



2019 Jakarta EE Developer Survey Report

Executive Summary



Top three community priorities for Jakarta EE:

- > Better support for microservices
- > Native integration with Kubernetes
- > Production quality reference implementation



Cloud native is critically important today and its importance will likely increase over time



The number of Java applications running in the cloud is projected to increase significantly over the next two years



Microservices is the leading architecture for implementing Java systems in the cloud

Executive Summary (2/2)



Top frameworks for building cloud native applications:

- 1) Spring/Spring Boot 2) Kubernetes 3) Eclipse MicroProfile



Top cloud native technologies:

Docker | Kubernetes | Jakarta EE | Spring/Spring Boot | Eclipse MicroProfile



Top IDEs for developing cloud native applications:

Eclipse IDE | IntelliJ IDEA | Visual Studio Code | Apache NetBeans | Eclipse Che

Introduction

The objective of the 2019 Jakarta EE Developer Survey was to **help Java ecosystem stakeholders better understand the requirements, priorities, and perceptions of enterprise developer communities.**

From March 4 to March 25, 2019, **1,772 individuals from around the world participated** in the survey online. The survey was promoted on social media, on the Jakarta.ee website and through partners, including London Java Community and the Java User Groups.



The State of Enterprise Java

Cloud native has emerged as an important strategy for IT modernization and business transformation initiatives. The enterprise marketplace has a strong desire to see Jakarta EE, the successor of Java EE, evolve to support containers, microservices, and multi-cloud portability.

For their part, developers need open specifications and tools that build upon the decades of enterprise-grade Java experience to create dynamic and scalable cloud native applications.

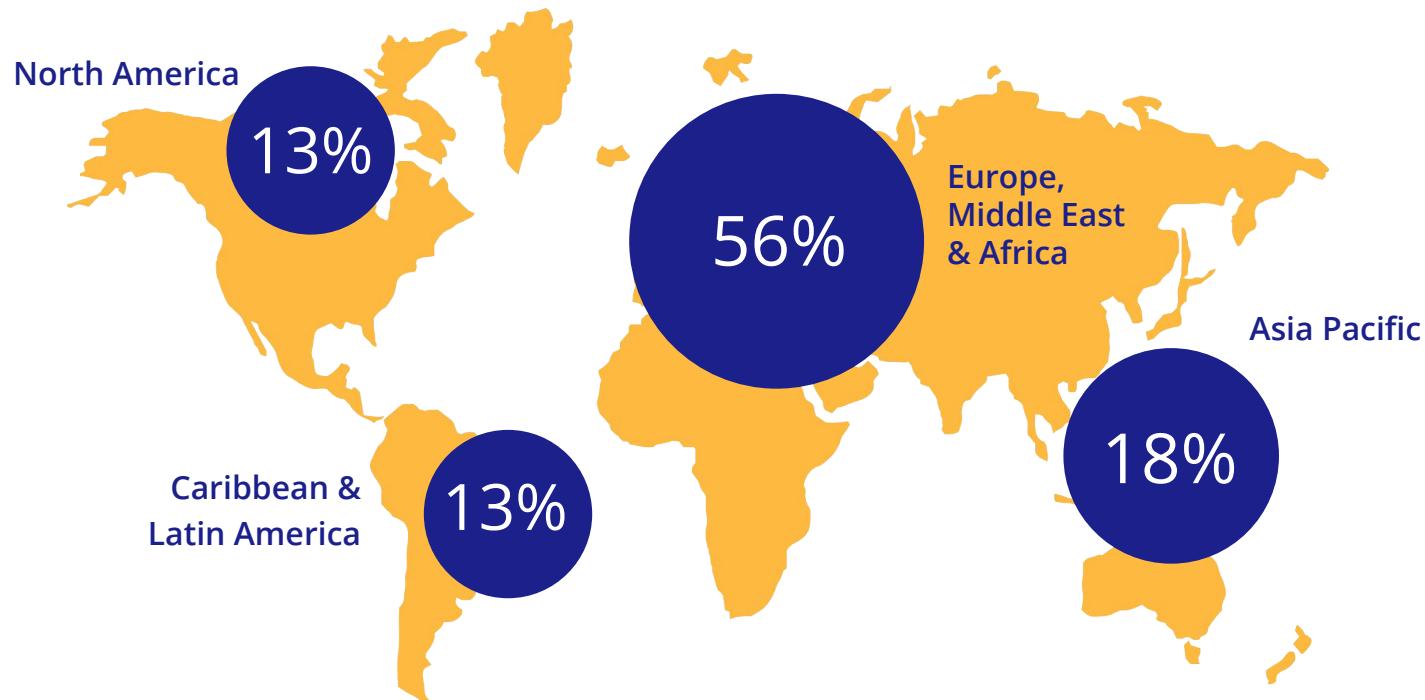
Powered by a well-governed and vendor-neutral open source ecosystem, Jakarta EE represents the best way to move mission-critical Java EE applications and workloads to the cloud.



