1.7.08b Release Notes

i2b2 Release 1.7.08b

Release Date: **December 14, 2016**

1.7.08b Release Summary

Release 1.7.08b fixes a bug in the CRC regarding when a query finishes running the BATCH_MODE in the QT_QUERY_INSTANCE table says PROCESSING INSTEAD OF FINISHED.

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.08b** from an earlier version of i2b2.
- If you are installing 1.7.08b from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

Upgrade Notes

i2b2 Release 1.7.08b contains changes to the following software components:

- i2b2 Server

Change Summary - i2b2 Core Software - Release 1.7.08b

Bug Fixes

- [CORE-245] -BATCH_MODE says PROCESSING even though query finished running

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i2b2 Release 1.7.08a

Release Date: **November 23, 2016**

1.7.08a Release Summary

Release 1.7.08a is primarily focused on fixing and improving the queueing process. The main issue addressed in this release is a fix for an issue that was introduced in 1.7.08; An error was returned when a query timed out and moved on to the medium queue. Although the query continued to run it was misleading to users as they were informed it generated an error an was therefore no longer running. A number of other issues were uncovered during the development and testing of this release. A complete list of each issue can be found in the section titled Change Summary - i2b2 Core Software

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.08a** from an earlier version of i2b2.
- If you are installing 1.7.08a from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

Upgrade Notes

i2b2 Release 1.7.08a contains changes to the following software components:

- i2b2 Server

> **Important**
> The changes to the queueing process were thoroughly tested against an Oracle and SQL Server database. Minimal testing was done against a PostgreSQL database.

- i2b2 Web Client

> **Note**
> The Web Client contains only one minor fix to the wording of an error message. Upgrading to the new Web Client is not essential for this release. Please see the Change Summary - i2b2 Web Client Software section to see what was changed.

Change Summary - i2b2 Core Software - Release 1.7.08a

Improvements

- [CORE-241] - Queries will immediately move to the next queue when timeout is < or = to 0

Bug Fixes

- [CORE-236] - Error returned when query times out

- [CORE-242] - Queries are stuck in queue when previous query results in an error
- [CORE-243] - Queries do not stop running when they time out of the large queue
- [CORE-244] - Statuses are not updated when query times out or an error occurs

Change Summary - i2b2 Web Client Software - Release 1.7.08a

Bug Fixes

- [WEBCLIENT-205] - Update date constraint warning message (patient_dimension)

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i2b2 Release 1.7.08

Release Date: October 7, 2016

1.7.08 Release Summary

Release 1.7.08 contains a number of new features as well as bug fixes. Below are a few highlights of the changes included in this release. Information about the other changes can be found in the sections that follow this one.

JBoss Updated to WildFly

In order to address some of the security vulnerabilities that exist in some JBoss installations, the i2b2 Server has been upgraded to use WildFly. In 2014 Red Hat renamed their JBoss Application Server to WildFly and their latest version (WildFly 10) addresses the known security vulnerabilities.

> **Note**
>
> The Third Party Software Changes section contains additional information on upgrading WildFly as well as other 3rd party software.
>
> Although we recommend upgrading to WildFly, we do recognize that some sites may not be in a position to upgrade their existing JBoss 7. In the section labeled i2b2 Property Settings for WildFly 10 and JBoss 7 we have documented all the places you will need to modify the paths in order to use 1.7.08 with your existing JBoss 7. We have also included some additional information that you will need to be aware of before using 1.7.08 with your existing JBoss,

SQL Server: Option to Improve Query Performance

New parameter to use temp table constraint instead of 'WITH' clause.

Large data warehouses that contain broad and deep ontologies run the risk of CRC queries having a slow response time. In this release (1.7.08) a new parameter has been added to the **crc.properties** file. This new parameter allows a site to use a temp table instead of a **'WITH'** clause when running a CRC query.

Additional information about this new feature can be found in the Improvement / New Feature Details section under the SQL Server: Option to Improve Query Performance heading.

Improvements to the Processing of Queueing Queries

In the Previous Query display, new statuses provide users with additional information that accurately reflects the current status and location of the query. The **new** statuses are:

- SMALL_QUEUE
- SMALL_QUEUE_RUNNING
- MEDIUM_QUEUE
- MEDIUM_QUEUE_RUNNING
- LARGE_QUEUE
- LARGE_QUEUE_RUNNING

In addition to updating the status of queries, an additional feature was added to the Web Client that makes these statuses visible to users. The query status can be seen in **Previous Queries** as well as in **Show Query Status**.

