



Setting up Veeam on the Dell™ DR4000 Disk Backup Appliance

A Dell Technical White Paper

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Executive Summary

This paper provides information about how to set up the Dell DR4000 as a backup to disk target for Veeam® Backup & Replication™ software. This paper is a quick reference guide and does not include all DR4000 deployment best practices.

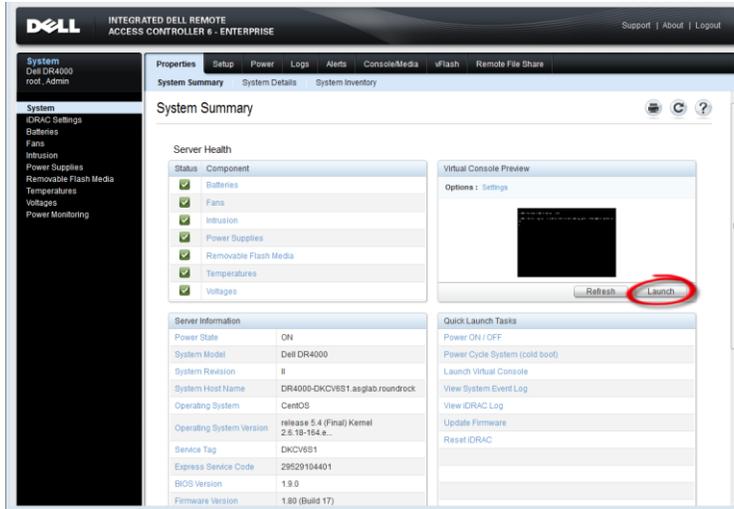
See the DR4000 documentation other data management application best practices whitepapers for additional information.

NOTE: The DR4000 build version and screen shots used for this paper may vary slightly, depending on the version of the DR4000 operating system.

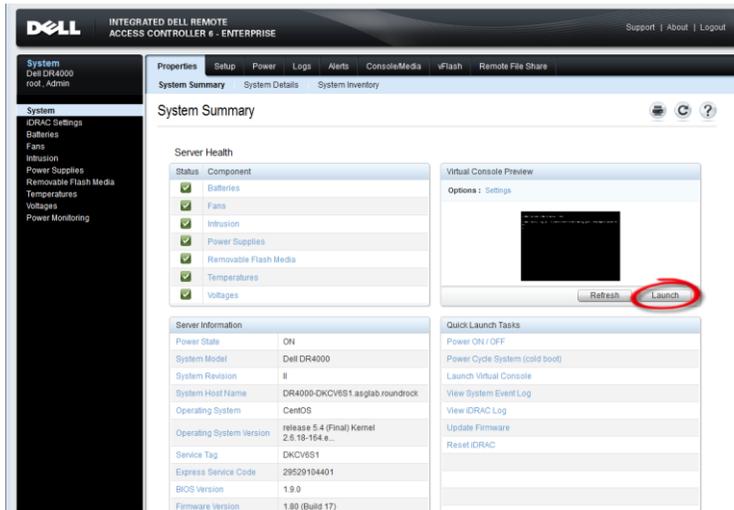


1 Install and Configure the DR4000

1. Rack and cable the DR4000 appliance, and power it on.
2. Log into iDRAC using the default address **192.168.0.1**, user name **root**, and the password **calvin**.



3. Launch the virtual console.



4. Once 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).



5. Set the user-defined networking preferences.

```
Would you like to use DHCP (yes/no) ?  
  
Please enter an IP address:  
  
Please enter a subnet mask:  
  
Please enter a default gateway address:  
  
Please enter a DNS Suffix (example: abc.com):  
  
Please enter primary DNS server IP address:  
  
Would you like to define a secondary DNS server (yes/no) ?  
  
Please enter secondary DNS server IP address:
```

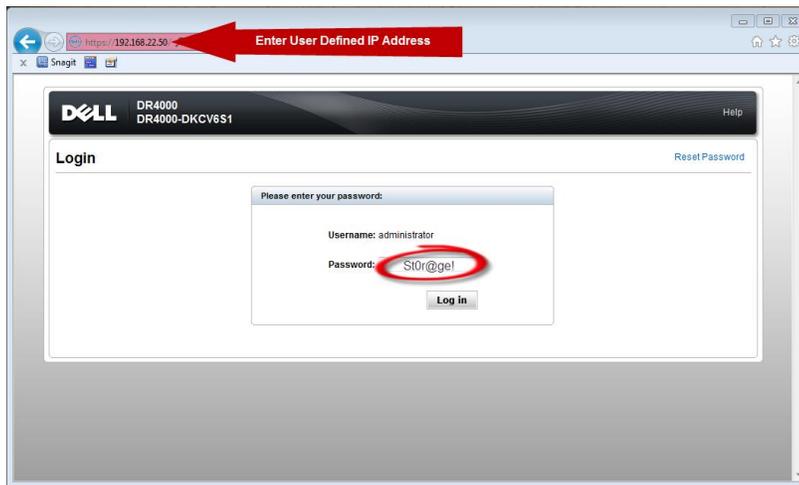
6. View the summary of preferences and confirm that it is correct.

```
=====
                          Set Static IP Address
IP Address                : 10.10.86.108
Network Mask              : 255.255.255.128
Default Gateway          : 10.10.86.126
DNS Suffix                : 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) ? _
```



7. Log into the DR4000 administrator console, using the IP address you just provided for the DR4000, user **administrator** and the password **St0r@ge!** (The "0" in the password is the numeral zero.).



