



2020 Jakarta EE Developer Survey Report

Executive Summary

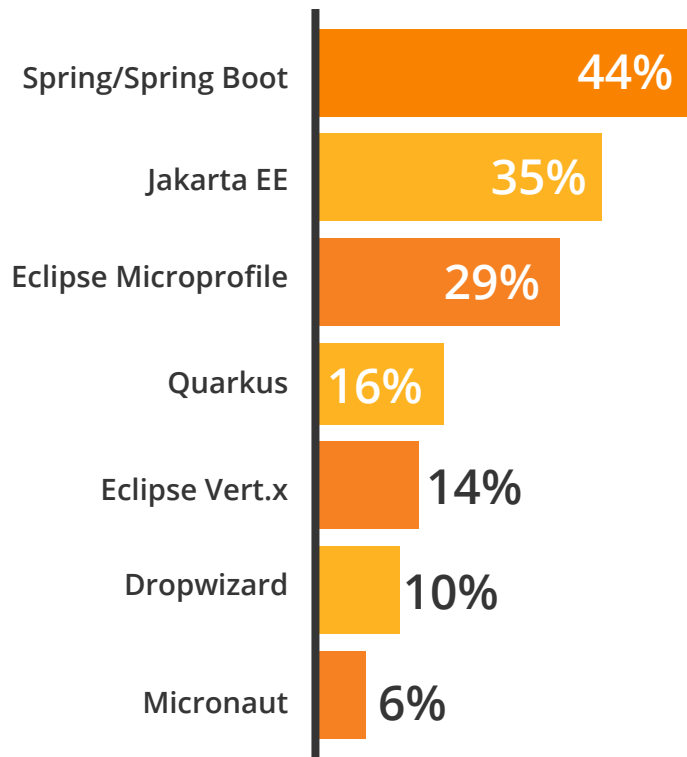
- > **Spring/Spring Boot continues to be the leading framework for building cloud native applications, but its share declines 13%** (from 57% in 2019 to 44% in 2020).
- > **Jakarta EE is emerging as the second place cloud native framework with 35% usage** in this year's survey.
- > The popularity of microservices may be waning, with the usage of the **microservices architecture for implementing Java systems in the cloud declining since last year** (39% in 2020 vs 43% in 2019).
- > **The Jakarta EE community is looking for better support for microservices in the platform.**
- > **Java/Jakarta EE 8 hits the mainstream with 55% adoption.** Despite only shipping in September 2019, **Jakarta EE 8 usage has skyrocketed to 17%.**
- > Use of the monolithic architecture approach **for implementing Java systems in the cloud has doubled since last year with 25% adoption reported in 2020** (up from 13% in 2019).

Introduction

The objective of this survey was to help Java ecosystem stakeholders better understand the requirements, priorities, and perceptions of enterprise developer communities and everyone in the Java ecosystem gain a better understanding of how the cloud native world for enterprise Java is unfolding and what that means for their strategies and businesses. From April 6 to May 5, 2020, 2,180 individuals (up from 1,772 in the 2019 survey) participated in the survey.

The survey was heavily promoted on Jakarta EE Working Group and Eclipse Foundation's various social media channels, the Jakarta EE Working Group and Eclipse Foundation websites, newsletters, blogs and through partners, including Jakarta EE Ambassadors, JUG leaders, and Java Champions.

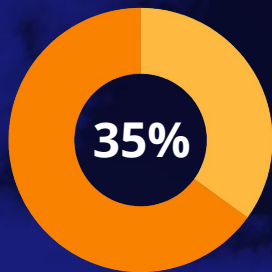
Which Java frameworks are you using for cloud native applications?



Spring/Spring Boot's share declines 13% as the leading framework for building cloud native applications (from 57% in 2019 to 44% in 2020).