A complete list of all the statuses as well as additional information about this new feature can be found in the Improvement / New Feature Details section under the Improvements to the Processing of Queueing Queries heading.

SHRINE Approval

SHRINE Release 1.21.2 has been tested with *i2b2 1.7.08 Release* and has been **approved** by the SHRINE Team

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.08** from an earlier version of i2b2.
- If you are installing 1.7.08 from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

Upgrade Notes

i2b2 Release 1.7.08 contains changes to the following software components:

- Database Scripts
- i2b2 Server
- i2b2 Web Client

Third Party Software Changes

In release 1.7.08 the **i2b2 Server** has been updated to use the following versions of third party software. These updates were done to address some security concerns with the third party software used by the i2b2

1. Apache Ant has been upgraded to 1.9
2. Apache Axis2 has been upgraded to 1.7.1
3. Java JDK has been upgraded to 8.0
4. JBoss has been upgraded to WildFly 10

3rd Party Software Versions and Links

The following table contains all the information needed to update your 3rd party software. In addition to the version information, the table contains links both to the Vendor's documentation as well as the appropriate chapter in the i2b2 Installation Guide located on the i2b2 Community Wiki.

3rd Party Software	Version	Download Link	Vendor Documentation	i2b2 Installation Guide	i2b2 Notes
Apache Ant	1.9	Apache Ant 1.9 Software	Ant's manual and API documentation is included in the binary distribution.		
Apache Axis2	1.7.1	Axis2 1.7.1 Software	Installation Guide	Apache Axis2	Download the WAR Distribution File
Java JDK	8.0	JDK 8 Software		Java JDK	Reminder: Update your JAVA_HOME environment variable to point to JDK 8.0
WildFly	10	WildFly 10 Software	Getting Started Guide		

i2b2 Property Settings for WildFly 10 and JBoss 7

Warning

As stated earlier, the i2b2 team made the decision to upgrade to WildFly 10 and JDK 8 in order to address known security vulnerabilities with JBoss. In order for the i2b2 server (1.7.08) to work correctly, we recommend you update your environment to use WildFly 10 and JDK 8. However, if you are currently using JBoss 7 and do not want to upgrade your environment to use WildFly there are a few things you need to be aware of.

1. Release 1.7.08 was **not tested** with *JBoss 7*, therefore we cannot guarantee the stability of the release if you continue to use JBoss 7. We can however confirm the i2b2 server (1.7.08) was tested with WildFly 10 and JDK 8 and does work correctly.
2. JDK 8 does not work with JBoss 7. If you are upgrading to JDK8 then you have to upgrade to WildFly

If you are upgrading to WildFly and JDK 8 you need to do these upgrades ***before*** you upgrade your i2b2 server code.

The property settings delivered with i2b2 version 1.7.08 are pointing to WildFly. For those sites that are currently using JBoss 7 and are not ready to upgrade to WildFly 10 you will need to change the path information to point to JBoss 7. The files and properties that need to be modified are in the next section.

WildFly Property Modifications

CRC Cell Property Changes

File Name: crc_application_directory.properties

Location: edu.harvard.i2b2.crc/etc/spring/

WildFly 10 path: edu.harvard.i2b2.crc.applicationdir=/opt/wildfly-10.0.0.Final/standalone/configuration/crcapp

JBoss 7 path: edu.harvard.i2b2.crc.applicationdir=/opt/jboss-as-7.1.1.Final/standalone/configuration/crcapp

File Name: build.properties

Location: edu.harvard.i2b2.crc/

WildFly 10 path: jboss.home=/opt/wildfly-10.0.0.Final

JBoss 7 path: jboss.home=/opt/jboss-as-7.1.1.Final

File Repository Cell Property Changes

File Name: fr_application_directory.properties

Location: edu.harvard.i2b2.fr/etc/spring/

WildFly 10 path: edu.harvard.i2b2.fr.applicationdir=/opt/wildfly-10.0.0.Final/standalone/configuration/frapp

JBoss 7 path: edu.harvard.i2b2.fr.applicationdir=/opt/jboss-as-7.1.1.Final/standalone/configuration/frapp

