



# Setting Up Dell™ DR Series Deduplication Appliance Disk Backup Appliance on CA ARCserve

Dell Engineering  
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## Revisions

Date	Description
January 2014	Initial release

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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 CA ARCserve R16. This paper is a quick reference guide and does not include all DR Series Deduplication Appliance deployment best practices.

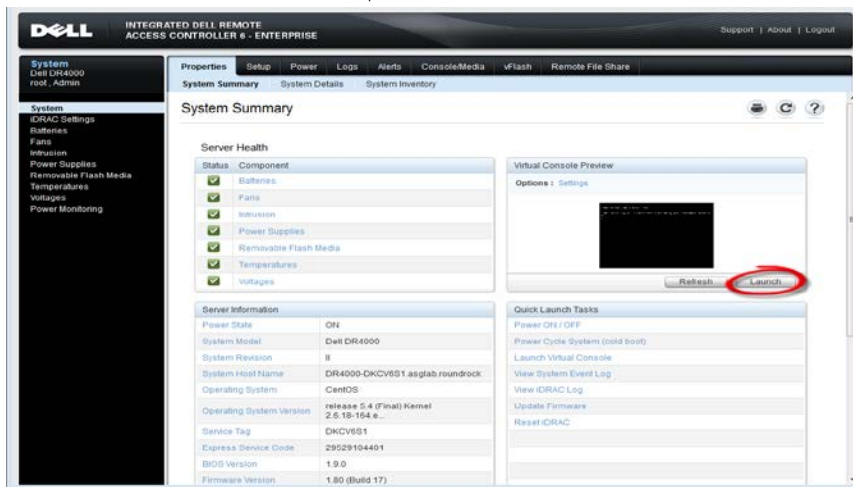
See the DR Series Deduplication Appliance documentation for other data management application best practices whitepapers at <http://www.dell.com/support/troubleshooting/us/en/04/Product/powervault-dr4100>, under "Manuals & Documentation".

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

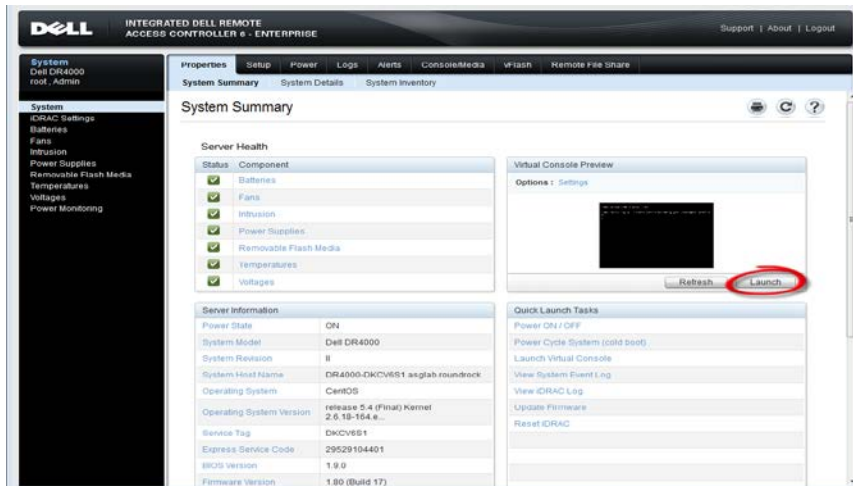


# 1 Install and Configure the DR Series Deduplication Appliance

1. Rack and cable the DR Series Deduplication 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 assigned to the iDRAC interface. Use user name and password of “**root/calvin**”.



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).

```
Debarina release 1 (EAR-1.00.00) Build: 32858
Kernel 2.6.18-164.el5 on an x86_64

localhost login: administrator
Password: St0r@ge!
```

6. 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:
```

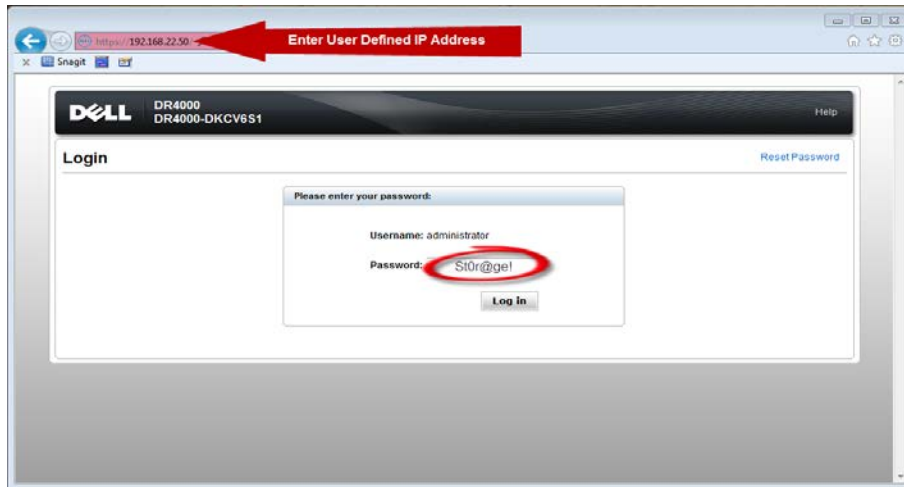
7. View the summary of preferences and confirm that it is correct.

```
=====
                          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) ? _
```



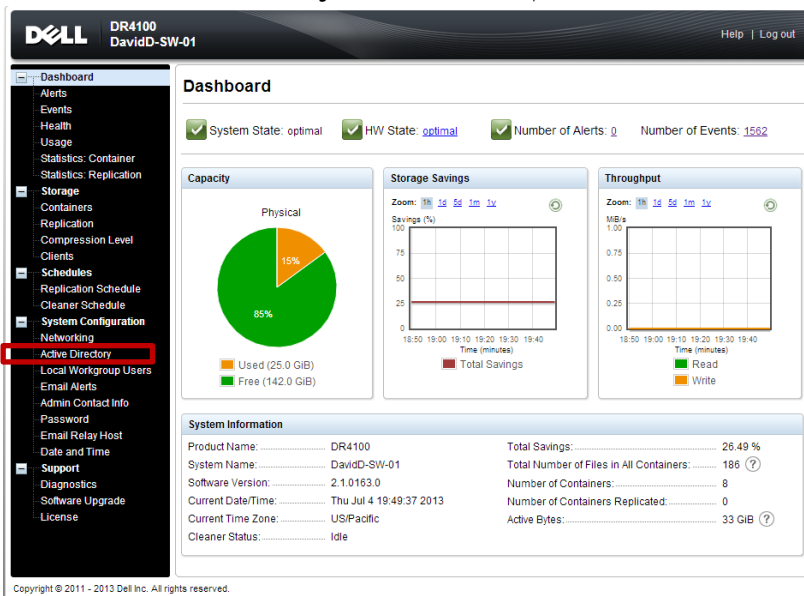
- Log on to DR Series Deduplication Appliance administrator console, using the IP address you just provided for the DR Series Deduplication Appliance, with username **administrator** and password **St0r@ge!** (The "0" in the password is the numeral zero).



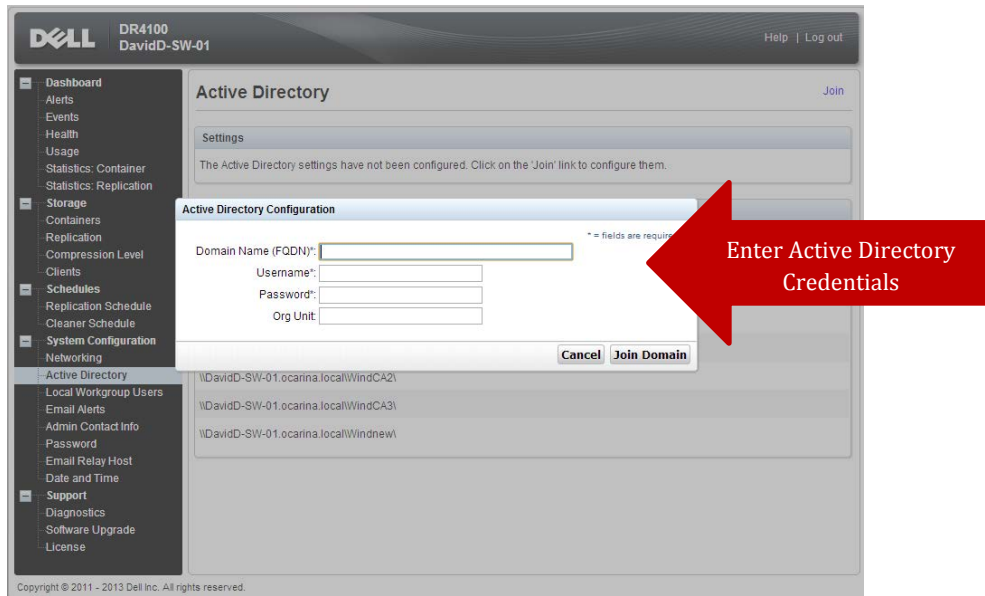
- Join the DR Series Deduplication Appliance to Active Directory.

