



Amazon Elastic Container Service (ECS), Elastic Container Registry (ECR) and Elastic Container Service for Kubernetes (EKS)

Amazon Web Services

What is Docker and What are Containers?

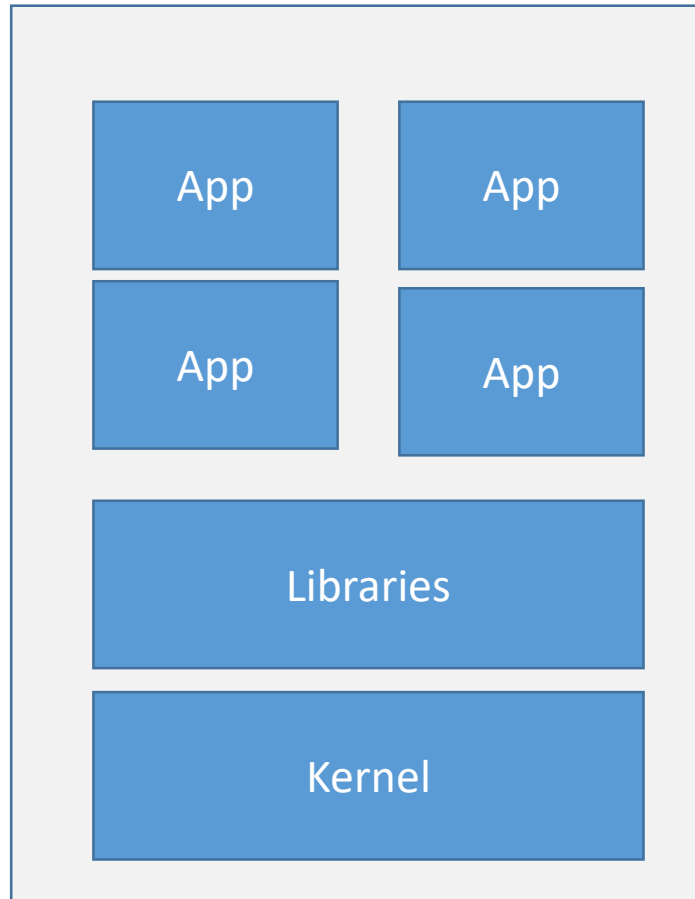
Docker is a software platform that allows you to build, test, and deploy applications quickly. Docker packages software into standardized units called **containers** that have everything the software needs to run including libraries, system tools, code, and runtime.

Containers act like virtual machines. But unlike a virtual machine, containers don't need to replicate an entire operating system, only the individual components they need in order to operate. This gives a significant performance boost and reduces the size of the application.

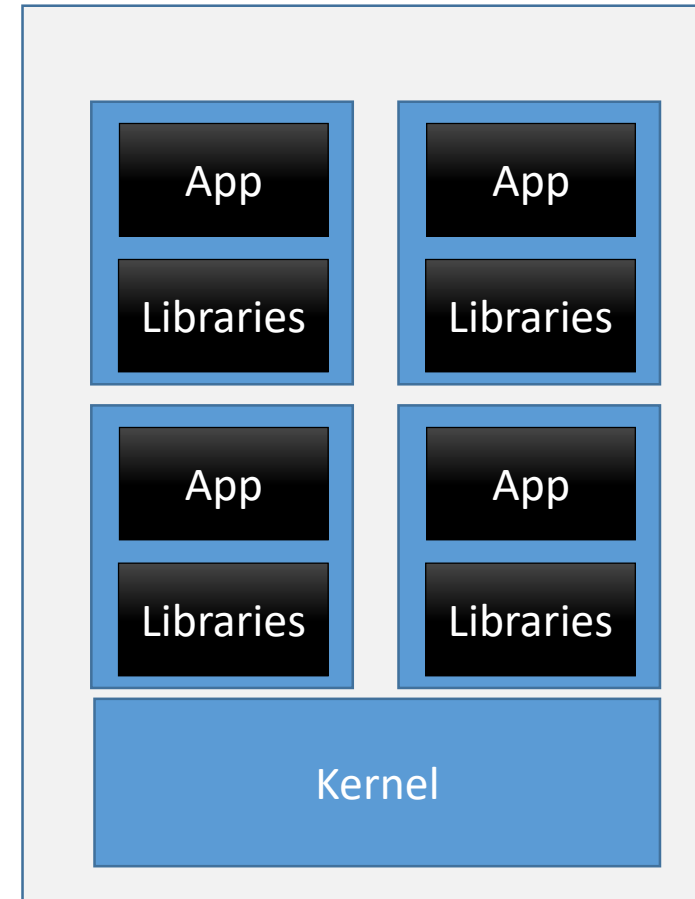


Primary Benefits of Containers

Applications on Hosts



Containerized Applications



What is Elastic Container Service (ECS)?