File Name: build.properties

Location: edu.harvard.i2b2.fr/

WildFly 10 path: jboss.home=/opt/wildfly-10.0.0.Final

JBoss 7 path: jboss.home=/opt/jboss-as-7.1.1.Final

Identity Management (IM) Cell Property Changes

File Name: im_application_directory.properties

Location: edu.harvard.i2b2.im/etc/spring/

WildFly 10 path: edu.harvard.i2b2.im.applicationdir=/opt/wildfly-10.0.0.Final/standalone/configuration/imapp

JBoss 7 path: edu.harvard.i2b2.im.applicationdir=/opt/jboss-as-7.1.1.Final/standalone/configuration/imapp

File Name: build.properties

Location: edu.harvard.i2b2.im/

WildFly 10 path: jboss.home=/opt/wildfly-10.0.0.Final

JBoss 7 path: jboss.home=/opt/jboss-as-7.1.1.Final

Ontology Cell Property Changes

File Name: ontology_application_directory.properties

Location: edu.harvard.i2b2.ontology/etc/spring/

WildFly 10 path: edu.harvard.i2b2.ontology.applicationdir=/opt/wildfly-10.0.0.Final/standalone/configuration/ontologyapp

JBoss 7 path: edu.harvard.i2b2.ontology.applicationdir=/opt/jboss-as-7.1.1.Final/standalone/configuration/ontologyapp

File Name: build.properties

Location: edu.harvard.i2b2.ontology/

WildFly 10 path: jboss.home=/opt/wildfly-10.0.0.Final

JBoss 7 path: jboss.home=/opt/jboss-as-7.1.1.Final

PM Cell Property Changes

File Name: build.properties

Location: edu.harvard.i2b2.pm/

WildFly 10 path: jboss.home=/opt/wildfly-10.0.0.Final

JBoss 7 path: jboss.home=/opt/jboss-as-7.1.1.Final

Server-Common Changes

File Name: build.properties

Location: edu.harvard.i2b2.server-common/

WildFly 10 path: jboss.home=/opt/wildfly-10.0.0.Final

JBoss 7 path: jboss.home=/opt/jboss-as-7.1.1.Final

Workplace Cell Property Changes

File Name: workplace_application_directory.properties

Location: edu.harvard.i2b2.workplace/etc/spring/

WildFly 10 path: edu.harvard.i2b2.workplace.applicationdir=/opt/wildfly-10.0.0.Final/standalone/configuration/workplaceapp

JBoss 7 path: edu.harvard.i2b2.workplace.applicationdir=/opt/jboss-as-7.1.1.Final/standalone/configuration/workplaceapp

File Name: build.properties

Location: edu.harvard.i2b2.workplace/

WildFly 10 path: jboss.home=/opt/wildfly-10.0.0.Final

JBoss 7 path: jboss.home=/opt/jboss-as-7.1.1.Final

Change Summary - i2b2 Core Software - Release 1.7.08

Improvements

- [CORE-214] - Upgrade JBoss to WildFly
- [CORE-216] - Change GetTermInfo from a like clause to an equal clause
- [CORE-221] - Improvements to the queuing process when running a query
- [CORE-229] - Provide updated JDBC drivers used by Oracle, PostgreSQL, and SQL Server

New Features

- [CORE-218] - New web service to retrieve the db lookup settings in the configuration files
- [CORE-226] - New parameter to use temp table constraint instead of 'WITH' clause
- [CORE-227] - Add ability to send parameters with string based variables as varchar instead of nvarchar

Bug Fixes

- [CORE-151] - Modifiers associated to inactive terms appear as active in hierarchical tree
- [CORE-184] - Generated SQL is not escaping single quotes correctly if a space exists between multiple values in C_DIMCODE
- [CORE-206] - Query failing to time out into processing queue
- [CORE-208] - qt_privilege primary key
- [CORE-211] - Some large queries are remaining in the medium queue
- [CORE-220] - SqlServer Age at Visit incorrect for 24, 80, 81 and 89
- [CORE-230] - SQL Server: Issue with non-clustered index on temp tables

