OASP4J - Guide for DBIntegration of MS SQL Server 2008

As a first step to integrate OASP4J with MS SQL Server 2008, MS SQL Server 2008 has to be installed. Following are the snapshots of the configuration chosen during various stages of installation.

Note : One can ignore the following section if they are well versed with installation procedure of MS SQL Server.

MSSQL Server 2008 Installation and Configuration :

• During installtion, at 'Server Configuration' step, please see that the configuration chosen is as mentioned in the screenshot below and click on Next button.

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p Support Rules	Service Accounts Collation			
ure Selection	Microsoft recommends that you use a separate account for each	h SQL Server service.		
nce Configuration	Service	Account Name	Password	Startup Ty
Space Requirements	SQL Server Agent	NT AUTHORITY\SYSTEM		Manual
er Configuration	SQL Server Database Engine	NT AUTHORITY\SYSTEM	•	Manual
base Engine Configuration	SQL Server Analysis Services	NT AUTHORITY/LOCAL SERVICE		Manual
ysis Services Configuration	Sql Server Reporting Services	NT AUTHORITY\LOCAL SERVICE		Manual
orting Services Configuration	SQL Server Integration Services 10.0	NT AUTHORITY\SYSTEM		Manual
r and Usage Reporting				
illation Rules			Use the same acco	unt for all SQL Server service
dy to Install				
Ilation Progress				
Complete	These services will be configured automatically where possible	to use a low privilege account. On some older Windows versions the user w	ill need to specify a low privilege account. For r	more information, click Help
	Service	Account Name	Password	Startup Ty
	Jeivice	Account Name	(upproru	
	SQL Full-text Filter Daemon Launcher	NT AUTHORITY/LOCAL SERVICE		Manual
	SQL Full-text Filter Daemon Launcher	NT AUTHORITY\LOCAL SERVICE		Manual
	SQL Full-text Filter Daemon Launcher	NT AUTHORITY\LOCAL SERVICE		Manual
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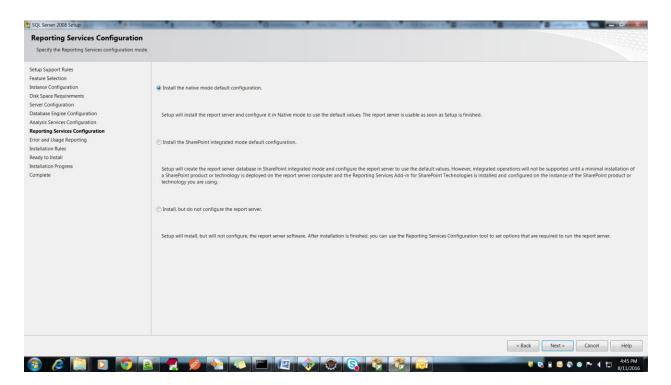
• In the next step, 'Database Engine Configuration, please choose the configuration as mentioned in the screenshot below and click on Next button.

1 SQL Server 2008 Setup	interest and prints on a distribution of distribution of the later	· · · · · · · · · · · · · · · · · · ·	
Database Engine Configuration			
Specify Database Engine authentication security	y mode, administrators and data directories.		
Setup Support Rules Feature Selection Instance Configuration Disk Space Requirements Server Configuration Database Expine Configuration Reporting Services Configuration Error and Usage Reporting Installation Rules Ready to Install Installation Progress Complete	Account Provisioning Data Directories FLESTREAM Specify the authentication mode and administrators for the Database Engine. Authentication Mode Image: Control of the Database Engine Mixed Mode (SQL Server authentication and Windows authentication) Built-in SQL Server authentication and Windows authentication Built-in SQL Server authentication and Windows authentication) Built-in SQL Server authentication and Windows authentication Specify SQL Server authentication Confirm password: Specify SQL Server administrators CORPNET: Specify SQL Server administrators CORPNET: AddRemove	SQL Ser	rver administrators have unrestricted access to the Database Engine.
			< Back Next > Cancel Help
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• In the next step, 'Analysis Services Configuration, please choose user that has Administration permissions and click on Next button.

