OVERLAND TANDBERG

NAS Backup

Integrating RDX® QuikStor® into QNAP® NAS Backup

January 11, 2021

All QNAP NAS storage systems offer data redundancy via RAID technology. RAID doesn't protect you from data losses and it should be backed up to an external device to be protected against hardware failures or human errors regularly. An easy to use built in utility allows scheduled backups to USB attached devices like memory sticks or external hard disks.

However, these devices don't offer much reliability and durability, as they are not specifically designed for backup and archiving tasks with on/offline storage requirements. The RDX QuikStor removable storage system is a media based rugged, reliable and convenient backup appliance, which fits perfectly into a professional backup strategy. RDX QuikStor easily attaches to QNAP NAS system's USB3.0 port and is ready to go.

After the backup job has completed, the RDX QuikStor media can be ejected to be placed into a secure location. Another media should then be inserted for the next backup job. This media rotation scenario provides the best protection against data loss and unpredictable failures, disasters and malware attacks.

The following guide explains how to integrate a RDX QuikStor drive directly to a QNAP NAS system and how to schedule a backup job. In addition, this guide refers to the QNAP Virtualization Station and explains how RDX is assigned to virtual machines.
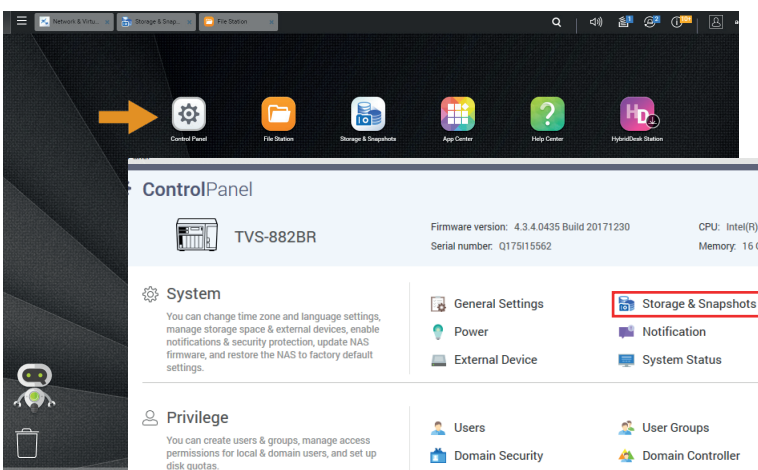
Introduce RDX QuikStor to QNAP NAS
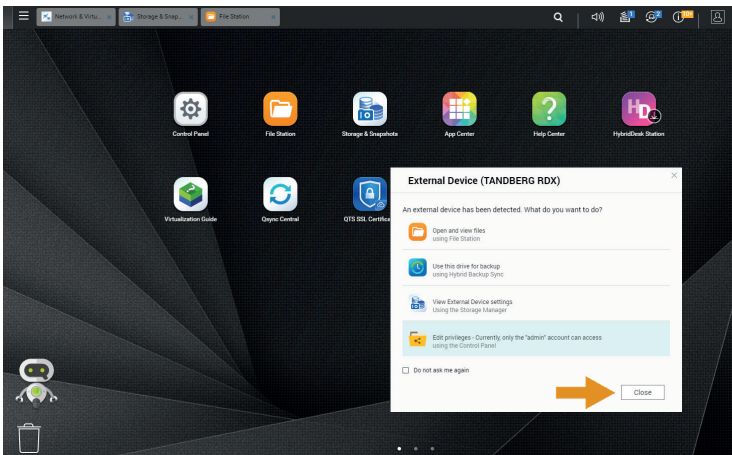
Start your NAS system and connect your RDX QuikStor drive to the USB 3.0 port at the back of your NAS system.
Insert an RDX media into the drive.

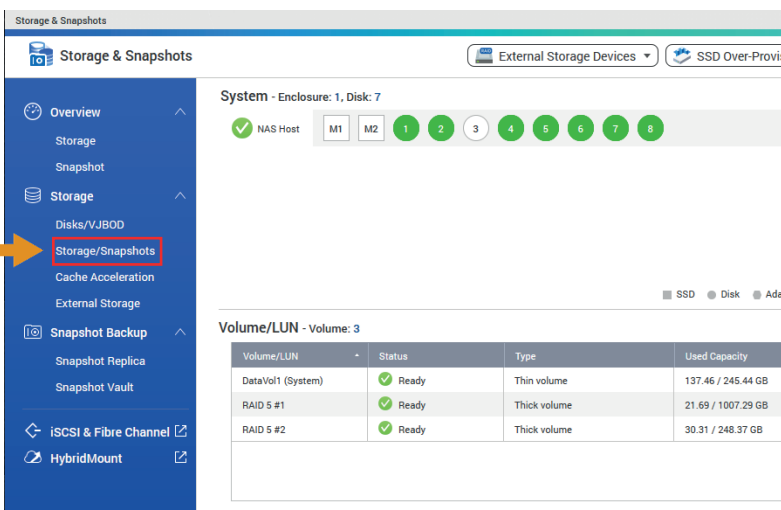There might start a popup window, offering some options.
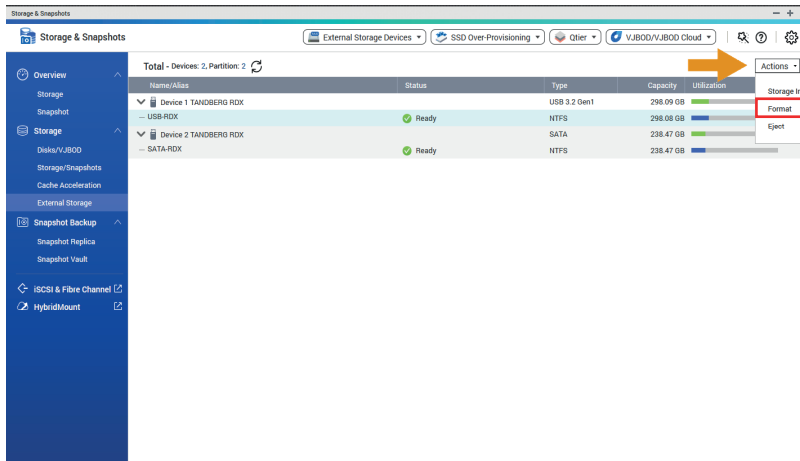
Click **Close**.

RDX media are preformatted with NTFS for Windows compatibility and are ready to use for backup. You might want to change this to EXT4 for maximum backup performance.