**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.

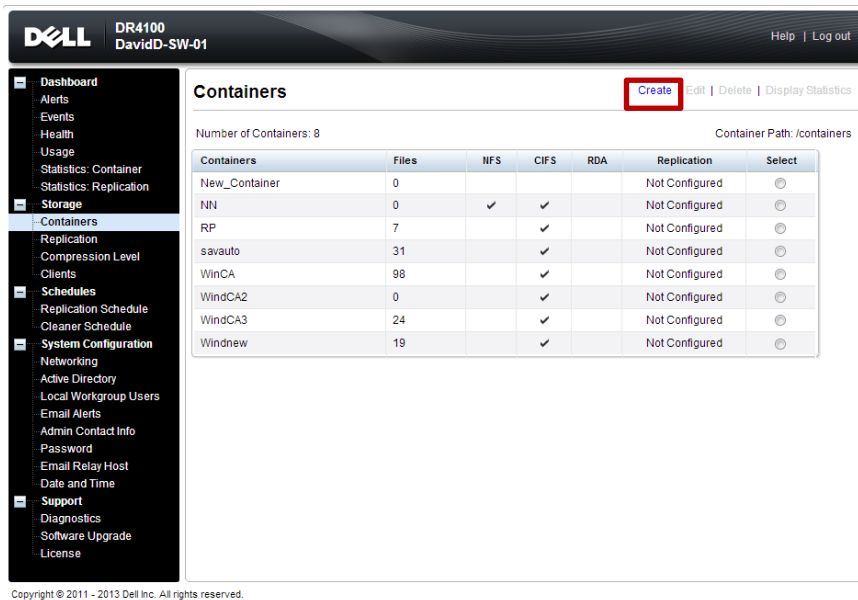
- Select **Active Directory** from the menu panel on the left side of the management interface.



- Enter your Active Directory credentials.

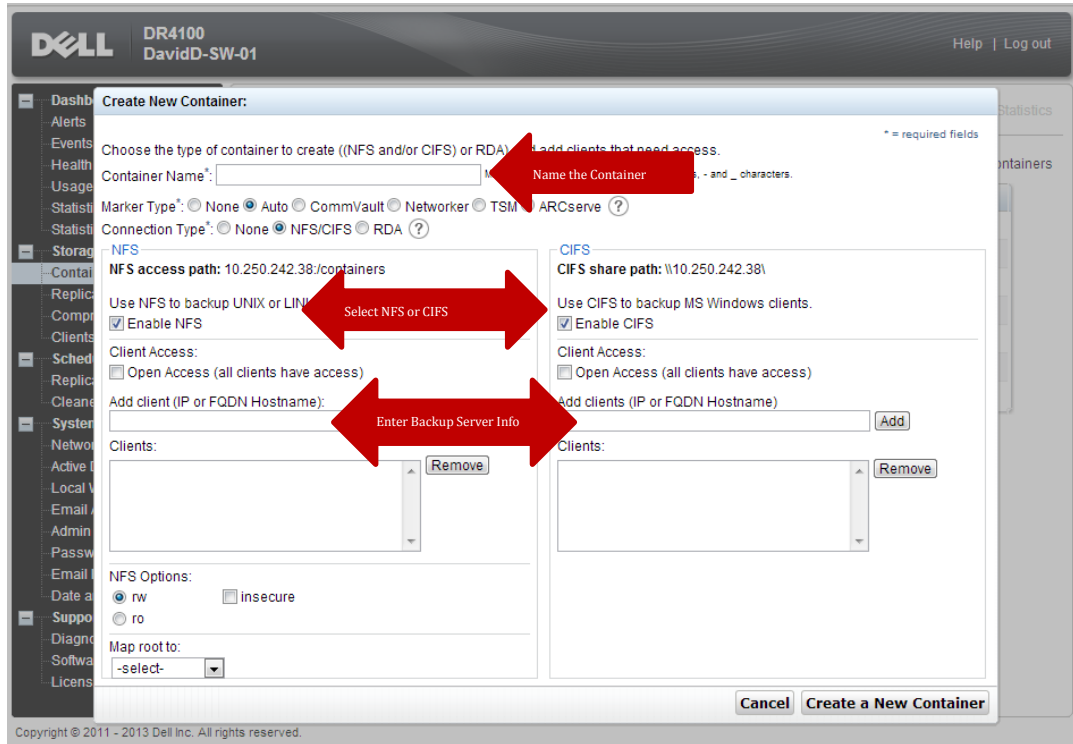


10. Create and mount the container. Select **Containers** in the tree on the left side of the dashboard, and then click the **Create** at the top of the page.

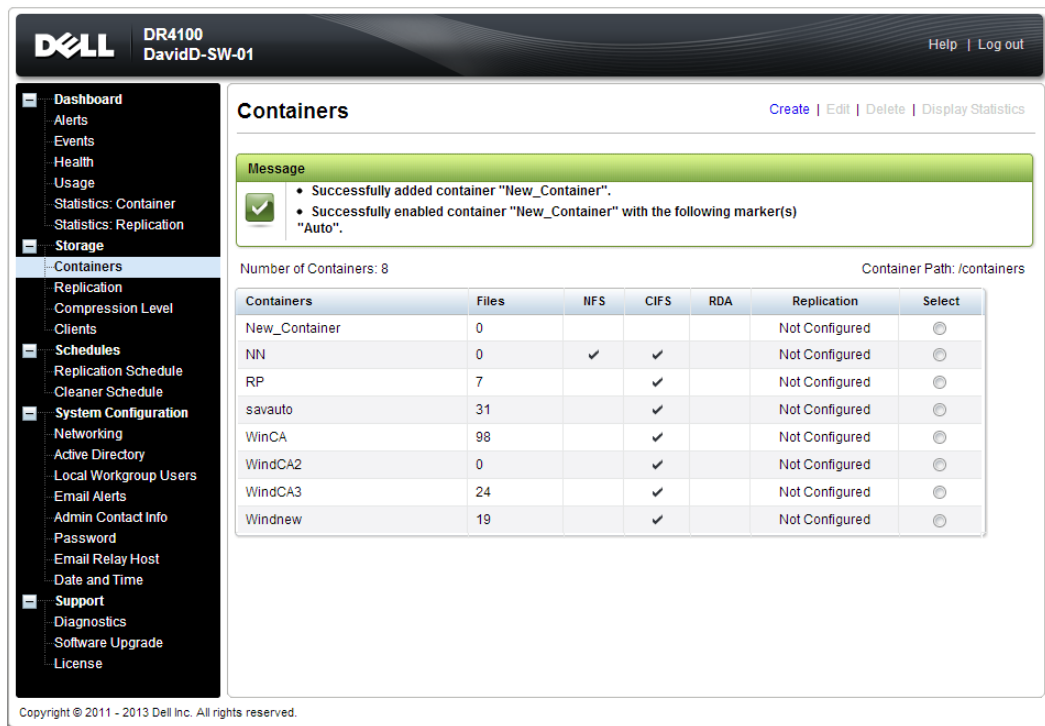




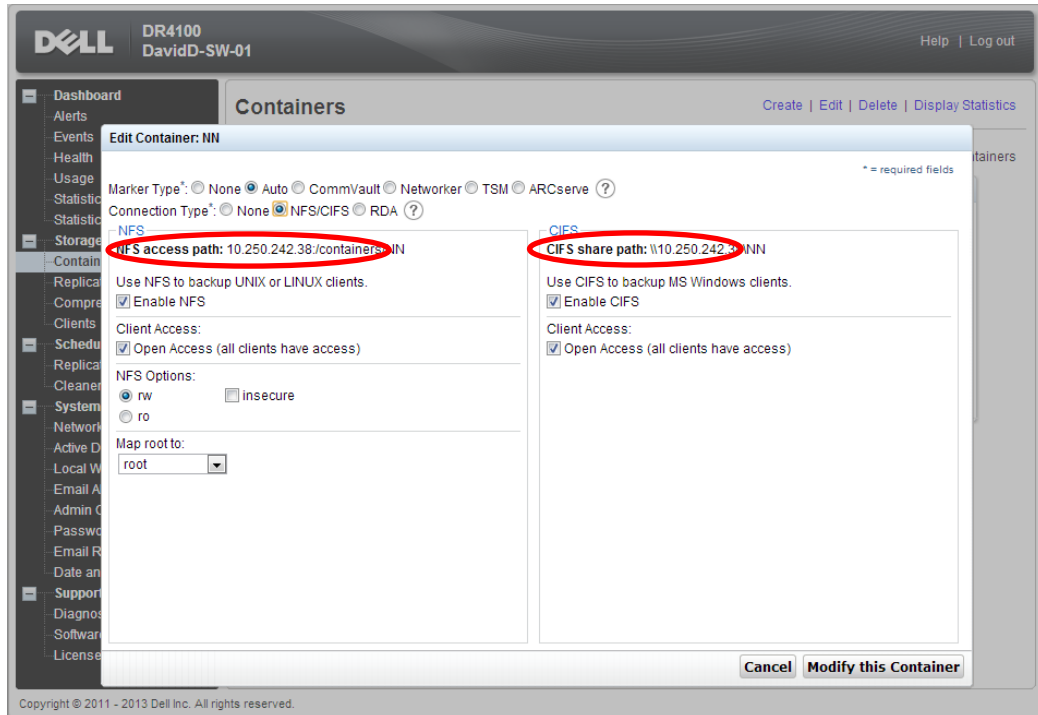
- Enter a **Container Name** and select the **Enable CIFS/NFS** check box.



