INTEGRATION BRIEF

QNAP TVS-882BR and RDX QuikStor Integration and Product Review

On test is the **QNAP TVS-882BRT3 NAS**, enhanced by the Overland-Tandberg RDX QuikStor unit; the focus of the test will be on the integration between devices and the advantages for businesses.

The network storage provided by the QNAP represents **an advanced solution for medium/large-sized companies**: a generously-sized desktop NAS that is able to accommodate multiple expansion cards, **up to 8x 3.5" drives and comes with a 5.25" housing.**

This space allows for a choice of removable backup solutions, according to users' needs. The company produces models with or without a Blu-Ray optical drive, and both 16 or 32GB variants are available (max. capacity is 64GB for all versions).

The base architecture is either an Intel Core i5 or i7; in our case, the **TVS-882BRT3-i5-16G** model we received had a Blu-Ray drive, 16GB RAM and Core i5-7500 processor, a quad-core version with a 3.4GHz base clock.

As standard, the hardware includes: two multi-format M.2 slots, four Thunderbolt 3 and Gigabit Ethernet ports (each), three HDMI outputs, four USB ports and two microphone inputs. This NAS is, in effect, a versatile tool with many use cases, from backup to the management of large-capacity repositories, from the control of IP security systems to the configuration of multiple VMs, from streaming to multi-site data sharing.

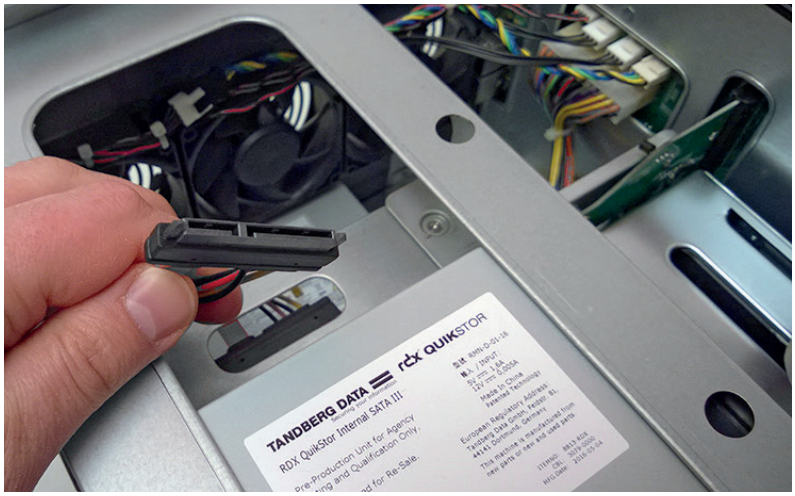
The QNAP TVS-882BRT3-i5-16G has the advantage of a desktop-like design, which allows for easy installation any workspace. At the same time, the chassis size and the generous fan allocation allows you to make full use of all internal components, including when all drive slots and racks are in use, as in our case.

In fact, for testing we received a particularly robust configuration, well-equipped with 8x 8TB Seagate IronWolf drives (Seagate ST8000VN0022-2EL112), giving a total unformatted capacity of 64TB.

But the primary focus of the test remains the native integration between QNAP storage and the versatile Overland-Tandberg RDX offsite storage solutions.

