

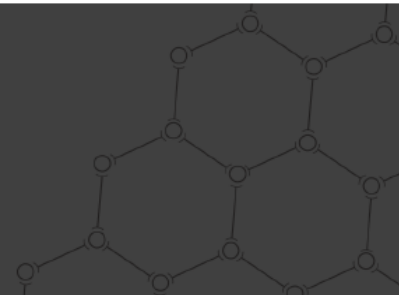


Klocwork 2020.4

System Requirements

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System Requirements

The following system configurations are required to run the Klocwork tools. To ensure the best experience, use the recommended settings listed below.

Supported platforms

The Klocwork Server and Build Tools packages are supported on the following operating systems (except where noted). This means that Klocwork has performed the full test suite on these operating systems with certain hardware and will provide technical support as specified in the Klocwork support policies. Note that for AIX, Mac, and Solaris, the Klocwork Server package is not supported. For more information, see .

Klocwork Server

Note: It is not possible to use Klocwork tools with SELinux (Security-Enhanced Linux) enabled.

Processor	Operating system
Intel and AMD 32 bit and 64 bit	<ul style="list-style-type: none">• Amazon Linux 2: New for Klocwork 2020.4, version 2.0.20200904.0.• CentOS: For Klocwork 2020.1, includes CentOS 7.5 to 7.7, CentOS 8.0. For Klocwork 2020.2, includes CentOS 7.5 to 7.7, CentOS 8.0 to 8.1. For Klocwork 2020.3, includes CentOS 7.5 to 7.8, CentOS 8.0 to 8.2. For Klocwork 2020.4, includes CentOS 7.5 to 7.9, CentOS 8.0 to 8.2.• Debian: For Klocwork 2020.1, includes Debian 9.x to 9.11, 10.0 to 10.1. For Klocwork 2020.2, includes Debian 9.x to 9.12, 10.0 to 10.3. For Klocwork 2020.3, includes Debian 9.x to 9.12, 10.0 to 10.4. For Klocwork 2020.4, includes Debian 9.x to 9.13, 10.0 to 10.6.• Fedora: For Klocwork 2020.1, includes Fedora 29 to 30. For Klocwork 2020.2, includes Fedora 30 to 31. For Klocwork 2020.2, includes Fedora 31 to 32.• Oracle Linux: For Klocwork 2020.1, includes Oracle Linux 7. For Klocwork 2020.2, includes Oracle Linux 7 to 7.7, Oracle Linux 8 to 8.1. For Klocwork 2020.3, includes Oracle Linux 7 to 7.8, Oracle Linux 8 to 8.2. For Klocwork 2020.4, includes Oracle Linux 7 to 7.9, Oracle Linux 8 to 8.2.• OpenSUSE: For Klocwork 2020.1 and 2020.2, includes Tumbleweed, OpenSUSE Leap 15.1. For Klocwork 2020.3, includes Tumbleweed, OpenSUSE Leap 15.1 to 15.2. For Klocwork 2020.4, includes Tumbleweed, OpenSUSE Leap 15.2.• SUSE Enterprise: For Klocwork 2020.1, includes SUSE Enterprise 12 SP1 to 12 SP4 and Leap 15 to 15 SP1. For Klocwork 2020.2 and 2020.3, includes SUSE Enterprise 12 SP1 to 12 SP5 and Leap 15 to 15 SP1. For Klocwork 2020.4, includes SUSE Enterprise 12 SP2 to 12 SP5 and Enterprise 15 to 15 SP2.• Red Hat Enterprise Linux: For Klocwork 2020.1, includes Red Hat Enterprise Linux 7.5 to 7.7, 8.0. For Klocwork 2020.2, includes Red Hat Enterprise Linux 7.5 to 7.7, 8.0 to 8.1. For Klocwork 2020.3, includes Red Hat Enterprise Linux 7.5 to 7.8, 8.0 to 8.2. For Klocwork 2020.4, includes Red Hat Enterprise Linux 7.5 to 7.9, 8.0 to 8.2.• Ubuntu: For Klocwork 2020.1, includes Ubuntu 16.04 to 16.04.6 LTS, 18.04 to 18.04.3 LTS, 19.10. For Klocwork 2020.2, includes

Processor	Operating system
	<p>Ubuntu 16.04 to 16.04.6 LTS, 18.04 to 18.04.4 LTS, 19.10. For Klocwork 2020.3, includes Ubuntu 16.04 to 16.04.6 LTS, 18.04 to 18.04.4 LTS, 20.04 LTS. For Klocwork 2020.4, includes Ubuntu 16.04 to 16.04.6 LTS, 18.04 to 18.04.4 LTS, 20.04 to 20.04.1 LTS, 20.10.</p> <p>Klocwork also supports Debian running glibc 2.15 or greater (use <code>getconf GNU_LIBC_VERSION</code> to find out your version).</p>
	<ul style="list-style-type: none"> • Windows 8.1 • For Klocwork 2020.1, includes Windows 10 versions 1803 to 1903. For Klocwork 2020.2, includes versions 1803 to 1909. For Klocwork 2020.3, includes Windows versions 1809 to 2004. For Klocwork 2020.4, includes Windows versions 1809 to 20H2. • Windows Server 2012 to R2 • Windows Server 2016 • Windows Server 2019

Klocwork Build tools

The following platforms support the Klocwork Build tools package.