Demographics

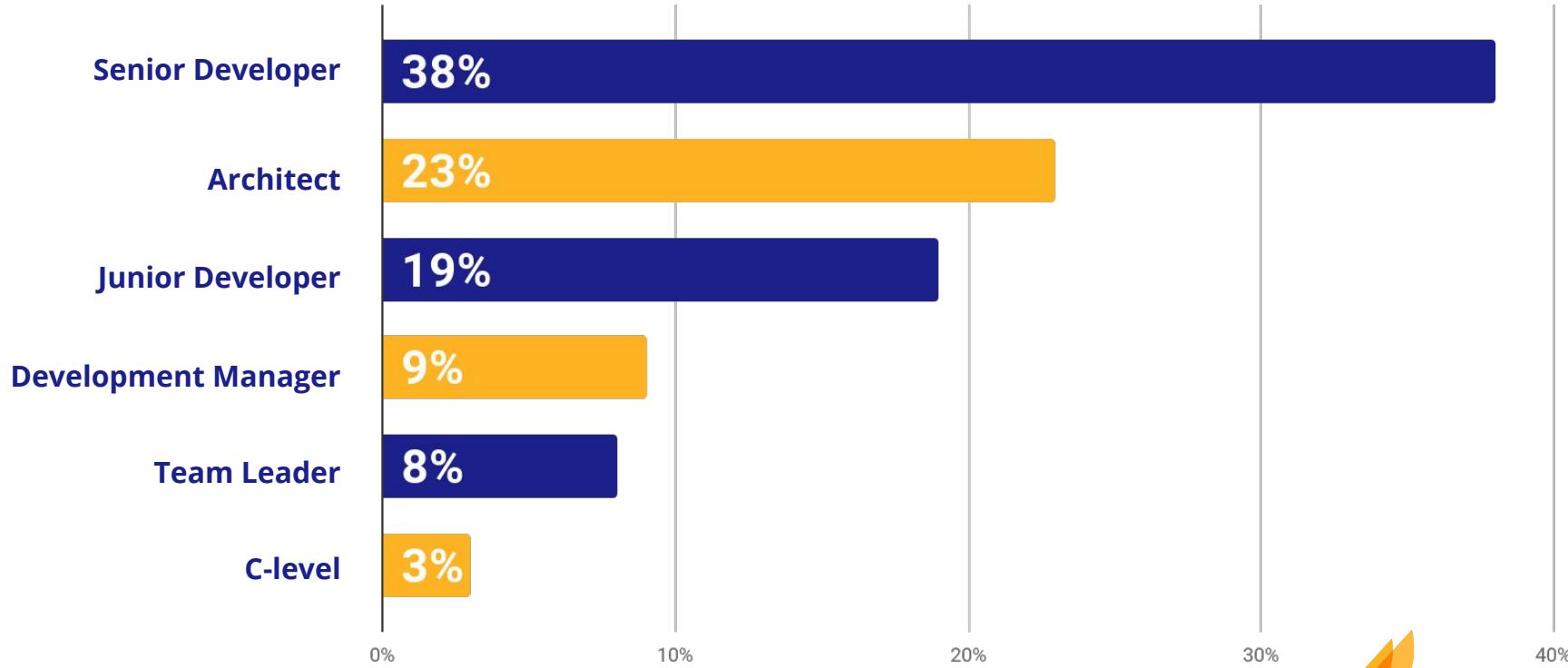
Regions

What region are you located in?



