

LAB | Create custom AMI and copy to a different region

Problem : I couldnt use the Connect feature in the console, so had to create the keys and access the machines using SSH from a linux terminal.

Launch an EC2 Instance and Install Software

The screenshot shows the AWS EC2 Instances page. At the top, there is a search bar with filters for 'Name = master-ec2-vijaya'. Below the search bar, a table lists one instance: 'master-ec2-vijaya' (Instance ID: i-0ef14e3b55333a45c). The instance is shown as 'Running' with a status check of '2/2 checks passed'. The instance type is 't2.micro' and it is located in the 'us-east-1c' availability zone. Below the table, the details for the instance 'i-0ef14e3b55333a45c (master-ec2-vijaya)' are displayed. The 'Details' tab is selected, showing the following information:

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0ef14e3b55333a45c	100.53.20.215 open address ↗	172.31.17.33
IPv6 address	Instance state	Public DNS
-	Running	ec2-100-53-20-215.compute-1.amazonaws.com open address ↗
Hostname type	Private IP DNS name (IPv4 only)	

```
vijayagagna@DESKTOP-FP4OP26:~$ ssh -i master-ec2-vijaya-key.pem ec2-user@100.53.20.215
,
#_
~\_ ####_      Amazon Linux 2023
~~ \####\ \
~~ \###|      https://aws.amazon.com/linux/amazon-linux-2023
~~ \#/ __
~~ V~' _->
~~ / /
~~ . / /
~~ / / /
~~ /m/
[ec2-user@ip-172-31-17-33 ~]$ sudo yum update -y
Amazon Linux 2023 Kernel Livepatch repository
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-17-33 ~]$ sudo yum install httpd -y
Last metadata expiration check: 0:00:10 ago on Tue Jan 20 13:52:51 2026.
```

Install the Apache HTTP Server (httpd).

```
[ec2-user@ip-172-31-17-33 ~]$ sudo systemctl start httpd
[ec2-user@ip-172-31-17-33 ~]$ sudo systemctl enable httpd
[ec2-user@ip-172-31-17-33 ~]$ systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
   Active: active (running) since Tue 2026-01-20 13:53:08 UTC; 15s ago
     Docs: man:httpd.service(8)
 Main PID: 10322 (httpd)
    Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/sec: 0 B/sec"
       Tasks: 177 (limit: 1120)
      Memory: 12.9M
        CPU: 60ms
      CGroup: /system.slice/httpd.service
              ├─10322 /usr/sbin/httpd -DFOREGROUND
              ├─10432 /usr/sbin/httpd -DFOREGROUND
              ├─10437 /usr/sbin/httpd -DFOREGROUND
              ├─10438 /usr/sbin/httpd -DFOREGROUND
              └─10439 /usr/sbin/httpd -DFOREGROUND

Jan 20 13:53:08 ip-172-31-17-33.ec2.internal systemd[1]: Starting httpd.service - The Apache HTTP Server...
Jan 20 13:53:08 ip-172-31-17-33.ec2.internal systemd[1]: Started httpd.service - The Apache HTTP Server.
Jan 20 13:53:08 ip-172-31-17-33.ec2.internal httpd[10322]: Server configured, listening on: port 80
```

2. Create a Custom AMI

The screenshot shows the AWS EC2 Image Builder interface with the following details:

Image summary for ami-03025b8619bd7d96b		Actions	
AMI ID	ami-03025b8619bd7d96b	Platform details	EBS
Image type	machine	Root device type	Linux/UNIX
AMI name	master-ami-vijaya	Architecture	x86_64
Owner account ID	686699774218	Usage operation	RunInstances
Root device name	/dev/xvda	Source	686699774218/master-ami-vijaya
Status	Available	Virtualization type	hvm
Boot mode	uefi-preferred	Creation date	2026-01-20T13:54:52.000Z
Description	Custom AMI with Apache HTTP Server installed.	Kernel ID	-
Product codes	-	Deprecation time	-
Last launched time	-	Deregistration protection	Disabled
Block devices	/dev/xvda=snap-00d45c14e2498f182:8:t rue:gp3	Allowed image	-
Source AMI ID	ami-07ff62358b87c7116	Source AMI Region	us-east-1

Below the summary, there are tabs for **Permissions**, **Storage**, **My AMI usage**, **AMI Ancestry - new**, and **Tags**.

