

# Setting Up Dell<sup>™</sup> DR Series Deduplication Appliance on HP<sup>®</sup> Data Protector 7.0

Dell Engineering January 2014

A Dell Technical White Paper

## Revisions

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### Executive summary

This paper provides information about how to set up the Dell DR Series Deduplication Appliance as a backup target for HP Data Protector 7.0. This paper is a quick reference guide and does not include all DR Series Deduplication Appliance deployment best practices.

See the DR Series Deduplication Appliance documentation for other data management application best practices whitepapers at <u>http://www.dell.com/support/troubleshooting/us/en/04/Product/powervault-dr4100</u>, under "Manuals & Documentation".

**Note:** The DR Series Deduplication Appliance/HP Data Protector build version and screenshots used for this paper may vary slightly, depending on the version of the DR Series Deduplication Appliance/ HP Data Protector software version used.



## 1 Install and Configure the DR Series Deduplication Appliance

- 1. Rack and cable the DR Series Deduplication Appliance appliance, and power it on.
- 2. Please refer to *Dell DR Series System Administrator Guide*, under sections of "iDRAC Connection", "Logging in and Initializing the DR Series System", and "Accessing IDRAC6/Idrac7 Using RACADM" for using iDRAC connection and initializing the appliance.
- 3. Log in to iDRAC using the default address **192.168.0.120**, or the IP that is assigned to the iDRAC interface. Use user name and password of "**root/calvin**".

	ATED DELL REMOTE CONTROLLER 6 - ENTER	PRISE	Su	ipport   About   Logout		
System Dell DR4000 root , Admin		Power Logs Alerts Console/Media stem Details System Inventory	vFlash Remote File Share			
System IDRAC Settings Batteries	System Summar	, ,		• C ?		
Fans	Server Health					
Power Supplies	Status Component		Virtual Console Preview			
Removable Flash Media Temperatures	Eatteries		Options : Settings			
Voltages	Pana Pana					
Power Monitoring	Manuston .					
	Power Supe	nes .				
	Removable	Flash Media				
	M Temperatur	18		-		
	Votagës		Relean	Launch		
	Server Information		Guick Launch Tasks			
	Power State	ON	Power Ott / OFF			
	Bystem Model	Dell DR4000	Power Cycle System (bold boot)			
	System Revision	1	Launch Virtual Console			
	System Host Name	DR4000-DKCV6S1.asglab.roundrock	View System Event Log			
	Operating System	CentOS	View IDRAC Log			
	Operating System Version 2.6.18-164.e.,		Update Fernware Reset (ORAC			
	Service Tag	DKCV6S1	LAND NOT YOUR ADDRESS OF			
	Express Denvice Cod	e 29529104401				
	BIOG Version	.1.9.0				
	Firmwate Version	1.80 (Build 17)				

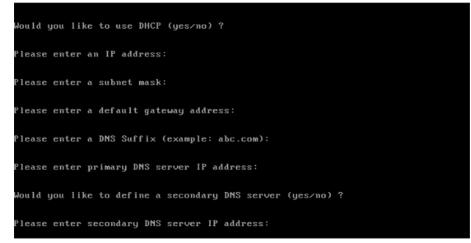
4. Launch the virtual console.



5. After the virtual console is open, log in to the system as user **administrator** and the password **St0r@ge!** (The "0" in the password is the numeral zero).



6. Set the user-defined networking preferences.



7. View the summary of preferences and confirm that it is correct.

Set Static IP A	ddress k
IP Address	: 10.10.86.108
Network Mask	: 255.255.255.128
Default Gateway	: 10.10.86.126
DNS Suffi×	: idmdemo.local
Primary DNS Server	: 10.10.86.101
Secondary DNS Server	: 143.166.216.237
Host Name	: DR4000-5
Are the above settings correct	(yes/no) ? _

8. Log on to DR Series Deduplication Appliance administrator console, using the IP address you just provided for the DR Series Deduplication Appliance, with username **administrator** and password **St0r@ge!** (The "0" in the password is the numeral zero.).

	Reset Password
Please enter your password:	
Username: administrator	
Constant of the second s	

9. Join the DR Series Deduplication Appliance to Active Directory.

**Note:** if you do not want to add DR Series Deduplication Appliance to Active Directory, please see the *DR Series Deduplication Appliance Owner's Manual* for guest login instructions.

- DR4100 DØLL Help | Log out edwinz-sw-01 nz-sw-01 ocarina local Dashboard Global View I Dashboard System State: optimal HW State: optimal Number of Alerts: 0 Number of Events: 705 Alerts Events Health Capacity Storage Savings Throughput Usage Statistics: Container Zoom: 1h 1d 5d 1m 1y 1 Zoom: 1h 1d 5d 1m 1v 0 Physical Statistics: Replication Refreshing Savings (%) MiB/s 1.00 Storage Containers 0.75 75 Replication 50 0.50 Compression Level 25 0.25 Schedules Replication Schedule ¢ 0.00 0:20 0:30 0:40 0:50 1:00 1:10 Time (minutes) 0:20 0:30 0:40 0:50 1:00 1:10 Time (minutes) Cleaner Schedule System Configuration Used (21.29 GiB) Read Total Savings Free (142.48 GiB) Active Directory Local Workgroup Users System Information Email Alerts Admin Contact Info Product Name: DR4100 Total Savings: 55.06 % Password Email Relay Host Total Number of Files in All Containers: System Name: edwinz-sw-01 1 ? 99.0.0517.0 Software Version: Number of Containers: 2 ate and Tir Thu Sep 26 01:12:47 2013 Current Date/Time: Number of Containers Replicated: 0 Support US/Pacific Current Time Zone: ... 47 GIB (?) Active Bytes: Diagnostics Cleaner Status: Idle Software Upgrade License Copyright © 2011 - 2013 Dell Inc. All rights reserved.
- Select Active Directory from the menu panel on the left side of the management interface.

• Enter your Active Directory credentials.

80	Global View	Active Directory	with
-	Dashboard	Settings	
	Events Health Usinge	The Adive Directory settings have not been con	required. Click on the Jow link to configure them
	Statistics: Container Statistics: Replication	Active Directory Configuration	
-	Storage Containers Replication	Domain Name (FGDN)*	* = fields are required.
-	Compression Level Clients Schedules Replication Schedule	Password*	Enter Active Directory Info
	Cleaner Schedule		Cancel Join Domain
	System Coolfgaration Networking Antimo Explosory Local Workgroup Users Email Aerts Admin Contact anto Password Email Relay Hoot Oate and Time		
-	Support Diagnostics Software Upgrade License		

10. Create and mount the container. Select **Containers** in the tree on the left side of the dashboard, and then click the **Create** at the top of the page.

DØLL	DR4100 edwinz-sw-01						He	lp   Log out
edwinz-sw-01		itainers			•	Creat	e   EØ   Delete   Dis	play Statistics
- Dashboa - Alerts	Numb	per of Containers: 1					Container Pat	h: /containers
Events	Cont	ainers	Files	NFS	CIFS	RDA	Replication	Select
Health	back	up	1	~	~		Not Configured	0
Usage	le				•			
	Container							
	Replication							
Storage								
-Containe								
Replicatio								
Compres	sion Level							
- Schedule								
	on Schedule							
Cleaner								
	Configuration							
Networkin								
-Active Dir								
-Local Wo	rkgroup Users							
-Email Ale	rts							
-Admin Co	ontact Info							
Passwor								
-Email Re								
Date and	Time							
Support								
Diagnost								
-Software License	Upgrade							
License								
Copyright @ 20	11 - 2013 Dell Inc. All rights	reserved.						

11. Enter a **Container Name** and choose **Connection Type**, select **Enable CIFS** or **Enable NFS** check box. HP Data Protector supports both CIFS and NFS protocols.