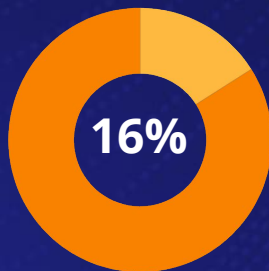
JAKARTA EE 8



With the delivery of **Jakarta EE 8** in September 2019, Jakarta EE starts to fulfill its promise of accelerating business application development for the cloud, **emerging as the second place cloud native framework with 35% usage** in this year's survey.

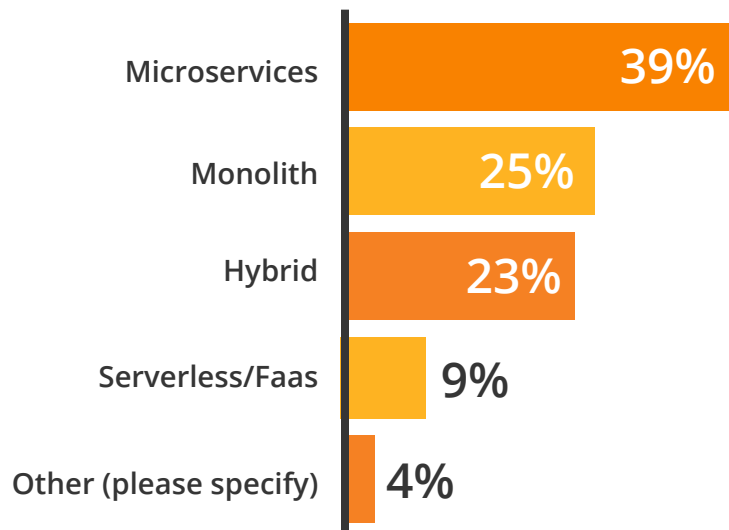


QUARKUS



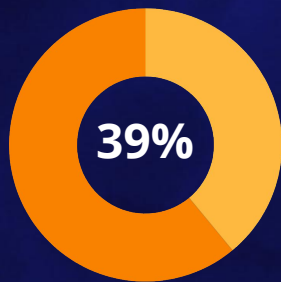
Since its announcement early in 2019, **the adoption of Quarkus** has skyrocketed with **16% of developers now using the framework.**

What architectural approach do you plan to use for implementing your Java systems in the cloud?

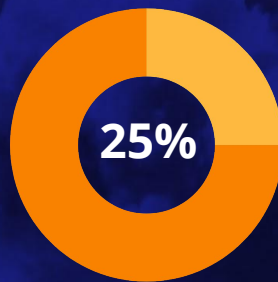


The popularity of microservices may be waning, with **the usage of the microservices architecture for implementing Java systems in the cloud declining** since last year (39% in 2020 vs 43% in 2019).

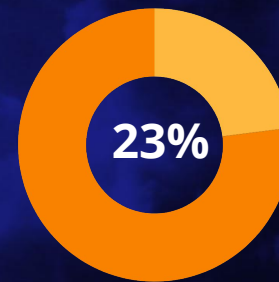
What architectural approach do you plan to use for implementing your Java systems in the cloud?



Microservices
(43% in 2019)



Monolithic
(13% in 2019)



Hybrid
(20% in 2019)

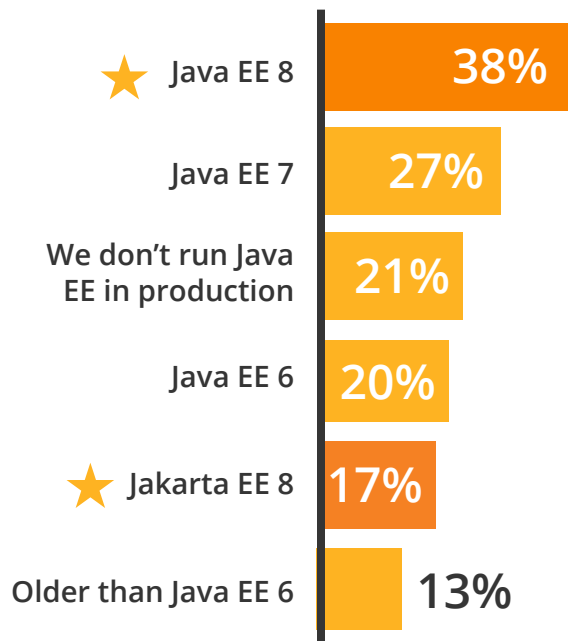
Use of the monolithic architecture approach has doubled since last year. The market seems to be less interested in re-architecting legacy applications to run as microservices, possibly because CIOs have realized that the fastest way to the cloud is 'lift and shift'.



