

# Setting Up the $Dell^{TM}$ DR Series System as an Archive Target on AppAssure 5.4.3

Dell Engineering April 2015

A Dell Technical White Paper

#### Revisions

| Date         | Description                                       |
|--------------|---|
| January 2014 | Initial release                                   |
| April 2015   | Updated for DR Series system 3.2 software release |

THIS WHITE PAPER IS FOR INFORMATIONAL PURPOSES ONLY, AND MAY CONTAIN TYPOGRAPHICAL ERRORS AND TECHNICAL INACCURACIES. THE CONTENT IS PROVIDED AS IS, WITHOUT EXPRESS OR IMPLIED WARRANTIES OF ANY KIND.

© 2015 Dell Inc. All rights reserved. Reproduction of this material in any manner whatsoever without the express written permission of Dell Inc. is strictly forbidden. For more information, contact Dell.

PRODUCT WARRANTIES APPLICABLE TO THE DELL PRODUCTS DESCRIBED IN THIS DOCUMENT MAY BE FOUND AT: <u>http://www.dell.com/learn/us/en/19/terms-of-sale-commercial-and-public-sector</u> Performance of network reference architectures discussed in this document may vary with differing deployment conditions, network loads, and the like. Third party products may be included in reference architectures for the convenience of the reader. Inclusion of such third party products does not necessarily constitute Dell's recommendation of those products. Please consult your Dell representative for additional information.

Trademarks used in this text:

Dell<sup>TM</sup>, the Dell logo, Dell Boomi<sup>TM</sup>, Dell Precision<sup>TM</sup>, OptiPlex<sup>TM</sup>, Latitude<sup>TM</sup>, PowerEdge<sup>TM</sup>, PowerVault<sup>TM</sup>, PowerConnect<sup>TM</sup>, OpenManage<sup>TM</sup>, EqualLogic<sup>TM</sup>, Compellent<sup>TM</sup>, KACE<sup>TM</sup>, FlexAddress<sup>TM</sup>, Force10<sup>TM</sup>, AppAssure<sup>TM</sup>, and Vostro<sup>TM</sup> are trademarks of Dell Inc. Other Dell trademarks may be used in this document. Microsoft<sup>®</sup>, Windows<sup>®</sup>, Windows Server<sup>®</sup>, Internet Explorer<sup>®</sup>, MS-DOS<sup>®</sup>, Windows Vista<sup>®</sup> and Active Directory<sup>®</sup> are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Red Hat® and Red Hat® Enterprise Linux® are registered trademarks of Red Hat, Inc. in the United States and/or other countries. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and/or names or their products and are the property of their respective owners. Dell disclaims proprietary interest in the marks and names of others.

# Table of contents

| Re  | vision | S   | 2  |
|-----|--------|---|----|
| Exe | ecutiv | e summary   | 4  |
| 1   | Insta  | alling and configuring the DR Series system                           | 5  |
| 2   | Setti  | ng up AppAssure   | 13 |
|     | 2.1    | Archiving backup images to the DR Series system                       | 13 |
|     | 2.2    | Restoring archived backup images from the DR Series system            | 19 |
| 3   | Setti  | ng up the DR Series system cleaner                                    | 22 |
| 4   | Mon    | itoring deduplication, compression, and performance                   | 23 |
| А   | Con    | figuring the DR container share as a CIFS storage device on AppAssure | 24 |
| В   | Back   | king up a Linux client  | 25 |
|     | B.1    | Installing the Linux agent on the client machine                      | 25 |
|     | B.2    | Backing up the Linux client machine                                   | 26 |

#### **Executive summary**

This paper provides information about how to set up the Dell DR Series Deduplication Appliance as a backup target for AppAssure 5.4.3.

For additional information, see the DR Series system documentation and other data management application best practices whitepapers for your specific DR Series system at:

http://www.dell.com/powervaultmanuals

**Note:** The DR Series system and AppAssure screenshots used in this document may vary slightly, depending on the DR Series system firmware version and AppAssure version used.



### 1 Installing and configuring the DR Series system

- 1. Rack and cable the DR Series system and power it on.
- 2. Initialize the DR Series system. For more information about this step, in the *Dell DR Series System Administrator Guide*, refer to the following topics: "iDRAC Connection," "Logging in and Initializing the DR Series System," and "Accessing iDRAC6/iDRAC7 Using RACADM".
- 3. Log on to iDRAC using the default address **192.168.0.120**, or the IP address assigned to the iDRAC interface. Use the user name and password: "**root/calvin**".

|                                       | TED DELL RE             | MOTE<br>R 6 - ENTERPRISE |  |                                | Support   About | Logout |
|---------------------------------------|-------------------------|--------------------------|--|--------------------------------|-----------------|--------|
| System<br>Dell DR4000<br>root , Admin | Properties<br>System Su | Setup Power              |  | vFlash Remote File Share       |                 |        |
| System<br>IDRAC Settings<br>Batteries | System                  | Summary                  |  |                                | e c             | 3      |
| Fans                                  | Serve                   | r Health                 |  |                                |                 |        |
| Power Supplies                        | Status                  | Component                |  | Virtual Console Preview        |                 |        |
| Removable Flash Media<br>Temperatures |                         | Batteries                |  | Options : Settings             |                 |        |
| Voltages                              |                         | Fano                     |  |                                |                 |        |
| Power Monitoring                      |                         | Industors                |  |                                |                 | 1.1    |
|                                       |                         | Power Supplies           |  |                                |                 | 1 1    |
|                                       |                         | Removable Flash          | Media                                      |                                |                 |        |
|                                       |                         | Temperatures             |  |                                | -               |        |
|                                       |                         | vonages                  |  | Retesh                         | Launch          |        |
|                                       | Server                  | Information              |  | Quick Launch Tasks             |                 |        |
|                                       | Power                   | State                    | ON   | Power Otl/OFF                  |                 |        |
|                                       | Oyster                  | n Model                  | Dell DR4000                                | Power Cycle System (bold boot) |                 |        |
|                                       | System                  | n Revision               | н  | Launch Witual Console          |                 |        |
|                                       | Dyster                  | n Host Name              | DR4000-DKCV6S1 asglab.roundrock            | View System Event Log          |                 |        |
|                                       | Operat                  | ling System              | CentOS                                     | View IDRAC Log                 |                 |        |
|                                       | Operation               | ling System Version      | release 5.4 (Final) Kernel<br>2.5.18-164.e | Update Firmware<br>Reset (DRAC |                 |        |
|                                       | Service                 | e Tag                    | DKCV6S1                                    | NEED CONS.                     |                 |        |
|                                       | Expres                  | a Denvice Code           | 29529104401                                |                                |                 |        |
|                                       | BIOG                    | Version                  | 1.9.0                                      |                                |                 |        |
|                                       | Firmw                   | are Version              | 1.80 (Build 17)                            |                                |                 |        |

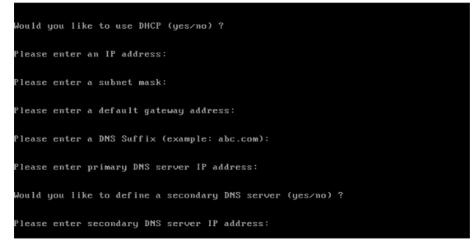
4. Launch the virtual console.

