

ELASTIC CONTAINER REGISTRY:

ECR DEFINATION:

Amazon Elastic Container Registry (ECR) is a fully managed container registry that makes it easy to store, manage, share, and deploy your container images and artifacts anywhere.

ECR PRICING:

You pay only for the amount of data you store in your public or private repositories and data transferred to the Internet.

BENEFITS:

Fully managed

Amazon ECR eliminates the need to operate and scale the infrastructure required to power your container registry.

Secure

Amazon ECR transfers your container images over HTTPS and automatically encrypts your images at rest.

Simplified workflow

Amazon Elastic Container Registry integrates with Amazon EKS, Amazon ECS, Amazon Lambda, and the Docker CLI, allowing you to simplify your development and production workflows.

Highly available

Amazon ECR has a highly scalable, redundant, and durable architecture, so your container images are highly available and accessible.

The screenshot displays the AWS Elastic Container Registry (ECR) console. The top navigation bar includes the AWS logo, a search bar, and a list of services (VPC, EC2, RDS). The main content area is titled 'Containers' and features a large heading 'Amazon Elastic Container Registry' with the subtext 'Share and deploy container software, publicly or privately'. A 'Create a repository' button is visible. Below this, a 'Pricing (US)' section states: 'You pay only for the amount of data you store in your public or private repositories and data'. The 'How it works' section is partially visible. The bottom section shows the 'Create repository' page with 'General settings' and 'Visibility settings' (Private selected). The repository name field is populated with '709398145454.dkr.ecr.us-east-1.amazonaws.com/container-images-repository'.

Containers

Amazon Elastic Container Registry

Share and deploy container software, publicly or privately

Amazon Elastic Container Registry (ECR) is a fully managed container registry that makes it easy to store, manage, share, and deploy your container images and artifacts anywhere.

Create a repository

[Get Started](#)

Pricing (US)

You pay only for the amount of data you store in your public or private repositories and data

How it works

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Amazon ECR > Private registry > Repositories > Create repository

Create repository

General settings

Visibility settings | Info

Choose the visibility setting for the repository.

☒ **Private**
Access is managed by IAM and repository policy permissions.

☐ **Public**
Publicly visible and accessible for image pulls.

Repository name
Provide a concise name. A developer should be able to identify the repository contents by the name.

709398145454.dkr.ecr.us-east-1.amazonaws.com/

27 out of 256 characters maximum (2 minimum). The name must start with a letter and can only contain lowercase letters, numbers, hyphens, underscores, periods and forward slashes.

Tag immutability | Info

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ScanOnPush configuration at the repository level is deprecated in favor of registry level scan filters.

Scan on push
Enable scan on push to have each image automatically scanned after being pushed to a repository. If disabled, each image scan must be manually started to get scan results.
☐ Disabled

Encryption settings
KMS encryption
You can use AWS Key Management Service (KMS) to encrypt images stored in this repository, instead of using the default encryption settings.
☐ Disabled

The KMS encryption settings cannot be changed or disabled after the repository is created.

Cancel Create repository

Amazon Elastic Container Registry

Private registry
Repositories
Settings

Public registry
Repositories
Settings

ECR public gallery
Amazon ECS
Amazon EKS
Getting started

Amazon ECR > Private registry > Repositories

Private repositories

Repositories (1) View push commands Delete Actions Create repository

Filter status

Repository name	URI	Created at	Tag immutability	Scan frequency	Encryption type
container-images-repository	709398145454.dkr.ecr.us-east-1.amazonaws.com/container-images-repository	April 04, 2024, 14:31:25 (UTC+05.5)	Disabled	Manual	AES-256

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Make sure that you have the latest version of the AWS CLI and Docker installed. For more information, see [Getting Started with Amazon ECR](#).

Use the following steps to authenticate and push an image to your repository. For additional registry authentication methods, including the Amazon ECR credential helper, see [Registry Authentication](#).

1. Retrieve an authentication token and authenticate your Docker client.

Use the AWS CLI:

```
aws ecr get-login-password --region us-east-1 | docker login --username AWS --password-stdin 709398145454.dkr.ecr.us-east-1.amazonaws.com
```

Note: If you receive an error using the AWS CLI, make sure that you have the latest version of the AWS CLI and Docker installed.