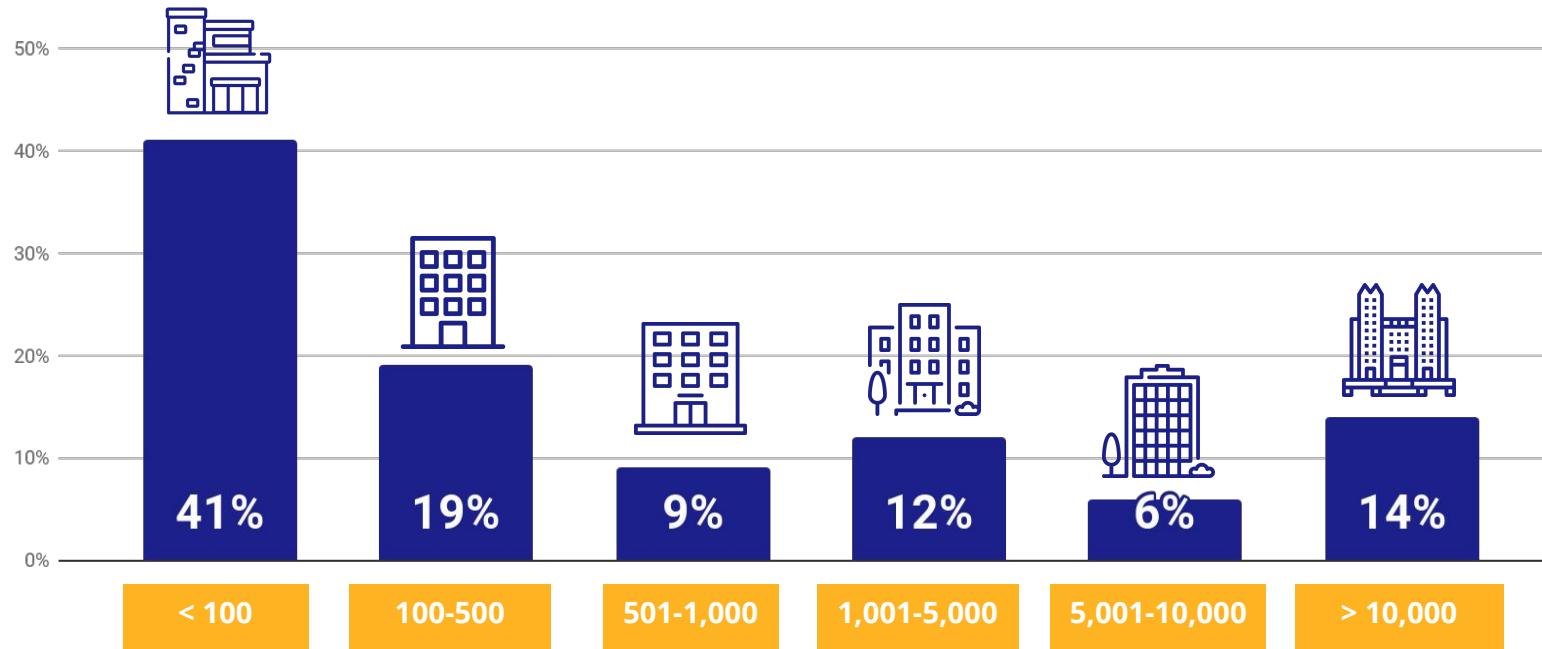
Roles

What best describes your role?



Employees

How many employees work in your organization?



Industries

What industry do you work in?



IT/Telecommunications

40%



Financial

18%



Education

10%



Other

9%



Government

8%



Retail

6%



Healthcare

4%



Manufacturing

3%



Energy

2%



Hospitality

1%

Findings

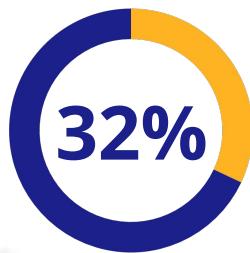


Finding #1:

Cloud native is critically important today

Finding #1 stats:

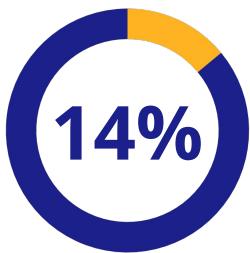
Plans for **building cloud native architectures**:



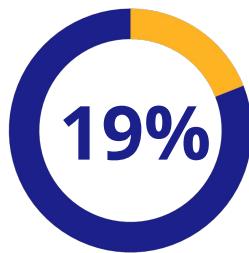
Plan to build
**within 6
months**



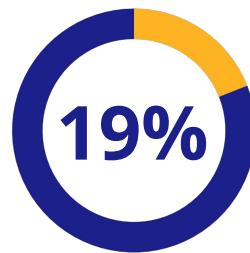
Currently building
cloud native
architectures