| vstem<br>HI DR4000<br>ot , Admin  | Properties<br>System Summa | Setup Power<br>any System ( |  | vFlash Remote File Share       |             |    |   |
|-----------------------------------|----------------------------|-----------------------------|--|--------------------------------|-------------|----|---|
| stem<br>RAC Settings              | System Su                  | ummary                      |  |                                |             | C  | ? |
| itteries<br>ins<br>trusion        | Server H                   | lealth                      |  |                                |             |    |   |
| ower Supplies                     | Status C                   | omponent .                  |  | Virtual Console Preview        |             |    |   |
| movable Flash Media<br>mperatures | <b>B</b>                   | latteries                   |  | Options : Settings             |             |    |   |
| Itages                            |                            | ans                         |  |                                |             |    |   |
| wer Monitoring                    | 🖾 In                       | strusion                    |  |                                |             |    |   |
|                                   | PI PI                      | ower Supplies               |  |                                |             |    |   |
|                                   |                            | comovable Flash I           | leda                                       |                                |             |    |   |
|                                   | <b>2</b> 10                | emperatures                 |  |                                |             | -  |   |
|                                   | <b>2</b> W                 | offages                     |  | R                              | itresh Laun | ch | • |
|                                   | Server Info                | ormation                    |  | Quick Launch Tasks             |             |    |   |
|                                   | Power Stat                 | ite                         | ON   | Power ON / OFF                 |             |    |   |
|                                   | Dystern Mo                 | odet                        | Dell DR4000                                | Power Cycle System (cold boot) |             |    |   |
|                                   | System Ro                  | evision                     | н  | Launch Virtual Console         |             |    |   |
|                                   | System He                  | nat Name                    | DR4000-DKCV6S1 asglab roundrock            | View System Fuent Log          |             |    |   |
|                                   | Operating                  | System                      | CentOS                                     | View IDRAC Log                 |             |    |   |
|                                   | Operating                  | System Version              | release 5.4 (Final) Kernel<br>2.6.18-164.e | Opdate Pitriware               |             |    |   |
|                                   | Service To                 |                             | DKCV6E1                                    | Reset IDRAC                    |             |    |   |
|                                   |                            | lervice Code                | 29529104401                                |                                |             |    |   |
|                                   | anos vers                  | ion                         | 1.9.0                                      |                                |             |    |   |
|                                   | Firmware                   | Varian                      | 1.80 (Build 17)                            |                                |             |    |   |

5. After the virtual console is open, log on to the system as user: **administrator** with 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 f                | ddress              | ▶ |
|--------------------------------|---------------------|---|
| 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) ? _        |   |



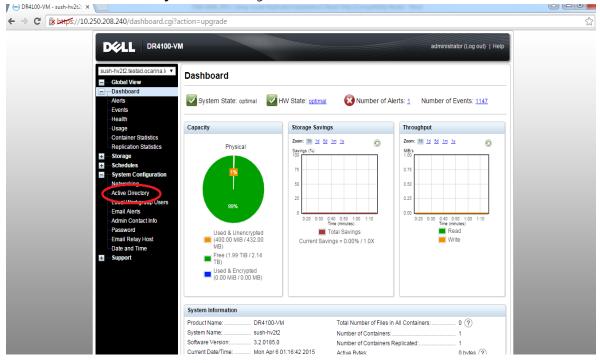
8. Log on to the DR Series system administrator console using the IP address you just provided for the DR Series system with the username: **administrator** and password: **St0r@ge!** (the "0" in the password is the numeral zero.).

| Login | Shanki                      | Reset Password |
|-------|-----------------------------|----------------|
|       | Please enter your password: |                |
|       | Username: administrator     |                |
|       | Password: St0r@gel          |                |
|       | anaporouningona             |                |
|       |                             |                |

9. Join the DR Series system to Active Directory.

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

a. Select **Active Directory** from the navigation menu in the left side of the user interface.



b. Enter your Active Directory credentials.

|   | Global View  | Active Directory   |   |
|---|--|--|---|
| - | Dashboard<br>Alerts<br>Events<br>Health  | Settings<br>The Active Directory settings have not been co | nfigured. Click on the 'Jow link to configure them. |
|   | Usinge<br>Statistica: Container<br>Statistics: Replication   | Active Directory Configuration                             |   |
| - | Storage<br>Containers<br>Replication   | Domain Name (FQDN)*.<br>Usemame*:                          | * = fields are required.                            |
| = | Compression Level<br>Cilents<br>Schedules  | Password*:<br>Org Unit                                     | Enter Active Directory Info                         |
| - | Replication Schedule<br>Cleaner Schedule<br>System Coefiguration<br>Networking   |  | Cancel Join Domain                                  |
| - | Active Directory<br>Local Workgroup Users<br>Email Artit<br>Admin Contact Info<br>Paissword<br>Email Rolay Hoot<br>Date and Time<br>Support<br>Okapeositic<br>Okapeositic<br>Software Upgrade<br>License |  |   |

10. Create and mount the container. Select **Containers** in the left navigation panel, and then click **Create** at the top of the page.

| D¢L   | DR4000   |       |              | tes                          | stad\administrator (Log | out)   Help    |
|---|--|-------|--------------|------------------------------|-------------------------|----------------|
| swsys-33.te   | stad.ocarina.loc  Containers View  |       | Click on Cre | eate container <u>Create</u> | Edit   Delete   Disp    | lay Statistics |
| - Dashbo<br>Alerts  | Number of Containers: 2  |       |              |                              | Container Path          | : /containers  |
| Events  | Containers   | Files | Marker Type  | Access Protocol Enabled      | Replication             | Select         |
| -Health<br>-Usage   | backup   | 0     | Auto         | NFS, CIFS                    | Not Configured          | 0              |
| Replica<br>Storage<br>Contait<br>Replica<br>Encrypi<br>Clients<br>Schedu<br>Replica<br>Cleane<br>System<br>Networ | ners<br>nition<br>Jles<br>nition Schedule<br>r Schedule<br>n Configuration |       |              |                              |                         |                |



11. Enter a **Container Name** and select the **Enable CIFS** checkbox. (AppAssure supports CIFS protocols.)

| C   | Xell   | DR4000                          |  |   | adminis                            | trator (Log out)   Help |
|-----|--|---------------------------------|--|---|------------------------------------|-------------------------|
| SWS | sys-33 testar<br>Global Vie  | Container Wizard - Create I     | New Container  |   |                                    | Display Statistics      |
|     | Dashboar   |                                 |  |   | * = required fields                |                         |
| =   | Alerts<br>Events<br>Health<br>Usage<br>Container<br>Replication<br>Storage<br>Container<br>Replication               | Storage Access Protocol*:       | <ul> <li>Dell Rapid Data Storage (RDS)</li> <li>Symantec OpenStorage (OST)</li> <li>NAS (NFS, CIFS)</li> </ul> | ? | Container Name and Type<br>sample1 | r Path; /containers     |
| 8   | Encryption<br>Clients<br>Schedules<br>System C<br>Networking<br>Active Dire<br>Local Worl<br>Email Aler<br>Admin Cor |                                 |  |   | < Back Cancel Next >               |                         |
| 8   | Password<br>Email Rela<br>Date and T<br>Support<br>Diagnostic:<br>Software U<br>License<br>SSL Certifi               | iy Host<br>Time<br>S<br>Ipgrade |  |   |                                    |                         |

| Container Wizard - Create N | lew Container                                 |        |                                     |                     |
|-----------------------------|---|--------|-------------------------------------|---------------------|
| Configure NAS Access        |   |        |                                     | * = required fields |
| Enable Access Protocols :   | NFS (Use NFS to backup UNIX or LINUX clients) |        | Container Name and<br>sample1       | і Туре              |
| s                           | CIFS (Use CIFS to backup MS Windows clients)  |        | Access Protocols<br>NAS (NFS, CIFS) |                     |
| Marker Type*:               | None  | ?      |                                     |                     |
|                             | Auto  |        |                                     |                     |
|                             | Networker                                     |        |                                     |                     |
|                             | Unix Dump                                     |        |                                     |                     |
|                             | BridgeHead                                    |        |                                     |                     |
|                             | Time Navigator                                |        |                                     |                     |
|                             |   |        |                                     |                     |
|                             |   |        |                                     |                     |
|                             |   | < Back | Cancel                              | Next >              |



