

How to Create a Virtual Tape File Using vtServer and a Physical Tape Drive

In environments where data archiving and recovery are critical, virtual tape files offer a flexible and efficient way to manage backups. By using vtServer in conjunction with a physical tape drive, you can convert physical tapes into virtual tape files (.vtape), making them easier to store, access, and manage. This process is especially useful for organizations transitioning from legacy tape systems to virtualized storage solutions.

Why This Process Matters

Creating virtual tape files from physical tapes provides several key benefits:

- **Preservation of Legacy Data:** Safely migrate data from aging physical tapes to modern storage formats.
 - **Improved Accessibility:** Virtual tapes can be accessed and managed more easily than physical media.
 - **Enhanced Backup and Recovery:** Virtual tapes integrate seamlessly with backup software, improving disaster recovery workflows.
 - **Reduced Physical Storage Needs:** Eliminates the need for storing and maintaining physical tapes.
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Now, let's walk through the steps to perform this conversion using vtServer and vtMonitor (shown on the following pages).

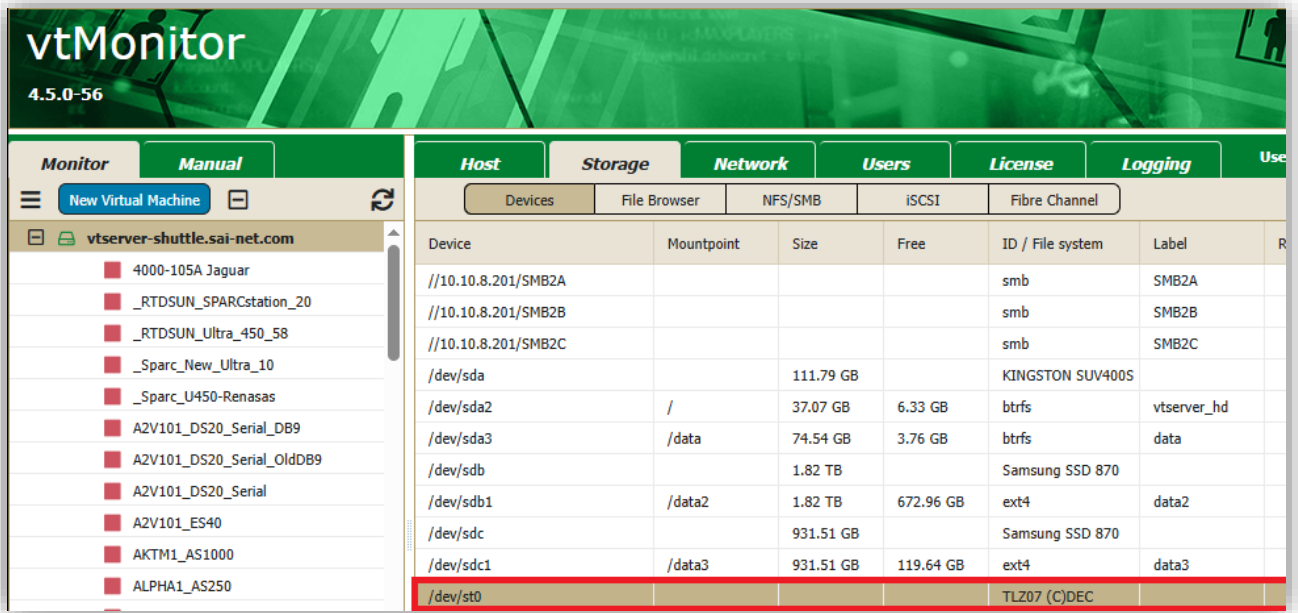
Step-by-Step Guide

1. Prepare the Hardware

- Ensure that the **vtServer** is **powered off** before connecting the physical tape drive.
- **Power on the tape drive first**, then turn on the vtServer. This ensures the tape drive is detected during the vtServer's "Bare Metal OS" boot sequence.

2. Verify Tape Drive Detection

- Once vtServer is running, open **vtMonitor**.
- Navigate to **Storage > Devices**.
- Confirm that the tape drive appears as **/dev/st0**.



