Hibernate Tip: Call a stored procedure

Question:

My DBA created a stored procedure which I need to call from my Java code. What's the best way to do that with Hibernate?

Solution:

Until JPA 2.0, you had to use a [native SQL query](#) to call a stored procedure. Since version 2.1, you can also do that it with a *@NamedStoredProcedureQuery*.

The following code snippet shows an example of a *@NamedStoredProcedureQuery* annotation. This query calls the stored procedure calculate with the input parameters x and y and the output parameter sum. As you can see, each parameter is defined by a *@StoredProcedureParameter* annotation which defines the parameter mode and its name. The parameter mode specifies if the parameter is used as an input (*ParameterMode.IN*), output (*ParameterMode.OUT*), input and output (*ParameterMode.INOUT*) or as a result set cursor (*ParameterMode.REF_CURSOR*).

```java
@NamedStoredProcedureQuery(

    name = "calculate",

    procedureName = "calculate",

    parameters = {

        @StoredProcedureParameter(mode =
ParameterMode.IN, type = Double.class, name = "x"),

        @StoredProcedureParameter(mode =
ParameterMode.IN, type = Double.class, name = "y"),

        @StoredProcedureParameter(mode =
ParameterMode.OUT, type = Double.class, name = "sum")

    }

)
```

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That's all you need to do to define the stored procedure call. You can now use it in your business code. You just have to provide its name to the *createNamedStoredProcedureQuery* method of the *EntityManager* to instantiate the query, set the input parameters, execute it and read the output parameter.

```
StoredProcedureQuery query =
this.em.createNamedStoredProcedureQuery("calculate");

query.setParameter("x", 1.23d);

query.setParameter("y", 4.56d);

query.execute();

Double sum = (Double)
query.getOutputParameterValue("sum");
```

Learn more:

You can read more about stored procedure calls and the supported parameter modes in [How to call a stored procedure in JPA](#)