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



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



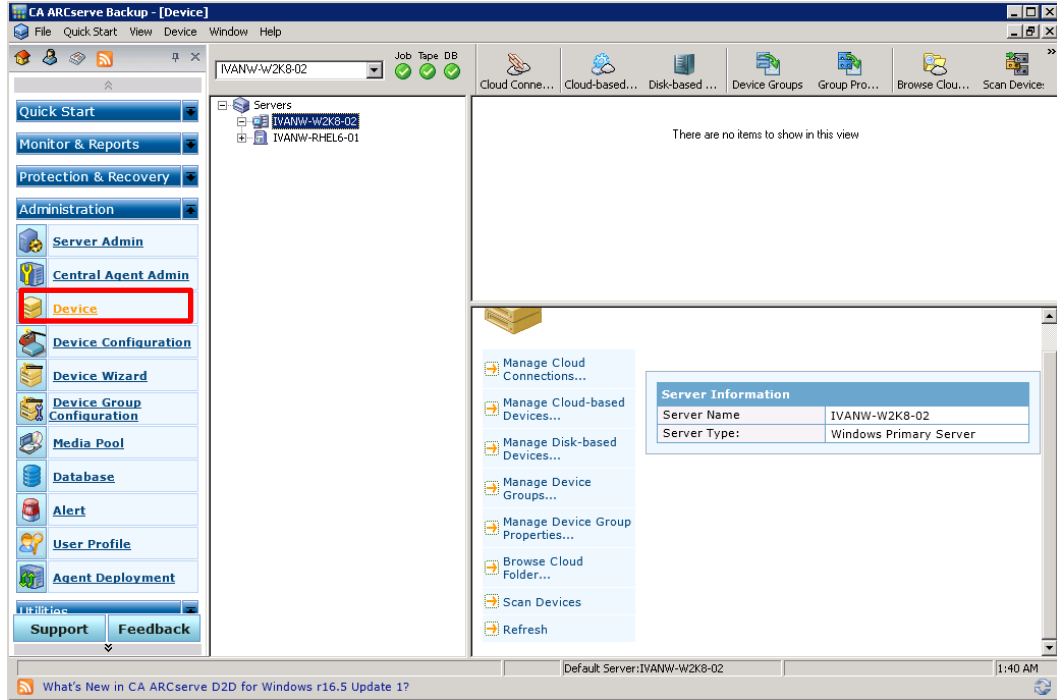
14. Click Cancel to exit.



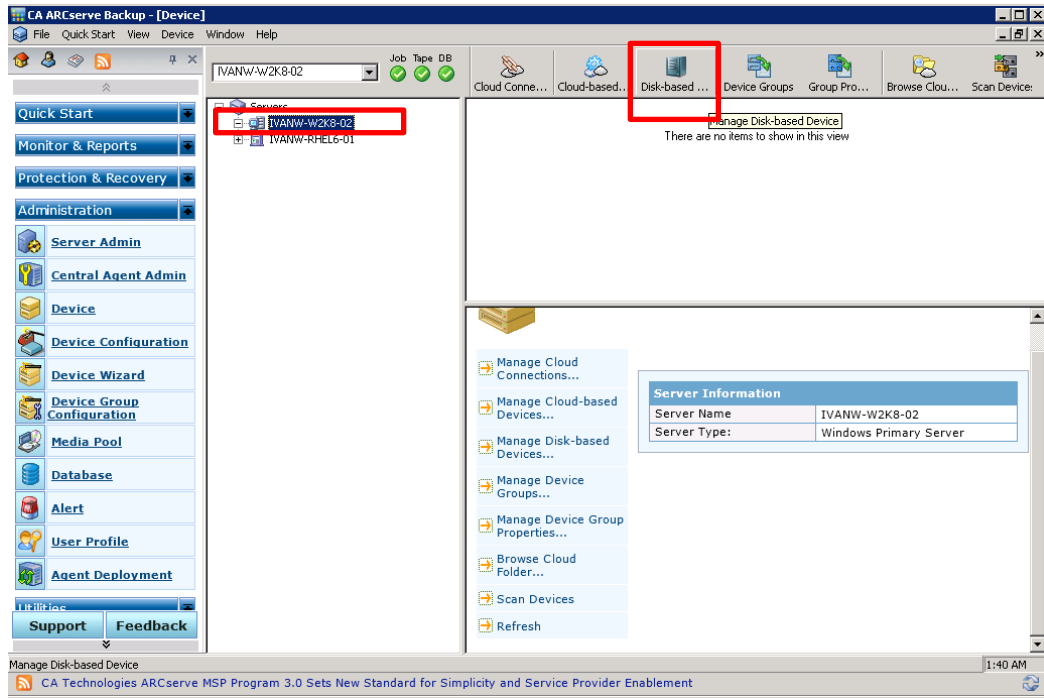
## 2 Create Disk-Based Target Device on CA ARCserve

### 2.1 Procedure for the Windows Environment

