For install Apache DB (derby) go to: <http://db.apache.org/derby/derby_downloads.html>

### Install Derby

Choose the directory into which you want to install the Derby software. You must have write permissions to this directory. The sample instructions below use C:\Apache for Windows and /opt/Apache for UNIX; be sure to use your actual location. Copy the software distribution to the location you choose, then extract it as shown below.

Windows (use your extraction tool e.g. WinZip -- these instructions use mks unzip):

mkdir C:\Apache

copy db-derby-10.14.2.0-bin.zip C:\Apache

cd C:\Apache

unzip db-derby-10.14.2.0-bin.zip

UNIX:

mkdir /opt/Apache

cp db-derby-10.14.2.0-bin.tar.gz /opt/Apache

cd /opt/Apache

tar xzvf db-derby-10.14.2.0-bin.tar.gz

In both cases, the software will now be extracted into a subdirectory named db-derby-10.14.2.0-bin.

### Set DERBY\_INSTALL

Set the DERBY\_INSTALL variable to the location where you installed Derby. Examples are shown below, but be sure to use the actual location on your system:

Windows:

C:\> set DERBY\_INSTALL=C:\Apache\db-derby-10.14.2.0-bin

UNIX Korn Shell:

$ export DERBY\_INSTALL=/opt/Apache/db-derby-10.14.2.0-bin

### Configure Embedded Derby

To use Derby in its embedded mode set your CLASSPATH to include the jar files listed below:

* derby.jar: contains the Derby engine and the Derby Embedded JDBC driver
* derbytools.jar: optional, provides the ij tool that is used by a couple of sections in this tutorial

You can set your CLASSPATH explicitly with the command shown below:

Windows:

C:\> set CLASSPATH=%DERBY\_INSTALL%\lib\derby.jar;%DERBY\_INSTALL%\lib\derbytools.jar;.

UNIX:

$ export CLASSPATH=$DERBY\_INSTALL/lib/derby.jar:$DERBY\_INSTALL/lib/derbytools.jar:.

Notice that multiple entries in the class path are separated by a semicolon (;) on Windows and a colon (:) on UNIX.

The Derby software provides another way to set CLASSPATH, using shell scripts (UNIX) and batch files (Windows). This tutorial shows how to set CLASSPATH explicitly and also how to use the Derby scripts to set it.

Change directory now into the DERBY\_INSTALL/bin directory. The setEmbeddedCP.bat (Windows) and setEmbeddedCP (UNIX) scripts use the DERBY\_INSTALL variable to set the CLASSPATH for Derby embedded usage. You can edit the script itself to set DERBY\_INSTALL, or you can let the script get DERBY\_INSTALL from your environment. Since you already set DERBY\_INSTALL in the "[Set DERBY\_INSTALL](https://db.apache.org/derby/papers/DerbyTut/install_software.html#set_derby_install)" section above, you don't need to edit the script, so go ahead and execute it as shown below:

Windows:

C:\> cd %DERBY\_INSTALL%\bin

C:\Apache\db-derby-10.14.2.0-bin\bin> setEmbeddedCP.bat

UNIX:

$ cd $DERBY\_INSTALL/bin

$ . setEmbeddedCP

### Verify Derby

Run the sysinfo command, as shown below, to output Derby system information:

java org.apache.derby.tools.sysinfo

Successful output will look something like this:

------------------ Java Information ------------------

Java Version: 1.8.0

Java Vendor: Oracle Corporation

Java home: /Library/Java/JavaVirtualMachines/jdk1.8.0.jdk/Contents/Home/jre

Java classpath: /Users/me/src:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derby.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derby.war:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_cs.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_de\_DE.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_es.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_fr.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_hu.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_it.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_ja\_JP.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_ko\_KR.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_pl.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_pt\_BR.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_ru.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_zh\_CN.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyLocale\_zh\_TW.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyclient.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbynet.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyoptionaltools.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyrun.jar:/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbytools.jar:/Users/me/sw/db2jcc/lib/db2jcc.jar:/Users/me/sw/db2jcc/lib/db2jcc\_license\_c.jar:/Users/me/sw/mysql/connectorj/mysql-connector-java-5.0.7/mysql-connector-java-5.0.7-bin.jar:/Users/me/sw/demo/jdbc.concurrent/jars/jdbc-concurrent.jar:/Users/me/sw/demo/tableFunctionWhitePaper/jars/vtis-example.jar

OS name: Mac OS X

OS architecture: x86\_64

OS version: 10.11.5

Java user name: me

Java user home: /Users/me

Java user dir: /Users/me/derby/branches/10.14

java.specification.name: Java Platform API Specification

java.specification.version: 1.8

java.runtime.version: 1.8.0-b132

--------- Derby Information --------

[/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derby.jar] 10.14.2.0 - (1828579)

[/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbytools.jar] 10.14.2.0 - (1828579)

[/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbynet.jar] 10.14.2.0 - (1828579)

[/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyclient.jar] 10.14.2.0 - (1828579)

[/Users/me/sw/z/db-derby-10.14.2.0-bin/lib/derbyoptionaltools.jar] 10.14.2.0 - (1828579)

------------------------------------------------------

----------------- Locale Information -----------------

Current Locale : [English/United States [en\_US]]

Found support for locale: [cs]

version: 10.14.2.0 - (1828579)

Found support for locale: [de\_DE]

version: 10.14.2.0 - (1828579)

Found support for locale: [es]

version: 10.14.2.0 - (1828579)

Found support for locale: [fr]

version: 10.14.2.0 - (1828579)

Found support for locale: [hu]

version: 10.14.2.0 - (1828579)

Found support for locale: [it]

version: 10.14.2.0 - (1828579)

Found support for locale: [ja\_JP]

version: 10.14.2.0 - (1828579)

Found support for locale: [ko\_KR]

version: 10.14.2.0 - (1828579)

Found support for locale: [pl]

version: 10.14.2.0 - (1828579)

Found support for locale: [pt\_BR]

version: 10.14.2.0 - (1828579)

Found support for locale: [ru]

version: 10.14.2.0 - (1828579)

Found support for locale: [zh\_CN]

version: 10.14.2.0 - (1828579)

Found support for locale: [zh\_TW]

version: 10.14.2.0 - (1828579)

------------------------------------------------------

The output on your system will probably be somewhat different from the output shown above, but it should reflect the correct location of jar files on your machine and there shouldn't be any errors. If you see an error like the one below, it means your class path is not correctly set:

$ java org.apache.derby.tools.sysinfo

Exception in thread "main" java.lang.NoClassDefFoundError:

org/apache/derby/tools/sysinfo

Echo your CLASSPATH, as shown below, then double check each entry in your class path to verify that the jar file is where you expect it:

Windows:

C:\> echo %CLASSPATH%

C:\Apache\DB-DER~1.1-B\lib\derby.jar;C:\Apache\DB-DER~1.1-B\lib\derbytools.jar;

UNIX:

$ echo $CLASSPATH

/opt/Apache/db-derby-10.14.2.0-bin/lib/derby.jar:/opt/Apache/db-derby-10.14.2.0-bin/lib/derbytools.jar:

If sysinfo outputs valid information, you're ready to move to "[Step 2: ij Basics](https://db.apache.org/derby/papers/DerbyTut/ij_intro.html)".

1. First, you need to manually start derby server (if it is not already running) before using it in IDEA IntelliJ. I usually do it via command prompt by typing:

>startNetworkServer -noSecurityManager