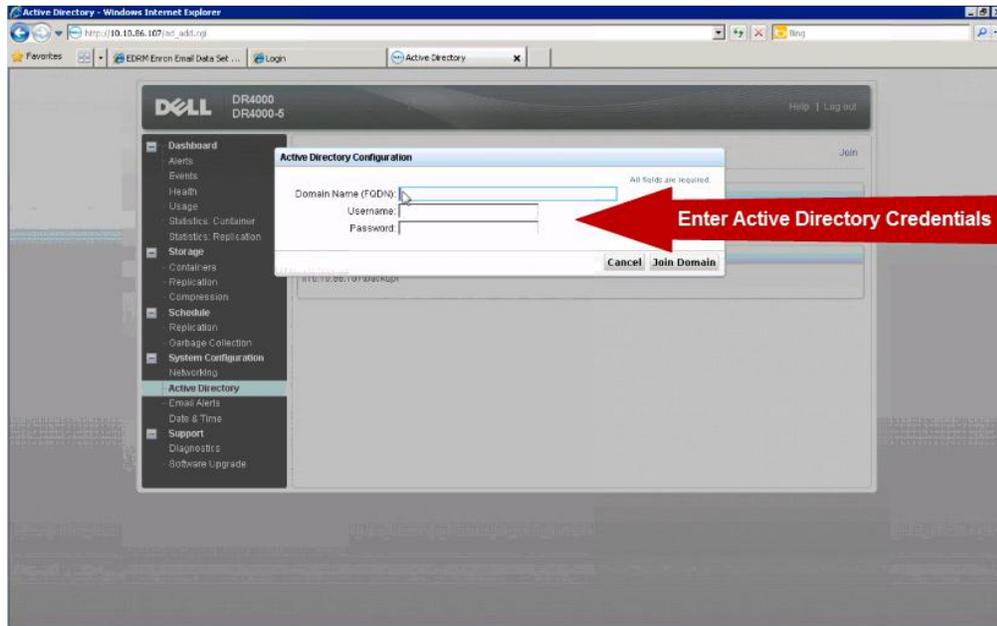
8. Join the DR4000 to Active Directory.

NOTE: if you do not want to add DR4000 to Active Directory, see the *Owner's Manual* for guest login instructions.

- a. Select **Active Directory** in the tree on the left hand side of the dashboard.