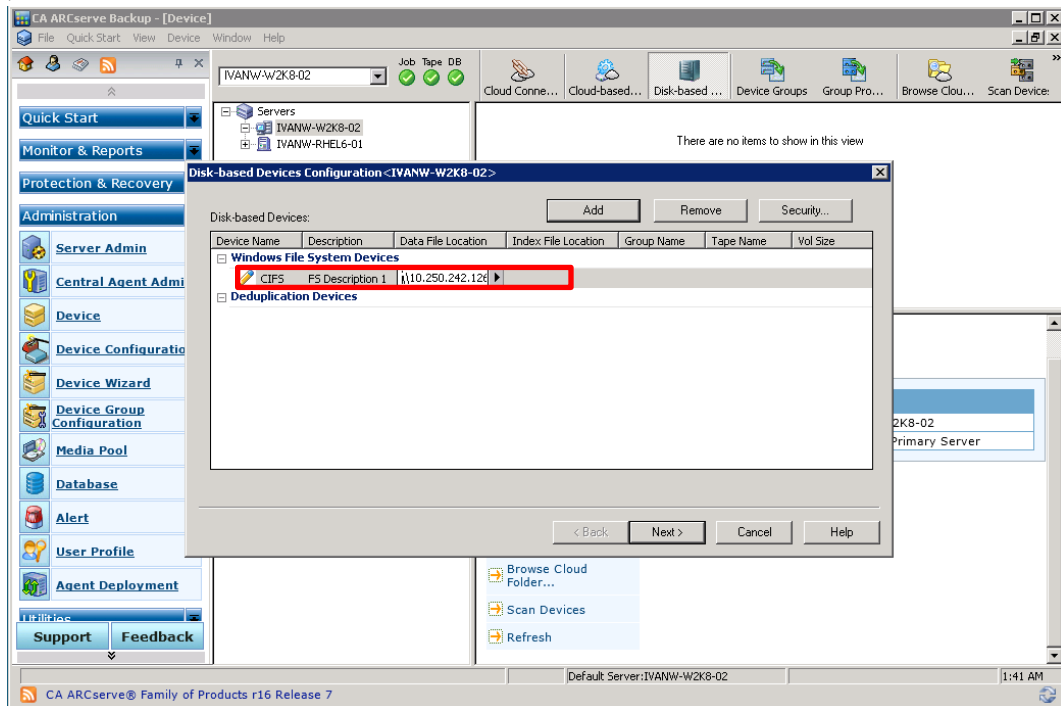
1. Open CA ARCserve Manager. In Navigation pane expand **Administration**, Click **Device**.



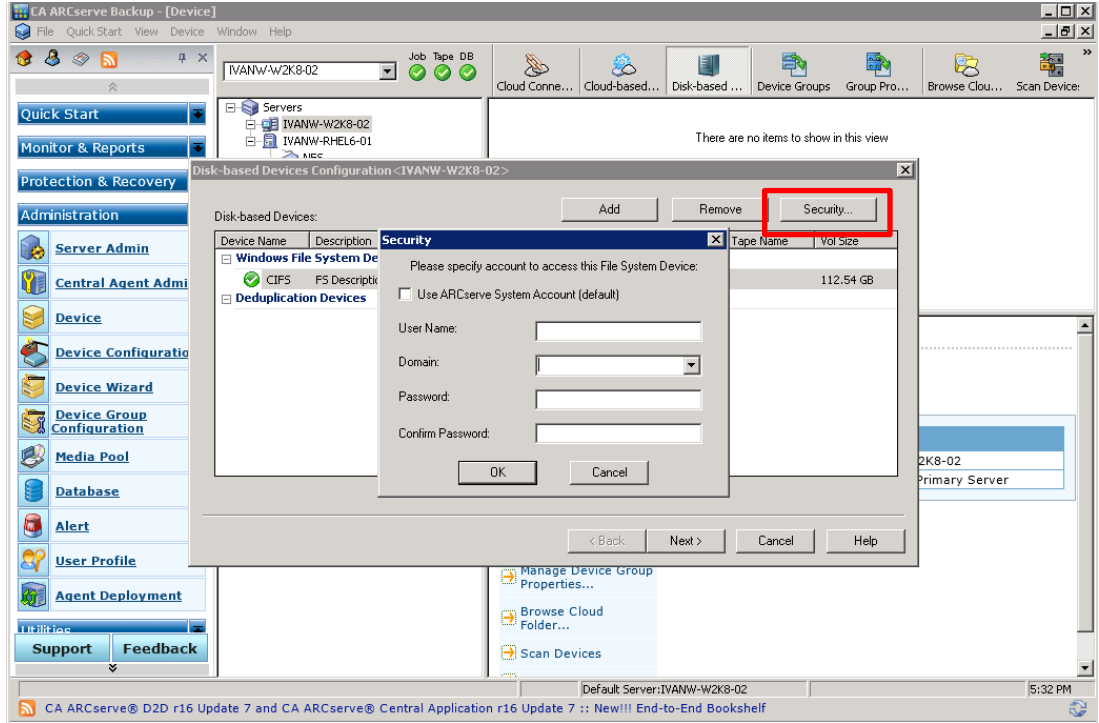
2. Select a **Server** -> Click **Disk-Based Device**



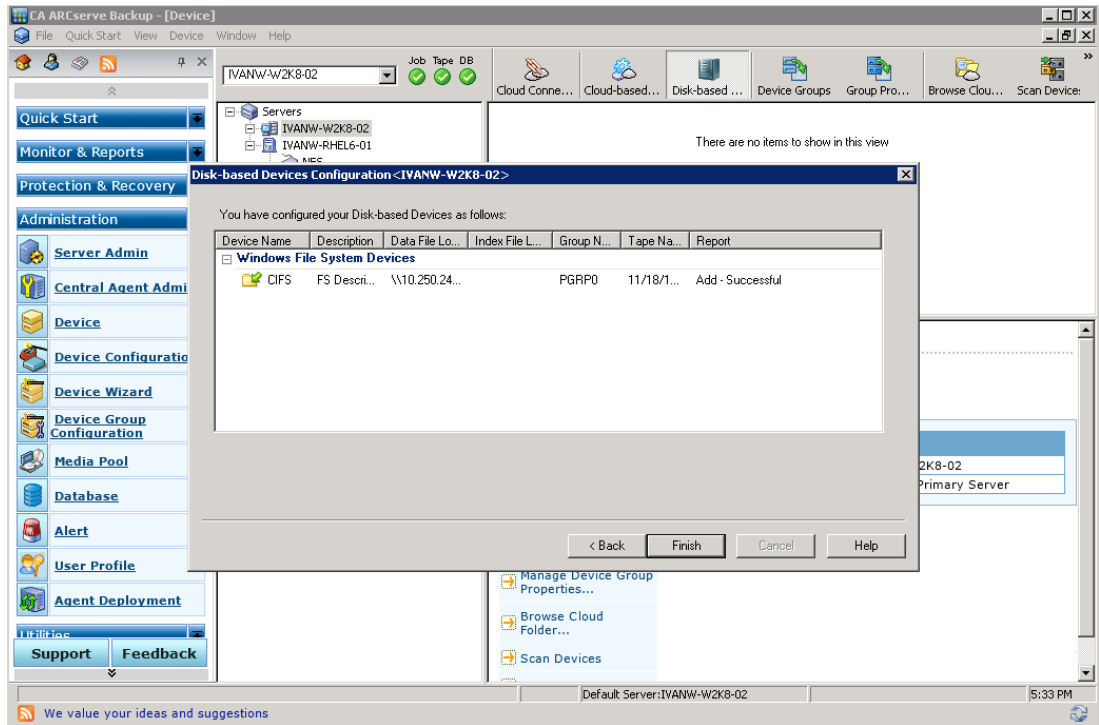
3. Select **Windows File System Devices** ->Enter a **Device name**, **Description**, DR container share path as **Data File Location**.



4. 2.1.4 Click on **Security...** Enter credentials of domain , click **OK**



5. Click **Finish**.



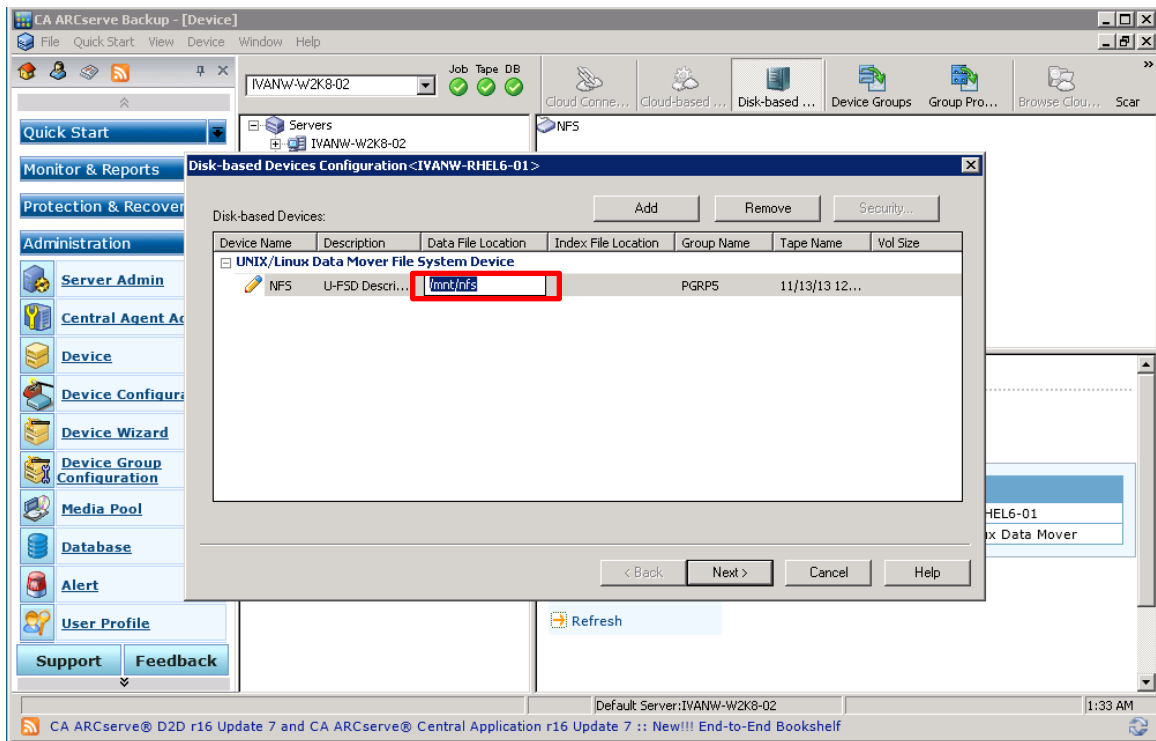
## 2.2 Procedure for the Unix/Linux Environment

### Note:

Make sure that you can mount/verify the NFS share from the UNIX/Linux client system. Please see **Appendix A.1** for how to mount/verify the NFS share.

