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](https://jdk.oracle.com)
- 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/
  - JEPs: https://bugs.openjdk.org/secure/Dashboard.jspa?selectPagId=21418
  - CSRs: https://bugs.openjdk.org/secure/Dashboard.jspa?selectPagId=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