



Manage application volumes

SnapCenter Software 5.0

NetApp
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Manage application volumes

What are application volumes

Application Volumes are the storage where information such as configuration, installer, and other non-data files related to Oracle database are stored.

SnapCenter Plug-in for Oracle Database allows you to create consistent backup of application volumes (non-data volumes) along with the Oracle databases.

The plug-in automates the backup and cloning of application volumes.

- Protect application volumes along with Oracle database volumes in a single resource group.
- Create backups of application volumes.
- Create backups of Oracle databases along with application volumes.
- Create clones of databases along with application volumes up to a point-in-time.
- Schedule backup operations.
- Monitor all operations.
- View reports of backup and clone operations.

Add application volumes

SnapCenter supports backing up and cloning of application volumes of Oracle database. You should manually add the application volumes. Auto discovery of application volumes is not supported.



Application volumes support only direct NFS and direct iSCSI connections.

Steps

1. In the left navigation pane, click **Resources**, and then select the Oracle Database plug-in from the list.
2. Click **Add Application Volume**.
3. In the Name page, perform the following actions:
 - In the Name field, enter the name of the application volume.
 - In the Host Name field, enter the name of the host.
4. In the Storage Footprint page, enter the storage system name, select one or volumes, and specify the associated LUNs or Qtrees.


You can add multiple storage systems.

5. Review the summary, and then click **Finish**.
6. In the Resources page, select **Application Volume** from the **View** list to view all the application volumes that you have added.

Modify application volume

You can modify all the values that you specified while adding the application volume, if no backups are created. If the backup is created, you can only modify the storage system details.

Steps


1. In the left navigation pane, click **Resources**, and then select the Oracle Database plug-in from the list.
2. In the Resources page, select **Application Volume** from the **View** list.
3. Click  to modify the values.

Delete application volume

When you delete an application volume, if there any backups associated with the application volume, the application volume will be put into maintenance mode and no new backups will be created and no earlier backups will be retained. If there are no backups associated, all the metadata will be deleted.

If required, SnapCenter allows you to undo the delete operation.

Steps

1. In the left navigation pane, click **Resources**, and then select the Oracle Database plug-in from the list.
2. In the Resources page, select **Application Volume** from the **View** list.
3. Click  to modify the values.

Backup application volumes


Back up application volume

If the application volume is not part of any resource group, you can back up the application volume from the Resources page.

About this task

By default, consistency group (CG) backups are created. If you want to create volume based backups, you should set the value of **EnableOracleNdvVolumeBasedBackup** to true in the *web.config* file.

Steps

1. In the left navigation pane, click **Resources**, and then select the Oracle Database plug-in from the list.
2. In the Resources page, select **Application Volume** from the **View** list.
3. Click , and then select the host name and the database type to filter the resources.

You can then click  to close the filter pane.

4. Select the application volume that you want to back up.

The Application volume-Protect page is displayed.


5. In the Resource page, perform the following actions:

For this field...	Do this...
Use custom name format for Snapshot copy	Select this check box, and then enter a custom name format that you want to use for the Snapshot name. For example, customtext__policy_hostname or resource_hostname. By default, a timestamp is appended to the Snapshot name.
Exclude archive log destinations from backup	Specify the destinations of the archive log files that you do not want to back up.


6. In the Policies page, perform the following steps:

- a. Select one or more policies from the drop-down list.



You can also create a policy by clicking .

In the Configure schedules for selected policies section, the selected policies are listed.

- a. Click  in the Configure Schedules column for the policy for which you want to configure a schedule.
- b. In the Add schedules for policy *policy_name* window, configure the schedule, and then click **OK**.

policy_name is the name of the policy that you have selected.

The configured schedules are listed in the Applied Schedules column.

7. In the Notification page, from the **Email preference** drop-down list, select the scenarios in which you want to send the emails.

You must also specify the sender and receiver email addresses, and the subject of the email. If you want to attach the report of the backup operation performed on the resource, and then select **Attach Job Report**.



For email notification, you must have specified the SMTP server details using either the GUI or the PowerShell command Set-SmSmtServer.

8. Review the summary, and then click **Finish**.

The application volume topology page is displayed.