Documentation

- [CORE-188] - Unable to change AGG_SERVICE_ACCOUNT password

Change Summary - i2b2 Web Client Software - Release 1.7.08

Improvements

- [WEBCLIENT-133] - Restrict ability to add Date Constraint if a panel contains any age concepts.
- [WEBCLIENT-192] - Improvements to queued queries in status window

New Features

- [WEBCLIENT-191] - ADMIN: Add the ability to view DB_LOOKUP settings for each cell
- [WEBCLIENT-198] - Parameters/Configurations for Web Client

Bug Fixes

- [WEBCLIENT-98] - Updating the "Annotate" option is not reflecting on mouse hover
- [WEBCLIENT-157] - Concept codes are displayed in tooltip even when the option is not selected
- [WEBCLIENT-160] - Previous query panel right click menu is not not functional under Find tab and menu option display is persistant once displayed
- [WEBCLIENT-161] - Max queries option under Previous queriesl/ontology terms panel allowing non integer and blank values
- [WEBCLIENT-170] - Query run without selecting any run option is putting the query in processing queue
- [WEBCLIENT-171] - query run with long name(more than 42 characters) is resulting in query time out and with larger number is giving sql error
- [WEBCLIENT-175] - Group buttons at bottom of Query Tool will sometimes "disappear" after Printing the Query Report
- [WEBCLIENT-180] - Set Modifier Value is not always an option when adding a previous query to the Query Tool
- [WEBCLIENT-181] - Web Client doesn't fully logout when logging out after the timeout message
- [WEBCLIENT-184] - "Not" does not appear if Group 4 or greater is excluded
- [WEBCLIENT-189] - Modifiers repeat when prompted to increase number of terms in web client
- [WEBCLIENT-190] - Modifiers associated to inactive terms appear as active in hierarchical tree
- [WEBCLIENT-193] - Admin appears to crash when clicking on DB-Lookup for IM cell
- [WEBCLIENT-195] - Fix names and fields that display on each of the new DBLookup pages
- [WEBCLIENT-197] - New date constraint warning appears even if demographics are not in panel
- [WEBCLIENT-199] - db_lookup

Change Summary - i2b2 Community Plugins - Release 1.7.08

Bug Fixes

- [PLUGINS-17] - Plugins manifest is pointing to the wrong URL

Improvement / New Feature Details

View and Update the DB_LOOKUP Tables

JIRA ISSUES:
[CORE-218] - New web service to retrieve the db lookup settings in the configuration files
[WEBCLIENT-191] - ADMIN: Add the ability to view DB_LOOKUP settings for each cell

Release 1.7.08 added the ability to view current database connections defined in the DB_LOOKUP tables for each i2b2 cells. Administrators can also edit existing values and add new entries into the tables. This new feature resides within the i2b2 Admin Module. The DB_LOOKUP tables are specific to each i2b2 cell. To access the list of values in a specific cell you need to expand Manage Cells in the Navigation Tree on the left of the page. Then select the cell to expand further, once this is done you will see DB-Lookup as an option. Clicking on DB-Lookup will display the DBLookup List page. This page will display all the values in a table format.

The following screen shot shows all the entries in the CRC_DB_LOOKUP table.

To add a new entry into the DB_LOOKUP table simply click on the **Add New DBLookup** button that appears above the table of existing values. The page will be updated to a form with fields to capture the information to be stored in the DB_LOOKUP table.

To edit an existing entry, click on its Name located in the Navigation Tree on the left. The page will be updated to show the values currently filed in the DB_LOOKUP table. Make any changes and click on **Save** to save your edits.

Improvements to the Processing of Queueing Queries

JIRA ISSUES:

[CORE-221] - Improvements to the queuing process when running a query
[WEBCLIENT-192] - Improvements to queued queries in status window

In the i2b2, there are three queues a query may be placed into when it is run. The length of time a query waits in each queue is defined in the crc. properties file.

1. Small Queue
2. Medium Queue
3. Large Queue

In the Web Client, the status of a query can be seen in Previous Queries. The status would be *PROCESSING*, *ERROR*, or *COMPLETED*. None of these statuses would provide information on which queue the query was in. Database administrators would have to view the query in the QT_QUERY_INSTANCE table to see the queue information. The statuses and queue information were often ambiguous which would make it challenging to trouble shoot any issues.

