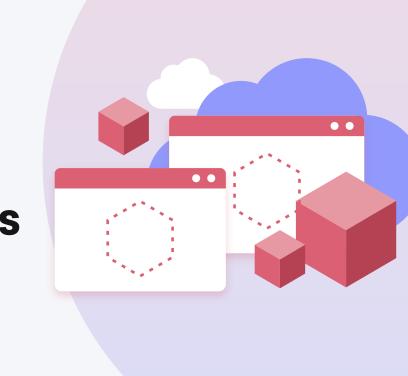


## State of workloads adoption on containers on Kubernetes



76%

13%

8%

1%

Deploying a few

Only deploying

stateless workloads

8%

Commercial ISV software-based

applications

30%

31%

.NET

51%

62%

**53%** 

47%

Flexibility

0%

4+ Clouds

**54%** 

Scalability

**79%** 

3 Clouds

**51%** 

49%

41%

45%

42%

34%

41%

.NET

Java

stateless workloads, but mostly stateful

delivered as a container. That means for every application, there are more parts to manage. To handle this complexity at scale, teams need a policy-driven, automated solution that dictates how and where containers will run. Kubernetes is an open source, extensible container orchestrator designed to handle these challenges. Pulse and Red Hat surveyed 200 enterprise tech leaders from multiple industries to find out what workloads they are deploying on containers and Kubernetes, and how

Applications are increasingly built as discrete functional parts, each of which can be

and why they are deploying those workloads across hybrid and multi-clouds, including the usage of Kubernetes Operators and Helm charts to help achieve key business goals and objectives.

Data collection: April 24 - June 3 and August 23 - September 28, 2021 Respondents: 200 enterprise tech leaders using containers and Kubernetes

Tech leaders are deploying a wide variety of mission-critical workloads on Kubernetes and reaping the benefits

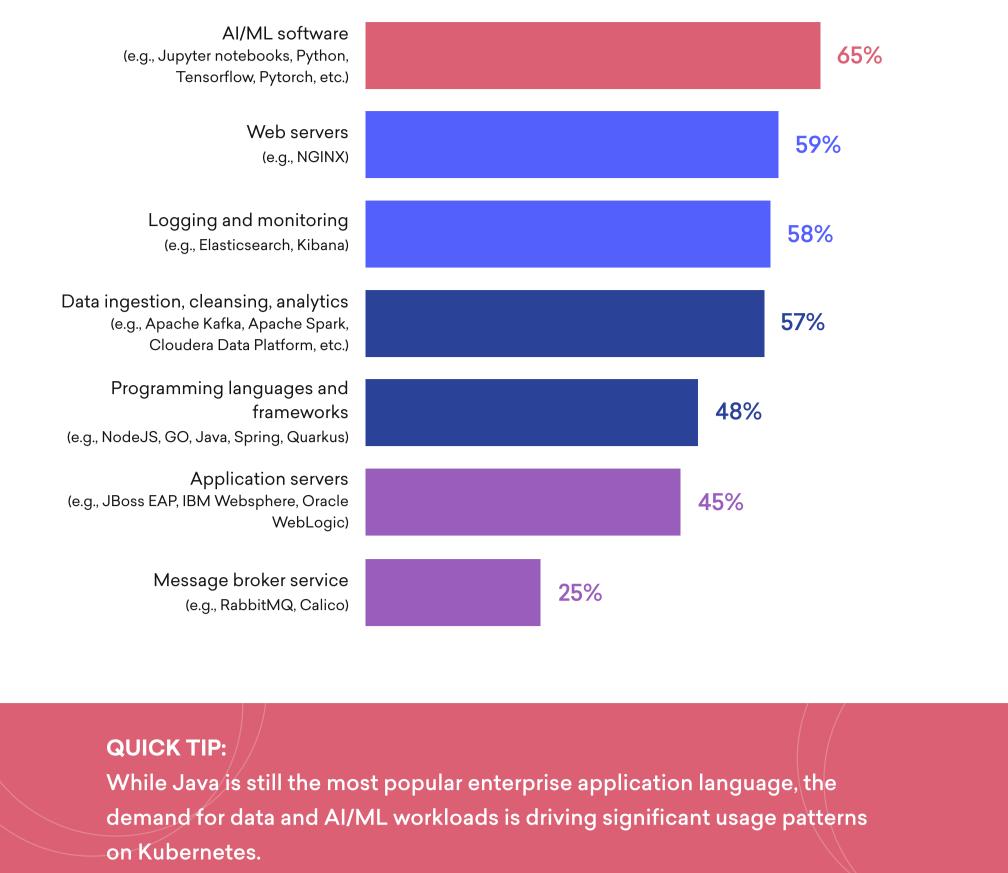
(e.g., PostgreSQL, MySQL, MongoDB,

Couchbase, Redis)