Processor	Operating system
Sun SPARC	<ul style="list-style-type: none"> • Sun Solaris 10.x • Sun Solaris 11.x to 11.4
Intel and AMD 32 bit and 64 bit	<ul style="list-style-type: none"> • Amazon Linux 2: New for Klocwork 2020.4, version 2.0.20200904.0. • CentOS: For Klocwork 2020.1, includes CentOS 7.5 to 7.7, CentOS 8.0. For Klocwork 2020.2, includes CentOS 7.5 to 7.7, CentOS 8.0 to 8.1. For Klocwork 2020.3, includes CentOS 7.5 to 7.8, CentOS 8.0 to 8.2. For Klocwork 2020.4, includes CentOS 7.5 to 7.9, CentOS 8.0 to 8.2. • Debian: For Klocwork 2020.1, includes Debian 9.x to 9.11, 10.0 to 10.1. For Klocwork 2020.2, includes Debian 9.x to 9.12, 10.0 to 10.3. For Klocwork 2020.3, includes Debian 9.x to 9.12, 10.0 to 10.4. For Klocwork 2020.4, includes Debian 9.x to 9.13, 10.0 to 10.6. • Fedora: For Klocwork 2020.1, includes Fedora 29 to 30. For Klocwork 2020.2, includes Fedora 30 to 31. For Klocwork 2020.2, includes Fedora 31 to 32. • Oracle Linux: For Klocwork 2020.1, includes Oracle Linux 7. For Klocwork 2020.2, includes Oracle Linux 7 to 7.7, Oracle Linux 8 to 8.1. For Klocwork 2020.3, includes Oracle Linux 7 to 7.8, Oracle Linux 8 to 8.2. For Klocwork 2020.4, includes Oracle Linux 7 to 7.9, Oracle Linux 8 to 8.2. • OpenSUSE: For Klocwork 2020.1 and 2020.2, includes Tumbleweed, OpenSUSE Leap 15.1. For Klocwork 2020.3, includes Tumbleweed, OpenSUSE Leap 15.1 to 15.2. For Klocwork 2020.4, includes Tumbleweed, OpenSUSE Leap 15.2. • SUSE Enterprise: For Klocwork 2020.1, includes SUSE Enterprise 12 SP1 to 12 SP4 and Leap 15 to 15 SP1. For Klocwork 2020.2 and 2020.3, includes SUSE Enterprise 12 SP1 to 12 SP5 and Leap

Processor	Operating system
	<p>15 to 15 SP1. For Klocwork 2020.4, includes SUSE Enterprise 12 SP2 to 12 SP5 and Enterprise 15 to 15 SP2.</p> <ul style="list-style-type: none"> • Red Hat Enterprise Linux: For Klocwork 2020.1, includes Red Hat Enterprise Linux 7.5 to 7.7, 8.0. For Klocwork 2020.2, includes Red Hat Enterprise Linux 7.5 to 7.7, 8.0 to 8.1. For Klocwork 2020.3, includes Red Hat Enterprise Linux 7.5 to 7.8, 8.0 to 8.2. For Klocwork 2020.4, includes Red Hat Enterprise Linux 7.5 to 7.9, 8.0 to 8.2. • Ubuntu: For Klocwork 2020.1, includes Ubuntu 16.04 to 16.04.6 LTS, 18.04 to 18.04.3 LTS, 19.10. For Klocwork 2020.2, includes Ubuntu 16.04 to 16.04.6 LTS, 18.04 to 18.04.4 LTS, 19.10. For Klocwork 2020.3, includes Ubuntu 16.04 to 16.04.6 LTS, 18.04 to 18.04.4 LTS, 20.04 LTS. For Klocwork 2020.4, includes Ubuntu 16.04 to 16.04.6 LTS, 18.04 to 18.04.4 LTS, 20.04 to 20.04.1 LTS, 20.10. <p>Klocwork also supports Debian running glibc 2.15 or greater (use <code>getconf GNU_LIBC_VERSION</code> to find out your version).</p> <ul style="list-style-type: none"> • Windows 8.1 • For Klocwork 2020.1, includes Windows 10 versions 1803 to 1903. For Klocwork 2020.2, includes versions 1803 to 1909. For Klocwork 2020.3, includes Windows versions 1809 to 2004. For Klocwork 2020.4, includes Windows versions 1809 to 20H2. • Windows Server 2012 to R2 • Windows Server 2016 • Windows Server 2019 <ul style="list-style-type: none"> • macOS 10.13.x to 10.14.6
IBM Power5 64 bit	<ul style="list-style-type: none"> • IBM AIX 7.1 TL5 (Server package only) • For Klocwork 2020.1, includes IBM AIX 7.2 TL2 to TL3 (Server package only). For Klocwork 2020.2, includes IBM AIX 7.2 TL2 to TL4 (Server package only).

Windows operating system dependencies

The Klocwork build tools for Windows have a dependency on the 64-bit Visual C++ redistributable package. The `vc_redist.x64.exe` package is available from Microsoft at <https://support.microsoft.com/en-gb/help/2977003/the-latest-supported-visual-c-downloads>.

Linux operating system patches and packages

The following patches or packages are required for running Klocwork products on Linux. They are in addition to the regular maintenance patches for your operating system.

If you are installing on Linux x86, 64-bit

The 32-bit compatibility libraries must be installed. Klocwork works on 64-bit platforms in 32-bit emulation mode, so in order for Klocwork to work on Linux 64-bit platforms, you must ensure that the 32-bit libraries are installed. The way you check and install 32-bit libraries depends on your Linux distribution.

For example, Klocwork requires the `gcc-multilib` and `g++-multilib` libraries. The version of the libraries required must match the version of GCC you are using. If you are using a non-default compiler, you must install `gcc-<version>multilib` and `g++<version>-multilib`, where `<version>` matches the major GCC version (find by using the `gcc --version` command).

For licensing and analysis tools to work, Klocwork requires the Linux Standard Base core package in addition to GNU and GCC standard libraries listed below. Install the 32-bit version of the Linux Standard Base core package; if there is no 32-bit version available for your Linux distribution, install the 64-bit version of the package.

