

Working with Volume Groups/introduction to volume groups.txt

Working with Volume Groups

The Oracle Cloud Infrastructure Block Volume service provides you with the capability to group together many volumes in a volume group. A

Required IAM Policy

To use Oracle Cloud Infrastructure, you must be granted security access in a policy by an administrator. This access is required whether

For administrators: The policy in Let volume admins manage block volumes, backups, and volume groups lets the specified group do everythi

See the following policy examples for working with volume groups:

Let users create a volume group lets the specified group create a volume group from a set of volumes.

Let users clone a volume group lets the specified group clone a volume group from an existing volume group.

Let users create a volume group backup lets the specified group create a volume group backup.

Let users restore a volume group backup lets the specified group create a volume group by restoring a volume group backup.

Tip

When users create a backup from a volume or restore a volume from a backup, the volume and backup don't have to be in the same compartmen

If you're new to policies, see Getting Started with Policies and Common Policies. For reference material about writing policies for insta

About Volume Groups

Volume groups simplify the process to create time-consistent backups of running enterprise applications that span several storage volumes

Similarly, you can also clone an entire volume group in a time-consistent and crash-consistent manner. A deep disk-to-disk and fully isol

For more information about Block Volume-backed system disks, see Boot Volumes. For more information about Block Volume backups see Overvi

This capability is available using the Console, CLI, SDKs, or REST APIs.

Volume groups and volume group backups are high-level constructs that allow you to group together several volumes. When working with volu

You can only add a volume to a volume group when the volume status is available.

You can add up to 32 volumes in a volume group, up to a maximum size limit of 128 TB. For example, if you wanted to add 32 volumes of equ

Each volume can only be in one volume group.

When you clone a volume group, a new group with new volumes is created. For example, if you clone a volume group containing three volumes

When you update a volume group using the CLI, SDKs, or REST APIs, you need to specify all the volumes to include in the volume group each

When you delete a volume group, the individual volumes in the group aren't deleted, only the volume group is deleted.

When you delete a volume that's part of a volume group, you must first remove it from the volume group before you can delete it.

When you delete a volume group backup, all the volume backups in the volume group backup are deleted.

Volume Group Replication

The Block Volume service provides you with the capability to perform ongoing automatic asynchronous replication of volume groups to other

Disaster recovery

Migration

Business expansion

For more information, see Replicating a Volume. For specific details about volume groups, including step-by-step procedures using the Con

Volume Group Backups

A volume group backup provides coordinated point-in-time-consistent backups of all the volumes in a volume group automatically. You can p

For a general overview of the Block Volume's service backup functionality, see Overview of Block Volume Backups.

Source Region

Volume group backups include a Source Region field. This specifies the region for the volume group that the backup was created from. For

Manual Volume Group Backups

Manual backups are on-demand one-off backups that you can launch immediately for volume groups by following the steps outlined in the pro

Using the Console

To create a backup of the volume group

Open the navigation menu and click Storage. Under Block Storage, click Volume Groups.

In the Volume Groups list, click Create Volume Group Backup in the Actions menu for the volume group you want to create a backup for.

To restore a volume group from a volume group backup

Open the navigation menu and click Storage. Under Block Storage, click Volume Group Backups.

In the Volume Group Backups list, click the volume group backup you want to restore.

Click Create Volume Group.

Fill in the required volume information:

Name: A user-friendly name or description. Avoid entering confidential information.

Compartment: The compartment for the volume group.

Availability Domain: The availability domain for the volume group.

Click Create Volume Group.

To copy a volume group backup to a new region

For more information about copying volume backups and volume group backups to new regions, see Copying a Volume Backup Between Regions. B

Open the navigation menu and click Storage. Under Block Storage, click Volume Group Backups.

In the Volume Group Backups list, click the volume group backup you want to copy to a new region.

Click Copy to Another Region.

Enter a name for the backup and choose the region to copy the backup to. Avoid entering confidential information.

In the Encryption section select whether you want the volume group backup to use the Oracle-provided encryption key or your own Vault enc

Click Copy Block Volume Backup.

Confirm that the source and destination region details are correct in the confirmation dialog and then click OK.

Using the CLI

For information about using the CLI, see Command Line Interface (CLI).

