# List of the changes made in cBioPortal source code to base MSSQL compliant

## Configuration updates

1. src/main/resource/portal.properties
   1. replace database information.
2. business/src/main/resources/applicationContext-business.xml
   1. Updated URL property of <bean id="businessDataSource">
3. added bean 'vendorProperties'
4. pom.xml
   1. **[unit test]** Updated db.test.driver/url/username/password
5. core/pom.xml
   1. **[unit test]** Added <dependency> for mssql in sql plugin for tests.
   2. **[unit test]** commented out <sqlcommand> for set storage and session from <executions> for sql plugin.
   3. **[unit test]**  updated <srcfiles> to use cgds\_fixed4MSSQL.sql.MS.CREATE.sql

Database Scripts Updates

### Portal

### Core

1. core /test/resources/seed\_mini.sql
   1. reversed order of delete b/w gene\_panel and gene\_panel\_list, sample and sample\_list\_list due to the foreign key constraint
2. - added set identity\_insert on/off for inserting rows in a table if auto increment column exits in order to be compliant on SQL Server. Also added print statement.
3. core/src/main/resources/db/cgds\_fixed4MSSQL.sql.MS.CREATE.sql
   1. commented out 'GO' in two places in order to make the test scripts run
4. core /src/main/resources/db/cgds\_insert\_test\_MSSQL.sql (2 matches)
   1. set identity\_insert table\_name on/off in order to insert into a table with primary key with auto-increment.

### Persistence

### Persistence-MyBatis-Test

## Code updates ordered by maven module including Java and XML

### Portal

No updates

### Core

1. Database script updates
2. New Java classes added
   1. core/src/main/java/edu/jhu/u01/DBProperties.java
   2. Updated core/src/main/java/org/mskcc/cbio/portal/dao/JdbcUtil.java to use this DBProperties class.
   3. core/src/main/java/edu/jhu/u01/DBVendor.java which encapsulates database vendor which defines DBVendor enum
3. Updated Java Classes where MSSQL prepared statements are added
4. core/src/main/java/org/mskcc/cbio/portal/dao/DaoCancerStudy.java
5. core/src/main/java/org/mskcc/cbio/portal/dao/DaoClinicalAttributeMeta.java
6. core/src/main/java/org/mskcc/cbio/portal/dao/DaoClinicalData.java
7. core/src/main/java/org/mskcc/cbio/portal/dao/DaoClinicalEvent.java
8. core/src/main/java/org/mskcc/cbio/portal/dao/DaoCnaEvent.java
9. core/src/main/java/org/mskcc/cbio/portal/dao/DaoCopyNumberSegment.java
10. core/src/main/java/org/mskcc/cbio/portal/dao/DaoCopyNumberSegmentFile.java
11. core/src/main/java/org/mskcc/cbio/portal/dao/DaoDrug.java
12. core/src/main/java/org/mskcc/cbio/portal/dao/DaoDrugInteraction.java
13. core/src/main/java/org/mskcc/cbio/portal/dao/DaoGene.java
14. core/src/main/java/org/mskcc/cbio/portal/dao/DaoGeneticAlteration.java
15. core/src/main/java/org/mskcc/cbio/portal/dao/DaoGeneticProfile.java
16. core/src/main/java/org/mskcc/cbio/portal/dao/DaoGeneticProfile.java
17. core/src/main/java/org/mskcc/cbio/portal/dao/DaoGistic.java
18. core/src/main/java/org/mskcc/cbio/portal/dao/DaoInteraction.java
19. core/src/main/java/org/mskcc/cbio/portal/dao/DaoMutSig.java
20. core/src/main/java/org/mskcc/cbio/portal/dao/DaoMutation.java
21. core/src/main/java/org/mskcc/cbio/portal/dao/DaoPatient.java
22. core/src/main/java/org/mskcc/cbio/portal/dao/DaoPdbUniprotResidueMapping.java
23. core/src/main/java/org/mskcc/cbio/portal/dao/DaoPfamGraphics.java
24. core/src/main/java/org/mskcc/cbio/portal/dao/DaoProteinArrayData .java
25. core/src/main/java/org/mskcc/cbio/portal/dao/DaoProteinArrayInfo.java
26. core/src/main/java/org/mskcc/cbio/portal/dao/DaoProteinArrayTarget.java
27. core/src/main/java/org/mskcc/cbio/portal/dao/DaoSample.java
28. core/src/main/java/org/mskcc/cbio/portal/dao/DaoSampleList.java
29. core/src/main/java/org/mskcc/cbio/portal/dao/DaoSampleProfile.java
30. core/src/main/java/org/mskcc/cbio/portal/dao/DaoSangerCensus.java
31. core/src/main/java/org/mskcc/cbio/portal/dao/DaoTextCache.java
32. core/src/main/java/org/mskcc/cbio/portal/dao/DaoTypeOfCancer.java
33. core/src/main/java/org/mskcc/cbio/portal/dao/DaoUser.java
34. core/src/main/java/org/mskcc/cbio/portal/dao/DaoUserAuthorities.java
35. Other Java Code Updates
36. core/src/main/java/org/mskcc/cbio/portal/network/NetworkIO.java
    1. added string trim to entrez\_gene in addNote and addDrugNode.
    2. addNode method add a node to a map whose key is entrez\_gene. And if entrez\_gene = '62232' it has trails of spaces eg., '62232 '.
    3. Therefore, in a subsequent method cannot find a node with entrez\_gene='62232' since its key in the map is '62232 '.
37. core/src/main/java/org/mskcc/cbio/portal/dao/DaoCancerStudy.java
    1. replaced IMPORT\_DATE = NOW() by IMPORT\_DATE =CURRENT\_TIMESTAMP
38. core/src/main/java/org/mskcc/cbio/portal/dao/DaoTextCache.java
    1. replaced NOW() by CURRENT\_TIMESTAMP in insert statement
    2. Updated purgeOldKeys: setting date time parameter for delete statement for mssql: datetime format from 'yyyyMMddHHmmss' to 'yyyy-MM-dd HH:mm:ss'.
39. core/src/main/java/org/mskcc/cbio/portal/dao/DaoMutation.java
    1. Replaced XML\_PATH method by SQL function dbo.group\_concat(col, max\_length) in order to avoid too many parameters passed to SQL error.
    2. //JK-FUTURE-TODO: Remove hard coded max length

### Business

### Web

### Persistence

1. Java Code Updates
   1. /persistence-mybatis/src/main/java/org/cbioportal/persistence/mybatis/MutationMyBatisRepository.java
      1. Updated method hasAlleleFrequenceData method to include

if (mutationMapper.hasAlleleFrequencyData(geneticProfileId, sampleId) == null) return false;

* + 1. in method 'getSignificantlyMutatedGenes' set the value of parameter for setting groupConcat to false since MS SQL does not support setting system parameter groupconcat as in MySQL.

1. XML updates
   1. created a separate foder for mssql MyBatis Mapper folder: persistence/persistence-mybatis/src/main/resources/org/cbioportal/persistence/mybatis-sqlserver
      1. this results in changes mapper locations in /business/src/main/resources/applicationContext-business.xml and persistence/persistence-mybatis-test/src/test/resources/testContextDatabase.xml

### Persistence-MyBatis-Test

### Service

### Scripts