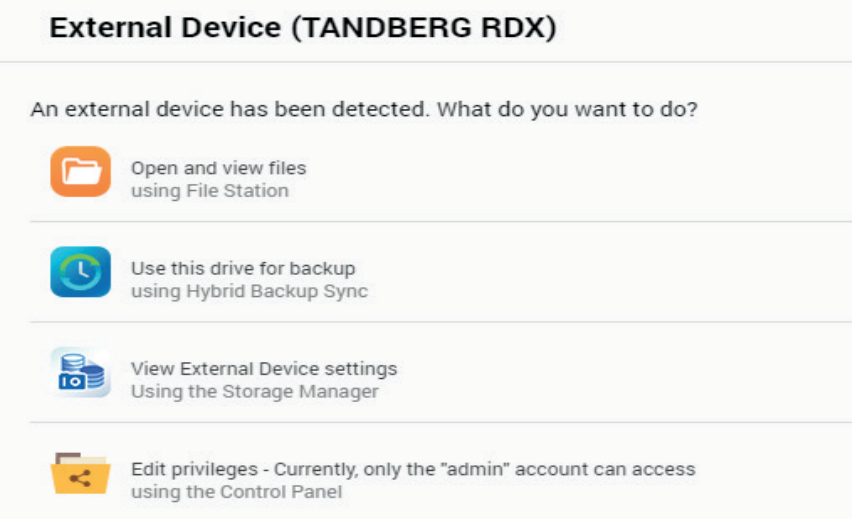
Access to the interior is only possible when the main chassis casing has been removed.

The Asus Blu-Ray unit can be detached and removed in exactly the same way as a standard desktop PC. In its place we installed an internal 3.5" RDX QuikStor unit, with the appropriate adapters for the 5.25" slot.



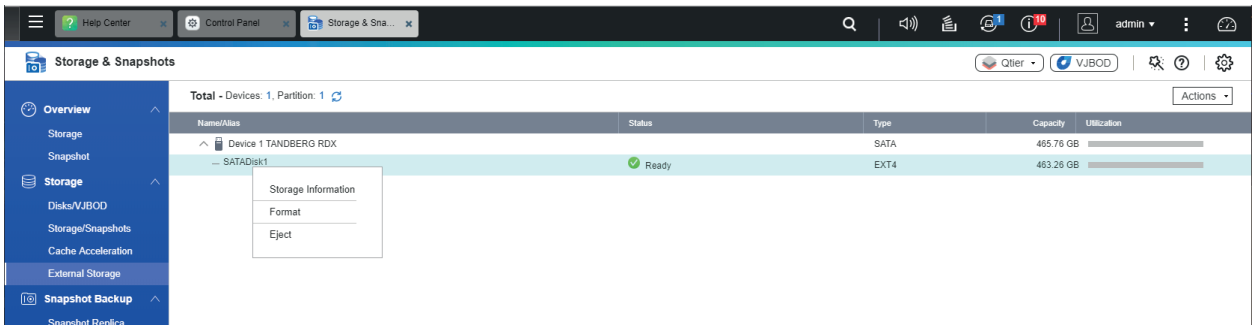
Inside, the NAS is already set up for direct connection, via a single Serial ATA and power cable. ***This can therefore be carried out by any IT technician with a minimum of experience and takes no more than 5 minutes.***

As anticipated, the native integration between the two solutions is a significant plus for customers looking for offsite protection of their data. In addition, by adopting the TVS-882BRT3-i5-16G NAS, it is possible to physically bundle the QuikStor RDX drive (which could alternatively be used externally, opting for the USB 3.0 self-powered variant).



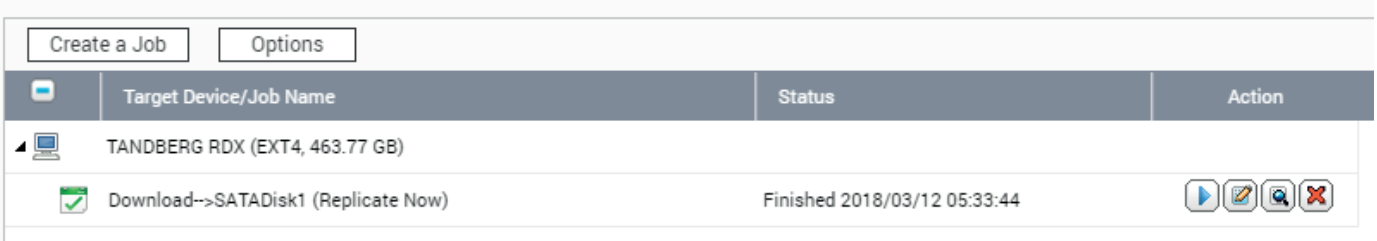
QNAP NAS Systems provide integrated backup applications

But why install a drive of this type as opposed to any other external or optical media drive?
As seen during the test of the single internal unit with Serial ATA interface (read our in-depth test), the removable Overland-Tandberg storage stands out due to the robustness of all the components involved.