Plan to build
**within 12
months**



Probably, but **not
for at least 12
months**



No plans to build
cloud native
architectures



Finding #2:

**Number of Java apps running in the cloud
projected to increase significantly**

Finding #2 stats:

32%

expect to be running more
than 60% of Java applications
in the cloud in 2 years

(34% in 2018)

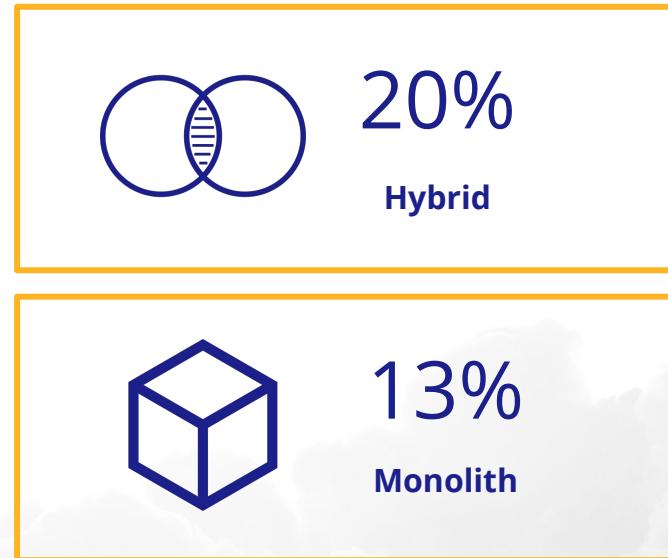
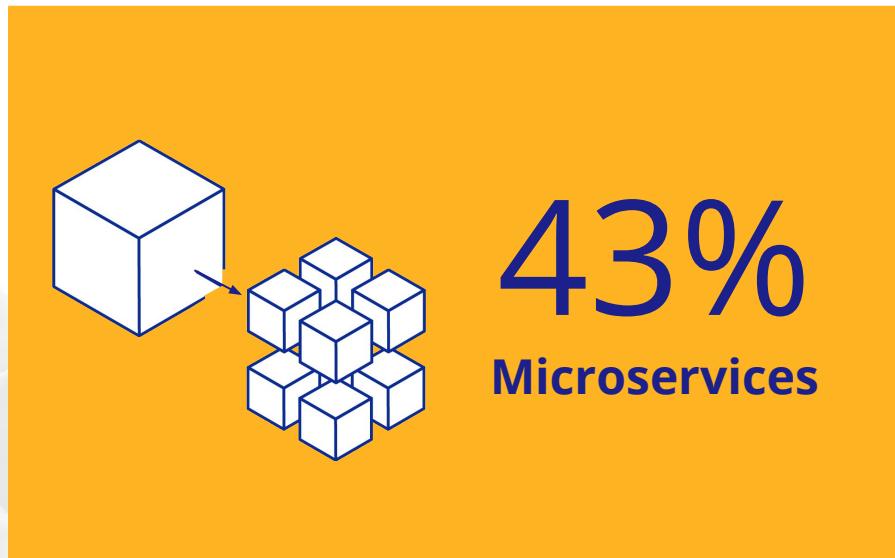


Finding #3:

**Microservices is the leading architecture
for implementing Java in the cloud**

Finding #3 stats:

Architectures for **implementing Java systems in the cloud**:





Finding #4:

**Spring/Spring Boot continues to dominate
as the leading framework for building
cloud native applications**

Finding #4 stats:

Top frameworks for **building cloud native applications**:

Spring Boot



Kubernetes



Eclipse MicroProfile



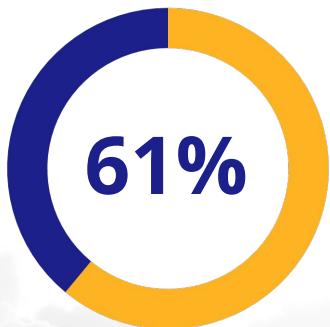


Finding #5:

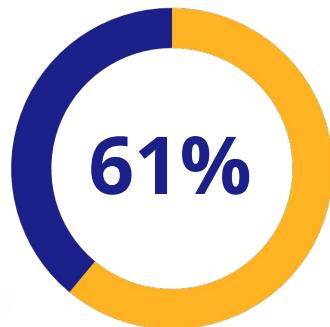
**Microservices, Kubernetes integration,
and reference implementation top the
community's agenda**