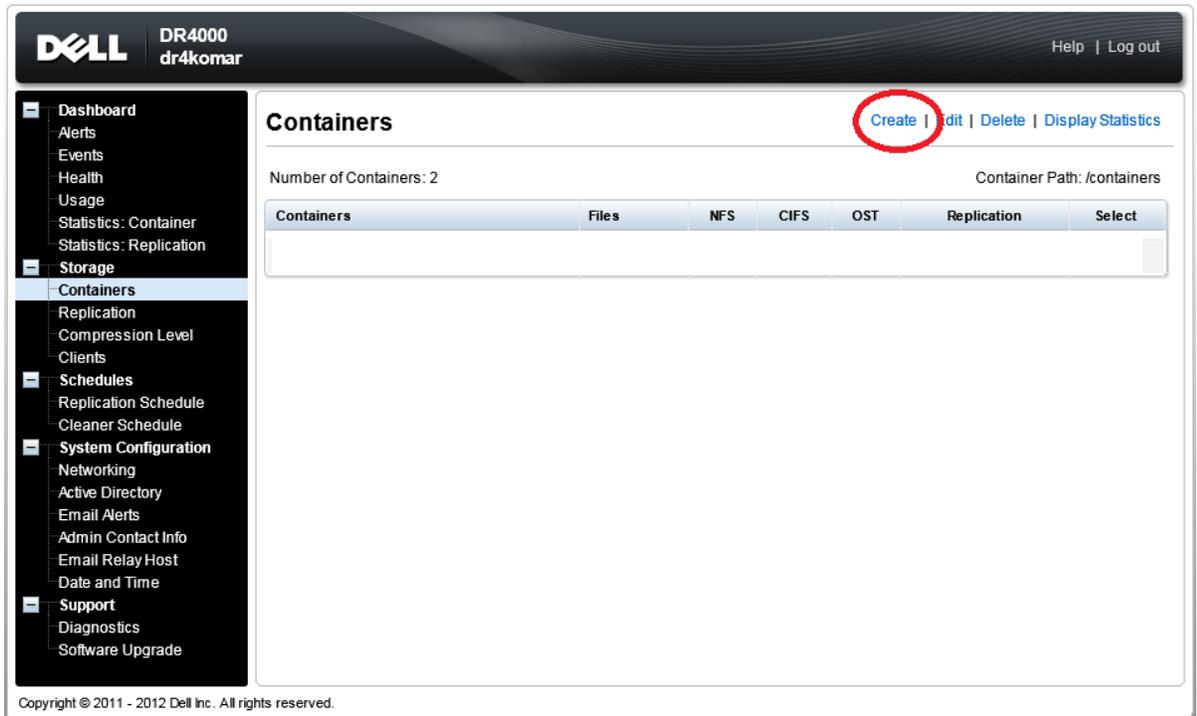


- b. Enter your Active Directory credentials.



9. Create and mount the container.

- a. Select **Containers** in the tree on the left side of the dashboard, and then click the **Create** link at the top of the page.



- b. Enter a **Container Name** and select the **Enable CIFS** check box.

The screenshot shows the 'Create New Container' form in the Dell DR4000 interface. The form is divided into two columns: NFS and CIFS. The 'Container Name' field is at the top, with a red arrow pointing to it labeled 'Name the Container'. Below this, there are sections for NFS and CIFS. The CIFS section has a red arrow pointing to the 'Enable CIFS' checkbox labeled 'Select CIFS or NFS'. In the 'Client Access' section, there are 'Add' and 'Remove' buttons for clients, with a red arrow pointing to the 'Add' button labeled 'Enter Backup Server Info'. At the bottom right, the 'Create a New Container' button is circled in red.

- c. Select the client access credentials preferred.

This screenshot is identical to the one above, showing the 'Create New Container' form. Red arrows point to the 'Container Name' field, the 'Enable CIFS' checkbox, the 'Add' button for clients, and the 'Create a New Container' button.

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



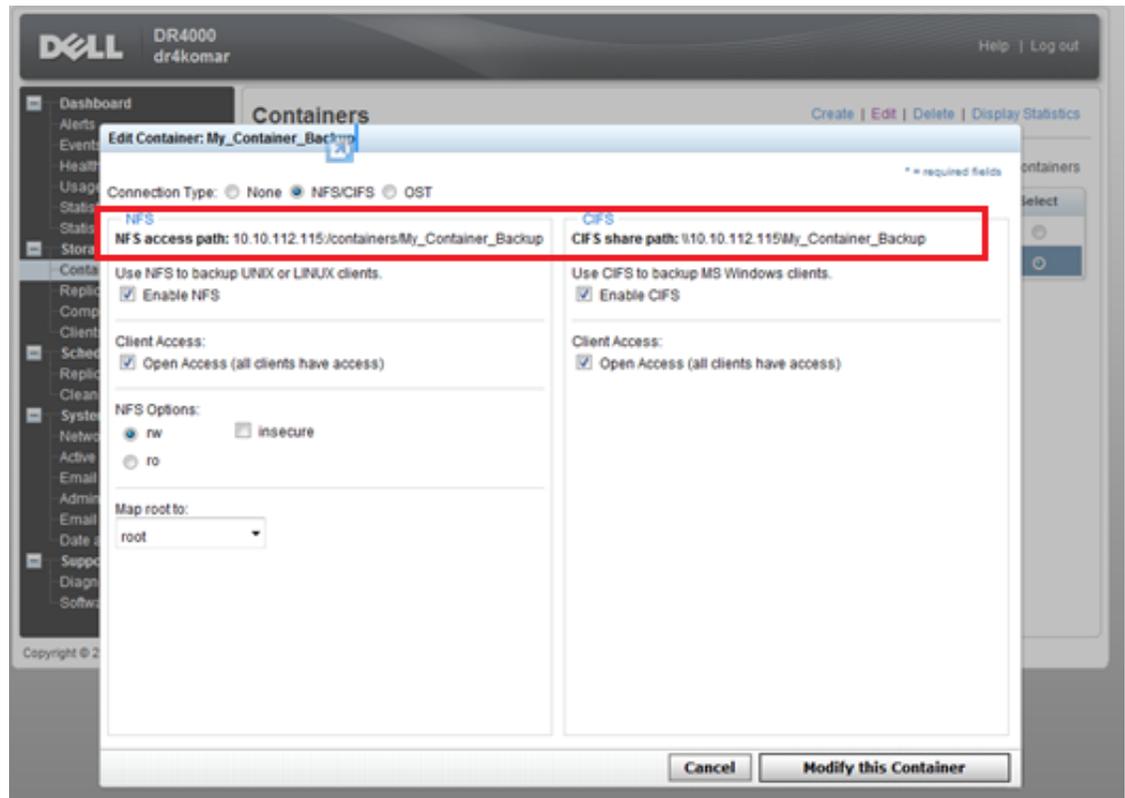
- Backup console (Veeam Server)
 - Hyper-V hosts (on-host proxy for Hyper-V environments)
 - Off-host proxies (for Hyper-V environments)
 - Backup proxies (for vSphere environments)
- d. Click **Create a New Container**.
- e. Confirm that the container was added.

