

Setting Up Replication between Dell[™] DR Series Deduplication Appliances with NetVault 9.2 as Backup Software

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Executive summary

This paper provides information about how to set up replication between Dell DR Series Deduplication Appliances for NetVault 9.2 backup. 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/NetVault build version and screenshots used for this paper may vary slightly, depending on the version of the DR Series Deduplication Appliance/ NetVault software version used.



1 Prepare each of the DR Series Deduplication Appliances

- 1. Add NetVault serve machine and DR Series Deduplication Appliance to the same domain (Optional: only applies when both DR and NVBU server are in Active Directory Domain environment)
- DR Series Deduplication Appliance Console: System Configuration-> Active Directory -> Join

1000-fhylbm1.ocarina.loc: 🗸 Global View	Active Directory	Join		
Dashboard Alerts	Settings			
-Events -Health	The Active Directory settings have not been configured. Click on the 'Join' link to configure them.			
Container Statistics	CIES Container Share Path			
Replication Statistics				
-Containers -Containers -Centainers -Clients -Schedules -System Configuration -Networking -Active Directory - Local Workshown Lisers -	Wdr4000-1 *= fields are required. Wdr4000-1 Domain Name (FQDN) ¹ : testad.ocarina.local Wdr4000-1 Username ¹ : administrator Wdr4000-1 Password ¹ : ••••••••••••••••••••••••••••••••••••	I		
Email Alerts Admin Contact Info Password Email Relay Host	Wardooch Cancel Join Domain \\\dr4000-fhylbm1.ocarina.loca\\\nvbu1\			
Date and Time	Ndr4000-fhylbm1.ocarina.locallnw-cifs-011			
Support	\\dr4000-fhylbm1.ocarina.local\weeam-cifs\	~		

2. Create container in DR Series Deduplication Appliance console. Enter a **Container Name**, select **Enable CIFS** check box. NetVault supports CIFS and NFS protocols.

Create New Container:	
Assign a name to the container, select its type, access protocol to use an	* = required fields) Help nd add clients that need access. weres and only letters, numbers, - and _ oharacters.
Global Connection Type ¹ : O No Access NAS (NFS, CIFS) O Rapid Data Access Dashtr - NFS	ess (RDA) ⑦
Alerts NFS access path: yoyol-sw-01:/containers	CIFS share path: \\yoyol-sw-01\ ntainers
Events Use NFS to backup UNIX or LINUX cliept Health Isane Enable NFS ■ Enable NFS	Use CIFS to backup MS Windows clients.
Contair Client Access:	Client Access:
Replica Open Access (all clients have access)	Open Access (all clients have access)
Contair Add client (IP or FQDN Hostname):	Add clients (IP or FQDN Hostname)
Clients:	Clients:
Clients Clients Control Clients Remove Remove	Remove O
-Local V NFS Options:	
Email A O rw insecure Admin : O ro	
Passwi Email F – Select-	
E Suppor	Cancel Create a New Container
Copyright © 2011 - 2013 Dell Inc. All rights reserved.	

3. Select preferred client access credentials. Click Create a New Container.

DEL	Create New Container:	5 = required fields	р H
	Assign a name to the container, select its type, access protocol to use	and add clients that need access.	
dr6000-09	Container Name [*] : Max 32 oh:	aracters and only letters, numbers, - and _ characters.	
Global	Connection Type [*] : ○ No Access ● NAS (NFS, CIFS) ○ Rapid Data A	ccess (RDA) ⑦	Itatisti
Alerts	NFS access path: yoyol-sw-01:/containers	CIFS share path: Nyoyol-sw-011	ntaine
Events Health	Use NFS to backup UNIX or LINUX client CIFS or NFS	Use CIFS to backup MS Windows clients.	elect
Contai	Client Access:	Client Access:	0
Replic	🗌 Open Access (all clients have access)	Open Access (all clients have access)	0
Storag	Add client (IP or FQDN Hostname):	r into	0
Replic	Clients:	Clients:	0
Clients	Remove	A Remove	0
Sched			0
Netwo	·		0
Active	×	v	-
-Local \	NFS Options:		
Email	🖉 💿 rw 🔄 insecure		
-Admin			
Passw	Map root to:		
Dote o	-select-		
+ Suppo		Cancel Create a New Container	
Copyright © 20	011 - 2013 Dell Inc. All rights reserved.		

