



Azul Zulu builds of OpenJDK

July 2023 Update Release for macOS

Release Notes

Revision 1.0

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Revision History

Revision	Date	Description
0.1	July 28, 2023	Initial version.

Release Details

This release is an update release for macOS Azul Zulu Builds of OpenJDK version 20, 17, and 11.

The following table lists detailed information on the Azul Zulu versions released with the current update.

Azul Zulu Version (*)	Update Type (**)	JDK Version	Based on		JavaFX Version
			Azul Zulu Version	JDK Version	
20.32.11 (CA) 20.32.12 (SA)	PSU	20.0.2+9	20.30	20.0.1+9	20.0.2+100
17.43.14 (SA)	CPU	17.0.7.0.101+2	17.42	17.0.7+7	20.0.1.0.101+100
17.44.15 (CA) 17.44.17 (CA) 17.44.16 (SA) 17.44.18 (SA)	PSU	17.0.8+7	17.43	17.0.7.0.101+2	20.0.2+100
11.65.14 (SA)	CPU	11.0.19.0.101+2	11.64	11.0.19+7	19.0.3.0.101+100
11.66.15 (CA) 11.66.17 (CA) 11.66.16 (SA) 11.66.18 (SA)	PSU	11.0.20+8	11.65	11.0.19.0.101+2	19.0.4+100

(*) Azul provides two types of distribution packages for each Java version:

- **SA** distributions are tested, certified, and commercially supported Azul Zulu builds of OpenJDK. Azul ensures that the software that uses the Accessible APIs of the

product doesn't have to include specific licenses and that such use doesn't contaminate the code or intellectual property of such software with any license requirements.

- CA are Azul Zulu builds of OpenJDK that are free to download and use.

NOTE

Both SA and CA distributions may contain Early Access builds noted with `-ea-` in their filename. Early Access builds may not be TCK certified.

(**) Update type:

- **CPU** (Critical Patch Updates) contain fixes to security vulnerabilities and critical bug fixes. Azul Zulu CPU releases are generally based on prior-cycle PSU releases, with only security fixes applied. They provide a low-risk vehicle for the potentially urgent deployment of security fixes when issues of sufficient severity arise. CPU releases are available in SA distributions.
- **PSU** (Patch Set Updates) incorporates all fixes in the corresponding CPU, as well as additional non-security bug fixes. Azul Zulu PSU releases incorporate both security fixes and other changes that align the release contents with the associated OpenJDK project quarterly release. PSU releases are available in SA and CA distributions.

NOTE

The new respin bundles have the same Azul Zulu versions but are distinguishable by `_1` appended to the Azul Zulu version in the package file name.

For example:

Initial version: `zulu11.66.16-sa-jdk11.0.20-macosx_x64.dmg`

Respin version: `zulu11.66.16_1-sa-jdk11.0.20-macosx_x64.dmg`

What's New

Respin for macOS Regarding jlink

The builds released on July 18, 2023, contain 'jmod' files in the macOS JDK bundles,

which became unusable to create custom JRE images with `jlink`. This respin Azul Zulu Builds of OpenJDK, released on July 28, 2023 include updated and fixed `jmod` files. The new installers provided in this release will override the corresponding files. There is no need to uninstall anything before you install the new versions.

Please note: only macOS `jmod` functionality in JDK bundles was affected. If you don't use `jlink` or if you only use JRE configurations, there is no need to update.

Known Issues

There are no new known issues to report in this release.

Bug Fix Specific to Azul Zulu Builds of OpenJDK

The following table describes the Azul Zulu bug fixes implemented in this release.

OpenJDK Patch ID	Azul Zulu Version	Synopsis	CPU/PSU
ZULU-50862	11, 17, 20	macOS jmods contain extra entries	CPU,PSU