

# DOCKER<sup>®</sup> VERSUS KUBERNETES



Comparison

## DOCKER<sup>®</sup>

## KUBERNETES

What is it?

Docker is an open source technology for isolating applications that use container virtualization. Docker has gained widespread popularity in the world of cloud and application packaging. It enables you to automate deployment of containers. It is computer software for virtualization.

The open source platform Kubernetes orchestrates and automates the setup, operation, and scaling of container applications. The architecture allows orchestration of containers across multiple machines — regardless of whether they are virtualized hardware or bare metal.

Features

1. Isolated environments
2. Version control
3. Agility for the application
4. Productivity for developers
5. Operational efficiency

1. Service discovery and load balancing
2. Orchestration of storage
3. Automatic rollouts and rollbacks
4. Self-healing
5. Horizontal scaling
6. Can be operated anywhere
7. Enterprise features
8. Autoscaling of infrastructure
9. Centralized application management
10. Provision and updating of software
11. Consistent environments for development, testing, and production

Developed by

Docker Inc.

Google

Veröffentlicht

2013

2014

## DOCKER<sup>®</sup>

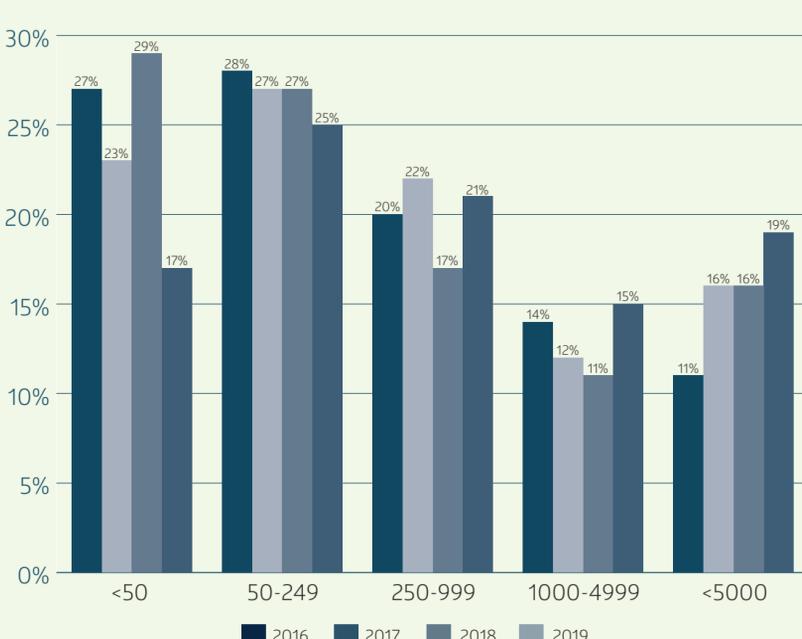
## KUBERNETES

Scaling		No autoscaling	Autoscaling
Cluster Setup		Installation of clusters is a complicated challenge.	Installation of clusters is a complicated challenge.
Installation		Complex and time-consuming	Easy and fast
Data volume		It is possible to share storage between several containers, but only within the same pod.	Shared storage can be used by any other container.
Logging und monitoring		It allows the use of third-party tools like ELK.	It allows the use of integrated logging and monitoring tools.
Load balancing		Automatic load balancing	Manual configuration of load balancer
Updates		Agent updates can be performed.	Clusters can be updated at any time.
Optimized for		Individual clusters, from small to large	Multiple clusters, from small to large
Tolerance ratio		High fault tolerance	Low fault tolerance
Node support		Up to 2000 nodes	Up to 5000 nodes
Container limit		Limited to 95,000 containers	Limited to 300,000 containers
Asset		Worker	Nodes
Compatibility		Less extensive and customer-specific	More comprehensive and highly customizable
Community		An active community that regularly updates the software	Provides strong community support through the CNCF (Cloud Native Computing Foundation) and the Cloud Native Ecosystem

## OUTLOOK

Containers have quickly conquered the software development world. In the near future, the dynamics behind Kubernetes will not slow down, but will accelerate instead.

Number of Containers in Production



Source: CNCF Cloud Native Survey 2019

With a growing number of contributors and IT service providers like SysEleven actively supporting it, Kubernetes will continue to improve and expand its functionality.



You can also easily get cluster orchestration with Kubernetes through SysEleven. With **Kubernetes as a Service**, you benefit from the unique features of Kubernetes and outstanding cloud technology at the same time. Our experts will be happy to answer your questions about the transition from Docker to Kubernetes in a personal consultation.



Contact us now