12. Select the preferred client access credentials.

|   |   |                  | lustud Vudministrat           | or (Log out)   Help |  |
|---|---|------------------|-------------------------------|---------------------|--|
|   | Global Vie  | Container        |                               | filmer Santers      |  |
|   | Dashboar Configure CIFS Client Access                               |                  | " = required fields           | r Path: /containers |  |
|   | Events  |                  | tainer Name and Type<br>mple1 | Select              |  |
|   | Health<br>Usage   |                  | ess Protocols                 | ed 🔍                |  |
|   | Container Client FQDN or IP :<br>Replication allow access client(s) | Add NA<br>All Au | AS (NFS, GIFS)<br>Ito         |                     |  |
|   | Storage   | NFS              | Access<br>and Write Access    |                     |  |
|   | Container Give the Client access<br>Replication Credentials         |                  | secure                        |                     |  |
|   | Encrypton<br>Clients  |                  | sen (allow all clients)       |                     |  |
| • | Schedules<br>Replication  |                  |                               |                     |  |
|   | Cleaner Se<br>System C  |                  |                               |                     |  |
|   | Networking  |                  |                               |                     |  |
|   | Active Dire<br>Local Work   | < Back           | Cancel Next >                 |                     |  |
|   | Email Alerts<br>Admin Contact Info                                  |                  |                               |                     |  |
|   | Password<br>Email Relay Host  |                  |                               |                     |  |
|   | Date and Time   |                  |                               |                     |  |

| DØLL   | DR4000  |  | tor (Log out)   Help |
|--|---|--|----------------------|
|  | Container Wizard - Create New Container   |  | Display Statistics   |
| Global Vi<br>Dashboa<br>Alerts<br>Events<br>Health<br>Usage<br>Containe<br>Replicati<br>Encrybio<br>Clients<br>Schedule<br>Replicati | Configure NFS Access NFS Options *:  Read Write Access Map root to :  Select Client Access : Client Access : Client FODN or IP : Add Remove | * required fields Container Name and Type Sample1 Access Protocols NAS (NFS, CIFS) Auto Enter the required details | r Path: /containers  |
| Cleaner S<br>System C<br>Networkin<br>Active Dir<br>Local Wo<br>Ermail Ae<br>Data and<br>Data and<br>Support                         | rts<br>Info<br>Info<br>Info   | Back Cancel Next >   |                      |

**Note**: For improved security, Dell recommends adding IP addresses for the backup console (AppAssure Core, AppAssure Agent). Not all environments will have all components included.



13. Click **Create a New Container**, and then confirm that the container has been added.

| Conta<br>Regit<br>Regit<br>Regit<br>Conta<br>Regit<br>Conta<br>Regit<br>Conta<br>Regit<br>Conta<br>Regit<br>Conta<br>Conta<br>Regit<br>Conta<br>Conta<br>Regit<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta<br>Conta | Container Wizard - Create New Container Configuration Summary Container Name and Type Container Name sample 1 Access Protocol: NAS (NFS, CIFS) Marker Type: Time Navigator | NFS Access<br>Access Option<br>Insecure: Yes<br>Map Root To<br>Open (allow a<br>Open (allow a | r: Read Write Access<br>root<br>II clients): | Longinskieler (Log out) 1 Mile<br>Long Aller<br>(Pate: Annisiners<br>Select |  |
|---|--|---|--|---|--|
| System<br>System<br>Active<br>Local<br>Email<br>Admm  | en C<br>hibit<br>Wor<br>Alter<br>Co  | < Back Ca   | ncel Create a New Cont                       | tainer  |  |
|   | Relay Host<br>and Time<br>art  |   |  |   |  |

| 000-09.ocarina.local 🔍 🗸                        | Containers   |                            |               |        | Creat | e   Edit   Delete   Dis |             |
|---|--|----------------------------|---------------|--------|-------|-------------------------|-------------|
| Dashboard                                       |  |                            |               |        |       |                         |             |
| Alerts  | Message  |                            |               |        |       |                         |             |
| Events  | Successfully added container "AppAssure".                    |                            |               |        |       |                         |             |
| Health  | Successfully added NFS connection for container "AppAssure". |                            |               |        |       |                         |             |
| Usage   | Successfully adde  | ed CIFS connection for con | tainer "AppAs | sure". |       |                         |             |
| -Container Statistics<br>Replication Statistics |  |                            |               |        |       |                         |             |
| Storage   | Number of Containers: 9                                      |                            |               |        |       | Container Pat           | h: /contain |
| Containers                                      | Containers   | Files                      | NFS           | CIFS   | RDA   | Replication             | Select      |
| Replication                                     | aa1  | 15                         |               | ~      |       | Stopped                 | 0           |
| Clients   | aa2  | 11                         |               | ~      |       | Not Configured          | 0           |
| Schedules                                       | aa3  | 11                         |               | ~      |       | Not Configured          | 0           |
| System Configuration                            | aa4  | 15                         |               | ~      |       | Not Configured          | 0           |
| Active Directory                                |  |                            |               |        |       | -                       | -           |
| Local Workgroup Users                           | aa5  | 7                          |               | ~      |       | Not Configured          | 0           |
| Email Alerts                                    | AppAssure  | 0                          | ~             | ~      |       | Not Configured          | 0           |
| Admin Contact Info                              | backup   | 0                          | ~             | ~      |       | Not Configured          | 0           |
| Password  | rep1   | 4                          |               | ~      |       | Not Configured          | 0           |
| Email Relay Host                                | ууу4   | 6                          |               | ~      |       | Not Configured          | 0           |
| Date and Time                                   |  |                            |               |        |       |                         |             |

14. Select the container, and click the **Display Statistics** link. Make a note of the container share/export path, which you will use later to target the DR Series system.



\* System Time Zone: US/Pacific

#### Marker Type: Auto

#### Connection Type: NFS / CIFS

| NFS Connection Configuration |  |
|------------------------------|--|
| NFS access path:             | satyan-sw-02.ocarina.local:/containers/sample1 |
| Client Access:               | Open Access (all clients have access)          |
| NFS Options:                 | rw,insecure                                    |
| Map root to:                 | root   |
| NFS Write Accelerator:       | inactive                                       |
|                              |  |

| CIEC  | Composition | Configuration |
|-------|-------------|---------------|
| - ura | COMPECTION  | Communiation  |
|       |             |               |

| 0                       |                                       |
|-------------------------|---------------------------------------|
| CIFS share path:        | \\satyan-sw-02.ocarina.local\sample1  |
| Client Access:          | Open Access (all clients have access) |
| CIFS Write Accelerator: | inactive                              |



### 2 Setting up AppAssure

#### 2.1 Archiving backup images to the DR Series system

To create a backup job and back up a Windows data set, follow steps 1-8 in the procedure that follows. If you already have a backed up data set, skip steps 1-8 and start from step 9 to archive the backup data set to the DR Series system.