		Create New Container:		
	Dél		* = required fields	t)   Help
		Assign a name to the container, select its type, access protocol to use		
ed	winz-sw-(	Container Name*: sample Nam	aracters including only latters numbers by hen, and underscore.	tatistics
	Global		Name the container	
	Dashbo	Connection Type <sup>*</sup> : ◎ No Access ◎ NAS (NFS, CIFS) ◎ Rapid Data A	CIES	ntainers
	Alerts	NFS access path: 10.250.242.167:/containers/sample	CIFS share path: \\10.250.242.167\sample	ntainers
	Events			elect
	Health	Use NFS to backup UNIX or UNUX clients.	Use CIFS to backup MS Windows clients. Enable CIFS	0
	Usage Contair	Select CIES or NES		
	Replica	Client Access: Open Access (all clients have access)	Itent Access:           Open Access (all clients have access)	
	Storage			
	Contair	Add client (IP or FQDN Hostname):	Add clients (IP or FQDN Hostname)	
	Replica	Clients:	Clients:	
۱.,	Clients	Remove	Remove	
▋▝▘	Schedu			
	Replica Cleane	Enter	Backup Server Info	
	System	-	-	
	Suppor			
		NFS Options: rw Insecure		
Cop	yright © 2			
		Map root to:		
		-select-		
			Cance Create a New Container	

12. Select the preferred client access credentials.

	Create New Container:		
DEL		* = required fields	t)   Help
	Assign a name to the container, select its type, access proto	pool to use and add clients that need access. Max 32 chr/ acters including only letters numbers hyphen and underscore.	
edwinz-sw-0	Container Name <sup>*</sup> : sample	Name r Name the container	tatistics
Global	Connection Type*: O No Access O NAS (NFS, CIFS) Ra		
Dashbo	NFS	CIFS	ntainers
-Alerts Events	NFS access path: 10.250.242.167:/containers/sample	CIFS share path: \\10.250.242.167\sample	elect
Health	Use NFS to backup UNIX or LINUX clients.	Use CIFS to backup MS Windows clients.	
Usage	Enable NFS Select C	IFS or NFS DIE CIFS	
Contair	Client Access:	Client Access:	
Replica	Open Access (all clients have access)	Open Access (all clients have access)	
Contair	NFS Options:	client access credentials	
Replica	rw insecure Select     ro		
Clients	Map root to:		
Schedu	-select-		
Replica			
+ System			
+ Suppor			
Copyright © 2			
		Cance. Create a New Container	

**Note**: For improved security, Dell recommends adding IP addresses for the following (Not all environments will have all components):

Backup console (HP Data Protector Server, HP Data Protector Clients)

13. Click Create a New Container. Confirm that the container is added.

Containers	<b>;</b>			Creat	te   Edit   Delete   Dis	play Statist
lobal View						
ashboard erts Message						
0110	essfully added container "samp	le".				
	essfully added NFS connection f		e".			
	essfully added CIFS connection					
ontainer Statistics		•				
eplication Statistics Number of Conta	iners: 2				Container Pat	h: /contain
Containers	File	s NFS	CIES	RDA	Replication	Select
ntainers				NDA	•	
blication	0	~	~		Not Configured	0
ants sample	0	~	~		Not Configured	0
chedules	· · · · · · · · · · · · · · · · · · ·					
eplication Schedule						
leaner Schedule						
ystem Configuration						

14. Click **Edit.** Note down the container share/export path, which you will use later to target the DR Series Deduplication Appliance.

		Edit Container: sample			
	<b>Kél</b>			* = required fields	)   Help
		Connection Type <sup>*</sup> : <sup>©</sup> No Access <sup>®</sup> NAS (NFS, CIFS) <sup>©</sup> Rapid Da □ NFS	ta Access (RDA) ?		
edw	/inz-sw-( Global )	VES access path: 10.250.242.167:/containers/sample	CIFS share path: \\10.250.242.167\sample		tatistics
	Dashbo Alerts	Use NFS to backup UNIX or LINUX clients.	Use CIFS to backup MS Windows clients.		ntainers
	Events Health	Client Access: Open Access (all clients have access)	Client Access: Ø Open Access (all clients have access)		elect
	Usage Contair Replica Storage	NFS Options: rw Insecure ro			0
	-Contair Replica Clients	Map root to: root			
	Schedu Replica Cleane				
	System Suppor				
Сору	right© 2		Cancel Modi	fy this Container	

15. Click **Cancel** to exit.

Edit Container: sample		
	* = required fields	)   Help
Connection Type <sup>*</sup> : O No Access O NAS (NFS, CIFS) Rapid D edwinz-sw-( NFS		
NFS access path: 10.250.242.167:/containers/sample	CIFS share path: \\10.250.242.167\sample	tatistics
Alerts	Use CIFS to backup MS Windows clients.	Itainers
Events Client Access:	Client Access:	elect
Health V Open Access (all clients have access)	Open Access (all clients have access)	0
Osage NFS Options: Contair orw insecure		0
Replica or ro		
Contair Map root to:		
Replica root		
Clients		
Replica		
Cleane		
+ System		
I → Suppor		
Copyright © 2		
	Cancel Molify this Container	



## 2 Set Up HP Data Protector

### 2.1 Procedure for backing up Windows Environment

1. Open **HP Data Protector Manager**. Click **Configure New Devices**, which goes to **Devices & Media** menu.

Ele       Edit       View       Actions       Help         Backup       Image: Construction       Image: Construction       Image: Construction         Image: Construction and modification of backup specifications       Image: Construction and modification of backup specifications.         Image: Construction and modification of backup specifications       Image: Construction and modification of backup templates.         Image: Construction and modification of backup templates       Image: Construction and modification of backup templates.         Image: Construction and modification and modification of backup templates       Image: Construction and modification of backup templates.         Image: Construction and modification and
Backup     Name     Description       Image: Image
Image: Deckup Specifications       Image: Deckup Specifications
Backup Specifications     Backup Specifications     Backup Specifications     Used for creation and modification of backup templates.
Next Step Wizard
Next Step Wizard
Next Step Wizard
Next step
Add New Clients
828
Add New Users
Configure New Devices
Configure New Devices
Configuring New Backup Specifications
Elization a Backup
Do not show this window in the future     Close
Image: Market Backup         Image: M



2. Right-click **Devices** and choose **Add Device**. In the next window, specify the **Device Name** and **Description** that identifies the **File Library Device**. Select **File Library** for the **Device Type**, and enter info for the **Client**. Click **Next**.

Add Device - HP Data Protector Manager ile Edit View Actions Help			- 0	
	🖬 🗐 📾   🥐  ] 😅 😅 🗃	<b>₩ m</b> ≥ \$ 0		
Environment     Environment     Environment     Environment     Environment     Environment     Environment     Environment	Specify the device name a description.	, the client system where the device is connected, and the device type. Opti-	anally, add	
Devices     Devices by host	Device Name	sample		
🕀 📻 Extended Copy 🕀 📻 Media	Description	DR4500		
	Device <u>T</u> ype	File Library		
	Interface Type	Г	-	
	Client	edwinz-w2k8-01	-	
	NDMP Server		<u> </u>	
	Management Console URL			
	MultiPath device			
	E stimated library - Is based E stimated library capacity ( Licensing details	licensing (Advanced backup to disk)		
B Objects	H + F H Add Device -	< Back Next > Finish	Cancel	
	,	Ca edwinz-w2k8-01		

**Note:** The Windows service account for HP Data Protector requires appropriate permissions to the DR container share for the step below to complete successfully. See **Appendix A** for setting up the HP Data Protector service account correctly. This should be done before the next step.



