XA Transaction implementation using spring framework

1. Create two different XA datasource



history-ds.xml

<?xml version=*"1.0"* encoding=*"UTF-8"*?>

<datasources>

<xa-datasource>

**<jndi-name>JPAHistoryDS</jndi-name>**

**<xa-datasource-class>com.mysql.jdbc.jdbc2.optional.MysqlXADataSource</xa-**datasource-class>

**<xa-datasource-property name=*"URL"*>jdbc:mysql://localhost:3306/history\_db</**xa-datasource-property>

<user-name>root</user-name>

<password>root</password>

<transaction-isolation>TRANSACTION\_READ\_COMMITTED</transaction-isolation>

<min-pool-size>5</min-pool-size>

<max-pool-size>100</max-pool-size>

<blocking-timeout-millis>2000</blocking-timeout-millis>

<idle-timeout-minutes>2</idle-timeout-minutes>

<track-connection-by-tx />

<valid-connection-checker-class-name>org.jboss.resource.adapter.jdbc.vendor.MySQLValidConnectionChecker</valid-connection-checker-class-name>

<exception-sorter-class-name>org.jboss.resource.adapter.jdbc.vendor.MySQLExceptionSorter</exception-sorter-class-name>

<!--new-connection-sql></new-connection-sql-->

<!--check-valid-connection-sql></check-valid-connection-sql-->

<metadata>

<type-mapping>mySQL</type-mapping>

</metadata>

</xa-datasource>

</datasources>

ezloann-ds.xml

<?xml version=*"1.0"* encoding=*"UTF-8"*?>

<datasources>

<xa-datasource>

**<jndi-name>LoanAppDS</jndi-name>**

**<xa-datasource-class>com.mysql.jdbc.jdbc2.optional.MysqlXADataSource</xa-datasource-class>**

**<xa-datasource-property name=*"URL"*>jdbc:mysql://localhost:3306/ezloan</xa-**datasource-property>

<user-name>root</user-name>

<password>root</password>

<transaction-isolation>TRANSACTION\_READ\_COMMITTED</transaction-isolation>

<min-pool-size>5</min-pool-size>

<max-pool-size>100</max-pool-size>

<blocking-timeout-millis>2000</blocking-timeout-millis>

<idle-timeout-minutes>2</idle-timeout-minutes>

<track-connection-by-tx />

<valid-connection-checker-class-name>org.jboss.resource.adapter.jdbc.vendor.MySQLValidConnectionChecker</valid-connection-checker-class-name>

<exception-sorter-class-name>org.jboss.resource.adapter.jdbc.vendor.MySQLExceptionSorter</exception-sorter-class-name>

<!--new-connection-sql></new-connection-sql-->

<!--check-valid-connection-sql></check-valid-connection-sql-->

<metadata>

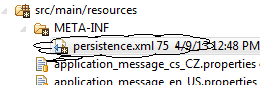
<type-mapping>mySQL</type-mapping>

</metadata>

</xa-datasource>

</datasources>

**Step-2**

**Create two persistence-unit inside the persistence.xml file.  
**

<persistence-unit name=*"JPAezLoan"* transaction-type=*"JTA"*>

<provider>org.hibernate.ejb.HibernatePersistence</provider>

<jta-data-source>java:LoanAppDS</jta-data-source>

<class>com.ez.model.entity.BankEntity</class>

<class>com.ez.model.entity.CustomerEntity</class>

<class>com.ez.model.entity.DepartmentEntity</class>

<class>com.ez.model.entity.EmployeeEntity</class>

<properties>

<property name=*"hibernate.dialect"* value=*"org.hibernate.dialect.MySQLDialect"* />

<property name=*"hibernate.hbm2ddl.auto"* value=*"update"* />

<property name=*"hibernate.show\_sql"* value=*"true"* />

<property name=*"hibernate.format\_sql"* value=*"true"* />

<property name=*"hibernate.use\_sql\_comments"* value=*"true"* />

<property name=*"hibernate.transaction.manager\_lookup\_class"*

value=*"org.hibernate.transaction.JBossTransactionManagerLookup"* />

<!-- <property name="hibernate.transaction.factory\_class"

value="org.hibernate.transaction.JTATransactionFactory" /> -->

<property name=*"hibernate.current\_session\_context\_class"*

value=*"jta"* />

<property name=*"jboss.entity.manager.factory.jndi.name"*

value=*"java:/JPAezLoan"* />

</properties>

</persistence-unit>

<persistence-unit name=*"JPAHistory"* transaction-type=*"JTA"*>

<provider>org.hibernate.ejb.HibernatePersistence</provider>

<jta-data-source>java:JPAHistoryDS</jta-data-source>

<class>com.ez.model.entity.BankEntity</class>

<class>com.ez.model.entity.CustomerEntity</class>

<class>com.ez.model.entity.DepartmentEntity</class>

<class>com.ez.model.entity.EmployeeEntity</class>

<properties>

<property name=*"hibernate.dialect"* value=*"org.hibernate.dialect.MySQLDialect"* />

<property name=*"hibernate.hbm2ddl.auto"* value=*"update"* />

<property name=*"hibernate.show\_sql"* value=*"true"* />

<property name=*"hibernate.format\_sql"* value=*"true"* />

<property name=*"hibernate.use\_sql\_comments"* value=*"true"* />

<property name=*"hibernate.transaction.manager\_lookup\_class"*

value=*"org.hibernate.transaction.JBossTransactionManagerLookup"* />

<!—

Below entry was showing error so I have commented it

<property name="hibernate.transaction.factory\_class"

value="org.hibernate.transaction.JTATransactionFactory" /> -->

<property name=*"hibernate.current\_session\_context\_class"*

value=*"jta"* />

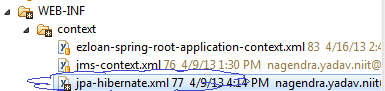
<property name=*"jboss.entity.manager.factory.jndi.name"*

value=*"java:/JPAHistory"* />

</properties>

</persistence-unit>

**Step-3**

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Creating entityFactoryManager for different persistsence unit

<!-- This is similar to hibernate session factory -->

<bean id=*"entityManagerFactory "*

class=*"org.springframework.orm.jpa.LocalEntityManagerFactoryBean"*>

<property name=*"persistenceUnitName"* value=*"JPAezLoan"*/>

</bean>

<bean id=*"historyEntityManager "*

class=*"org.springframework.orm.jpa.LocalEntityManagerFactoryBean"*>

<property name=*"persistenceUnitName"* value=*"JPAHistory"*/>

</bean>

**Note : Configuring spring JTA transaction manager**

<tx:jta-transaction-manager />

<!-- Enabling This transaction manager with annotation -->

<!-- This code snippet is for Spring Transaction with Annotation -->

<tx:annotation-driven proxy-target-class=*"true"*

order=*"100"* transaction-manager=*"transactionManager"* mode=*"proxy"*/>