To address this issue, new statuses have been added in Release 1.7.08. These new statuses provide users with additional information that accurately reflects the current status and location of the query. The new statuses are:

> QUEUED ERROR COMPLETED PROCESSING SMALL_QUEUE MEDIUM_QUEUE LARGE_QUEUE MEDIUM_QUEUE_RUNNING LARGE_QUEUE_RUNNING RUNNING

In addition to updating the status of queries, an additional feature was added to the Web Client that makes these statuses visible to users. The query status can be seen in **Previous Queries** as well as in **Show Query Status**.

SQL Server: Option to Improve Query Performance

JIRA ISSUES: [CORE-226] - New parameter to use temp table constraint instead of 'WITH' clause

Large data warehouses that contain broad and deep ontologies run the risk of CRC queries having a slow response time. In this release (1.7.08) a new parameter has been added to the **crc.properties** file. This new parameter allows a site to use a temp table instead of a '**WITH**' clause when running a CRC query. In some environments, using a temp table allows the query to run more efficiently and process the request faster.

Parameter Name: edu.harvard.i2b2.crc.setfinderquery.constraintlogic
Located in: crc.properties file
Behavior:

Value	Behavior
TEMP or TEMPTABLES	Temp tables will be used when building queries.
WITH	Current query logic is used

If the parameter is missing from the crc.properties file, the system will current query logic (WITH clause).

> **Important**
> This change only affects SQL Server databases. Both PostgreSQL and Oracle do not have the capabilities of using temp tables.
> They will continue to use the WITH clause.

Date Constraint Improvements

JIRA ISSUES: [WEBCLIENT-133] - Restrict ability to add Date Constraint if a panel contains any age concepts.

In the i2b2, the CRC will use the START_DATE in the OBSERVATION_FACT table when running a query with a date constraint defined on a panel. This can present a problem if at least one of the items in the panel is an age concept and the patient demographics are stored in the PATIENT_DIMENSION table. The problem is ages that are stored in the PATIENT_DIMENSION table will not have a START_DATE and therefore the date constraint is not valid.

General i2b2 users do not know whether or not an age has a start date and if they select a date constraint their query may not return the expected results. This becomes a bigger issue when you are using the i2b2 in a larger network in which some sites may store it in the PATIENT_DIMENSION and others in the OBSERVATION_FACT. This scenario will definitely result in misleading results and the user will be unaware of the discrepancy.

To avoid any confusion or misleading results, users can no longer add a date constraint if at least one item in the panel is an age concept. The following message will appear when attempting to set a date constraint on a panel with an age concept: *Date constraints are not allowed for age related concepts. This panel contains at least one age related concepts, therefore a date constraint can not be set for this panel."*

Web Client Configurations

JIRA ISSUES: [WEBCLIENT-198] - Parameters/Configurations for Web Client

In Release 1.7.08, a new configuration file has been added to the i2b2 Web Client. This file allows site administrators to customize the text on the login screens, default user id and password values, as well as how obfuscated results display in the i2b2 Web Client.

File Name: i2b2_ui_config.js **File Location:** /webclient/js-i2b2/

Parameter	Description	Default Value
titleLogoSrc	Logo that appears in toolbar when logged into the i2b2 Web Client.	"assets/images/title.gif"
loginHeaderText	Text in the header bar of the login box	"i2b2 Login"
loginUsernameText	Text for the username input of the login box.	"Username:"
loginDefaultUsername	Default text inside the username input.	"demo"
loginPasswordText	Text for the password input of the login box.	"Password:"
loginDefaultPassword	Default text inside the password input.	"demouser"
loginHostText	Text for the PM cell dropdown of the login box.	"i2b2 Host:"
obfuscatedDisplayNumber	The number to display after the plus/minus for obfuscated results. **Please see the important note at end of this table.**	3
useFloorThreshold	If **true**, any result below floorThresholdNumber shows as '{floorThresholdText} {floorThresholdNumber}' If **false**, floor threshold will not be used when displaying values in the i2b2 Web Client.	false
floorThresholdNumber	Threshold for the low number of results	10
floorThresholdText	Text that is prefixed before {floorThresholdNumber} (include trailing space)	"Less Than "

Important

The calculation for the real obfuscation value continues to be controlled by the server and is based on the value defined in the CRC properties file. The **obfuscatedDisplayNumber** parameter in the **i2b2_ui_config.js** simply defines what number to display to the user when viewing the query results.