Finding #5 stats:

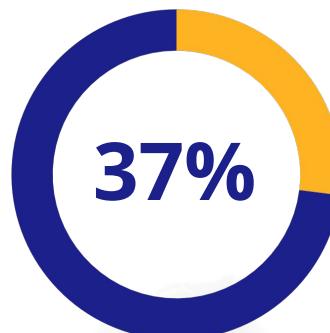
Top three Jakarta EE community priorities:



Better support for
microservices



Native integration
with **Kubernetes**



Production quality
reference implementation

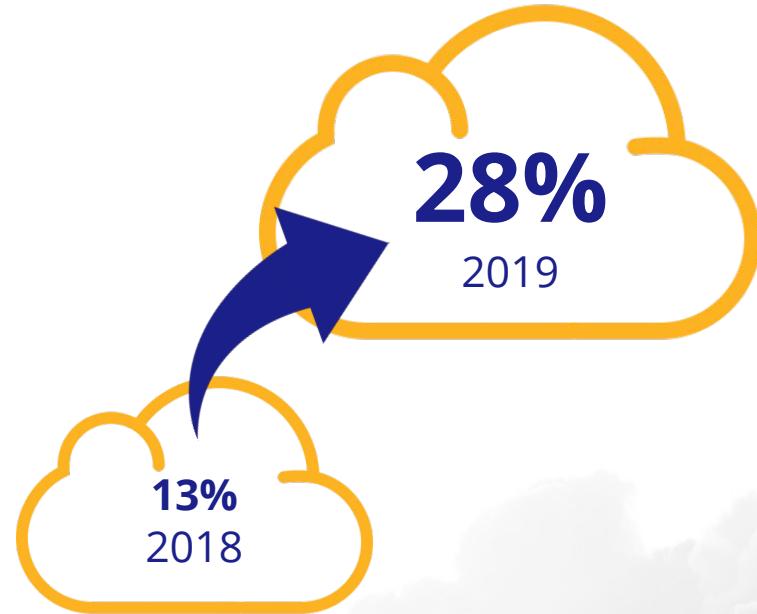


Finding #6:

Eclipse MicroProfile usage surges

Finding #6 stats:

Eclipse MicroProfile's adoption has surged with reported usage growing from 13% in 2018 to 28% in 2019





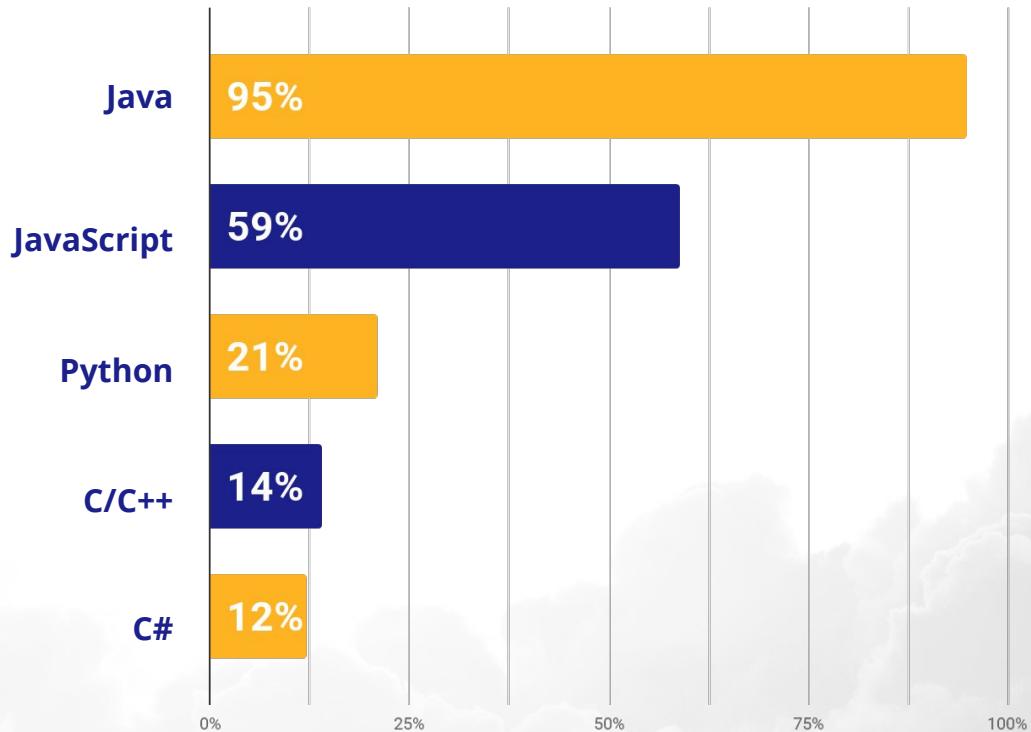
Finding #7:

It's a polyglot world

Finding #7 stats:

Most applications today are being built by development teams using multiple programming languages.

