this type of solution does not simplify recovery of data for the users.

With ReadyNAS, each user account is given a private home folder when that user first accesses the ReadyNAS. Other than the administrator, only that user is privileged to view and write to that user's private folder. Even other users belonging to his or her group will not have access to that folder. Each user will map this home folder to a drive letter and specify that in the backup program.



Because MICROSOFT Backup is readily available on each Windows PC, a quick HowTo on using this tool may be enough to encourage the users to backup their own data. In most instances, users do know the importance of backups, but the “hassle” of setting up a backup infrastructure scares or discourages these users from actually do so.

Who does the restoring?

The age-old question with backups is if you were to ever need to restore data from a backup, who do you go to? Do you send a request to the company's helpdesk, if that's even available? Do you go to the IT guy and beg him or her to do this during their free time?

With ReadyNAS, if the data to restore had resided on a Windows server, understandably only the administrator of that server will have access to the backup data on ReadyNAS, and you will need to go to him or her to get your data.

However, if the backup had been performed by an individual user, that user can easily perform the restore him- or herself. In most cases, this would be the case as users may have accidentally overwritten or deleted their own files, or may have contracted a virus on their own PC.



ReadyNAS is your simple backup solution!

With ReadyNAS, you no longer will want to delegate the backups to a far-away and unseen server. By putting ReadyNAS storage units closer to user workgroups, the backup paradigm changes, making backups easier and more accessible to users.

Remember that ReadyNAS can be your 24/7 workhorse. During the day, it can act as a file and print server. During the night, it can act as a backup server. So if you already have ReadyNAS in your plans for file serving, simplified backups come free!