4. Confirm that the container is added.

n1.testad.ocari V ew				Creat	e Edit Delete Dis	play Statis
er Statistics on Statistics	y added container "nvbu_test". y added NFS connection for cont y added CIFS connection for con 22	ainer "nvbu_t tainer "nvbu_1	est". test".		Container Pat	h: /contain
Containers	Files	NFS	CIFS	RDA	Replication	Select
on 2t	6				Not Configured	0
2tb	6				Stopped	0
aa1	15		~		Stopped	0
aa2	0		~		Not Configured	0
acronis-cifs	0		~		Not Configured	0
backup	3	~	~		Not Configured	0
t Info backup01	14		~		Not Configured	0
nbu-cifs-02	44		~		Not Configured	0
nvbu	7	~	~		Stopped	0
nvbu1	7		~		Stopped	0
nvbu_test	0	~	~		Not Configured	0
nw-cifs-01	37		~		Not Configured	0
rda?	5			RDS	N/A	0
1002						<u> </u>

5. Click **Edit.** Note down the container share/export path, which you will use later to target the DR container. Click **Cancel** to exit.

Connection	ype $^*:$ \bigcirc No Access $ullet$ NAS (NFS, CIFS) \bigcirc Rapid	i Data Acc	ess (RDA) 🕧	Ð				_	
dr4000-fhy NFS access	path: 10.250.243.18:/containers/nvbu_test	(CIFS CIFS	path: \\10.	.250.243	.18\nvbu_te	st	Statis	tics
- Dasht Use NFS to Alerts ☑ Enable N	to backup UNIX or LINUX clients. 9 NFS		Use CIFS to	o backup N CIFS	/IS Windo	ows clients.		ontainer	
Event: Client Acces	S:		Client Acce	ss:	lionto ha			Select	
Usagt Open Access (all clients have access) NFS Options:			Open Ac	.cess (an c	Jients ne	ive access)		0	Ê
Replic rw	insecure insecure							0	
Conta Map root to:								0	
Client	•							0	
+ Scheo								0	
- Netwo								0	
Active								0	
Local Email								0	
Admir								•	
Passv						Cancel	Modify this Container	0	
Email	1002	1	0				Stopped		
Date and Time	repz								
Date and Time	veeam-cifs	2			~		Not Configured		

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2 Set Up NetVault

2.1 Procedure of backup data to source DR

- 1. Add NetVault serve to the same domain as DR Series Deduplication Appliance (Optional: only applies when both DR and NVBU server are in Active Directory Domain environment).
- NetVault Window 2012 server

a		Server Manager			X
Server Ma	inager • Local Ser	ver	• © P	Manage Tools View I	Help
🖬 Dashboard	For Zhuhai-2012-05			TASKS 🔻	
Local Server All Servers File and Storage Services	Computer name Domain	Zhuhai-2012-05 testad.ocarina.local	Last installed updates Windows Update Last checked for updates	Never Not configured Never	
	Windows Firewall Remote management Remote Desktop NIC Teaming Ethernet	Domain: Off Enabled Enabled Disabled IPv4 address assigned by DHCP, IPv6 enabled	Windows Error Reporting Customer Experience Improvement Program IE Enhanced Security Configuration Time zone Product ID	Off Not participating On (UTC-08.00) Pacific Time (US & Canada 00183-80002-00293-AA671 (activated)))
	Operating system version Hardware information	Microsoft Windows Server 2012 Standard VMware, Inc. VMware Virtual Platform	Processors Installed memory (RAM) Total disk space	Intel(R) Xeon(R) CPU E5-2690 0 @ 2.90 8 GB 199.66 GB	IC
	<	Ш		>	1 -

2. On NetVault server, launch **Windows Services** console, set the logon information for '**NetVault Process Manager**' service. Enter CIFS credential that has access permission to DR container share(s), and then restart the service.



