

Supported Build Platforms

About build platform support

In an open-source community, for a build platform to be supported, someone has to step up and support it. This page intends to list what platforms the open-source JDK can build on, and who (if anyone) in the community is supporting those platforms.

Oracle defines a number of build platforms, with carefully specified versions of operating systems, compilers and other build tools. If you report a failure to build on any of these platforms, the report will be processed with high priority from the build team in Oracle. Under normal circumstances, a build on any of these platforms will always succeed.

In addition to the build platforms supported by Oracle, the JDK can normally be built on many other platforms. For these platforms, there is no guarantee from Oracle that the build will succeed. The Oracle build team can help to solve some problems encountered, but only on a best-effort basis. In addition to the Oracle build team, other companies and individuals in the OpenJDK Community are welcome to help with making the JDK compile on these platforms, and can of course make similar commitments like the one Oracle has made. Please keep this page up to date with any such efforts.

The supported build platforms are listed below. Note that build support is different for different versions of the JDK. We welcome updates from the community to this list. If you have succeeded (or not!) in building the JDK on a platform that is substantially different from the ones already listed, please document your experience in the list.

JDK 19 and 20 build platforms supported by Oracle

OS and CPU	OS Type /Vendor	OS Version	Compiler/Toolchain Type /Vendor	Compiler/Toolchain Version	Notes
Linux x86_x64	Oracle Enterprise Linux	6.4/7.x	gcc	11.2.0	Build platform is OEL 7.x but using sysroot (headers and libs) from 6.4
Linux aarch64	Oracle Enterprise Linux	8.x	gcc	11.2.0	Build platform is OEL 7.x but using sysroot from OL7.6
macOS x86_64	macOS	10.15.x	XCode / clang	12.4	
macOS aarch64	macOS	11.2	XCode / clang	12.4	
Windows x86_64	Windows	Server 2016	Microsoft Visual Studio	2022 17.1.0	

JDK 17 and 18 build platforms supported by Oracle

OS and CPU	OS Type /Vendor	OS Version	Compiler/Toolchain Type /Vendor	Compiler/Toolchain Version	Notes
Linux x86_x64	Oracle Enterprise Linux	6.4/7.x	gcc	10.3.0	Build platform is OEL 7.x but using sysroot (headers and libs) from 6.4
Linux aarch64	Oracle Enterprise Linux	7.x	gcc	10.3.0	Cross compiled on OEL 7.x x86_64 using sysroot from OL7.6
macOS x86_64	macOS	10.15.x	XCode / clang	12.4	
macOS aarch64	macOS	11.2	XCode / clang	12.4	
Windows x86_64	Windows	Server 2016	Microsoft Visual Studio	2019 16.9.3	

Other JDK 20 build platforms

Legend for status: ★ Works correctly ★ Works partially or workaround(s) needed ★ Does not work

Please help us expand this table!

Platform	Status	OS Type/Vendor	OS Version	Compiler/Toolchain Type/Vendor	Compiler/Toolchain Version	Notes / Workarounds
Linux x86_64	★	Suse SLES	15.4	gcc	8.3.0 (devkit)	Maintained by SAP
Linux ppc64le	★	Suse SLES	12.1	gcc	8.2.1	Maintained by SAP
macOS x86_64	★	macOS	11.17	XCode / Clang	13.1 (devkit)	Maintained by SAP
macOS aarch64	★	macOS	11.6.1	XCode / Clang	13.1 (devkit)	Maintained by SAP

Windows x86_64	★	Microsoft Windows Server	2022	Microsoft Visual Studio	2019 (devkit)	Maintained by SAP
Linux s390x	★	RHEL	7	gcc	8.2.1	Maintained by IBM
AIX ppc64	★	IBM AIX	7.2	XLC/xlclang++	16.1	Maintained by IBM

Other JDK 17 and 18 build platforms

Legend for status: ★ Works correctly ⭐ Works partially or workaround(s) needed ★ Does not work

Please help us expand this table!

Platform	Status	OS Type/Vendor	OS Version	Compiler /Toolchain Type/Vendor	Compiler /Toolchain Version	Notes / Workarounds
Linux x86_64	★	Suse SLES	15.4	gcc	8.3.0 (devkit)	Maintained by SAP
Linux ppc64le	★	Suse SLES	12.1	gcc	8.2.1	Maintained by SAP
Linux s390x	★	Suse SLES	11.3	gcc	8.2.1	Maintained by SAP up to 17.0.0, maintained by IBM afterwards
macOS x86_64	★	macOS	10.14.5	XCode / Clang	13.1 (devkit)	Maintained by SAP
macOS aarch64	★	macOS	11.6.1	XCode / Clang	13.1 (devkit)	Maintained by SAP
Windows x86_64	★	Microsoft Windows Server	2016	Microsoft Visual Studio	2017	Maintained by SAP
AIX ppc64	★	IBM AIX	7.2	XLC/xlclang++	16.1	Maintained by SAP up to 17.0.0, maintained by IBM afterwards

