

Hibernate Tip: Log SQL Statements

Question:

How do you configure Hibernate so that it writes the executed SQL statements and used bind parameters to the log file?

Solution:

Hibernate uses 2 different log categories and log levels to log the executed SQL statements and their bind parameters:

- The SQL statements are written as DEBUG messages to the category `org.hibernate.SQL`.
- The bind parameters are logged to the `org.hibernate.type.descriptor.sql` category with log level TRACE.

You can activate and deactivate them independently of each other in your log configuration.

The following code snippet shows an example of a log4j configuration which activates both of them.

```
log4j.rootLogger=info, stdout
# basic log level for all messages
log4j.logger.org.hibernate=info

# SQL statements and parameters
log4j.logger.org.hibernate.SQL=debug
log4j.logger.org.hibernate.type.descriptor.sql=trace
```

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Hibernate then writes log messages like the following ones to your log file.

```
17:34:50,353 DEBUG [org.hibernate.SQL] - select author0_.id as  
id1_0_, author0_.firstName as firstNam2_0_, author0_.lastName as  
lastName3_0_, author0_.version as version4_0_ from Author  
author0_ where author0_.id=1
```

```
17:34:50,362 TRACE
```

```
[org.hibernate.type.descriptor.sql.BasicExtractor] - extracted value  
([id1_0_] : [BIGINT]) - [1]
```

```
17:34:50,373 TRACE
```

```
[org.hibernate.type.descriptor.sql.BasicExtractor] - extracted value  
([firstNam2_0_] : [VARCHAR]) - [Joshua]
```

```
17:34:50,373 TRACE
```

```
[org.hibernate.type.descriptor.sql.BasicExtractor] - extracted value  
([lastName3_0_] : [VARCHAR]) - [Bloch]
```

```
17:34:50,374 TRACE
```

```
[org.hibernate.type.descriptor.sql.BasicExtractor] - extracted value  
([version4_0_] : [INTEGER]) - [0]
```

Further reading:

You can find more information about Hibernates logging features and my recommendation for a development and a production configuration (yes, you should use 2 different ones!) in [Hibernate Logging Guide – Use the right config for development and production](http://www.thoughts-on-java.org/hibernate-logging-guide/) (<http://www.thoughts-on-java.org/hibernate-logging-guide/>).