3. Launch NVBU Console, click Device Management





4. Choose Add menu, click Add -> Add Library. In the pop-up Add Library window, highlight a client, right click on that machine and choose Create Virtual Library

File Add View Help Server S File View Help Server Selection: ZHUHAI-2012-05 Library Name Choose Library Choose Library Peek Treenode Create SVTL No Library Selected Type Details		NVBU Device Management		x
Server S File View Help Device Server Selection: ZHUHAI-2012-05 Library Name Library Selection Drive Selection Configure Choose Library Peek Treenode Create SVTL No Library Selected Type Details	File Ad	d View Help		
Server S File View Help Device Server Selection: ZHUHAI-2012:05 Library Name Library Selection Drive Selection Configure Choose Library Selected Library Selected Library Peek Treenode Create SVTL No Library Selected No Library Selected Type Details 		Add Library	Bac 	kup ×
Type Type	Server S Device	File View Help NetVault Server Selection: ZHUHAI-2012-05 Library Selection Drive Selection Configure Choose Library Open Peek Treenode Create sirtual library Create SVTL No Library Selected	Back	(Up
		Type Type		•

5. Enter source DR container share UNC path, configure other parameters, click **OK**.

<u>h</u>					Not	Vault [®]	Rad	kun	cku
۵			Add ne	ew virtual	library		_		
Serv Library	y settings								
Lib Librar	y location <	\\10.250.243	l.18\nvbu	test					
Librar	y name	NewLibrary							
E Barco	ode prefix	V815R							
Numb	per of drives	1	÷						
Numb	per of slots	4	•						
Media	a capacity (MB)	1024000	÷						
							Cancel	OK	

6. On Library Selection tab, right click the newly created library, choose Select.

6	Add Library
File View Help	NetVault [®] Backup
Server Selection: ZHUHAI-2012-05	Library Name ZHUHAI-2012-05: \\10.250.243.18\nvbu1\N
Choose Library ZHUHAI-2012-05 Sobotic Libraries NDMP Robotic Libraries SVTL Robotic Libraries	Selected Library
	Logon: default 23:03 🅢

7. On **Drive Selection** tab, pick each of the Drives available for the library, right click on the drive(s), choose **Select.** Make sure all drives are configured in Configure tab, and the library is added successfully. **Save** the library. Verify that the library device is **Online**.

	Add	Library 📃 🗖 🗙
File	View Help	
		NetVault Backup
Serv	er Selection: ZHUHAI-2012-05 Lib	rary Name ZHUHAI-2012-05: \\10.250.243.18\nvbu1\N
Libr	ary Selection Drive Selection Configure	1
- C	noose Drives	Selected Drives
	ZHUHAI-2012-05	Select for drive bay
	Image International Internati	
		Type NetVault Virtual Driv 💌
		Details
		<none></none>
		Remove Drive
		Logon: default 23:06

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8. Create backup job by clicking **Backup** button on NVBU Console. In Backup job creation window, choose the source DR container library device under **Target** tab.

NVBU Backup 📃 🗖 🗙							
ile View Accept Help							
🗅 🖥 🧤 🚦 NetVault Backup							
Server Selection ZHUHAI-2012-05 🔽 Job Title No Title							
Selections Backup Options Schedule Target Advanced Options							
C Any Device © Specify Device □ Local Drives Only							
Media Options							
Target Media By 💿 Any not in a group							
C Any							
○ MID							
O Group Label							
Label Media 🔽 Automatically label blank media							
Reuse Media Never O Any O With same group label as target media							
General Options Specify minimum space required on media before backup M Bytes Protect media from further writes after backup Ensure this backup is the first on the media Media Request Timeout							
Target Set Load Save As Delete Modify							
Logon: default 23:07							