**Note about Linux backup images:** Steps 9-12 in the following procedure are for archiving both Windows and Linux backup images. To generate Linux backup images, see Appendix A.2.

1. Log on to the AppAssure Core. Click Configuration -> Repositories -> Add New Repository.

| Manage     Repositories       10.250.242.12     Security         Status     Repository Name     Description       10.250.242.12     Security | AppAssure   | R320-SYS-44 > Configuration   | Contact AppAssure Support   docs   Version: 5.3.6.125  |
|--|---|---|--|
| Retention Policy<br>Attachability<br>Settings<br>Licensing   | <ul> <li>R320-\$Y\$-44</li> <li>Protected Machines</li> <li>10.250.233.95</li> <li>10.250.242.12</li> </ul> | Home         Machines         Replication         Virtual Standby         Events         Tools         Configuration           Manage         ^ | ▲<br>Y - Actions<br>Add New Repository<br>Open existing Repository<br>Open existing Repository |

2. Type in a repository name and then click Add Storage Location.

| AppAssure                                     |   |                           |
|---|---|---------------------------|
| ✓ <sup>(±)</sup> / <sub>***</sub> R320-SYS-44 | Home Machines Replication Virtual Standby Events Tools Configuration    |                           |
| ✓ Protected Machines                          | Add New Repository  | ? ×                       |
| 🗾 10.250.233.95                               | Repr  | e Space Compression Ratio |
| 10.250.242.12                                 | Ser. Even Repository Repository Comments: Ret Concurrent Operations: 64 | *         29%             |
| (   | Satt Use Storage Locations  | dd Storage Location       |
|   | Metadata Path Data Path Size  | Action                    |
|   | Please, add Storage Location.   |                           |
|   |   | Create Cancel             |
|   |   |                           |

3. Enter the **Storage Location** details. (The storage location is the target location for backup job.) Click **Save**.

| Add file on local disk |   | Add file on CIFS share |  |
|------------------------|---|------------------------|--|
| Metadata Path:         | c:\test\matadata  | UNC path:              | \\10.250.243.89\aa2  |
| Data Path:             | c:\test\data  | User Name:             | administrator  |
|                        |   | Password:              | •••••  |
|                        |   |                        | y in the root (i.e. X:\) is not recommended as               |
|                        | repository in a dedicated folder (i.e.<br>delete the entire contents of the rep |                        | y in the root (i.e. X:\) is not recommended as Show/Hide Det |

4. In the AppAssure core console, click **Home -> Protect Machine**.

| AppAssure            | 1010-WINEXS  | (R2-0 + Home           |  |   |   | Con                     | stact AppActure Support | docs   Version: 53.6.0 |
|----------------------|--------------|------------------------|--|---|---|-------------------------|-------------------------|------------------------|
|                      | House        | Machines Replication   | on Virtual Standby Events Tools Config                 | paratism                                      |   |                         |                         |                        |
| ✓ Protected Machines | YOYC         | D-WIN2K8R2-0           |  |   |   |                         |                         | ?                      |
| 7 10.30.149.74       |              |                        |  |   |   |                         |                         |                        |
|                      | Protec       | cted Machines          |  |   |   |                         | Protect Machine         | Protect Cluster        |
|                      | () and other | Machine Name           |  | Repository                                    |   | Last Snapshot           | Recovery Points To      | Total Protected Space  |
|                      | •            | 10.30,149.74           |  | Reportiony 1                                  |   | 11/27/2013 12:01:57 PM  | 8                       | 993.6 MB               |
|                      | Reposi       | sitories               |  |   |   |                         |                         | Add New Repository     |
|                      | Status       | Repository Name        |  |   | Total Size Free S                       | pace Protected Data Mac | hines Recovery Points   | Compression Ratio      |
|                      | •            | Repository 1           |  |   | 183.81 GB 183.                          | .64 GB 993.6 MB         | 1 8                     | i 82%                  |
|                      | Alerts       | 1                      |  |   |   |                         |                         |                        |
|                      | Level        | Date                   | Message  |   |   |                         |                         |                        |
|                      | 0            | 11/27/2013 12:00:59 AM | Events, alerts, reports and background jobs older t    | than 10/28/2013 12:00:59 AM were deleted fr   | rom database                            |                         |                         |                        |
|                      | A .          | 11/27/2013 12:00:59 AM | Nightly 'Checksum Check Job' has been skipped. Re      | rason: No agents available for nightly checks | un check                                |                         |                         |                        |
|                      | 4            | 11/27/2013 12:00:59 AM | Nightly attachability job has been skipped. Reason:    | There are no SQL Server instances configur    | red for attachability check on the Core |                         |                         |                        |
|                      | 0            | 11/26/2013 12:00:57 AM | Events, alerts, reports and background jobs older th   | chan 10/27/2013 12:00:57 AM were deleted fr   | rom database                            |                         |                         |                        |
|                      | 4            | 11/26/2013 12:00:57 AM | Nightly 'Checksum Check Job' has been skipped. Re-     | rason: No agents available for nightly checks | un check                                |                         |                         |                        |
|                      | 4            | 11/26/2013 12:00:57 AM | Nightly attachability job has been skipped. Reason:    | There are no SQL Server Instances configur    | red for attachability check on the Core |                         |                         |                        |
|                      | 4            | 11/25/2013 11:07:16 AM | A backup of protected machine '10.20.149.74 has fa     | alled.  |   |                         |                         |                        |
|                      | 4            | 11/25/2013 11:01:47 AM | A backup of protected machine '10, 30, 149, 74" has be | seen canceled                                 |   |                         |                         |                        |
|                      | A 1          | 11/25/2013 10:54:56 AM | A backup of protected machine '10, 30, 149, 74 has be  | seen canceled                                 |   |                         |                         |                        |



5. Enter the client machine information and click **Connect**.

| AppAssure |                           |   |   |                        |  |
|-----------|---------------------------|---|---|------------------------|--|
|           |                           |   |   |                        |  |
|           | YOYO-WINZKER2-0           |   |   |                        | ?]   |
|           | Protected Machines        |   | Protect Machine Protect                                 |                        |  |
|           | Statum Aberbine Hamm      | Report<br>Report  |   | 11/27/2013 13/01:57 PM | Receivery Points   Tetal Protected Space  <br> |
|           | Repositories              |   |   |                        | Add New Reporting                              |
|           | Status Reporting Name     | Connect   |   |                        |  |
|           | Ø Reputtory 1             | Host: 10.30.149.74  | Port: 8006.   | GB 18144 GB 993.4 MB   | 1 43   |
|           | Alerts                    | User name: administrator  | Pastword:   |                        |  |
|           | Level Data                | Montage.  | Connect   |                        |  |
|           | 11/07/2010 12:00:5H MA    | Least, data, reports many an annument and an annument                 |   |                        |  |
|           | 40 11/27/2013 12:00 54 AM | Nightly Chackson Check Job has been shipped. Reason No against not    | stable for rightly checkpus check                       |                        |  |
|           | A 11/27/2013 12:00:59 AM  | Augusty structuality jub has been slopped. Reasons There are no SQL   | lenver initiances configured for attachability check of | in the Core            |  |
|           | 11/26/2010 12:00:57 AM    | Events, elerts, reports and background jate older than 10/27/2013 12/ | 0.57 Mil were deleted from database                     |                        |  |
|           | 4 11/26/2013 12:00:57 AM  | Nghtly Checkson Check Job has been stopped. Reason: No agents we      | dable for nightly checkcom check                        |                        |  |
|           | 11/26/2013 12:00:57 AM    | Ngntly stachability job has been skipped, Reason There are no 503.    | ferver instances configured for attachability check o   | is the Core            |  |
|           | A 11/25/2012 11.07/16 44  | A backup of protected machine "22.0, 125.72 has follow                |   |                        |  |
|           | 11/25/2013 11/01-47 AM    | A backup of protected wachine '530 18.75 her bean canceled            |   |                        |  |
|           | 11/25/2013 10/34 56 AM    | A backup of protected mechine "20.00.100.707 her been succeed         |   |                        |  |

