Resizing and Snapshot

Snapshots in Redshift
Snapshots are point-in-time backups of a Redshift cluster.
They can be used to restore a cluster to a previous state.
Snapshots can be created automatically or manually.
It is best practice to take a manual snapshot before resizing a cluster to avoid data loss.

Automatic Snapshots
Automatic snapshots are created by Redshift automatically at regular intervals.
They usually have a retention period of one day by default.
Automatic snapshots cannot be renamed, and they are managed by AWS.
You can view existing snapshots under the Snapshots section in the Redshift console.

Cluster Resizing
Cluster resizing is used to adjust compute capacity or storage to match workload requirements.
You can change either the node type or the number of nodes.
Resizing can be done in two ways:

Classic Resize: Takes longer; cluster is read-only during the process (can last hours or days).

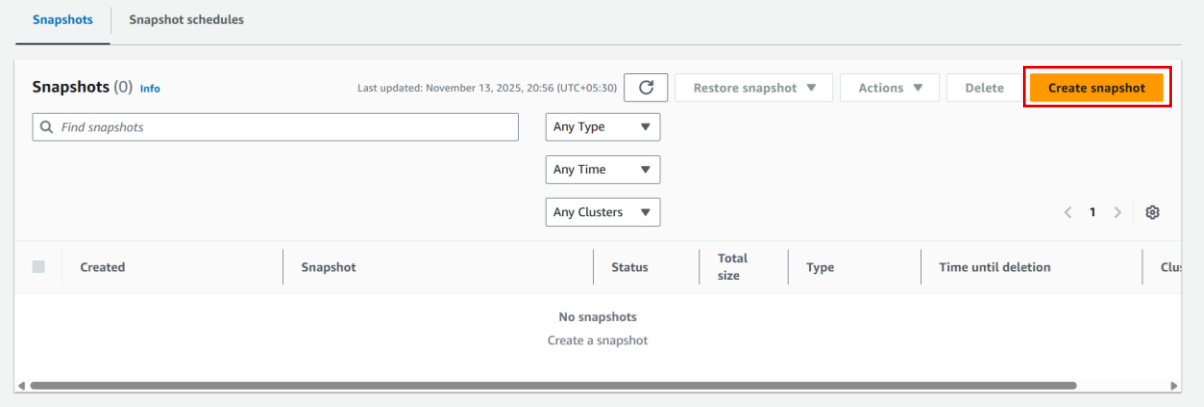
Elastic Resize: Recommended method; faster and causes minimal downtime.

