Introduction to Amazon ECR
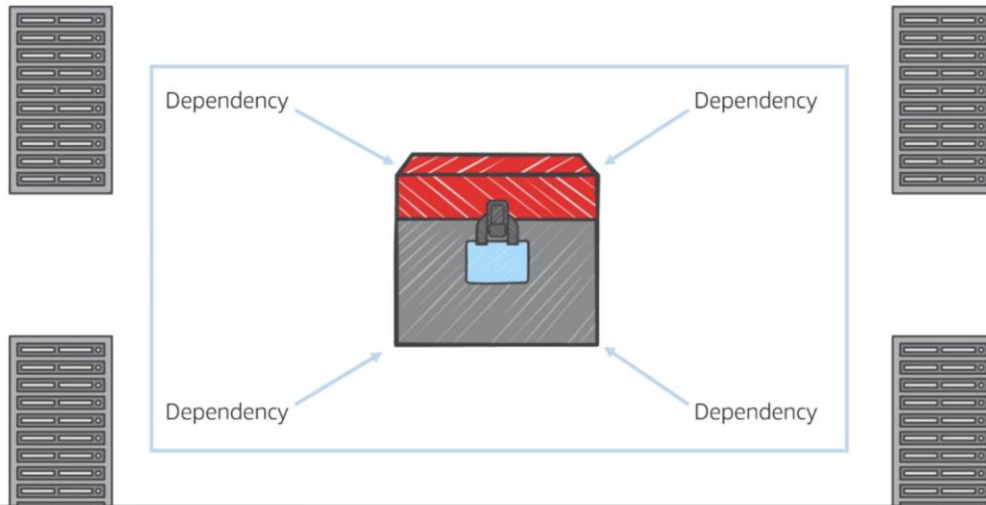

Amazon EC2 Container Registry
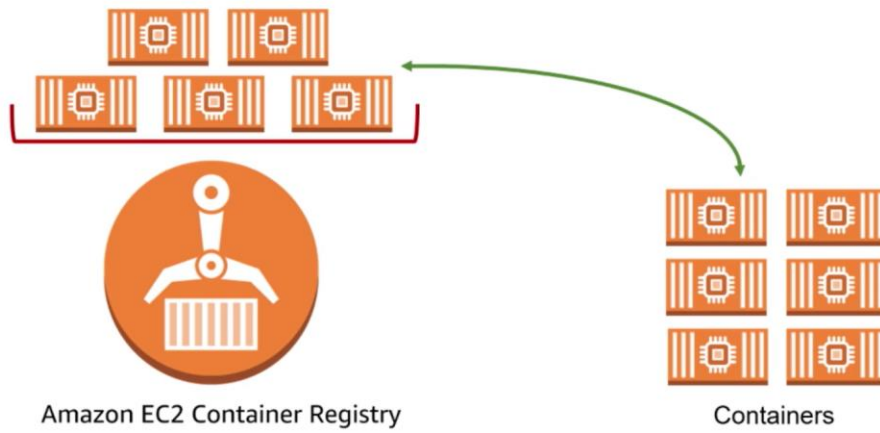
Containers

Introduction to Containers

Dependency   Dependency

Dependency   Dependency

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Containers to the Rescue

Container   Development   Testing   Production

Containers Versus Virtual Machines

App 1	App 2	App 3
Bins/Libs	Bins/Libs	Bins/Libs
Guest OS	Guest OS	Guest OS
Hypervisor		
Host Operating System		

Container

App 1	App 2	App 3
Bins/Libs	Bins/Libs	Bins/Libs
Docker Engine		
Operating System		

Docker Daemon

Container

Manages **Manages**

Image

Client
Docker CLI

REST API

Network

Server
Docker Daemon

Data Volumes

Manages

Manages

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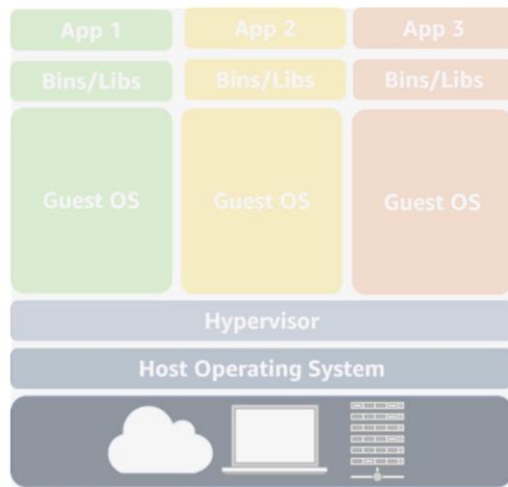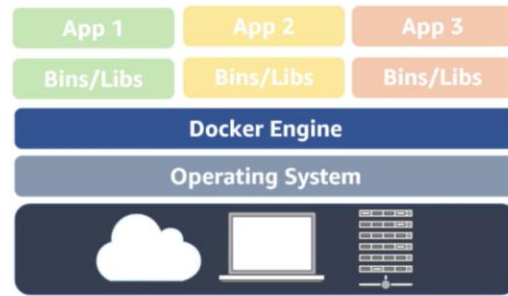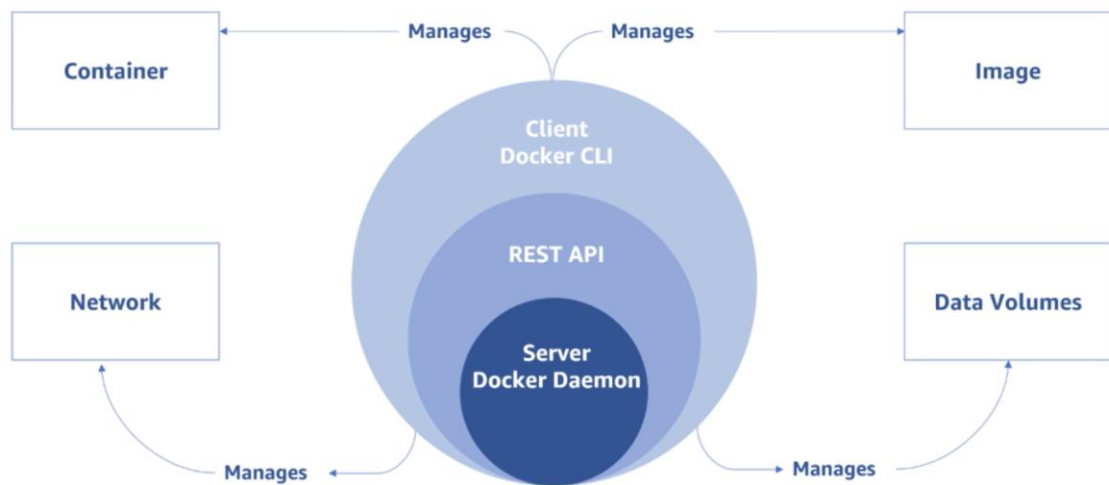
Docker Images