6. Select or clear the checkbox for each volume group as needed to select the proper backup data set. To change backup schedules, click **Edit.** Click **Protect**.

| Firefox 🔻   |   |   | _ 🗆 >                                       |
|---|---|---|---|
| 😻 Welcome to Firefox  | × 😻 Mozilla Firefox Start Page 🛛 🛛 🖉 AppAssure 5 Core | × +   |   |
| ← ▲ https://r320-sys-44:8006/appr                             | ecovery/admin/Core                                    | ☆ マ C 🛛 🗧 🗸 Google  | ۹ 🗣 ۹                                       |
| AppAssure   |   |   | pport   docs   Version: 5.3.6.125           |
| ✓ <sup>1</sup> R320-SYS-44                                    | Protect 10.250.233.95                                 | ? ×   |   |
| <ul> <li>Protected Machines</li> <li>10.250.242.12</li> </ul> | Options   |   | ?   |
|   | Display Name: 10.250.233.95<br>Repository: aa1        | itect Ma  | achine Protect Cluster                      |
|   | Encryption Key: (none) Initially pause protection:    | v   | 6 3.48 GB                                   |
|   | C Volumes   | Apply Default   | Add New Repository Points Compression Ratio |
|   | Volume groups   |   | 6 29%                                       |
|   | Volume Labeled 'System Reserved')                     | Every 60 minutes peak, every 60 minutes weekends  |   |
|   | ✓ > C:\   | Every 60 minutes peak, every 60 minutes   |   |
|   |   | Protect   | e   |
|   |   | r has been skipped. Keason: No agents available for nightly checksum check<br>been skipped. Reason: There are no SQL Server instances configured for atta | chability check on the Core                 |

7. The machines that have been protected by AppAssure are listed on the left side under **Protected Machines**.

| AppAssure                  | R320-SYS-44 > 10.250.233.95 > Summary Contact AppAssure Support   i   | docs   Version: 5.3.6.12 |
|----------------------------|---|--------------------------|
| ✓ <sup>1</sup> R320-SYS-44 | Summary Recovery Points Events Tools Configuration  |                          |
| Protected Machines         | 10. 250. 233. 95  |                          |
| <b>U</b> 10.250.233.95     |   |                          |
| 10.250.242.12              | Summary   | ? T Actions              |
| •                          | Host: ZHUHAF-2012-01<br>Last Snapshot: 11/26/2013 11:55:06 PM<br>Next Snapshot: 11/27/2013 12:55:06 AM<br>Encryption: Disabled<br>Version: 5:3.6.125<br>Volumes |                          |
|                            | (Volume Labeled 'System Reserved) Total size: 350 Used Space: Free space: 108.7 Every 60 minutes peak, every 60<br>MB 241.3 MB MB minutes weekends              |                          |
|                            | C:\ Total size: 199.60 Used Space: Free space: Every 60 minutes peak, every 60<br>68 57.15 68 142.51 68 minutes weekends  | 54%                      |
|                            |   |                          |

8. AppAssure creates backup images for the protected machines according to the protection policy. To see the backup images, click **Protected Machines** -> **Recovery Points**.

| 10.250.233.95 |               | System Info                        |  |              |                    |               |          |
|---------------|---------------|------------------------------------|--|--------------|--------------------|---------------|----------|
|               | Archive ^     | Host Name:                         | 8320-515-44  |              |                    |               |          |
| 10.250.242.12 | Create        | OS Version: N                      | Windows Server 2008 R2   |              |                    |               |          |
|               | Import        | OS Architecture:                   | and64  |              |                    |               |          |
|               | Diagnostics ~ | Memory (Physical):                 | 24.68  |              |                    |               |          |
|               | Reports *     | Display Name:                      | R020-SY5-44  |              |                    |               |          |
|               | 7             | Fully Qualified Domain Name: I     | R020-SYS-44, testad. ocarina. local  |              |                    |               |          |
|               |               | Cache Metadata Path: 0             | C:\ProgramData\AppRecovery\RepositoryMetaData\CacheMetadata  |              |                    |               |          |
|               |               |                                    | C: ProgramData\AppRecovery\RepositoryMetaData\PrimaryCache<br>C: ProgramData\AppRecovery\RepositoryMetaData\SecondaryCache |              |                    |               |          |
|               |               | Volumes                            |  |              |                    |               |          |
| •             |               | Name                               | Device 10  | Rew Capacity | Formatted Capacity | Used Capacity | Mount Po |
|               |               | (Volume Labeled 'System Reserved') | V2VGLOBALROOT/Device/Handdis/Volume1   | 100 M.B      | 100 MB             | 28.87 MB      | 1        |
|               |               | C/A                                | WWW.OBALROOT/DeviceWarddisWolume2  | 199.9 GB     | 199.9 GB           | 46.22 68      | C:1      |
|               |               | 200                                | \V2V5L0BALROOT\Device\HarddiskVolume4  | 2.53 TB      | 2.53 TB            | 2.13 TB       | Fi\      |
|               |               | F/\                                |  |              |                    |               |          |
|               |               | F.\<br>Replay Engine Connections   |  |              |                    |               |          |

9. To create an archive job, click **Core Server** -> **Tools** -> **Archive** -> **Create**. Enter all of the required information then click **Archive**.

| AppAssure   | R320-SYS-44 > Tools     | Replication Virtual Standby Fronts Temb Configuration  | Contect AppAccure Support:   doc:   Version: 5.3.6.1 |
|---|-------------------------|--|--|
| <ul> <li>Protected Machines</li> <li>10.250.233.95</li> </ul> | Tools ~                 | Create Archive   | (?)  |
| <b>7 10.250.242.12</b>  | Create                  | Date Range   |  |
|   | inport<br>Diagnostics * | Date range of your backup image  | ges  |
|   | Reports ~               | Location   |  |
|   |                         | Location: U10.250.240.5PAppApure The UNC path of DR Emploid path. 0 function of a memory bath. Vacenamental damages. | _  |
|   |                         | User name: testadiadministrator The access information to DR   |  |
|   |                         | Password:  |  |
| ٠   |                         | Options  |  |
|   |                         | Aucinum Size: 🛞 Entire Turget 🔿 20   |  |
|   |                         | Recycle action: Eruse completely +   |  |
|   |                         | × Connect:   |  |
|   |                         | 2  |  |
|   |                         | Machines   |  |
|   |                         | 의 Agent Names  |  |
|   |                         | 2 10.250.242.12  |  |
|   |                         | 10.250.233.95  |  |
|   |                         |  | Archive  |