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Analysis Services Configuration	on										
Specify Analysis Services administrators and	d data directories.										
Setup Support Rules Feature Selection Instance Configuration Disk Space Requirements Server Configuration Analysis Services Configuration Error and Usage Reporting Installation Rules Ready to Install Installation Progress Complete		(vkiran)	ies ative permissions for A	unalysis Services.			Analysis Service	es administrators have u	nrestricted access to	Analysis Service	5.
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In the next step, '**Reporting Services Configuration**, please choose configuration as mentioned in the screen below and click on '**Next**' button.



In the next step, 'Error and Usage Reporting, please choose configuration as mentioned in the screen below and click on 'Next' button.

1 SQL Server 2008 Setup	
Error and Usage Reporting Help Microsoft improve SQL Server feature	s and services.
Setup Support Rules Feature Selection Instrance Configuration Disk Space Requirements Server Configuration Catabase Engine Configuration Reporting Services Configuration Error and Usge Reporting Installation Progress Complete	Restrict Specify the information that you would like to automatically send to Microsoft to improve future releases of SQL Server. These settings are optional. Microsoft treats this information as confidential. Microsoft maps include and initialled on your machine automatically, depending on your Automatic Update settings. Vers the Microsoft Update to modify feature usage data. These updates might be downloaded and initialled on your machine automatically, depending on your Automatic Update settings. Read more about Microsoft Update and Automatic Update. Improve future on the Windows and SQL Server Enror Reports to Microsoft or your corporate report server. This setting only applies to services that run without user interaction. Improve future usage data to Microsoft. Feature usage data includes information about your hardware configuration and how you use Microsoft software and services.
	< Back Next > Cancel Help
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After the step, 'Error and Usage Reporting', one can select the default configuration in the steps that follow and complete the installation.

DBIntegration – Disabling MSSQL Server 2008 and enabling h2 Database

• Comment column annotation for 'user' attribute in oasp4j-jpaenvers/src/main/java/io/oasp/module/jpa/dataaccess/api/AdvancedRevisionEntity.java. Below is the commented code for reference

```
/** @see #getUser() */
/** Comment the following line completely (Column Annotation) in case of database
other than MS SQL Server 2008 */
/* @Column(name = "[user]") */
private String user;
```

• Comment the dependency for MSSQLServer 2008 jdbc driver in oasp4j-samplecore/pom.xml. Commented code below

• Uncomment the query to retrieve ids from Bill table for **payed=true** in oasp4j-samplecore/src/main/resources/META-INF/orm.xml and comment the one that exists for MS SQL Server. Uncommented code below.

```
<named-native-query name="get.all.ids.of.payed.bills">
<query><![CDATA[SELECT id FROM Bill WHERE payed =
true]]></query>
</named-native-query>
```

- Rename file V0001__R001_Create_schema_MSSQL.sql in oasp4j-samplecore/src/main/resources/db/migration/mssql to V0001__R001_Create_schema_MSSQL.sql.mssql
- Rename file V0002__R001_Master_data_MSSQL.sql in oasp4j-samplecore/src/main/resources/db/migration/mssql to V0002__R001_Master_data_MSSQL.sql.mssql
- Rename file V0003__R001_Add_blob_table_and_data_MSSQL.sql in oasp4j-samplecore/src/main/resources/db/migration/mssql to V0003__R001_Add_blob_table_and_data_MSSQL.sql.mssql

- Rename file V0004__R001_Add_batch_tables_MSSQL.sql.sql in oasp4j-samplecore/src/main/resources/db/migration/mssql to V0004__R001_Add_batch_tables_MSSQL.sql.mssql
- Uncomment the spring active profile **h2mem** and comment the spring active profile **mssql** in oasp4j-sample-core/src/main/resources/application.properties
- Uncomment the line that has spring active profile **junit** and comment the line has spring active profiles **junit** and **mssql** separated by comma in the file oasp4j-sample-core/src/test/resources/config/application.properties
- Rename file V9001_1__Delete_data_MSSQL.sql in oasp4j-sample-core/src/ test/resources/AllTests/setup/db to V9001_1__Delete_data_MSSQL.sql.mssql
- Rename file V9901_1__Import_data_MSSQL.sql in oasp4j-sample-core/src/ test/resources/ BillExportJobTest/setup/db to V9901_1__Import_data_MSSQL.sql.mssql
- Rename file V0001__R001_Create_schema_MSSQL.sql in oasp4j-sample-core/src/ test/resources/db/tablemanagement to V0001__R001_Create_schema_MSSQL.sql.mssql
- Rename V0002__R001_Master_data_MSSQL.sql in oasp4j-sample-core/src/ test/resources/db/tablemanagement to V0002__R001_Master_data_MSSQL.sql.mssql