The screenshot shows the Dell DR4000 web interface. The top header includes the Dell logo, 'DR4000 dr4komar', and 'Help | Log out'. The left sidebar contains a navigation menu with categories: Dashboard, Alerts, Events, Health, Usage, Statistics: Container, Statistics: Replication, Storage, Containers, Replication, Compression Level, Clients, Schedules, System Configuration, and Support. The main content area is titled 'Containers' and includes a 'Message' box with a green checkmark and the text 'Successfully added container 'My_Container_Backup''. Below the message, it states 'Number of Containers: 2' and 'Container Path: /containers'. A table displays the container details:

Containers	Files	NFS	CIFS	OST	Replication	Select
My_Container_Backup	0	✓	✓		Not Configured	○



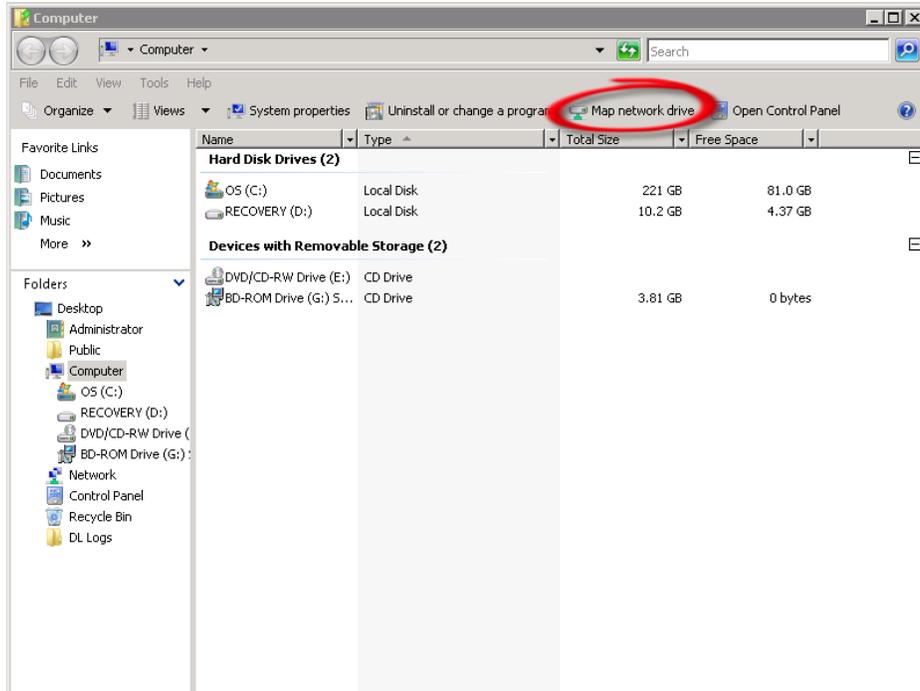
- f. Click **Edit**, and write down the container path, which you will use later to target the DR4000.



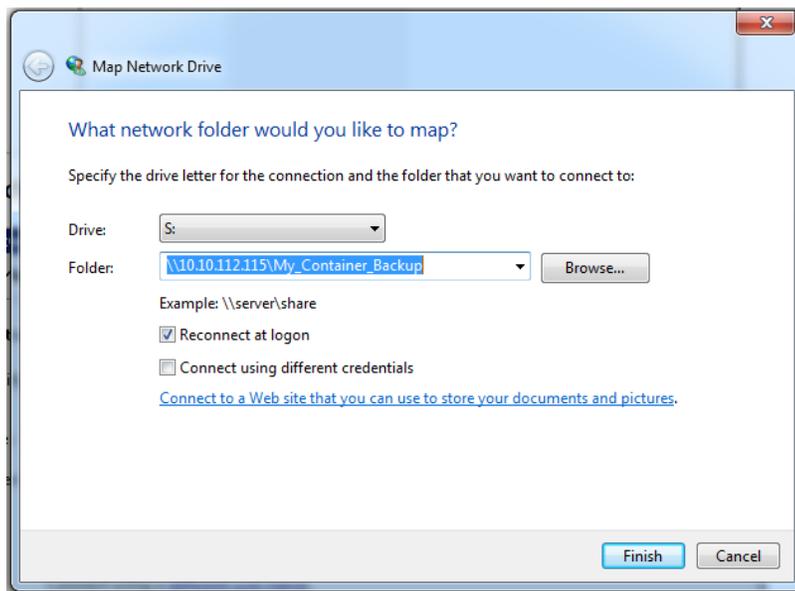
- g. Click **Cancel** to exit.