To begin with the Lab

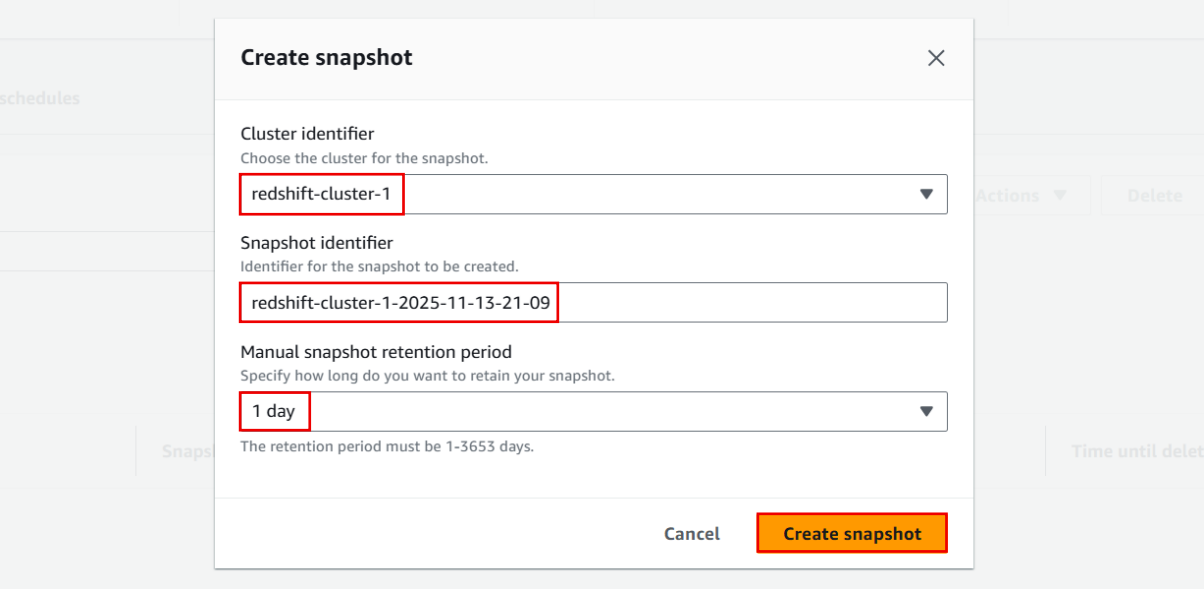
Summary of the Lab

In this lab, you learn how to manage **snapshots** and **resize clusters** in Amazon Redshift. Snapshots are point-in-time backups used to restore clusters, created automatically or manually. It is best practice to take a manual snapshot before resizing to prevent data loss. Snapshots can be restored to new clusters and deleted when no longer needed. Cluster resizing adjusts compute or storage capacity by changing node type or count. The **Elastic Resize** method is recommended for faster resizing with minimal downtime, while **Classic Resize** is slower and makes the cluster read-only during the process.

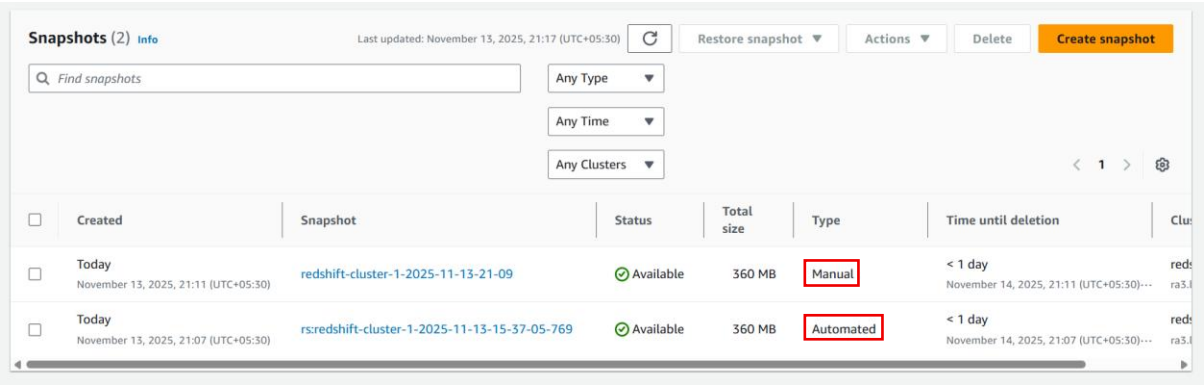
- You can create a manual snapshot at any time.
  Steps to create a snapshot:
- Go to the Redshift console and select the cluster.
- Choose “Create Snapshot.”



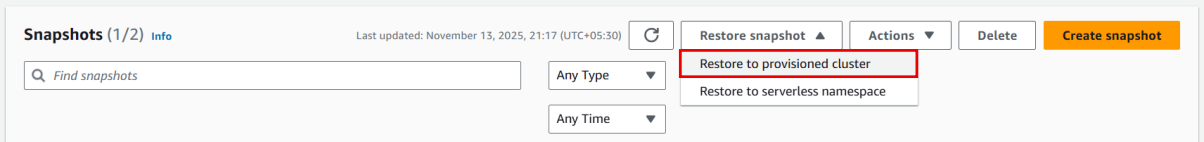
- Provide a snapshot identifier (default uses the current date).
- Choose a retention period (for example, one day).
- Create the snapshot.



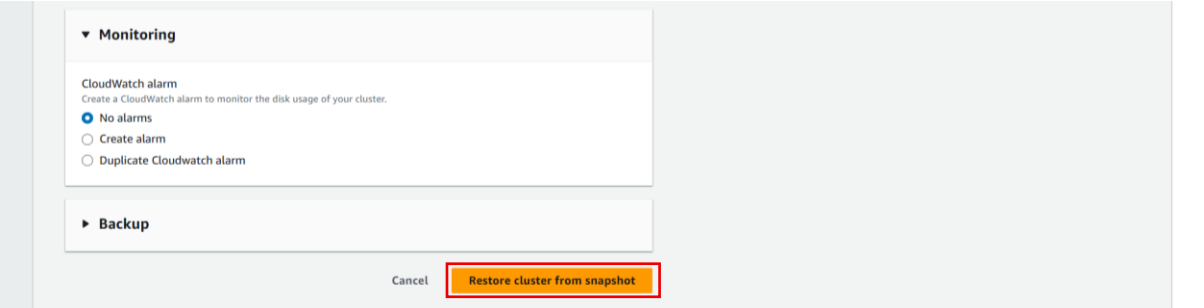
- Once created, the snapshot appears in the snapshot list and can be used for restoration.
- Manual and automatic snapshots can both be used to restore clusters.



