

Oracle® Fusion Middleware

Running Oracle WebLogic Server and Coherence on GraalVM Enterprise Edition

Release 12c (12.2.1.4.0)

F29662-03

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About Oracle WebLogic Server and Coherence on GraalVM Enterprise Edition

Oracle WebLogic Server and Coherence 12c (12.2.1.4.0) are certified to run on Oracle GraalVM Enterprise Edition.

Oracle GraalVM Enterprise Edition is a high performance runtime platform built on Oracle's enterprise-class Java SE. Its optimizing compiler accelerates WebLogic applications by rearranging compiled code, aggressive method inlining, escape analysis, advanced vectorization and more. Running WebLogic Server and Coherence on GraalVM Enterprise is as simple as updating your `JAVA_HOME` and `PATH` environment variables and calling `./startWeblogic.sh`.

See <https://www.oracle.com/graalvm>.

Note:

Oracle WebLogic Server and Coherence support GraalVM Enterprise Edition, but do not support the use of the GraalVM Native Image technology.

System Requirements

Oracle WebLogic Server and Coherence 12.2.1.4 support Oracle GraalVM Enterprise Edition.

For details on system configuration supported by Oracle WebLogic Server and Coherence, see Oracle Fusion Middleware Supported System Configurations.

Performance Benefits

When you run WebLogic Server and Coherence applications on Oracle GraalVM Enterprise, in general you can anticipate up to a 5-10% performance improvement. This performance improvement estimate is based on a variety of internal API specific microbenchmarks, and benchmarks run on a full, end to end Java EE WebLogic

Server application used for internal stress testing. This application covers a combination of Java EE APIs and is run in a large clustered configuration. These performance improvement results, which are consistent with performance improvements observed for other Java applications, and improvements observed for other Oracle applications, are the basis for these estimates. Performance benefits will be application-specific, and we encourage testing on your applications to verify the benefits you will realize from Oracle GraalVM Enterprise.

Download and Install Oracle GraalVM Enterprise

Oracle GraalVM Enterprise is distributed as an archive (.tar.gz) that consists of the JVM, the GraalVM compiler, the LLVM bitcode interpreter, and the JavaScript runtime with Node.js support.

1. In a web browser, navigate to the Oracle GraalVM downloads page at <https://www.oracle.com/downloads/graalvm-downloads.html>, accept the Oracle License Agreement, and download the appropriate version for your platform.
2. Extract the archive to a directory of your choice. For example, `tar -xzf archive.tar.gz`, where *archive* represents the file name of the archive you downloaded.

For more information, see [Oracle GraalVM Enterprise Edition](#) documentation.

Download and Install WebLogic Server and Coherence

WebLogic Server is distributed as a ZIP archive that contains the WebLogic Server generic installer (.jar), and a readme file.

1. In a web browser, navigate to the Oracle Fusion Middleware Software Downloads page at <http://www.oracle.com/technetwork/middleware/weblogic/downloads/index.html>.
2. Select the Generic Installer, accept the Oracle License Agreement and download the ZIP archive.
3. Extract the ZIP archive to a directory of your choice.
4. Configure the environment.
 - Prepend the GraalVM bin directory to the PATH environment variable.

```
$ export PATH=path_to_GraalVM/bin:$PATH
```
 - Set the JAVA_HOME environment variable to resolve to the GraalVM installation directory.

```
$ export JAVA_HOME=path_to_GraalVM
```
5. Launch the generic installer.

```
$ java -jar fmw_12.2.1.4.0_wls_generic.jar
```

After the installer extracts the files, it analyzes your system to see if it meets the minimum requirements (CPU speed, for example). If your system meets the requirements, the graphical Oracle Universal Installer starts.

6. Step through the screens in the graphical installer, responding to the prompts with the settings specific to your environment.

See Installing the Oracle WebLogic Server and Coherence Software in *Installing and Configuring Oracle WebLogic Server and Coherence*.

After you have successfully completed the installation, all subsequent WebLogic Server and Coherence configuration, startup, development, management and monitoring operations are identical to the same operations that you perform in a standard Java environment.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

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