DBIntegration – Enabling MSSQL Server 2008 and disabling h2 Database

• UnComment column annotation for 'user' attribute in oasp4j-jpaenvers/src/main/java/io/oasp/module/jpa/dataaccess/api/AdvancedRevisionEntity.java. Below is the uncommented code for reference

/** @see #getUser() */
/** UnComment the following line completely (Column Annotation) in case of database
other than MS SQL Server 2008 */
@Column(name = "[user]")
private String user;

• Uncomment the dependency for MSSQLServer 2008 jdbc driver in oasp4j-samplecore/pom.xml. Dependency for MSSQLServer 2008 below

```
<dependency>
        <groupId>com.microsoft.sqlserver</groupId>
        <artifactId>sqljdbc</artifactId>
        <version>4.0</version>
</dependency>
```

• Uncomment the query to retrieve ids from Bill table for payed=1 in oasp4j-samplecore/src/main/resources/META-INF/orm.xml and comment the one for H2 Database. Uncommented code below.

> <named-native-query name="get.all.ids.of.payed.bills"> <query><![CDATA[SELECT id FROM Bill WHERE payed = 1]]></query> </named-native-query>

- In the file oasp4j-sample-core/src/main/resources/config/application-mssql.properties, please change the value of property 'spring.datasource.url'. Hostname, port and databaseName has to be changed accordingly. Change the values of the properties 'spring.datasource.username' and 'spring.datasource.password' as well accordingly.
- Rename file V0001__R001_Create_schema_MSSQL.sql.mssql in oasp4j-samplecore/src/main/resources/db/migration/mssql to V0001__R001_Create_schema_MSSQL.sql
- Rename file V0002__R001_Master_data_MSSQL.sql.mssql in oasp4j-sample-core/src/main/resources/db/migration/mssql to V0002__R001_Master_data_MSSQL.sql
- Rename file V0003__R001_Add_blob_table_and_data_MSSQL.sql.mssql in oasp4j-sample-core/src/main/resources/db/migration/mssql to V0003__R001_Add_blob_table_and_data_MSSQL.sql
- Rename file V0004__R001_Add_batch_tables_MSSQL.sql.mssql in oasp4j-sample-core/src/main/resources/db/migration/mssql to V0004__R001_Add_batch_tables_MSSQL.sql
- Comment the spring active profile **h2mem** and Uncomment the spring active profile **mssql** in oasp4j-sample-core/src/main/resources/application.properties
- Rename file V9001_1__Delete_data.sql in oasp4j-sample-core/src/ test/resources/AllTests/setup/db to V9001_1__Delete_data.sql.h2
- Rename file V9901_1__Import_data.sql in oasp4j-sample-core/src/ test/resources/ BillExportJobTest/setup/db to V9901_1__Import_data.sql.h2
- Rename file V0001__R001_Create_schema.sql in oasp4j-sample-core/src/ test/resources/db/tablemanagement to V0001__R001_Create_schema.sql.h2
- Rename V0002__R001_Master_data.sql in oasp4j-sample-core/src/ test/resources/db/tablemanagement to V0002__R001_Master_data.sql.h2

After following above instructions, make sure JUNITs are successful by running the command '**mvn clean install**' for oasp4j project.

Running sample application with Angular JS Client:

• Follow steps mentioned in https://github.com/oasp/oasp4js/wiki/tutorial-jspacking-angular-client .

Running sample application with Sencha Client:

• Follow steps mentioned in <u>https://github.com/devonfw/devon/wiki/getting-started-deployment-on-tomcat</u>.