

Adoptium Working Group Program Plan 2024

Draft Proposal
Approved by Adoptium Steering Committee - 09 november 2023

2024

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Contents

- **Our Mission**
- **Program Objectives**
- **Strategies and Tactics**
- **Member Participation**
- **Project Priorities**
- **Key Metrics**



Our Mission

Working Group Mission Statement



Advance, promote and support projects structured around the Adoptium top-level project for the creation and dissemination of runtime and associated technologies including producing high quality runtimes for use across the Java ecosystem.

Technical Projects – Areas of Endeavor

- > **Runtimes and Development Kits:** deliver high quality, consumable, open source Java SE binaries across various API versions, on a wide variety of processor architectures and operating systems, made available through platform native installers, Docker container images, a website, API, and artifact repositories.
- > **Quality Assurance:** operate a robust, secure supply chain, framework, and associated tests for trusted quality determination of key functional, performance, security, and durability criteria. Provide infrastructure and tools to simplify running Java SE TCKs to ensure compliance to the specification.
- > **Secure Development:** deliver secure, reproducible binaries. Including all of the associated information required to validate and verify the security of our deliverables.
- > **Innovation and differentiation:** enable participants to explore technical opportunities in areas of endeavor and build upon the commons to provide commercial differentiation.



Program Objectives

Program Objectives

1. Vibrant Healthy Projects

2. Maintain Product Usage

3. Innovation that Matters

4. Secure Development

1. Ensure Adoptium's projects thrive by providing excellent community health, technical resource, and marketing support for their success.
2. Maintain Adoptium as the industry's top vendor-neutral source of secure, high-quality open source Java runtimes.
3. Identify new technical collaboration opportunities across Eclipse projects and beyond.
4. Deliver secure, reproducible binaries. Including all of the associated information required to validate and verify the security of our deliverables.



Strategies and Tactics

1. Vibrant Healthy Projects: Program Strategies and Tactics

Program Goal	Corresponding Strategies and Tactics
<p>Ensure Adoptium's projects thrive by providing excellent community health, technical resource, and marketing support for their success.</p>	<ul style="list-style-type: none">• Clearly communicate the goals of the projects and working group to the community, and involve the entire community in owning and achieving them through appropriate channels.• Recognize the developer community has autonomy in decision making, defining processes, and technical direction within the scope of the working group charter.• Provide the appropriate tools, computing resources to make developers successful in the long term. Always act in the best interests of the project.• Promote the work of the community through marketing, amplification, and representation. Forge links with other communities as appropriate.• Invite and encourage innovation and experimentation in runtime technology through technical knowledge sharing, upstream collaboration and creation of Adoptium projects.

1. Vibrant Healthy Projects: Achievements and Objectives

2023 Achievements

- Adoptium project communities are a healthy technical and social environment for collaboration. New users are welcomed and encouraged including open calls and localized website.
- Projects are working with delegated responsibility for decision making and progressing work items. Teams are working in the open for the benefit of the broader community.
- PMC are providing coordination and overall awareness across area, achieved with a light touch and consensus decision making. PMC membership has grown.
- Provided required resources across project areas including infrastructure, documentation, and input as requested and within budget.
- New projects welcomed as innovation hubs for collaboration.

2024 Objectives

- Continue to support Adoptium community and growth through student programmes, public availability of tasks for onboarding new members and areas of responsibility to grow experienced members.
- Ensure information dissemination throughout the Adoptium community by consistently sharing plans and operations data to ensure a common goal.
- Update the long term marketing plan for the Adoptium brands, focused on an enterprise user audience.
- Build associations across Eclipse Foundation and beyond to deliver Java runtime technology needs and support Java runtime development.

2. Maintain Product Usage: Program Strategies and Tactics

Program Goal	Corresponding Strategies and Tactics
<p>Maintain Adoptium as the industry's top vendor-neutral source of secure, high-quality open source Java runtimes.</p>	<ul style="list-style-type: none">• Embed Adoptium's reputation in the industry for high quality, on-time deliveries of Java SE binaries.• Provide a compelling website to reflect the maturity and position of the product and brand in the market. Build secure and scalable distribution channels for Adoptium.• Build upon the industry leading secure engineering practices of Eclipse Temurin runtimes.• Promote the enhanced assurance program for AQAvit tested binaries to be accredited and distributed by Adoptium.• Convert product usage into support from enterprise users.

