



i2b2 Data Upgrade Guide (Linux/Oracle)

Release 1.3

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About this Guide

Informatics for Integrating Biology and the Bedside (i2b2) is one of the sponsored initiatives of the NIH Roadmap National Centers for Biomedical Computing (<http://www.bisti.nih.gov/nbc/>). One of the goals of i2b2 is to provide clinical investigators broadly with the software tools necessary to collect and manage project-related clinical research data in the genomics age as a cohesive entity—a software suite to construct and manage the modern clinical research chart. This guide with the provided database scripts will help you to learn how to upgrade the i2b2 data package to Release 1.3.

Document Version History

Date	Revision	Description	Author(s)
09/17/08	1.0	Release 1.2 to Release 1.3 upgrade	Lori Phillips
10/18/08	1.1	Updates	Lori Phillips

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Prerequisites

Required Software

a. Oracle Express Edition

Oracle Database 10gExpress Edition (Universal) 'oracle 10g EE' should have been installed in a previous release.

To verify that Oracle was properly installed, open a browser and enter <http://yourDbHost:yourPort/apex>. You should see an Oracle Database Express Edition login screen.

Assumptions

a. PM/Gridsphere setup

The data in this package provides data for a domain of i2b2demo and two projects: Demo and Demo2. The assumption is that the PM/gridsphere service has been configured as such. In the PM install guide, projects are referred to as groups. You will need to ensure that groups Demo and Demo2 have been created as shown in section 3 step 3.

Skip to section 4, step 5 to assign users to groups Demo and Demo2.

Finally on the Global Hive Data tab / Environment Data sub menu ensure that domain = 'i2b2demo'

b. Prior Database Installation

The assumption is that prior data has been installed during the original Core hive release version 1.0. The assumption going forward in this document is that the previously installed data (which we refer to as schemas i2b2metadata and i2b2demodata) will be assigned to project 'Demo' and upgraded accordingly.

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Upgrade

Upgrading the i2b2 Data Package

1. Unzip the data package into a folder: (/opt/data)

You should see the project edu.harvard.i2b2.data.

```
'cd edu.harvard.i2b2.data /Release_1-3/Upgrade'
```

This is considered your data upgrade working directory. Under this directory are folders for Demodata, Metadata, and Workdata. These map to previously installed schemas i2b2demodata, i2b2metadata and new schema i2b2workdata for project Demo. Folder Hivedata maps to the new i2b2hive schema.

A new feature in Release 1.3 is the ability to support more than one project in a given hive/domain. To this end we describe the installation step to generate users and schemas and load data associated with project 'Demo2'

2. Create user accounts in Oracle :

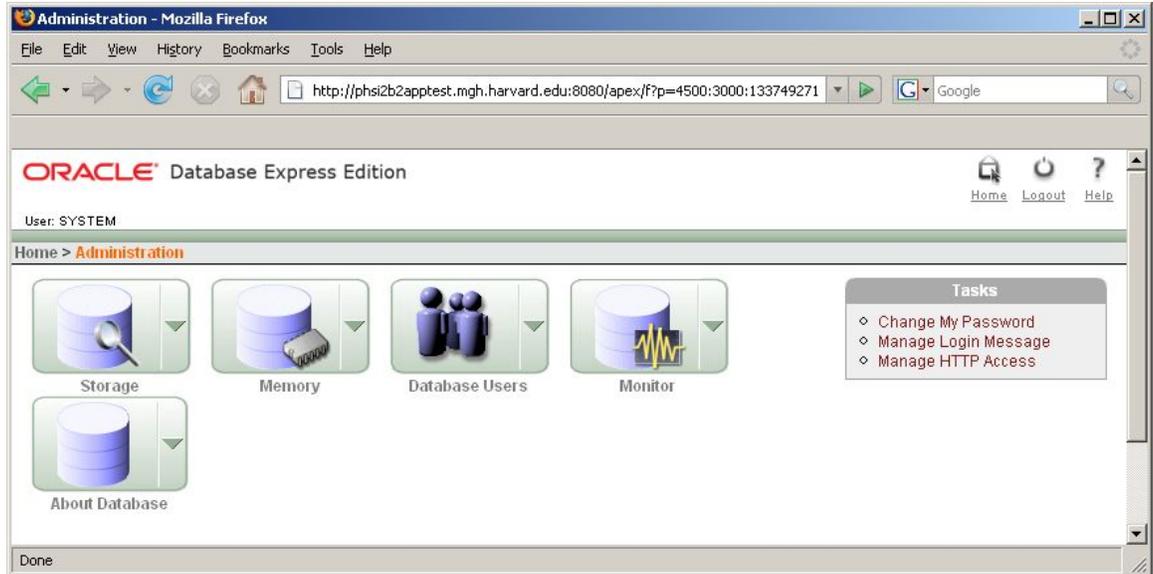
In browser, open <http://yourDbHost:8080/apex>.

