

From Java 8 to Java 11



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bit.ly/waes-java11

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- New release lifecycle
- Changes in Oracle JDK
- OracleJDK Alternatives

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- Java 9
- Java 10
- Java 11
- Upgrading

10



- Java 17 roadmap
- GraalVM

Java SE versions before

Version	General Availability	End of free public updates	End of extended support
JDK Beta	1995	/	/
...			
Java 6	December 2006	April 2013	December 2018
Java 7	July 2011	April 2015	July 2022
Java 8	March 2014	January 2019	March 2025
Java 9	September 2017	March 2018	/

Java SE versions now

Version	General Availability	End of free public updates (OpenJDK)	End of extended support (OracleJDK)
Java 8 (LTS)	March 2014	January 2019	March 2025
Java 9	September 2017	March 2018	/
Java 10	March 2018	September 2018	/
Java 11 (LTS)	September 2018	March 2019	September 2026
Java 12	March 2019	September 2019	/
Java 13	September 2019	March 2020	/
...			
Java 17 (LTS)	September 2021	March 2022	September 2029?

OracleJDK key changes

- OracleJDK code \cong OpenJDK code
- OracleJDK not free to run in production.
 - Many kind of licenses.



Alternatives?



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Java 9

91 features

JShell

Private methods in interfaces

Utility methods in Streams

Utility methods in Optionals

Collections "of" factory methods.

StackWalker

Modules

Jlink

Java 10

12 features

Local Variable Type Inference

Immutability helpers

Optional.orElseThrow

Improved container awareness

Java 11

18 features
7 modules
removed

Java HTTP/2 client

var in lambdas

Shebang

New String methods

Optional.isEmpty()

Predicate.not()

Java Flight Recorder

Removed modules

When upgrading to Java 11...



Choose your JDK vendor



Don't rush to use
modules

It's unlikely that you can
leverage jlink for now



Add missing modules as
dependencies if needed

Test all workflows in
your application



Make your application work and then start
using new features



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Java 17 roadmap

- Project Amber
 - Syntactic sugar
- Project Valhalla
 - Valued types and specialized generics
- Project Loom
 - Improving multithreading performance
- Project Metropolis
 - JVM rewritten in Java

Interesting projects

- [OpenJ9](#)
- [GraalVM](#)
 - [Micronaut](#)
 - [Quarkus](#)
 - [Helidon](#)

- Slides: bit.ly/waes-java11
- Code: github.com/cesdperez/java8-to-java11-demo
- [Tool] [sdkman!](#)
- [Reading] [Java is still free](#)
- [Presentation] [Exploring Java 9: The Key Parts by Venkat Subramaniam](#)
- [Presentation] [Var with Style by Stuart Marks](#)
- [Presentation] [JIT and AOT in OpenJ9 with Mark Stoodley](#)
- [Presentation] [GraalVM for Java developers by Oleg Šelajev](#)