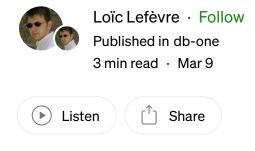


Oracle JDBC Drivers 19c, 21c, 23c





Sometimes you need information about Oracle JDBC drivers such as the last versions, which one to use for a given database version, the changelogs, etc.

In this post, I tried to bring you all this information in one place. If anything is missing, don't hesitate to comment so that I can fix it. This is not a read-only post!

There are currently 3 major versions of these drivers being supported:

- 19.X.X.X known as Long Term Support (or LTS); latest version: 19.18.0.0; end of *extended* support is April 2027
- 21.X.X.X known as Innovation Release; latest version: 21.9.0.0; end of support is April 2024
- 23.X.X.X known as future Long Term Support; early version: 23.2.0.0 brought along the new Oracle database 23c FREE Developer release

The changelogs of these versions can be found respectively <u>here</u> for 19 and <u>here</u> for 21.

These drivers come in 2 flavors:

• thin: Level 4 driver 100% written in Java, useful for GraalVM native images, available on Maven Central, e.g.:

Maven dependencies:

```
<dependency>
     <groupId>com.oracle.database.jdbc</groupId>
     <artifactId>ojdbc8</artifactId>
          <version>19.18.0.0</version>
</dependency>
```

```
<dependency>
  <groupId>com.oracle.database.jdbc</groupId>
  <artifactId>ojdbc8</artifactId>
  <version>21.9.0.0</version>
</dependency>
```

```
<dependency>
```

```
<groupId>com.oracle.database.jdbc</groupId>
  <artifactId>ojdbc11</artifactId>
   <version>23.2.0.0</version>
</dependency>
```

Gradle dependencies:

```
implementation 'com.oracle.database.jdbc:ojdbc8:19.18.0.0'

implementation 'com.oracle.database.jdbc:ojdbc8:21.9.0.0'

implementation 'com.oracle.database.jdbc:ojdbc11:23.2.0.0'
```

• thick: Level 2 driver which requires the previously mentioned Java dependencies along additional libraries such as the <u>Oracle Instant Client</u>; not really good for Container images (larger size)

A good place to get the latest information is the official <u>Oracle JDBC FAQ portal!</u>

One of the questions you may ask yourself is which driver should I use for a given database version and a given JVM version. From the FAQ above, it looks like relying on the <code>ojdbc8.jar</code> is the best choice for now as it remains compatible with JDK 8 and JDK 11 as well as Oracle databases 19c and 21c while it's compliant with JDBC 4.2 specification.

For JDK 17 and above, you should use the ojdbc11.jar, also it is JDBC 4.3 compliant.

From the FAQ, this means:

If you are using JDK11 then, ojdbc8.jar is still a better choice as it includes all the 4.3 features but as Oracle extensions. Customers can use ojdbc10.jar only if they need JDBC 4.3 features available through standard Java SE.

```
Example: ojdbc8.jar:
```

```
Connection conn = DriverManager.getConnection(...);
// would fail because beginRequest is not in Java 8
conn.beginRequest();

// succeeds because beginRequest is provided as an Oracle extension
((OracleConnection)conn).beginRequest();
```

ojdbc10.jar:

```
Connection conn = DriverManager.getConnection(...);
// succeeds because beginRequest is in Java 10
conn.beginRequest();

// succeeds because OracleConnection supports JDBC 4.3 (in Java 10)
// and beginRequest is part of JDBC 4.3
((OracleConnection)conn).beginRequest();
```

A quick note regarding **23c**, JDBC 19 driver is *currently* the minimum planned version to support this coming Long Term Support (LTS) release.

Since the beginning of April, with the new <u>Oracle Database 23c FREE</u> — <u>Developer release</u> announcement, <u>23c JDBC drivers are now available on OTN</u> and on Mayen Central.

Last but not least, I recommend the following documentation:

- JDBC Developers Guide 19
- <u>JDBC Developers Guide 21</u>