SQL Server: New Connection Parameter to Pass in String Based Variables

JIRA ISSUES: [CORE-227] - Add ability to send parameters with string based variables as varchar instead of nvarchar

Prior to release 1.7.08, parameters are sent in as Unicode (nvarchar) instead of varchar. SQL Server then has to explicitly convert the nvarchar to varchar in the query. The effect is that SQL Server optimizer may have to use an index scan instead of an index seek (which is faster).

To address this issue, we have added a new connection parameter to be used when i2b2 uses PreparedStatements to pass in string based variables in SQL Server. The following connection parameter is to be added to the datasource definition.

Connection Parameter: connection-property name="sendStringParametersAsUnicode"
Added To: datasource definition
Behavior:

Value	Behavior
false	String based variable will be sent as varchar
true	Current logic is used; String based variable will be sent in Unicode (nvarchar)

Example: <connection-property name="sendStringParametersAsUnicode" >false</connection-property>

Updated JDBC Drivers

JIRA ISSUES: [CORE-229] - Provide updated JDBC drivers used by Oracle, PostgreSQL, and SQL Server

Included in release 1.7.08 are updated JDBC drivers for Oracle, PostgreSQL and SQL Server. The new version of JDBC drivers are optional and will not be installed automatically.

> **Important**
> Sites that choose to upgrade their JDBC drivers will be required to also updated the datasource files for all of their cells.

Information on Updating Drivers

This section contains some general information and key points to keep in mind when updating your JDBC drivers.

Location of JDBC Jar files

Your current JDBC jar files reside in the following directories:

1. ${jboss.home}/standalone/deployments/${axis2.war.name}/WEB-INF/lib
2. ${jboss.home}/standalone/deployments

New Version of JDBC

There are three new jar files, one for each type of supported databases.

1. Oracle = ojdbc7.jar
2. PostgreSQL = postgresql-9.4-1209.jar
3. SQL Server = sqljdbc42.jar

Update Existing i2b2 Instance

A script to deploy the new jar files has been included in the 1.7.08 Release. Once you have updated your server with the latest code you can run one of the following commands to deploy the new jdbc jar files:

Linux Command

```
ant copy_new_jdbc_jar
```

Windows Command

```
%ANT_HOME%\bin\ant.bat copy_new_jdbc_jar
```

Warning

If you choose to install the new JDBC jar files you also need to **update your datasource files** with the new driver information. This needs to be done for each cell in the i2b2 hive.

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i2b2 Release 1.7.07c

Release Date: June 7, 2016

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.07c** from an earlier version of i2b2.
- If you are installing 1.7.07c from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

SHRINE Approval

Release 1.7.07c does not include any server changes and therefore does not affect SHRINE installations. This release does not need to be tested with the latest version of the SHRINE Software.

Upgrade Notes

i2b2 Release 1.7.07c contains changes to the following software components:

- i2b2 Web Client
- i2b2 Server - Admin code only

> **Important**
> The Admin changes can be found in the i2b2core-src-1707c zip file located on the software page of the i2b2.org website. Please note that the other server components are included in this file. If you are upgrading from 1.7.07 then you do not need to update your i2b2 server as there are no changes. If you are upgrading from a release prior to 1.7.07 then you do need to install these other components.

Third Party Software Changes

No changes to third party software are included in release 1.7.07c

Change Summary - i2b2 Web Client Software - Release 1.7.07c

Bug Fixes

- [WEBCLIENT-186] - Timeout message not returned when query runs longer than the defined 180 secs

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i2b2 Release 1.7.07b

Release Date: March 1, 2016

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.07b** from an earlier version of i2b2.
- If you are installing 1.7.07b from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

SHRINE Approval

Release 1.7.07b does not include any server changes and therefore does not affect SHRINE installations. This release does not need to be tested with the latest version of the SHRINE Software.

Upgrade Notes

i2b2 Release 1.7.07b contains changes to the following software components:

- i2b2 Web Client
- i2b2 Server - Admin code only

> **Important**
> The Admin changes can be found in the i2b2core-src-1707b zip file located on the software page of the i2b2.org website. Please note that the other server components are included in this file. If you are upgrading from 1.7.07 then you do not need to update your i2b2 server as there are no changes. If you are upgrading from a release prior to 1.7.07 then you do need to install these other components.