9. Click **Back up Now**.

10. In the Backup page, perform the following steps:

- a. If you have applied multiple policies to the resource, from the **Policy** drop-down list, select the policy that you want to use for backup.
- b. Click **Backup**.

11. Monitor the operation progress by clicking **Monitor > Jobs**.

Back up the application volumes resource group

You can back up the resource group containing only application volumes or a mix of application volumes and database. A backup operation on the resource group is performed on all resources defined in the resource group.



If the resource group has multiple application volumes, all the application volumes should either have SnapMirror or SnapVault replication policy.

About this task

By default, consistency group (CG) backups are created. If you want to create volume based backups, you should set the value of **EnableOracleNdvVolumeBasedBackup** to true in the *web.config* file.

Steps

1. In the left navigation pane, click **Resources**, and then select the Oracle Database plug-in from the list.
2. In the Resources page, select **Resource Group** from the **View** list.

You can search the resource group either by entering the resource group name in the search box, or by clicking , and then selecting the tag. You can then click  to close the filter pane.

3. In the Resource Groups page, select the resource group that you want to back up, and then click **Back up Now**.
4. In the Backup page, perform the following steps:
 - a. If you have associated multiple policies with the resource group, from the **Policy** drop-down list, select the policy that you want to use for backup.

If the policy selected for the on-demand backup is associated with a backup schedule, the on-demand backups will be retained based on the retention settings specified for the schedule type.

- b. Click **Backup**.
5. Monitor the operation progress by clicking **Monitor > Jobs**.



Verification operation will be performed only for the databases and not for the application volumes.

Clone application volume backup

You can use SnapCenter to clone the application volume backups.


Before you begin

If you have installed the plug-in as a non-root user, you should manually assign the execute permissions to the prescript and postscript directories.

Steps

1. In the left navigation pane, click **Resources**, and then select the Oracle Database plug-in from the list.
2. In the Resources page, select **Application Volume** from the **View** list.
3. Select the application volume either from the application volume details view or from the resource group details view.

The application volume topology page is displayed.

4. From the Manage Copies view, select the backups either from Local copies (primary), Mirror copies (secondary), or Vault copies (secondary).
5. Select the backup from the table, and then click .
6. In the Location page, perform the following actions:

For this field...	Do this...
Plug-in host	Select the host where you want to create the clone.
Target Resource Name	Specify the resource name.

7. In the Scripts page, specify the names of the scripts to be executed before cloning, commands to mount a file system, and names of the scripts to be executed after cloning.
8. In the Notification page, from the **Email preference** drop-down list, select the scenarios in which you want to send the emails.

You must also specify the sender and receiver email addresses, and the subject of the email. If you want to attach the report of the clone operation performed, select **Attach Job Report**.




For email notification, you must have specified the SMTP server details using either the GUI or the PowerShell command Set-SmSmtServer.

9. Review the summary, and then click **Finish**.

Split an application volume clone

You can use SnapCenter to split a cloned resource from the parent resource. The clone that is split becomes independent of the parent resource.

Steps

1. In the left navigation pane, click **Resources**, and then select the Oracle Database plug-in from the list.
2. In the Resources page, select **Application Volume** from the **View** list.
3. Select the cloned resource and click .
4. Review the estimated size of the clone that is to be split and the required space available on the aggregate, and then click **Start**.
5. Monitor the operation progress by clicking **Monitor > Jobs**.


Delete an application volume clone

You can delete clones if you find them no longer necessary. You cannot delete clones that acts like source for other clones.

Steps

1. In the left navigation pane, click **Resources**, and then select the Oracle Database plug-in from the list.
2. In the Resources page, select **Application Volume** from the **View** list.
3. Select the resource or resource group from the list.

The resource or the resource group topology page is displayed.

4. From the Manage Copies view, select **Clones** either from the primary or secondary (mirrored or replicated) storage systems.
5. Select the clone, and then click .
6. In the Delete Clone page, perform the following actions:
 - a. In the **Pre clone delete** field, enter the names of the scripts to be executed before deleting the clone.
 - b. In the **Unmount** field, enter the commands to unmount the clone before deleting the clone.
7. Click **OK**.

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