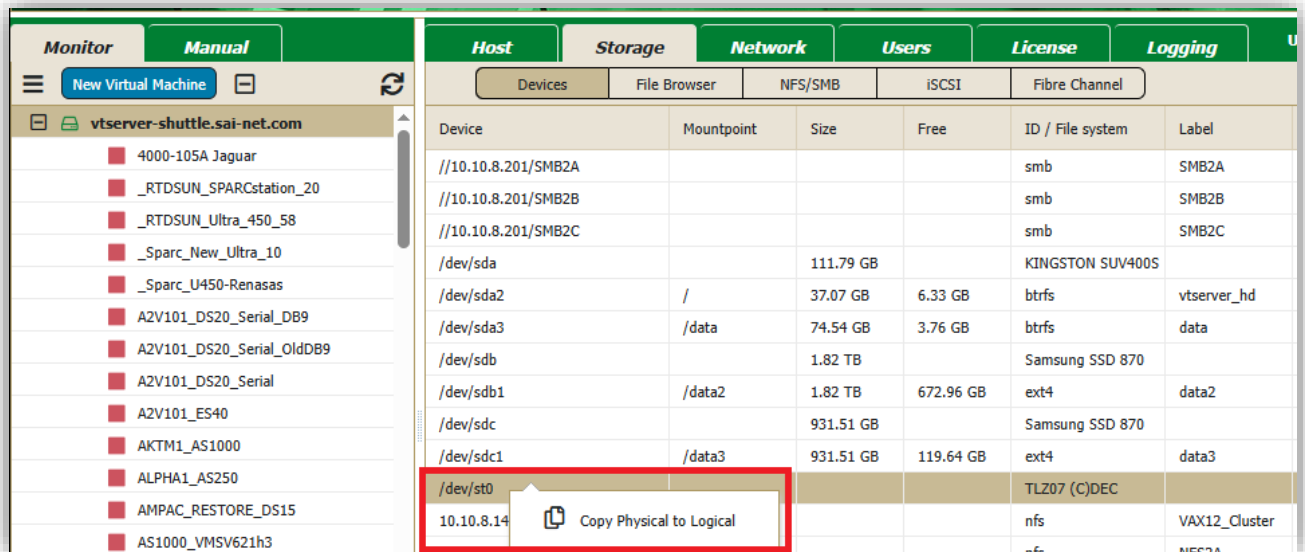
Device	Mountpoint	Size	Free	ID / File system	Label	R
//10.10.8.201/SMB2A				smb	SMB2A	
//10.10.8.201/SMB2B				smb	SMB2B	
//10.10.8.201/SMB2C				smb	SMB2C	
/dev/sda		111.79 GB		KINGSTON SUV400S		
/dev/sda2	/	37.07 GB	6.33 GB	btrfs	vtserver_hd	
/dev/sda3	/data	74.54 GB	3.76 GB	btrfs	data	
/dev/sdb		1.82 TB		Samsung SSD 870		
/dev/sdb1	/data2	1.82 TB	672.96 GB	ext4	data2	
/dev/sdc		931.51 GB		Samsung SSD 870		
/dev/sdc1	/data3	931.51 GB	119.64 GB	ext4	data3	
/dev/st0				TLZ07 (C)DEC		

3. Insert and Ready the Tape

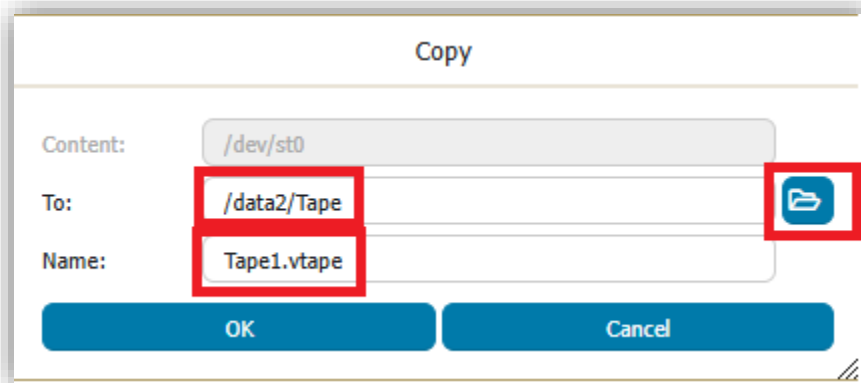
- Insert a tape into the physical tape drive.
- Wait until the tape shows as **ready** in vtMonitor.

4. Initiate the Copy Process

- Right-click on `/dev/st0` and select “Copy Physical to Logical”.



- A window will appear prompting for:
To: Specify the vtServer drive and folder where the virtual tape file will be saved.
Name: Enter a name for the virtual tape file (e.g., backup_oct.vtape).



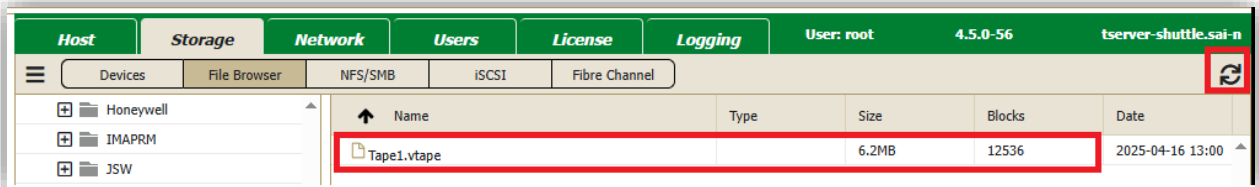
5. Monitor the Copy Status

- At the bottom of vtMonitor, look for a **Status indicator** with a **blue X**, which shows the system is busy.
- The tape drive should begin reading the tape.

Tasks Alerts					
Time	User ID	Server	Command	Status	Description
16-Apr-2025 12:48:52	root	vtserver-shuttle.sai-net.com	Copy /dev/st0 to /data2/Tape/Tape1.vtape		

6. Check File Creation Progress

- Go to **Storage > File Browser** in vtMonitor.
- Click the **refresh icon** to monitor the growth of the virtual tape file.



Note: This process may take a significant amount of time depending on tape size (be patient).