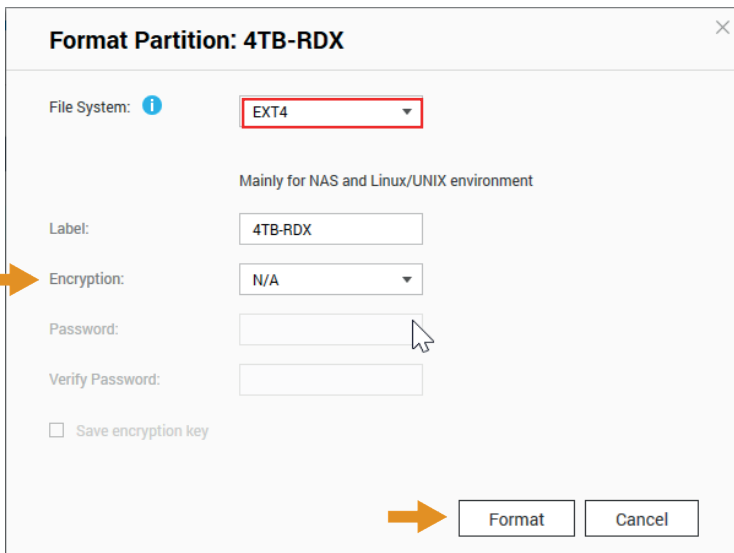If you want to keep the NTFS filesystem, proceed to the next chapter!

Otherwise click on **Control Panel** and choose **Storage & Snapshots**.

Choose **External Storage**.

All attached RDX drives are displayed. Select the desired drive and click on **Actions** and **Format**.

Choose the desired filesystem and enter a label. You might want to enable encryption to ensure that data on RDX media cannot be accessed during transport and off-site storage.
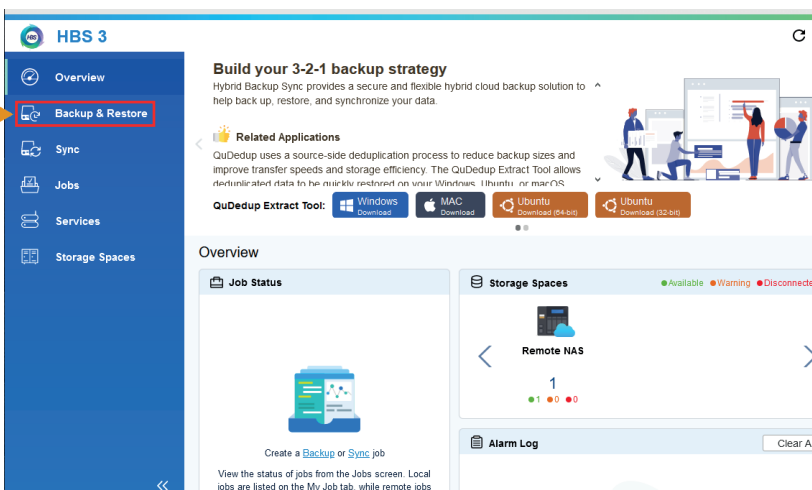
In this case, a password is required.

Click on **Format**.

The device is now ready to use.

![Overland Tandberg logo]
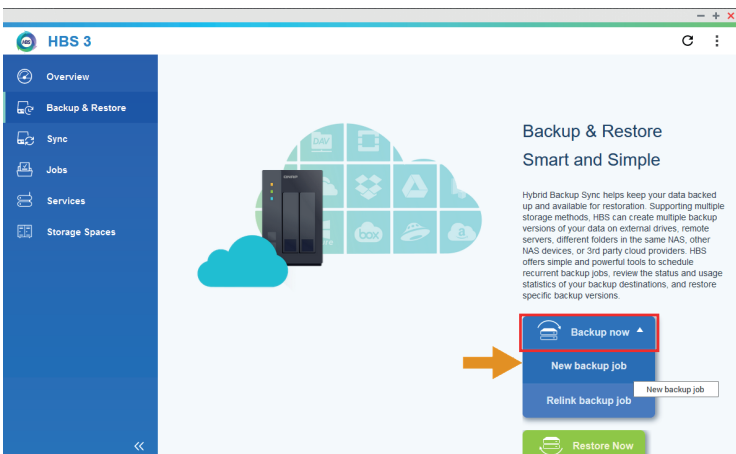
Create a Backup Job to RDX

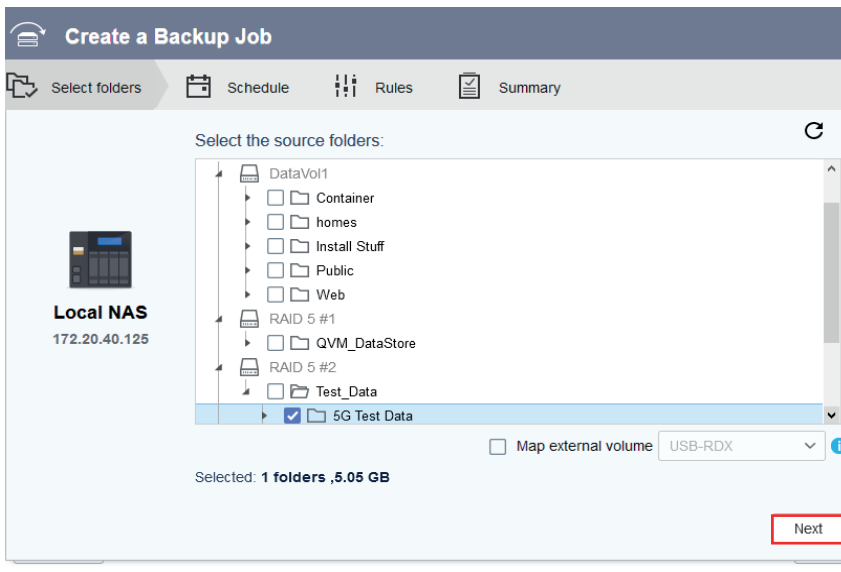From the main menu, start **HBS 3 Hybrid Backup Sync**.