JAKARTA EE

The Jakarta EE community is looking for better support for microservices in the platform. Combined with the **decline in adoption of Spring Boot** and the **rise of Jakarta EE**, the takeaway here may be that developers are looking past single vendor microservices frameworks in favor of vendor-neutral standards for building Java microservices.

What version of Java EE/Jakarta EE is your organization running in production?



★ **Java/Jakarta EE 8** hits the mainstream with **55% adoption**.

★ Despite only shipping in September 2019, **Jakarta EE 8 usage has skyrocketed to 17%.**



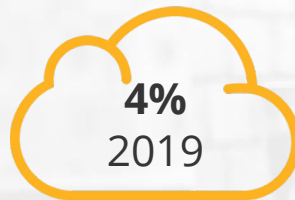
Driven by the contributions of a diverse global community of dedicated developers and vendors, **Jakarta EE 8**, the first major Jakarta EE release by the Eclipse Foundation, **has seen explosive growth** with **more Compatible Implementations certified as Full Platform Compatible Products in 8 months** than Java EE 8 has in over **2 years**.



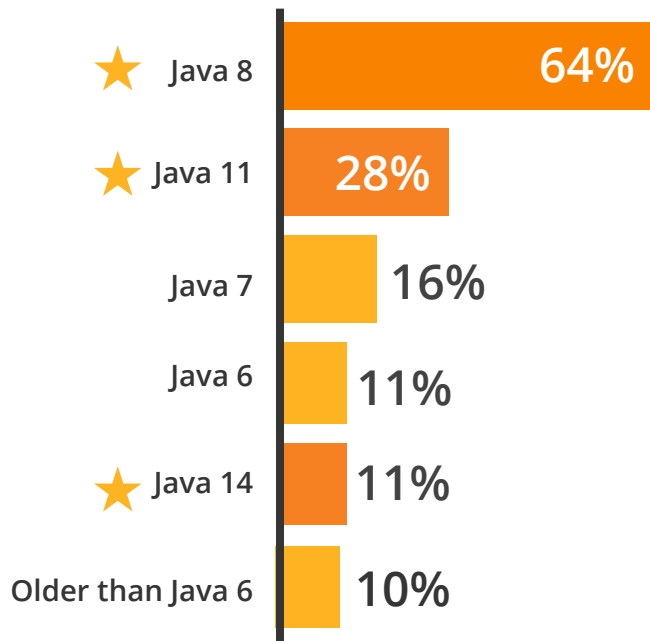
Eclipse Che



Eclipse Che's adoption has surged with reported usage growing from **4%** in 2019 to **11%** in 2020.



What version of Java SE is your organization running in production?

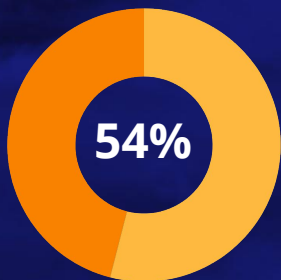


★ **Java 8 adoption has decreased to 64%** (84% in 2019). This is an indicator that developers are finally moving away from Java 8 and Java 11 is replacing Java 8 as the default Java.

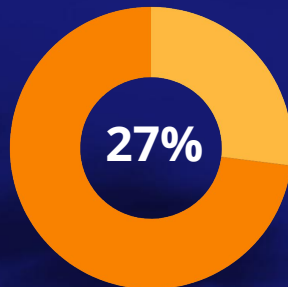
★ **Java 11 use has surged to 28%** (20% in 2019).