Third Party Software Changes

No changes to third party software are included in release 1.7.07b

Change Summary - i2b2 Web Client Software - Release 1.7.07b

Bug Fixes

- [WEBCLIENT-177] - PHP Proxy Update
- [WEBCLIENT-178] - Error returned when reloading the i2b2 Web Client after it times out

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i2b2 Release 1.7.07

Release Date: January 15, 2016

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.07** from an earlier version of i2b2.
- If you are installing 1.7.07 from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

SHRINE Approval

SHRINE Release 1.20.1 has been tested with *i2b2 1.7.07 Release* and has been **approved** by the SHRINE Team

Upgrade Notes

i2b2 Release 1.7.07 contains changes to the following software components:

- i2b2 Community Plugins
- i2b2 Data
- i2b2 Server
- i2b2 Web Client

Third Party Software Changes

No changes to third party software are included in release 1.7.07

Change Summary - i2b2 Core Software - Release 1.7.07

Improvements

- [CORE-118] - Increase number of queries that can be run in the "lifetime" of the database
- [CORE-187] - Split the observation_fact_demo_insert_data script into smaller scripts
- [CORE-194] - Split the icd10_icd9_diagnoses_insert_data script into smaller scripts
- [CORE-201] - Update i2b2 demo data scripts to support Microsoft SQL Server 2012

Bug Fixes

- [CORE-182] - Wrong datatype defined for some date fields in PostgreSQL create script(s)
- [CORE-199] - PM Cell is not sending admin role unless a project is associated to the user
- [CORE-202] - Some concepts in concept_dimension have synonym name
- [CORE-203] - Restore requirement to look at M_APPLIED_PATH when retrieving modifier info from the Ontology Cell
- [CORE-204] - Duplicate data in GitHub repo i2b2-data

Change Summary - i2b2 Web Client Software - Release 1.7.07

Improvements

- [WEBCLIENT-143] - Add .HideBreak() & .getXNodeValNoKids() methods to webclient/js-i2b2/hive/hive_helper.js
- [WEBCLIENT-144] - Concepts with a line break in their name are not displaying correctly in the Timeline
- [WEBCLIENT-145] - Add reference for jquery-1.11.3.min.js in /webclient/default.htm
- [WEBCLIENT-146] - New drop down that will display the list of plugins
- [WEBCLIENT-155] - Add 'Delete Temporal Relationship' option to the define order of events screen
- [WEBCLIENT-163] - Excluding a panel will now display 'NOT' in front of each item
- [WEBCLIENT-168] - Add the ability to expand the Query Status view
- [WEBCLIENT-172] - Add 'Close' button to new Plugins Menu
- [WEBCLIENT-173] - Right-Click "Display" menu to load Previous Query

New Features

- [WEBCLIENT-162] - Item Level Date Constraints
- [WEBCLIENT-164] - New i2b2 Web Client Plugin Installer
- [WEBCLIENT-166] - Printable Query Report Feature
- [WEBCLIENT-167] - Plugin installer configurable parameter in i2b2_config_data.js

Bug Fixes

- [WEBCLIENT-75] - Cannot delete event from temporal query once added in the webclient
- [WEBCLIENT-100] - Bar graph overlaps number of patients when large patient set is displayed
- [WEBCLIENT-102] - Print Query doesn't display name if printing a previous query
- [WEBCLIENT-118] - Announcements do not display correctly in Internet Explorer
- [WEBCLIENT-122] - Clicking on Login button with missing or invalid username/password is not displaying the right error message
- [WEBCLIENT-125] - Wrong icon appears when dragging previous temporal query to Workplace View
- [WEBCLIENT-127] - Breakdowns for obfuscated results are not displaying the obfuscation indicator (±3) in Graph Results
- [WEBCLIENT-130] - Change Password link show to accounts logged in via AD
- [WEBCLIENT-132] - Demographics (1 patient set) plugin
- [WEBCLIENT-135] - Some metadata terms with special characters will not run in the query tool
- [WEBCLIENT-136] - Date Constraints lost in webclient when executing a query created in workbench
- [WEBCLIENT-138] - Timeline bugs
- [WEBCLIENT-139] - Find - Search by Names for non-existent term does not return a message
- [WEBCLIENT-142] - "Missing resource" error is being logged because prevQuery.jpg file is missing from /images/
- [WEBCLIENT-147] - previous query run results tab displaying obfuscated indicator as '0±3' for counts <3
- [WEBCLIENT-149] - Query rerun is failing when run as query-in-query
- [WEBCLIENT-150] - Find - After Searching, the disappearing "Searching..." text logic is incorrect
- [WEBCLIENT-151] - New events in temporal query not populating existing temporal relationships