JDK 16 build platforms supported by Oracle

OS and CPU	OS Type /Vendor	OS Version	Compiler/Toolchain Type /Vendor	Compiler/Toolchain Version	Notes
Linux x86_x64	Oracle Enterprise Linux	6.4/7.x	gcc	10.2.0	Build platform is OEL 7.x but using sysroot (headers and libs) from 6.4
Linux aarch64	Oracle Enterprise Linux	7.x	gcc	10.2.0	Cross compiled on OEL 7.x x86_64 using sysroot from OL7.6
macOS x86_64	macOS	10.15.x	XCode / clang	11.3.1	
Windows x86_64	Windows	Server 2016	Microsoft Visual Studio	2019 16.7.2	

Other JDK 16 build platforms

Legend for status: ★ Works correctly ⭐ Works partially or workaround(s) needed ★ Does not work

Please help us expand this table!

Platform	Status	OS Type/Vendor	OS Version	Compiler/Toolchain Type/Vendor	Compiler/Toolchain Version	Notes / Workarounds
Linux ppc64	★	Suse SLES	11.3	gcc	8.2.1	Maintained by SAP up until 16.0.2
Linux ppc64le	★	Suse SLES	12.1	gcc	8.2.1	Maintained by SAP up until 16.0.2
Linux s390x	★	Suse SLES	11.3	gcc	8.2.1	Maintained by SAP up until 16.0.2
Mac OS X x86_64	★	Mac OS X	10.12.6 (Sierra)	XCode / Clang	9.0	Maintained by SAP up until 16.0.2
Windows x86_64	★	Microsoft Windows Server	2016	Microsoft Visual Studio	2017	Maintained by SAP up until 16.0.2
AIX ppc64	★	IBM AIX	7.2	XLC/xlclang++	16.1	Maintained by SAP up until 16.0.2

JDK 15 build platforms supported by Oracle

OS and CPU	OS Type /Vendor	OS Version	Compiler/Toolchain Type /Vendor	Compiler/Toolchain Version	Notes
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Linux x86_x64	Oracle Enterprise Linux	6.4/7.x	gcc	9.2.0	Build platform is OEL 7.x but using sysroot (headers and libs) from 6.4
Linux aarch64	Oracle Enterprise Linux	7.x	gcc	9.2.0	Cross compiled on OEL 7.x x86_64 using sysroot from OL7.6
Mac OS X x86_64	Mac OS X	10.13.5	XCode / clang	10.1	
Windows x86_64	Windows	Server 2016	Microsoft Visual Studio	2019 16.5.3	

Other JDK 15 build platforms

Legend for status: ★ Works correctly ★ Works partially or workaround(s) needed ★ Does not work

Please help us expand this table!

Platform	Status	OS Type/Vendor	OS Version	Compiler/Toolchain Type/Vendor	Compiler/Toolchain Version	Notes / Workarounds
Linux ppc64	★	Suse SLES	11.3	gcc	7.3.1	Maintained by SAP up to 15.0.2
Linux ppc64le	★	Suse SLES	12.1	gcc	7.4.0	Maintained by SAP up to 15.0.2
Linux s390x	★	Suse SLES	11.3	gcc	7.3.1	Maintained by SAP up to 15.0.2
Mac OS X x86_64	★	Mac OS X	10.12.6 (Sierra)	XCode / Clang	9.0	Maintained by SAP up to 15.0.2
Windows x86_64	★	Microsoft Windows Server	2016	Microsoft Visual Studio	2017	Maintained by SAP up to 15.0.2
AIX ppc64	★	IBM AIX	7.2	XLC/xlclang++	16.1	Maintained by SAP up to 15.0.2

JDK 14 build platforms supported by Oracle

OS and CPU	OS Type /Vendor	OS Version	Compiler/Toolchain Type /Vendor	Compiler/Toolchain Version	Notes
Linux x86_x64	Oracle Enterprise Linux	6.4/7.x	gcc	8.3.0	Build platform is OEL 7.x but using sysroot (headers and libs) from 6.4
Solaris sparcv9	Solaris	11.3	Oracle Solaris Studio	12.6	
Mac OS X x86_64	Mac OS X	10.13.5	XCode / clang	10.1	
Windows x86_64	Windows	Server 2012R2	Microsoft Visual Studio	2017 15.9.16	

