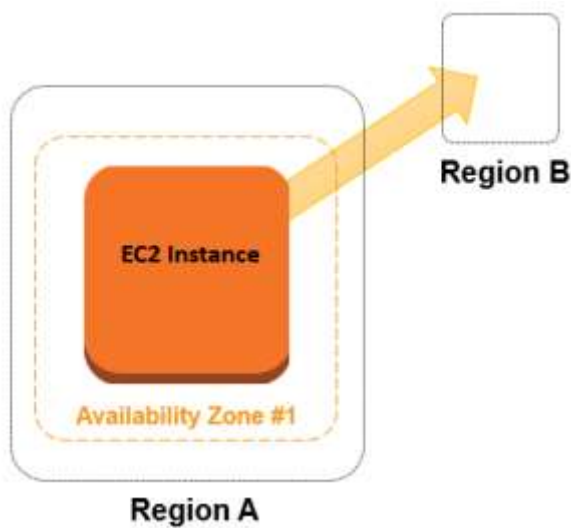


How to Migrate (Copy) an EC2 Instance between Amazon AWS Regions

AWS has the functionality to copy snapshots across regions. Replicating snapshots across availability zones (AZs) and regions will enable you to deploy your online services across AZs and regions. Doing so will protect your cloud from damage and ensure availability during an outage.

This demonstrates how to copy a snapshot of a Linux based instance to another region as well as attach a volume to a new instance to complete the instance data migration across regions.



1. Go to the [AWS Console](#) and select the EC2 Service. Go to the EC2 running instance dashboard and select the running Linux instance. It displays the instance metadata. Note the volume details of the instance. The instance is currently running in the US-West-2 (Oregon) region.

dit

Oregon

Help

Launch Instance

Actions

Viewing: All Instances

All Instance Types

Search

1 to 2 of 2 Instances

	Name	Instance	AMI ID	Root Device	Type	State	Status Checks	Alarm Status	Monitoring	Security Gro
<input type="checkbox"/>		i-e29f5bd0	ami-167af226	ebs	t1.micro	stopped		none	basic	
<input checked="" type="checkbox"/>	Test Linux	i-b8b77b8a	ami-2a31bf1a	ebs	t1.micro	running	initializing	none	basic	default

RAM Disk ID:

Key Pair Name:

Monitoring:

Elastic IP:

Root Device Type:

IAM Role:

EBS Optimized:

Block Devices:

Network Interfaces:

Public DNS:

Private DNS:

Platform:

sda1

EBS ID: vol-dac01ee3

Root device type: ebs

Attachment time: 2012-12-22T17:58:12.000Z

Block device status: attached

Delete on termination: Yes

Snapshot ID: snap-921bb2b4

aki-fc37bacc

h Index: 0

e: sda1

default

normal

2. Login to the Linux instance, as explained in [Connecting to AWS linux instance from a Windows machine](#). List the data of the instance.

```
[ec2-user@ip-10-252-195-157 ~]$ pwd
/home/ec2-user
[ec2-user@ip-10-252-195-157 ~]$ ls
aws-scripts-mon  snapcopyDir  test2.txt  test.txt
[ec2-user@ip-10-252-195-157 ~]$ sudo cat test.txt
hi
[ec2-user@ip-10-252-195-157 ~]$
```

3. Go to Snapshot in the EC2 console and select “Create Snapshot”.

Provide the snapshot name, description and select the volume of the instance identified in step #1. Click on the “Create” button.

Create Snapshot

Cancel

Volume: vol-dac01ee3

Name: Copy-Snapshot-Region

Description: Copy Snapshot from One

Cancel

Create

4. The snapshot has been created and is available in the Snapshot console.

	Name	Snapshot ID	Capacity	Description	Status	Started	Progress
<input type="checkbox"/>	Copy-Snapshot-Region	snap-8c5746aa	8 GiB	Copy Snapshot from One Region	 completed	2012-12-31 17:28	available (100%)
<input type="checkbox"/>	EBS-Copy	snap-ca5243ec	8 GiB	Test Snapshot Copy	 completed	2012-12-31 17:23	available (100%)

5. Select the snapshot that the user wants to move to the other region. Right click on the snapshot and select the “copy snapshot” option.

Buttons: Create Snapshot, Delete, Permissions, Create Volume, Create Image, **Copy**

Viewing: Owned By Me [Search]

	Name	Snapshot ID	Capacity	Description
<input checked="" type="checkbox"/>	Copy-Snapshot-Region	snap-8c5746aa	8 GiB	Copy Snapshot from One Region
<input type="checkbox"/>	EBS-Copy	snap-d		shot Copy

- Delete Snapshot
- Snapshot Permissions
- Create Volume from Snapshot
- Create Image from Snapshot
- Add/Edit Tags
- Copy Snapshot**

6. Provide the target region and the description for the snapshot. Click on the button “Yes, Copy”.

Copy Snapshot [Cancel X]

Snapshot: snap-8c5746aa -- Copy Snapshot from One Region

Destination region: EU (Ireland)

Description: [[Copied snap-8c5746aa from us-west-2] Copy Snapshot from One Region]

[Cancel] **Yes, Copy**

7. The snapshot copy process will now commence. AWS will display the acknowledgement for the same and provide a link to go to the snapshot console of the target region. Click on the link or manually change the region to go to the target region snapshot console.

Copy Snapshot [Cancel X]

Snapshot copy operation has been initiated. Visit the [Snapshots](#) page in EU (Ireland) to check on the progress of the copy operation.