2 Configure the Backup Server

1. Log into the media server and click on **Start→My Computer**.
2. Click **Map network drive**.



3. For **Folder**, enter the path to the container on the DR4000.



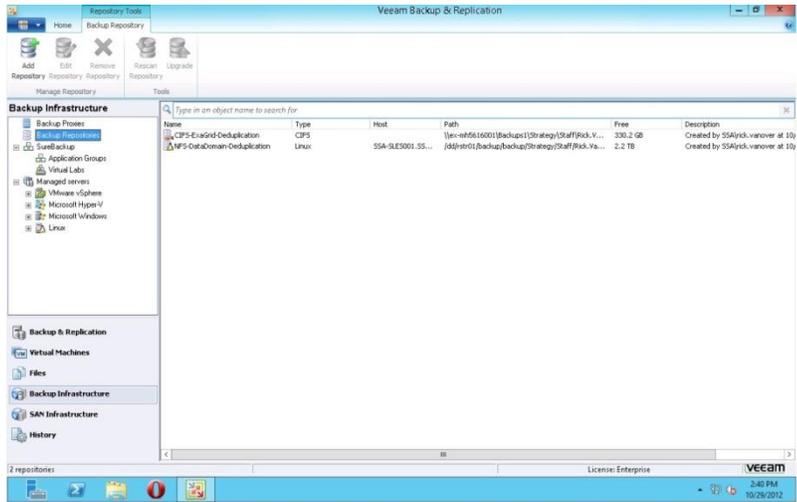
4. Select the **Reconnect at logon** check box.

5. When prompted, enter the DR4000 login credentials.
The DR4000 container is now mounted to your backup server.

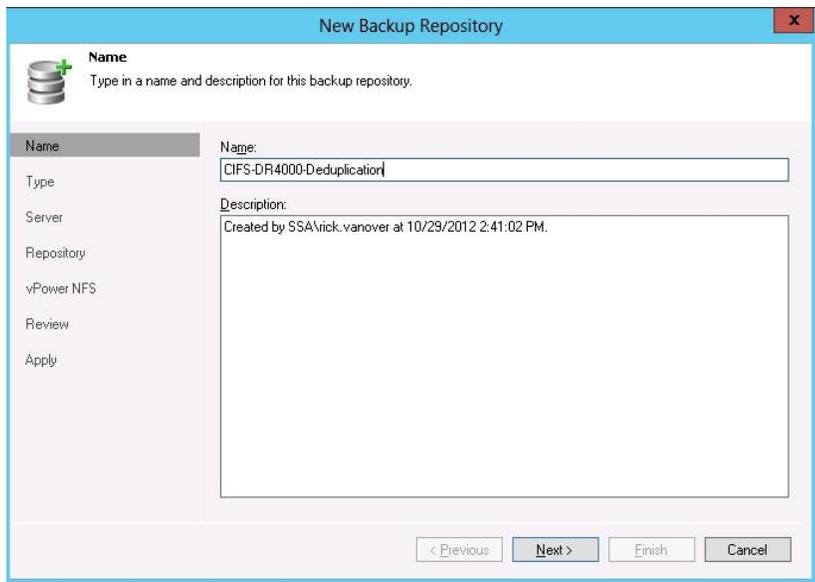


3 Set up Veeam

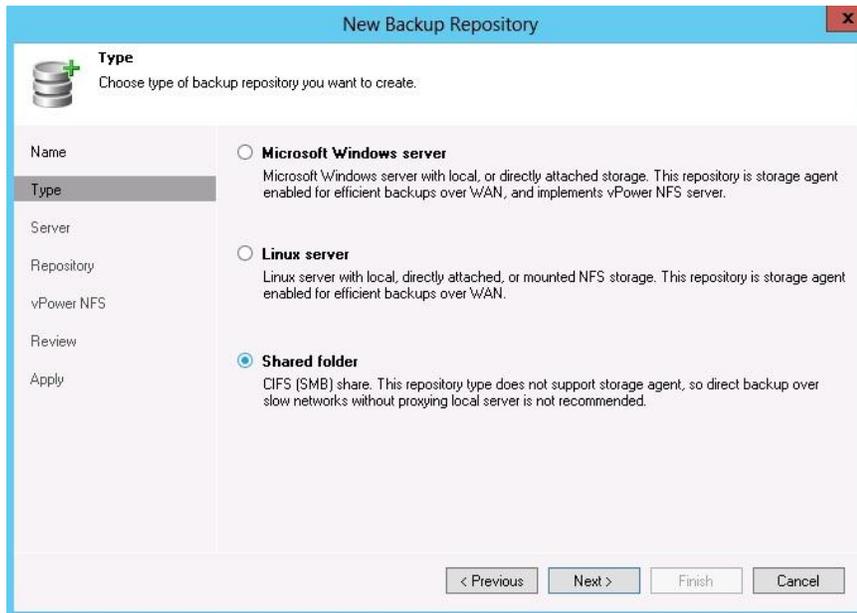
1. Open the Veeam Backup & Replication console.
2. Click the **Backup Infrastructure** section, right-click on **Backup Repositories**, and select **Add Backup Repository**.