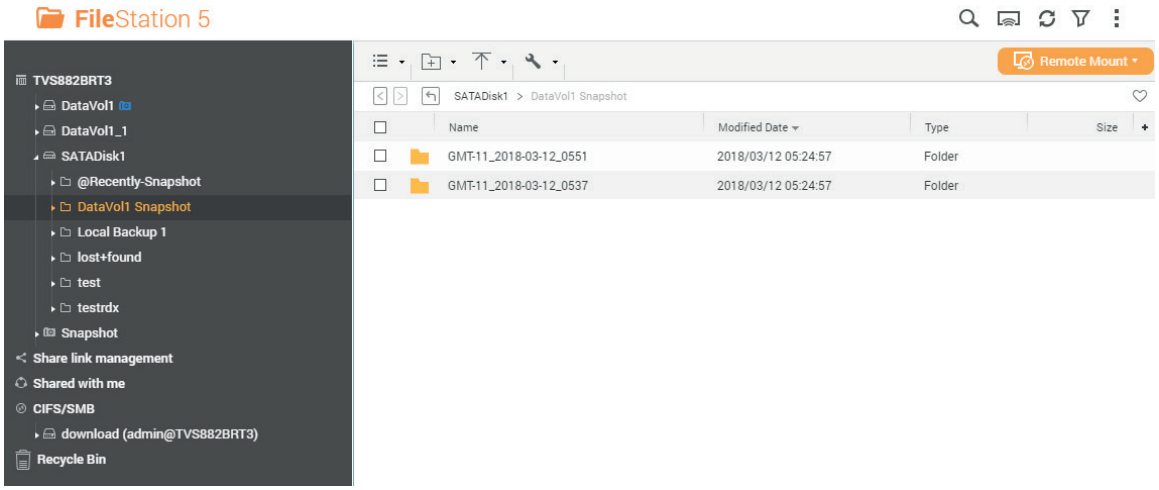


This is essential when it comes to data protection. The SATA device and cartridges (HDD or SSD) are covered by an extended warranty and are solidly built. It should be added that the cartridges are highly practical and easy to transport and use on a daily basis, which is key to making data protection truly timely and within everyone's reach. What's more, regular backup rotations on additional cartridges and data encryption can be set up, as well as support for Ransomblock and WORM for the most demanding environments with strict compliance regulations (Healthcare, PA).

Once an RDX cartridge is inserted, the device can be used as a storage location, facilitating the procedure of data backup via the dedicated role of **external backup,** sent from the **Backup Station**.