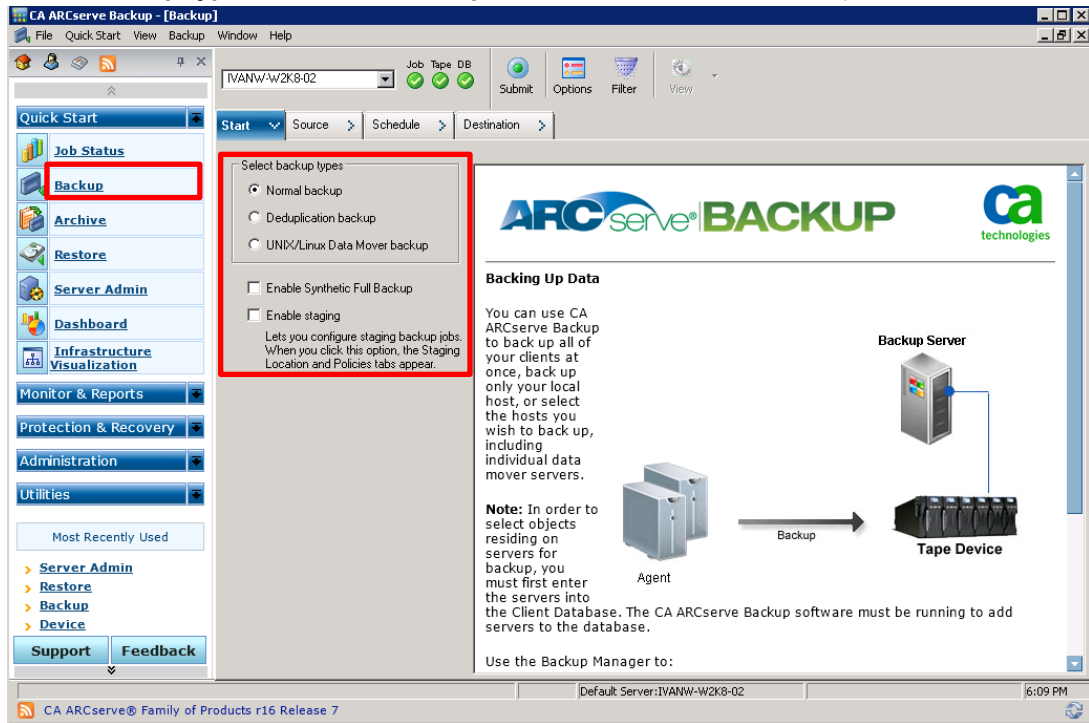
The procedure for the Unix/Linux Environment is very similar to the procedure for the Windows Environment. The only difference is that DR container NFS export path is used instead of a UNC path, as described below, for **Data File Location**.

For other details, please refer to 2.1 Procedure for the Windows Environment.

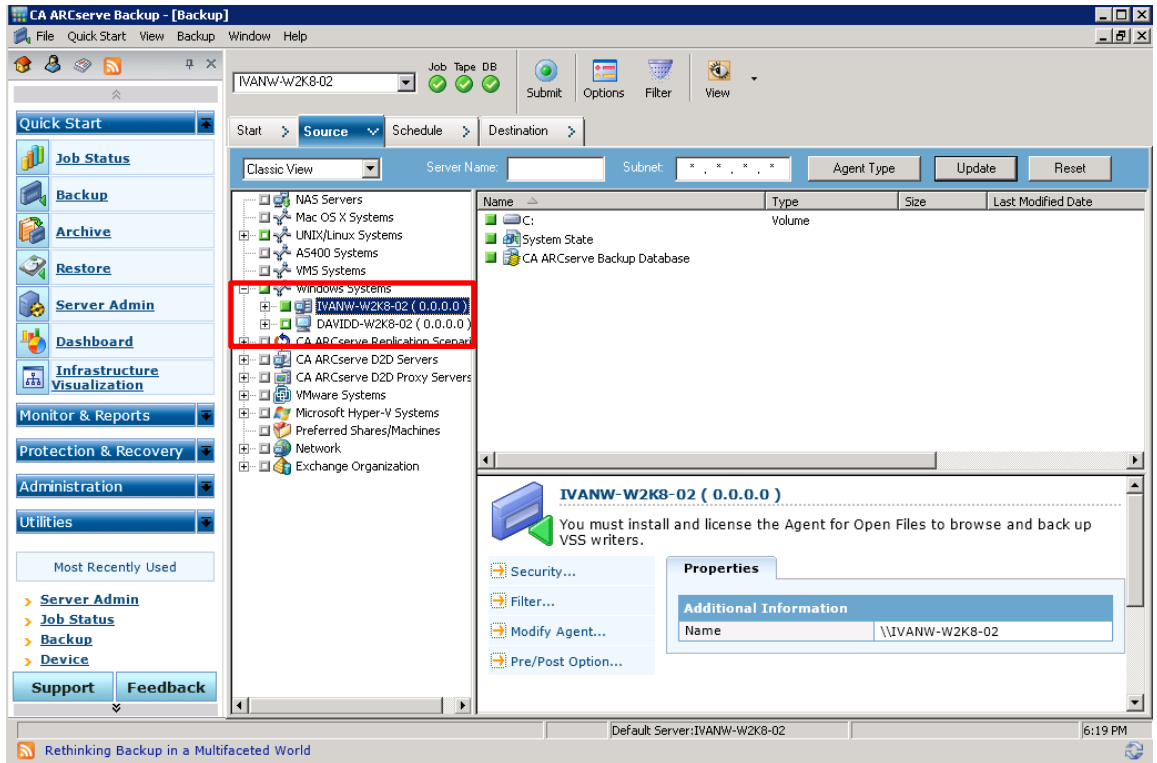


### 3 Create a New Backup Job with DR Series Deduplication Appliance as the Target

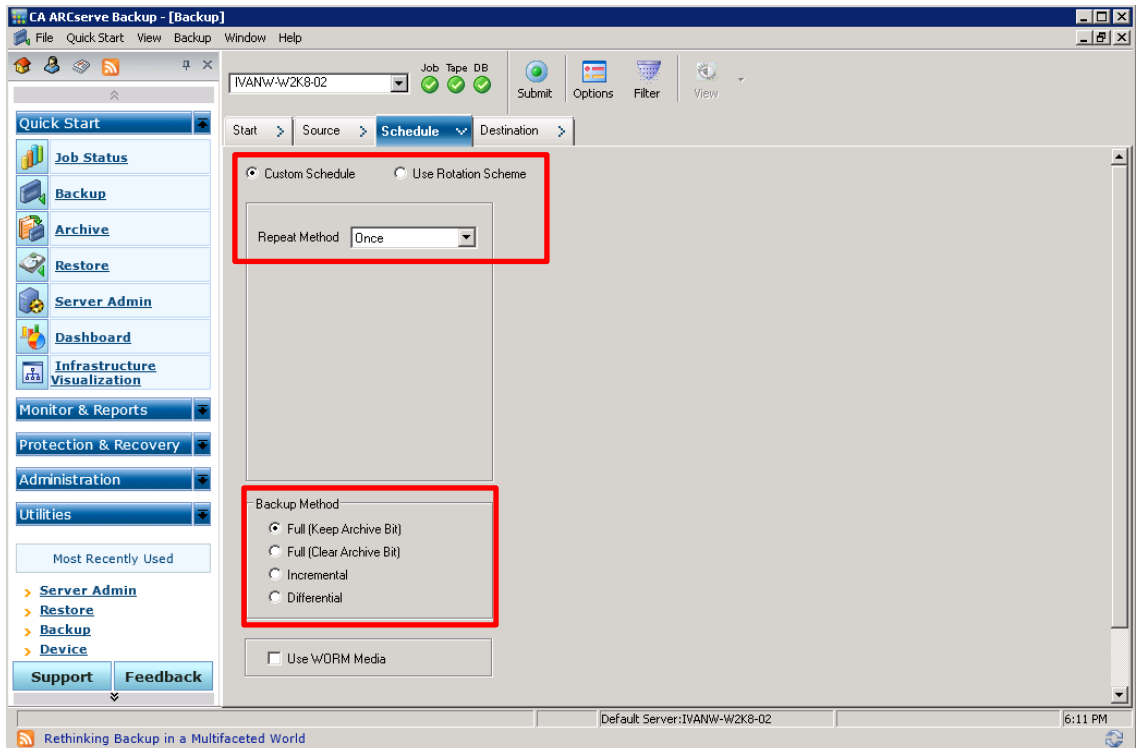
1. In the Navigation pane, click **Quick start** -> **Backup**. Then in right side panel, on **Start** tab, set **Select backup types** as **Normal backup** for both CIFS and NFS backup.



