



Adoptium Working Group Program Plan 2023

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Plan Update

Feb 2023 : Eclipse Temurin LTS Platform Priorities updated



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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.
- > **Vendor-neutral Marketplace:** provide a managed location for working group members to publish high-quality Java SE compliant runtimes that pass the AQAvit quality verification suite.
- > **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. Increase Product Usage

3. Innovation that Matters

4. Grow Membership and Involvement

1. Ensure Adoptium projects thrive by providing excellent community health, technical resource, and marketing support for their success.
2. Establish Adoptium as the industry's top vendor-neutral source of secure, high-quality open source Java runtimes.
3. Identify technical collaboration opportunities across Eclipse projects and beyond.
4. Increase the developer and working group membership to further grow our inclusive, diverse, and robust community.



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 working group to the technical project 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.• 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

2022 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 areas have 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. PMC membership 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.

2023 Objectives

- Continue to engage with Adoptium community and growth through student programmes, public availability of tasks and responsibility, and closer engagement with external projects.
- Ensure information dissemination throughout the Adoptium community by consistently sharing plans and operations data to ensure a common goal.
- Create a longer term marketing plan for the Adoptium brand focused on enterprise user audience.
- Increase promotion of the work of the community through marketing, amplification, and representation based upon an agreed marketing plan.
- Build associations across Eclipse Foundation and beyond to deliver Java runtime technology needs.

2. Increase Product Usage: Program Strategies and Tactics

Program Goal	Corresponding Strategies and Tactics
<p>Establish Adoptium as the industry's top vendor-neutral source of secure, high-quality open source Java runtimes.</p>	<ul style="list-style-type: none">● Build upon Adoptium's reputation for high quality, on-time deliveries of Java SE binaries. Establish a compelling website, API, installer, container images, and archives to support user needs.● Establish industry leading secure engineering practices and reproducible builds for the robust production of Eclipse Temurin runtimes.● Create an enhanced assurance program for AQAvit tested binaries to be accredited and distributed by Adoptium.● Have a comprehensive education and marketing program to promote the benefits of Adoptium binaries.● Develop and distribute marketing materials to clearly communicate the Adoptium value statement to prospective participants.

2. Increase Product Usage: Achievements and Objectives

2022 Achievements	2023 Objectives
<ul style="list-style-type: none">• Adoptium is recognised in the industry as the leading provider of high-quality, long-term supported, community built Java runtimes.• Temurin images are integral parts of leading enterprise software stacks such as Maven, Jenkins, Tomcat, Jetty, Apache Spark, ...• Temurin is directly supported by three commercial offerings (Azul, IBM, Red Hat).• Reproducible builds established at Adoptium to secure the build process; software bill of materials established to secure the supply chain; and code signing for secure distribution.• Multiple external parties running AQAvit tests and tooling on their runtimes.	<ul style="list-style-type: none">• Achieve industry recognized secure software engineering goals in SSDF and SLSA frameworks to enable users to mitigate risk and ensure compliance.• Further promotion and education of the Github actions, containers, API, marketplace, and distribution managers supporting Temurin availability.• 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.

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

2022 Achievements	2023 Objectives
<ul style="list-style-type: none">• Have established mutual working goals with commercial vendors including Alibaba, IBM, Microsoft, Red Hat to provide technology that can be customised for corporate interests.• Collaborations with other vendors to promote security vulnerability and secure engineering opportunities.• Working with external academic and placement partners including CanOSP, Outreachy, Grace Hopper ZHAW IT, iJUG, Hacktoberfest, Jumpstart to advance students and innovate in Adoptium projects.• Welcomed further work in the Adoptium incubator for fast startup, and migration toolkit for Java to the project.	<ul style="list-style-type: none">• Grow AQAvit definition to reflect working group areas of interest, business demands, and technical dependencies.• Utilize temporal 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. 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. Vendor-neutral marketplace: Program Strategies and Tactics

Program Goal	Corresponding Strategies and Tactics
<p>Provide a vendor-neutral marketplace for eligible Working Group members to promote high-quality Java runtimes.</p>	<ul style="list-style-type: none">• Develop and publish processes for working group members to participate in a marketing programme managed by the group.• Provide robust agreements and processes to ensure the integrity of the marketplace operation and materials being promoted by the working group.• Implement a website and associated API to provide information to end users and allow users to verify the claims of marketplace entries.• Promote the value of the marketplace through working group sponsored initiatives with support of the Eclipse Foundation.

