CONTAINER JOURNAL

App Development Platforms for Kubernetes: The Next Phase

The Challenge of Building Container Applications

The challenge many developers face today is that building container applications remains cumbersome. There's a critical need to streamline that process as part of an overall effort to make container platforms much more accessible.

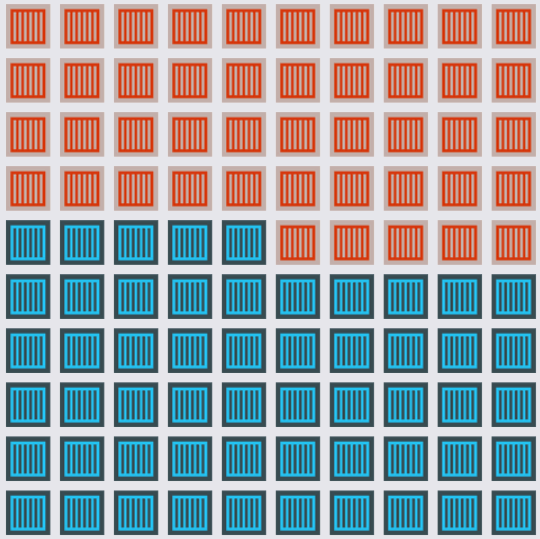
Achieving that goal will require presenting developers with higher levels of abstractions that mask the underlying complexity of platforms such as Kubernetes. The good news is that providers of container platforms are racing to provide those abstractions. Unfortunately, there's still a lot of work to be done before achieving that goal.

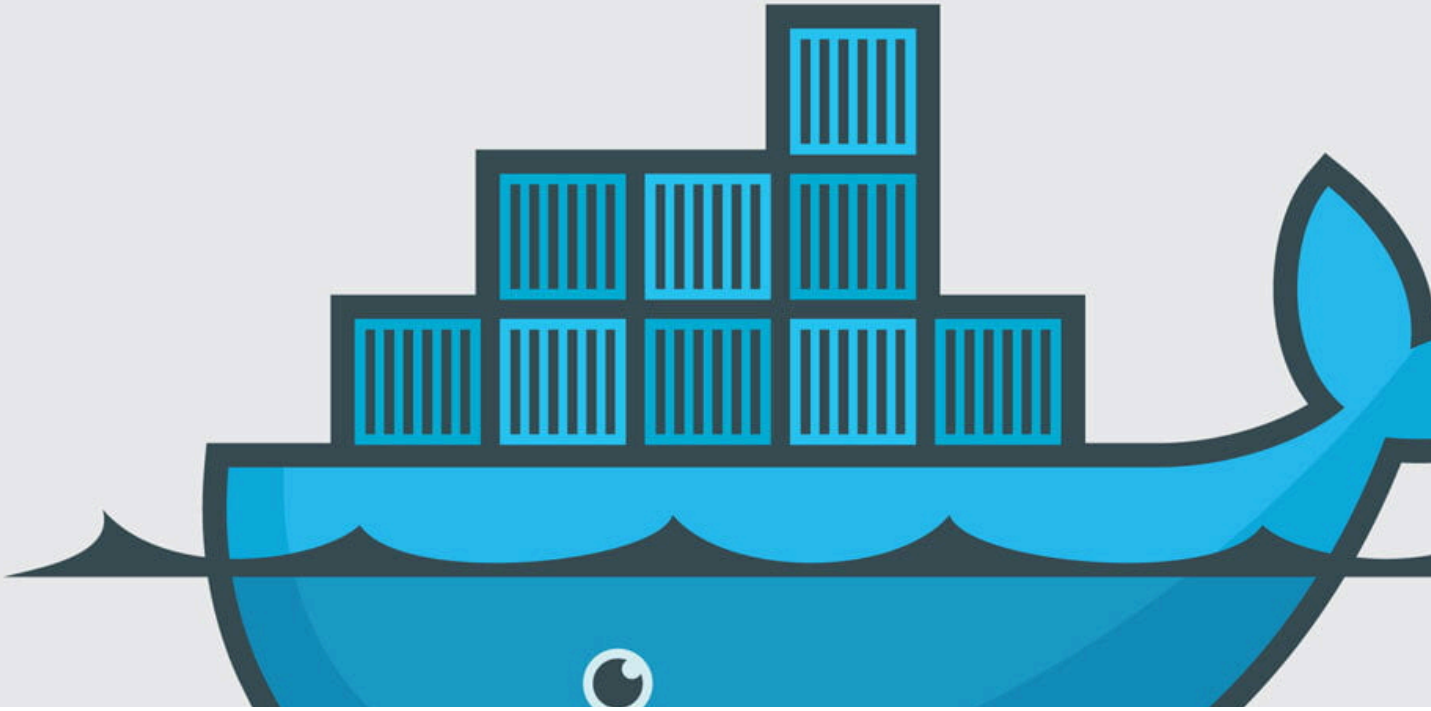
Container Developer Community Growth

Today there are more than 10 million developers using Docker tools, but by the end of the decade the total number of developers is expected to reach 45 million.