9. On Advanced Options, uncheck **Enable Deduplication.**

b	NVBU Backup	,	_ D X
File View Accept Help			
D 🖣 🐌 🚦		NetVa	ult [®] Backup
Server Selection ZHUHAI-2012-05	Job Title No T	itle	
Selections Backup Options Sche	dule Target Advanced Option	is	
Backup Life			_
Backup C Archive			
Discard After	Full Backups		
Discard After	🕂 🖲 Days 🔿 Weeks	C Years	
🔲 Take Index Offline After 🛛	🕂 🔿 Days 🔿 Weeks	C Years	
Additional Options			
Enable Encryption	Enable Deduplication		
Verify After Backup	Enable Network Compression		
Secondary Copy	Bun Secondary Copy On	erver 👻	
C Duplicate	Using Schedule Set	mediate	Manage
C Data Conu	Using Target Set		Manage
Encrupt Secondary Copy On	Using Source Set	v Device	Manage
Migrate (Discard Original Bag	(kup) 🗌 🗌 Allow Streams to	Share Media	
Use optimised replication bel	ween devices that support this fe	ature	
Select Source Media before	Target Media		
© Use Original's Life ⊂ Dis	card After 🚺 📩 👁 Days	C Weeks C Years	
Pre and Post Scripts			
🔲 Use Pre Script	User P	arameter	
Use Post Script	User P	arameter	
Events			
Raise Event If Job Is Succes	sful	v	
📃 🔲 Raise Event If Job Has War	nings	T	-
		Logon: d	efault 23:08

10. After the backup job is completed, a restore point will appear in **NVBU Restore**.

🕌 NVBU Re	store 📃 🗖 🗙
File View Accept Help	
	NetVault [®] Backup
Server Selection ZHUHAI-2012-05 💌 Job Ti	tle No Title
Selections Restore Options Source Target Client Sch	edule Advanced Options
Selection Method Plugin 🗨	
I PUHAI-2012-05 I I I System I I I System I I I I I I I I I I I I I I I I I I I	Filter Options
Restore Selection Set Load	Save As Delete T Modify

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2.2 Set up DR Native Replication from DR Console

dr4000-fhylbm1.testad.ocari v - Global View	plication		Create dit D	Delete Stop Start I	Bandwidth Displ	ay Statist
Dashboard Alerts	per of Source Replicati	ions: O				
Events Health	al Container Name	Role	Remote Container Name	Peer State	Bandwidth	Select
Usage 2tb		target	10.250.243.89 2tb	Stopped	Default	0
Replication Statistics		target	10.250.243.89 aa1	Stopped	Default	0
Containers nvb	u	target	10.250.224.190 nvbu	Stopped	Default	0
	u1	target	10.250.224.190 nvbu1	Stopped	Default	0
System Configuration	2	target	10.250.243.89 rep2	Stopped	Default	0
Active Directory Local Workgroup Users vtl		target	10.250.243.89 vti	Stopped	Default	0
Email Alerts Admin Contact Info		target	10.250.243.89 vtl2	Stopped	Default	0
Password Email Relay Host vtl3		target	10.250.243.89 vtl3	Stopped	Default	0
-Date and Time						

1. On source DR console, go to **Replication** -> **Create**

2. Select the source container in step1, choose **Source** in step 3, choose '**Create container on remote system**' in step4. Enter target DR hostname/IP and management credential, click Create Replication

Create Replication		
Step 1: Select a local container* backup backup backup weifs-01 mweifs-01 sample veifs-01 Step 2: Select Encryption* None 128 bit 256 bit	Step 3: Select a role *	Step 4: Remote container settings Create container on remote system Username*: Password*: Peer System*: Peer Container Name:
Admin Contact Into Password Email Relay Host Date and Time Support Copyright © 2011 - 2013 Dell Inc. All rights reserved.		Cancel Create Replication

3. Make sure replication session is created successfully, and **Peer Status** is **Online**. Check **Replication Status** from **Replication Statistics** menu.