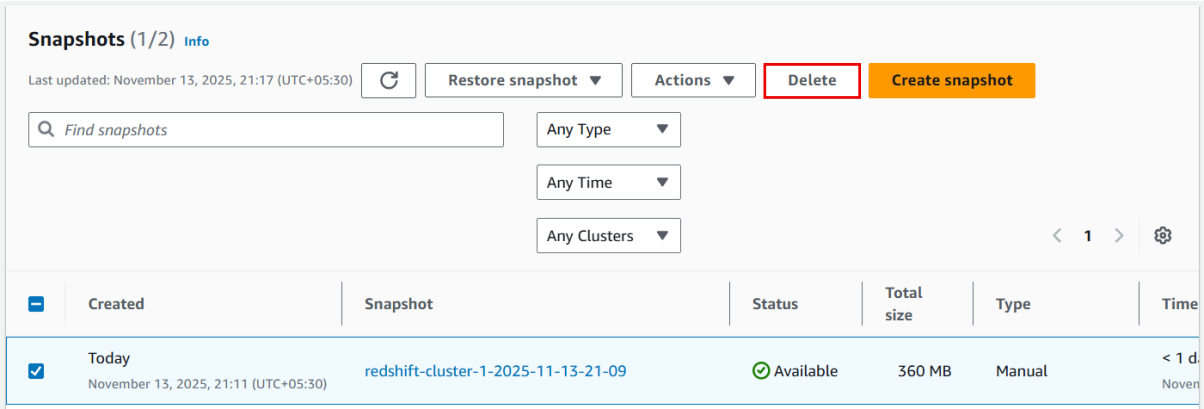
- Snapshots can be restored to either:
- A new provisioned Redshift cluster.



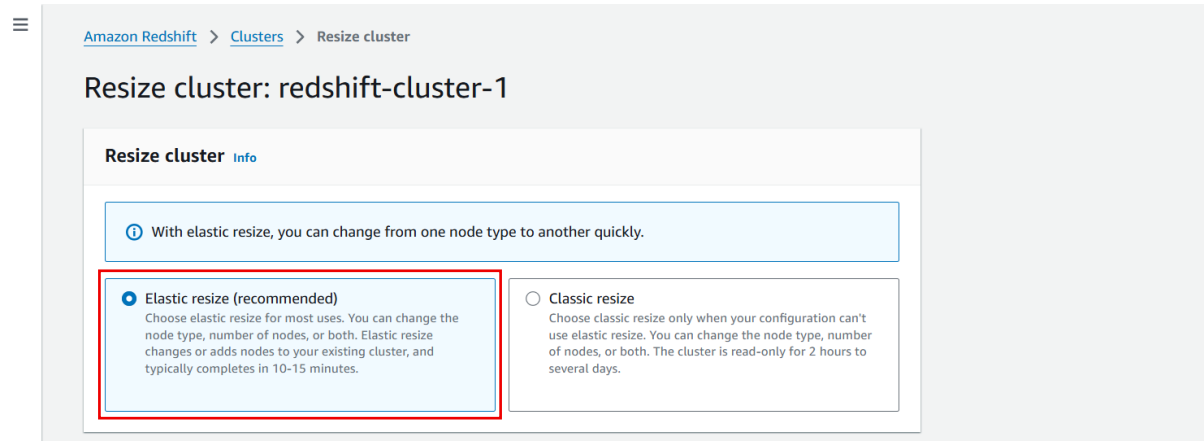
- When restoring, you can modify some cluster settings like node type or network configuration.



- Click on Restore cluster from snapshot to restore the cluster.
- After testing or restoring, if a snapshot is no longer needed, it can be deleted from the Snapshots section.
- Select the snapshot and choose “Delete.”



- Go to the Clusters section in the Redshift console.
- Select the cluster and choose “Resize.”
- Choose Elastic Resize.



- Adjust the node type or node count as needed.
- Otherwise leave all the settings on default.
- Optionally, schedule the resize for a later time.
- If elastic resize is not supported for the cluster type, Redshift falls back to classic resize.