3. The next window asks for the path to the library that is the UNC path to the DR container share as described below. Specify a list of directories for the library. You can also specify the number of writers for the library, it defaults to 1. Click **Properties** to assign proper values to the file library parameters, including **Maximal File Depot Size**. Click **Next**.

and Device - HP Data Protector Manager		
File Edit View Actions Help		
Devices & Media		
E-Pinvironment	Specify a list of directories for the library.	
Devices     Devices by host		Add
Extended Copy	\\10.250.242.167\sample	Browse
		Properties
		Delete
	Number of writers:	
		<u> </u>
R Objects	<back next=""></back>	Finish Cancel
Talker colocia		edwinz-w2k8-01

4. The Media Type default is File. Click Next.

evices & Media 🗾 🔡 🛇 📾 🛑 📼 🗃 ? 🗍 🚅 🖅 📽 📽 🖓 🚳 🌫 🔊 🖤	Add Device - HP Data Protector Manager	
Conversions     Conversio	File Edit View Actions Help	
Automated Operations     Operative Policies     Operative     Operative Policies     O	Devices & Media 💌 🔡 📀 📰	1 🕶 🖂 🖆 / 🖉 🛥 🗇 📽 🍓 🚵 🕹 🖉
	Environment     Environme	Specify the type of media used in the library.  Media Type  Standard type of media used by the physical device.  File  Distributed file media format  Using distributed file media format enables the file library for virtual full backup.
Dejects Add Device -		
	A Objects	H 4 P H Add Device -



5. Click **Next**. The **Summary** window shows the total physical storage size of that particular File Library Device on the DR container.

File Edit View Actions Help	
Devices & Media 🔄 🔛 😃 🛇 📾 🔫 🖽 🖼 ?	
Devices 2 Media         Image: Convolution of the c	
< Back Next> Finish Cane	-
C Back Next? Finish Cane	
Readwinz-w286-01	

6. Click **Finish**. In next windows click **Close** to close it.



### 2.2 Procedure for backing up Unix/Linux Environment

#### NOTE:

Make sure that you can mount/verify the NFS share from the UNIX/Linux client system. Please see **Appendix B** for how to mount/verify the NFS share.

The procedure for the Unix/Linux Environment is very similar to the procedure for the Windows Environment. One difference is that in **Step#3**, enter the UNIX path of the DR container export is used instead of a UNC path, as described below.

For other details, please refer to the Procedure for backing up Windows Environment.

8 <b>2</b>	Properties for nfs - HP Data Protector Manager	_ = ×
<u>File Edit View Actions Help</u>		
<ul> <li>P → Environment</li> <li>P → Automated Operations</li> <li>P → D evice Policies</li> <li>P → D evices</li> <li>P → D evices</li> </ul>	General / Repository / Settings / Summary         Image: Specify a list of directories for the library.	
⊷ 🛍 lo		A <u>d</u> d
← Û) nfs ← Û) NFS_Saving_233.67	/mnt	Browse
← 🕅 saving _167 ← 🍘 Devices by host		Properties
∽ 🚍 Extended Copy ∽ 🏣 Media		Delete
	Number of writers.	
	Ca	ncel <u>A</u> pply
🕼 Objects	Properties for nfs	



## 3 Create a New Backup Job with DR Series Deduplication Appliance as the Target

1. In the **Context List** drop-down menu, click **Backup**. In **Scoping Pane**, expand **Backup** and then click **Backup Specifications**. In expanded sub-tree view, right-click the **Filesystem** item and select **Add Backup**.

💼 Backup Specifications - H	IP Data Protector Manager	
File Edit View Actions	: Help	
Backup	💌 🔛 🕲 💼 🛥 📖 🖆 🕺 🖄 🖼 💭 💭 🖉	
Backup	Name	
😑 🚺 Backup Specificatio		
😨 🚞 Filesystem 🖭 📷 Templates	Create New Backup 🔀	
templaces	Select a template to apply to the new backup. Use the Blank template to create a specification with no default settings.	
	were the second se	
	Filesystem	
	Trans Uroup Apply options	
	18 biank Pilesystem Backup Derauk	
	Detaut     Detaut     Detaut     Detaut     Detaut     Detaut     Detaut     Detaut	
	Monthly_Full     Default     Default	
	Int_NNM_template     Default     Default     Default     Default     Default	
	👿 Weekly_Full Default 🖂 Earce to defaults	
	Weekly_Full_Catalog Default	
	Weekly Full Over WAN Default	
	Schedule	
	Backup options	
	Backup type Local or network backup	
	✓ Load balanced	
	Sub type	
	Source-side deduplication	
	OK Cancel Help	
撮 Objects  🖫 Tasks	M 4 P M Add Device - Backup Specifications	
	li ci i c	edwinz-w2k8-01

2. Select the **Blank Filesystem Backup** template and click **OK**. Check any source data set that needs to be backed up. In this example, it's the whole local "C:\" drive. Then click **Next**.

💼 Backup - New1 - HP Data Protector Manager		
File Edit View Actions Help		
Backup		
Oachup     Oachup     Oachup Specifications     (+)	Select the items that you want to back up.	
	Different Database	Map Network Share
		Disconnect Share
	CONFIGURATION:     E: [Data]	Add/Bemove
	System Reserved [Volume(#e30416-a157-11e1-aa0c-806e6/6	
	< Dack Next	> Finish Cancel
🐻 Objects 📲 Tasks	H 4 P H Add Device - Backup · New1 - B	
		Geledwinz-w2k8-01

3. Select the devices or drives to be used as the backup target. In this example, it's the DR container share/export created in previous section. Check **Properties** and define other parameters, then click **Next** 

Backup - New2 - HP Data Protector Manager		
File Edit View Actions Help		
Backup 💽 🔛 😂 🛅		
Backup     Grading Specifications     Grading Filesystem	Select the devices or drives to be used for the backup.	
in - main Templates	Backup	Add Mirror
	C Show selected C Show all	Remove Mirror
		Move Mirror <
	e→⊡·0 CIFS1 e→⊡·0 CIFS2	Move Mirror >
	B ⊕ Û CIFS_Karen B ⊕ Û sample 7	
	B → D 0 saving_67	
I 🗱 Objects 📲 Tasks		Finish Cancel
		Charles water of

4. Check and verify on **Backup Specification Options** through **Advanced** button. Then in **Filesystem Options** section, click on **Advanced**.

💼 Backup - New2 - HP Data Protector Manager	
Eile Edit View Actions Help	
Backup 💌 🔛 😂 📾 🗌	🕶 🖂 🗐 🦿 🔄 🐼 🗢 🧔 🕫
Backup     Backup Specifications     Beckup Specifications     Be	Select the backup options for all objects in this backup specification.           Backup Specification Options           Adjust general backup specification options.           Description
	Filesystem Options           Select the default protection period for all backed up files and directories.           Protection:           Permanent
	Disk Image Options Select the default protection period for all backed up disk images. P(otection: Permanent Advanced
	Backup to Disk Device Options
No Objects Tasks	< Back

5. In Filesystem Options, click Other tab, make sure "Software compression" is unchecked, and "Data security" is set to None.

🔂 Backup - backup_sample - HP Data Protector Manager	
File Edit View Actions Help	
Backup 🖳 🔡 🗞 📾 🗝 🕮 背 🗐 😵 🗇 💭 🕬	
Backup Backup	
Backup Specifications Filesystem Options	×
Filesystem     Options     Other     WinFS Options     NetWare Options	
Deckup_cfs1       Uptons:       Units' Uptons   NetWate Uptons           Deckup_semple       saving_67         Itest       Enhanced incremental backup         Cost native Filesyme Charge Log Provider if available         Software compression         Display statistical into         Do not preserve access time attributes         Cost files during backup         Data security         None         Backup files of size         Attriace	Advanced       \$.       Y       Advanced
User defined variables	
Edit	
OK Cancel Help	
	Cancel Apply
R Objects R Tasks N 4 ▷ ▷ saving_67 H backup_sample H saving_67 H saving_67	-w saving_67 - Backup - backup_sample
	Gedwinz-w2k8-01

**Note:** Always Disable **'Software compression'**, as DR Series Deduplication Appliance has compression built in and does not require any compression on HP Data Protector. In general, additional data compression on backup software will have negative impact on total savings on DR Series Deduplication Appliance.