10. To check the archive job details, click the **Events** tab.

|  | Taika  |                             |                           |           | ?                      | a se serie de Constat  |               |
|--|--|-----------------------------|---------------------------|-----------|------------------------|------------------------|---------------|
|  |  |                             |                           |           |                        |                        |               |
|  | Archive of 1 agents from 16/27/2012 12:00:00 AM to 11/27/2012 11 19:59 204.                          | Archive path                | 1015 250 240.891AppAcours | 1 · · · · | 11/27/2213 12:12:59 44 |                        |               |
|  | <ol> <li>Trender of volumer (Volume Laboled System Reserved) (20) From 10.250.23.</li> </ol>         | 0.99                        |                           | Succeeded | 11/26/2013 11:15-06-PM | 11/27/2013 12:05:55 AM |               |
| 1998/100                                   | Active Task  |                             |                           |           |                        | ×                      |               |
| Archive<br>Start Tie                       | of 1 agents from 10/27/2013 12:00:00 AM to 11/27/2013 11:59:59 PM. Arch<br>e: 11/27/2013 12:12:59 AM | hive path: \\1              |                           |           |                        |                        |               |
|  |  | hive path: \\1              | 10. 250. 243.89\AppAssure |           |                        |                        | -             |
|  |  | hive path: \\1              |                           |           |                        |                        | -             |
| Start Tie                                  | H: 11/22/2013 12:12:59 AM  | hive path: \\1<br>Progress: |                           |           | Cancel                 |                        | 1 1 1 1 1 1 1 |
| Start Tie<br>Details<br>Elapred 1<br>Rate: | er: 11/27/2013 12:12:59 AM   |                             | 11                        |           | Cancel                 |                        | 00000         |
| Start Tie<br>Dotasis<br>Elapsed T          | er: 11/27/2013 12:12:59 AM   | Progress:                   | 5%<br>2.75 68 cf 57.96 68 |           | General                |                        | 20.00         |



11. The archive job details are displayed on the **Events** tab.

| lows Tasks  |           | 2                      | Active V Complete      | e 12 Di |
|---|-----------|------------------------|------------------------|---------|
| 233.95  | Status    | Start Time             | Lod Time               | Deta    |
| Catchive of 1 agents from 10/27/2013 12:00:00 AM to 11/27/2013 11:59:39 FM. Archive path: 1010.250.240.89/AppAssure | Succeeded | 11/27/2013 12:12:59 AM | 11/27/2013 12:35:52 AM | 1       |
| Transfer of volumes ((Volume Labeled System Reserved),C:() from '10.250.233.99                                      | Succeeded | 11/26/2013 11:55:06 PM | 11/27/2013 12:05:55 AM | F       |
| Transfer of volumes (E/U) from '10.250.242,12   | Succeeded | 11/26/2013 11:00:15 PM | 11/26/2013 11:00:34 PM |         |
| Bolling up 'P protected machine(s).   | Succeeded | 11/26/2013 10:10:10 PM | 11/26/2013 10:10:15 PM |         |
| Transfer of volumes (E:1) from '10.250.242.12   | Succeeded | 11/25/2013 11:00:17 PM | 11/25/2013 11:00:34 PM | F       |
| <ul> <li>Rolling up 'T protected machine(s).</li> </ul>   | Succeeded | 11/25/2013 t0:10:50 PM | 11/25/2013 10:10:51 PM | F       |
| > Maintaining repository 'ast'  | Succeeded | 11/25/2013 5:24:20 PM  | 11/25/2013 5:25:14 PM  | 8       |
| Inporting 1 protected machines from backup. Path: \\110.250.243.16\u00e4a1  | Succeeded | 11/25/2013 12:40:14 AM | 11/25/2013 12:45:18 AM | 1       |
| Importing 1 protected machines from backup. Path: \\10.250.243.18\u00e4a1   | Error     | 11/25/2013 12:17:42 AM | 11/25/2013 12:20:42 AM | F       |
| Deleting all recovery points for '10.250.242.12'  | Succeeded | 11/25/2013 12:16:39 AM | 11/25/2013 12:16:42 AM | R.      |

12. To return to the Next Step Wizard page, click Finish. To close the window, click Close.



#### 2.2 Restoring archived backup images from the DR Series system

| 1. | Click Tools -> Archive -> | Import.  |
|----|---------------------------|----------|
| ±. |                           | iniport. |

| <b></b> A | ippAssure        | R320-5Y5-44 + Tools                            |  |  |   |                 |                    | Contact AppAssure Supp | ort   docz   Version: 5.3.6.125 |
|-----------|------------------|--|--|--|---|-----------------|--------------------|------------------------|---------------------------------|
| ~ Wies    |                  | Home Machines N                                | eplication Virtual Standby Even  | nti Taols  | Condiguration                                 | _               | _                  | _                      |                                 |
| Y Pro     | stected Machines | Teals ~  | System Info  |  |   |                 |                    |                        | ?                               |
|           | T 10.250.242.12  | Create<br>Inport<br>Diagnostics v<br>Reports v | Not Name<br>GS Verline<br>CS Architecture<br>Memory (Physical):<br>Diplay Name:<br>Fully Qualifies Domin Name<br>Cache Metadata Path<br>Primary Cache Path<br>Secondary Cache Path | amd64<br>24 08<br>R320-515-44<br>R320-515-44<br>C:\Program0<br>C:\Program0 | rver 2008 R2                                  |                 |                    |                        |                                 |
|           | 8                |  | Volumes  |  |   |                 |                    |                        |                                 |
|           |                  |  | Name   |  | Device ID                                     | Raw Capacity    | Formatted Capacity | Used Capacity          | Mount Points                    |
|           |                  |  | (Volume Labeled 'System Reserved')   |  | V2\GLOBALROOT\Device\HarddiskVolume1          | 100 AAB         | 100 MB             | 28.87 MB               |                                 |
|           |                  |  | C:N  |  | While OBALROOT/Device/HanddiskVolume2         | 199.9 GB        | 799.9 GB           | 46.22 68               | C/V                             |
|           |                  |  | FA   |  | WAGLOBALROOT/Device/HarddiskVolume4           | 2.53 TB         | 2.53 TB            | 2.13 TB                | F-1                             |
|           |                  |  | Replay Engine Connections  |  |   |                 |                    |                        | Details                         |
|           |                  |  | Ð  | Local I  | ind Point Remote End Point Mounted Image Disp | play Neme       |                    | h Writable Mount       | Authenticated User              |
|           |                  |  |  |  | No -  | data to display |                    |                        |                                 |

2. Enter the UNC path of the DR Series system container share that holds the archive images. In addition, enter the CIFS credentials for authenticating to the DR Series system. Click **Check File**.

| AppAssure                          | R205-975-44 > Toole   | Contact AppAcsure Support   docs   Version: 1 |
|------------------------------------|---|---|
| Razosys-44<br>· Protected Machines | Hone Machines Replication Virtual Standby Events Tools Configuration  |   |
| 10.250.233.95                      | Tools "Import Archive Archive   | 1   |
| 10.250.242.12                      | Create Location: 1002502.202.094optionsre<br>Inport Control in grading Down Charlen of Same Charlen and Same Ch |   |
|                                    | Obsequenties         Uter name:         Input the access information of DR           Reports         •         Paravord:         •  |   |
|                                    | Check The   |   |
|                                    |   |   |
|                                    | •   |   |
|                                    |   |   |
|                                    |   |   |
|                                    |   |   |



3. Under **Agent Names**, select the agent and repository to which the archived data will be imported and click **Restore**.

