

DevOps Tools for Cloud Native Architecture on AWS

DevOps complements the cloud native architecture by providing a success-driven

software delivery approach that combines speed, agility and control. AWS

augments this approach by providing the required tools.

Here are some of the key tools offered by AWS for adopting cloud native

architecture.





Docker and Microservices Architecture

Docker is the most popular containerization platform that enables organizations to package applications with all the required runtime resources such as the source code, dependencies and libraries. This open-source container toolkit makes it easy to automate and control the tasks of building, deploying and managing containers using simple commands and APIs.





Amazon Elastic Container Service (ECS)

Amazon Elastic Container Service (ECS) is a powerful container orchestration tool to manage a cluster of Amazon EC2 instances. ECS leverages the serverless technology of AWS Fargate to autonomously manage containerization tasks which means you can quickly build and deploy applications instead of spending time on patches, configurations and security policies. It easily integrates with your popular CI/CD tools as well as with AWS native management and compliance solutions.

You can pay only for the resources used.





Amazon Kubernetes Service (Amazon EKS)

Amazon Kubernetes Service (EKS) is a containerized orchestration tool for contai-

ner applications managed by Kubernetes on the AWS cloud. It uses the open-sour-

ce Kubernetes software which means you gain more extensibility to manage con-

tainer environments when compared with Amazon ECS.





Amazon Fargate

Amazon Fargate is a popular tool from AWS that enables administrators to run container clusters in the cloud without having to worry about the management of the underlying infrastructure. Fargate works along with ECS and abstracts the containers from the underlying infrastructure, allowing users to manage containers while Fargate takes care of the underlying stack.





Serverless Computing

Serverless Computing is a cloud-native model wherein developers can write code

and deploy applications without the need to manage servers. As the servers are

abstracted from the application, the cloud provider handles provisioning, scaling

and the management of server infrastructure.

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AWS Lambda is a popular serverless computing tool that lets you run code without the need to provision and manage servers. Lambda enables developers to upload code as a container image and automatically provisions the underlying stack on an event-based model. Lambda lets you run app code in parallel and scales resources individually for each trigger. So, resource usage is optimized to the core and administrative burden becomes zero.



The key to fully leveraging the cloud revolution is designing the right cloud

architecture for your software development requirements. Implementing the right

automation in the right areas, making the most of managed services,

incorporating DevOps best practices and applying the best cloud native

architecture patterns is recommended.

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DevOps & Software Development



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