Use individual volume snapshots for data protection

Element Software

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A volume snapshot is a point-in-time copy of a volume. You can use an individual volume rather than a group of volumes for the snapshot.

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Create a volume snapshot

You can create a snapshot of an active volume to preserve the volume image at any point in time. You can create up to 32 snapshots for a single volume.

1. Click **Management** > **Volumes**.
2. Click the **Actions** icon for the volume you want to use for the snapshot.
3. In the resulting menu, select **Snapshot**.
4. In the **Create Snapshot of Volume** dialog box, enter the new snapshot name.
5. **Optional:** Select the **Include Snapshot in Replication When Paired** check box to ensure that the snapshot is captured in replication when the parent volume is paired.
6. To set the retention for the snapshot, select from one of the following options:
   - Click **Keep Forever** to retain the snapshot on the system indefinitely.
   - Click **Set Retention Period** and use the date spin boxes to choose a length of time for the system to retain the snapshot.
7. To take a single, immediate snapshot, perform the following steps:
   a. Click **Take Snapshot Now**.
   b. Click**Create Snapshot**.
8. To schedule the snapshot to run at a future time, perform the following steps:
   a. Click **Create Snapshot Schedule**.
   b. Enter a **New Schedule Name**.

c. Choose a **Schedule Type** from the list.

d. **Optional:** Select the **Recurring Schedule** check box to repeat the scheduled snapshot periodically.

e. Click **Create Schedule**.

Find more information

Schedule a snapshot

Edit snapshot retention

You can change the retention period for a snapshot to control when or if the system deletes snapshots. The retention period you specify begins when you enter the new interval. When you set a retention period, you can select a period that begins at the current time (retention is not calculated from the snapshot creation time). You can specify intervals in minutes, hours, and days.

Steps

1. Click **Data Protection** > **Snapshots**.
2. Click the **Actions** icon for the snapshot you want to edit.
3. In the resulting menu, click **Edit**.
4. **Optional:** Select the**Include Snapshot in Replication When Paired** check box to ensure that the snapshot is captured in replication when the parent volume is paired.
5. **Optional:** Select a retention option for the snapshot:
   - Click **Keep Forever** to retain the snapshot on the system indefinitely.
   - Click **Set Retention Period** and use the date spin boxes to select a length of time for the system to retain the snapshot.
6. Click **Save Changes**.

Delete a snapshot

You can delete a volume snapshot from a storage cluster running Element software. When you delete a snapshot, the system immediately removes it.

You can delete snapshots that are being replicated from the source cluster. If a snapshot is syncing to the target cluster when you delete it, the sync replication completes and the snapshot is deleted from the source cluster. The snapshot is not deleted from the target cluster.

You can also delete snapshots that have been replicated to the target from the target cluster. The deleted snapshot is kept in a list of deleted snapshots on the target until the system detects that you have deleted the snapshot on the source cluster. When the target detects that you have deleted the source snapshot, the target stops replication of the snapshot.

When you delete a snapshot from the source cluster, the target cluster snapshot is not affected (the reverse is also true).

1. Click **Data Protection** > **Snapshots**.

2. Click the **Actions** icon for the snapshot you want to delete.
3. In the resulting menu, select **Delete**.
4. Confirm the action.

Clone a volume from a snapshot

You can create a new volume from a snapshot of a volume. When you do this, the system uses the snapshot information to clone a new volume using the data contained on the volume at the time the snapshot was created. This process stores information about other snapshots of the volume in the newly created volume.

1. Click **Data Protection** > **Snapshots**.
2. Click the **Actions** icon for the snapshot you want to use for the volume clone.
3. In the resulting menu, click **Clone Volume From Snapshot**.
4. Enter a **Volume Name** in the **Clone Volume From Snapshot** dialog box.
5. Select a **Total Size** and size units for the new volume.
6. Select an **Access** type for the volume.
7. Select an **Account** from the list to associate with the new volume.
8. Click **Start Cloning**.

Roll back a volume to a snapshot

You can roll back a volume to a previous snapshot at any time. This reverts any changes made to the volume since the snapshot was created.