2. Build your Docker image using the following command. For information on building a Docker file from scratch see the instructions [here](#). You can skip this step if your image is already built:

```
docker build -t container-images-repository .
```

3. After the build completes, tag your image so you can push the image to this repository:

```
docker tag container-images-repository:latest 709398145454.dkr.ecr.us-east-1.amazonaws.com/container-images-repository:latest
```

4. Run the following command to push this image to your newly created AWS repository:

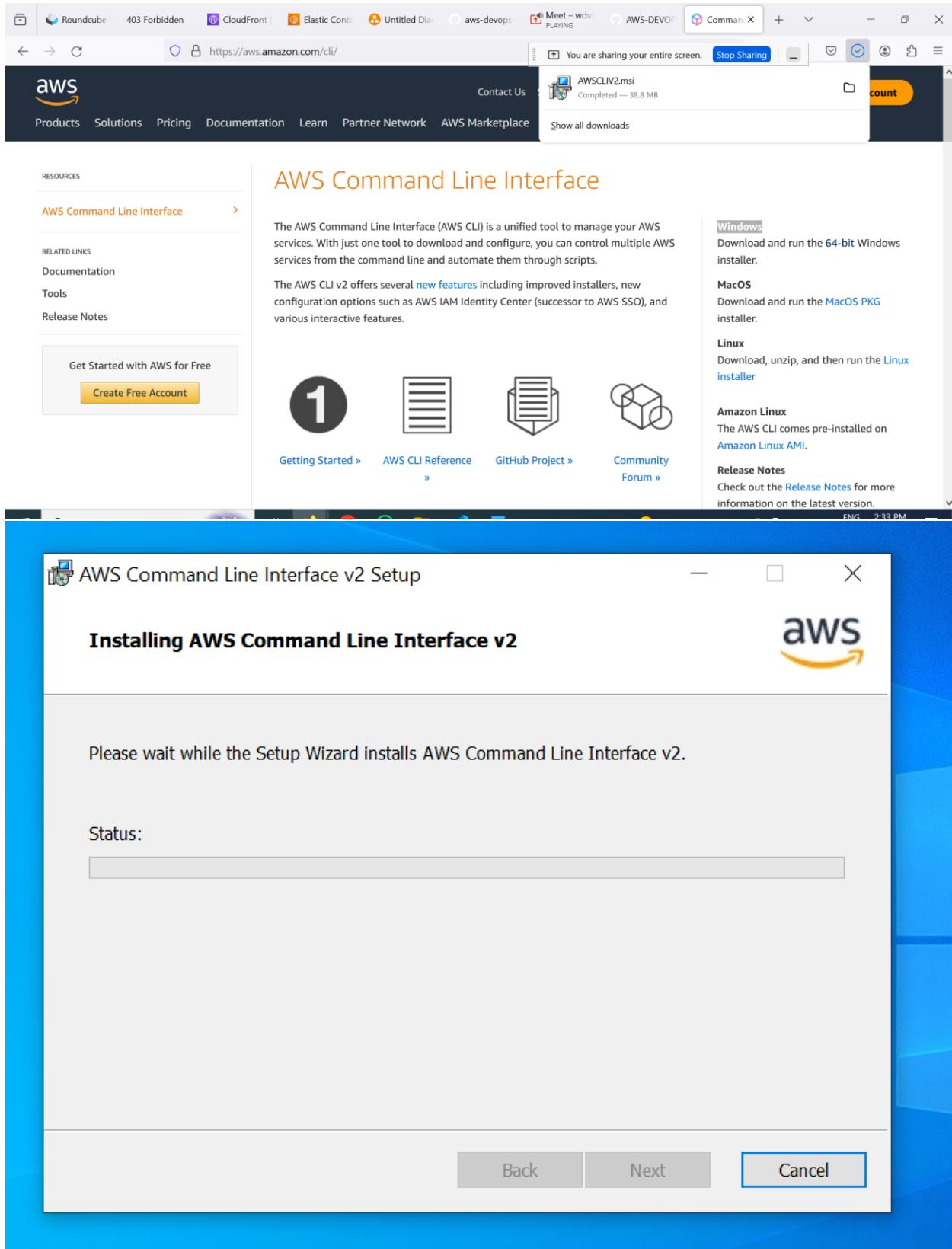
```
docker push 709398145454.dkr.ecr.us-east-1.amazonaws.com/container-images-repository:latest
```

