**Task: Take EBS Snapshot and Restore a New Volume**

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This guide covers the process of creating an EBS snapshot, which serves as a point-in-time backup of a volume. It then explains how to restore that snapshot to create a new, identical EBS volume, a fundamental process for backup, disaster recovery, and data migration.

**1. Understanding the Process**

An **EBS Snapshot** is a backup of your EBS volume that is stored redundantly by AWS in Amazon S3. Snapshots are incremental, meaning only the data blocks that have changed since your last snapshot are saved, which is efficient and cost-effective. The process involves two main stages:

1. **Creating the Snapshot:** Taking a backup of an existing EBS volume.
2. **Restoring the Volume:** Using the snapshot as a blueprint to create a new EBS volume containing the exact data from when the snapshot was taken.

**2. Step-by-Step Guide**

**Part 1: Create an EBS Snapshot**

**Step 1: Select the Volume to Back Up** Navigate to the **EC2 Dashboard** in the AWS Console. In the left menu, under **Elastic Block Store**, click **Volumes**. Select the volume you wish to back up from the list.

**Step 2: Initiate Snapshot Creation** With the volume selected, click the **Actions** menu and choose **Create snapshot**.

**Step 3: Configure and Create the Snapshot** In the dialog box that appears:

* **Description:** Provide a clear and meaningful description. It is highly recommended to include the date and purpose (e.g., WebApp-Data-Volume-Backup-2025-09-24).
* **Tags:** Add tags, such as a "Name" tag, to help organize and manage your snapshots.
* Click **Create snapshot**.

**Step 4: Monitor Snapshot Status** In the left menu, under **Elastic Block Store**, click **Snapshots**. You can monitor the progress here. The status will initially be "pending" and will change to **"completed"** once the backup is finished.

**Part 2: Restore a New Volume from the Snapshot**

**Step 5: Select the Snapshot to Restore** Once the snapshot status is **"completed,"** select it from the snapshot list.

**Step 6: Initiate Volume Creation** Click the **Actions** menu and select **Create volume from snapshot**.

**Step 7: Configure the New Volume** You will be taken to the "Create volume" screen, with the settings pre-populated from the original volume. Here you have several options:

* **Volume Type and Size:** You can change the volume type (e.g., upgrade from gp2 to gp3) or **increase** its size. You cannot decrease the size.
* **Availability Zone:** This is a key feature for data migration. You can create the new volume in **any Availability Zone** within the same region, not just the original one.
* Review the settings and click **Create volume**.

**Step 8: Verify and Use the New Volume** You will be redirected to the **Volumes** screen, where you can see your new volume being created. Once its status becomes **"available,"** it is ready to be used. You can now attach this new volume to any EC2 instance within its designated Availability Zone, and then mount it just like any other new volume.