For Ubuntu, run the following commands:

```
sudo dpkg --add-architecture i386
sudo apt-get update
sudo apt-get install libc6:i386 libgcc1:i386
sudo apt-get install lib32tinfo5
```

Note:

- Ubuntu 18.10 requires you to install `lib32tinfo6` instead of `lib32tinfo5`.
- For Ubuntu 19.04 (and greater) and Debian 9.9 (and greater) the `lib32tinfo5` package is not available. Run the following commands instead: `sudo apt-get install lib32tinfo6` and then `sudo apt-get install libncurses5:i386`.

```
sudo apt-get install libncursesw5:i386
sudo apt-get install libaio1
sudo apt-get install numactl
sudo apt-get install lsb-core
```

For earlier versions of Ubuntu, consult the Ubuntu documentation.

For Fedora and Redhat Enterprise Linux, run these commands:

```
sudo yum install glibc.i686
sudo yum install libgcc.i686
sudo yum install numactl-libs
sudo yum install libnsl
sudo yum install libnsl.i686
sudo yum install redhat-lsb-core.i686
```

For CentOS, run these commands:

```
sudo yum install glibc.i686
sudo yum install libgcc.i686
sudo yum install numactl
sudo yum install redhat-lsb-core.i686
```

For SUSE Linux Enterprise Server (SLES), run these commands:

```
zypper --non-interactive install python python-pip python-lxml git-core subversion
tar wget lsb vim unzip
zypper --non-interactive install numactl gcc-c++ glibc-32bit glibc-devel-32bit
libgcc_s1-32bit libncurses5 libncurses5-32bit
zypper --non-interactive install java-1_8_0-openjdk-devel
```

Depending on the Linux version, Klocwork servers require one of the following 3rd-party packages to run:

```
libaio1
```

libaio
libaio.x86_64
libnuma1

If you are installing on a Linux distribution that does not install the X11 version of X Window by default

You need to install `xorg-XFree86-deprecated-libs`.

Solaris operating system patches and packages

If you are installing on Solaris 10, you need the `zlib` package. This package is not required if you are installing only the Klocwork developer tools.

To check that the `zlib` package is installed, either run `$ pkginfo |grep zlib` or look for a file called `libz.so` under `/usr/lib` or `/usr/local/lib`.

If the `zlib` package is installed, you will see the package `SUNWzlib`, or `SMCzlib`, or both packages.

Disk space requirements

Disk space requirements for installation

A server installation requires 1 GB to 1.4 GB for installation. Plugins require an additional 700 MB. Additional disk space is required temporarily during installation.

Disk space requirements for data storage

Klocwork Static Code Analysis data includes the source files, configuration files, object files, tables, and the database. The total disk space needed for a single integration-build analysis will be the total of all this data. If you use Klocwork [incremental analysis](#), the object file size and table size is needed only once per project.

Some sample projects to show how size can vary

Project	Language	Lines of code	Object file size (MB)	Table size (MB)	Database size (MB)	Total size (MB)
Boost	C/C++	140,000	393	17	84	1,638
Firefox	C/C++	1,600,000	2,800	606	702	3,174
Common C++	C/C++	20,000	168	23	45	236
Python	C	214,000	114	52	84	143
MySQL	C/C++	350,000	781	133	167	463

Processor and RAM requirements

Minimum requirements for server and complete installations

- Processor speed: 2 GHz or better
- RAM: Minimum 2 GB for a single core machine and a minimum of 1 GB of memory per processor or core on multicore machines. More than 2 GB may be required for very large analyses. Note that the size of a build and its RAM requirements depend not only on the lines of code, but also on the number of relationships and complexity of relationships in the code.

Minimum requirements for desktop installations

Klocwork client	Processor speed	RAM
Klocwork for C/C++	1 GHz or better	2 GB

Klocwork client	Processor speed	RAM
Klocwork for Java	1 GHz or better	2 GB
Klocwork Static Code Analysis and Klocwork Code Review	1 GHz or better	2 GB

Java Virtual Machine requirements

Klocwork recommends you use a Java Runtime Environment (JRE) and a Java Development Kit (JDK), such as OpenJDK, that is compatible with the platform you are using.

Windows

On Windows, the Klocwork Server, Klocwork Build Tools, Distributed Analysis, and Command-Line packages bundle the 32-bit or 64-bit Open JDK version 1.8.0_202. Java will be installed in `<klocwork_install_path>_jvm\bin\`. The installation package automatically detects whether you have a 32-bit or 64-bit operating system. Your system must meet the [requirements](#) for this version of Java.

Linux

On Linux, there is a separate installation package for both 32-bit and 64-bit Java. Select the one that matches your operating system.

The Klocwork Server, Klocwork Build Tools, Distributed Analysis, and Command-Line packages bundle Open JDK version 1.8.0_202. Your system must meet the [requirements](#) for this version of Java.

Solaris

On Solaris, the Klocwork Build Tools, Distributed Analysis, and Command-Line packages bundle the 32-bit Java Virtual Machine, Java 7 Update 25. Your system must meet the [requirements](#) for the appropriate version of Java.

Mac

On Mac OS, Klocwork uses the Java Virtual Machine provided by your system. Klocwork requires Java 8. If you have an earlier version of Java installed and you try to install Klocwork, you will see the error message, "Java is not installed or version of Java is unsupported". Your system must meet the [requirements](#) for the appropriate version of Java.

AIX

The Klocwork Build Tools and Distributed Analysis packages bundle the 32-bit IBM SDK, Java Technology Edition, Version 8.0.5.35. Your system must meet the requirements for the appropriate version of Java. At the time of publication, the link to supported system configurations for IBM Java is: <https://www.ibm.com/developerworks/java/jdk/aix/service.html>.

