Import Tapes from Physical Tape Library To FalconStor VTL

PURPOSE:

FalconStor's VTL's import function allows an administrator to copy the data from a physical tape to a virtual tape. Doing so, then enables global data deduplication, enterprise wide replication and tape export to cloud storage without requiring changes to the existing environment.



ENVIRONMENT:

The FalconStor VTL server is configured for production, any of the 50+ supported physical tape library with tape drives and tapes is available. For a complete list of all supported physical libraries, tape drives visit our certification matrix at: <u>https://www.falconstor.com/certification-matrix/tape-devices</u>

PRE-OPERATION CHECKLIST:

A maintenance window is needed if the physical tape library has not been added to the VTL server from the VTL console.

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DETAILED INSTRUCTIONS:

1. Configure the fibre channel ("FC") zones between the VTL server and physical tape library, as well as the VTL server and physical tape drives.

Note: It is recommended to use 2-member soft FC zones (one initiator and one target). Example: VTL FC port 100's initiator WWPN: 21:00:00:24:ff:42:1d:79 Physical tape library's WWPN: 21:00:00:0d:77:3a:f2:a6 Physical tape drive 1's WWPN: 21:00:00:0d:77:3a:f2:a7 Switch: Brocade FC switch with active configuration named Production alicreate VTL_100i, 21:00:00:24:ff:42:1d:79 alicreate PTL, 21:00:00:0d:77:3a:f2:a6 alicreate PTD 1, 21:00:00:0d:77:3a:f2:a7

zonecreate VTL_100i_PTL, VTL_100i zoneadd VTL_100i_PTL, PTL zonecreate VTL_100i_PTD_1, VTL_100i zoneadd VTL_100i_PTD_1, PTD_1

cfgadd Production, VTL_100i_PTL cfgadd Production, VTL_100i_PTD_1

cfgsave cfgenable Production

- 2. Provision the physical tape library and physical tape drives to the VTL server.
- 3. From the VTL console, connect to the VTL server.



4. Go to Tools menu -> Console Options -> Change the Display Mode from Standard to Configuration.



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F A L C O N S T O R

🗈 Virtual Tape Library Console 🛛 🗙
Console Options
Choose a language for Console display Auto detect Remember password for session
Automatically time out servers after 0 minute(s)
Do not show the welcome screen for wizards
Enable advanced tape creation method
Scan for accessibility themes
Sort physical devices by Name \sim
Number of days of event log to display $15\frac{1}{15}$
Display in Configuration \vee mode
<u>Q</u> K <u>C</u> ancel

5. Go to the Physical Resources -> Storage HBAs -> Right click and select the Rescan option to pick up the new physical tape library and tape drives.



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6. Make sure there are no I/O activities (no backup jobs, no export jobs). Then click the Yes button to continue.



7. Select the Discover New Devices option and then click on the Ok button.

🔝 Virtua	Virtual Tape Library Console							
Specify Ad	apter, SCSI ID and LUN r	ang	jes to scan					
⊖ Sca	an Existing Devices cover New Devices							
Adapter:	100	to	101					
SCSHD:	0	to	15					
() U	lse Report LUNs							
- OL	UN Range			-				
	0	to	0					
S	Stop scan when a LUN without a device is encountered							
			<u>O</u> K <u>C</u> and	el				

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8. Once the physical tape library and physical tape drives are pick up, it will be display under the Physical Resources -> Storage Devices -> Fibre Channel Devices Tree

↓ CTL61238 ↓ Ctivities	۵	8 devices with filtering off.		
💠 🔯 Status	11	Device Name	Vendor ID:Product ID	SCSI Address
🛱 Virtual Tape Library System	11	6 FALCON: IPSTOR DISK	FALCON: IPSTOR DISK	100:0:0:0
A C Reports	11	6 FALCON: IPSTOR DISK	FALCON: IPSTOR DISK	100:0:0:1
Reports	11	5 FALCON: IPSTOR DISK	FALCON: IPSTOR DISK	100:0:0:2
Repositories		6 FALCON: IPSTOR DISK	FALCON: IPSTOR DISK	100:0:0:3
🗢 🚛 System	11	6 FALCON: IPSTOR DISK	FALCON: IPSTOR DISK	100:0:0:4
🕂 📆 Clients	11	6 FALCON: IPSTOR DISK	FALCON: IPSTOR DISK	100:0:0:5
Hosted Backup Client	11	IBM:03584L32	IBM:03584L32	100:0:1:0
🖻 🧓 FC Clients	Ш	2 IBM:ULT3580-TD3	IBM:ULT3580-TD3	100:0:1:1
🛄 IBMi	11			
🛥 🛺 Physical Resources	Ш			
- 🗊 Storage HBAs	- MI			
Storage Devices				
Eibra Channal Davicas		Total: 8		
SCSI Devices		0		

9. Go to Virtual Tape Library System -> Physical Tape Libraries -> Right Click -> Assign



10. Select the Physical Tape Library and click the Assign button for adding it to the VTL server.

Device Name	SCSI Address
J IDM.0004632	100.0.1.0
elect All De-Select All	

11. Right click the newly added physical tape library under Physical Tape Libraries -> Assign



12. Select all the physical tape drives that belonging to the physical tape library and then click the Assign button.

Assign Physical Tape Drives	×
Select physical tape drives to be assi	gned to the physical library "IBM:03584L32-00035
Device Name	SCSI Address
S IBM:ULT3580-TD3	100:0:1:1
Select All De-Select All	
	Assign Cancel