an-sw-03.ocarina.local v Global View Dashboard	Replication	Statistics					
Alerts	Replication Filter						
Events Health Usage Container Statistics Replication Statistics Containers Replication Clients Schedules System Configuration Active Directory	Container Filter: Headers: Peer Status Replication Th Peer Containe	● All roughput r	 Name Nvbu nvbu ✓ <l< th=""><th>Peer System 10.250.243.1 Time To Network Encryptio</th><th>8 A Sync Savings n</th><th>Progree Last Tit</th><th>ss % me in Sync Apply Filter</th></l<>	Peer System 10.250.243.1 Time To Network Encryptio	8 A Sync Savings n	Progree Last Tit	ss % me in Sync Apply Filter
Local Workgroup Users Email Alerts	Container	Progress %	Network Throughput	Network Savings	Peer Status	Repl	ication Status
-Admin Contact Info	nvbu	100	0 KiB/s	93.34	Stopped	INSYN	10
Password Email Relay Host Date and Time	nvbu1	100	1 KiB/s	100.00	Online	INSYN	

4. Once **Replication Status** is **INSYNC**, stop the replication.

● https://10.250.224.190/set_repli	ication.cgi		☆ ▽ (C S ← Google	م		ŀ
	м			ac	iministrator (Log	i out) Helj	p
ivan-sw-03.ocarina.local 🗸	Replication		Create Edit [Delete Stop Start Ba	ndwidth Displ	ay Statistics	
Dashboard Alerts	Number of Source Replica	tions: 1					
Health	Local Container Name	Role	Remote Container Name	Peer State	Bandwidth	Select	
Usage - Container Statistics	nvbu	source	10.250.243.18 nvbu	Online	Default	•	2
Replication Statistics	nw-cifs-01	target	10.250.225.79 nw-cifs-01	Disconnected	Default	0	ļ
-Containers -Replication							
Clients Clients Configuration							
-Networking							
Local Workgroup Users							
Admin Contact Info							
Password							
-Email Relay Host							
+ Support							
	white we are used						

5. Modify target container on target DR management console and **Enable CIFS** share path

Connection Type [*] : O Ne) Access NAS (NFS, CIFS) Rapid D	iata Access (RDA) ?	
Globa NFS access path: 10.2	250.243.18:/containers/nvbu	CIFS share path: \\10.250.243.18\nvbu	Statistics
Dasht Use NFS to backup Uf Alerts Image: Construction of the second se	NIX or LINUX clients.	Use CIFS to hackup MS Windows clients.	ontainers
Event: Client Access:		Client Access:	Select
Healti Dpen Access (all cl	ients have access)	Open Access (all clients have access)	
Conta Add client (IP or FQDN	Hostname):	Add clients (IP or FQDN Hostname)	0
Replic	Add	Add	0
Stora: Clients:		Clients:	
Conta	Remove	_ Remove	0
Client			•
Scheo	~	×	0
Syste NFS Options:			0
Suppt 💿 rw 🗌 i	nsecure		0
O ro			0
Map root to:			
-select- 🗸			0
		Cancel Medify this Container	

6. Add target DR to the same domain as NetVault Server, add target DR into Active Directory Domain (Optional: only applies when both DR and NVBU server are in Active Directory Domain environment).

dr4000-fhylbm1.ocarina.loc Global View	Active Directory	Join
Alerts	Settings	
Events Health	The Active Directory settings have not been configured. Click on the 'Join' link to configure them.	
Container Statistics	CIFS Container Share Path	
Storage	Ndr4000-fl Active Directory Configuration	^
Containers Replication Clients Schedules System Configuration Networking Active Directory Local Workgroup User Email Alerts Admin Contact Info	Ndr4000-1 *= fields are required. Ndr4000-1 Domain Name (FQDN)*: testad.ocarina.local Ndr4000-1 Username*: administrator Ndr4000-1 Password*: ••••••• Ndr4000-1 Org Unit S Ndr4000-1 Ndr4000-1 Cancel	=
Password Email Relay Host Date and Time Cupport	\\dr4000-fhylbm1.ocarina.loca\\nvbu1\ \\dr4000-fhylbm1.ocarina.loca\\nvv-cifs-01\ \\dr4000-fhylbm1.ocarina.loca\\veeam-cifs\	~

