

## **HSQLDB - 100% Java Database**

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## **Starting Multiple Servers**

A HyperSQL server can be started very simply to serve multiple databases. In fact, the Server implementation is so flexible that you can start two servers, running on different ports, to serve the same databases. This example was developed by Larissa Janssen to start an SSL server for external access, together with a local server.

UNIX and Linux users don't need to write a program or assemble a Java command as described below, because HyperSQL comes with an init script that does this for you. See this section of the User Guide and read the comments about the INVOC ADDL ARGS setting in the init script config file.

```
package myApplication;
import org.hsqldb.persist.HsqlProperties;
import org.hsqldb.server.Server;
import org.hsqldb.server.ServerConfiguration;
import org.hsqldb.server.ServerAcl.AclFormatException;
 * do start one Hsqldb-Server with two Ports: 554 and 9001. Port 554 must be first started.
*/
public class HSQLDBServerTest {
       public static void main(String[] args) {
               Server.main(new String[] {});
               System.out.println("********* Localhost *************);
               Server server2 = new Server();
               boolean read2 = server2.putPropertiesFromFile("serverLocal");
               if (read2) {
                       server2.start();
               }
       }
}
####################
An alternative to using the above program is the MainInvoker class. This class can invoke two or more main() methods from different classes.
http://hsqldb.org/doc/2.0/apidocs/org/hsqldb/util/MainInvoker.html
java -cp... org.hsqldb.util.MainInvoker org.hsqldb.server.Server "" org.hsqldb.server.Server --port 9002 --tls false
####################
Server-Properties for SSL (standard name server.properties):
server.port=554
 server.database.0=file:D:/hsqldbs/plus/db/plus
 server.dbname.0=plus
 server.database.1=file:D:/hsqldbs/plus1/db/plus1
 server.dbname.1=plus1
 server.database.2=file:D:/hsqldbs/plus2/db/plus2
 server.dbname.2=plus2
 server.database.3=file:D:/hsqldbs/plus3/db/plus3
 server.dbname.3=plus3
 server.silent=true
 system.javax.net.ssl.keyStore=D:/hsqldbs/server.keystore
 system.javax.net.ssl.keyStorePassword=testLa
 server.tls=true
 server.no system exit=false
#############################
Server-Properties for Localhost (name serverLocal.properties):
 server.port=9001
 server.database.0=file:D:/hsqldbs/plus/db/plus
 server.dbname.0=plus
 server.database.1=file:D:/hsqldbs/plus1/db/plus1
 server.dbname.1=plus1
 server.database.2=file:D:/hsqldbs/plus2/db/plus2
 server.dbname.2=plus2
 server.database.3=file:D:/hsqldbs/plus3/db/plus3
 server.dbname.3=plus3
 server.silent=true
server.no_system_exit=false
#################################
My Programm for starting hsqldb:
--cd to hsqldb-Home (here is this file server.properies)
cd D:/hsqldbs
%JAVA HOME%\bin\java -classpath "D:\Tomcat\lib\hsqldb.jar;D:\Tomcat\lib\sqltool.jar;myApplication.jar" myApplication.HSQLDBServerTest
Finish!
###############################
Here is start sample:
[Server@3f437c]: [Thread[main,5,main]]: checkRunning(false) entered
[Server@3f437c]: [Thread[main,5,main]]: checkRunning(false) exited
[Server@3f437c]: Startup sequence initiated from main() method
[Server@3f437c]: Loaded properties from [D:\hsqldbs\server.properties]
[Server@3f437c]: Initiating startup sequence...
[Server@3f437c]: Server socket opened successfully in 468 ms.
[Server@3f437c]: Using TLS/SSL-encrypted JDBC
[Server@3f437c]: Database [index=0, id=0, db=file:D:/hsqldbs/plus3/db/plus3, alias=plus3] opened sucessfully in 829 ms.
[Server@3f437c]: Database [index=1, id=1, db=file:D:/hsqldbs/plus2/db/plus2, alias=plus2] opened sucessfully in 500 ms.
[Server@3f437c]: Database [index=2, id=2, db=file:D:/hsqldbs/plus1/db/plus1, alias=plus1] opened sucessfully in 375 ms.
[Server@3f437c]: Database [index=3, id=3, db=file:D:/hsqldbs/plus/db/plus, alias=plus] opened sucessfully in 250 ms.
[Server@3f437c]: Startup sequence completed in 2422 ms.
[Server@3f437c]: 2010-05-27 14:34:31.381 HSQLDB server 2.0.0 is online on port 554
[Server@3f437c]: To close normally, connect and execute SHUTDOWN SQL
[Server@3f437c]: From command line, use [Ctrl]+[C] to abort abruptly
******** Localhost **********
[Server@la1f635]: [Thread[main,5,main]]: putPropertiesFromFile(): [D:\hsqldbs\serverLocal.properties]
[Server@1a1f635]: [Thread[main,5,main]]: checkRunning(false) entered
[Server@la1f635]: [Thread[main,5,main]]: checkRunning(false) exited
[Server@lalf635]: Initiating startup sequence...
[Server@la1f635]: Server socket opened successfully in 0 ms.
[Server@lalf635]: Database [index=0, id=0, db=file:D:/hsqldbs/plus3/db/plus3, alias=plus3] opened sucessfully in 0 ms.
[Server@lalf635]: Database [index=1, id=1, db=file:D:/hsqldbs/plus2/db/plus2, alias=plus2] opened sucessfully in 0 ms.
[Server@lalf635]: Database [index=2, id=2, db=file:D:/hsqldbs/plus1/db/plus1, alias=plus1] opened sucessfully in 16 ms.
[Server@lalf635]: Database [index=3, id=3, db=file:D:/hsqldbs/plus/db/plus, alias=plus] opened sucessfully in 0 ms.
```



[Server@1a1f635]: Startup sequence completed in 16 ms.

[Server@1a1f635]: 2010-05-27 14:34:31.459 HSQLDB server 2.0.0 is online on port 9001

[Server@1a1f635]: To close normally, connect and execute SHUTDOWN SQL [Server@1a1f635]: From command line, use [Ctrl]+[C] to abort abruptly