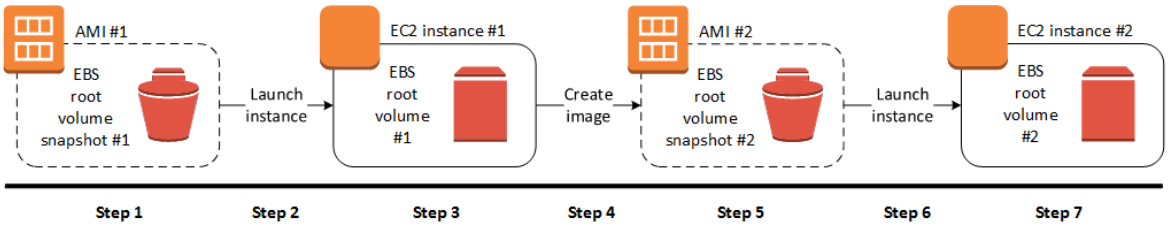
Creating a Linux AMI from an Instance

You can create an AMI using the AWS Management Console or the command line. The following diagram summarizes the process for creating an Amazon EBS-backed AMI from a running EC2 instance. Start with an existing AMI, launch an instance, customize it, create a new AMI from it, and finally launch an instance of your new AMI. The steps in the following diagram match the steps in the procedure below.



To create an AMI from an instance using the console

1. Select an appropriate EBS-backed AMI to serve as a starting point for your new AMI, and configure it as needed prior to launch. For more information, see Launching an Instance.
2. Choose **Launch** to launch an instance of the EBS-backed AMI that you've selected. Accept the default values as you step through the wizard. For more information, see Launching an Instance.
3. While the instance is running, connect to it.

   You can perform any of the following actions on your instance to customize it for your needs:

   - Install software and applications
   - Copy data
   - Reduce start time by deleting temporary files, defragmenting your hard drive, and zeroing out free space
   - Attach additional Amazon EBS volumes

   (Optional) Create snapshots of all the volumes attached to your instance. For more information about creating snapshots, see Creating an Amazon EBS Snapshot.

In the navigation pane, choose **Instances** and select your instance. Choose **Actions**, **Image**, and **Create Image**.

> **Tip**
>
> If this option is disabled, your instance isn't an Amazon EBS-backed instance.

4. In the **Create Image** dialog box, specify values for the following fields, and then choose **Create Image**.

   Name

   A unique name for the image.

   Description

   (Optional) A description of the image, up to 255 characters.

   By default, Amazon EC2 shuts down the instance, takes snapshots of any attached volumes, creates and registers the AMI, and then reboots the instance. Choose **No reboot** if you don't want your instance to be shut down.

   > **Warning**
   >
   > If you choose **No reboot**, we can't guarantee the file system integrity of the created image.

   You can modify the root volume, Amazon EBS volumes, and instance store volumes as follows:

   - To change the size of the root volume, locate the **Root** volume in the **Type** column, and fill in the **Size**field.
   - To suppress an Amazon EBS volume specified by the block device mapping of the AMI used to launch the instance, locate the EBS volume in the list and choose **Delete**.
   - To add an Amazon EBS volume, choose **Add New Volume**, **Type**, and **EBS**, and fill in the fields. When you then launch an instance from your new AMI, these additional volumes are automatically attached to the

instance. Empty volumes must be formatted and mounted. Volumes based on a snapshot must be mounted.

- To suppress an instance store volume specified by the block device mapping of the AMI used to launch the instance, locate the volume in the list and choose **Delete**.
- To add an instance store volume, choose **Add New Volume**, **Type**, and **Instance Store**, and select a device name from the **Device** list. When you launch an instance from your new AMI, these additional volumes are automatically initialized and mounted. These volumes don't contain data from the instance store volumes of the running instance from which you based your AMI.

5. While your AMI is being created, you can choose **AMIs** in the navigation pane to view its status. Initially this will be `pending`. After a few minutes the status should change to `available`.

   (Optional) Choose **Snapshots** in the navigation pane to view the snapshot that was created for the new AMI. When you launch an instance from this AMI, we use this snapshot to create its root device volume.

6. Launch an instance from your new AMI.
7. The new running instance contains all of the customizations you applied in previous steps.

Creating a Linux AMI from a Snapshot

If you have a snapshot of the root device volume of an instance, you can create an AMI from this snapshot using the AWS Management Console or the command line.

Important

Some Linux distributions, such as Red Hat Enterprise Linux (RHEL) and SUSE Linux Enterprise Server (SLES), use the Amazon EC2 `billingProduct` code associated with an AMI to verify subscription status for package updates. Creating an AMI from an EBS snapshot does not maintain this billing code, and subsequent instances launched from such an AMI will not be able to connect to package update infrastructure.

Similarly, although you can create a Windows AMI from a snapshot, you can't successfully launch an instance from the AMI.

In general, AWS advises against manually creating AMIs from snapshots.

To create an AMI from a snapshot using the console

1. Open the Amazon EC2 console at https://console.aws.amazon.com/ec2/.
2. In the navigation pane, under **Elastic Block Store**, choose **Snapshots**.
3. Choose the snapshot and choose **Actions**, **Create Image**.
4. In the **Create Image from EBS Snapshot** dialog box, complete the fields to create your AMI, then choose**Create**. If you're re-creating a parent instance, then choose the same options as the parent instance.
    - **Architecture**: Choose **i386** for 32-bit or **x86_64** for 64-bit.
    - **Root device name**: Enter the appropriate name for the root volume. **Virtualization type**: Choose whether instances launched from this AMI use paravirtual (PV) or hardware virtual machine (HVM) virtualization.
    - (PV virtualization type only) **Kernel ID** and **RAM disk ID**: Choose the AKI and ARI from the lists. If you choose the default AKI or don't choose an AKI, you'll be required to specify an AKI every time you launch an instance using this AMI. In addition, your instance may fail the health checks if the default AKI is incompatible with the instance.