2.3 Restore from Replication Target

1. Launch NVBU Console, go to Device Management, Remove the source VTL.



2. Modify C:\Program Files (x86)\Quest Software\NetVault Backup\config\diskdevices.cfg, change the following locations to point to target DR IP or hostname. Save diskdevices.cfg after the modification is completed.

[libraries] location=\\<mark>10.250.243.18</mark>\nvbu1\NewLibrary

[drives] location=\\<mark>10.250.243.18</mark>\nvbu1\NewLibrary\drives\1 location=\\<mark>10.250.243.18</mark>\nvbu1\NewLibrary\drives\2 3. In NVBU **Device Management** menu, click **Add** -> **Auto-Configure Device**

		NVBU Device N	lanagement	_ 🗆 X
File	Add	View Help		
Serv De		Add Library Add Standalone Drive Add NetVault SmartDisk Add EMC Data Domain Boost Device Auto-Configure Device Narve 2005, vro.2002, con. roo wrobd wrewcioraly to Narve 1 (Idle) : 2HUHAI-2012-05 28 Nov 19:18-1 (50 2RIVE 2 (Idle) : 3HANK (58/2G002) SLOT 1 : RESERVED SLOT 2 : RESERVED	NetVal nline) *ZG001)	ult [°] Backup

4. NVBU will detect the target library with **Re-scan for devices**

	NVBU Device Management	_	D X
File Add	I View Help		
	NetV	ault Ba	ackup
Server Sele	lection ZHUHAI-2012-05		
Devices	Device Logs Media Reguests		
3 - 740			[
	DRIVE 1 (Idle) : ZHUHAI-2012-05 28 Nov 19:18-1 (58×ZG001)		
	DRIVE 2 (Idle) : BLANK (58%2GUU2) SLOT 1 : RESERVED		
	SLOT 2: RESERVED		,
	Automatic Device Configuration	x	
	Server ZHUHAI-2012-05		
	Select Device Type		
	C Standalana Driva		
	1		
	Re-scan for devices		
	Next	Cancel	



5. The target container device show as **Online** in **Device Management** UI

	NVBU Device Management	_ D X
File	Add View Help	
		NetVault [®] Backup
Serv	er Selection ZHUHAI-2012-05	
Dev	rices Device Logs Media Requests	
.	ZHUHAI-2012-05: \\10.250.224.190\nvbu\NewLibrary (Online) ≪ DRIVE 1 (Idle) : ZHUHAI-2012-05 28 Nov 19:18-1 (58×ZG001) ≪ DRIVE 2 (Idle) : BLANK (58×ZG002) ™ SLOT 1 : RESERVED ™ SLOT 2 : RESERVED	
	2HUHAI-2012-05: \\10.250.243.18\nvbu/NewLibrary (0nline) DRIVE 1 (Idle): 2HUHAI-2012-05.28 (Nov 13:18-1 (58%2G001) DRIVE 2 UHA): PLANK (72.002)	
	SLUT 2	

6. From NVBU Console, click Restore. On Selections tab, choose data set that needs to be restored.

	NVBU Restore				
File	View Accept Help View Accept Help Image: Second s	° 8	acl	kup	
Ser	ver Selection ZHUHAI-2012-05 Job Title No Title	, ,		4 ¥ 4 ¥	
F	Restore Selection Set Load Save As Delete Modify				
	Logon: default		1	9:38 //	