Log in as system user

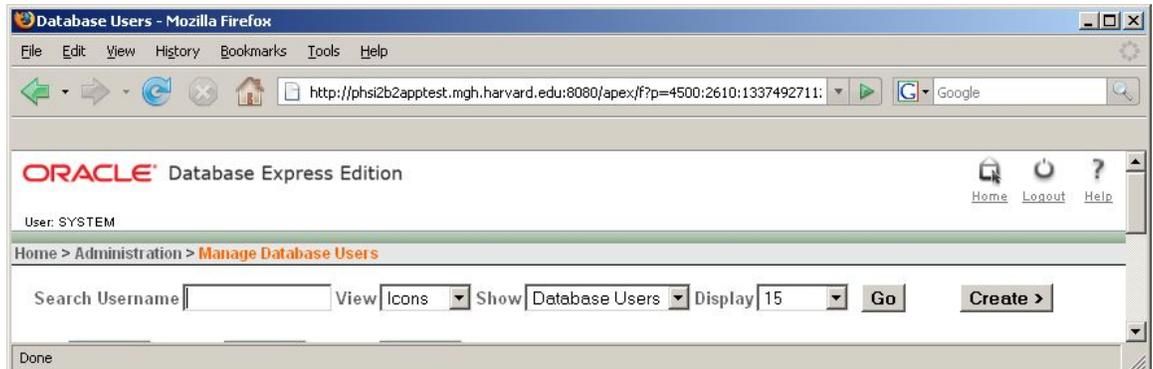
Select Administration



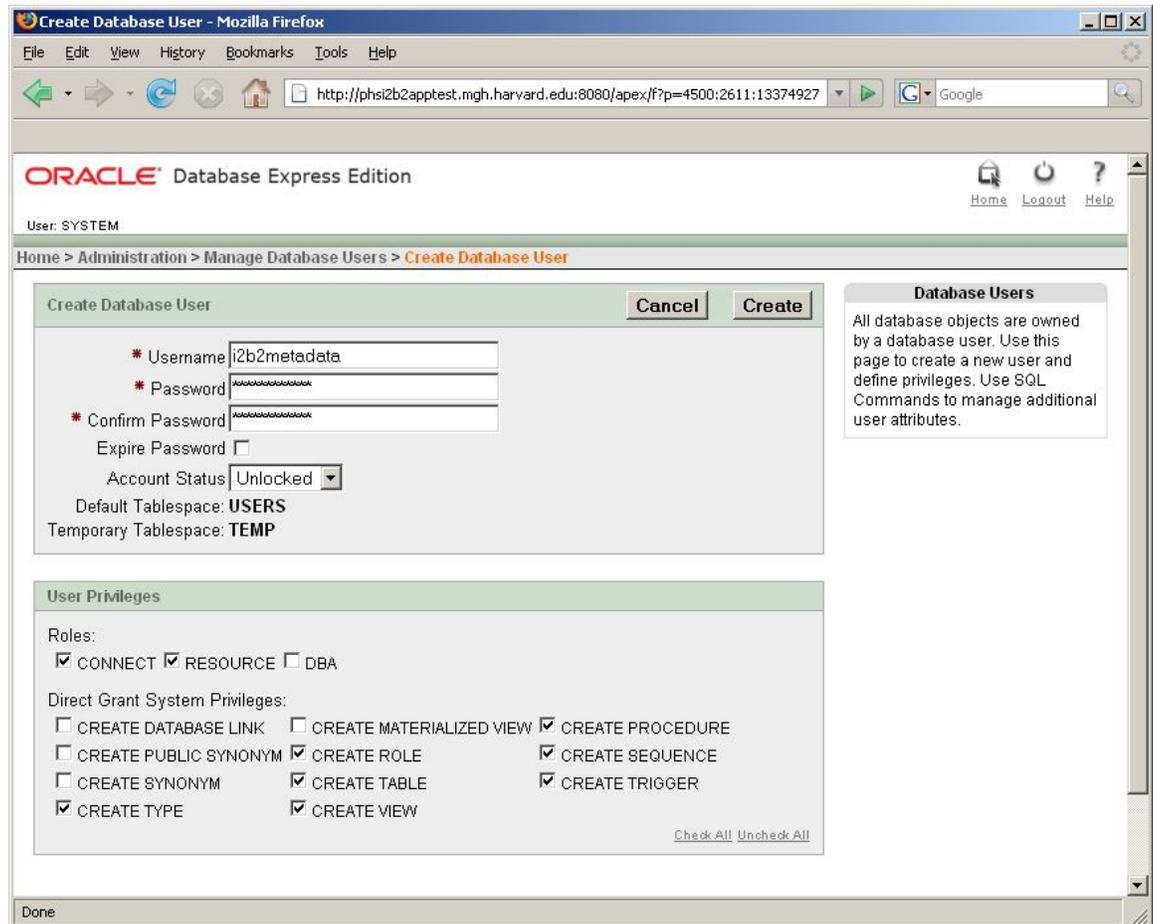
Select Database Users



Select Create



Enter i2b2workdata user name and password. Check off Direct grant system privileges as shown below. Repeat for user i2b2hive. This step assumes that users i2b2metadata and i2b2demodata have been created during a previous installation Repeat again for users i2b2metadata2, i2b2demodata2, i2b2workdata2 for project Demo2.



3. Upgrade i2b2metadata tables

- a) 'cd Metadata' of your working directory.
(edu.harvard.i2b2.data /Release_1-3/Upgrade
- b) Edit db.properties
Set database properties; be sure to set user/pswd to i2b2metadata

```
db.type=oracle
db.username=i2b2metadata
db.password=i2b2metadata_pswd
db.server=localhost:1521:xe
db.driver=oracle.jdbc.driver.OracleDriver
db.url=jdbc:oracle:thin:@localhost:1521:xe
```

-
- c) To upgrade metadata tables and insert new, additional data for project 'Demo':
Run 'ant -f data_build.xml upgrade_metadata_tables_release_1-3'

4. Upgrade i2b2demodata tables:

- a) 'cd Demodata' of your working directory.
(edu.harvard.i2b2.data /Release_1-3/Upgrade)
- b) Open db.properties
Set database properties; be sure to set user/pswd to i2b2demodata
db.script.dir is currently unused.

```
db.type=oracle
db.username=i2b2demodata
db.password=i2b2demodata_pswd
db.server=localhost:1521:xe
db.driver=oracle.jdbc.driver.OracleDriver
db.url=jdbc:oracle:thin:@localhost:1521:xe
#db.script.dir=/opt/data
```