Click on view push

Close

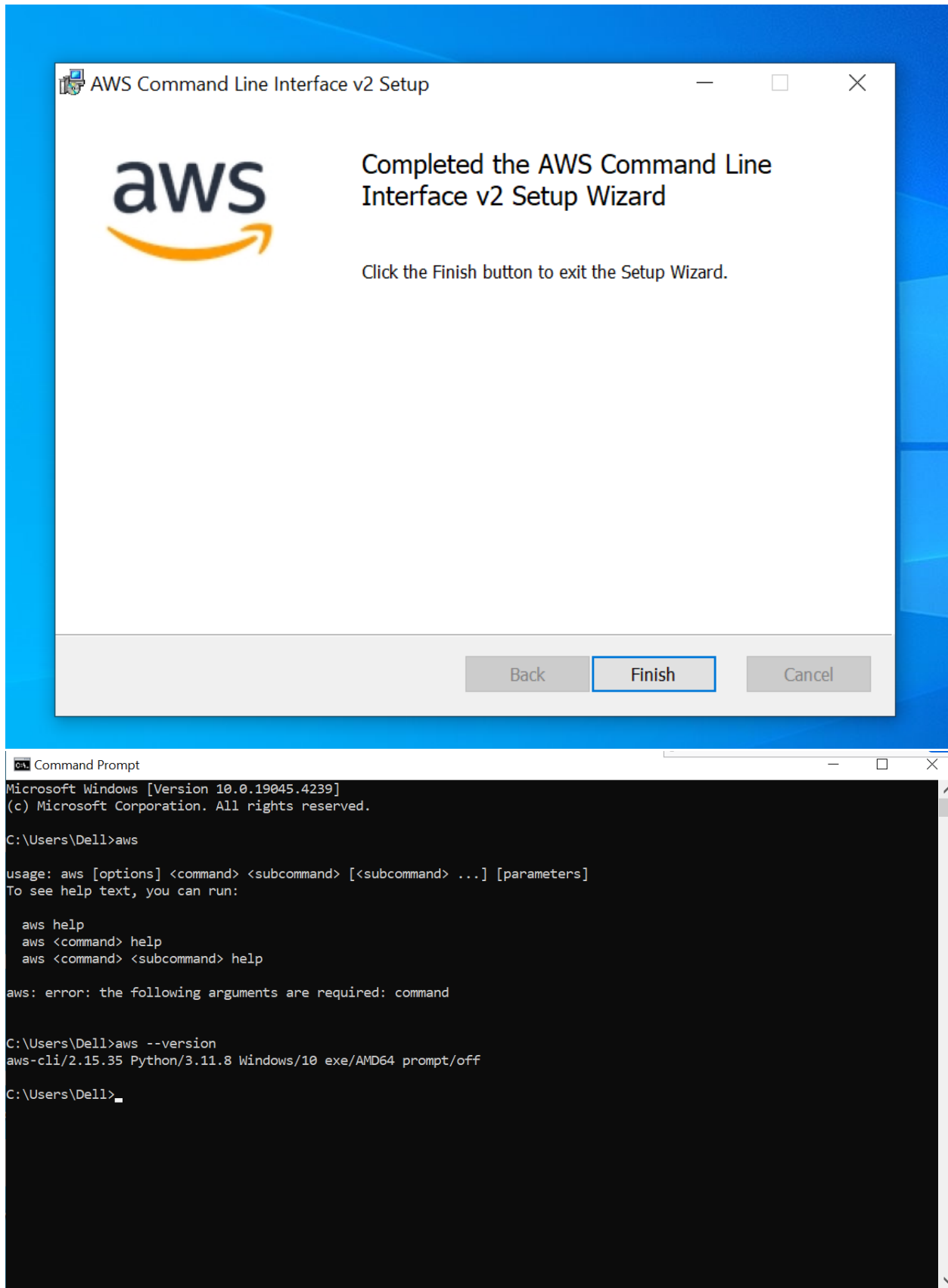
The screenshot shows the AWS Management Console interface for the Amazon Elastic Container Registry (ECR) Private repositories page. The left sidebar contains navigation links for VPC, EC2, RDS, and Amazon Elastic Container Registry. The main content area shows the 'Private repositories' section with a table listing the repositories. The table has columns for Repository name, URI, Created at, Tag immutability, Scan frequency, and Encryption type. One repository is listed: 'container-images-repository' with URI '709398145454.dkr.ecr.us-east-1.amazonaws.com/container-images-repository', created on April 04, 2024, with tag immutability disabled, manual scan frequency, and AES-256 encryption.