Only 32-bit Java is supported for AIX. AIX is not compatible with other platforms so you cannot copy or migrate your projects_root directory to or from other platforms.

IDE plug-ins

Klocwork Desktop Java plug-ins for Eclipse and IntelliJ IDEA require a Java 8 or later compatible runtime environment. You must ensure that your IDE is running the appropriate version of Java.

kwant

[kwant](#) requires a JDK compatible with Java 8 or later. You must ensure your environment is configured to use the correct JDK.

Ports used by the Klocwork servers

The following table shows the default port numbers for a new installation of the Klocwork servers:

Server name	Port
Database Server	3306
License Server	27000 plus 33133
Klocwork Server	8080 plus 8081

The default port for each server is the typical port for that type of server. For example, port 3306 is the typical port for a MariaDB server. So, if you will be using the default ports, ensure that you are not already running other servers on these ports. Similarly, you can choose to use alternative ports to the defaults, but first ensure that the ports you choose are not already in use.

When the Klocwork servers are running behind a firewall, you must configure the firewall to allow client communication to the servers. However, not all ports need to be exposed:

- The Klocwork Server uses two consecutive ports: the one you choose, plus the next one. The second Klocwork Server port, which is port 8081 by default, is the port on which the server listens for requests to stop the server. In many cases, this port does not need to be accessible through a firewall. For more information about the Tomcat shutdown port, see the [Apache Tomcat 7 documentation](#).
- The database port does not need to be exposed unless you are importing data from this server to a server that is outside of the firewall.

Important:

- If you migrated from a previous version of Klocwork, your servers will be running on the ports stored in the old projects_root.
- Each Klocwork server must run on a dedicated port. Do not set any other application to use the same port numbers.
- If port 33133 is not available for use by the License Server, see [Changing the vendor daemon port in your license file](#).

For more information about setting your ports, see [Setting the ports used by the Klocwork servers](#).

Supported IDEs

Note: Klocwork also has successful integrations with other Eclipse-based IDEs.

Supported C/C++ IDEs

IDE	Version
CLion	2020.2, includes versions 2019.2 (up to 2019.2.5), 2019.3 (up to 2019.3.6), and 2020.1 (up to 2020.1.1). For Klocwork 2020.3, includes versions 2019.2 (up to 2019.2.5), 2019.3 (up to 2019.3.6), and 2020.1 (up to 2020.1.2). For Klocwork 2020.4, includes versions 2019.2 (up to 2019.2.5), 2019.3 (up to 2019.3.6), 2020.1 (up to 2020.1.3), and 2020.2 (up to 2020.2.4).
Eclipse	For Klocwork 2020.1, includes versions 3.4 to 4.13. For Klocwork 2020.2, includes versions 4.2 to 4.15. For Klocwork 2020.3, includes versions 4.2 to 4.16. For Klocwork 2020.4, includes versions 4.2 to 4.17.

IDE	Version
Wind River Workbench	<p>For Klocwork 2020.1, includes versions 3.1 to 4 SR0620 Edition 2.</p> <p>For Klocwork 2020.2, includes versions 3.1 to Workbench 4 SR0630.</p> <p>For Klocwork 2020.3 and 2020.4, includes versions 3.1 to Workbench 4 SR0640.</p> <p>The Klocwork plug-in is only supported for Workbench 3.1, 3.2, 3.3 and 3.31 if you use 32-bit Java 7. You must launch the product by specifying this version of Java.</p>
QNX Momentics	QNX Momentics Dev Suite 6.3.2, QNX Momentics v6.3 up to SP3, and QNX Software Dev Platform 7.0.
Microsoft Visual Studio	<p>For Klocwork 2020.1, includes Visual Studio 2012, 2013, 2015, 2017 up to 15.9.17, and 2019 up to 16.3.6.</p> <p>For Klocwork 2020.2, includes Visual Studio 2012, 2013, 2015, 2017 up to 15.9.20, and 2019 up to 16.4.5.</p> <p>For Klocwork 2020.3, includes Visual Studio 2012, 2013, 2015, 2017 up to 15.9.24, and 2019 up to 16.6.3.</p> <p>For Klocwork 2020.4, includes Visual Studio 2012, 2013, 2015, 2017 up to 15.9.28, and 2019 up to 16.7.6.</p> <p>The Express edition of Visual Studio is not supported.</p>
Visual Studio Code	For Klocwork 2020.4, includes Visual Studio Code versions 1.49.3 up to 1.51.1

Supported C# IDEs

IDE	Version
Microsoft Visual Studio	<p>For Klocwork 2020.1, includes Visual Studio 2012, 2013, 2015, 2017 up to 15.9.17, and 2019 up to 16.3.6.</p> <p>For Klocwork 2020.2, includes Visual Studio 2012, 2013, 2015, 2017 up to 15.9.20, and 2019 up to 16.4.5.</p> <p>For Klocwork 2020.3, includes Visual Studio 2012, 2013, 2015, 2017 up to 15.9.24, and 2019 up to 16.6.3.</p> <p>For Klocwork 2020.4, includes Visual Studio 2012, 2013, 2015, 2017 up to 15.9.28, and 2019 up to 16.7.6.</p> <p>The Express edition of Visual Studio is not supported.</p>
Visual Studio Code	For Klocwork 2020.4, includes Visual Studio Code versions 1.49.3 up to 1.51.1