Steps

1. Click **Data Protection** > **Snapshots**.
2. Click the **Actions** icon for the snapshot you want to use for the volume rollback.
3. In the resulting menu, select **Rollback Volume To Snapshot**.
4. **Optional:** To save the current state of the volume before rolling back to the snapshot:
   a. In the **Rollback To Snapshot** dialog box, select **Save volume's current state as a snapshot**.
   b. Enter a name for the new snapshot.
5. Click **Rollback Snapshot**.

Back up a volume snapshot

Back up a volume snapshot

You can use the integrated backup feature to back up a volume snapshot. You can back up snapshots from a SolidFire cluster to an external object store, or to another SolidFire cluster. When you back up a snapshot to an external object store, you must have a connection to the object store that allows read/write operations.

- Back up a volume snapshot to an Amazon S3 object store
- Back up a volume snapshot to an OpenStack Swift object store
- Back up a volume snapshot to a SolidFire cluster

Back up a volume snapshot to an Amazon S3 object store

You can back up SolidFire snapshots to external object stores that are compatible with Amazon S3.

1. Click**Data Protection** > **Snapshots**.
2. Click the **Actions** icon for the snapshot you want to back up.
3. In the resulting menu, click **Backup to**.
4. In the **Integrated Backup** dialog box under **Backup to**, select **S3**.
5. Select an option under **Data Format**:
   - **Native**: A compressed format readable only by SolidFire storage systems.
   - **Uncompressed**: An uncompressed format compatible with other systems.
6. Enter a hostname to use to access the object store in the **Hostname** field.
7. Enter an access key ID for the account in the **Access Key ID** field.
8. Enter the secret access key for the account in the **Secret Access Key** field.
9. Enter the S3 bucket in which to store the backup in the **S3 Bucket** field.
10. **Optional**: Enter a nametag to append to the prefix in the **Nametag** field.
11. Click **Start Read**.

Back up a volume snapshot to an OpenStack Swift object store

You can back up SolidFire snapshots to secondary object stores that are compatible with OpenStack Swift.

1. Click **Data Protection** > **Snapshots**.
2. Click the **Actions** icon for the snapshot you want to back up.
3. In the resulting menu, click **Backup to**.
4. In the **Integrated Backup** dialog box, under **Backup to**, select **Swift**.
5. Select an option under **Data Format**:
   - **Native**: A compressed format readable only by SolidFire storage systems.
   - **Uncompressed**: An uncompressed format compatible with other systems.
6. Enter a **URL** to use to access the object store.
7. Enter a **Username** for the account.
8. Enter the **Authentication Key** for the account.
9. Enter the **Container** in which to store the backup.
10. **Optional**: Enter a **Nametag**.
11. Click **Start Read**.

Back up a volume snapshot to a SolidFire cluster

You can back up volume snapshots residing on a SolidFire cluster to a remote SolidFire cluster.

Ensure that the source and target clusters are paired.

When backing up or restoring from one cluster to another, the system generates a key to be used as authentication between the clusters. This bulk volume write key allows the source cluster to authenticate with the destination cluster, providing a level of security when writing to the destination volume. As part of the backup or restore process, you need to generate a bulk volume write key from the destination volume before starting the operation.

1. On the destination cluster, click **Management** > **Volumes**.
2. Click the **Actions** icon for the destination volume.
3. In the resulting menu, click **Restore from**.
4. In the **Integrated Restore** dialog box under **Restore from**, select **SolidFire**.
5. Select a data format under **Data Format**:
   - **Native**: A compressed format readable only by SolidFire storage systems.
   - **Uncompressed**: An uncompressed format compatible with other systems.
6. Click **Generate Key**.
7. Copy the key from the **Bulk Volume Write Key** box to your clipboard.
8. On the source cluster, click **Data Protection** > **Snapshots**.
9. Click the Actions icon for the snapshot you want to use for the backup.
10. In the resulting menu, click **Backup to**.
11. In the**Integrated Backup** dialog box under **Backup to**, select **SolidFire**.
12. Select the same data format you selected earlier in the **Data Format** field.
13. Enter the management virtual IP address of the destination volume's cluster in the **Remote Cluster MVIP** field.
14. Enter the remote cluster user name in the **Remote Cluster Username** field.
15. Enter the remote cluster password in the **Remote Cluster Password** field.
16. In the **Bulk Volume Write Key** field, paste the key you generated on the destination cluster earlier.
17. Click **Start Read**.

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