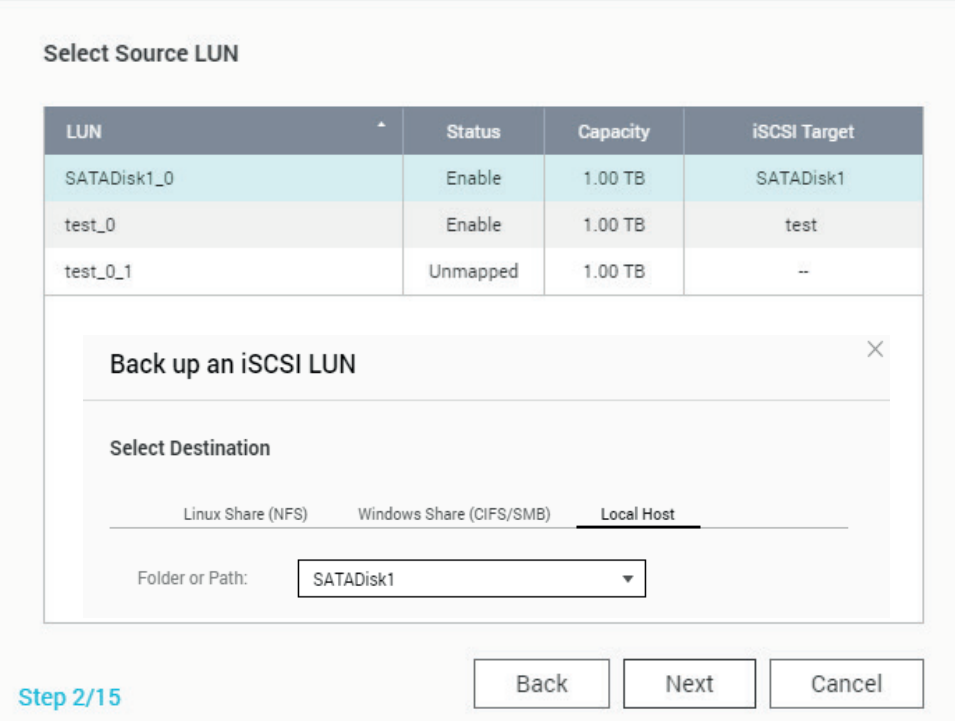
With direct copying, it is possible to replicate folders and individual files by specifying source and target, choosing the directories desired, until the copy modes are defined. It is possible to do this activity in real time, allowing the modification, removal and alteration of documents as soon as they are created or modified.
Additionally, it is possible to schedule periodic replication, for example on an hourly or daily basis, defining the policy and choosing whether or not to eject the cartridge once the operation is complete, to facilitate the daily media rotation.
Switching from **Storage & Snapshot**, the system allows you to create and define policies and methods of execution of snapshots, with archiving on RDX.
All files and archives created are easily accessible via File Station 5. The media (identified in this case as SATADisk 1) may contain not only files and folders, but also snapshots of the volumes indicated, simplifying the backup and protection of heterogeneous data.



ISCSI LUNs created and managed through the NAS can be backed up to removable disk, using the **LUN Backup** function on the iSCSI menu (under Storage & Snapshot).

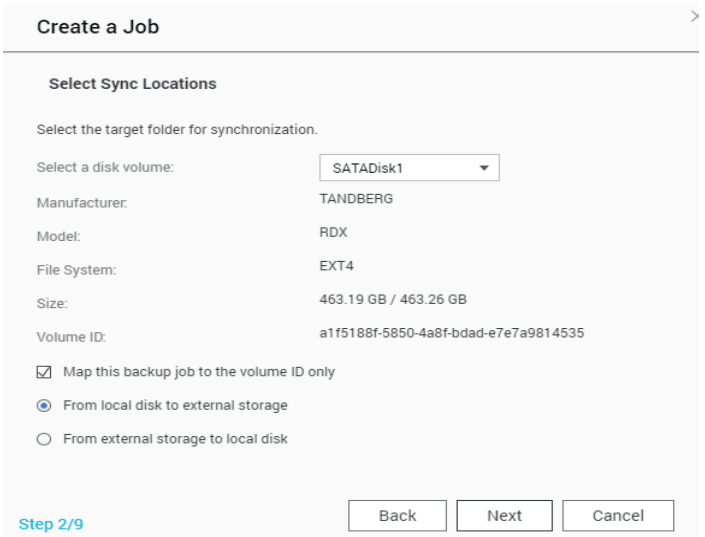
By working with infrastructure that is able to quickly snapshot the NAS, small businesses are also able to protect themselves effectively, even in the event of a malware or ransomware attack.