4. Vendor-neutral marketplace: Achievements and Objectives

2022 Achievements	2023 Objectives
<ul style="list-style-type: none">● Marketplace concept designed to allow vendors to directly publish materials with minimal workload required from Eclipse Foundation or project members.● Agreements established to ensure safe operation of the marketplace for publishers and Adoptium.● Marketplace process implemented and made available as a robust API and website. No issues reported.● Successful launch of the marketplace through press releases and blogs.	<ul style="list-style-type: none">● Ensure that the marketplace continues to be useful and relevant to the publishers.● Provide further tracking, marketing and distribution opportunities for participating publishers.● Verify marketplace publishers AQAvit results and utilise the data in bug analysis and prediction.



Member Participation

Working Group Member Asks

- > **Follow and engage with @ on Twitter 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 Resource 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.
 - 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 Level 4](#) accreditation of Adoptium's supply chain level for primary platform software artifacts.

> Binary identical build verification with complete Software Bill of Materials

- Further enhance Temurin build process to facilitate external build verification and audit through byte-level reproducible build processes.
- Publish a comprehensive SBOM describing the deliverables, and 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

> Additional platforms

- As resources allow we will also support development and delivery activities on secondary and “in-development” platforms, as defined by the Adoptium PMC.

> Additional code streams

- As resources allow we will support the build and test (but not JCK 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, for example, Loom and Panama.
- The principle reason for using these code streams is to allow diverse derivatives in the community, and ensure our code is flexible enough to support them.

Strategic Marketing Activities

- > **Create a long-term marketing plan for Adoptium**
 - Build upon Adoptium's success and reputation in the industry to further establish the Adoptium brand around 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 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.
- > **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.

Accelerate Innovation

- > **Raise awareness of Adoptium Incubator**
 - Promote the 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.
 - Move AIX and zSeries into secondary platform status. These platforms have low download counts, and the technical projects struggle to resource them in machine and triage/release engineers. These should be moved from primary to secondary platform status.
- > **Only build secondary platforms at LTS versions**
 - Some platforms do not utilise Java versions that are not LTS supported. Focus effort on LTS releases for those platforms reducing the work there.

Platforms (CPU/OS family)	Temurin v8	Temurin v11	Temurin v17	Temurin v21	Notes
x64 Linux	P1	P1	P1	P1	
x64 Windows	P1	P1	P1	P1	
x64 macOS	P1	P1	P1	P1	
x32 Windows	P2	P2	P2	✗	
Apple Silicon macOS	✗	P1	P1	P1	
ppc64le Linux	P2	P2	P2	P2	
ppc64 AIX	P3	P3	P3	P3	
aarch64 Linux	P1	P1	P1	P1	
aarch64 Windows	✗	✗	Dev	P2	
aarch64 Alpine Linux (musl)	✗	✗	✗	Dev	Headless only
arm32 Linux	P2	P2	P2	P2	
s390x Linux	✗	P3	P3	P3	
RISC-V 64 Linux	✗	✗	Dev	P3	
SPARCv9 Solaris	P3	✗	✗	✗	
x64 Solaris	P3	✗	✗	✗	
x64 Alpine Linux (musl)	P3	P2	P2	P2	Headless only
Apple Silicon Linux	✗	✗	✗	✗	No demand apparent

Eclipse Temurin LTS Platform Priorities

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

Platform priorities are constantly reviewed by the PMC.

P1	Primary platform
P2	Secondary platform
P3	Tertiary platform
Dev	Development builds only
✗	Unavailable



Key Metrics

Key Performance Indicators

Metric	April 2021	October 2021	October 2022
Direct Downloads of Temurin Releases Downloads of AdoptOpenJDK+Temurin	0 250M	4.5M 339M	75.9M 412M
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
Weekly active Slack members (within last 30 days)	?	210	125
Working Group Members	8	10	12
Sponsors	1	2 agreements (GitHub unavailable)	3 agreements 6 GitHub
AQAvit Validated Runtimes in Marketplace	0	0	6
Blogs on adoptium.net	2	6	17

Key Performance Goals

- > **Release the primary platforms within 2 days of the final OpenJDK source code being available.**
 - 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 of the source code availability.**

Release activity	% tarballs published within target
Initial July release	64.3%
JDK 8u345 respin	63.6%
JDK 11.0.16.1+1 respin	90.9%
JDK 17.0.4.1+1 respin	72.7%
JDK 18.0.2.1+1 respin	100%

[Source](#)



Thank you!