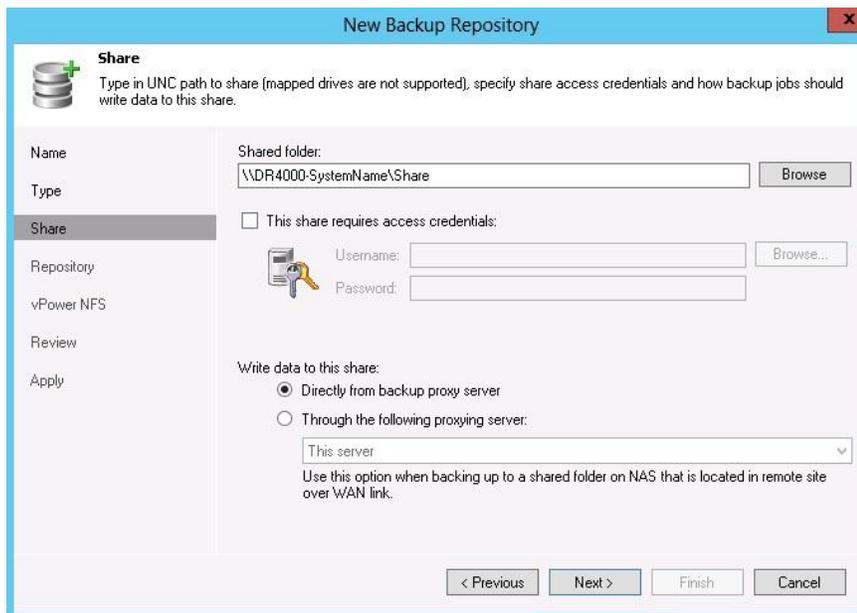
3. Enter a name that is self-documenting, such as "CIFS-DR4000-Deduplication," to indicate the device, protocol and feature of the repository.



4. Select **Shared folder**.

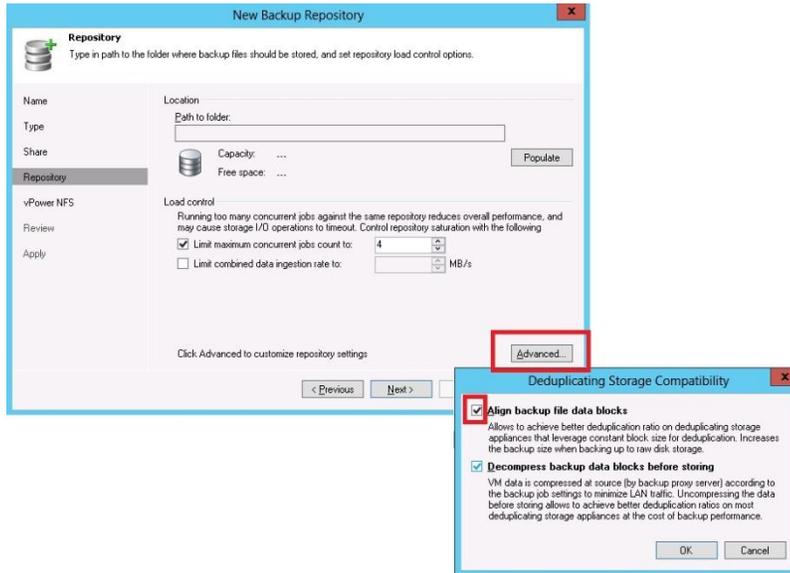


5. For **Shared folder**, enter in the name of the DR4000 (or TCP/IP address used above) and the share name, and then click **Next**.