If you start HBS 3, the main screen appears.
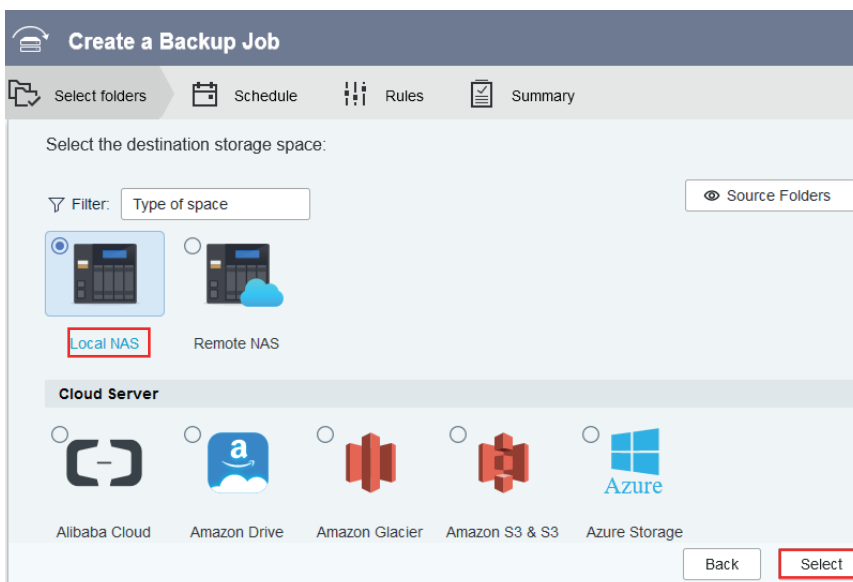
Choose **Backup & Restore**.

Choose **Backup now**.

To create a new backup job click **New backup job**.

Create a Backup Job

Select folders | Schedule | Rules | Summary

Select the source folders: ↻

- DataVol1
  - ☐ Container
  - ☐ homes
  - ☐ Install Stuff
  - ☐ Public
  - ☐ Web
- RAID 5 #1
  - ☐ QVM_DataStore
- RAID 5 #2
  - ☐ Test_Data
    - ☑ 5G Test Data

☐ Map external volume | USB-RDX | ⓘ

Selected: **1 folders ,5.05 GB**

Next

Select the source folders of your files you want to backup.

Click **Next**.

Create a Backup Job

Select folders | Schedule | Rules | Summary

Select the destination storage space:

▽ Filter: | Type of space | 👁 Source Folders

◉ Local NAS   ○ Remote NAS

Cloud Server

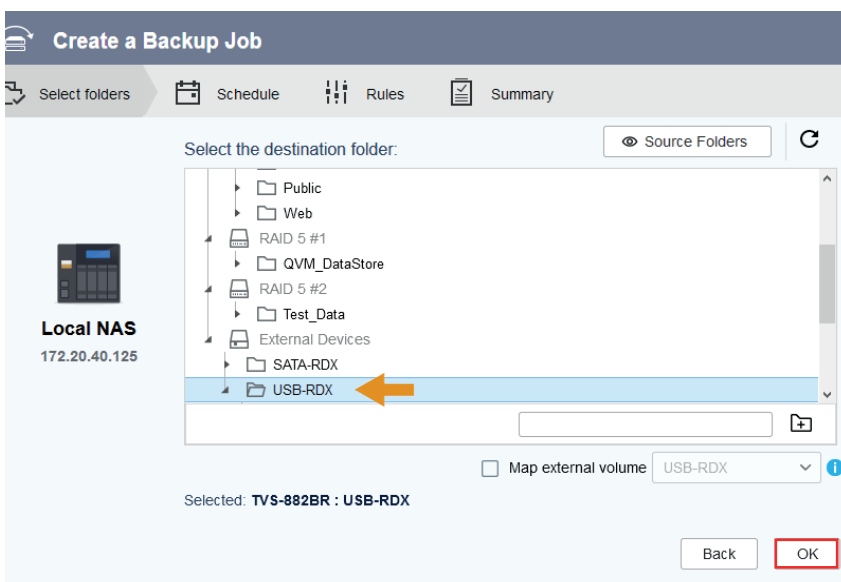○ Alibaba Cloud   ○ Amazon Drive   ○ Amazon Glacier   ○ Amazon S3 & S3   ○ Azure Storage

Back | Select

Select the destination storage space of your backup.

As RDX is attached to the local system, select **Local NAS**.

Click **Select**.

Create a Backup Job

Select folders | Schedule | Rules | Summary

Select the destination folder: | 👁 Source Folders | ↻

- ☐ Public
- ☐ Web
- RAID 5 #1
  - ☐ QVM_DataStore
- RAID 5 #2
  - ☐ Test_Data
- External Devices
  - ☐ SATA-RDX
  - ☐ USB-RDX ⬅

☐ Map external volume | USB-RDX | ⓘ

Selected: **TVS-882BR : USB-RDX**

Back | OK

Now, select the RDX system, you want to backup your files. In our case, we chose USB-RDX.

Click **OK**.

Create a Backup Job

Select folders | Schedule | Rules | Summary

Job Name: Backup to RDX

Description: This is the Backup Job with the USB-RDX QuikStor drive as the backup destination.

Local NAS 172.20.40.125 → **Local NAS** 172.20.40.125

Selected: **1 folders** → Path: **USB-RDX**

Total folders: 1 folders

Total files: 17 files

Total size: 5.05 GB

Source Folders

Cancel | Next

Source and destination are defined.

Now, name and describe this backup job according your requests.

Click **Next**.

Create a Backup Job

Select folders | Schedule | Rules | Summary

Schedule

Version Management OFF

Set the job schedule:

○ Scheduler
Up to 30 schedules can be created.

○ Run after job: Select a job
This job runs every time the selected job has finished running.

● No schedule

○ Auto-backup
The job runs each time an external storage device is connected to the NAS.

☐ Backup now

☑ Eject external volume after completion

Cancel | Back | Next

The scheduler allows you to choose between minutely, hourly, daily, weekly or monthly or one-time backups. In addition, backups can be performed after another job or as soon as the RDX is connected to the NAS system.

You also should check the **Eject external volume after completion** box to eject the RDX media for rotation reminder.

Click **Next**.

Create a Backup Job

Select folders | Schedule | Rules | Summary

Methods

Policies

Options

☑ **Enable filters**

☐ **Exclude symbolic links**
Exclude symbolic links located in the paired folder.

