

# Java SE Platform JSR Status

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# Done!

## JSR 395: Java SE 20

- Final Release: 2023/03/08
- Specification
  - 4 JEPS
    - [432](#): Record Patterns (Second Preview)
    - [433](#): Pattern Matching for **switch** (Fourth Preview)
    - [434](#): Foreign Function & Memory API (Second Preview)
    - [436](#): Virtual Threads (Second Preview)
  - JSR 269 MR 14: Pluggable Annotation-Processing API
  - 74 CSRs
- RI: [JDK 20](#)
- TCK: JCK 20

# Mostly done

## **JSR 337 MR 5: Java SE 8**

## **JSR 384 MR 2: Java SE 11**

- Maintenance Release: 2023/05/09
- Proposal: [JSR 337 MR 5](#), [JSR 384 MR 2](#)
- Specification
  - (337, 384) GB 18030-2022 Implementation Level 2
  - (384) `java.specification.maintenance.version`
- RI: [JDK 8u43](#), [JDK 11.0.0.1](#)
- TCK: JCK 8d, JCK 11a
- Changes contributed to OpenJDK's July Security releases (8u382, 11.0.20)

# JSR 396: Java SE 21

## Specification

- No DRAFTs yet; first expected soon
- Public Review expected this July

## Reference Implementation (RI) – JDK 21

- Latest: <https://jdk.java.net/21> (build 26)
- Repository: <https://github.com/openjdk/jdk21>
- Rampdown Phase 1 (RDP1)
  - Feature set frozen
  - Development limited to selected bug fixes
- 12 Integrated SE JEPs; 116 approved SE CSRs
- General Availability (GA): 2023/09/19

## Technology Compatibility Took Kit (TCK) – JCK 21

- Approaching new test freeze and stabilization fork

## Schedule *(start dates)*

2022/12/07  
Expert Group Formation

2023/07 – 2023/08  
Public Review

2023/08  
Public Review –  
Final Approval Ballot

2023/09  
Final Release

# JEPs in Java SE 21

## Language

- [440](#) Record Patterns
- [441](#) Pattern Matching for `switch`
- [430](#) String Templates (Preview)
- [443](#) Unnamed Patterns & Variables (Preview)
- [445](#) Unnamed Classes & Instance `main` Methods (Preview)

## Virtual Machine

- [451](#) Prepare to Disallow the Dynamic Loading of Agents

## Libraries

- [431](#) Sequenced Collections
- [444](#) Virtual Threads
- [442](#) Foreign Function & Memory API (Third Preview)
- [446](#) Scoped Values (Preview)
- [453](#) Structured Concurrency (Preview)

## Security

- [452](#) Key Encapsulation Mechanism API

# Other notable changes in Java SE 21

116 Compatibility & Specification  
Review (CSR) Requests

<https://bugs.openjdk.org/issues/?filter=43361>

1 JSR Maintenance Release  
269: Pluggable Annotations  
Processing API [MR15]

3 Removed APIs

`java.lang.Compiler` (9)  
`java.lang.ThreadGroup`  
    `.allowThreadSuspension(boolean)` (14)  
`javax.management.remote.rmi`  
    `.RMIIOPServerImpl` (9)

2 Terminally Deprecated APIs Added

`javax.management.remote.JMXConnector`  
    `.getMBeanServerConnection()`  
`javax.swing.plaf.synth.SynthLookAndFeel`  
    `.load()`

# JSR 397: Java SE 22

## Specification

- No DRAFTs yet
- Public Review expected after the new year

## Reference Implementation (RI) – JDK 22

- Latest: <https://jdk.java.net/22> (build 1)
- Repository: <https://github.com/openjdk/jdk>
- Active development on all relevant \*-dev mailing lists
- General Availability (GA): 2024/03

## Technology Compatibility Took Kit (TCK) – JCK 22

- First promotion expected after JCK 21 GA

## Schedule *(start dates)*

2023/06/01  
Expert Group Formation

2024/01 – 2024/02  
Public Review

2024/02  
Public Review –  
Final Approval Ballot

2024/03  
Final Release

# Resources

- <https://openjdk.org/projects/jdk/21/spec/>
  - <https://jcp.org/en/jsr/detail?id=396>
  - JEPs: <https://bugs.openjdk.org/secure/Dashboard.jspx?selectPageId=21418>
  - CSRs: <https://bugs.openjdk.org/secure/Dashboard.jspx?selectPageId=21419>
  - <https://mail.openjdk.org/mailman/listinfo/java-se-spec-experts>
  - <https://jdk.java.net/21/>
- <https://openjdk.org/projects/jdk/22/spec/>
- <https://mail.openjdk.org>
- <https://github.com/openjdk>