Supported Java IDEs

IDE	Version
Android Studio	<p>For Klocwork 2020.1, includes versions 1.0 to 3.5.1.</p> <p>For Klocwork 2020.2, includes versions 2.3.2 to 3.6.</p> <p>For Klocwork 2020.3, includes versions 2.3.3 to 4.0.</p> <p>For Klocwork 2020.4, includes versions 2.3.3 to 4.0.2.</p>

IDE	Version
Eclipse	For Klocwork 2020.1, includes versions 3.4 to 4.13. For Klocwork 2020.2, includes versions 4.2 to 4.15. For Klocwork 2020.3, includes versions 4.2 to 4.16. For Klocwork 2020.4, includes versions 4.2 to 4.17.
IBM Rational Application Developer for WebSphere	7.5.x at the level of "Ready for IBM Rational Software" for Eclipse-based solutions
JetBrains IntelliJ IDEA	For Klocwork 2020.1, includes versions 11.x to 2018.x (up to 2018.3.6), 2019.1 (up to 2019.1.4), and 2019.2 (up to 2019.2.3). For Klocwork 2020.2, includes versions 12.x to 2018.x (2018.3.6), 2019.1 (up to 2019.1.4), 2019.2 (up to 2019.2.4), and 2019.3 (up to 2019.3.3). For Klocwork 2020.3, includes versions 12.x to 2018.x (2018.3.6), 2019.1 (up to 2019.1.4), 2019.2 (up to 2019.2.4), 2019.3 (up to 2019.3.5), and 2020.1 (up to 2020.1.2). For Klocwork 2020.4, includes versions 12.x to 2018.x (2018.3.6), 2019.1 (up to 2019.1.4), 2019.2 (up to 2019.2.4), 2019.3 (up to 2019.3.5), 2020.1 (up to 2020.1.4), and 2020.2 (up to 2020.2.3).
Visual Studio Code	For Klocwork 2020.4, includes Visual Studio Code versions 1.49.3 up to 1.51.1

Supported continuous integration servers

Klocwork supports the following continuous integration servers:

- Jenkins 1.658 to 2.204.5. For Klocwork 2020.3, includes versions 1.658 to 2.243. For Klocwork 2020.4, includes versions 1.658 to 2.263.

Supported browsers

A browser is required for Klocwork Static Code Analysis and Klocwork Code Review .

- Google Chrome 54.x to 78.x. For Klocwork 2020.2, includes versions 54.x to 80.x. For Klocwork 2020.3, includes versions 54.x to 83.x. For Klocwork 2020.4, includes versions 54.x to 86.x.
- Mozilla Firefox ESR 52.8.0, 52.9.0, 60.x.x, 62.x.x, 65.x.x, 66.x.x, 67.x.x, 68.x.x, 70.x. For Klocwork 2020.2, includes versions ESR 52.8.0, 52.9.0, 60.x.x, 62.x.x, 65.x.x, 66.x.x, 67.x.x, 68.x.x, 70.x, 73.x. For Klocwork 2020.3, includes versions ESR 52.8.0, 52.9.0, 60.x.x, 62.x.x, 65.x.x, 66.x.x, 67.x.x, 68.x.x, 70.x, 73.x, 78.x. For Klocwork 2020.4, includes versions ESR 52.8.0, 52.9.0, 60.x.x, 62.x.x, 65.x.x, 66.x.x, 67.x.x, 68.x.x, 70.x, 73.x, 78.x, 82.x.
- Apple Safari 9.1.x to 12.1.2. For Klocwork 2020.2, 2020.3, and 2020.4, includes versions 9.1.x to 13.0.
- Microsoft Edge 20.x, 25.x, 38.x, 40.x, 41.x, 42.x, 44.x to 44.18362. For Klocwork 2020.2, includes versions 20.x, 25.x, 38.x, 40.x, 41.x, 42.x, 44.x, 79.x, 80.x to 80.0.361. For Klocwork 2020.3, includes versions 20.x, 25.x, 38.x, 40.x, 41.x, 42.x, 44.x, 79.x, 80.x, 81.x, 83.x. For Klocwork 2020.4, includes versions 20.x, 25.x, 38.x, 40.x, 41.x, 42.x, 44.x, 79.x, 80.x, 81.x, 83.x, 84.x, 85.x.
- Microsoft Internet Explorer 11.0.x to 11.0.155. For Klocwork 2020.2, includes versions 11.0.x to 11.0.175. For Klocwork 2020.3, includes versions 11.0.x to 11.0.195. For Klocwork 2020.4, includes versions 11.0.x to 11.0.210.

Note: Klocwork Static Code Analysis and Klocwork Code Review also require that you enable cookies in your browser.

Supported source code management systems for Klocwork Code Review

Code Review has been tested with the following, for both pre-checkin and post-checkin code reviews:

SCM	Supported plug-ins
Base ClearCase 7.x*	Eclipse, IntelliJ IDEA, Visual Studio
CVS 1.12.x	Eclipse, IntelliJ IDEA
Git 1.7.x	Eclipse, IntelliJ IDEA, Visual Studio
TFS 2010	Visual Studio
Perforce server 2005.2 or higher	Eclipse, Visual Studio
Subversion 1.4.x**, 1.6.x, 1.7.x, 1.8.x	Eclipse, IntelliJ IDEA, Visual Studio

*Snapshot views are not supported for Base ClearCase

**Subversion 1.4.x is not supported by the Visual Studio plug-ins

Note: All of the SCM's are supported by using the commands `kwcodereview` (pre-checkin) or `kwscm` (post-checkin) on the command-line.

For other SCMs, please contact Customer Support by sending an email to techsupport@roguewave.com.