JDK 13 build platforms supported by Oracle

OS and CPU	OS Type /Vendor	OS Version	Compiler/Toolchain Type /Vendor	Compiler/Toolchain Version	Notes
Linux x86_x64	Oracle Enterprise Linux	6.4/7.x	gcc	8.2.0	Build platform is OEL 7.1 but using sysroot (headers and libs) from 6.4
Solaris sparcv9	Solaris	11.3	Oracle Solaris Studio	12.6	
Mac OS X x86_64	Mac OS X	10.13.5	XCode / clang	10.1	
Windows x86_64	Windows	Server 2012R2	Microsoft Visual Studio	2017 15.9.6	

Other JDK 13 build platforms

Legend for status: ★ Works correctly ★ Works partially or workaround(s) needed ★ Does not work

Please help us expand this table!

Platform	Status	OS Type/Vendor	OS Version	Compiler/Toolchain Type/Vendor	Compiler/Toolchain Version	Notes / Workarounds
Linux ppc64	★	Suse SLES	11.3	gcc	7.3.1	Maintained by SAP up to 13.0.2

Linux ppc64le	★	Suse SLES	12.1	gcc	7.4.0	Maintained by SAP up to 13.0.2
Linux s390x	★	Suse SLES	11.3	gcc	7.3.1	Maintained by SAP up to 13.0.2
Mac OS X x86_64	★	Mac OS X	10.12.6 (Sierra)	XCode / Clang	9.0	Maintained by SAP up to 13.0.2
Windows x86_64	★	Microsoft Windows Server	2016	Microsoft Visual Studio	2017	Maintained by SAP up to 13.0.2
AIX ppc64	★	IBM AIX	7.2	XLC/xlclang++	16.1	Maintained by SAP up to 13.0.2

JDK 12 build platforms supported by Oracle

OS and CPU	OS Type /Vendor	OS Version	Compiler/Toolchain Type /Vendor	Compiler/Toolchain Version	Notes
Linux x86_x64	Oracle Enterprise Linux	6.4/7.x	gcc	7.3.0	Build platform is OEL 7.1 but using sysroot (headers and libs) from 6.4
Solaris sparcv9	Solaris	11.3	Oracle Solaris Studio	12.6	
Mac OS X x86_64	Mac OS X	10.13.5	XCode / clang	9.4	
Windows x86_64	Windows	Server 2012R2	Microsoft Visual Studio	2017 15.5.5	

Other JDK 12 build platforms

Legend for status: ★ Works correctly ★ Works partially or workaround(s) needed ★ Does not work

Please help us expand this table!

Platform	Status	OS Type/Vendor	OS Version	Compiler/Toolchain Type/Vendor	Compiler/Toolchain Version	Notes / Workarounds
Linux ppc64	★	Suse SLES	11.3	gcc	7.3.1	Maintained by SAP
Linux ppc64le	★	Suse SLES	12.1	gcc	7.4.0	Maintained by SAP
Linux s390x	★	Suse SLES	11.3	gcc	7.3.1	Maintained by SAP
Mac OS X x86_64	★	Mac OS X	10.12.6 (Sierra)	XCode / Clang	9.0	Maintained by SAP
Windows x86_64	★	Microsoft Windows Server	2016	Microsoft Visual Studio	2017	Maintained by SAP
AIX ppc64	★	IBM AIX	7.1	XLC	12.1	Maintained by SAP

JDK 11 build platforms supported by Oracle

OS and CPU	OS Type /Vendor	OS Version	Compiler/Toolchain Type /Vendor	Compiler/Toolchain Version	Notes
Linux x86_x64	Oracle Enterprise Linux	6.4/7.x	gcc	7.3.0	Build platform is OEL 7.1 but using sysroot (headers and libs) from 6.4
Solaris sparcv9	Solaris	11.1/11.2	Oracle Solaris Studio	12.4	Build platform is Solaris 11.2 but using sysroot (headers and libs) from 11.1
Mac OS X x86_64	Mac OS X	10.13.5	XCode / clang	9.4	
Windows x86_64	Windows	Server 2012R2	Microsoft Visual Studio	2017 15.5.5	

Other JDK 11 build platforms

Legend for status: ★ Works correctly ★ Works partially or workaround(s) needed ★ Does not work

Please help us expand this table!