★ **Java 14 use is sitting at 11%.** Java 14 uptake may be due to the cloud providers looking to stay on the latest and greatest

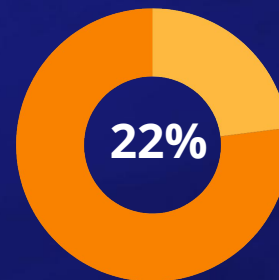
Which container orchestration technologies
are you using for cloud native applications?



Kubernetes



Docker Swarm

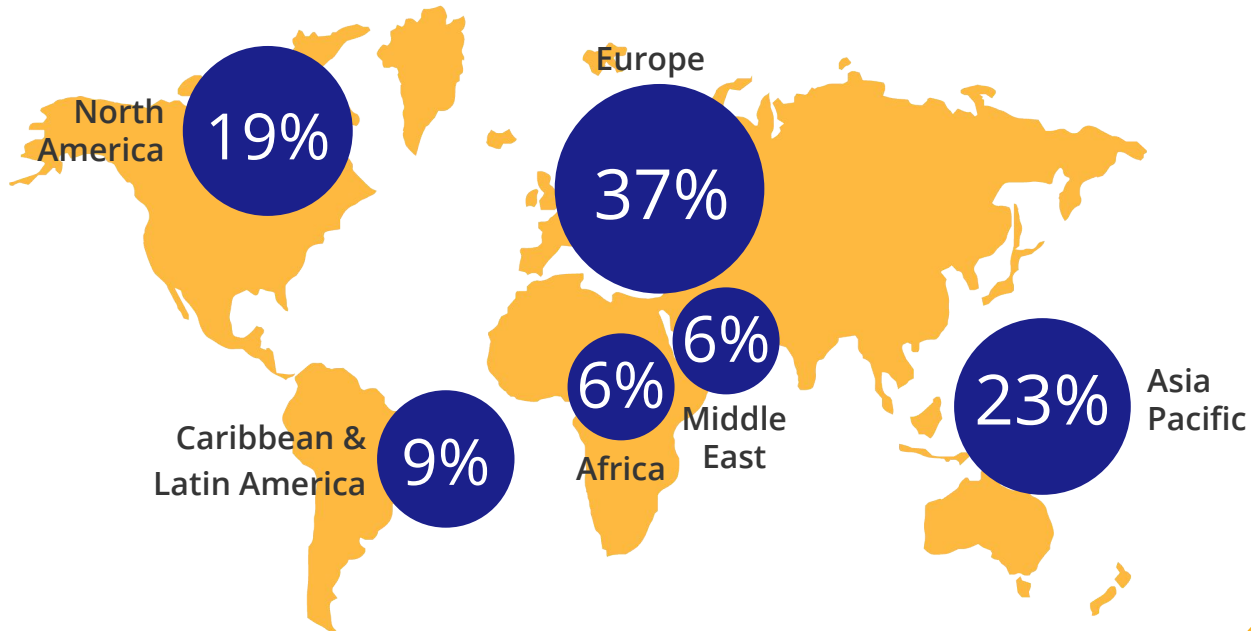


Apache mesos

Demographics

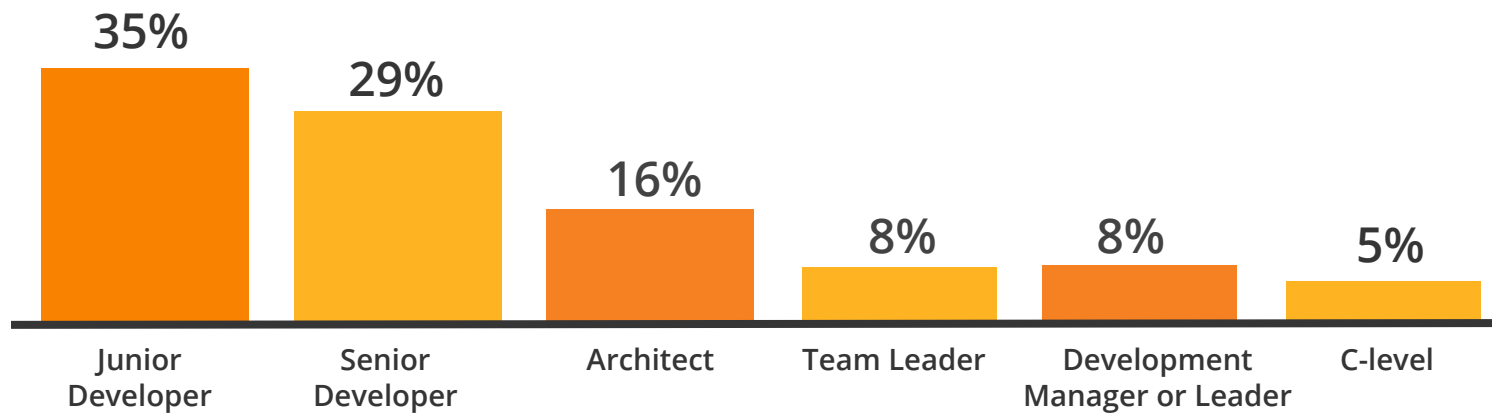
Regions

What region are you located in?



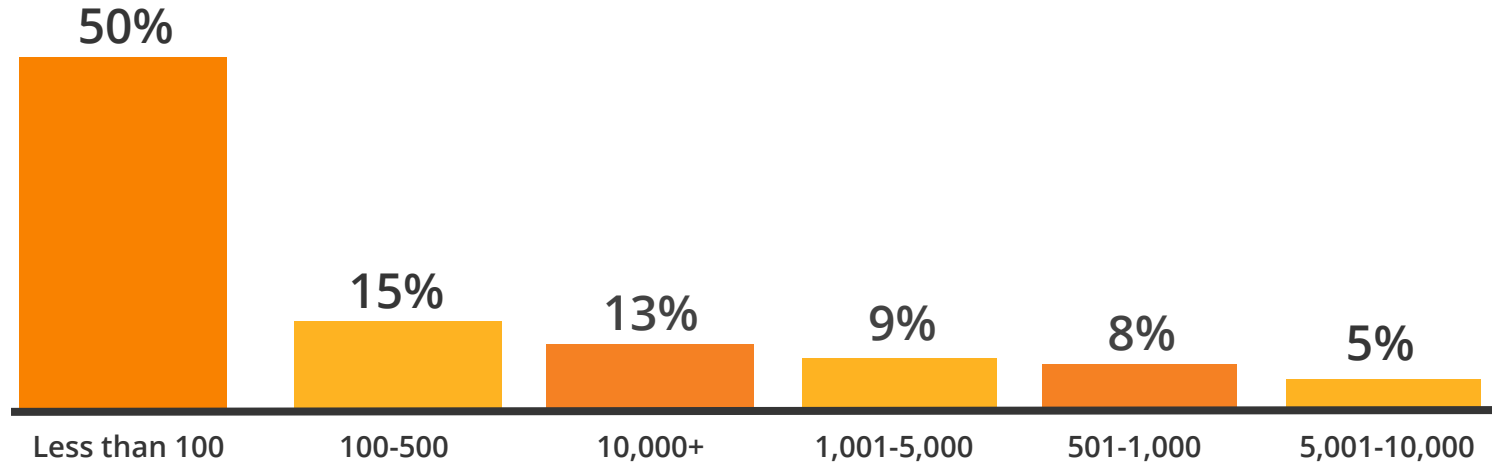
Roles

What best describes your role?



Employees

How many employees work in your organization?



Industries

What industry do you work in?



IT

22%



Software

19%



Computer & Electronics
Manufacturing

13%



Education

11%



Financial Services

11%



Government

5%



Retail & Consumer
Services

4%



Telecommunications

3%



Healthcare &
Pharmaceutical

3%



Manufacturing

3%



Energy/Utilities

2%



Hospitality

1%

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