2. Maintain Product Usage: Achievements and Objectives

2023 Achievements	2024 Objectives
<ul style="list-style-type: none">● Delivered each quarterly update and new feature release at the high-quality level set by the project and expected by the community.● Achieved all the deliverables using infrastructure, documentation, and assets as requested by the projects and within budget.● Significantly improved delivery times of Eclipse Temurin artifacts compared to 2022.● Comparison build pipeline established at Adoptium to ensure builds are reproducible.● Progressed redesign of the Adoptium website to improve delivery of Temurin to customers.	<ul style="list-style-type: none">● Further promotion and education of the Temurin distribution channels including GitHub actions, containers, API, marketplace, and distribution managers.● Targeted alliances around the usage of Temurin in middleware and popular framework stacks.● Develop and distribute marketing materials to clearly communicate the AQAvit value statement to enterprise users, architects, and technical execs.● Complete the redesign of the Adoptium website and make progress on its implementation.● Further improve the delivery process of Temurin for all artifacts, including installers and container images, to improve time to market

3. Innovation that Matters: Program Strategies and Tactics

Program Goal	Corresponding Strategies and Tactics
<p>Identify new technical collaboration opportunities across Eclipse projects and beyond.</p>	<ul style="list-style-type: none">• Reach out to existing Eclipse projects that depend upon Java runtimes and understand their requirement for availability and delivery.• Develop stack-optimized runtimes containing Eclipse technology for target markets, including IoT, development, middleware servers, and Cloud deployment.• Encourage experimentation and innovation in the Adoptium Incubator with a view to productive collaboration in broader communities such as OpenJDK development, vendor groups, etc.• Provide new services such as bug prediction analytics, decentralized testing, etc. including relevant communities wherever possible.

3. Innovation that Matters: Achievements and Objectives

2023 Achievements	2024 Objectives
<ul style="list-style-type: none">● Collaborations with other vendors to promote security vulnerability and secure engineering opportunities.● Welcomed further work in the Adoptium incubator for fast startup, and migration toolkit for Java to the project.● Engaged with interested parties including Bloomberg, Canonical, and Fujitsu to provide Adoptium technology customised for corporate interests.● Worked with external academic and placement partners including Outreachy to advance students and innovate in Adoptium projects.● Promoted secure development innovations of Adoptium at EclipseCon 2023.	<ul style="list-style-type: none">● Grow AQAvit definition to reflect working group areas of interest, business demands, and technical dependencies.● Utilize historical results for testing trend analysis and prediction. Enhancing the testing summary service capabilities to optimise triage tasks.● Provide resources to facilitate optimal Java development experiences and devops integration under Project Tressle. Actively seek out new opportunities.● Engage with Foundation projects and beyond to define reference architectures for runtime technology stacks and verticals aligned with working group areas of interest (emerging processors, edge, IoT, automotive, etc.).

4. Secure Development: Program Strategies and Tactics

Program Goal	Corresponding Strategies and Tactics
<p>Deliver secure, reproducible binaries. Including all of the associated information required to validate and verify the security of our deliverables.</p>	<ul style="list-style-type: none">• Ensure we have a trusted supply chain for our dependencies and follow industry best practices for secure software development.• Select the accepted criteria for industry certification and provide relevant attestation for all users.• Utilize security expertise beyond the project including but not limited to an external security audit.• Provide open and consumable information relating to vulnerabilities in our products.

4. Secure Development: Achievements and Objectives

2023 Achievements	2024 Objectives
<ul style="list-style-type: none">• Achieved SLSA v0.1 Build Level 3, provided attestation via Eclipse Foundation project page.• Provided reproducible builds for major platforms with contributions to OpenJDK and the development of a reproducible build pipeline at Adoptium• Published SBOMs with all binaries that have enough detail for users to produce binary identical builds using the Temurin SBOM data.• Started work on vulnerability disclosure report for Temurin, registered Temurin on the NIST CPE directory, and migrated GitHub org/repo management to Eclipse Otterdog• Infrastructure secured via deployment of “Wazuh” security platform to proactively monitor all machines at Adoptium.	<ul style="list-style-type: none">• Achieve SLSA v1.0 Level 3 (for primary platforms).• Provide a mechanism for the external, public verification of Eclipse Temurin builds via the reproducible build capability.• Complete an external security audit and apply critical fixes identified.• Enhance security of Temurin build pipelines through evaluation and adoption of best in class CI/CD systems following OpenSSF best practices.• Define a Temurin standard security repository policy in Otterdog to unify source code access and management.• Provide annual attestations for security policies applied at Adoptium.



Member Participation

Working Group Member Asks

- > **Follow and engage with @ on X and LinkedIn**
 - Please use #adoptium hashtags whenever relevant in your posts
 - Ask your company's social media manager to follow and RT from official handles including @adoptium
 - Please share news and updates with your own personal networks
- > **Share your project-related news and announcements with news@eclipse.org**
 - Let us know 4-6 weeks in advance of a newsworthy project milestone, so we can draft an announcement, pitch to media, and/or schedule briefings with Mike Milinkovich and the Project Lead
- > **Author blog posts that mention Adoptium or related projects**
 - Write a post about your experience as a member of the Adoptium community
 - We welcome posts that talk about your commercial enhancements and value from the Adoptium work
- > **Share your use cases and success stories with news@eclipse.org**
 - Let us know how you are using Temurin
- > **Volunteer to give a webinar / host a virtual meetup**
 - Fill out this form: <https://forms.gle/KJQ7T3a3V5NZPLEdA>
 - Virtual meetups managed through meetup.com: <https://www.meetup.com/Virtual-Eclipse-Community-MeetUp/>
- > **Submit talks to CFPs for Adoptium awareness in conference and meet-ups**

Working Group Member Goals

As a Working Group Member you are expected to understand and help with promoting the work of the Adoptium group and projects.