Repository name	URI	Created at	Tag immutability	Scan frequency	Encryption type
container-images-repository	709398145454.dkr.ecr.us-east-1.amazonaws.com/container-images-repository	April 04, 2024, 14:31:25 (UTC+05.5)	Disabled	Manual	AES-256



The screenshot shows a web browser window displaying the AWS Command Line Interface (CLI) v2 Setup page. The browser's address bar shows the URL <https://aws.amazon.com/cli/>. The page features the AWS logo and navigation links such as Products, Solutions, Pricing, Documentation, Learn, Partner Network, and AWS Marketplace. The main content area is titled "AWS Command Line Interface" and provides an overview of the CLI as a unified tool for managing AWS services. It includes sections for Windows, MacOS, and Linux, each with instructions on how to download and run the installer. A "Get Started with AWS for Free" section with a "Create Free Account" button is also visible. Below the main content, there are links for "Getting Started", "AWS CLI Reference", "GitHub Project", and "Community Forum".

The foreground window is titled "AWS Command Line Interface v2 Setup". It has a blue header bar with the AWS logo. The main text reads "Installing AWS Command Line Interface v2". Below this, it says "Please wait while the Setup Wizard installs AWS Command Line Interface v2." and "Status:". A progress bar is shown below the status text. At the bottom of the window, there are three buttons: "Back", "Next", and "Cancel".



The image shows two overlapping terminal windows. The top window is a Windows Command Prompt titled 'Command Prompt' showing the execution of the AWS CLI. The bottom window is a MobaXterm terminal titled 'EC2-SERVER' showing an SSH session to an Amazon Linux 2 EC2 instance, where Docker is being installed.

```

Microsoft Windows [Version 10.0.19045.4239]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Dell>aws

usage: aws [options] <command> <subcommand> [<subcommand> ...] [parameters]
To see help text, you can run:

    aws help
    aws <command> help
    aws <command> <subcommand> help

aws: error: the following arguments are required: command

C:\Users\Dell>aws --version
aws-cli/2.15.35 Python/3.11.8 Windows/10 exe/AMD64 prompt/off

C:\Users\Dell>aws configure
AWS Access Key ID [None]: AKIA2KK3MVGXP7SNC3MX
AWS Secret Access Key [None]: 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
Default region name [None]: us-east-1
Default output format [None]:

C:\Users\Dell>
  
```

```

EC2-SERVER
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect...
/home/ec2-user/
  Name
  ├── .ssh
  ├── .bash_logout
  ├── .bash_profile
  └── .bashrc

Remote monitoring
☐ Follow terminal folder

(SSH client, X server and network tools)
> SSH session to ec2-user@3.88.100.75
  • Direct SSH      : ✓
  • SSH compression : ✓
  • SSH-browser     : ✓
  • X11-forwarding  : ✗ (disabled or not supported by server)
> For more info, ctrl+click on help or visit our website.

#
#####
AL2 End of Life is 2025-06-30.

A newer version of Amazon Linux is available!
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-31-31-230 ~]$ sudo su
[root@ip-172-31-31-230 ec2-user]# yum install docker -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package docker.x86_64 0:20.10.25-1.amzn2.0.4 will be installed
--> Processing Dependency: containerd >= 1.3.2 for package: docker-20.10.25-1.amzn2.0.4.x86_64
--> Processing Dependency: libcgrouper >= 0.40.rc1-5.15 for package: docker-20.10.25-1.amzn2.0.4.x86_64
--> Processing Dependency: runc >= 1.0.0 for package: docker-20.10.25-1.amzn2.0.4.x86_64
--> Processing Dependency: pigz for package: docker-20.10.25-1.amzn2.0.4.x86_64
--> Running transaction check
  
```

UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>

The screenshot displays a MobaXterm terminal window titled "ECR-SERVER". The left sidebar shows a file explorer for the "/home/ec2-user/" directory, containing files like ".ssh", ".bash_logout", ".bash_profile", and ".bashrc". The main terminal area shows the following commands and output:

```
[root@ip-172-31-31-230 ec2-user]# systemctl start docker
[root@ip-172-31-31-230 ec2-user]# systemctl enable docker
Created symlink from /etc/systemd/system/multi-user.target.wants/docker.service to /usr/lib/systemd/system/docker.service.
[root@ip-172-31-31-230 ec2-user]# systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; vendor preset: disabled)
   Active: active (running) since Thu 2024-04-04 09:14:29 UTC; 14s ago
     Docs: https://docs.docker.com
    Main PID: 3631 (dockerd)
    CGroup: /system.slice/docker.service
            └─3631 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock --default-ulimit nofile=32768:65...
```