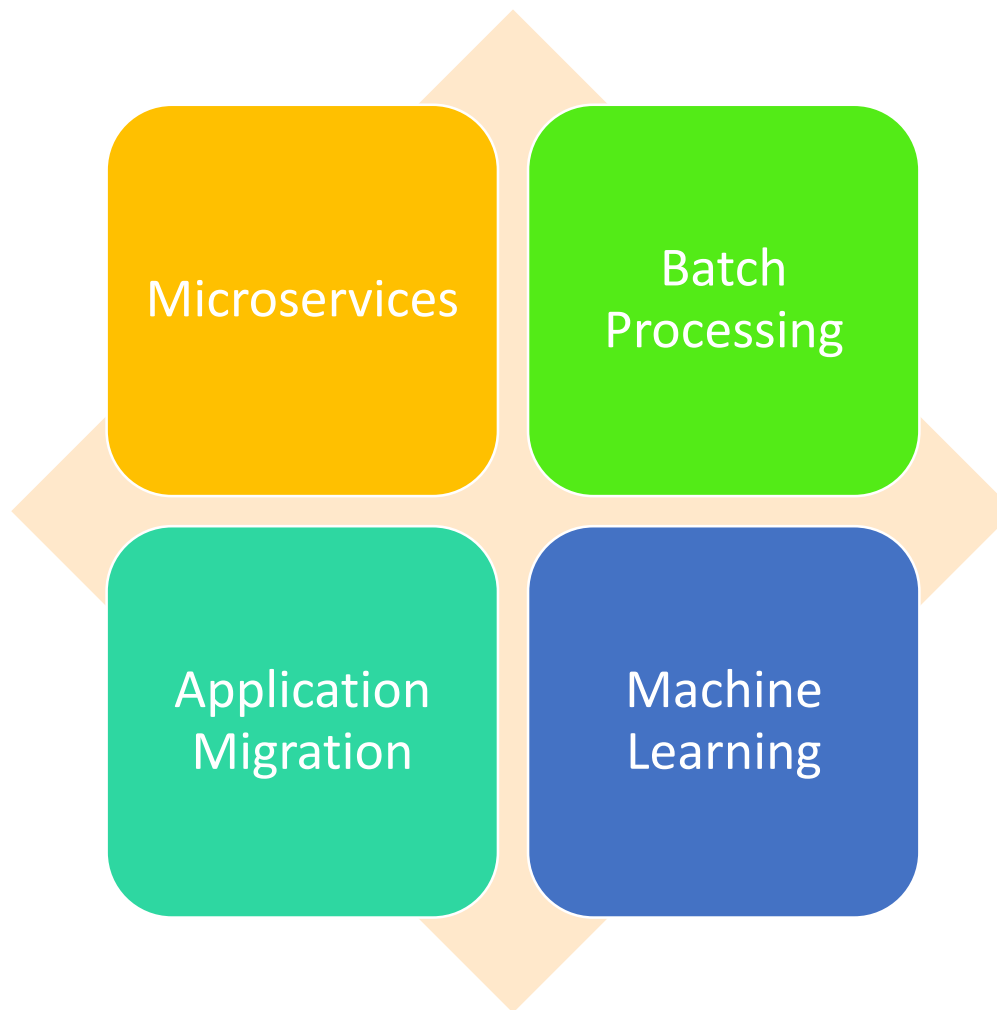
Amazon Elastic Container Service (Amazon ECS) is a highly scalable, high-performance container orchestration service that supports Docker containers and allows you to easily run and scale containerized applications on AWS. Amazon ECS eliminates the need for you to install and operate your own container orchestration software, manage and scale a cluster of virtual machines, or schedule containers on those virtual machines.



Amazon Elastic Container
Service

What is Elastic Container Service (ECS)?

ECS Use Case



What is Elastic Container Service (ECS)?

ECS Launch Types

Fargate Launch Type

- No need to manage servers or clusters. Simply package your application in containers, specify the CPU and memory requirements, define networking and IAM policies, and launch the application.

EC2 Launch Type

- Run your containerized applications on a cluster of Amazon EC2 instances that you manage and schedule. You are responsible for provisioning, patching, and scaling clusters of servers

What is Elastic Container Registry (ECR)?

Amazon Elastic Container Registry (ECR) is a fully-managed Docker container registry that enables developers to store, manage, and deploy Docker container images. Integrated with Amazon (ECS), it simplifies your development to production workflow. You do not need to operate your own container repositories or worry about scaling the underlying infrastructure. Amazon ECR hosts your images in a highly available and scalable architecture, allowing you to reliably deploy containers for your applications. With IAM you can also ensure resource-level control of each repository.



Amazon EC2 Container
Registry

What is Kubernetes?

Kubernetes is a container orchestration system for containerized applications. Kubernetes manages clusters of Amazon EC2 compute instances and schedules containers to run on the cluster based on the available compute resources and the resource requirements of each container. Containers are run in logical groupings called pods and you can run and scale one or many containers together as a pod



What is Elastic Container Service for Kubernetes?

Amazon Elastic Container Service for Kubernetes (Amazon EKS) enables you to easily deploy, manage, and scale containerized applications using Kubernetes on AWS.

Amazon EKS runs the Kubernetes management infrastructure for you across multiple AWS availability zones to eliminate a single point of failure. Amazon EKS is certified Kubernetes conformant so you can use existing tooling and plugins from partners and the Kubernetes community. Applications running on any standard Kubernetes environment are fully compatible and can be easily migrated to Amazon EKS.



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