7. On **Source** tab, choose the target library device.

W NVBU Restore	_ 🗆 X
File View Accept Help	
🗅 📲 🧤 📓 NetVault	Backup
Server Selection ZHUHAI-2012-05 Job Title No Title	
Selections Restore Options Source Target Client Schedule Advanced Options	
C Any Device Specify Device Local Drives Only	
ZHUHAI-2012-05: \\10.250.224.190\nvbu\NewLibrary	
CHURAL-2012-05: \\10.250.243.18\nvbu\NewLibrary	
Source Set Load Save As Delete Modify	-
Logon: default	: 19:38 🏑

8. Verify from **NVBU Console** -> Logs that restore from target container is completed successfully.

- WB	NVBU Logs L	
File View Options Help		
🔆 🔁	NetVault	Backup
Server Selection ZHUHAI-2012-05		
Warning Level Date / Time Job Class	Client Log Message	
Job Mess 2013/11/28 1 40 Jobs	ZHUHAL Starting job 40 '2Grep-restore from target' (Phase 1 , Instance 1) for UID 0	
Job Mess 2013/11/28 1 40 Data Plu	ZHUHAI File System 7.9.5 restore	
Job Mess 2013/11/28 1 40 Data Plu	ZHUHAI Requesting backup index	
Job Mess 2013/11/28 1 40 Data Plu	ZHUHAI Analyzing items to restore	
Job Mess 2013/11/28 1 40 Data Plu	ZHUHAI Building list of items to restore	
Job Mess 2013/11/28 1 40 Media	ZHUHAI [ZHUHAI-2012-05: \\10.250.243.18\nvbu\NewLibray] Job has been assigned media 'ZHUHAI-2012-05 28 Nov 19:18-1' (58×ZG001) in 'DRIVE 1:ZHUHAI	-2012-05'
Job Mess 2013/11/28 1 40 Media	ZHUHAL (ZHUHAI-2012-05: \\10.250.243.18\nvbu\NewLibrary) Media in 'DRIVE 1:ZHUHAI-2012-05' assigned to job ready for data transfer	
Job Mess 2013/11/28 1 40 Media	ZHUHAI [ZHUHAI-2012-05: \\10.250.243.18\nvbu\NewLibrary] Drive 'DRIVE 1:ZHUHAI-2012-05' has completed its transfer	
Job Mess 2013/11/28 1 40 Data Plu	ZHUHAI Job completed	
Job Mess 2013/11/28 1 40 Jobs	ZHUHAI Job Status: Restore Completed	
Job Mess 2013/11/28 1 40 Jobs	ZHUHAI Finished job 40, phase 1 (instance 1)	



Set Up the DR Series Deduplication Appliance Cleaner

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.

DELL DR4100 EdwinZ-	SW-01			Help Log out
Dashboard Alerts	Cleaner Sched	lule		Edit Schedule
Events Health Usage Statistics: Container	System time zone: US/P Note: When no schedule			
Statistics: Replication	Day	Start Time	Stop T	ime
Containers	Sun			
Replication	Mon			
Compression Level	Tue		-	
Clients	Wed			
Schedules	Thu		-	
Replication Schedule	Fri		-	
Cleaner Schedule	Sat			
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				



4 Monitoring Deduplication, Compression and Performance

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.





A Appendix

A.1 Authenticating to DR through CIFS

There are two options for NVBU to authenticate to DR Series Deduplication Appliance through CIFS.

- 1. **DR joined into domain**: Integrate NVBU 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 NVBU service to run with this AD user <Domain\User>
- 2. **DR is standalone CIFS server**: Make sure Windows NVBU services and DR Series Deduplication Appliance have 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. NVBU 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



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 NVBU service account to use the CIFS administrator account.

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

Data Protector Inet Pro	perties (EDWINZ-W2K8-01)	X	
Log on as:			
Local System account of the service to the servi	int interact with desktop		
This account	Nadministrator	Browse	
Password:	•••••		
<u>C</u> onfirm password:	•••••		
Help me configure user	account log on options.		
	OK Cancel	Apply	

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 workgroup account rather than the AD account, make sure that there is a ".\"in front of the user name.

- d. Click OK.
- e. After changes, choose Stop/Start to restart the services.