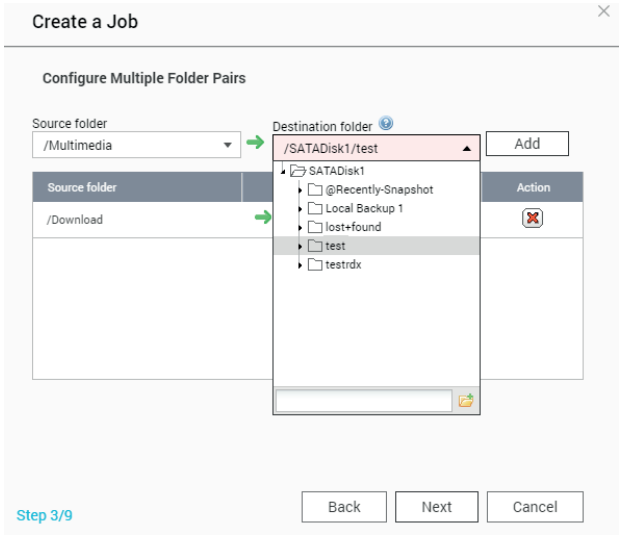
Backup an iSCSI LUN



In addition, the snapshot capabilities available are particularly comprehensive, ranging from iSCSI LUN block-based systems for thick and thin provisioning, to file-based iSCSI LUN mechanisms. It is also possible to enable snapshots at the volume level or with a shared folder for snapshots.

All these functions are accessible via the Storage & Snapshots Manager, while requests created are now easily retrievable via File Station.

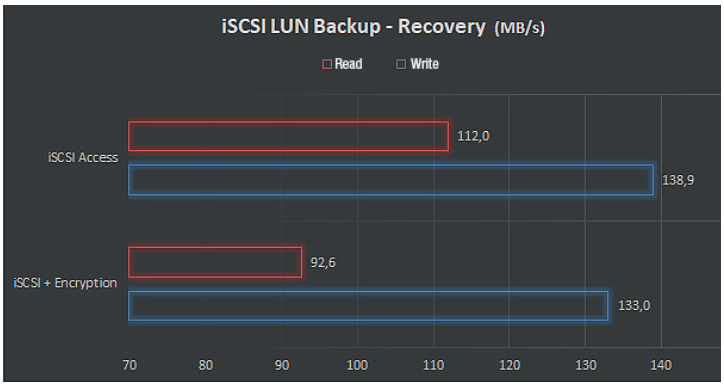


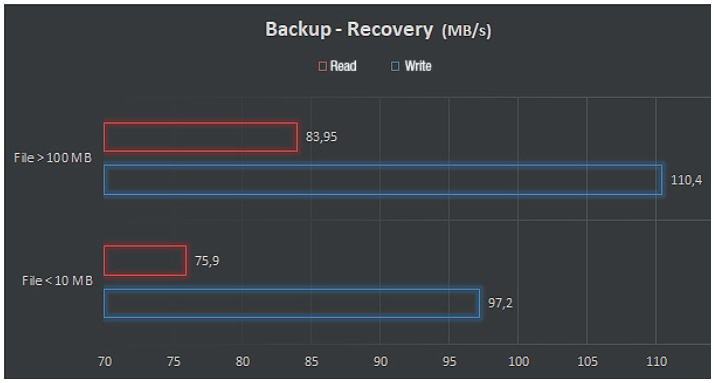


With the help of block-based snapshots, you can record and save the status of the entire file system and its metadata, externally to the file system itself. In this case, should the NAS fail or be damaged due to a virus or malware, the previously prepared snapshots will remain intact, ensuring easy recovery by users and administrators.

By looking at the results recorded, it is easy to see the advantages of a removable storage based on hard drive cartridges, over a conventional optical system. In addition to the overall higher capacity, this platform benefits from better performance.

It is possible to obtain up to 110MB/s read and 83MB/s write speed while processing fragmented files with an average size of above 100MB.