Image
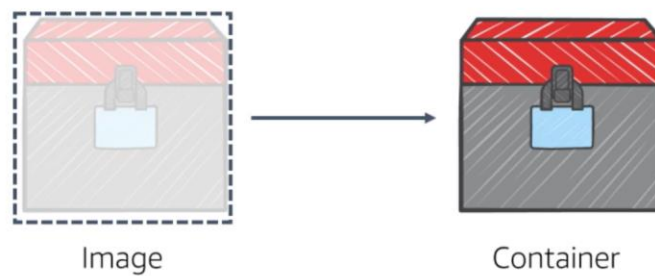
Container

Questions to Consider

How do you:

...manage multiple container images?

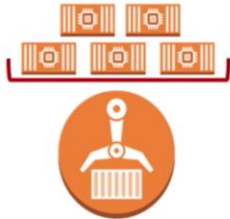...make sure the image repository is highly available?

...manage access control?

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How do you:

...manage multiple container images?

...make sure the image repository is highly available?

...manage access control?

Amazon ECR

Amazon S3

IAM

```
docker pull <REGISTRY ENDPOINT>/AWSomeApp:prod
docker push <REGISTRY ENDPOINT>/AWSomeApp:prod
```

Container Image

Amazon ECR

Get started with Amazon EC2 Container Registry

Step 1: Configure repository

Step 2: Build, tag, and push Docker image

Configure repository

The wizard guides you through creating a repository in Amazon ECR. Learn more

Repository name*   [   ]   ❶

Namespaces are optional, and they can be included in the repository name with a slash (for example, namespace/repo).

Repository URI   [ ][ ]

Permissions

As the owner, you have access to this repository by default. After completing this wizard, you can grant others permission to access this repository in the console.

*Required   Cancel   **Next step**

Get started with Amazon EC2 Container Registry

Step 1: Configure repository

Step 2: Build, tag, and push Docker image

Build, tag, and push Docker image

Now that your repository exists, you can push a Docker image by following these steps:

✅ **Successfully created repository**
[   ]

To install the AWS CLI and Docker and for more information on the steps below, visit the ECR documentation page.

1) Retrieve the `docker login` command that you can use to authenticate your Docker client to your registry:
Note:
If you receive an "Unknown options: --no-include-email" error, install the latest version of the AWS CLI. Learn more

```
aws ecr get-login --no-include-email --region eu-west-1
```

2) Run the `docker login` command that was returned in the previous step.
Note:
If you are using Windows PowerShell, run the following command instead.

```
Invoke-Expression -Command (aws ecr get-login --no-include-email --region eu-west-1)
```

3) 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 demo-app .
```

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

```
docker tag [                                                                ]
```

5) Run the following command to push this image to your newly created AWS repository:

```
docker push [                                                ]
```

*Required   **Done**

```
[ec2-user@ip-172-31-0-5 docker-demo]$ aws ecr get-login --no-include-email --region eu-west-1|sh
Login Succeeded
[ec2-user@ip-172-31-0-5 docker-demo]$ █
```

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```
[ec2-user@ip-172-31-0-5 docker-demo]$ aws ecr get-login --no-include-email --region eu-west-1|sh
Login Succeeded
[ec2-user@ip-172-31-0-5 docker-demo]$ docker tag demo-app:latest
atest█
```

```
[ec2-user@ip-172-31-0-5 docker-demo]$ aws ecr get-login --no-include-email --region eu-west-1|sh
Login Succeeded
[ec2-user@ip-172-31-0-5 docker-demo]$ docker tag demo-app:latest ███████████████████████████
atest
[ec2-user@ip-172-31-0-5 docker-demo]$ docker push ████████████████████████████████████
```

```
[ec2-user@ip-172-31-0-5 docker-demo]$ aws ecr get-login --no-include-email --region eu-west-1|sh
Login Succeeded
[ec2-user@ip-172-31-0-5 docker-demo]$ docker tag demo-app:latest ███████████████████████████
atest
[ec2-user@ip-172-31-0-5 docker-demo]$ docker push ██████████████████████████████████████████
The push refers to a repository █████████████████████████████████
a7dab901beeb: Pushed
a179bfb4f2f6: Pushed
a1a53f8d99b5: Pushed
453fc2d51e11: Pushing [==========================================>]  53.56 MB
cec7521cdf36: Pushing [==========================================>    ]  50.87 MB/55.27 MB
```

- Use containers for self-contained software delivery.
- Docker images are blueprints of your containers.
- Amazon ECR stores, manages and deploys your Docker images.