The following is a recommended schedule of such engagement.

Program	All Members
Blogs Postings on Adoptium Topics	1/quarter
Project-related Social Media Posts from Official Channels	1/month
AQAvit Case Studies/Use Cases Shared	1/year
Adoptium Webinar/Conference	1/year
Adoptium Chat/Video/Interview	2/year



Project Priorities

Working Group Resources Primary Focus

- > **Deliver secure, high-quality, and timely Temurin binaries on core platforms**
 - Core platforms are defined by the Adoptium PMC (see later slide).
 - Temurin's supported binaries are derived from OpenJDK long term supported source streams and the latest dev stream release. Presently that is 8u, 11u, 17u, 21u.
 - The duration of community supported binaries is defined by the Adoptium PMC and shown on [the Adoptium website](#).
- > **Budget and resources first call is on the primary focus area**
 - Maintain sufficient infrastructure and community focus to allow the Adoptium TLP to deliver the primary focus area.
 - Includes build, test, TCK compliance, installers, Docker images, download site, API support, marketing, IP processes, etc.
- > **Maintain and promote the AQAvit verified Java SE binaries in the marketplace**
 - Operate and promote the marketplace containing a wide range of binaries that pass the Java SE TCK and the AQAvit Quality Verification Suite criteria.

Secure Supply Chain and Software Engineering

> Secure software development and supply chain management

- Meet demands of the [NIST SSDF framework](#) across four themes:
 - Ensure our community, processes, and technology are designed for secure software development.
 - Protect all components of the process and software from tampering and unauthorized access.
 - Produce well-secured software with minimal security vulnerabilities throughout.
 - Respond appropriately to vulnerabilities and prevent similar vulnerabilities from occurring in the future.
- Achieve [SLSA v1.0 Level 3](#) accreditation of Adoptium's supply chain level for primary platform software artifacts.

> Binary identical build verification with complete Software Bill of Materials

- Maintain Temurin build process to facilitate external build verification and audit through byte-level reproducible build processes.
- Publish a comprehensive SBOM describing the deliverables, and the build environment used to create them.

> Enhancements to compliance testing

- Explore options such as automation of the manual tasks and broader community engagement to reduce the time to complete compliance testing, improving our time to market, and reducing developer workload.

Enable Additional Areas of Community Interest

As resources allow, we will also:

> **Additional platforms**

- Support development and delivery activities on secondary and “in-development” platforms, as defined by the Adoptium PMC.

> **Additional code streams**

- Support the build and test (but not JCK certify or release) other code streams beyond the core and secondary platforms.
 - Other code streams include, for example, Bisheng, Corretto, Dragonwell, OpenJ9, and SAPMachine plus early access code stream of OpenJDK projects.
- Provide consumable build and test environments across a wide variety of platforms to support WG members’ developers in OpenJDK (Project Trestle).
 - Build around the AQAvit test suite, and support platforms not well served by existing OpenJDK automated testing.

Strategic Marketing Activities and Events

- > **Maintain a long-term marketing plan for Adoptium**
 - Build upon Adoptium's success and reputation in the industry to further embed the Adoptium brand using our principles and objectives.
 - Target enterprise organizations, architects, and technical execs with a value statement for a free, open, and durable Java solution. Aim to grow adoption and membership and participation in the working group.
- > **Build relationships with leading projects dependent upon Java runtimes**
 - Engage with influential brands and projects to provide fit for purpose runtime solutions, including package content, delivery formats, and channels.
- > **Promote AQAvit**
 - Celebrate the vendors providing AQAvit-verified runtimes in the marketplace and ensure the ecosystem understands the value of that verification achievement.
 - Build the reputation of AQAvit as an open, trusted quality test suite and framework that vendors should look to verify their runtimes, and that end users and businesses should demand when selecting their Java runtime.

Strategic Marketing Activities and Events

> Events

- Drive awareness, promote adoption, and build community through sponsorship/participation at relevant conferences/events.

> Convert product usage into support from enterprise users

- Build a marketing story to convert Enterprise users into project supporters.