Set **'Data security'** to **None**, as enabling encryption before the data stream is sent to the DR Series Deduplication Appliance device will make the data not deduplicatable. This will put significant negative impact on total savings on DR Series Deduplication Appliance.

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- 1 Backup 은 1월 Backup Specifications - 변 은 Filesystem 요 함 1 Templates	SI no	becify the bt want sc	dates and heduled ba	times that j ickups to n	you want b un on holio	backups pe days.	erformed.	. Check the Holiday box to indicate that y	you do
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6. Define Backup Job Schedule options and click Next.



7. Review the Backup Job Summary. Click Next.

💼 Backup – New2 – HP Data Protector Manager		
File Edit View Actions Help		
Backup 💌 🔡 🥝 📖	▰▥▥▯?!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	
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	edwinz-w2k8-01 C: Filesystem [Windows] C: [Load Ba	Delete
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	< Back Next	> Finish Cancel
🕵 Objects 📲 Tasks	H H E H Backup New2 -	
		edwinz-w2k8-01

8. Specify a name for the Backup Job. Click **Save As** to save the newly configured backup specification.

🙀 Backup - New2 - HP Data Prote	
File Edit View Actions Help	
Backup Specifications     Point Filesystem	Perform finishing steps in your backup/template design.
😟 - 🧑 Templates	Save as Save the newly created backup/template.
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	th the current backup specification. This option is the Single Malbox, Sybase. Informix, IBM DB2, Name backup_sample
	Group Default 💌
	OK Cancel Help
	< Back Next> Finith Cancel
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9. (This step and next are **Optional**: or wait for the scheduled backup run to complete.) Click **Start Backup** to run the backup. When the **Start Backup** window opens, click **OK** to start the backup.

Backup - backup_sample - HP Data Protector N	- · ·	
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[	Source Destination Options Schedule Backup Object Summary	
-> <u> </u> Boo	Select the items that you want to back up. Shogs Selected Tilesystem Backup Dackup	Map Network Share Disconnect Share Add/Remove
	DK Cancel Help	
		Cancel Apply
🚰 Objects 🔛 Tasks	H 4 P H Backup - backup_sample	
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10. The **Backup** window displays the progress of the backup session. The Session Information window will tell you when the backup is completed.

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Backup	Backup
Filesystem	Status Type Client System Source Device Size Done Errors Warnings Description
backup_cifs2	
test	
	Status De Client System Total Data Medium Label
	Running CI edwinz-w2k8-01 432000 CIF51_MediaPool_8
	[Normal] From: VBDA@edwinz-w2k8-01 "C:" Time: 7/5/2013 7:25:53 AM VSS Writer 'System Writer':Component 'System Files' successfully added
	[Normal] From: VBDA@edwinz-w2k8-01 "C:" Time: 7/5/2013 7:25:53 AM VSS Writer 'WMI Writer':Component 'WMI' successfully added in the snap:
	[Normal] From: VBDA@edwinz-w2k8-01 "C:" Time: 7/5/2013 7:25:53 AM VSS Writer 'COM+ REGDB Writer':Component 'COM+ REGDB' successfully adde
	[Normal] From: VBDA@edwinz-w2k8-01 "C:" Time: 7/5/2013 7:25:53 AM
	VSS Writer 'Registry Writer':Component 'Registry' successfully added in
	[Normal] From: VBDA@edwinz-w2k8-01 "C:" Time: 7/5/2013 7:25:53 AM VSS option was specified. Attempting to create snapshot.
	[Normal] From: VBDA@edwinz-w2k8-01 "C:" Time: 7/5/2013 7:26:00 AM
	Clearing archive flags is not applicable with Volume Shadow Copy backu;
<u> </u>	
🕵 Objects 📲 Tasks	K 4 ▷ ▷ Ø backup_sample 🗰 backup_sample 🗰 backup_sample 🖬
	Redwinz-w2k8-01

## 4 Set up DR Native Replication & Restore from Target Container

### 4.1 Build Replication Relationship between DRs

**NOTE**: The assumption is that on both the source and target DR, a container is already created for each of them. In this example it's called "backup". And the target container should not be used by anything else and is empty, with the same **Connection Type** as the source container.

11. On the source DR, select **Replication** from the menu panel on the left side of the management interface, click **Create**.

	И				root (Log	out)   Help
edwinz-sw-01.ocarina.local 💌	Replication		Create   Edit	Delete   Stop   Start   I	Bandwidth   Displ	ay Statistics
Dashboard     Alerts	Number of Source Replicatio	ns: 0				
Events Health	Local Container Name	Role	Remote Container Name	Peer State	Bandwidth	Select
Usage						
Container Statistics						
Replication Statistics						
- Storage						
Replication						
Clients						
+ Schedules						
+ System Configuration						
+ Support						
Copyright © 2011 - 2013 Dell Inc. /	All rights reserved.					

12. Select a local container as source container in **Step 1**, make appropriate selection in **Step 2** and **Step 3**. In **Step 4**, select **Map to container on remote system**, enter credential to authenticate to Target DR (default is "Administrator/St0r@ge!), then click **Retrieve Containers**, select the target container on the list, click **Create Replication**.

Create Replication		
Step 1: Select a local container backup HDMNFS2	Step 3: Select a role * © Source © Target Source	* = required fiel Step 4: Remote container settings Create container on remote system Map to container on remote system Username*: administrator Password*: Peer System*: 10.250.233.67 Remote Container: Retrieve Containers(s) backup
		Cance Create Replicat

13. Verify that the replication session is created. **Peer State** is **Online**. Monitor the replication progress under **Replication Statistics**, and make sure the replication **Status** is **INSYNC**.

	1				root (Log	out)   Help
edwinz-sw-01.ocarina.local  Global View Dashboard	Replication		Create   Edit	Delete   Stop   Start   E	andwidth   Displa	ay Statistics
<ul> <li>Dashboard</li> <li>Alerts</li> </ul>	Message					
Events Health	Successfully ad	ded replicatior	n for container 'backup'.			
Usage						
Container Statistics	Number of Source Replicatio	ns: 1				
Replication Statistics	Local Container Name	Role	Remote Container Name	Peer State	Bandwidth	Select
Containers Replication	backup	source	10.250.233.67 backup	Online	Default	0
Clients						
Schedules						
Replication Schedule						
+ System Configuration						
+ Support						
Copyright © 2011 - 2013 Dell Inc. A	Il rights reserved.					

# 4.2 Run backup to source DR (Optional: only when there is no backup data on the source DR container)

1. Add both source DR and target DR as Devices on HP DP, create a New Backup Job with source DR as the Target.

Backup - saving_67 - HP Data			<u>.</u>				_ 🗆 ×
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2. In **Start Backup** window, click **OK** to start the backup using the appropriate settings. Monitor job status.

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templaces	
	Status Device Client System Total Data Medium Label
	PInacti saving_167 edwinz-w2k8-01 9408 KB saving_167_MediaPool_35
	Disk Agents Total 1
	Completed Media Agents 1
	Failed Media Agents 0
	Aborted Media Agents 0
	Media Agents Total 1
	Overall Deduplication Ratio
	Movtes Total
	Used Media Total 1
	Disk Agent Errors Total 0
	Session completed successfully!
🕼 Objects 📲 Tasks	4 4 ▷ ▷ Ø saving_167_0 → Ø Ø saving_167_0 → Ø Ø saving_167_0 → Ø Ø Backup_Source → Ø
	Ga edwinz-w2k8-01

- 3. When backup job is completed, HP DP creates backup files using the suffix '.fd' on source DR , and the '.fd' files will be replicated to the target DR, as shown in screenshots.
- Source DR

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Organize 👻 New folder				:== • [	1
📃 Desktop 🔺	Name	Date modified -	Туре	Size	
Downloads     Recent Places     Libraries     Documents     O    Music     P    Pictures     Videos	036967d4551e116b15070450058.fd	12/25/2013 7:06 PM	FD File	9,544	KΒ

• Target DR

<u> l</u> backup				
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Desktop Cownloads Recent Places	036967d4551e116b15070450058.fd	12/25/2013 7:06 PM	FD File	9,544 KB
<ul> <li>➢ Libraries</li> <li>➢ Documents</li> <li>➢ Music</li> <li>➢ Pictures</li> <li>☑ Videos</li> </ul>				



### 4.3 Prepare Replication Target for restore

4. On HP DP, Go to **Devices & Media** -> **Media** -> **Pools**, right-click the Media Pool associated with the source container device and the backup set that needs to be restored, click **Export**.