Supported Java build tools

Several Klocwork commands can integrate with your Java build, capturing all of the information it needs to provide a centralized view of the entire code stream. You must use Java 7 or later, and you must use a javac from the Java Development Kit (JDK). The supported Java build tools and versions are as follows:

Klocwork Command	Java Build Tool	Supported Version
<code>kwant</code>	ant	1.7 or later
<code>kwmaven</code>	mvn	3.0 or later
<code>kwgradle</code>	gradle	For Klocwork 2020.1, includes 3.x to 5.6.3. For Klocwork 2020.2, includes 3.x to 6.2.1. For Klocwork 2020.3, includes 3.x to 6.5.1. For Klocwork 2020.4, includes 3.x to 6.7.
<code>kwgradlew</code>	gradlew	For Klocwork 2020.1, includes gradle versions 3.x to 5.6.3. For Klocwork 2020.2, includes gradle versions 3.x to 6.2.1. For Klocwork 2020.3, includes gradle versions 3.x to 6.5.1.

Klocwork Command	Java Build Tool	Supported Version
		For Klocwork 2020.4, includes gradle versions 3.x to 6.7.

C/C++ compilers supported for build integration

As part of creating a build specification, Klocwork automatically searches for the following compiler types by default. If your compiler is not on this list, contact Customer Support by sending an email to techsupport@roguewave.com so that we can support your compiler. For details on compilers and on creating build specifications generally, see [Creating a C/C++ build specification](#).

Compiler type	Klocwork compiler code	Names of common compiler variants	Introduced	Improved
Analog Devices Blackfin and TigerSHARC	dsp	cdblkn, ccts	9.5	
Archelon C	archelon	mcc	10.0	
Archelon CSR Kalimba C	kalimba_cc kalimba_link	kalcc, kalcc32, kld	11.3	2019.2
ARM	armcc armlink ar	armcc, armcpp, tcc, tcpp armlink armar	Pre-9.5	11.0, 11.2, 2020.4
ARM Optimizing C/C++ compiler (formerly TI tms470 C/C++ compiler)	cl470 lnk2000 ar	cl470, armcl lnk470 ar470	9.6	10.1, 2019.1
CADUL C cross compiler for Intel 80X86	cadul_compile cadul_link	ccu38o lnku38a	9.6	
CEVA compiler (NVIDIA)	ceva	c16cc	10.0	
Clang	clang	clang clang++	9.6 SR3	10.2, 11.3, 2017, 2018, 2018.1, 2018.2, 2018.3, 2019, 2019.1, 2019.2, 2019.3, 2020.1, 2020.2, 2020.3, 2020.4
CodeWarrior Freescale S12	chc12	chc12	9.5	10.4

Compiler type	Klocwork compiler code	Names of common compiler variants	Introduced	Improved
Compiler caching tools	ccache	ccache, distcc	9.5	
Cosmic	cosmiccompile cosmiclink	cxs12x, cx6812, cx6816, cxstm8, cxs12z clnk	9.5	10.2, 2020.4
Embarcadero compiler/linker	bcc blink	bcc32 ilink32	9.5	
Fujitsu FR Family	fcc	fcc911s, fcc907s, fcc896s	9.5	2018.2
GNU	gnu gnu_ld	gcc, g++, cc, c++ ld	Pre-9.5	11.3, 2017, 2017.1, 2018.1, 2018.2, 2018.3, 2019.1, 2019.2, 2019.3, 2020.1, 2020.2, 2020.3, 2020.4
GNU ar	ar	ar	Pre-9.5	
Green Hills	ghs ghscom ghslink ghsar	gcc, gcx, ccarm, cxarm, cccfe, ccmips, cxmips, ccintppc, cxintppc, ccv850, ccppc, ccsh, ccintarm, cxintarm, ccintarm64, cxintarm64, cxppc, ecomarm, ecomppc, ecom800, ecomsh, ecomarm64, elxr, ax	Pre-9.5	10.2, 11.2, 11.3, 2019.1, 2019.2
Hexagon Tools	qdsp	qdsp-gcc, qdsp-g++	9.5	10.1, 2018.3
HI-CROSS+ Motorola HC16	chc16	chc16	2017	
HI-TECH C compiler/linker	picc piclink	picc hlink	9.6	
Hitachi ch38	ch38	ch38.exe	Pre-9.5	
HiveCC	hive	hivecc	10.3	2019
IAR 78k	iar_78_compile	icc78k0r	10.0	10.1
IAR compiler/linker for AVR32	iar_avr32_compile	ccavr32	10.1	
IAR compiler/linker for MAXQ	iar_maxq_compile	iccmxq	10.1	2018.2
IAR compiler/linker for RL78	iar_rl78_compile	iccr178	10.1	
IAR H8	iar_h8_compile	icch8	10.0	10.1

Compiler type	Klocwork compiler code	Names of common compiler variants	Introduced	Improved
IAR M32C	iar_m32c_compile	iccm32c	10.0	
IAR RH850	iar_rh850_compile	iccrh850	10.4	
IAR SH compiler/linker	iar_sh_compile	iccsh	10.0	10.1
IAR compiler/linker for STM8 Microcontroller family	iccstm8 ilinkstm8	iccstm8 ilinkstm8	2018.1	2020.2
IAR Systems C compiler/linker for: <ul style="list-style-type: none"> • 8051 • NEC V850 • MSP430 • M16C • Renesas RX210 • CR16C • ARM • Atmel AVR • Renesas R32C 	icc8051* iccv850 icc430 xlink iccm16c iar_rx_compile iar_rx_link icc16c iccarm ilinkarm iar_avr_compile_filter iar_r32c_compile *Klocwork does not process the compiler option for icc8051 to open standard input as source instead of reading source from a file. If your build uses this option, you can save the source code to a file and run icc8051 with the source file as input, or you can choose to ignore these compilations. The code that is piped through standard input will not be analyzed in the Klocwork build (this is what kwinject does by default).	icc8051* iccv850 icc430 xlink iccm16c icc16c iccarm ilinkarm iccavr icc32c	Pre-9.5	10.1, 2019.2
IBM XL C/C++	xlc	cc, xlc, xlc and related commands (see <code>kwfilter.conf</code> in the <code><kw_install>/config</code> directory for the full list)	9.5	
ImageCraft AVR	iccavr	iccavr	9.5	
ImageCraft M8C compiler/linker	iccm8c ilinkm8c	ilinkm8c ilinkm8c	10.3	
Intel C++	icc icl	icc, icpc icl	Pre-9.5	10.1, 11.1, 11.3, 2017, 2018.3, 2020.4
Intel iC-386	c386	c386a	9.6	
Keil CA51	c51 lx51	c51, cx51, c166, c251 lx51, l166, l251	9.5	10.1, 2017.3

