Lightning Look at 2022

Eclipse Adoptium in Review

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Adoptium History

▸ Established as community project to protect availability of **free**[dom] and **$free** Java SE binaries across multiple platforms in face of emerging industry licensing changes.

▸ All infrastructure, build, test, packaging code is available as open source software – with vendors encouraged to reuse and extend.

IBM establishes AdoptOpenJDK to distribute unmodified OpenJDK and OpenJ9-based Java SE binaries	Various surveys list AdoptOpenJDK as top installation in the enterprise, recommended by analysts like Gartner.	Moves to Eclipse Adoptium for governance, WG members now include Red Hat, Alibaba Cloud, Azul Systems, Huawei, IBM, iJug, Microsoft, Bloomberg, Google, Rivos, Karakun	**5 years**
2017	2020	2021	2022

Adoptium Today

520M+ downloads

~200k downloads per day from API+Docker
~50k unique website visits per day, plus
95TB/month rpm|deb installers, Github
actions at 1.5PB/month
Docker images, Github actions, GUI installers,
package managers, API.

3800+ community members

270,000+ messages on Slack to date
10.6K followers on Twitter

~~166~~ 206 releases in 2022

Java 8 LTS, 11 LTS, 17 LTS, +latest
on Linux, Windows, MacOS, Solaris, AIX,
Alpine – across x64, x86, aarch64, ARM32,
PPCle, PPCbe, Apple silicon, SPARC, s390x

~350,000 tests per release

Oracle TCK for compliance and
AQAvit tests for release quality checks

Multi-stream builds

early access, nightlies, JDKs, JREs,
debug images, test images, static libs,
prominent OpenJDK project streams

Multi-project structure
Temurin,
AQAvit,
Temurin Compliance,
Incubator,
Mission Control,
Migration Toolkit for Java