Devices by host         Description         Quality         Protection         Available Space (We)         Location           Charles And Copy         Extended Copy         Extended Copy         Convertion	ces & Media 💽 📃 🕮 🐼 💼		3				= = = = = = = = = = = = = = = = =
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Default ATT         0         [asing_167, 101250.242.167]backup(03967d4551da63945070450028.fd]           Default DD5         [saving_167, 10250.242.167]backup(03967d4551da63945070450028.fd]           Default DTF         [saving_167, 10250.242.167]backup(03967d4551da63945070450028.fd]           Default DTF         [saving_167, 10250.242.167]backup(03967d4551da63945070450028.fd]           Default Entre         [saving_167, 10250.242.167]backup(03967d4551da6394500450028.fd]           Default Entre         [saving_167, 10250.242.167]backup(03967d4551da6325700450028.fd]           Default Entre         [saving_167, 10250.242.167]backup(03967d4551da632570450014.fd]           Default Cptical         [saving_167, 10250.242.167]backup(03967d4551da652570450014.fd]           Default SD3         [saving_167, 10250.242.167]backup(03967d4551da652570450014.fd]           Default SD4         [saving_167, 10250.242.167]backup(03967d4551da5251d501967045011.fd]           Default SD3         [saving_167, 0cod Perman         [saving_167, 110.250.242.167]backup(03967d4551d351d50506570010.fd]           Default SD3         [saving_167, 0cod Perman         [saving_167, 110.250.242.167]backup(03967d4551d251d551d50506550016.fd]           Default SD3         [saving_167, 0cod Perman         [saving_167, 110.250.242.167]backup(03967d4551d251d551d551d551d551d551d551d551d551d	CIF53 MediaPool					1.7.1	
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Berauk DL1         Berauk DTF         Berauk DTF         Berauk DTF           Berauk DTF         Berauk DTF         Good Perman         Defauk DTF           Berauk DTC-Ultrium         Berauk DTF         Good Perman         Defauk DTF           Berauk DTC         Berauk DTC         Berauk DTF         Berauk DTF           Berauk DTC         Berauk DTC         Berauk DTC         Berauk DTF           Berauk DTC         Berauk DTC         Berauk DTC         Berauk DTC           Berauk DTC         Berauk DTC         Berauk DTC         Berauk DTC           Berauk DT         Berauk DTC         Berauk DTC         Berauk DTC         Berauk DTC           Berauk DT         Berauk DTC	P Default DDS					-	
Persult Dr#               Persult Exabyte               Default Dr#	Default DLT					-	
Befault Eile         Bewing_167         Good         Perman         0         fswing_167.11(10.250.242.167/backup)03967d4551da5645307045001.fd]           Befault File						-	
Default 10-Ultrium         0 [saving_167 Good         Perman         0 [saving_167.'\1\10.250.242.167\backup\03967d4551ds5fd570765001.fd]           Default Optical         Saving_167 Good         Perman         0 [saving_167.'\1\10.250.242.167\backup\03967d4551ds5fd570765001.fd]           Default SD-3         Saving_167 Good         Perman         0 [saving_167.'\1\10.250.242.167\backup\03967d4551ds5fd570765001.fd]           Default SD-3         Saving_167 Good         Perman         0 [saving_167.'\1\10.250.242.167\backup\03967d4551ds5fd551ds5de50705001.fd]           Default SD-3         Saving_167 Good         Perman         0 [saving_167.'\1\10.250.242.167\backup\03967d4551ds5fd551ds506500501.fd]           Default T3400/T4990/T990         Saving_167 Good         Perman         0 [saving_167.'\1\10.250.242.167\backup\03967d4551ds5fd551d550055001.fd]           Default T340/T4990/T990         Saving_167 Good         Perman         0 [saving_167.'\1\10.250.242.167\backup\03967d4551d2977506f5001.fd]           Default T390         Saving_167 Good         Perman         0 [saving_167.'\1\10.250.242.167\backup\03967d4551d2977506f5001.fd]           Default T3901         Saving_167 Good         Perman         0 [saving_167.'\1\10.250.242.167\backup\03967d4551d2977506f5001.fd]           Default T3940         Saving_167 Good         Perman         0 [saving_167.'\1\10.250.242.167\backup\03967d4551d2977506f5001.fd]	P Default Exabyte					-	
Pefault Optical         Perman         0         [saving_167, \\[10.250.242.167\]backup\]03967d4551d3d52f307045001.6fd]           Pefault SATT         Saving_167         Good         Perman         0         [saving_167, \\[10.250.242.167\]backup\]03967d4551d3d52f307045001.6fd]           Pefault SATT         Saving_167         Good         Perman         0         [saving_167, \\[10.250.242.167\]backup\]03967d4551d3d52f307045001.6fd]           Pefault SD-3         Saving_167         Good         Perman         0         [saving_167, \\[10.250.242.167\]backup\]03967d4551d3d52g507045001.6fd]           Pefault T0000         Saving_167         Good         Perman         0         [saving_167, \\[10.250.242.167\]backup[03967d4551d3939507045011.6fd]           Pefault T3800         Saving_167         Good         Perman         0         [saving_167, \\[10.250.242.167\]backup[03967d4551d3939507045011.6fd]           Pefault T3800         Saving_167         Good         Perman         0         [saving_167, \\[10.250.242.167\]backup[03967d4551d2996764551d29972506f85001.6fd]           Pefault T3800         Saving_167         Good         Perman         0         [saving_167, \\[10.250.242.167\]backup[03967d4551d29967505001.6fd]         Saving_167         Good         Perman         0         [saving_167, \\[10.250.242.167\]backup[03967d4551d29967505001.6fd]         Saving_16	P Default File			Good	Perman	0	[saving_167: \\10.250.242.167\backup\036967d4551da6462507045001f.fd]
Pefault Cytical               Perant	Default LTO-Ultrium		Apr saving_167	Good	Perman	0	[saving_167: \\10.250.242.167\backup\036967d4551da5f81507045001c.fd]
Default SAIT         9 saving_167         Good         Perman         0         [saving_167         [Saving_167         [Saving_167         [Saving_167]         [Daving_167]         [Daving_167]         [Daving_167]         [Daving_167]         [Daving_167]         [Saving_167]         [Daving_167]         [Daving_16	Default Optical			Good	Perman	0	[saving_167: \\10.250.242.167\backup\036967d4551da5dc65070450019.fd]