But most enterprise applications are usually built primarily using frameworks based on languages such as Java that have stood the test of time.





Finding #8:

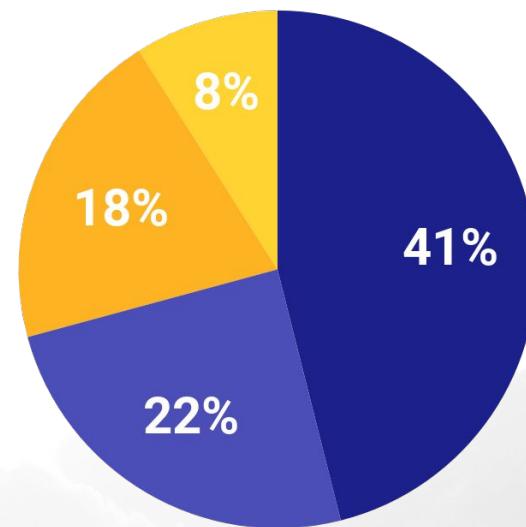
Java dominates when it comes to production deployments

Finding #8 stats:

Java clearly dominates when it comes to deploying applications in production environments. Consequently, it comes as no surprise that **most companies are intent on protecting their past strategic investments in Java** — including retaining internal Java developer expertise.

Production systems built using Java

- More than 80%
- 60 to 80%
- 40 to 60%
- Less than 20%





Finding #9:

**Migrating Java systems to the cloud is
still a work in progress**

Finding #9 stats:

Given the **mission-criticality of Java systems**, it makes sense that IT organizations would be cautious and deliberate about making the move.



are running over 60% of Java applications in the cloud
(slightly up from 18% in 2018)



say they are running less than 20% of Java systems in the cloud
(steady compared to 50% running <20% in 2018)

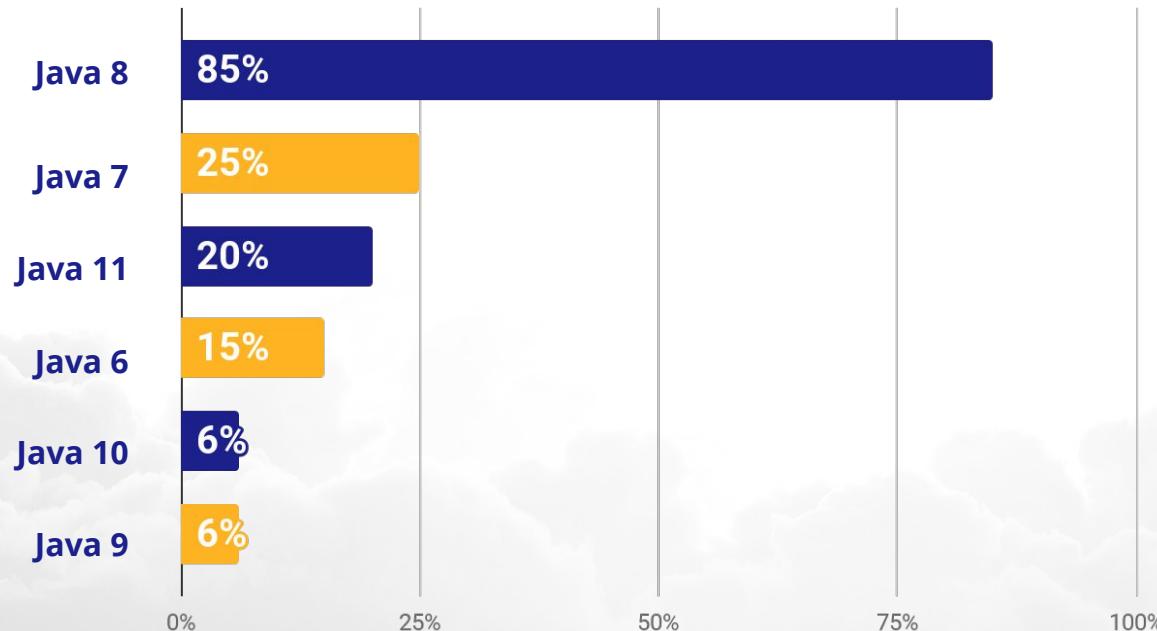


Finding #10:

**Java SE in production:
Java 8 is steady and
Java 11 use has surged**

Finding #10 stats:

85% of survey respondents are running Java 8, with another 25% still running Java 7. Adoption of Java 11 has taken off, leapfrogging Java 9 and 10.



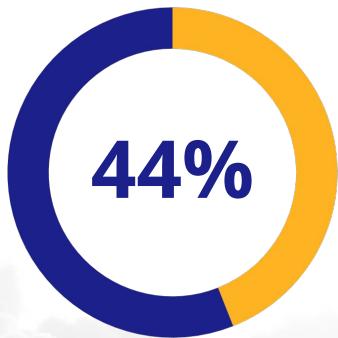


Finding #11:

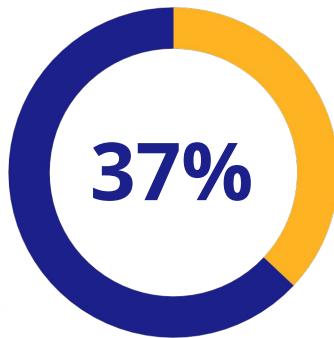
Java EE 8 adoption has picked up

Finding #11 stats:

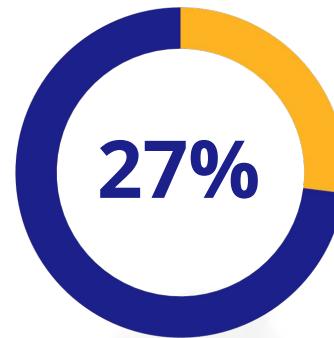
Developers are **embracing newer versions** of Java EE.



Java EE 7
(55% in 2018)



Java EE 8
(21% in 2018)



Java EE 6
(38% in 2018)

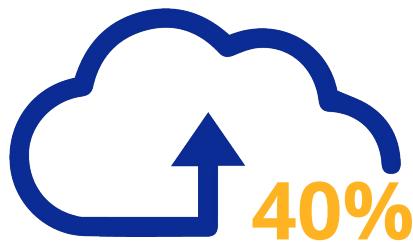


Finding #12:

Respondents are more likely to modify existing Java applications for migration to the cloud

Finding #12 stats:

Developers are **more likely to modernize Java systems for cloud migration** than create brand new cloud native services.