To list volume backup groups

Open a command prompt and run:

Command

Copy

Try It

oci bv volume-group-backup list --compartment-id <compartment_ID>

For example:

oci bv volume-group-backup list --compartment-id ocid1.compartment.oc1..<unique_ID>
 To create a volume group backup
 Open a command prompt and run:

Command
 Copy
 Try It
 oci bv volume-group-backup create --volume-group-id <volume-group_ID>
 For example:

oci bv volume-group-backup create --volume-group-id ocid1.volumegroup.oc1.phx.<unique_ID>
 To retrieve a volume group backup
 Open a command prompt and run:

Command
 Copy
 Try It
 oci bv volume-group-backup get --volume-group-backup-id <volume-group-backup_ID>
 For example:

oci bv volume-group-backup get --volume-group-backup-id ocid1.volumegroupbackup.oc1.phx.<unique_ID>
 To update display name for a volume group backup
 Open a command prompt and run:

Command
 Copy
 Try It
 oci bv volume-group-backup update --volume-group-backup-id <volume-group-backup_ID> --display-name <new_display_name>
 You can only update the display name for the volume group backup.

For example:

oci bv volume-group-backup update --volume-group-backup-id ocid1.volumegroupbackup.oc1.phx.<unique_ID> --display-name "new display name"
 To restore a volume group from a volume group backup
 Open a command prompt and run:

Command
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 Try It
 oci bv volume-group create --compartment-id <compartment_ID> --availability-domain <external_AD> --source-details <Source_details_JSON>
 For example:

Command
 Copy
 Try It
 oci bv volume-group create --compartment-id ocid1.compartment.oc1..<unique_ID> --availability-domain ABbv:PHX-AD-1 --source-details '{"ty
 To delete a volume group backup
 Open a command prompt and run:

Command
 Copy
 Try It
 oci bv volume-group-backup delete --volume-group-backup-id <volume-group-backup_ID>
 When you delete a volume group backup, all volume backups in the group are deleted.

For example:

oci bv volume-group-backup delete --volume-group-backup-id ocid1.volumegroupbackup.oc1.phx.<unique_ID>

Policy-Based Volume Group Backups

These are automated scheduled backups as defined by the backup policy assigned to the volume group. Policy-based backups for volume group

Note

Oracle defined backup policies are not supported for scheduled volume group backups.

Caution

Vault encryption keys for volumes are not copied to the destination region for scheduled volume and volume group backups enabled for cros

Managing Backup Policy Assignments to Volume Groups

The backup policy assigned to a volume group defines the frequency and schedule for volume group backups. This section covers how to perf

If a volume group has an assigned backup policy, you must remove any backup policy assignments from volumes before you can add them to th

Before you can assign a backup policy to an existing volume group containing one or more volumes with assigned backup policies, you must

Using the Console

To assign a backup policy to a volume group
 Open the navigation menu and click Storage. Under Block Storage, click Volume Groups.
 Click the volume group for which you want to assign a backup policy to.
 On the Volume Group Details page click Edit .
 In the BACKUP POLICIES section, select the compartment containing the backup policies.

Select the appropriate backup policy for your requirements.

Click Save Changes.

To change a backup policy assigned to a volume group
 Open the navigation menu and click Storage. Under Block Storage, click Volume Groups.
 Click the volume group for which you want to change the backup policy for.
 On the Volume Group Details page click Edit.
 In the BACKUP POLICIES section, select the compartment containing the backup policy.

Select the backup policy you want to switch to.

Click Save Changes.

To remove a backup policy assigned to a volume group
 Open the navigation menu and click Storage. Under Block Storage, click Volume Groups.
 Click the volume group for which you want to remove the backup policy for.
 On the Volume Group Details page click Edit .
 In the BACKUP POLICIES section, select None from the list, and then click Save Changes.

Using the CLI

For information about using the CLI, see Command Line Interface (CLI).

To assign a backup policy to a volume group
Open a command prompt and run:

Command

Copy

Try It

```
oci bv volume-backup-policy-assignment create --asset-id <volume_group_ID> --policy-id <policy_ID>
```

For example:

```
oci bv volume-backup-policy-assignment create --asset-id ocid1.volumegroup.oc1.<unique_ID> --policy-id ocid1.volumebackuppolicy.oc1.<un
```

To get the backup policy assigned to a volume group

Open a command prompt and run:

Command

Copy

Try It

```
oci bv volume-backup-policy-assignment get-volume-backup-policy-asset-assignment --asset-id <volume_group_ID>
```

For example:

```
oci bv volume-backup-policy-assignment get-volume-backup-policy-asset-assignment --asset-id ocid1.volumegroup.oc1.<unique_ID>
```

To retrieve a specific backup policy assignment

Open a command prompt and run:

Command

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Try It

```
oci bv volume-backup-policy-assignment get --policy-assignment-id <backup-policy-ID>
```

For example:

```
oci bv volume-backup-policy-assignment get --policy-assignment-id ocid1.volumebackuppolicyassignment.oc1.phx.<unique_ID>
```