ADOPTIUM

Adoptium Projects Activity in 2022

- ▸ **Adoptium (7 – 3 archived = 4 active repositories, 3385 commits)**

    - · **Temurin (26 repositories including mirrors/binaries, 795 commits)**

    - · **AQAvit (7 repositories, 796 commits)**

    - · **Temurin Compliance**

    - · **Mission Control (1 repository, 30 commits)**

    - · **Migration Toolkit for Java | EMT4J (1 repository, 24 commits)**

    - · **Incubator (2 repositories)**
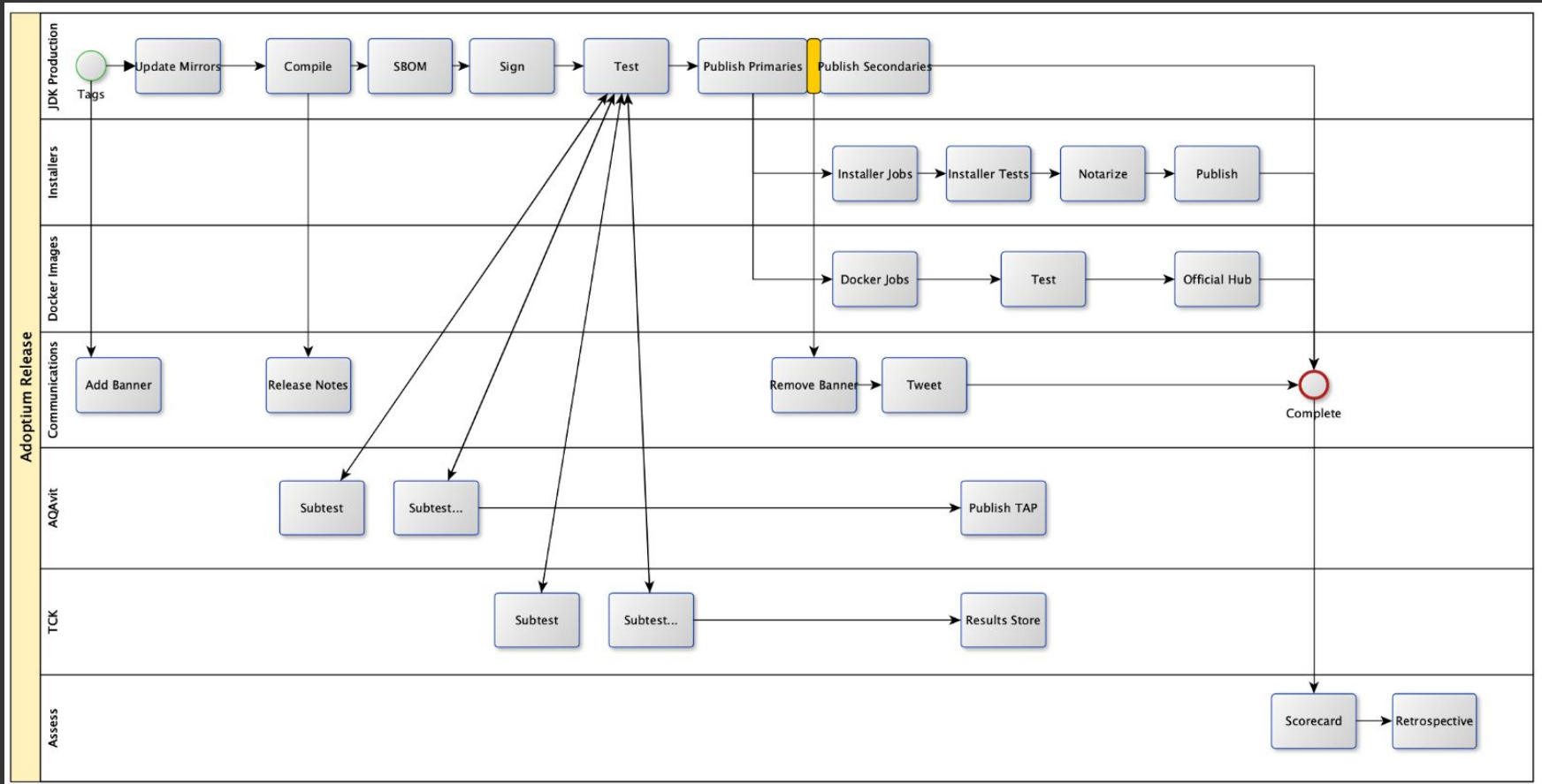
Adoptium Highlights

- **Growth**

  - 3 new working group members (Bloomberg, Rivos, Google), new sponsors

  - 3 new PMC members, new community manager (San Hong, Lan, Andrew, Carmen)

  - New committers, new first time contributors

- **Marketplace**

  - New Marketplace API, 7 vendors

- **Outreach**

  - New website + consolidation of documentation and blog + 14 blog posts

  - Participation in CanOSP, GSoC and 2 Outreachy terms

  - Talks at many public conferences, including EclipseCon

Temurin Highlights

▸ **SSDF | SLSA** – frameworks to guide projects towards greater security (prepare, protect, produce, respond)

- · **M1** – initial SBOM, assessment against NIST checklist, identify gaps, **M2** – SBOM enhancement, closing gaps identified in M1, consumer outreach, SLSA assessment + SLSA Level 2 badge (achieved 4Q 2022)

▸ **Reproducible OpenJDK builds** – byte for byte identical builds that unlock many possibilities

- · **M1** – linux, **M2** – mac, **M3** – windows, JDK 17 and JDK 19+

▸ **Build / Distribution**

- · Build from tags/SHAs, split into Release and Prototype

- · Complete overhaul of linux installer pipeline, containers automation

- · UBI minimal docker images added to official container image set

▸ **Infrastructure**

- · 150+ machines, ephemeral builds, Nagios cleanup, 16+ platforms

AQAvit Highlights

▸ **AQAvit verification / Marketplace support**

- Marketplace criteria, 6 releases (v0.90-v0.95), testenv.properties reproduce testing pinned to specific versions/SHAs of upstream test material