### data caching solutions (76%), AI/ML software (65%), and web servers (59%). Which of the following workloads are you

The top workloads tech leaders are deploying on Kubernetes are databases or

currently deploying on Kubernetes containers? Databases or data cache



#### 80% Deploying a few stateful Deploying a fair mix of both workloads, but mostly stateless and stateful stateless workloads

A vast majority of tech leaders (80%) are deploying or planning to deploy a fair

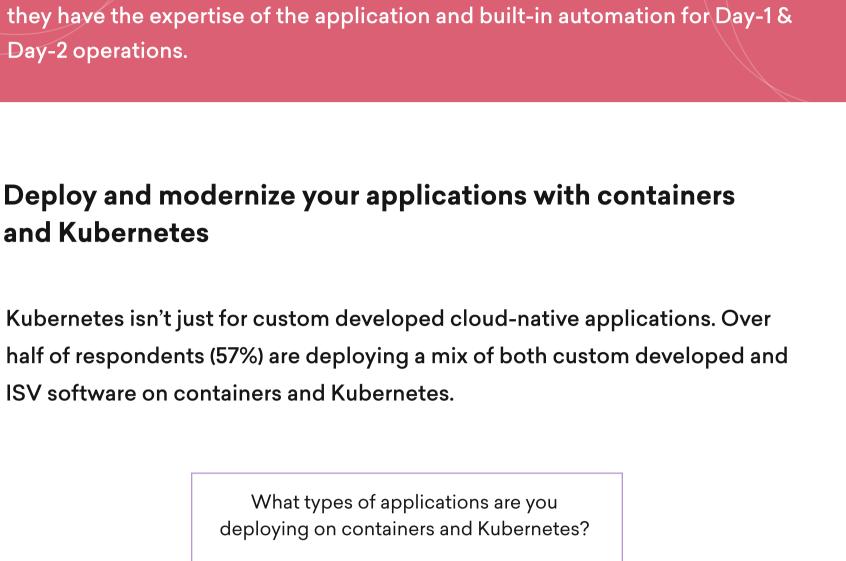
What mix of stateless (e.g. NGINX for web servers) and

stateful workloads (e.g. databases, data analytics, etc.) are you

deploying or plan to deploy on containers and Kubernetes?

mix of both stateless and stateful workloads on containers and Kubernetes.

**QUICK TIP:** This is an area where Kubernetes Operators can make a big difference, since



**57**% A mix of both custom and ISV apps

36%

Custom developed

using languages such as Java, .Net, Python, etc.

application architectures and platforms.

Microservices

Absence of knowledge

Integrating on-premise

and cloud infrastructure

Business reluctance

towards change

Unavailability or

scarcity of skills

Automated updates and

Saved developers' time

and reduced need for a

deployment and lifecycle

Simplified deployment

Reduced deployment

I plan to use in the future

I haven't used either

cloud environments

and Kubernetes.

**74%** 

Consistency across

environments

two public clouds.

0%

None

North America 48%

TITLE

21%

27%

Biotech and

Scientific R&D

Retail

C-Suite

Director

VP

Manager 6%

Arts, Entertainment

and Recreation

Manufacturing

How many public clouds does your organization currently rely on or plan on using for workload deployment?