Close

8. In the target region (EU-Ireland), the copy process is in progress. AWS will display the progress of the process.

edit

Ireland

Help

Create SnapshotDeletePermissionsCreate VolumeCreate ImageCopy

Viewing: Owned By Me

1 to 2 of 2 Items

	Name	Snapshot ID	Capacity	Description	Status	Started	Progress
<input type="checkbox"/>	empty	snap-08953961	10 GiB		completed	20	available (100%)
<input checked="" type="checkbox"/>	empty	snap-ce8cb8e7	8 GiB	[Copied snap-8c5746aa from us-west-2] Copy	pending	2012-12-31 17:36	5%

9. After the process is complete, the snapshot will be available in the target region.

	Name	Snapshot ID	Capacity	Description	Status	Started	Progress
<input type="checkbox"/>	empty	snap-08953961	10 GiB		completed	20	available (100%)
<input type="checkbox"/>	empty	snap-ce8cb8e7	8 GiB	[Copied snap-8c5746aa from us-west-2] Copy Snapshot from One Region	completed	2012-12-31 17:36	available (100%)

10. Create the volume from the snapshot.

Create SnapshotDeletePermissionsCreate VolumeCreate ImageCopy

Viewing: Owned By Me

Search

	Name	Snapshot ID	Capacity	Description
<input type="checkbox"/>	empty	1	10 GiB	
<input checked="" type="checkbox"/>	empty	snap-ce8cb8e7	8 GiB	[Copied snap-8c5746aa from us-west-2] Copy Snapshot from One Region

Delete Snapshot

Snapshot Permissions

Create Volume from Snapshot

Create Image from Snapshot

Add/Edit Tags

Copy Snapshot

11. Select the zone where the volume will be created and provide the remaining details. Click on the button “Yes, Create” to create the volume.

Create Volume

Cancel

Size:8GiB

Availability Zone:eu-west-1b

Snapshot:snap-ce8cb8e7 -- [Copied snap-8c5746aa fr...om One R...

Volume Type:StandardIOPS:100

Cancel

Yes, Create

12. Launch a Linux instance (as explained in [How to launch an Amazon AWS EC2 instance](#)) in the same zone where the volume from the snapshot has been created.

☒ EU Instance

i-757c753e

ami-c37474b7

ebs

t1.micro

running

2/2 checks

none

basic

default

1 EC2 Instance selected.

EC2 Instance: EU Instance (i-757c753e)

ec2-46-137-139-23.eu-west-1.compute.amazonaws.com

Description

Status Checks

Monitoring

Tags

AMI:
amzn-ami-pv-2012.09.0.x86_64-ebs (ami-c37474b7)

Zone:
eu-west-1b

Alarm Status:
none

Security Groups:
default. view rules

13. Stop the instance, as explained in [How to reboot an EC2 instance](#). Detach the root volume of the new instance.

	Name	Volume ID	Capacity	Volume Type	Snapshot	Created	Zone	State
<input type="checkbox"/>	empty	vol-7cfbd856	8 GiB	standard	snap-ce8cb8e7	2013-01-01T04:39:36	eu-west-1b	available
<input checked="" type="checkbox"/>	empty	vol-1af4d730	8 GiB	standard	snap-981540ce	2013-01-01T04:34:31	eu-west-1b	in-use

Detach Volume

Force Detach

Create Snapshot

Change Auto-Enable IO Setting

14. Once the root volume has been detached, attach the volume created in step #11 to the instance.

	Name	Volume ID	Capacity	Volume Type	Snapshot	Created	Zone	State
<input type="checkbox"/>	empty	vol-1af4d730	8 GiB	standard	snap-981540ce	2013-01-01T04:34:31	eu-west-1b	available
<input checked="" type="checkbox"/>	empty	vol-7cfbd856	8 GiB	standard	snap-ce8cb8e7	2013-01-01T04:39:36	eu-west-1b	available

Delete Volume

Attach Volume

Create Snapshot

Change Auto-Enable IO Setting

15. Attach the volume as the root volume by mounting on /dev/sda1.

Attach Volume

Cancel

Volume: vol-7cfbd856 in eu-west-1b

Instances: i-757c753e - EU Instance (stopped) in eu-west-1b

Device: /dev/sda1

Linux Devices: /dev/sdf through /dev/sdp

Note: Newer linux kernels may rename your devices to /dev/xvdf through /dev/xvdp internally, even when the device name entered here (and shown in the details) is /dev/sdf through /dev/sdp.

Cancel

Yes, Attach

16. Start the Linux instance and login to the instance. The instance will display the content similar to the US-West-2 Linux instance, as shown in step #2.

```
login as: ec2-user
Authenticating with public key "imported-openssh-key"
Last login: Mon Dec 31 11:52:40 2012 from 14.97.140.73

  ____|  __|_  )
  _| (  _| /   Amazon Linux AMI
  __| \__|__|

https://aws.amazon.com/amazon-linux-ami/2012.09-release-notes/
There are 3 security update(s) out of 43 total update(s) available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-226-87-234 ~]$ pwd
/home/ec2-user
[ec2-user@ip-10-226-87-234 ~]$ ls
aws-scripts-mon  snapcopyDir  test2.txt  test.txt
[ec2-user@ip-10-226-87-234 ~]$ sudo cat test.txt
hi
[ec2-user@ip-10-226-87-234 ~]$
```

17. The above process completes the migration of the user's instance from one region to another.