— Perfault 50-3               Perman             0             [saving_167 Good             Perman             0             [saving_167 [Job 20.242.167\backup(03967d4551d29057045001.fd]             ]saving_167 Good             Perman             0             [saving_167 [Job 20.242.167\backup(03967d4551d29057045001.fd]             ]saving_167 Good             Perman             0             [saving_167 [Job 20.242.167\backup(03967d4551d29057045501d290615001.fd]             ]saving_167 Good             Perman             0             [saving_167 [Job 20.242.167\backup(03967d4551d29057045501.fd]             ]saving_167 Good             Perman             0             [saving_167] [Job 20.242.167\backup(03967d4551d2905704551d29972506f85001.fd]             ]saving_167 Good             Perman             0             [saving_167] [Job 20.242.167\backup(03967d4551d29972506f85001.fd]             ]saving_167 Good             Perman             0             [saving_167] [Job 20.242.167\backup(03967d4551d29972506f85001.fd]             ]saving_167 Good             Perman             0             [saving_167] [Job 20.242.167\backup(03967d4551d29972506f85001.fd]             ]saving_167 Good             Perman             0             [saving_167] [Job 20.242.167\backup(03967d4551d29972506f85000.fd]             ]saving_167 Good             Perman             0             [saving_167] [Job 20.242.167\backup(03967d4551d2990506f85000.fd]             ]saving_167 Good             Perman             0             [saving_167] [Job 20.242.167\backup(03967d4551d2990506f85000.fd]             ]saving_167 Good             Perman             0             [saving_167] [Job 20.242.167\backup(03967d4551d2980506f85000.fd]             ]saving_167 Good             Perman             0             [saving_167] [Job 20.242.167\backup(03967d4551d2980506f850	Pefault QIC			Good	Perman	0	[saving_167: \\10.250.242.167\backup\036967d4551da5c2f5070450016.fd]
— Perfault SD-3             — Default S	P Default SAIT		Arr 167	Good	Perman	0	[saving_167: \\10.250.242.167\backup\036967d4551da5aa65070450013.fd]
Default T3480/T4890/T9490         Saving_167 Good         Perman         0         [saving_167.\\[10.250.242.167\backup\]03696744551d239a5c506/850019.fd]           Default T3480/T4890/T9490         Saving_167 Good         Perman         0         [saving_167.\\[10.250.242.167\backup\]03696744551d239a5c506/850019.fd]           Default T3980         Saving_167 Good         Perman         0         [saving_167.\\[10.250.242.167\backup\]03696744551d239a5c50018.fd]           Default T3980         Saving_167 Good         Perman         0         [saving_167.\\[10.250.242.167\backup\]03696744551d239a5c50018.fd]           Default T3980         Saving_167 Good         Perman         0         [saving_167.\\[10.250.242.167\backup\]03696744551d239a5c500018.fd]           Default T3980         Saving_167 Good         Perman         0         [saving_167.\\[10.250.242.167\backup\]03696744551d239b0366760001.fd]           Saving_167 Good         Perman         0         [saving_167.\[10.250.242.167\backup\]03696744551d239b036765000.fd]           Saving_167 Good         Perman         0         [saving_167.\[10.250.242.167\backup\]03696744551d239b036765000.fd]           Saving_167 Good         Perman         0         [saving_167.\[10.250.242.167\backup\]03696744551d239b036765000.fd]           Saving_167 Good         Perman         0         [saving_167.\[10.250.242.167\backup\]03696744551d239850506	Default SD-3			Good	Perman	0	[saving_167: \\10.250.242.167\backup\036967d4551da593c5070450010.fd]
Perfault T10000	Default SuperDLT		Aving 167	Good	Perman	0	[saving 167: \\10.250.242.167\backup\036967d4551d29b8f506f85001c.fd]
Perault 7340/74990/79490               Perault 7350/74990/79490               Perault 7350/74990/79490                 Perault 7350/7490/7490/79490               Perault 7350/7490/7490               Perault 7350/7490/7490                 Perault 73590               Perault 7350/7490/7490               Perault 7350/7490/7490               Perault 7350/7490/7490                 Perault 73500               Perault 7350/7490/7490               Saving_167 Good Perman               [saving_167.110.250.242.167\backup()03696744551d29775506455000.16]                 Perault 73940               Perault 7360               Saving_167 Good Perman               [saving_167.110.250.242.167\backup()03696744551d29775506455000.16]                 Perault 73940               Perault 7360               Saving_167 Good Perman               [saving_167.110.250.242.167\backup()03696744551d297850665000.16]                 Perault 7360               Saving_167 Good Perman               [saving_167.110.250.242.167\backup()03696744551d297850665000.16]                 Perault 7360               Saving_167 Good Perman               [saving_167.110.250.242.167\backup()03696744551d2870506665000	Default T10000			Good	Perman	0	
	- 🔄 Default T3480/T4890/T9490						
	P Default T3590					0	
<sup>C</sup> Default 79940	Default T3592					-	
	Default T9840					-	
Default lape         Jesaving 167 Good         Perman         0         [saving 167. \\10.250.242.167\backup\036967d4551d288e0506f650007.fd]           MrS_Edwin01_MediaPool         Saving 167 Good         Perman         0         [saving 167. \\10.250.242.167\backup\036967d4551d288e0506f650007.fd]           Saving 167 Good         Perman         0         [saving 167. \\10.250.242.167\backup\036967d4551d288e0506f650001.fd]           Saving 167 Good         Perman         0         [saving 167. \\10.250.242.167\backup\036967d4551d2870a506f650001.fd]           Saving 167 Good         Perman         0         [saving 167. \\10.250.242.167\backup\036967d4551d2870a506f650001.fd]           Saving 167 Good         Perman         0         [saving 167. \\10.250.242.167\backup\036967d4551d2870a506f650001.fd]	Default T9940					-	
B: @ IDrary_mediaPool       > saving_167 Good       Perman       0 [saving_167: \\10.250.242.167\backup\036967d4551d287fe306f650001.fd]         - @ saving_167 Good       Perman       0 [saving_167: \\10.250.242.167\backup\036967d4551d287fe306f650001.fd]         - @ saving_167 Good       Perman       0 [saving_167: \\10.250.242.167\backup\036967d4551d287fe306f650001.fd]         - @ saving_167 MediaPool       - @ saving_167: \\10.250.242.167\backup\036967d4551d287fe306f650001.fd]	P Default Tape					-	
	🗄 🗃 library_MediaPool					-	
Er sampe_netarool Fr∰ saving_167_MediaPool → By saving_167_MediaPool	— In NFS_Edwin01_MediaPool					-	
A saving 167 MediaPool 1	sample_MediaPool		Aving_167	Good	Perman	0	[saving_167: \\10.250.242.167\backup\036967d4551d2870a506f850001.fd]
🥮 saving 167_MediaPool_1	🖻 🚽 saving_167_MediaPool						
	saving_167_MediaPool_1	-	L				