☑ **Exclude hidden files and folders**

☑ **Exclude system-generated temp files**
Excludes temporary files created by the system.
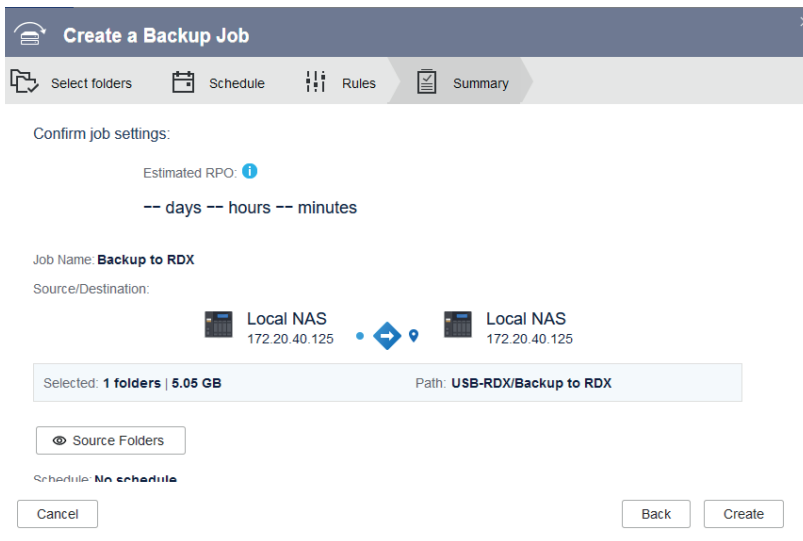
Advanced Filters

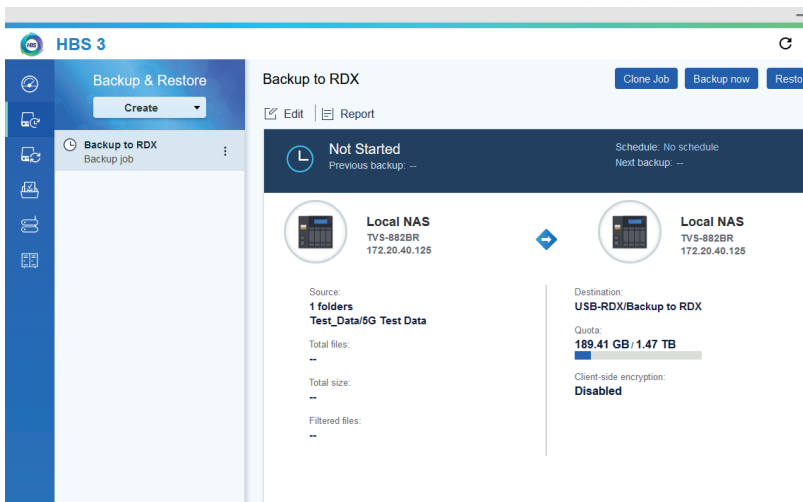Advanced settings

☐ Use QuDedup ⓘ

Cancel | Back | Next

You might choose from several backup options. Please refer to the QNAP manual for further information.

If you want to be able to restore files to another location (server, desktop, laptop, ...), please uncheck **Use QuDedup***! (HBS 3 will then create accessible files instead of a backup set.)*
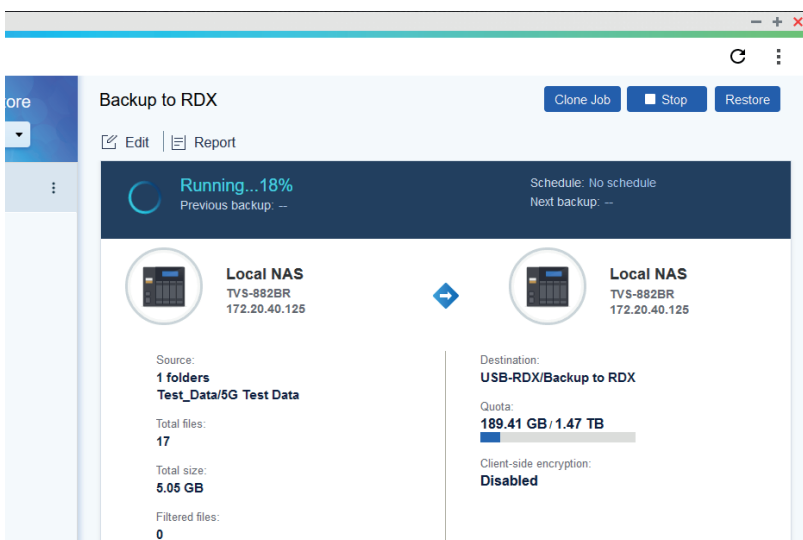
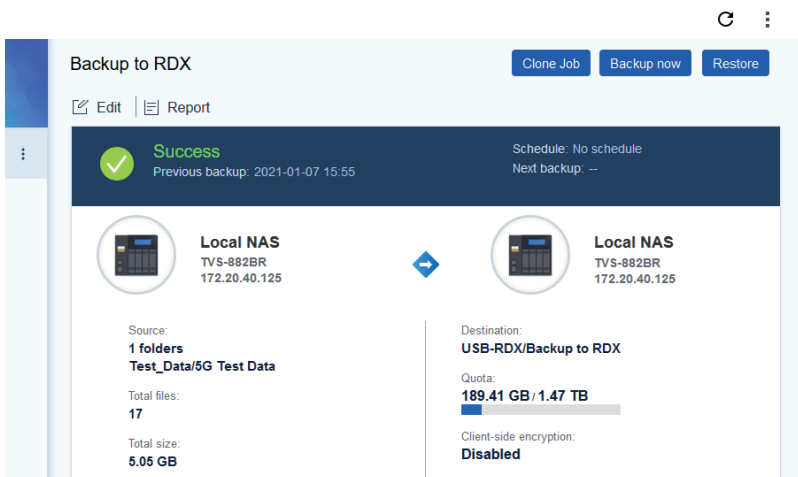Choose your options, then click on **Next**.

Create a Backup Job

| Select folders | Schedule | Rules | Summary |

Confirm job settings:

Estimated RPO: ℹ

-- days -- hours -- minutes

Job Name: **Backup to RDX**

Source/Destination:

Local NAS
172.20.40.125 → **Local NAS**
172.20.40.125

Selected: **1 folders | 5.05 GB**   Path: **USB-RDX/Backup to RDX**

👁 Source Folders

Schedule: **No schedule**

Cancel   Back   Create

Check all your setting in the summary view. If changes are necessary, click on **Back**, otherwise click on **Create**.