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13. If there are any manual changes on the physical tape library like adding physical tapes, then update the changes on the VTL server by right-clicking the newly added physical tape library under the Physical Tape Libraries tree -> Inventory



General Layo	out Physical Dr	ives Physical Tapes Performance
Barcode	Location	Stacked Tape
DEMO00L3	In Slot:0	No
DEMO01L3	In Slot:1	No
DEMO02L3	In Slot:2	No
DEMO03L3	In Slot:3	No

14. Create a new virtual tape library with same tape drive type technologies (IBM LTO, HP LTO, Quantum DLT etc)



<u>Note</u>: VTL can import data from physical tape to virtual tape by using newer generation of the same tape drive type technologies. For example, the physical tape drive is IBM LTO3 and the virtual tape drive is IBM LTO7. However, please make sure the backup software's restore job is compatible with newer tape drive type. Otherwise, use the same or one generation newer drive type.

F A L C O N S T O R

15. To import physical tapes to the VTL server, right click on the newly physical tape library - > Import Tape



16. Pick the destination virtual tape library for placing the import tape. Then click Next button.

mport Physical Tape To Virtual Library Wizard - [VTL	.61238]	>
Select the virtual library to which you want to import a tape.		
🥞 Select the virtual library to which you want to import.		
Virtual Tape Library		
IBM-TS3500L22-00023		1
IBM-TS3500L32-00026		
IBM-TS3500L32-00030-Demo		
Click <next> to continue.</next>		
	Back Next Cancel	

17. Select the Copy Mode for the import job.

mport Physical Tape To Virtual Library Wizard - [VTL61238]	<
Select the import mode for importing a tape.	
Select the import mode for importing a tape.	
Copy Mode	
Copies the contents of a physical tape onto a virtual tape and retains the physical tape after the data is transferred.	
O Direct Access Mode	
Links a physical tape to its virtual counterpart. This gives the backup application immediate access to the tape data without waiting for a complete copy. This is useful when you need to restore a small amount of data from a physical tape.	
O Recycle Mode	
Recycles a physical tape after its retention period has been reached.	
Decrypt data with the selected key when importing a physical tape	
Select a key:	
Click <next> to continue.</next>	
Back Next Cancel	

18. Select the physical tapes that will be imported and click the Next button.

Ma	Virtual Tape Library: IBM- aximum physical tapes that (rS3500L32-00026. Import Mo can be imported: 6.	nary. Ide: Copy Mode. Total Fre	ee Slots: 247.	
*	Physical Tape Barcode	Location	Virtual Tape Bar	Slot	
	DEMO00L3	slot: 0	DEMO00L3	6	\sim
	DEMO01L3	slot: 1	DEMO01L3	7	\sim
	DEMO02L3	slot: 2	DEMO02L3	8	\sim
	DEMO03L3	slot: 3	DEMO03L3	9	\sim
	DEMO04L3	slot: 4	DEMO04L3	10	\sim
	DEMO05L3	slot: 5	DEMO05L3	11	~
	Select All De-Select ick <next> to continue.</next>	All			

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19. Select the storage LUN for saving the data and click Next button.

Total Available Space: 129,508 MB Total Selected Space: 129,508 MB					
Storage Pools Physical Devices	•	Device Name	SCSI Addr	Available(Availability
		FALCON: IPSTOR DISK	100:0:0:3	129,508	Available

20. Review the import request and click Finish button to submit the import job(s).

Import Physical Tape To Virtual Library Wizard - [VTL6	51238]	×
Verify and import		
Verify and import		
Virtual Library Name: IBM-T \$3500L32-00026 Physical Tape Barcode: DEMO05L3 Virtual Tape Barcode: DEMO05L3 Mode: Copy Physical Tape In Slot: 5 To Slot: 11		
	<u>B</u> ack <u>Finish</u> <u>C</u> an	cel

21. An import job will be created for each selected physical tapes and display under the Activities -> Tape Import/Export Queue

- 128	Â	1 job with filt	ering off. [1 active,0 completed]		
Deductive let Over	Ш.	Job ID	Туре	Virtual Barcode	Physical Barcode
Deduplication Job Queue	Ш.		Import from Physical Tape Library (Copy)	DEMO05L3	DEMO05L3
🧽 Unique Replication Queue	Ш.				
	Ш.				
🖙 🍣 Tape Import/Export Queue [1 Job]					

22. Once the import job is completed, the corresponding virtual tape for each import job will be show up in the destination virtual tape library.

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6 tapes with filtering off.			
Name	Barcode	Size(MB)	Location
VirtualTape-TS3500L32-00004	001A00L5	46,080	In Drive:2
🍥 VirtualTape-TS3500L32-00005	001A01L5	25,600	In Slot:1
VirtualTape-TS3500L32-00006	001A02L5	0	In Slot:2
🍥 VirtualTape-TS3500L32-00007	001A03L5	0	In Slot:3
🍥 VirtualTape-TS3500L32-00008	001A04L5	0	In Slot:4
irtualTape-00016	DEMO05L3	5,120	In Slot:5

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