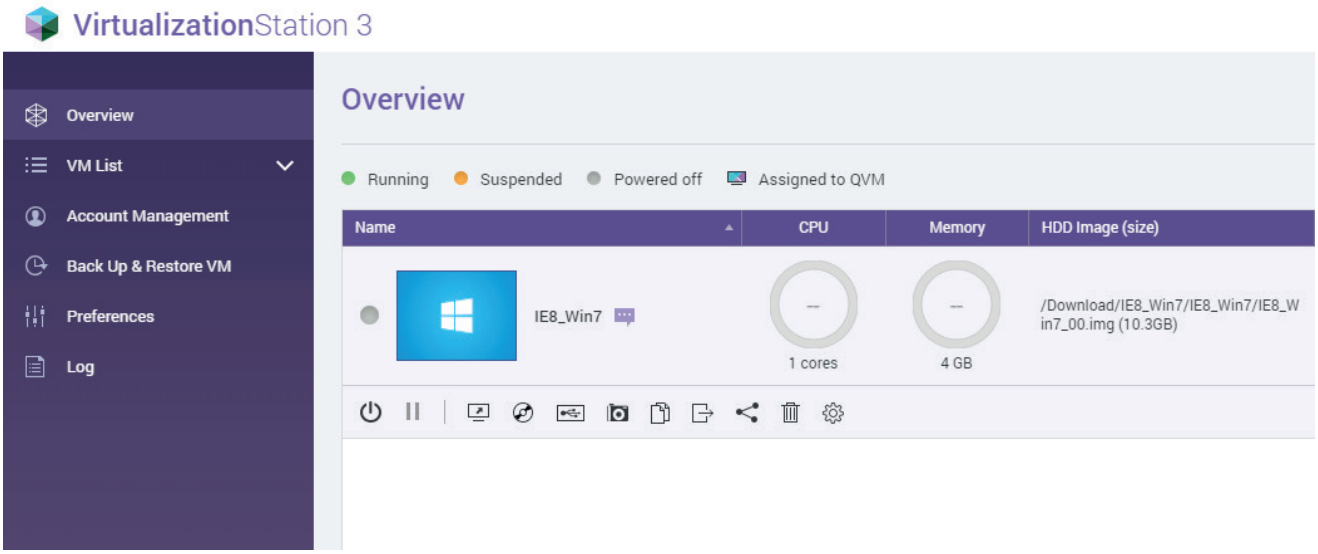




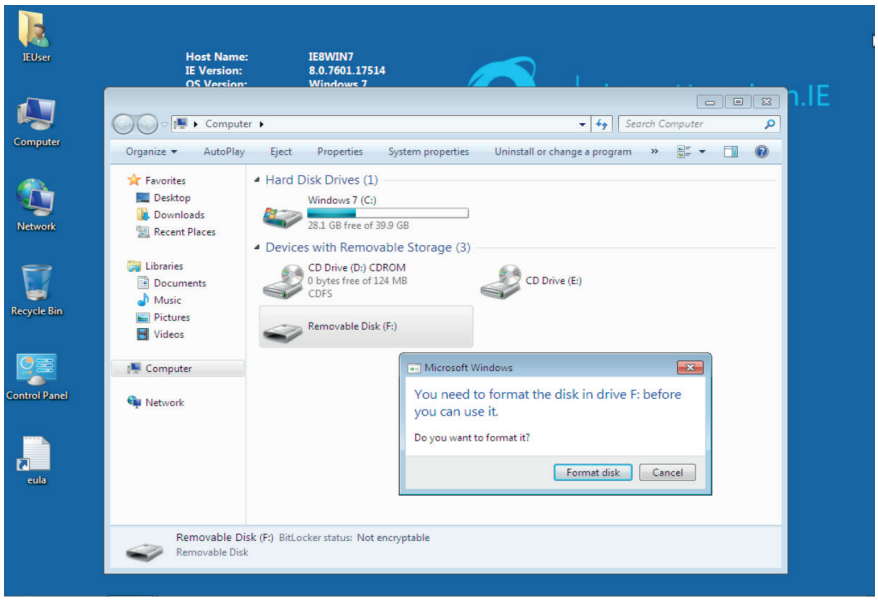
Backup and recovery on iSCSI LUNs can reach 138.9MB/s read and 112MB/s writing speeds, which matches what we recorded during the tests of the RDX unit separately inside a Windows Server workstation.