Compiler type	Klocwork compiler code	Names of common compiler variants	Introduced	Improved
Marvell C compiler/linker	marvell_compile	ccmsa	10.0	
MetaWare High C/C++	ararc ldarc mcc	arac, mcc, h386, hcarc, hcac, ldarc, ldac	Pre-9.5	10.1
Metrowerks CodeWarrior	mwc	mwcc, mwccmcf	Pre-9.5	10.1
Microchip MPLAB pic24	pic30	pic30-gcc	9.5	10.1, 2018.3
Microchip MPLAB pic32	pic32	pic32-gcc, pic32-g++, xc32-gcc, xc32-g++	10.0	2018.3, 2020.1
Microchip MPLAB XC8 C	xc8	sc8	2017.1	
Microsoft Visual C++	mscompile mslink	cl, clarm link, lib	Pre-9.5	10.2, 2017.1, 2018, 2018.3, 2019, 2019.1, 2020.4
Microtec	mcx mlk	mcx mlk	9.5	
Microware Ultra C for OS-9	ultra	xcc	10.0	
Mono Headset SDK	gnu ar	xap-local-xap-gcc xap-local-xap-ar	9.2	2019.1
Motorola DSP563	moto563compile moto563link	g563c dsplnk	9.6	
MPLAB C18	mcc18 mplink	mcc18 mplink	9.5	10.1
MPLAB XC16 C	xc16-gcc	xc16-gcc	2017	
Nintendo Cafe Platform	cafe_compile cafe_link	cl, link	10.1	
Nvidia CUDA	nvcc	nvcc	9.6	2019.1
NXP StarCore Freescale	scc sc100-ld	scc sc100-ld	Pre-9.5	10.1, 2017.3
Panasonic C	cc103S ld103S	cc103S ld103S	9.5	
Panasonic MN101E/MN101L	cc101 ld101	cc101 ld101	11.2	
Paradigm C/C++	pcc plink	pcc plink	9.6	2019
Plan 9 C	plan9 ar	0c, 1c, 2c, 5c, 6c, 7c, 8c, 9c, kc, qc, vc ar.l	9.5	2019.1
QNX	qnx	qcc	Pre-9.5	2018.2
Renesas 78K0R	ren_cc78 cc78k0r	ren_lk78 lk78k0r	9.6	
Renesas CC-RL RL78 Family	ccrl	ccrl	2017.2	

Compiler type	Klocwork compiler code	Names of common compiler variants	Introduced	Improved
Renesas CX	ren_cx	cx	10.0	
Renesas M32R family compiler/linker	<ul style="list-style-type: none"> ren_m32_compile ren_m32_link 	cc32r (compiler) lnk32r (linker)	10.0	
Renesas R8C and M16C families	nc30 ren_ln308	nc30 nc308 ln308	9.5	10.1, 11.3
Renesas R32C family	nc100	nc100	10.1	11.3
Renesas RH850 family	ccrh	ccrh	11.2	
Renesas SuperH and RX family	rxcompile rxlink	rxc, shc optlnk	9.5	10.1, 2020.2
Renesas V850	ca850 ld850	ca850 ld850	9.5	
Rowley Crossworks for MSP430	rowley_compile	hcl	10.0	
Sony SN Systems compiler for PS2, PS3 and PSVita	snc	psp2snc, ps3ppusncllv	10.0	10.1
Sony Orbis Clang compiler for PS4	clang	orbis-clang	10.0	10.1
Sun Studio C/C++	sun	CC, cc	Pre-9.5	10.2
Synopsys ARC MetaWare compiler	ccac	ccac	11.0	11.3, 2017, 2017.1, 2018.3
Target Chess	chess	chesscc	10.0	11.1, 11.3
Tasking 68K Toolset compiler/linker	tasking_68_compile tasking_68_link	c68360, cp68360, c68332, cp68332 (compiler) llink (linker)	10.0	
Tasking ARM Toolset compiler/linker	tasking_arm_compile, tasking_arm_link	ccarm (compiler) lkarm (linker)	10.0	
Tasking Classic Toolset for C166 compiler/linker	tasking_classic_166_compile, tasking_classic_166_link	cc166 l166	9.5	10.2
Tasking DSP56X Toolset compiler/linker	tasking_dsp56_compile, tasking_166_link	c563, cp563 lk563	10.1	
Tasking IFX SLE88	cj2	cj2	9.5	
Tasking SLE88 compiler/linker	tasking_sle88_compile, tasking_166_link	c88 lk88	10.1	
Tasking Tricore	tricore_compile tricore_link	cctc, ctc, cptc (compiler) ltc (linker)	9.5	10.1, 2020.1