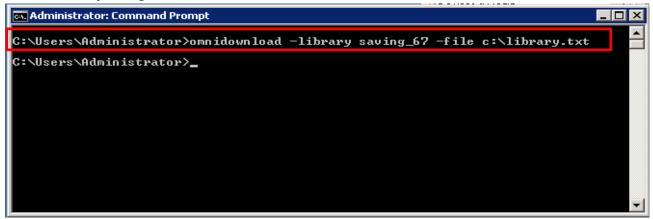
**NOTE**: If the media pool is protected and cannot be exported, you should perform **Recycle** before **Export** 



5. Under **Devices & Media** -> **Devices**, expand the source container device node, delete the device object that is associated with the backup set.

noperties for \\10.250.242.167\backup\036967d4551db8d4e5070450052.f	d - HP Data Prot	tector Manager	
File Edit View Actions Help			
Devices & Media 🔄 🛃 🛃 😒 🔚 🛶 🗐 🕮 🦿			
saving_167	General Info	Objects Usage	
E 🔠 Directories			
😑 🚞 \\10.250.242.167\backup		Slot	
\\10.250.242.167\backup\036967d4551d287fe506f850004.fd	Description	saving_167_MediaPool_33	
\\10.250.242.167\backup\036967d4551d288e0506f850007.fd	Description	saving_ror_medial col_co	
\\10.250.242.167\backup\036967d4551d289d8506f85000a.fd	Location		•
	Location		
(10.250.242.167(backup)036967d4551d297765067650010.rd \u03e9 \u03e910.250.242.167(backup)036967d4551d2987e506f850013.fd			
(10.250.242.167/backup/036967d4551d29972506f850016.fd	Media label	saving_167_MediaPool_33	
\\10.250.242.167\backup\036967d4551d29a6c506f850019.fd	Format	Data Protector	
\\10.250.242.167\backup\036967d4551d29b8f506f85001c.fd	-	[	450052 (-1)
\\10.250.242.167\backup\036967d4551da593c5070450010.fd	L <u>o</u> cation	[saving_167: \\10.250.242.167\backup\036967d4551db8d4e507(	J450052.rdj
\\10.250.242.167\backup\036967d4551da5aa65070450013.fd	<u>M</u> edia Pool	saving_167_MediaPool	
\\10.250.242.167\backup\036967d4551da5c2f5070450016.fd	Cell	edwinz-w2k8-01	
\\10.250.242.167\backup\036967d4551da5dc65070450019.fd	-		
\\10.250.242.167\backup\036967rl4551da5f81507045001c_fd			
>\\10.250.242.167\backup\036967(			
((10.250.242.16/(backdpt05696/( -			
110.250.242.167\backup\036967( 0.000 Copy Catalog to Ele			
Will 250 242 167(backup)036967/			
W)10.250.242.167(backup)036967(			
\\10.250.242.167\backup\036967 Import Catalog			
110 250 242 167(backup)036967			
W10.250.242.167\backup\036967			
\\10.250.242.167\backup\036967c Properties Alt+Enter			
\\10.250.242.167\backup\036967d4551e116b15070450058.rd			
🗄 🛅 Drives 📃 🗾			
			Cancel Apply
🚜 Objects	N 4 D D Prop	perties for \\10.250.242.167\backup\036967d4551d2870a506f850001.fd	
Delete selected object	,		G edwinz-w2k8-01

6. Open HP DP CLI console, use command utility **"omnidownload"** to download the source container library configuration from IDB

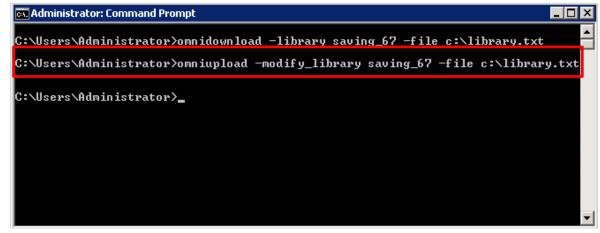


NOTE: Please refer to Appendix C on how to use the command "omnidownload".

7. Edit the file, modify or add the object information to point to the target DR, save this file

📕 library - Notepad
File Edit Format View Help
NAME "saving_67"
DESCRIPTION
HOST edwinz-w2k8-01
POLICY_Filelibrary
TYPE File
REPOSITORY
"\\10.250.233.67\backup\036967d4551e116b15070450058.fd"
"\\10.250.233.67\backup\036967d4551d2e193507+050001.+d" "\\10.250.233.67\backup\036967d4551d2e27e507f050004.fd"
(\10.230.223.67\backup\036967445514222763071050004.10
(10.230.225.07) backup (03090744) 510225303077050007.10
"\\10.250.233.67\backup\036967d4551d2e350507f050007.fd" "\\10.250.233.67\backup\036967d4551d2e421507f05000a.fd" "\\10.250.233.67\backup\036967d4551d2e502507f05000d.fd"
"\\10.250.233.67\backup\036967d4551d38e32507f050010.fd"
"\\10.250.233.67\backup\036967d4551d38e32507f050010.fd" "\\10.250.233.67\backup\036967d4551d397f5507f050013.fd"
"\\10.250.233.67\backup\036967d4551d39c7b507f050016.fd"
"\\10.250.233.67\backup\036967d4551d3ac44507f050019.fd"
"\\10,250,233,67\backup\036967d4551d3c046507f05001c.fd"
"\\10.250.233.67\backup\036967d4551d3c10c507f05001f.fd" "\\10.250.233.67\backup\036967d4551d3c1c5507f050022.fd"
"\\10.250.233.67\backup\036967d4551d3c1c5507f050022.fd"
"\\10.250.233.67\backup\036967d4551d3c283507f050025.fd" "\\10.250.233.67\backup\036967d4551d3c363507f050028.fd"
"\\10.250.233.67\backup\036967d4551d3c363507f050028.fd"
"\\10.250.233.67\backup\036967d4551d3ceba507f05002b.fd"
"\\10.250.233.67\backup\036967d4551d3cfac507f05002e.fd"
"\\10.250.233.67\backup\036967d4551d3d0a0507f050031.fd"
"\\10.250.233.67\backup\036967d4551d3d1ac507f050034.fd" "\\10.250.233.67\backup\036967d4551d3d378507f050037.fd"
[ "//TO'SIO'SS'O//hackub/Os0a0/0411TU202/010/101003/.10"

8. Upload this modified configuration file to IDB using the command "omniupload".

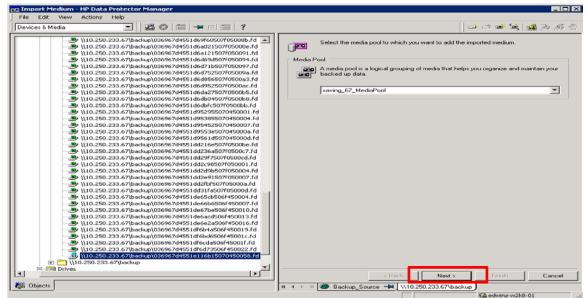


NOTE: Please refer to Appendix C on how to use the command "omniupload"

9. Expand the device node, **Import** the device object from target device

File Edit View Actions Help	056.10 - HP Data Protector P	
Devices & Media		
↓         ↓           ↓         ↓         ↓           ↓         ↓         ↓         ↓           ↓         ↓         ↓         ↓         ↓           ↓	Slo Description Location Media label Format Location	Unknown [saving_67: \\10.250.233.67\backup\036967d4551e116b15070450(
Pines ►	Format	Cancel Apply
🕵 Objects	Import Export	
Import medium (media)	Change Location	🔂 edwinz-w2k8-01

10. Click Next.



11. Check Import Copy as Original, click Finish.

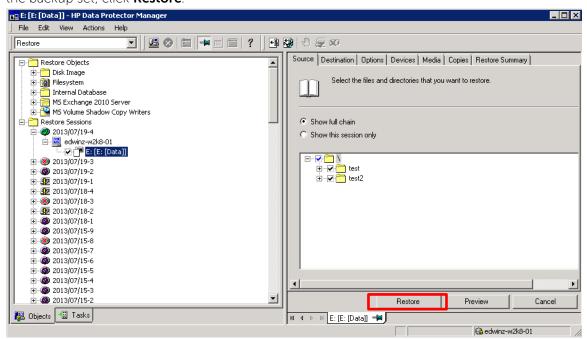
💼 Import Medium - HP Data Protector Manager	
File Edit View Actions Help	
Devices & Media 🗾 🖳 😂 📾 🖷 🕮 🤗	😅 🛎 🗃 📓 🚑 🥵 🖑
Devices & Media         Image: Control of the con	Specify additional options for the session.  Options  Finish Cancel  C Back Next > Finish Cancel
	N 4 D N Backup_Source - N(10.250.233.67\backup)
	Gi edwinz-w2k8-01

12. Verify that the import is done successfully.

💼 Import Medium - HP Data Pr	otector Manager		
File Edit View Actions H	elp		
Devices & Media	💽 🛛 🕮 ⊗ 🔚 🔚 🗐 😭 🦿		<b>-</b>
Environment Environment Device Policies Devices Environment Comparison Devices Environment Comparison Com		[Normal] From: MSM@edwinz-w2] Media session 2013/07/: [Normal] From: MMA@edwinz-w2] STARTING Media Agent "4	k8-01 "saving 67 Writer0" Time:
⊕ 00 a ⊕ 00 CIF5&NF5 ⊕ 00 CIF5-243.2 ⊕ 00 CIF51		Loading medium from slo	k8-01 "saving_67 Writer0" Time: ot \\10.250.233.67\backup\036967d k8-01 "saving 67 Writer0" Time:
⊡     ⊡     CIFS2     ⊡     ⊡     CIFS_Edwin01		Data Protector foreign	medium "036967d4:51e116b1:0704:0
B D Library B D saving_167 B D saving_167 B D Devices by host B D Extended Copy B M Media	Session Information Session ID: Session Type Import Medium 1 n	R-2013/07/19-2 Media edia out of 1 successfully imported.	B-01 "saving_67_Writer0" Time: database: 7/13-3 -WZR8-01\ADMINISTRATOR@edwinz-w2 D13 1:58:21 AM B-01 "saving_67_Writer0" Time: t \\10.250.233.67\backup\036967d B-01 "saving_67_Writer0" Time: saving_67_Writer0"
👸 Objects			a out of 1 successfully imported.

