Back up and restore volumes

Element Software

NetApp
November 12, 2025

This PDF was generated from https://docs.netapp.com/us-en/element-software/storage/task_data_protection_back_up_and_restore_volumes.html on November 12, 2025. Always check docs.netapp.com for the latest.

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Back up and restore volumes

Back up and restore volumes

You can back up and restore volumes to other SolidFire storage, as well as secondary object stores that are compatible with Amazon S3 or OpenStack Swift.

When you restore volumes from OpenStack Swift or Amazon S3, you need manifest information from the original backup process. If you are restoring a volume that was backed up on a SolidFire storage system, no manifest information is required.

Find more information

- Back up a volume to an Amazon S3 object store
- Back up a volume to an OpenStack Swift object store
- Back up a volume to a SolidFire storage cluster
- Restore a volume from backup on an Amazon S3 object store
- Restore a volume from backup on an OpenStack Swift object store
- Restore a volume from backup on a SolidFire storage cluster

Back up a volume to an Amazon S3 object store

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

1. Click **Management** > **Volumes**.
2. Click the Actions icon for the volume 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. Enter a nametag to append to the prefix in the **Nametag** field.
11. Click **Start Read**.

Back up a volume to an OpenStack Swift object store

You can back up volumes to external object stores that are compatible with OpenStack Swift.

1. Click **Management** > **Volumes**.
2. Click the Actions icon for the volume 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 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. Enter a URL to use to access the object store in the **URL** field.
7. Enter a user name for the account in the **Username** field.
8. Enter the authentication key for the account in the **Authentication Key** field.
9. Enter the container in which to store the backup in the **Container** field.
10. **Optional**: Enter a name tag to append to the prefix in the **Nametag** field.
11. Click **Start Read**.

Back up a volume to a SolidFire storage cluster

You can back up volumes residing on a cluster to a remote cluster for storage clusters running Element software.

Ensure that the source and target clusters are paired.

See Pair clusters for replication.

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, **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 an option 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, go to **Management** > **Volumes**.
9. Click the Actions icon for the volume to back up.
10. In the resulting menu, click **Backup to**.
11. In the **Integrated Backup** dialog box under **Backup to**, select **SolidFire**.

12. Select the same option 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**.

Restore a volume from backup on an Amazon S3 object store

You can restore a volume from a backup on an Amazon S3 object store.

1. Click **Reporting** > **Event Log**.
2. Locate the backup event that created the backup you need to restore.
3. In the **Details** column for the event, click **Show Details**.
4. Copy the manifest information to your clipboard.
5. Click **Management** > **Volumes**.
6. Click the Actions icon for the volume you want to restore.
7. In the resulting menu, click **Restore from**.
8. In the **Integrated Restore** dialog box under **Restore from**, select **S3**.
9. Select the option that matches the backup under **Data Format**:
   - **Native**: A compressed format readable only by SolidFire storage systems.
   - **Uncompressed**: An uncompressed format compatible with other systems.
10. Enter a hostname to use to access the object store in the **Hostname** field.
11. Enter an access key ID for the account in the **Access Key ID** field.
12. Enter the secret access key for the account in the **Secret Access Key** field.
13. Enter the S3 bucket in which to store the backup in the **S3 Bucket** field.
14. Paste the manifest information into the **Manifest** field.
15. Click **Start Write**.

Restore a volume from backup on an OpenStack Swift object store

You can restore a volume from a backup on an OpenStack Swift object store.

1. Click **Reporting** > **Event Log**.
2. Locate the backup event that created the backup you need to restore.
3. In the **Details** column for the event, click **Show Details**.
4. Copy the manifest information to your clipboard.

5. Click **Management** > **Volumes**.
6. Click the Actions icon for the volume you want to restore.
7. In the resulting menu, click **Restore from**.
8. In the **Integrated Restore** dialog box under **Restore from**, select **Swift**.
9. Select the option that matches the backup under **Data Format**:
    - **Native**: A compressed format readable only by SolidFire storage systems.
    - **Uncompressed**: An uncompressed format compatible with other systems.
10. Enter a URL to use to access the object store in the **URL** field.
11. Enter a user name for the account in the **Username** field.
12. Enter the authentication key for the account in the **Authentication Key** field.
13. Enter the name of the container in which the backup is stored in the **Container** field.
14. Paste the manifest information into the **Manifest** field.
15. Click **Start Write**.

Restore a volume from backup on a SolidFire storage cluster

You can restore a volume from a backup on a SolidFire storage cluster.

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 volume you want to restore.
3. In the resulting menu, click **Restore from**.
4. In the **Integrated Restore** dialog box, under **Restore from**, select **SolidFire**.
5. Select the option that matches the backup 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 **Bulk Volume Write Key** information to the clipboard.
8. On the source cluster, click **Management** > **Volumes**.
9. Click the Actions icon for the volume you want to use for the restore.
10. In the resulting menu, click **Backup to**.
11. In the **Integrated Backup** dialog box, select **SolidFire** under **Backup to**.
12. Select the option that matches the backup under **Data Format**.
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. Paste the key from your clipboard into the **Bulk Volume Write Key** field.
17. Click **Start Read**.

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