

Hibernate Tip: Create a database setup script based on entity mappings

Question:

I want to use a database setup script instead of Hibernate's schema generation. What's the easiest way to create this script for an existing entity model?

Solution:

[JPA 2.1](#) introduced a schema generation features which can setup your database or export the generated commands to a file. You just have to set the following configuration parameters in your `persistence.xml` file to activate it:

`javax.persistence.schema-generation.scripts.action`

Defines which scripts the persistence provider shall create. You can choose between *none*, *create*, *drop-and-create*, *drop*.

A script target needs to be defined for each script to be created.

`javax.persistence.schema-generation.scripts.create-target`

Defines the target location of the create script generated by the persistence provider as a file URL or a *java.IO.Writer*.

`javax.persistence.schema-generation.scripts.drop-target`

Defines the target location of the drop script generated by the persistence provider as a file URL or a *java.IO.Writer*.

Here you can see a `persistence.xml` configuration that generates a create and a drop script based on the entity mapping information.

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```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<persistence xmlns="http://xmlns.jcp.org/xml/ns/persistence"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
version="2.1"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/persistence
http://xmlns.jcp.org/xml/ns/persistence/persistence_2_1.xsd">
  <persistence-unit name="EFS2015-persistence-unit"
transaction-type="JTA">
    <description>Forge Persistence Unit</description>
    <provider>org.hibernate.ejb.HibernatePersistence</provider>
    <jta-data-source>java:jboss/datasources/ExampleDS</jta-
data-source>
    <exclude-unlisted-classes>false</exclude-unlisted-classes>
    <properties>
        <property name="hibernate.dialect"
value="org.hibernate.dialect.PostgreSQLDialect"/>

        <property name="javax.persistence.schema-
generation.scripts.action" value="drop-and-create"/>
        <property name="javax.persistence.schema-
generation.scripts.create-target" value="./create.sql"/>
        <property name="javax.persistence.schema-
generation.scripts.drop-target" value="./drop.sql"/>
    </properties>
  </persistence-unit>
</persistence>
```

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Learn more:

You can use JPA's schema generation feature also to setup and initialize databases based on the entity mapping information or a set of SQL scripts. I explain it in more detail in my post [Standardized schema generation and data loading with JPA 2.1.](#)