### 4.4 Restore from target DR

13. In **Context List** drop-down menu, choose **Restore**. Run the restore session that is associated to the backup set, click **Restore**.



14. Verify that the restore is done successfully.

💼 Restore - HP Data Protector Manager		
<u>File Edit View Actions Help</u>		
Restore		
Bright Restore Objects     Bright Disk Image     Bright Filesystem     Bright Thernal Database     Bright MS Exchange 2010 Server	Status         Type         Client System         Source         Label         Session         Fr           Com         WinF5         edwinz-w2k8-01         E:         E:         [Data]         7/19/2013 1         sa	
B · Solume Shadow Copy Writers Restore Sessions 2013/07/19-4 B · Solution (19-4) B · Sol	Session Information X Session ID: 2013/07/19-6 Session Type: Restore   Restore	Þ
B - ∰ 2013/07/19-2 B - ∰ 2013/07/19-1 B - ∰ 2013/07/18-4 B - ֎ 2013/07/18-3 B - ∰ 2013/07/18-2	Session completed successfully!	Þ
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## Set Up the DR Series Deduplication Appliance Cleaner

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The cleaner will run during idle time. If you workflow does not have a sufficient amount of idle time on a daily basis then you should consider scheduling the cleaner which will force it to run during that scheduled time.

If necessary you can do the following procedure as described in the screenshot to force the cleaner to run. Once all the backup jobs are setup the DR Series Deduplication Appliance cleaner can be scheduled. The DR Series Deduplication Appliance cleaner should run at least 6 hours per week when backups are not taking place, generally after a backup job has completed.

Performing scheduled disk space reclamation operations are recommended as a method for recovering disk space from system containers in which files were deleted as a result of deduplication.

Dashboard Alerts	Cleaner Sched		Schedule Cleaner
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System Configuration Networking Active Directory Local Workgroup Users Email Alerts Admin Contact Info Password Email Relay Host Date and Time Support Diagnostics Software Upgrade License			

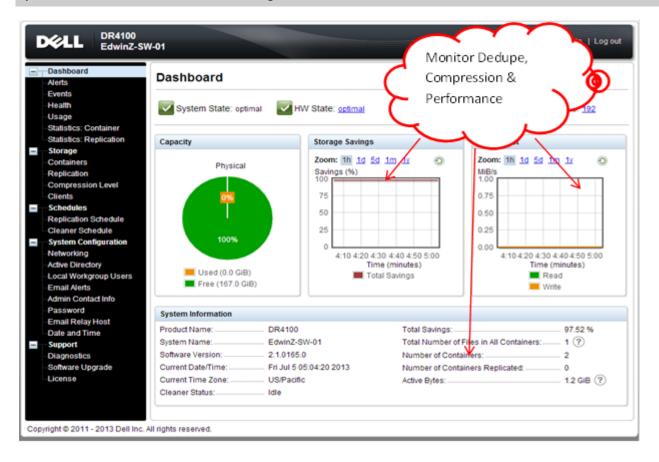


## Monitoring Deduplication, Compression and Performance

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After backup jobs have completed, the DR Series Deduplication Appliance tracks capacity, storage savings and throughput on the DR Series Deduplication Appliance dashboard. This information is valuable in understanding the benefits the DR Series Deduplication Appliance.

**Note:** Deduplication ratios increase over time; it is not uncommon to see a 2-4x reduction (25-50% total savings) on the initial backup. As additional full backup jobs complete, the ratios will increase. Backup jobs with a 12-week retention will average a 15x ratio in most cases.





## 7 Appendix

### 7.1 Create a Storage Device for CIFS

There are two options for HP Data Protector to authenticate to DR Series Deduplication Appliance through CIFS.

- 1. **DR joined into domain**: Integrate HP Data Protector Server and DR Series Deduplication Appliance with Active Directory
- a. Ensure the AD user has appropriate ACLs to the DR Series Deduplication Appliance Container share
- b. Set the HP Data Protector service to run with this AD user <Domain\User>
- 2. **DR is standalone CIFS server**: Make sure HP Data Protector Inet service and CRS service use the same Log On user. DR Series Deduplication Appliance also has the same username and password defined in Local Workgroup Users.

Also make sure this CIFS user has appropriate access permission to the DR Series Deduplication Appliance container share. HP Data Protector services will use this user to authenticate to DR Series Deduplication Appliance share in Workgroup mode.

- a. To set the password for local CIFS administrator on the DR Series Deduplication Appliance, log on to the DR using SSH.
  - i. Log on with username Administrator and password St0r@ge!
  - ii. Run the following command: Authenticate -- set -- user administrator

```
administrator@EdwinZ-SW-01 > authenticate --set --user administrator
Enter new password for CIFS user administrator:
Re-enter new password for CIFS user administrator:
Changed administrator's password.
administrator@EdwinZ-SW-01 >
```

**NOTE**: The CIFS administrator account is a separate account from the administrator account used to administer the appliance. After an authentication method is chosen, set the HP Data Protector service account to use the CIFS administrator account.

- b. Launch Microsoft Services Snap-in by clicking **Start > Run > Services.msc > Enter**.
- c. Locate the Data Protector Inet and Data Protector CRS Service. Right-click **Properties** and click the Log On tab.

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**NOTE**: Do this step only when no backups are currently running, as restarting the services causes backup jobs to fail. Double-click on the services one at a time.

If you are using local synced accounts rather than the AD account, make sure that there is a ".\"in front of the user name. [move this before the step – that's when the user needs this info]

- d. Click **OK**.
- e. After changing both services for HP Data Protector, choose **Stop/Start** to restart the two services.

### 7.2 Create a Storage Device for NFS

For NFS backup using the HP Data Protector, a target folder needs to be created as NFS share directory. This is the location to which backup objects will be written. This is not required while adding CIFS share.

- 1. Mount the DR Series Deduplication Appliance NFS share onto the NFS share directory which backup objects will be written in the HP Data Protector environment.
- 2. Verify the NFS share. One way is to try using the Linux command "cat /proc/mounts". The rsize and wsize of the nfs mount should be 512K.

### 7.3 User commands

- 1. Omnidownload
  - Downloads information about a backup device and a library from the Data Protector internal Database (IDB).
  - This command is available on systems with the Data Protector User Interface component installed.

Examples:

To review the information about a virtual tape library named "VTL" in ASCII format that will be saved as the file "libVTL.txt" to the directory "C:\Temp", run:

omnidownload - library VTL - file C:\Temp\libVTL.txt

- 2. Omniupload
  - Uploads information about a backup device from an ASCII file to the Data Protector internal database(IDB).
  - This command is available on systems with the Data Protector User Interface component installed.

#### Examples

To modify library "Exabyte1" using the information in the file "/tmp/EXA", run:

omniupload - modify\_library Exabyte1 - file /tmp/EXA