The Most Popular Kubernetes Alternatives and Competitors
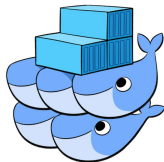
Parameter	ECS	RedHat OpenShift	Docker Swarm	Nomad	Fargate
Open Source	No	Yes	Yes	Yes	No
Vendor Lock-In	Yes, AWS	No	No	No	Yes
Cluster Set Up	Easy	A Little Complex	Easy	Very Easy	Available as launch type for ECS cluster

Parameter	ECS	RedHat OpenShift	Docker Swarm	Nomad	Fargate
Built-In Workload Autoscaling	Supported	Supported	Not supported	Not supported	Supported
Manage Legacy Applications	No	No	No	Yes	No
Built-In Monitoring	Yes, Cloudwatch	Yes, Prometheus	No	No	ECS Metrics available

Amazon ECS

Pros	Cons
AWS Managed	Vendor Lock-in, bound to AWS
Serverless	Less community support
Highly available	
Easy integration with other AWS Services	
Support from AWS Experts is available	

Amazon Elastic Container Service (ECS), one of the Kubernetes alternatives, provides a **serverless architecture** where Docker containers run on EC2 instances that are managed, **scaled by ECS**.

RedHat OpenShift

Pros	Cons
Works on bare metal servers	Not flexible
Extensive security features	Relatively small community
Excellent user experience	Relatively hard-to-understand logs
Better container image management	
Built-in monitoring	

Due to its strict security policy, containers **can not be run as root**. RedHat OpenShift comes with centralized policy management and built-in monitoring. The support is **limited primarily** to Red Hat developers for OpenShift.

Docker Swarm

Pros	Cons
A lot easier to install	Limited functionality
Less moving parts and more lightweight	Limited high availability and fault recovery capabilities
Docker Swarm does not require any additional components and is built into any Docker deployment	The open-source community is smaller
Seamlessly integrates with other Docker tools, such as Docker CLI and Docker Compose	No automatic scaling option available
Easy learning curve	

Docker Swarm is a container orchestration that consists of managers and workers. It is **native clustering for Docker**. Managers in the cluster manage membership and delegation, and workers run swarm services.

Nomad

Pros	Cons
Installation is very simple; there's only a single binary for both clients and servers	Limited to only cluster management and scheduling
Supports a diverse workload of containerized, legacy, micro-service, and batch applications	

Nomad is used in deploying and managing **containerized or legacy** application workloads. Nomad can run **Docker, non-containerized, micro-service, and batch** application workloads and is one of the Kubernetes alternatives.

AWS Fargate

Pros	Cons
Less complex, available as a launch type for Amazon ECS and EKS	No control over customization
Lower costs	Vendor Lock-In
Integration with other AWS Services	
Pay for only CPU and Memory	

Amazon Fargate is the technology for Amazon ECS and EKS for deploying containerized applications **without having to manage** servers or clusters.