HBS 3

Backup & Restore

Create

Backup to RDX
Backup job

Backup to RDX   Clone Job | Backup now | Restore

✎ Edit   ☰ Report

Not Started
Previous backup: --   Schedule: No schedule
Next backup: --

Local NAS
TVS-882BR
172.20.40.125 → **Local NAS**
TVS-882BR
172.20.40.125

Source:
1 folders
Test_Data/5G Test Data   Destination:
USB-RDX/Backup to RDX

Total files:
--   Quota:
189.41 GB / 1.47 TB

Total size:
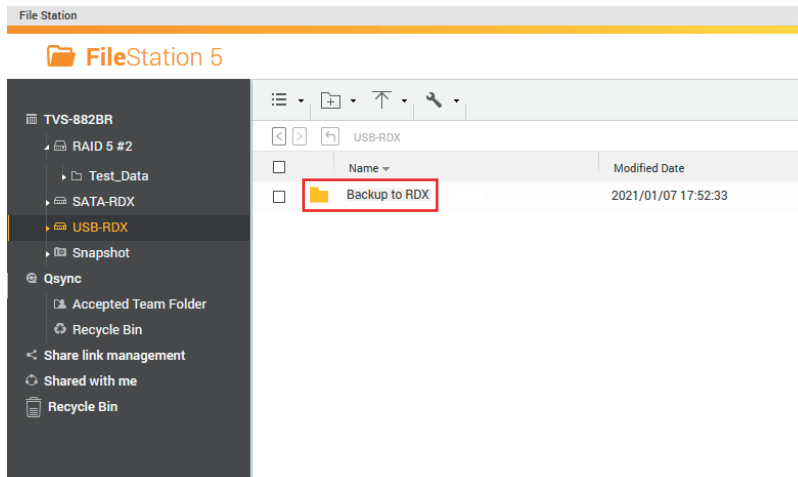--   Client-side encryption:
Disabled

Filtered files:
--

The backup job *Backup to RDX* has been created. It will start upon the specified schedule or by clicking **Backup Now**.

Backup to RDX   Clone Job | ⏹ Stop | Restore

✎ Edit   ☰ Report

Running...18%
Previous backup: --   Schedule: No schedule
Next backup: --

Local NAS
TVS-882BR
172.20.40.125 → **Local NAS**
TVS-882BR
172.20.40.125

Source:
1 folders
Test_Data/5G Test Data   Destination:
USB-RDX/Backup to RDX

Total files:
17   Quota:
189.41 GB / 1.47 TB

Total size:
5.05 GB   Client-side encryption:
Disabled

Filtered files:
0

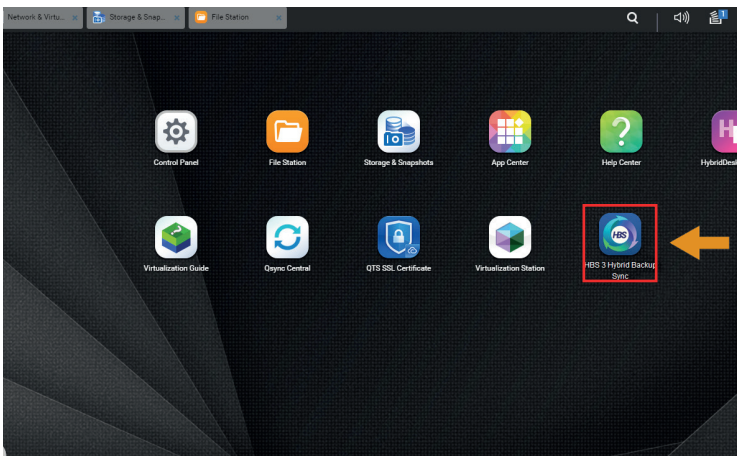The backup job starts.

The backup job completed successfully.

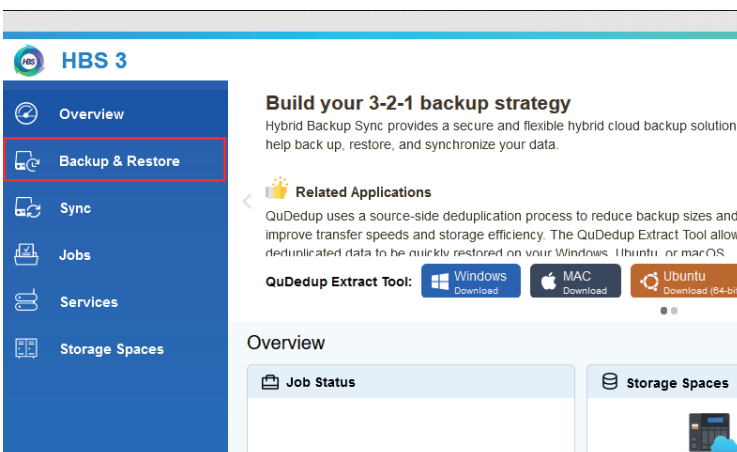If checking the RDX content, you will find a new directory named after the backup job.

For media rotation purposes, create this directory on every RDX media which will be incorporated into the media rotation scheme before running the first backup job on the new media.
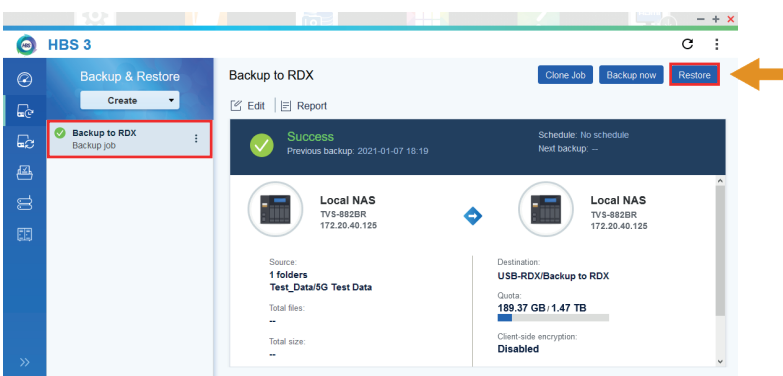
![Overland Tandberg logo]

Create a restore job

From the main menu start **HBS 3 Hybrid Backup Sync**.

From the **Overview** menu select **Backup & Restore**.

Choose the backup job you want to perform the restore.

Click on **Restore**.

Create a Restore Job

Select folders | Schedule | Rules | Summary

Job Name: Restore from RDX

Description: Restore Job from the USB-RDX QuikStor

Source: ⦿ Backup job ⃝ Destination ⓘ

Local NAS 172.20.40.125 → Local NAS 172.20.40.125

Backup to RDX ▾ → Selected location ▾

Select source +   Choose a destination +

☐ Skip deleted data ⓘ

Cancel   Next

Name and describe this restore job according your requests.

Select the source folder and chose **Original location** as the destination.

Create a Restore Job

Select folders | Schedule | Rules | Summary

Job Name: Restore from RDX

Description: Restore Job from the USB-RDX QuikStor

Source: ⦿ Backup job ⃝ Destination ⓘ

Local NAS 172.20.40.125 → Local NAS 172.20.40.125

Backup to RDX ▾ → Original location ▾

Selected: 1 folders

☐ Skip deleted data ⓘ

Cancel   Next

Click on **Next**.