Below the systemctl output, there is a log of Docker daemon startup messages. Then, the user runs:

```
[root@ip-172-31-31-230 ec2-user]# vi Dockerfile
[root@ip-172-31-31-230 ec2-user]# aws ecr get-login-password --region us-east-1 | docker login --username AWS --password-std
in 709398145454.dkr.ecr.us-east-1.amazonaws.com
Unable to locate credentials. You can configure credentials by running "aws configure".
Error: Cannot perform an interactive login from a non TTY device
[root@ip-172-31-31-230 ec2-user]# aws configure
AWS Access Key ID [None]: AKIA2KK3MVGXP7SNC3MX
AWS Secret Access Key [None]: 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
Default region name [None]: us-east-1
Default output format [None]:
[root@ip-172-31-31-230 ec2-user]# aws ecr get-login-password --region us-east-1 | docker login --username AWS --password-std
in 709398145454.dkr.ecr.us-east-1.amazonaws.com
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
[root@ip-172-31-31-230 ec2-user]# docker build -t container-images-repository .
Sending build context to Docker daemon  6.656kB
Step 1/2 : FROM httpd:latest
latest: Pulling from library/httpd
8a1e25ce7c4f: Pull complete
8b0a7c8478f8: Pull complete
4f4fb700ef54: Pull complete
7f8fb0a042e0: Pull complete
91e4b2f2b52a: Pull complete
c78cdbf9617d: Pull complete
Digest: sha256:374766f5bc5977c9b72fdb8ae3ed05b7fc89060e7edc88fcbf142d6988e58eeb
Status: Downloaded newer image for httpd:latest
--> ac45b24b92cc
--> Running in fbe8d6cbbdf0
Step 2/2 : MAINTAINER "SHRIKANTH C R"
```

The bottom of the terminal shows the Docker build progress for the "container-images-repository" image, including the pull of the "httpd:latest" base image and the execution of the MAINTAINER command.

The screenshot shows a terminal window with the following content:

```

91e4b2f2b52a: Pull complete
c78cddf9617d: Pull complete
Digest: sha256:374766f5bc5977c9b72fdb8ae3ed05b7fc89060e7edc88fcbf142d6988e58eeb
Status: Downloaded newer image for httpd:latest
--> ac45b24b92cc
Step 2/2 : MAINTAINER "SHRIKANTH C R"
--> Running in fbe8d6cbbdf0
Removing intermediate container fbe8d6cbbdf0
--> a815126dde47
Successfully built a815126dde47
Successfully tagged container-images-repository:latest
[root@ip-172-31-31-230 ec2-user]# docker images
REPOSITORY          TAG          IMAGE ID      CREATED      SIZE
container-images-repository  latest      a815126dde47  6 seconds ago  167MB
httpd                latest      ac45b24b92cc  2 months ago  167MB
[root@ip-172-31-31-230 ec2-user]# docker tag container-images-repository:latest 709398145454.dkr.ecr.us-east-1.amazonaws.com/container-images-repository:latest
[root@ip-172-31-31-230 ec2-user]# docker images
REPOSITORY          TAG          IMAGE ID      CREATED      SIZE
container-images-repository  latest      a815126dde47  32 seconds ago  167MB
709398145454.dkr.ecr.us-east-1.amazonaws.com/container-images-repository  latest      a815126dde47  32 seconds ago  167MB
httpd                latest      ac45b24b92cc  2 months ago  167MB
[root@ip-172-31-31-230 ec2-user]# docker push 709398145454.dkr.ecr.us-east-1.amazonaws.com/container-images-repository:latest
The push refers to repository [709398145454.dkr.ecr.us-east-1.amazonaws.com/container-images-repository]
d91409980ade: Pushed
2cf15bc08e25: Pushed
1f9ac7ca16f1: Pushed
5f70bf18a086: Pushed
3ee8143d0880: Pushed
a483da8ab3e9: Pushed
latest: digest: sha256:d6bc3d84e09b5d731cdad390988a26115d6969ff1d9c120a61015f98f1b37b67 size: 1572
[root@ip-172-31-31-230 ec2-user]#

```