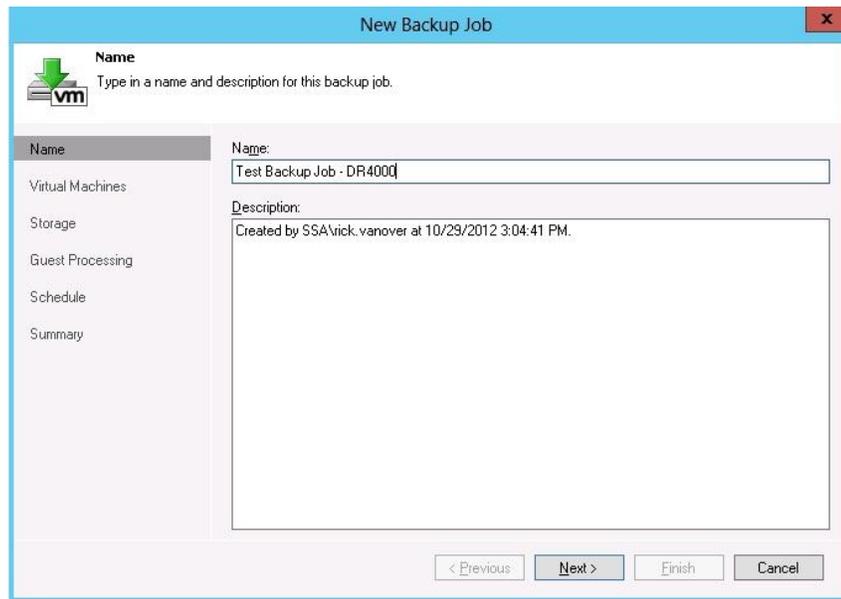


- Configure the repository wizard to note that the DR4000 is a deduplication target. Click the advanced button and select the additional option for "Aligning backup file data blocks" (fixed length write). Optionally select the decompress value. The decompress option will make the DR4000 do all of the compression.

All other options for the new repository wizard are independent of anything related to the DR4000.



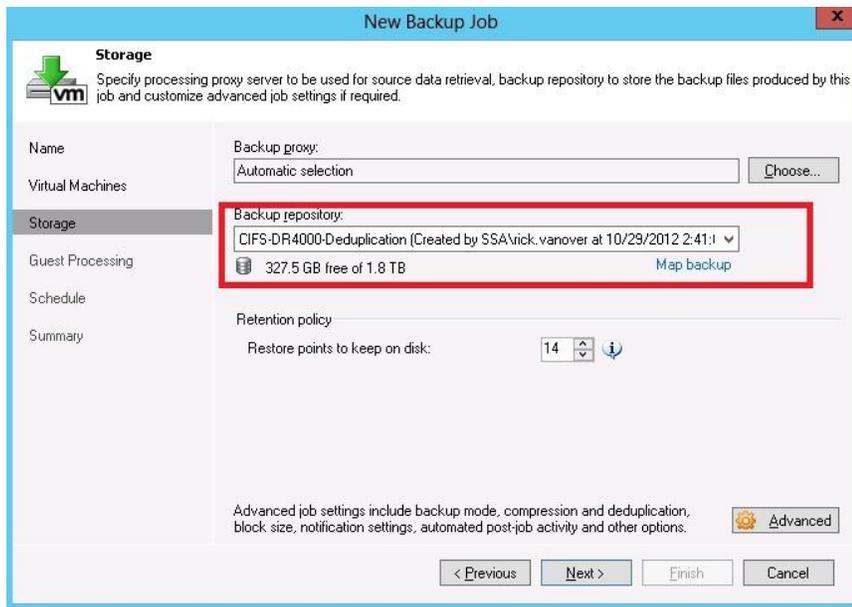
- Create a new backup job in the Veeam Backup console, for either Hyper-V or vSphere; the options specific to the DR4000 are the same.



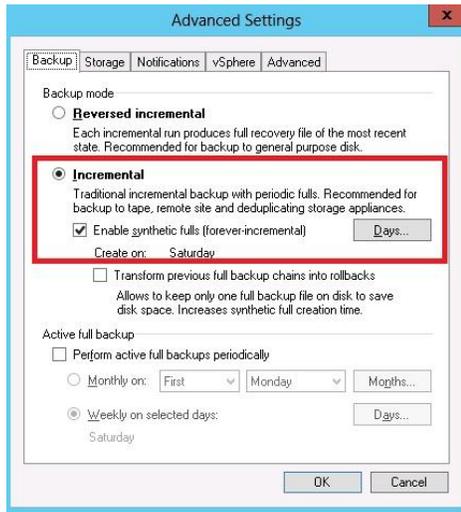
8. Select one or more virtual machines, folders, datastores, resource pools, vApps, SCVMM clusters, etc. for the backup.