Compiler type	Klocwork compiler code	Names of common compiler variants	Introduced	Improved
Tasking VX Toolset for C166 compiler/linker	tasking_166_compile tasking_166_link	cc166 lk166	9.6	10.1
Tensilica Xtensa C/C++	xtensa	xt-xc xt-xc++	9.6	10.1, 2018.3
TI ARP32 C/C++	cl_arp32	cl-arp32	9.5	
TI msp430 C/C++	cl430	cl430	9.5	10.1
TI tms320c6x, TI tms320c55x, and TI C7000 Optimizing C/C++	cl6x link6x ar6x	cl7x, cl6x, cl55 link6x ar6x	Pre-9.5	10.1, 2020.4
TI tms320C3x/4x C	cl30/lnk30	cl30 (compiler) lnk30 (linker)	10.0	
TI tms320c28x	cl2000 lnk2000 ar	cl2000 lnk2000 ar2000	9.5	10.1, 2017.2, 2020.4
TriMedia tmcc	tmcc	tmcc, tmCC	Pre-9.5	
Watcom compiler/linker	watcom_compile watcom_link	wcc, wpp, wcc386, wpp386 (for compiler) wlink (for linker)	10.0	
WinAVR	gnu ar	avr-gcc, avr-g++ avr-ar	9.6	10.2, 2019.1
Wind River Diab	diab dld ar	dcc, dplus dld dar	Pre-9.5	10.1, 2018.2, 2020.2, 2020.4
Wind River GCC	gnu	ccppc, ccmips, ccpenitium, ccarm, c++ppc, c++mips, c++penitium, c++arm	9.5	11.3, 2017, 2018
ZiLOG eZ80	ez80cc ez80link	ez80cc ez80link	9.5	

Supported C++ language specifications

Klocwork supports the following C++ language specifications.

Operating system	C++11	C++14	C++17
AIX	Partial	Partial	n/a
Linux	Full (Clang, GCC) Partial (other)	Full (Clang, GCC) Partial (other)	Full (Clang, GCC) n/a (other)
Mac	Partial	Partial	n/a
Solaris	Partial	Partial	n/a
Windows	Full (Clang, GCC, Microsoft Visual C++) Partial (other)	Full (Clang, GCC, Microsoft Visual C++) Partial (other)	Full (Clang, GCC, Microsoft Visual C++) n/a (other)

Supported C# language specifications

Klocwork supports versions 7.0 and below of the C# language specification.

Supported Java language specifications

Klocwork supports version 9 of the Java language specification.

Application servers supported by Klocwork JSP scanning

Klocwork's JSP scanning supports the following application servers:

Application server	Version
Apache Tomcat	5.5, 6.0, 7.0
BEA WebLogic	10

Supported versions of Flex Net Publisher

Platform	Supported Version of FlexNet Publisher
AIX	11.10.1.0
Linux	2019 R3 SP1 (11.16.5.1)
Mac	2016 R2 SP2 (11.14.1.2) On Mac, clients running version 11.14.0.2 cannot connect to a Klocwork 2017.3 server running 11.14.1.2. For a workaround, see kwlef error states license is not valid .
Solaris	11.10.1.0
Windows	2019 R3 SP1 (11.16.5.1)

Operating systems that support FlexNet ID Dongles

A FlexNet ID Dongle is a hardware key, also referred to as a dongle, used to lock software access to the machine on which it is physically installed.

You can use FlexNet ID Dongles in situations where you:

- cannot release any system information such as MAC addresses or IP addresses
- cannot share a license server between multiple sites

For more information about FlexNet ID dongles, see the *FlexNet Publisher Driver Installation Guide for FlexNet ID Dongles* published by Flexera Software.

To use Flexera Software FlexNet ID dongles, use one of the following operating systems with the appropriate FlexNet FLEXID9 driver. You can obtain the appropriate driver for your operating system from Klocwork Customer Support.

Operating system	FlexNet dongle driver installer
Red Hat Enterprise Linux 5.11, 6.8, 7.2, 7.3	<p>The following drivers apply to FlexNet version 11.14.0.2:</p> <ul style="list-style-type: none"> • 32-bit: aksusbdredhatsuse- 2.5.1.tar.gz • 64-bit: aksusbdredhatsuse- 2.5.1.tar.gz <p>The following drivers apply to FlexNet version 11.14.1.2, for both 32-bit and 64-bit:</p> <ul style="list-style-type: none"> • aksusbd-redhatsuse-7.54.tar.gz
Windows 8.1, Windows 10	<p>The following drivers apply to FlexNet version 11.14.0.2:</p> <ul style="list-style-type: none"> • 32-bit: FLEXID9_Windows_v7_41_i686.zip • 64-bit: FLEXID9_Windows_v7_41_x64.zip <p>The following drivers apply to FlexNet version 11.14.1.2:</p> <ul style="list-style-type: none"> • 32-bit: FLEXID9_Windows_v7_54_i686.zip • 64-bit: FLEXID9_Windows_v7_54_x64.zip

Notes:

- You must install Flexera FlexNet ID Dongles at the root/Administrator privilege. For Unix, use su/sudo. For Windows, use an Administrator group.
- After installing Flexera FlexNet ID Dongles on Windows, restart the Klocwork Servers.
- The Linux Red Hat Package Manager (RPM) installer emits an error message about checkpc. Ignore the error message.

Supported versions of MariaDB

The Database Server for Windows and Linux is a MariaDB 10.3.22 database server.

Supported LDAP servers

- Windows Server 2008: Microsoft Active Directory
- Linux: OpenLDAP
- Sun Java System Directory
- Novell eDirectory



Toll-free: 1.800.487.3217

Direct: 1.613.836.8899

sales@klocwork.com

support@klocwork.com

400 First Avenue North #200, Minneapolis, MN 55401

www.perforce.com

www.perforce.com/products/klocwork



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