Create a Restore Job

Select folders | Schedule | Rules | Summary

Confirm job settings:

Job Name: **Restore from RDX**

Source/Destination:

Local NAS 172.20.40.125 → Local NAS 172.20.40.125

Source backup job: **Backup to RDX**   Original location

Version: **Latest version : 1 folders**

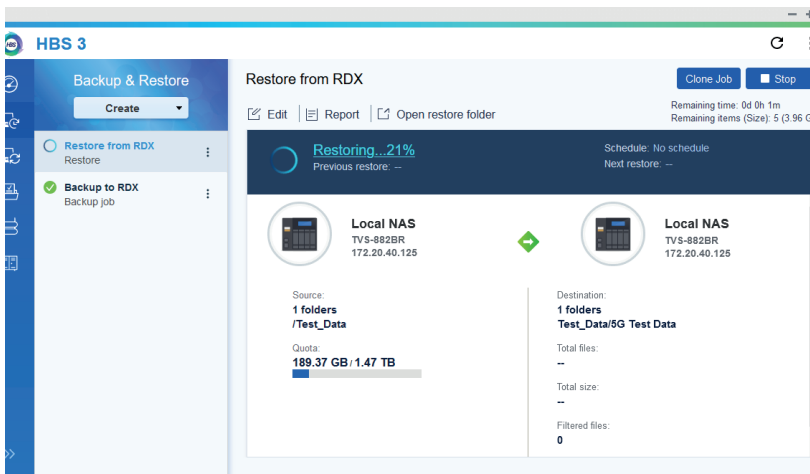Conflict policy: **Rename local files**

Schedule: **No schedule**

Cancel   Back   Restore

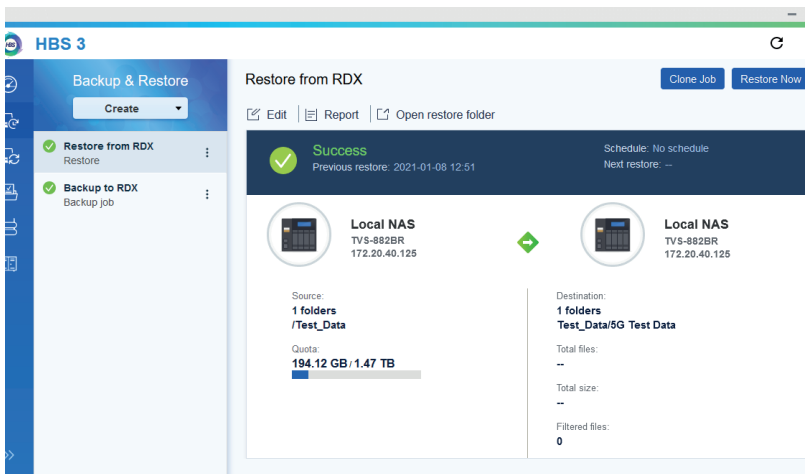The summary screen shows the setting for your review.

If changes need to be done, click on **Back**, otherwise click on **Restore**.
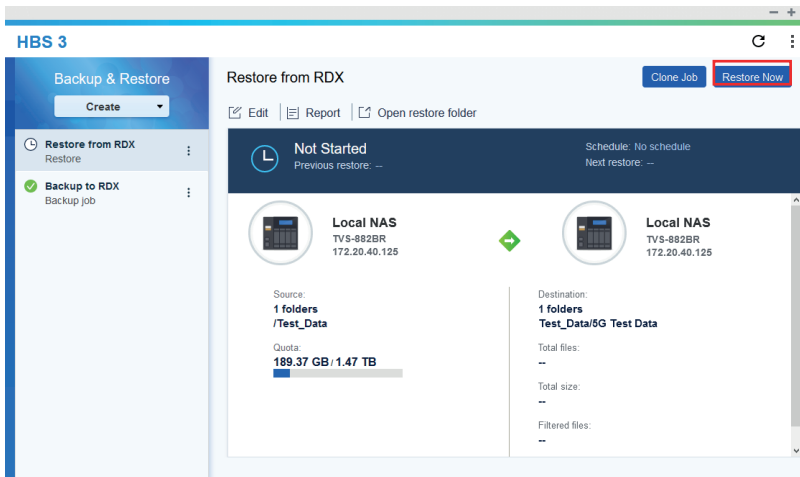
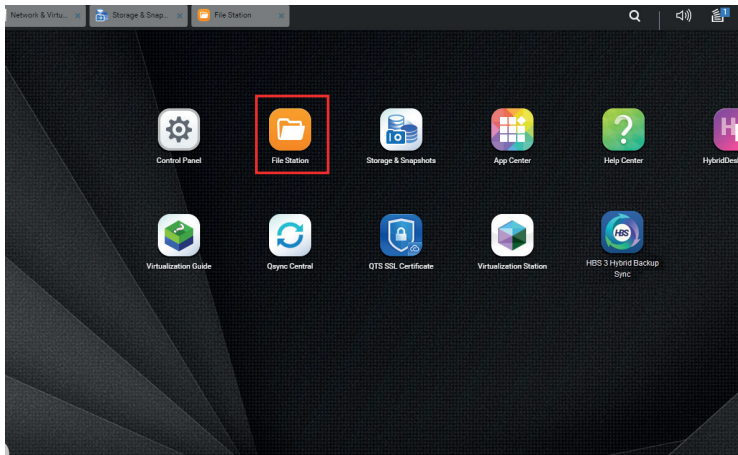The restore job has been created. Click on **Restore Now** to perform the restore.
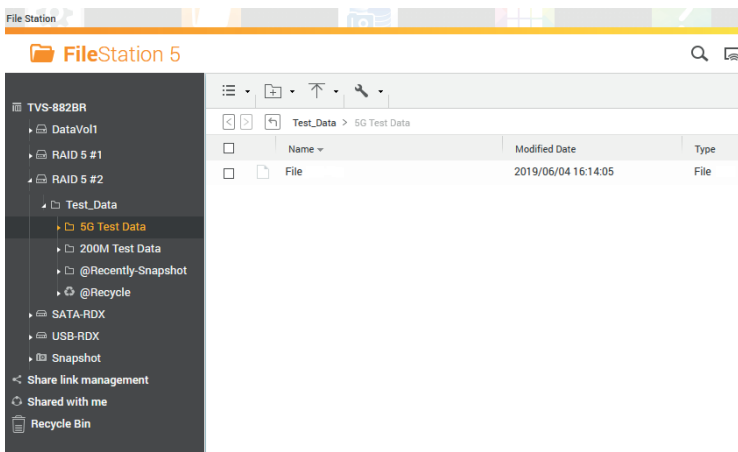

The restore job is running.