3. Copy the AMI to Another Region

The screenshot shows the AWS EC2 Image Builder interface. At the top, there's a navigation bar with account information (Account ID: 6866-9977-4218, United States (Oregon), vijaya). Below the navigation bar is a search bar with the placeholder "[Alt+S]". The main content area is titled "Image summary for ami-03dffcef80d65ba85". It contains several sections with key details:

AMI ID	Image type	Platform details	Root device type
ami-03dffcef80d65ba85	machine	Linux/UNIX	EBS
AMI name	Owner account ID	Architecture	Usage operation
master-ami-vijaya	686699774218	x86_64	RunInstances
Root device name	Status	Source	Virtualization type
/dev/xvda	Available	686699774218/master-ami-vijaya	hvm
Boot mode	State reason	Creation date	Kernel ID
uefi-preferred	-	2026-01-20T13:59:32.000Z	-
Description	Product codes	RAM disk ID	Deprecation time
[Copied ami-03025b8619bd7d96b from us-east-1] master-ami-vijaya	-	-	-
Last launched time	Block devices	Deregistration protection	Allowed image
-	/dev/xvda=snap-0436083e3f46326f5:8:true:gp3	Disabled	-
Source AMI ID	Source AMI Region		
ami-03025b8619bd7d96b	us-east-1		

Deploy an EC2 Instance from the Copied AMI

The screenshot shows the AWS EC2 Instances interface. At the top, there's a navigation bar with account information (Account ID: 6866-9977-4218, United States (Oregon), vijaya). Below the navigation bar is a search bar with the placeholder "[Alt+S]". The main content area is titled "Instance summary for i-0acc84a855af73c6c (sec-ec2-vijaya)". It contains several sections with key details:

Instance ID	Public IPv4 address	Private IPv4 addresses	
i-0acc84a855af73c6c	34.220.205.222 open address	172.31.29.239	
IPv6 address	Instance state	Public DNS	
-	Running	ec2-34-220-205-222.us-west-2.compute.amazonaws.com open address	
Hostname type	Private IP DNS name (IPv4 only)	Elastic IP addresses	
IP name: ip-172-31-29-239.us-west-2.compute.internal	ip-172-31-29-239.us-west-2.compute.internal	-	
Answer private resource DNS name	Instance type	AWS Compute Optimizer finding	
IPv4 (A)	t3.micro	Opt-in to AWS Compute Optimizer for recommendation.	
Auto-assigned IP address	VPC ID	Learn more	
34.220.205.222 [Public IP]	vpc-0cc7eaafb7614c52c1		
IAM Role	Subnet ID	Auto Scaling Group name	
-	subnet-0165aa676bc11ba75	-	
IMDSv2	Instance ARN	Managed	

5. Verify Installation on the New Instance

```
The authenticity of host '34.220.205.222 (34.220.205.222)' can't be established.
ED25519 key fingerprint is SHA256:3fgEmrb2T1t0GsKsRY8mtZl8Ut33nAdCwrWwXKycupk.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '34.220.205.222' (ED25519) to the list of known hosts.

,      #
~\_ #####      Amazon Linux 2023
~~ \#####\
~~ \###|
~~  \#/  ____ https://aws.amazon.com/linux/amazon-linux-2023
~~   V~' '-'>
~~   /
~~ ._. / /
~~ /_/
~/m/'
```

```
Last login: Tue Jan 20 13:52:19 2026 from 46.59.137.222
```

```
ec2-user@ip-172-31-29-239 ~]$ systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
   Active: active (running) since Tue 2026-01-20 14:17:43 UTC; 4min 56s ago
     Docs: man:httpd.service(8)
 Main PID: 1407 (httpd)
   Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/sec: 0 B/sec"
    Tasks: 177 (limit: 1067)
   Memory: 18.5M
      CPU: 392ms
    CGroup: /system.slice/httpd.service
            ├─1407 /usr/sbin/httpd -DFOREGROUND
            ├─1479 /usr/sbin/httpd -DFOREGROUND
            ├─1480 /usr/sbin/httpd -DFOREGROUND
            ├─1490 /usr/sbin/httpd -DFOREGROUND
            └─1509 /usr/sbin/httpd -DFOREGROUND

Jan 20 14:17:41 ip-172-31-17-33.ec2.internal systemd[1]: Starting httpd.service - The Apache HTTP Server...
Jan 20 14:17:43 ip-172-31-17-33.ec2.internal systemd[1]: Started httpd.service - The Apache HTTP Server.
Jan 20 14:17:43 ip-172-31-17-33.ec2.internal httpd[1407]: Server configured, listening on: port 80
└─2 user@ip-172-31-29-239 ~$
```