2. On **Source** tab, select backup source files.

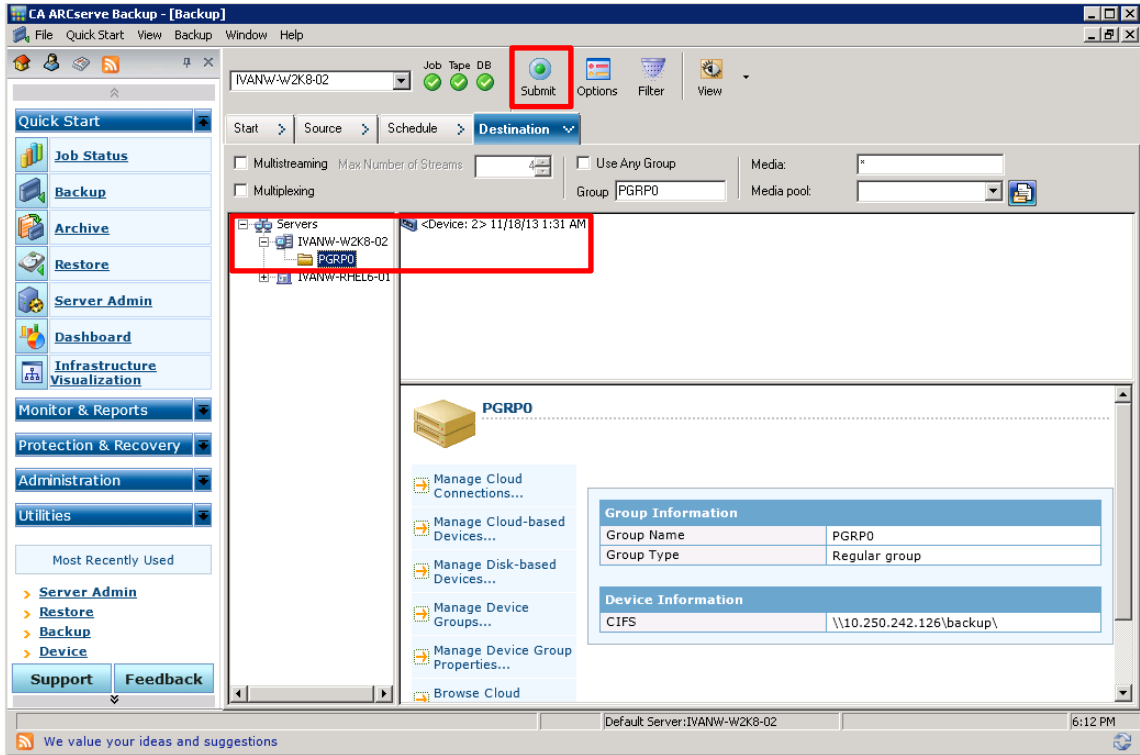


3. On **Schedule** tab, set a **Custom Schedule** or **Use Rotation Schema**, and **Backup Method**

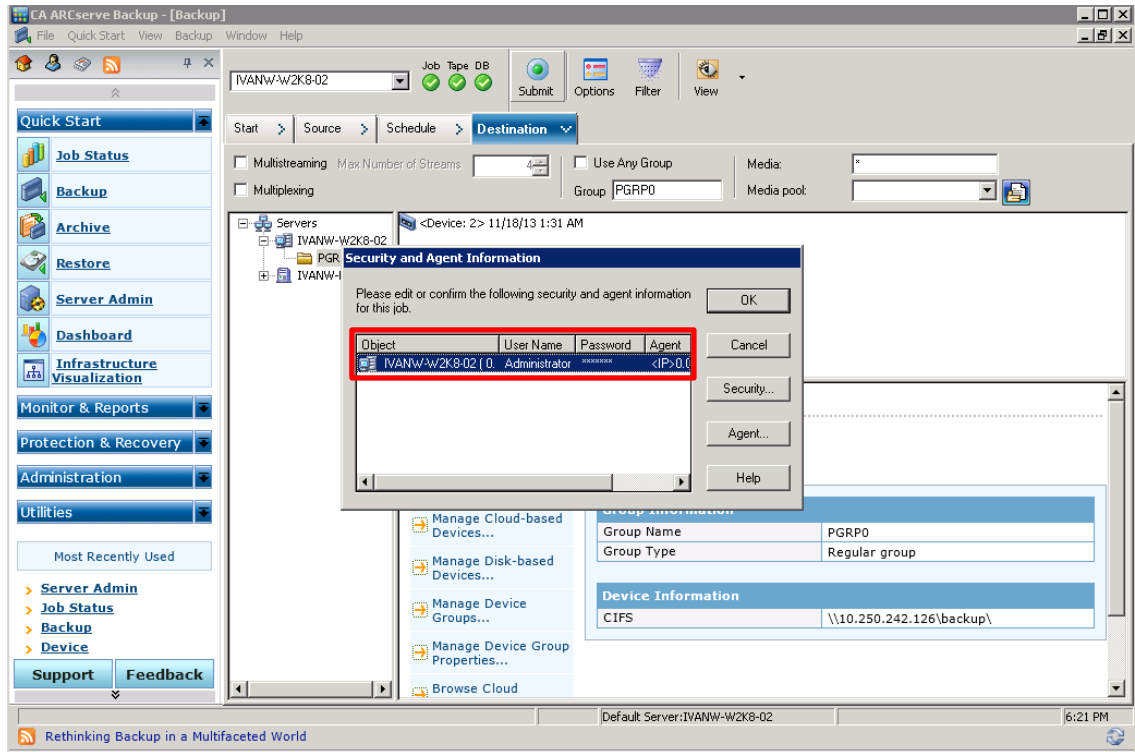