▸ **L1 | TKG** - Nested iterations (with exit options: on pass, on fail, full run), new info in TAP files (java –version, release info, test material SHAs), Micro-architecture support

▸ **L2 | CI layer**

- TKG parallelism in run-aqa**,** Jenkins Auto-rerun, AQA_Test_Pipeline

- remote trigger TCK, multi-JVM automation
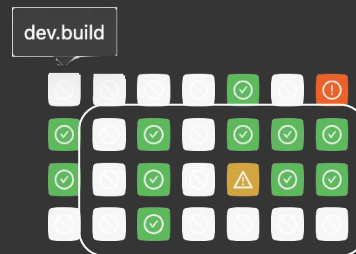
▸ **L3 | TRSS** - Tree view, Grid view and release summary enhancements, M1 of TAP upload, TRSS_Synch, Netlify

▸ **Other Multi-layer features**

- auto-rerun, new 'dev' level, external test enhancements (supporting CRIU and other new upcoming JVM features), AQA_Test_PIpeline, new tests (jcstress, security, CRIU, Spring), new platform support

Other Project Highlights

- **Mission Control**

  - 3 releases, upcoming logo

- **EMT4J**

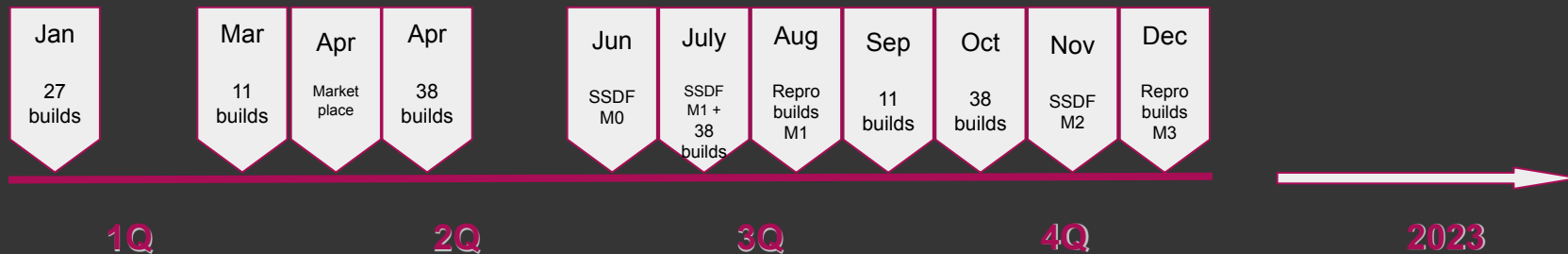 - New project in 2Q 2022, blog: emt4j–an–easier–upgrade–for–java–applications

- **Incubator**

  - incubator, jdk11u-fast-startup-incubator, blog: a-short-exploration-of-java-class-pre-initialization

- **Temurin Compliance**

  - Heavily active during releases, many automation improvements via AQAvit & Temurin pipeline updates

Status (commitments & timeline)

Jan		Mar	Apr	Apr		Jun	July	Aug	Sep	Oct	Nov	Dec
27 builds		11 builds	Market place	38 builds		SSDF M0	SSDF M1 + 38 builds	Repro builds M1	11 builds	38 builds	SSDF M2	Repro builds M3

1Q   **2Q**   **3Q**   **4Q**   **2023**

▸ Build, test and release
- ~~166~~ 206 GA builds (including respins)
- EA/nightlies to support development

▸ Lift up and support Adoptium marketplace

▸ Assess & comply with SSDF (M1, M2), SLSA Level 2

▸ Reproducible builds M1, M2, M3

Summary

▸ 2022 was a "big" year, thanks to all contributors!

▸ 2023 looks bigger

  · New challenges & goals

  · More collaborations and fun

▸ Kudos & see you in 2023!