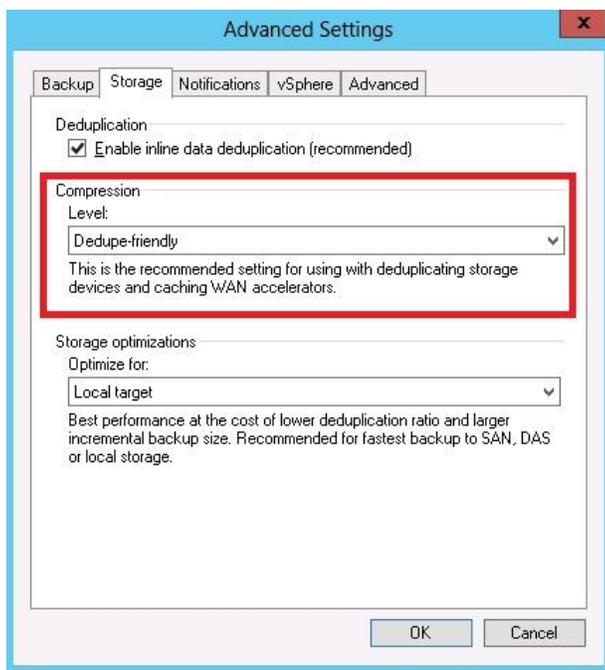
9. Ensure that the repository for this job is the DR4000.
10. On the storage wizard of the backup job, click the **Advanced** button to check a number of important settings.



11. Ensure the backup job is running in **Incremental** mode, and avoid the rollback transformation option. This is a default for new jobs.



12. Change the compression engine to **Dedupe-friendly** in the storage tab of the advanced settings. The deduplication option to local target will perform deduplication by Veeam at 1 MB, landing on the DR4000 for additional deduplication and compression.



NOTE: If overall space savings is the overall priority, it is recommended to use both in this fashion.

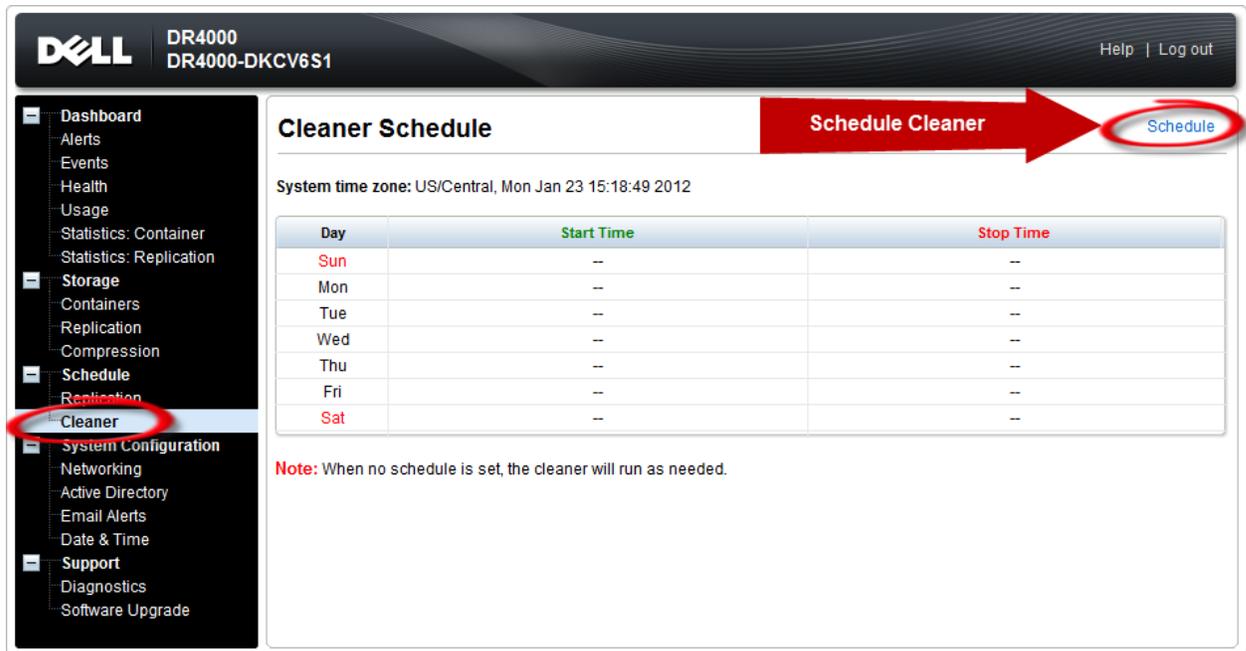
All other options are independent of the backup target.



4 Set up the DR4000 Cleaner

Once all the backup jobs are setup the DR4000 cleaner must be scheduled. The DR4000 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 DR4000 DR4000-DKCV6S1 Help | Log out

Cleaner Schedule [Schedule Cleaner](#) [Schedule](#)

System time zone: US/Central, Mon Jan 23 15:18:49 2012

Day	Start Time	Stop Time
Sun	--	--
Mon	--	--
Tue	--	--
Wed	--	--
Thu	--	--
Fri	--	--
Sat	--	--

Note: When no schedule is set, the cleaner will run as needed.

5 Monitoring Dedupe, Compression & Performance

After backup jobs have run the DR4000 will track Capacity, Storage Savings and Throughput on the DR4000 dashboard. This information is valuable in understanding the benefits the DR4000.

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. As mentioned before backup jobs with 12 week retention will average a 15x ratio in most cases.