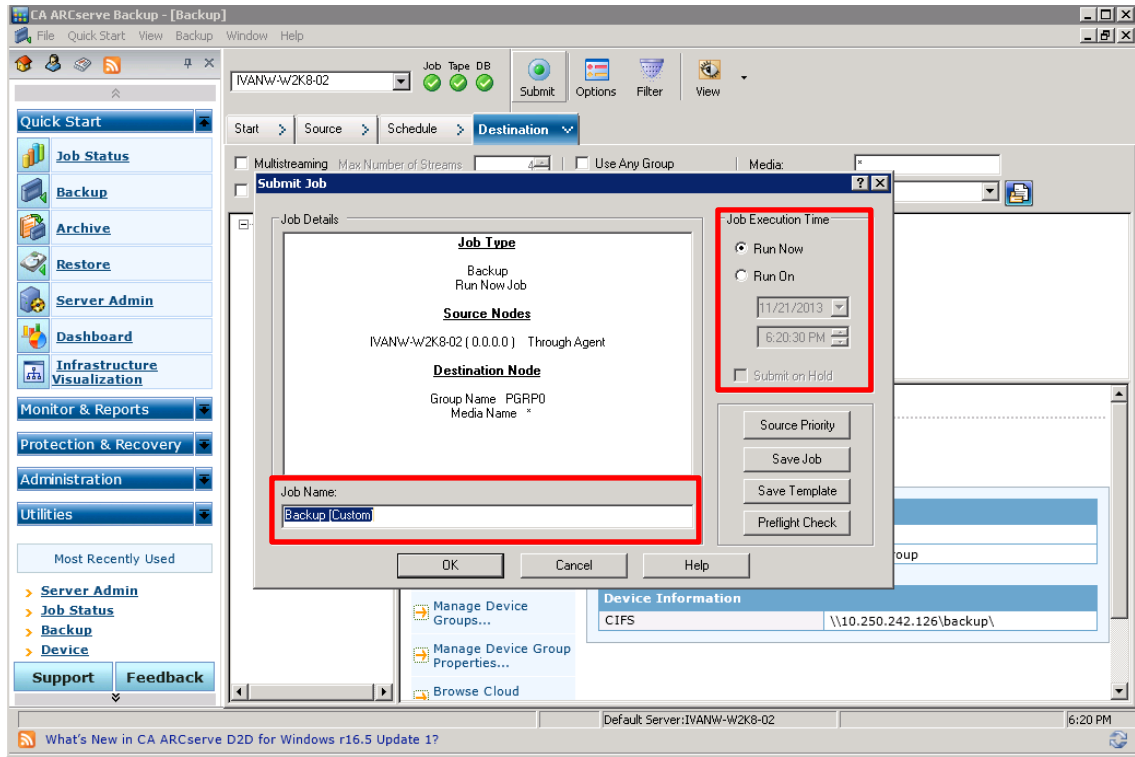
4. On **Destination** tab, select destination device that is created on DR. Click **Submit**.



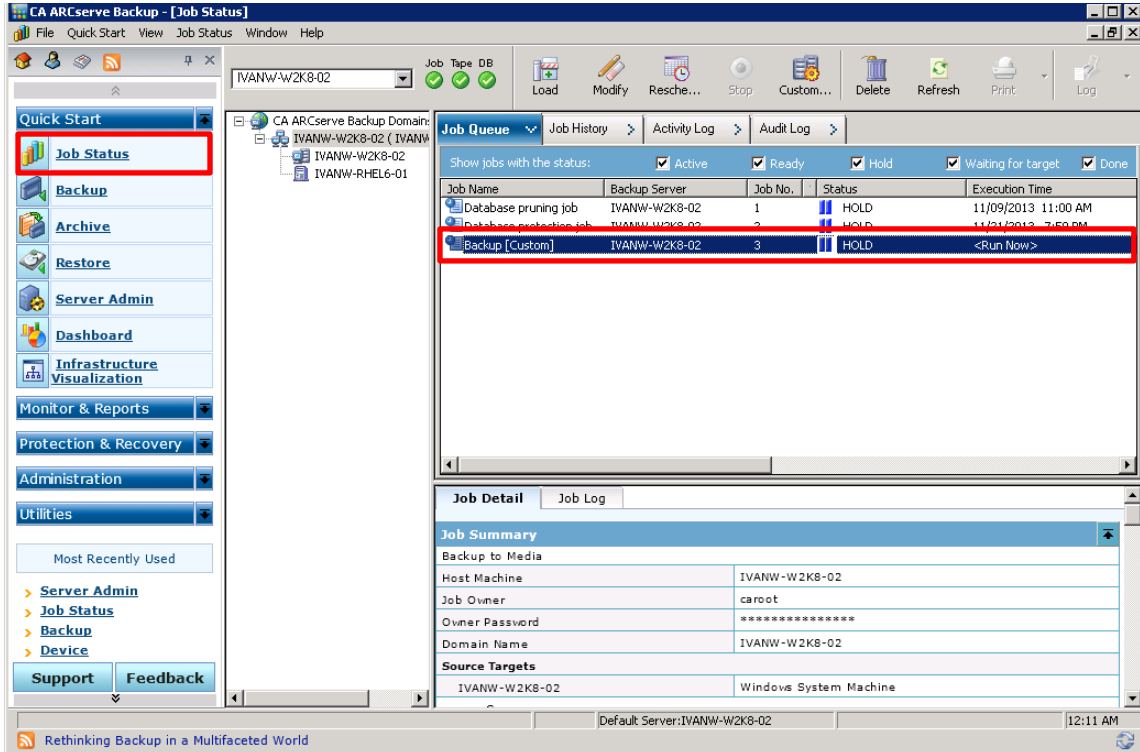
5. In **Security and Agent Information** window, choose an agent server, click **OK**.



- Enter the backup **Job Name**, choose **Job Execution Time**, then click **OK**.



- When the backup job runs, check **Job Queue** display in **Job Status** window.

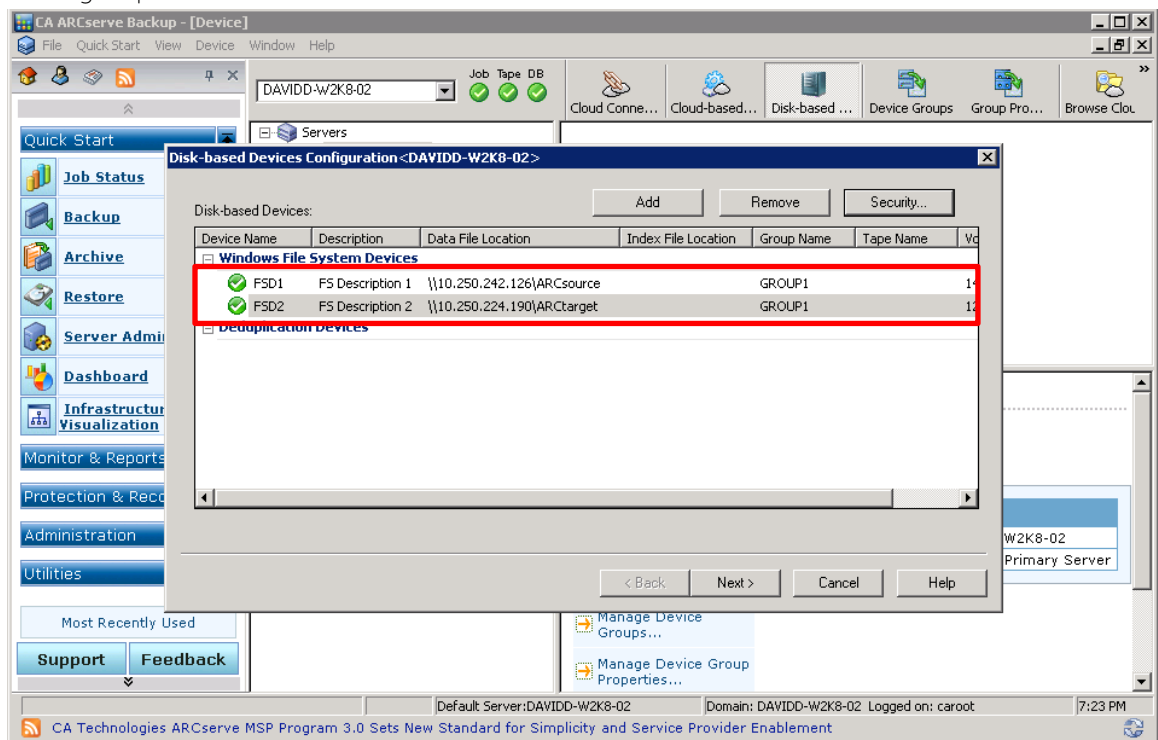


## 4 Set up DR Native Replication & Restore from Replication Target

**Note:** Assume DR1 is the replication source DR appliance, and DR2 is the replication target DR appliance. 'ARCsource' is the replication source container, and 'ARCtarget' is the replication target container.

### 4.1 Create DR Native Replication Session

1. Create a CIFS container 'ARCsource' on DR1; create a second CIFS container 'ARCtarget' on DR2. For each of the containers, on ARCserve server configure a Windows File System Devices within same group.



- From DR1's GUI management interface, under **Replication** menu, click on **Create**. Set 'ARCsource' container as replication source, set DR2 'ARCtarget' container as replication target. **Start** the replication session, or make sure the replication session is **Online**. You can **Stop** and/or **Delete** the replication whenever it's in INSYNC mode.

ramboz-sw-01.testad.ocari | **DELL** DR4100 root (Log out) | Help

### Replication

Number of Source Replications: 2

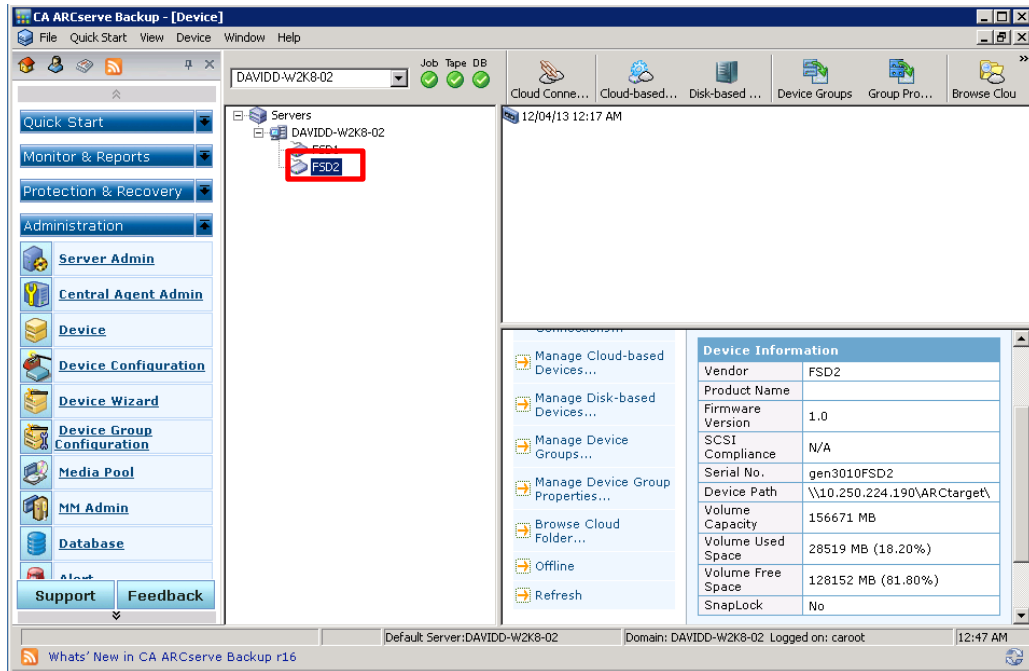
Local Container Name	Role	Remote Container Name	Peer State	Bandwidth	Select
ARCsource	source	10.250.224.190 ARCtarget	Online	Default	<input checked="" type="radio"/>
source	source	10.250.224.190 target	Online	Default	<input type="radio"/>

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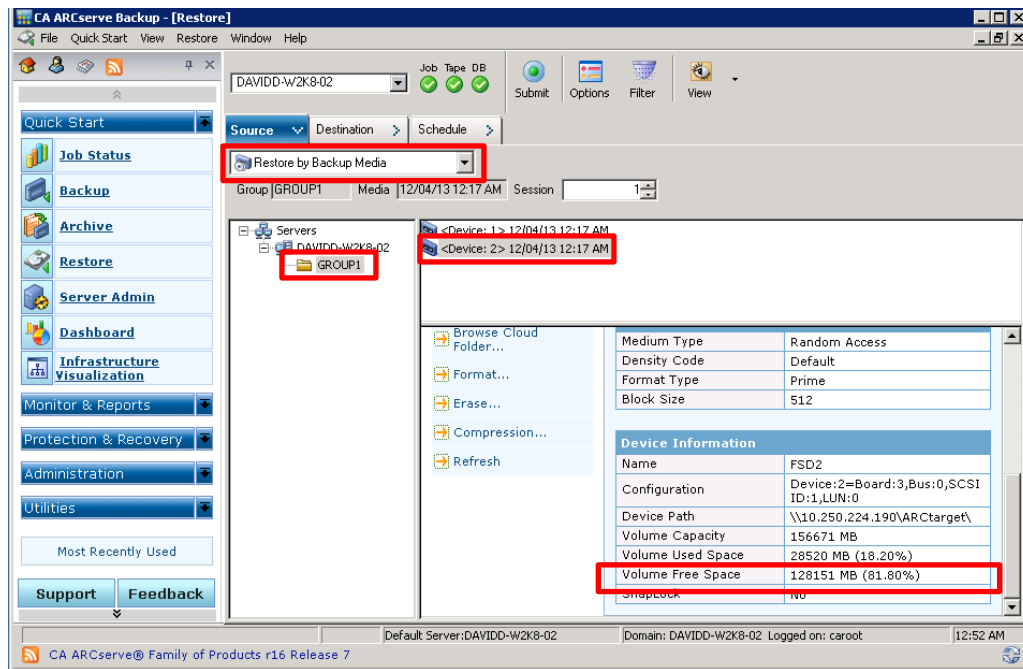


## 4.2 Restore from Replication Target