| AppAssure   |   |                            |   |   |
|---|---|----------------------------|---|---|
| - Ramana  |   |                            | estra tentta ina feneratia a  |   |
| <ul> <li>Probability Machines</li> <li><sup>107</sup> 10.250233.95</li> <li><sup>107</sup> 10.2502342.12</li> </ul> | Trenh *<br>Archive *<br>Greek<br>august<br>Diegonstan * | Import Archive<br>Location | THE 20 Yel Ministerior T  | 2 |
| •   | Rogerty +   | Persent (                  | Conternate: 19/27/2013 12:00:00 AM to: 11/27/2013 11:09:09 PM Content: Core: \$200-575-44 Content: Agent Names Core: \$200-575-44 Content: Core: \$200-575-44 C |   |

4. To monitor the restore process, click **Open Monitor Window**.

|  |  |  | Index (Lines)  |           |   |
|--|--|--|--|-----------|---|
|  | Tools  | Import Archive   |  |           |   |
|  | Arithm A   | Location:  |  |           |   |
|  |  |  |  |           |   |
|  | Disguestics =  | - Uner market  |  |           |   |
|  | Reports  | Passward:  | Court File   |           |   |
|  |  |  | Active Tesk Spen Machine Window<br>Inport started<br>Clean   |           |   |
|  |  |  |  |           |   |
|  | 1000-51/5-44 × Täute   | Nadara - Viciai Vi   | weby [ Tanut   |           | Contert AppAncer Support 1 decr. 1 W      |
| p Assure   | 100-519-44 - Taras<br>Taras  | national y second  | nder   Territ  |           | Centert Applicave Support, J. Arro J. Ye  |
|  | Tooli - Archive -  | Inport Archive   | andry   Terretti   |           | - Centurt Applicane Support () deca () Ve |
|  | Tools  | Tradication - Vertical Vertica | inity Tentt Tent X-Algebra   |           | Context Applicave Sulport 1: does 4: Ve   |
| 05970-01<br>97 10.250.232.95<br>97 10.250.242.13   | Tools ~<br>Arshine +<br>Drana<br>Hourit<br>Diamothe +  |  | lanky Tanata Tanata Sanata |           |   |
| evented Adde Informa<br><sup>100</sup> 10, 150, 200, 95<br><sup>100</sup> 10, 250, 347, 13<br><b>Monitor</b>   | Tool •<br>Active Task  | Location Liter name:   | Distriction (  |           | Centert Applicave Support 1 : decs () ve  |
| evented Adde Informa<br><sup>100</sup> 10, 150, 200, 95<br><sup>100</sup> 10, 250, 347, 13<br><b>Monitor</b>   | Toole Antime of Article of Articl | Location<br>Iter name  | Distriction (  | for Time; |   |
| event Machines<br>Tours (10,50,222,55<br>Tours (10,250,137,13)<br>Monitor<br>Importi<br>Ster Tie   | Active Task<br>acceeded  | Location<br>Iter name  | Distriction (  | End Time: |   |
| AVAILAT<br>The test due to the second<br>The second due to the second<br>The second due to the second due to the second<br>The second due to the s | Antina Carlos Ca | Location<br>Deer nume<br>from backup. Path: 1\10.<br>s5 Au   | 1250.243.89%AppAssure Progress: Subceeded  | End Time: |   |
| AVELLI<br>Terred Machana<br>Terred J. 201, 202, 202, 55<br>Terred J. 201, 202, 202, 55<br>Monitor<br>Import<br>Status:<br>Details  | Active Task In 1 protected machines are: 1/2/2/013 12314 Task: Tas | Licentree<br>Uter name<br>from backup. Path: \\10.<br>55 Au  | 230.243.89VAppAssure   | End Time: |   |



5. After the restore is completed, click **Protected Machines** -> **Recovery Points**. Verify that the recovery point(s) have been restored to the repository.

| ▲ AppAssure  | R220-5Y5-44 + 10.250.233.95 + Recovery Points Summary Recovery Points Tools Configur | ation          | _                           | Cont  | act AppAcsure Support   docs   Version: 5.3.6. |
|--|--|----------------|-----------------------------|---|--|
| <ul> <li>Protected Machinet</li> <li>T 10.250.233.95</li> <li>10.250.242.12</li> </ul> | 10.250.233.95 Recovery Points  |                |                             |   | ?  |
| •  | Totel Recovery Polyts: 2<br>Totel Protected One: 56.42 GB<br>Reportory: tal          | Repository Sta | 300 350 400 45              | l   |  |
| Ŭ  | Recovery Points  |                |                             |   | (* Actions )                                   |
|  | Sister Enrystod Contents   | GN C           | Yype<br>Incremental<br>Base | Creation Date<br>11/27/2013 12:55-22 AM<br>11/26/2013 11:55:06 PM | Size<br>661.69 MB<br>57.% GB                   |

6. Each of the recovery points can be expanded to show available operations.

| ppAssure R220                                 | STS-44 > 10.250.233.95 > Recovery Points                           |   |                 | Con                    | tact AppAcsure Support   docs   Version: |
|---|--|---|-----------------|------------------------|--|
| 29-545<br>steeted Machines<br>👎 (0.250.252.05 | Republicny: asl  | ee1 [20. 405.5]<br>0 50 100 150 200 200 | 300 350 400 450 | 500                    |  |
| 10.250.242.12                                 |  |   | uied 📕          | Free                   |  |
| ľ   | Recovery Points  |   |                 |                        | · Acti                                   |
|   | Status Encrypted Contents  |   | Тура            | Creation Date          | Size                                     |
|   | <ul> <li>O h</li> <li>(Volume Labeled System Reserved),</li> </ul> | Q1)                                     | Incremental     | 11/27/2013 12:55:22 AM | 661.69 MB                                |
|   | Actions  |   |                 |                        | Mount Export * Rollback                  |
| •   | Contents   |   |                 |                        |  |
|   | Status Title   |   |                 |                        | Size                                     |
|   | Volume Labeled "System Reserved")                                  |   |                 |                        | 1.95 A                                   |
|   | > 0 C/   |   |                 |                        | 659.78 A                                 |
| C   | 🕥 0 💧 (Volume Labeled System Reserved),                            | cit.                                    | Bate .          | 11/26/2013 11:55:06 PM | 57.98 68                                 |
|   | Actions  |   |                 |                        | Mount Export • Rollback Delete           |
|   | Contents   |   |                 |                        |  |
|   | Status Title   |   |                 |                        | Size                                     |
|   | <ul> <li>O (Volume Labeled 'System Rejerved')</li> </ul>           |   |                 |                        | 269.4 M                                  |
|   | > 0 C:\  |   |                 |                        | 57.71 6                                  |

#### Setting up the DR Series system cleaner

3

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 cleaner runs 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 to force it to run during a scheduled time.

If necessary, you can perform the procedure shown in the following screenshot to force the cleaner to run. After all of the backup jobs are set up, the DR Series system cleaner can be scheduled. The DR Series system cleaner should run at least 40 hours per week when backups are not taking place, and generally after a backup job has completed.