The restore job ended successfully.
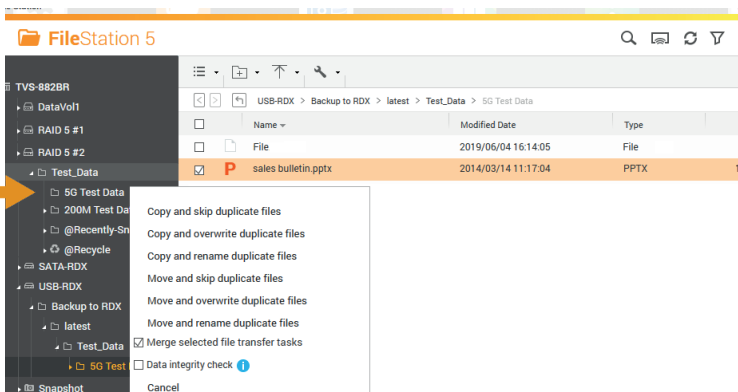
Perform a restore using File Station

If there is a need of just restoring a couple files, it might make sense, to use File Station to recover from data loss.

From the main menu start **File Station**.

Browse to the directory where you need to recover the lost file.

In our example, we deleted a presentation by accident from the directory 5G Test Data.

Browse to the Backup destination (in our case USB-RDX - Backup to RDX - Test_Data - 5G Test Data).

Select the file(s) you want restore (sales bulletin.pptx in our case).

To restore the files, drag them to the desired directory. Choose one of the options from the popup-window regarding your requests.
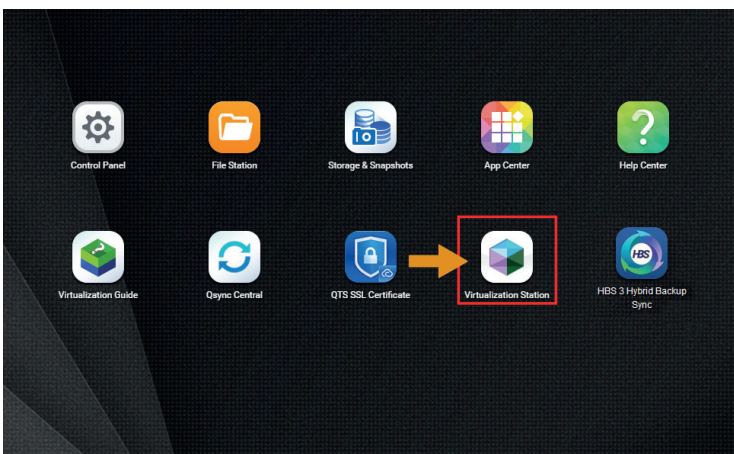
Using the Virtualization Station

Most QNAP NAS storage systems offer the Virtualization Station application (see the Virtualization Station system requirements for more information). QNAP Virtualization Station enables virtualized desktop operations on the NAS for managing multiple virtual machines with multiple operating system types. With the easy-to-use interface, you can centrally manage all virtual machines created on the Turbo NAS with least efforts.

RDX QuikStor drives can be assigned to a virtual machine and benefit from removable storage for backup and archiving tasks with any supported application (see our software compatibility list for supported applications). In addition, you can install software utilities like rdxLOCK for regulatory compliance archiving (WORM), where data must not be deleted or overwritten, or for ransomware protection (RansomBlock*), which secures backups against virus and ransomware attacks and ensures full recovery in case of infected data and blocked computer systems or RDX Manager with PowerEncrypt feature for integrated SATA III drives (currently available for QNAP TVS-882BR only), which encrypts data stored on RDX media for secure transportation and archiving.

In addition to the internal data store of the VM, the virtual machines can access directly data stored on the NAS system. With this, NAS data can be backed up to RDX using any RDX compatible backup application.

* not available for Windows Server 2019

Assigning a RDX QuikStor USB drive to a virtual machine

From the main menu select **Virtualzation Station**.
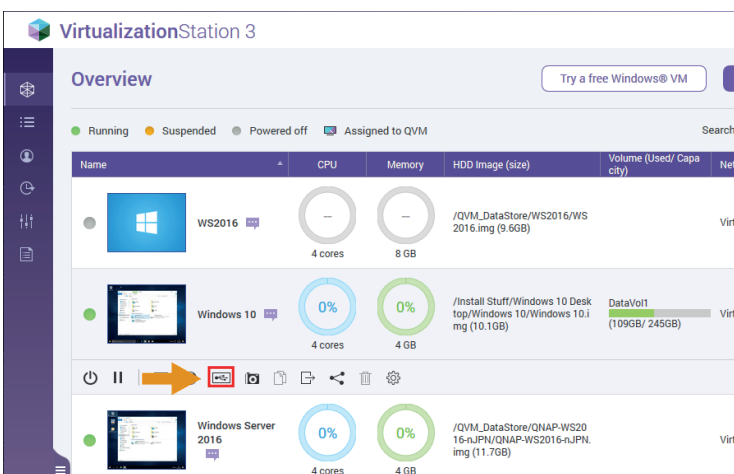
The Virtualization Station over-view screen appears, displaying all available virtual machines. Select the desired virtual machine you want to attach the RDX Quik-Stor drive.
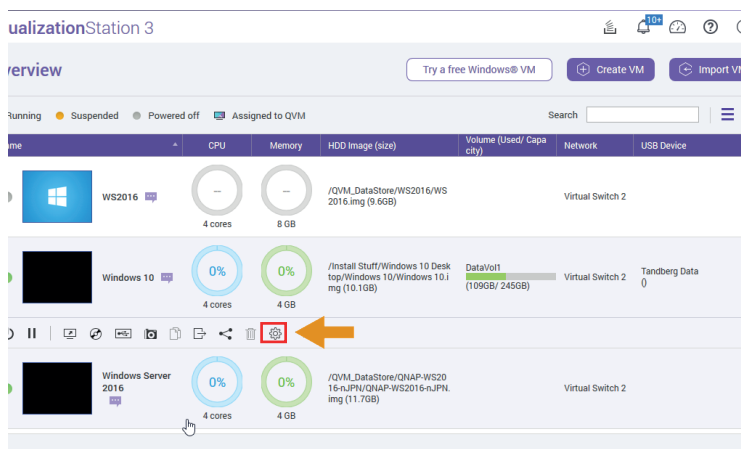
Click on the **USB Icon**.