> Adoptium Swag Store

- Promote the brand and nurture community engagement by implementing and maintaining a SWAG store

Accelerate Innovation

- > **Raise awareness of Adoptium Incubator**
 - Promote further participation in incubator projects to enable exploration and evaluation of new technical areas.
- > **Participate in programs for educating and advancing our community**
 - Continue to sponsor and mentor student programs for new participants, students, and researchers.
 - Promote project opportunities to solve interesting and challenging problems in the scope of the project, including test analysis, secure software development and distribution, enhanced performance and modern workload optimisation.
- > **Focus on faster delivery**
 - Innovate in infrastructure, processes, and techniques for faster delivery of Temurin runtimes.
 - Continue to monitor and record key points in all Adoptium processes to determine opportunities.

Consider Stopping

- > **Builds for platforms with minimal download count or customer interest**
 - Adoptium builds 16+ platforms and collects direct download statistics for each. Platforms need to be individually evaluated for their effort-to-benefit ratio and considered for elimination.
 - The greatest cost to the project is the release work required. Releasing an individual platform across all four major Java versions represents about 4 days of engineering time every release. With 4-6 releases a year that is about 16-24 days that could be saved and used to implement fixes and enhancements that have long term benefit to the project.
 - AIX and zSeries were moved into non-primary platform status. These platforms have low download counts, and the technical projects struggle to resource them in machine and triage/release engineers.
 - Platforms that are not being actively maintained and kept up to date at OpenJDK will be removed from Temurin distribution.

Eclipse Temurin LTS Platform Focus

Details of specific supported processors and OS versions [are published on the Temurin website](#).

Core platforms are constantly reviewed by the PMC.

Binaries will be released in prioritised phases as decided by the PMC.

Core platforms receive preferential funding from the project.

Key



Core Funding Focus



Additional Funding



Unavailable

tbd

To be determined

Platforms (CPU/OS family)	Temurin v8	Temurin v11	Temurin v17	Temurin v21	Notes
x64 Linux	✓	✓	✓	✓	
x64 Windows	✓	✓	✓	✓	
x64 macOS	✓	✓	✓	✓	
x32 Windows	◆	◆	◆	✗	
aarch64 macOS	✗	✓	✓	✓	v11 onwards only
ppc64le Linux	✓	✓	✓	✓	
ppc64 AIX	✓	✓	✓	◆	
aarch64 Linux	✓	✓	✓	✓	includes Apple silicon
aarch64 Windows	✗	✗	✗	tbd	in development
aarch64 Alpine Linux (musl)	✗	✗	✗	◆	V21 onwards only
arm32 Linux	◆	◆	◆	tbd	
s390x Linux	✗	✓	✓	◆	v11 onwards only
RISC-V 64 Linux	✗	✗	✗	tbd	in development
SPARCv9 Solaris	◆	✗	✗	✗	v8 only
x64 Solaris	◆	✗	✗	✗	v8 only
x64 Alpine Linux (musl)	✓	✓	✓	✓	v8 requires upstreaming



Key Metrics

Key Performance Indicators

Metric	October 2021	October 2022	October 2023	Target 2024
Direct Downloads of Temurin Releases Downloads of AdoptOpenJDK+Temurin	4.5M 339M	75.9M 412M	254M 777M	500M 1B
Committers across all Adoptium Projects	8 (Adoptium TLP) 20 (Temurin) 15 (AQAvit) 11 (Temurin compliance) 3 (Mission Control) 14 (Incubator) --- 71 TOTAL	10 (Adoptium TLP) 21 (Temurin) 16 (AQAvit) 25 (Temurin compliance) 3 (Mission Control) 13 (Incubator) --- 88 TOTAL	13 (Adoptium TLP) 21 (Temurin) 17 (AQAvit) 26 (Temurin compliance) 4 (Mission Control) 13 (Incubator) --- 94 TOTAL	13 (Adoptium TLP) 21 (Temurin) 17 (AQAvit) 26 (Temurin compliance) 4 (Mission Control) 13 (Incubator) --- 94 TOTAL
Weekly active Slack members (within last 30 days)	210	125	143	
Working Group Members	10	12	12	15
Sponsors	2 agreements (GitHub unavailable)	3 agreements 6 GitHub	3 agreements 7 GitHub	25% growth
OpenSSF scorecard average for GitHub org	n/a	n/a	X	7
Blogs on adoptium.net	6	11	16	25

Key Performance Goals

- > **Release the primary platforms within 2 days[†].**
 - Deliver high quality Java runtimes in “cloud-time”.
 - Gather and monitor release process statistics, and respond to lessons learned in retrospectives.
- > **Release the secondary platforms within 7 days[†].**

Metric	2022 CPU Updates	2023 CPU Updates
Percentage of Tarballs Released Within Target	34.94%	78.98%
Average Days for Primaries	7.36	2.15
Average Days for Secondaries	9.96	4.91

[†] Measured as elapsed time from the relevant OpenJDK source code being made publicly available

[Calculated From Scorecards](#)



Thank you!