1%

1 Cloud

Reduced errors with

upgrades

larger team

management

of applications

time

3%

**QUICK TIP:** 

Other

2%

of the legacy applications



Legacy Java stacks aren't optimized for containers. 97% of respondents are

modernizing their Java and .Net applications on containers and Kubernetes

More than 80% of companies want flexibility in how they modernize their Java

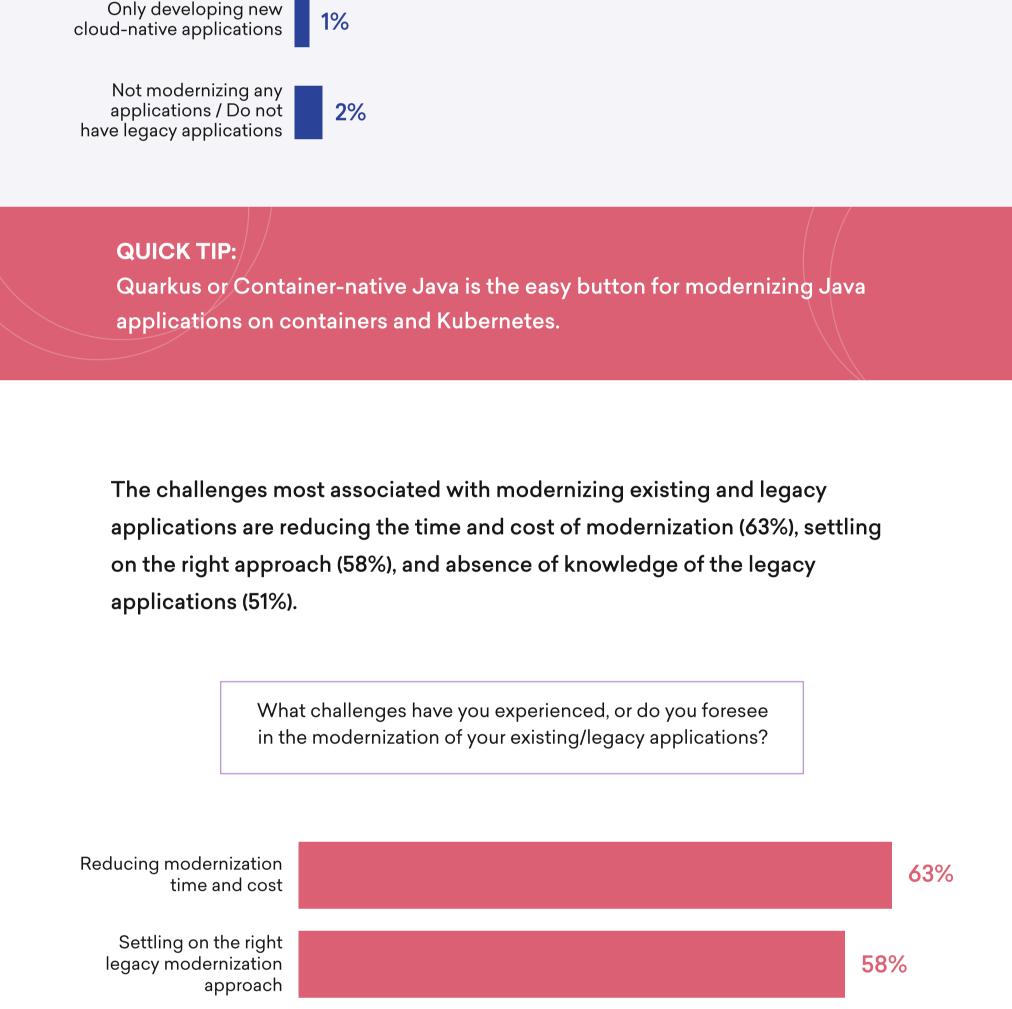
Are you modernizing existing/legacy Java/.NET

applications on containers or Kubernetes?

and .NET applications, with a strong desire to co-exist with microservice

with either monolithic, microservices, or a mix of both architectures.

42% Mix of both 41% .NET



the right partners to help every step of the way. Open source projects such as https://www.konveyor.io/ can help solve lot of these challenges. Kubernetes Operators and Helm charts save time, simplify deployment, and automate updates and upgrades

Respondents who have used Kubernetes Operators and Helm charts say they

were able to automate updates and upgrades (62%), save developers' time and

reduce the need for larger teams (53%), and reduced errors in deployment (51%).

If you are using Kubernetes Operators and Helm charts, what benefits are you achieving?

14%

Consistency across environments is key - A majority of

respondents are deploying containerized workloads in a hybrid

Over 70% of companies have the need for consistency across clouds as they

deploy into hybrid and multi-cloud environments. Respondents also benefit

from agility (73%) and portability (55%) by deploying workloads on containers

Modernization is more than just new technology, it requires the right migration

and modernization patterns, the right alignment of process modernization, and

## What are the top 3 reasons your organization is deploying workloads on containers and Kubernetes?

99% of respondents indicated that they rely on multiple clouds, with nearly

80% of tech leaders reporting that their organization relies on or plans to rely

on three public clouds for workload deployment. 21% indicate they are using

**55%** 

Portability

73%

Agility

100% of tech leaders indicated that the ability to run workloads consistently across a hybrid cloud environment is important for their organization, with the majority (63%) saying it is a 4 on a scale of 1-5, with 5 being significantly important.

21%

2 Clouds

On a scale of 1-5 (5 being high), to what extent is the ability to run these workloads consistently across the hybrid cloud (mix of on-premises and 1 or more public clouds) an important consideration for your organization? 1% 36% 63% 1% 3 2 4 (Somewhat) (Significantly) RESPONDENT BREAKDOWN

**REGION** 

# APAC 11% **EMEA 42%** Many of these respondents represent global/multinational organizations.

47%

**COMPANY SIZE** 

28%

31%

Financial

services

Warehousing

Telecommunication Transportation and

Services

**Red Hat** 

1,001 - 5,000 employees

5,001 - 10,000

Healthcare and

Social Assistance

employees

Educational Consumer Services Goods

Software

**INDUSTRIES** 

10,001+

employees

41%