Choose the RDX QuikStor drive you want to assign.

Click on **OK**.

The RDX USB drive has been assigned ...

... and can be used in the virtual machine.

## Assigning a RDX QuikStor SATA III drive to a virtual machine (available for QNAP TVS-882BR)

The QNAP TVS-882 NAS system offers an regular 5.25" drive bay for integration of an internal RDX QuikStor SATA III drive. The advantage of this solution is the clean integration of RDX QuikStor, without external cables and devices.

Another big advantage is the utilization of the hardware encryption **PowerEncrypt** provided by the RDX Manager software for SATA III drives, which can be installed on Windows-based virtual machines.
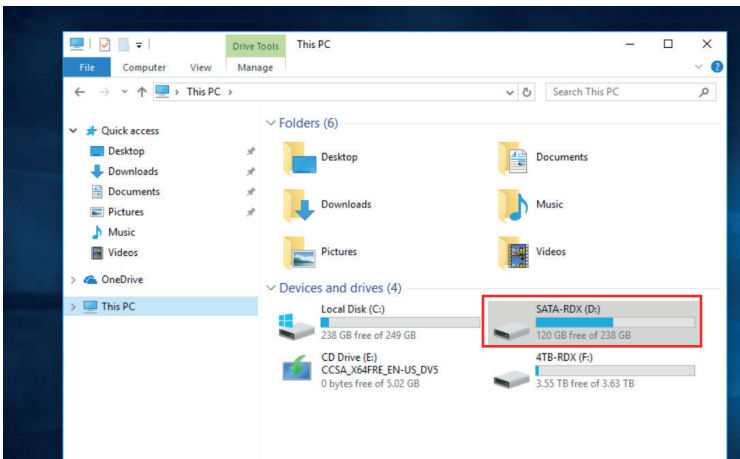

Start the Virtualization Station.

Stop the virtual machine, you want to assign the RDX QuikStor SATA III drive and click on the **Settings** icon.
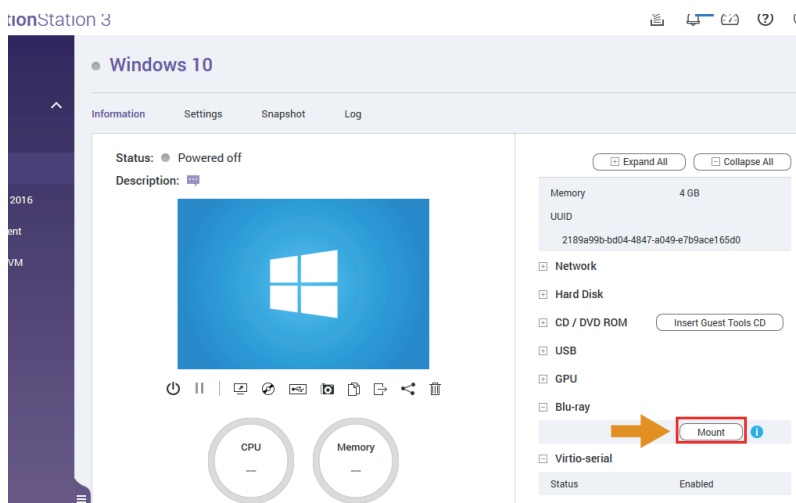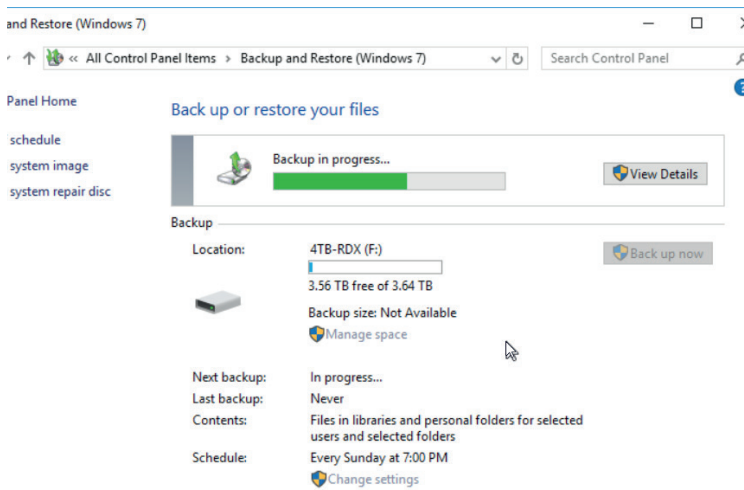

Expand the Blu-ray section on the right hand side of the windows by clicking on the **+ sign**.
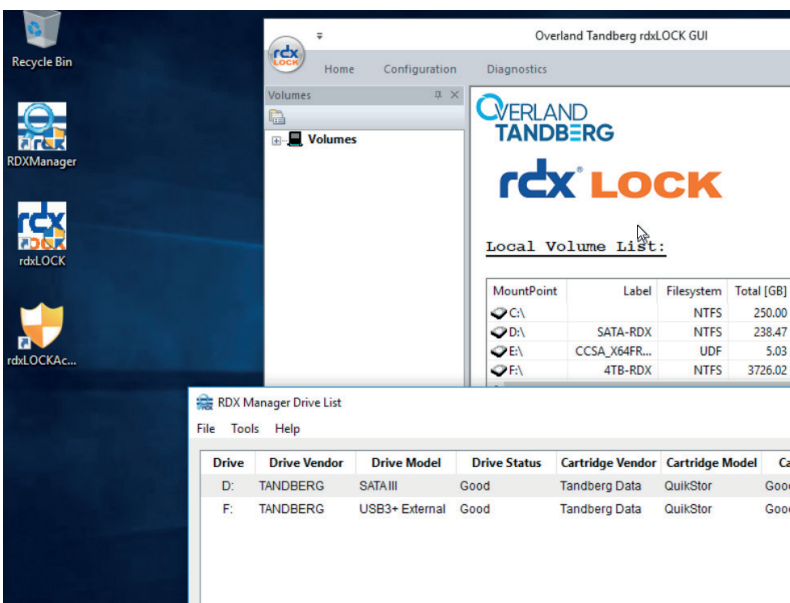
Click on **Mount**.

The RDX SATA III drive has been assigned and can be used in the virtual machine ...

... for example as a backup target for the built-in Windows Backup utility.

By installing the RDXManager and rdxLOCK software, you can use WORM, Ransomblock* and PowerEncrypt features.

* not available for Windows Server 2019