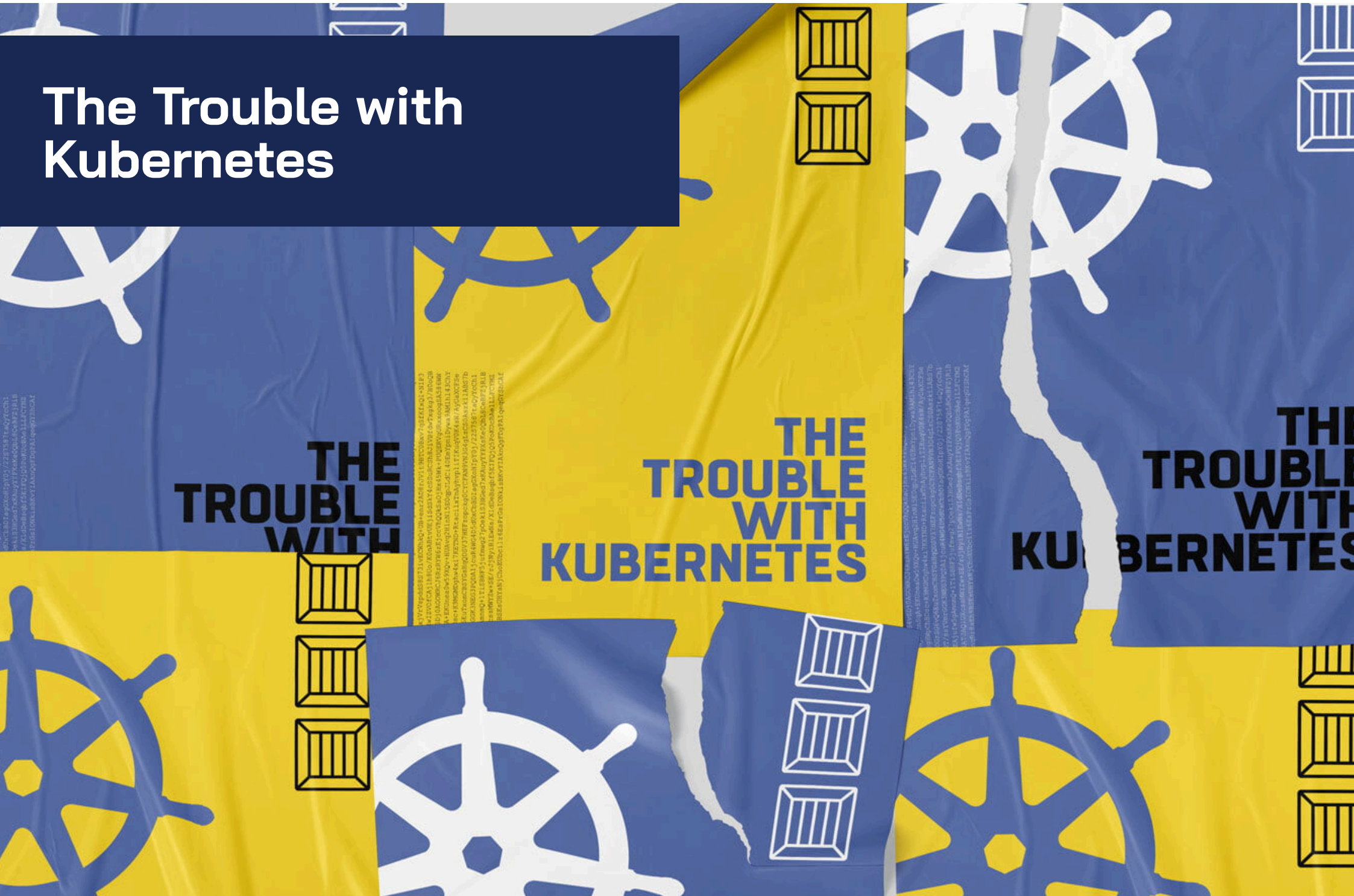
Source

Docker estimates that 55% of professional developers already employ Docker containers every day.