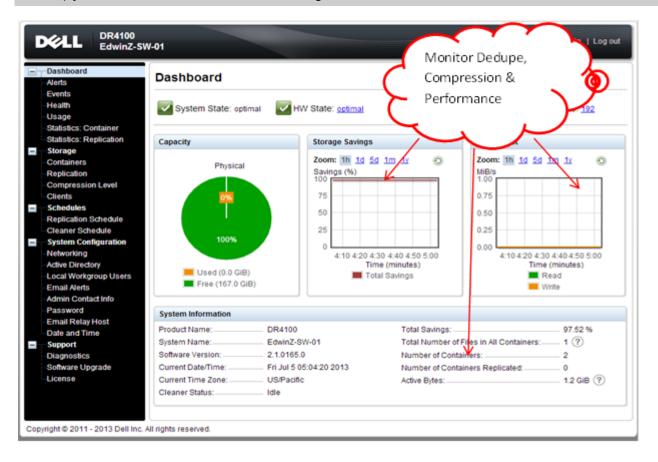
| Dashboard<br>Alerts<br>Events   | Cleaner Sched | lule   | Sch | edule Cleaner | Edit Schedu |
|---|---------------|--|-----|---------------|-------------|
| Health<br>Usage<br>Statistics: Container  |               | acific, Fri Jul 5 05:00:41 2013<br>e is set, the cleaner will run as neede | d.  |               |             |
| Statistics: Replication   | Day           | Start Time   |     | Stop Time     |             |
| Storage<br>Containers   | Sun           |  |     |               |             |
| Replication   | Mon           |  |     |               |             |
| Compression Level   | Tue           |  |     |               |             |
| Clients   | Wed           |  |     |               |             |
| Schedules   | Thu           |  |     |               |             |
| Replication Schedule  | Fri           |  |     |               |             |
| Cleaner Schedule  | Sat           |  |     |               |             |
| System Configuration<br>Networking<br>Active Directory<br>Local Workgroup Users<br>Email Alerts<br>Admin Contact Info<br>Password<br>Email Relay Host<br>Date and Time<br>Support<br>Diagnostics<br>Software Upgrade<br>License |               |  |     |               |             |



## 4 Monitoring deduplication, compression, and performance

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

**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 are completed, the ratios will increase. Backup jobs with a 12-week retention will average a 15x ratio, in most cases.





# A Configuring the DR container share as a CIFS storage device on AppAssure

To configure the DR Series system container share as an archive destination, AppAssure needs to authenticate to a DR Series system.

• If the DR Series system is joined to an Active Directory domain, you must enter [domain\_name]\user\_id in the User Name field for successful authentication.

| AppAssure   | R320-515-44 > Tools     |  | Contect AppAssure Support   docs   Version: \$3.6.1 |
|---|-------------------------|--|---|
|   | Home Machines           | Replication Virtual Standby Errorts Tools Configuration  |   |
| <ul> <li>Protected Machines</li> <li>10.250.223.95</li> </ul> | Tools *                 | Create Archive   | ?   |
| 10.250.242.12   | Archive ^<br>Creste     | Date Range   |   |
|   | Import<br>Diagnostics ~ | Dete range: 10/27/2013 + to: 11/27/2013 +  |   |
|   | Reports *               |  |   |
|   |                         | Location: VCR0000-074/aphrove Example loci park 0: Norris Santha or anticidi park. Voncessiant/Apartume. |   |
|   |                         | Uter name: Testaduden/nitrator Domain/userID   |   |
|   |                         | Password   |   |
| •   |                         | Options  |   |
|   |                         | Nacimum Size:   Entire Target   III III III III III III III III III                                      |   |
|   |                         | Recycle action: Do not reuse v   |   |
|   |                         | Connenti   |   |
|   |                         | 2  |   |
|   |                         | Machines   |   |
|   |                         | Agent Names  |   |
|   |                         | 10.250.242.12  |   |
|   |                         |  | Archivo   |

• If the DR Series system is configured as a standalone CIFS server, a DR Series system local CIFS user credential can be used.

| AppAssure   | R220-51544 + Taols   | Contact Applesure Support   docs   Version: 8.3.6.    |
|---|--|---|
| · * 12 R220-545-44  | Home Machines Replication Virtual Standby Events Tools Configuration |   |
| <ul> <li>Protected Machines</li> <li>10.250.233.95</li> </ul> | Teols ~ Import Archive   | 2   |
| 10.250.242.12   | Create Location: VCRes000-07VAppAssure Inspit Inspit                 | amédianana  |
|   | Dispositive Uter name: Administrator                                 | nput DR user name only if it does not join any domain |
|   | 1990 9   | Check File  |

#### B Backing up a Linux client

#### B.1 Installing the Linux agent on the client machine

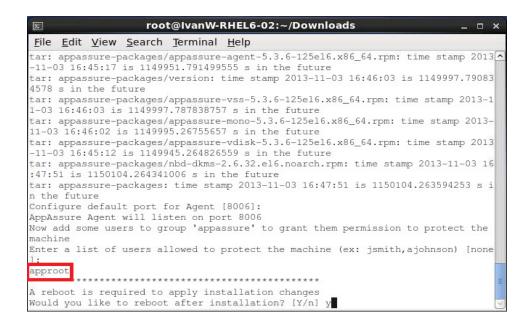
#### Note: For more details, see the AppAssure User Guide.

On the Linux client machine, run the commands below as the **root** user:

- 1. Create a new user for the Linux Agent. useradd approot
- 2. Set a password for the new user. passwd approot
- 3. Add the user to the root, daemon, adm, and wheel groups. usermod -G root, daemon, adm, wheel approot

| E   |   |  | roo   | t@lvanW-   | RHEL6-02:~/Downloads   |   |  |
|---|---|--|---|--|--|---|--|
| <u>F</u> ile  | <u>E</u> dit  | View   | <u>S</u> earch  | Terminal   | <u>H</u> elp   |   |  |
| [root<br>[root<br>New ]<br>Rety]<br>passu<br>[root<br>appro | t@Ivan<br>t@Ivan<br>ging p<br>passwo<br>pe new<br>wd: al<br>t@Ivan<br>t@Ivan<br>cot : | W-RHEI<br>W-RHEI<br>asswor<br>rd:<br>passw<br>l auth<br>W-RHEI<br>W-RHEI<br>approc | .6-02 Dow<br>.6-02 Dow<br>.d for us<br>word:<br>henticati<br>.6-02 Dow<br>.6-02 Dow<br>.cot cot cot | mloads]#<br>mloads]#<br>ser approc<br>.on tokens<br>mloads]# | useradd approot<br>passwd approot<br>ot.<br>s updated successfully.<br>usermod -G root,daemon,adm,wheel approot<br>groups approot<br>m_wheel | 8 |  |

- 4. Install the Linux agent installer.
  - ./appassure-installer\_rhel\_amd64\_5.4.3.125.sh



#### B.2 Backing up the Linux client machine

- 1. On the AppAssure Core Console, click **Home -> Protect Machine**.
- 2. In the **Connect** dialog box, enter the information about the client machine, and then click **Connect**.

| Host:      | IvanW-RHEL6-02 | Port:     | 8006 |        |
|------------|----------------|-----------|------|--------|
| User name: | approot        | Password: |      |        |
|            |                |           | _    | onnect |

Note: Use the approot user, which was added during agent installation.

2. In the **Protect** dialog box, edit the settings as needed, and then click **Protect**.

| Opti      | ons                  |               |            |
|-----------|----------------------|---------------|------------|
| Display   | y Name:              | wanW-RHEL6-02 |            |
| Repos     | itory:               | rep01         | *          |
| Encry     | ption Key:           | (none)        | +          |
|           | ly pause protection: |               |            |
| Volu      |                      |               | ly Default |
| Volu<br>V | mes                  |               | ly Default |