Platform	Status	OS Type/Vendor	OS Version	Compiler /Toolchain Type/Vendor	Compiler/Toolchain Version	Notes / Workarounds
Linux x86_x64	★	Suse SLES	15.4	gcc	4.8.5 (until 11.0.2), 8.3.0 (devkit)	Maintained by SAP

Linux ppc64	★	Suse SLES	11.3	gcc	4.8.5 (until 11.0.2), 7.3.1	Maintained by SAP until 11.0.12
Linux ppc64le	★	Suse SLES	12.1	gcc	4.8.5 (until 11.0.2), 8.2.1	Maintained by SAP
Linux s390x	★	Suse SLES	11.3	gcc	4.8.5 (until 11.0.2), 8.2.1	Maintained by SAP until 11.0.12
Solaris sparcv9	★	Oracle Solaris	11.3	Oracle Solaris Studio	12.4	Maintained by SAP until 11.0.12
Mac OS X x86_64	★	Mac OS X	10.14.5	XCode / Clang	13.1 (devkit)	Maintained by SAP
Windows x86_64	★	Microsoft Windows Server	2016	Microsoft Visual Studio	2017	Maintained by SAP
AIX ppc64	★	IBM AIX	7.1	XLC	12.1 (until 11.0.15), 16.1	Maintained by SAP until 11.0.12, Maintained by IBM

JDK 9 and 10 build platforms supported by Oracle

OS and CPU	OS Type /Vendor	OS Version	Compiler/Toolchain Type/Vendor	Compiler/Toolchain Version	Notes
Linux x86_x64	Oracle Enterprise Linux	6.4/7.1	gcc	4.9.2	Build platform is OEL 7.1 but using sysroot (headers and libs) from 6.4
Solaris sparcv9	Solaris	11.1/11.2	Oracle Solaris Studio	12.4	Build platform is Solaris 11.2 but using sysroot (headers and libs) from 11.1
Mac OS X x86_64	Mac OS X	10.10 (Yosemite)	XCode / clang	6.3	
Windows x86_64	Windows	Server 2012R2	Microsoft Visual Studio	2013SP4	

Other JDK 9 and 10 build platforms

Legend for status: ★ Works correctly ⭐ Works partially or workaround(s) needed ❌ Does not work

Please help us expand this table!




Platform	Status	OS Type/Vendor and Version	Compiler/Toolchains Type/Vendor and Version	Notes / Workarounds
Linux x86 and x86_64	★	Ubuntu 14.04	gcc 4.8.2	Works flawlessly
	★	Ubuntu 13.10	gcc 4.8.1	Works flawlessly
	★	Suse SLES 11.3	gcc 4.8.5	
Linux ppc64	★	Suse SLES 11.3	gcc 4.8.5	
Linux ppc64le	★	Suse SLES 12.1	gcc 4.8.5	
Linux s390x	★	Suse SLES 11.3	gcc 4.8.5	
Solaris sparcv9	★	Oracle Solaris 11.1	Oracle Solaris Studio 12u4	
Mac OS X x86_64	⭐	Mac OS X 10.10 (Yosemite)	XCode 6.1	Needs separate installation of freetype
	★	Mac OS X 10.12.6 (Sierra)	XCode / Clang 9.0	
Windows x86_64	★	Microsoft Windows Server 2008 R2	Microsoft Visual Studio 2013	
Windows x86_64	★	Microsoft Windows Server 2008 R2	Microsoft Visual Studio 2010 SP 1	Previous setup used by Oracle, likely still works for both 32 and 64 bit builds
AIX ppc64	★	IBM AIX 7.1	XLC 12.01	

JDK 8 build platforms supported by Oracle








OS and CPU	OS Type /Vendor	OS Version	Compiler/Toolchain Type /Vendor	Compiler/Toolchain Version	Notes
Linux x86 and x86_64	Fedora	9	gcc	4.3.0	
Solaris sparcv9 and x86_64	Solaris	10u6	Oracle Solaris Studio	12.1	

Mac OS X x86_64	Mac OS X	10.7 (Lion)	Xcode / gcc	4.6.2	
Windows x86_64	Windows	Server 2008 R2	Microsoft Visual Studio	2010 SP1	Also for creating 32-bit builds.

Other JDK 8 build platforms

Legend for status:  Works correctly  Works partially or workaround(s) needed  Does not work

Please help us expand this table!

Platform	Status	OS Type/Vendor and Version	Compiler/Toolchains Type/Vendor and Version	Notes / Workarounds
Linux x86 and x86_64		Ubuntu 14.04	gcc 4.8.2	Works flawlessly
		Ubuntu 13.10	gcc 4.8.1	Works flawlessly
Linux ppc64		Suse SLES 11.3	gcc 4.8.5	Maintained by SAP until 8.301
Linux ppc64le		Suse SLES 12.1	gcc 4.8.5	
Mac OS X x86_64		Mac OS X 10.8 (Mountain Lion)	XCode / gcc 4.2.1	
Windows x86_64		Microsoft Windows Server 2008 R2	Microsoft Visual Studio 2010	
AIX ppc64		IBM AIX 7.1	XLC 12.01	Maintained by SAP until 8.301