- c) To upgrade demo data tables, create new tables and insert new, additional data:
Run 'ant -f data_build.xml db_data_upgrade_1-3'
- d) To create new stored procedures:
Run 'ant -f data_build.xml create_procedures_release_1-3'

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Install

Installing the i2b2 Data Package

From here on, we will be installing data for new schemas i2b2workdata, i2b2hive, i2b2workdata2, i2b2metadata2 and i2b2demodata2.

```
'cd edu.harvard.i2b2.data /Release_1-3/NewInstall'
```

This is considered your data installation working directory. Under this directory are folders for Demodata, Metadata, and Workdata. These map to schemas i2b2demodata2, i2b2metadata2 and i2b2workdata2 for project Demo2 and i2b2workdata for project Demo. Folder Hivedata maps to the i2b2hive schema.

1. Create Workdata tables and load data:

- a) 'cd Workdata' of the installation working directory.
(edu.harvard.i2b2.data /Release_1-3/NewInstall/Workdata)
- b) Edit db.properties
Set database properties; be sure to set user/pswd to i2b2workdata, and project to demo; db.script.dir is currently unused.

```
db.type=oracle
db.username=i2b2workdata
db.password=i2b2workdata_pswd
db.server=localhost:1521:xe
db.driver=oracle.jdbc.driver.OracleDriver
db.url=jdbc:oracle:thin:@localhost:1521:xe
db.project=demo
#db.script.dir=/opt/data
```

- c) To create workdata tables, indexes and sequences :
Run 'ant -f data_build.xml create_workdata_tables_release_1-3'

d) To load data:
If you wish to load your own work data, do that now.