1. Restart ARCserve services. Go to **Administration** -> **Device**. Check and verify the target device.



2. Go to **Quick Start** -> **Restore**. Configure a restore job. Run the job to restore from the target device.



## 5 Set Up the DR Series Deduplication Appliance Cleaner

The cleaner will run during idle time. If your 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.

The screenshot shows the Dell DR4100 web interface. The header includes the Dell logo, system ID 'DR4100 EdwinZ-SW-01', and 'Help | Log out'. The left navigation menu has 'Cleaner Schedule' highlighted. The main content area is titled 'Cleaner Schedule' and shows the system time zone as 'US/Pacific, Fri Jul 5 05:00:41 2013'. A note states: 'Note: When no schedule is set, the cleaner will run as needed.' Below this is a table with columns 'Day', 'Start Time', and 'Stop Time'. The table shows a schedule for Sunday through Saturday, with all start and stop times currently set to '--'. A red arrow points to the 'Edit Schedule' button in the top right corner.

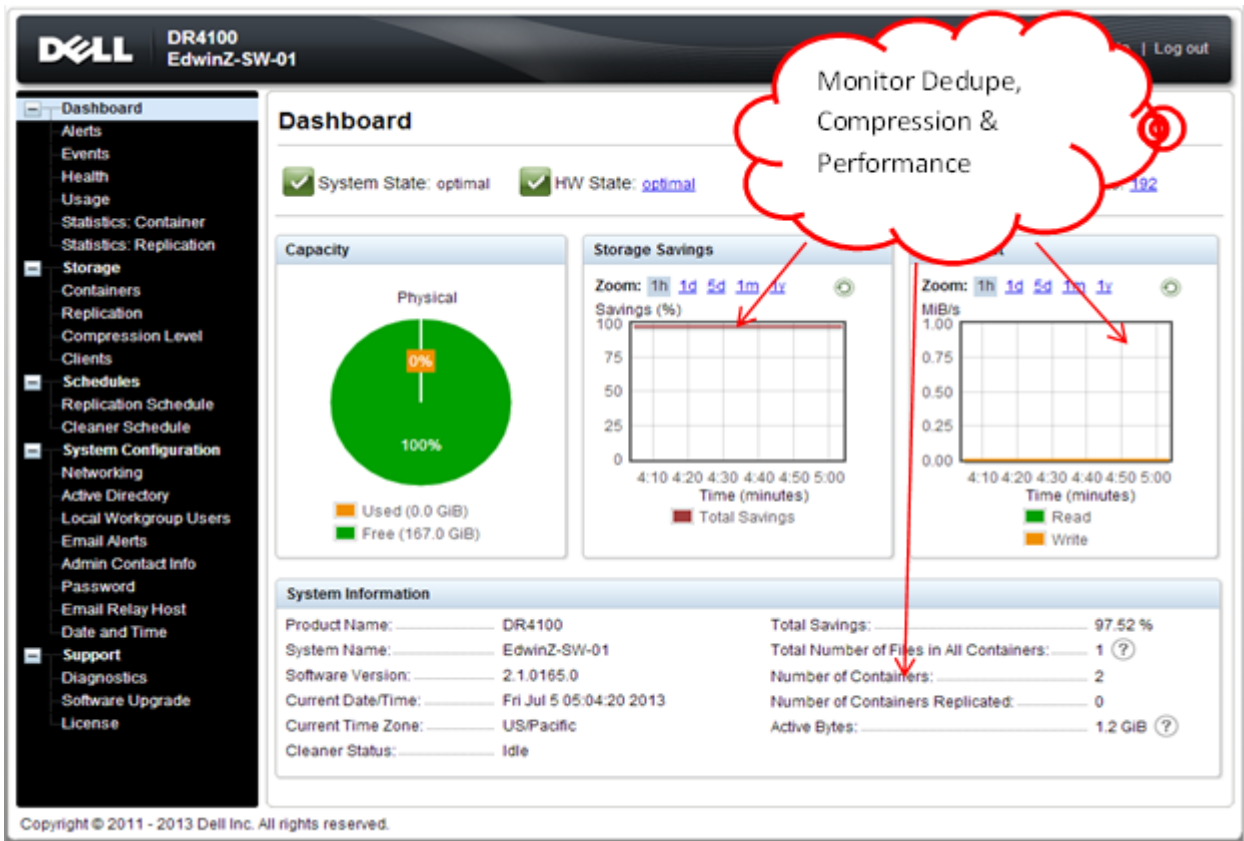
Day	Start Time	Stop Time
Sun	--	--
Mon	--	--
Tue	--	--
Wed	--	--
Thu	--	--
Fri	--	--
Sat	--	--



## 6 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.



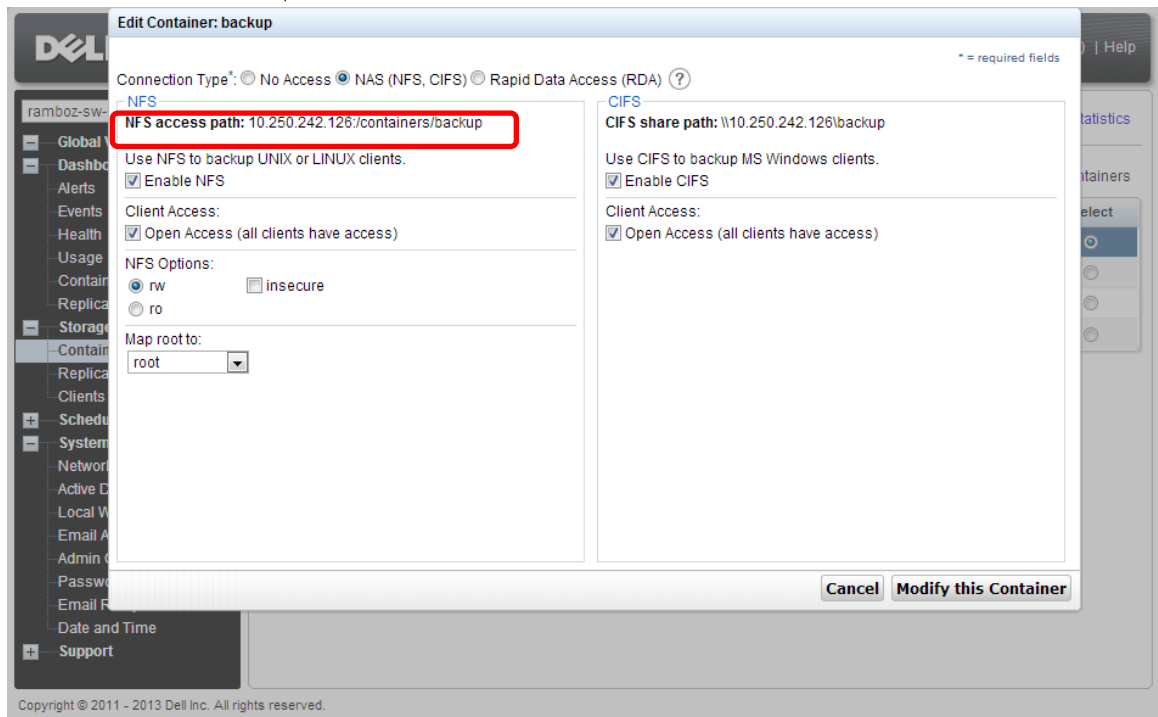
# A Appendix

## A.1 Create a Storage Device for NFS

For NFS backup using the CA ARCserve, 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 CA ARCserve.

Check the NFS access path:



2. Mount NFS access path in Linux agent server

Example:

```
[root@IvanW-RHEL6-01 mnt]# mount 10.250.242.126:/containers/backup /mnt/nfs
```