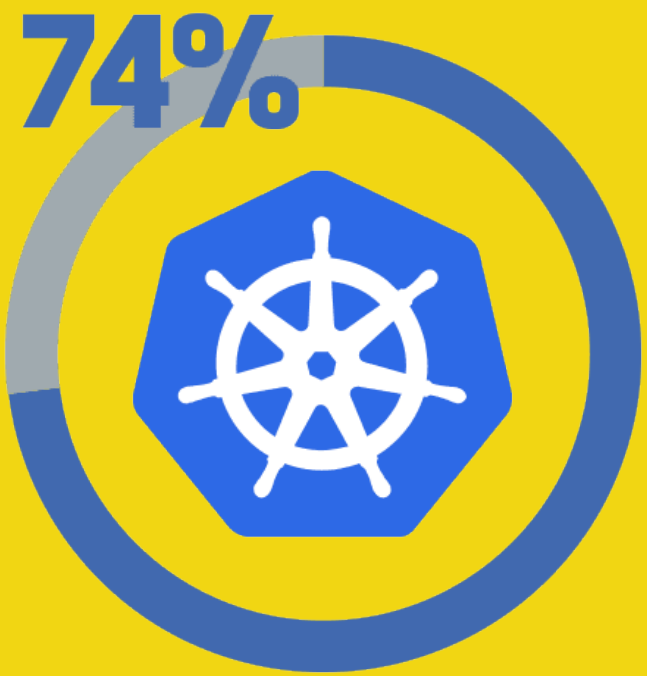




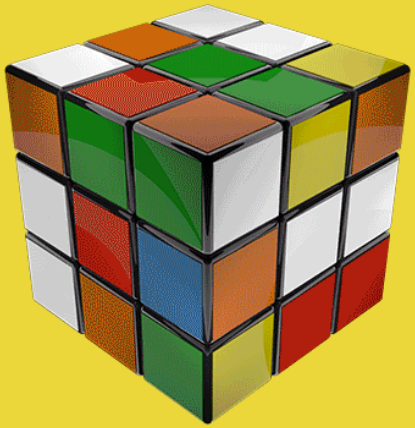
The Trouble with Kubernetes



The Trouble with Kubernetes



Nearly **three quarters of developers (73%)** are employing Kubernetes in a production environment.



About half the respondents (47%) also noted **the complexity of the platform** is hindering further adoption.

An equal number of developers working with containers today are **not employing Kubernetes at all.**

Source

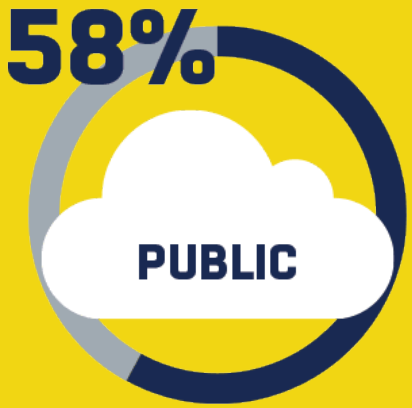
Kubernetes Challenges

The top challenge cited by survey respondents (57%) is the **steep Kubernetes learning curve.**

One of the most cited sources of Kubernetes frustration is the **new terms, concepts and commands** that developers need to understand.

Another oft-cited frustration is **the amount of time it takes** to spin up a working Kubernetes cluster.

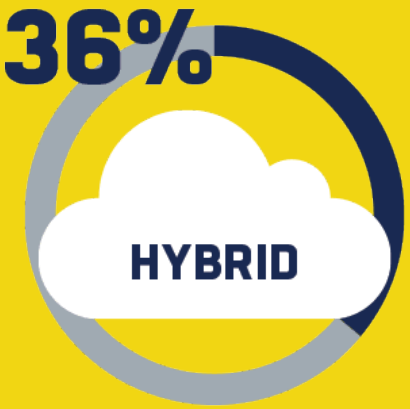
Where Kubernetes Code Runs



More than half of cloud native developers (58%) are running code on a public cloud

47% are on a private cloud

47% are on-premises



36% are on a hybrid cloud

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Kubernetes Benefits

Kubernetes Benefits

Source

Top Benefits of Kubernetes

SCALABLE

41%

Ease of Scaling

MANAGEABLE

35%

Ease of Management of Containers

OPTIMIZATION

13%

Optimization of Resources

Top Reasons for Kubernetes Adoption

ACCELERATED

59%

Accelerating Deployment Frequency

AUTOMATED

54%

Increasing Automation

REDUCE COSTS

46%

Reduce IT costs

Kubernetes on the Rise

INCREASED USE

68%

Increased their use of Kubernetes as a result of the pandemic

CRITICAL PART

77%

Consider Kubernetes a critical element of their digital transformation strategy

FUTURE GROWTH

61%

Expect production projects using Kubernetes to rise in the next two years

The Developer Upside

Most developers view containers as being a high or important priority (91%), 30% motivated by the need to deliver new types of application services, while another 19% are turning to containers as a way to better support business groups in their organization. A total of 40% developers identified career advancement as a key reason for using containers.

Source

The Big Thing

There is a clear need for a portable, consistent, developer-friendly platform for Kubernetes. Whether that's a platform-as-a-service (PaaS) or container-as-a-service (CaaS) environment or something completely different is still anybody's guess.

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