In this case, the pairing of a QNAP NAS and Tandberg RDX cartridges provide rescue and recovery speeds similar to what can be achieved in Windows environments and with machines of similar power (in any case, superior to remote network applications, which affect the speeds imposed by a Gbit connection).

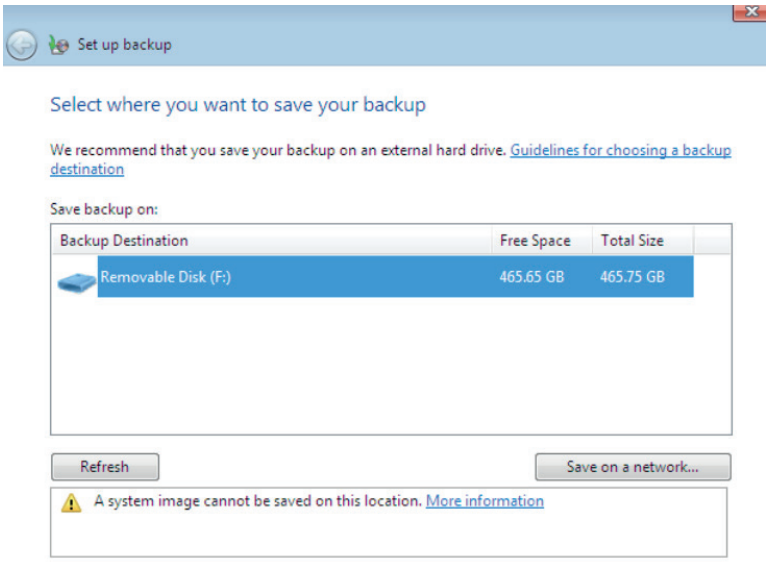
Being a device with a direct connection to the QTS operating system, the Overland-Tandberg drive can also be easily routed from virtual machines created with Virtualization Station 3.

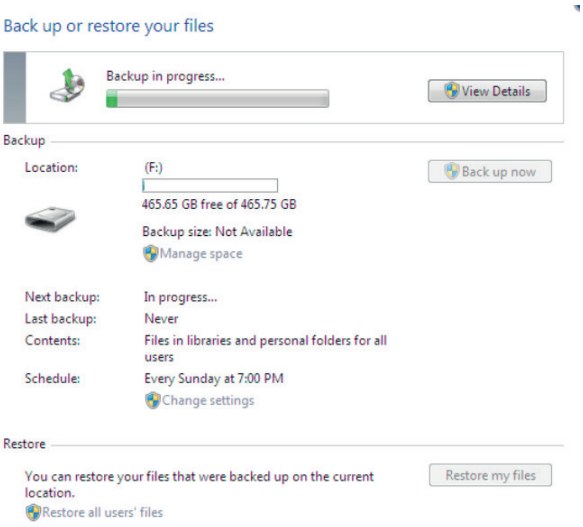


During the tests we simulated a backup procedure via Acronis software including use of the most basic Windows Backup, on a Windows 7 VM.



The inserted cartridge is recognised as local storage, the only caution that should be taken for correct operation is to format the removable disk as NTFS. This will prevent it from functioning with the other features described and, therefore, it is essential to have other cartridges allocated for different work environments. It therefore becomes more complex to configure mixed VM/iSCSI activities on the afore mentioned RDX drive.





Summary

Overall, it is a winning combination: easy to manage and free from compatibility or operational problems, for a truly seamless operation.

SCORE

92

out of 100

PROS

Tight integration between devices; seamless use in different contexts; supports snapshot, iSCSI and VM backup recovery.

CONS

For use with QTS and Windows VM it is necessary to provide a series of drives with different formatting.