more likely to modify existing Java applications for migration to the cloud



will develop brand new cloud native applications

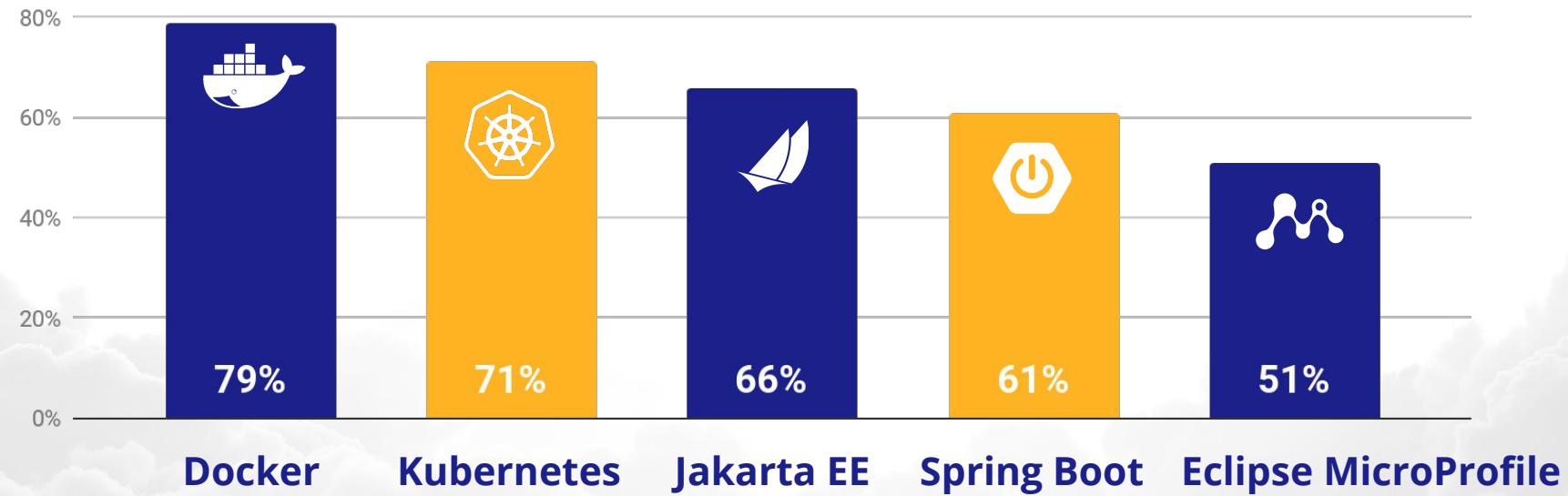


Finding #13:

Top cloud native technologies

Finding #13 stats:

Top 5 cloud native technologies:



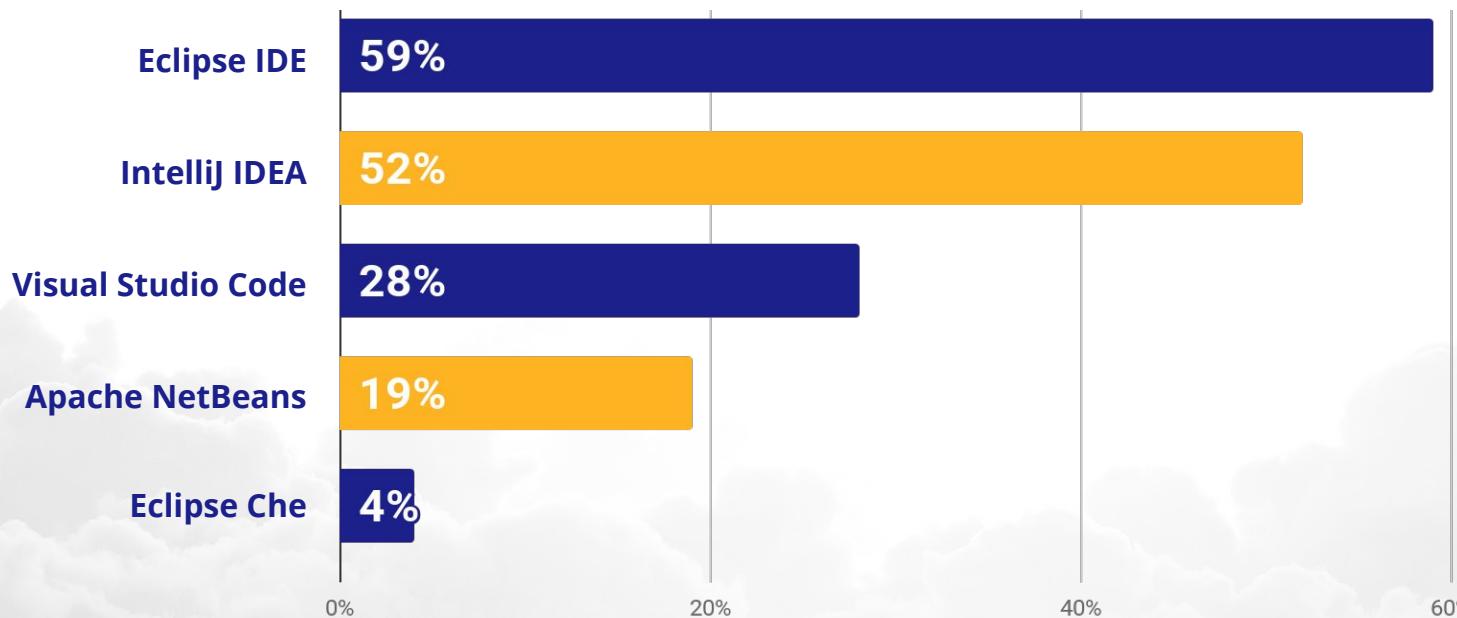


Finding #14:

Top IDEs for cloud native applications

Finding #14 stats:

Top 5 IDEs for cloud native applications:



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A photograph of a sailboat with its sail partially deployed, sailing across a dark blue sea under a sky filled with scattered white and grey clouds.

Thank you!



JAKARTA EE