Otherwise:

```
Run 'ant -f data_build.xml db_workdata_load_data'
```

e) Edit db.properties for user/pswd i2b2workdata2 and project demo2.
Repeat steps c and d.

2. Create Hive tables and load data:

a) 'cd Hivedata' of your installation directory.
(edu.harvard.i2b2.data /Release_1-3/NewInstall)

b) Edit db.properties
Set database properties; be sure to set user/pswd to i2b2hive;
db.script.dir is currently unused.

```
db.type=oracle  
db.username=i2b2hive  
db.password=i2b2hive_pswd  
db.server=localhost:1521:xe  
db.driver=oracle.jdbc.driver.OracleDriver  
db.url=jdbc:oracle:thin:@localhost:1521:xe  
#db.script.dir=/opt/data
```

c) To create hive tables, indexes and sequences :
Run 'ant -f data_build.xml create_hivedata_tables_release_1-3'

d) To load data:
If you wish to load your own hive data, do that now.

Otherwise:

```
Run 'ant db_hivedata_load_data'
```

The data loaded into the three i2b2hive db_lookup tables presumes that the default target location pointing to the hive we are now setting up is 'i2b2demo'. This target location is also referred to as the domain of the hive and should match the domain set up in the PM/gridsphere setup.

In the client's i2b2.properties file:

```
I2b2.1=demo,REST,http://webservices:9090/axis2/rest/PMSERVICE/  
I2b2.2=HarvardDemo,REST,http://services.i2b2.org/PM/rest/PMSERVICE/  
#I2b2.3=YourSite,REST,http://tomcatHost:tomcatPort/axis2/rest/PMSERVICE/
```

The I2b2.1 target location ('demo') points to the hive residing on the vmware image. The i2b2.2 target location, HarvardDemo points to the hive residing at Harvard. The data installed at Harvard is identical to the data provided in this package. The hive we are now setting up is I2b2.3. Please be sure to rename 'YourSite' to 'i2b2demo'.

3. Create i2b2metadata2 tables and load data:

- a) 'cd Metadata' of your installation directory.
(edu.harvard.i2b2.data /Release_1-3/NewInstall)
- b) Edit db.properties
Set database properties; be sure to set user/pswd to i2b2metadata2 and project to demo2; db.script.dir is unused.

```
db.type=oracle
db.username=i2b2metadata2
db.password=i2b2metadata2_pswd
db.server=localhost:1521:xe
db.driver=oracle.jdbc.driver.OracleDriver
db.url=jdbc:oracle:thin:@localhost:1521:xe
db.project=demo2
#db.script.dir=/opt/data
```

- c) To create metadata tables, indexes and sequences :
Run 'ant -f data_build.xml create_metadata_tables_release_1-3'

- d) To load data:
If you wish to load your own metadata, do that now.

Otherwise:
Run 'ant -f data_build.xml db_metadata_load_data'

This may take a while (15 minutes)

4. Create i2b2demodata2 tables and load data:

- a) 'cd Demodata' of your installation directory.
(edu.harvard.i2b2.data /Release_1-3/NewInstall)

b) Edit db.properties

Set database properties; be sure to set user/pswd to i2b2demodata2 and project to demo2; db.script.dir is currently unused.

```
db.type=oracle
db.username=i2b2demodata2
db.password=i2b2demodata2_pswd
db.server=localhost:1521:xe
db.driver=oracle.jdbc.driver.OracleDriver
db.url=jdbc:oracle:thin:@localhost:1521:xe
db.project=demo2
#db.script.dir=/opt/data
```

c) To create demodata tables, indexes and sequences :

Run 'ant -f data_build.xml create_demodata_tables_release_1-3'

d) To create new stored procedures:

Run 'ant -f data_build.xml create_procedures_release_1-3'

e) To load data:

If you wish to load your own demo data, do that now.

Otherwise:

Run 'ant -f data_build.xml db_demodata_load_data'

This may take a while (15 minutes)

5. You are now ready to install the hive cells.

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License

The i2b2 source code is licensed under the i2b2 Software License Software. This includes but not limited to all code in the edu.harvard.mgh.i2b2.* package namespace.