- [WEBCLIENT-152] - Creating multiple New Events without expanding Define Order of Events dropdown is broken
- [WEBCLIENT-153] - Previous Queries with special characters do not run in Query Tool
- [WEBCLIENT-158] - Minor typos in the webclient
- [WEBCLIENT-176] - Blank Page opens in new tab when opening the i2b2 Plugin Gallery

Change Summary - i2b2 Community Plugins - Release 1.7.07

Improvements

- [PLUGINS-12] - Export XLS: Add field to define delimiter when exporting data to .csv file

New Features

- [PLUGINS-15] - Set up production repositories for all plugins

Bug Fixes

- [PLUGINS-6] - Export XLS: Data does not appear in exported files
- [PLUGINS-7] - CARE-Concept: Data does not appear in the exported files
- [PLUGINS-8] - CARE-Observation: Data does not appear in the exported files
- [PLUGINS-10] - CARE-Concept plugin doesn't display marital statuses
- [PLUGINS-11] - CARE-Observation: Marital Statuses are not displaying
- [PLUGINS-16] - Fix issue with double quotes in the manifests for several plugins

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i2b2 Release 1.7.06

Release Date: August 12, 2015

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.06** from an earlier version of i2b2.
- If you are installing 1.7.06 from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

Upgrade Notes

i2b2 Release 1.7.06 contains changes to the following software components:

- i2b2 Server
- i2b2 Web Client
- i2b2 Workbench

Third Party Software Changes

No changes to third party software are included in release 1.7.06

Change Summary - i2b2 Core Software - Release 1.7.06

Bug Fixes

- [CORE-149] - JDBC calls to interrupted threads throw sqlexceptions - Queries do not leave medium queue
- [CORE-165] - Timeline filter not working if database is SQL Server
- [CORE-180] - SHRINE queries will not run once i2b2 is updated to 1.7.05

Documentation Updates

- [CORE-179] - Difference between documentation and table concept_dimension

Change Summary - i2b2 Web Client Software - Release 1.7.06

Bug Fixes

- [WEBCLIENT-110] - Temporal queries do not print unless a population is defined
- [WEBCLIENT-115] - IE Compatibility tag missing end tag and not within the header
- [WEBCLIENT-116] - Graph Results display as "undefined" for obfuscated users
- [WEBCLIENT-117] - Query Tool displays behind Query Status and Graph Results tabs
- [WEBCLIENT-120] - Print query does not work in Internet Explorer for Previous Temporal Queries
- [WEBCLIENT-121] - Previous temporal queries do not run in Internet Explorer
- [WEBCLIENT-123] - Order of events not maintained when running a previous temporal query
- [WEBCLIENT-124] - Clear in Query Tool does not clear correctly for Temporal Queries
- [WEBCLIENT-126] - Only able to view the first two events when previous temporal query is added to the query tool

i2b2 Release 1.7.05

Release Date: **May 6, 2015**

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.05** from an earlier version of i2b2.
- If you are installing 1.7.05 from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

Upgrade Notes

i2b2 Release 1.7.05 contains changes to the following software components:

- Database Scripts
- i2b2 Server
- i2b2 Web Client
- i2b2 Workbench

Third Party Software Changes

No changes to third party software are included in release 1.7.05

Change Summary - i2b2 Core Software - Release 1.7.05

Bug Fixes

- [CORE-149] - JDBC calls to interrupted threads throw sqlexceptions
- [CORE-156] - PM may not send the correct cell information when multiple projects and cells defined
- [CORE-158] - JBoss server log contains password information when debug is turned on
- [CORE-159] - Inconsistency in JBoss711Final and Install documentation
- [CORE-166] - Hard coded references to I2B2DEMODATA in CRC install files
- [CORE-167] - Metadata data install error
- [CORE-169] - SHRINE Previous Queries: Path displays in Query Tool instead of item name
- [CORE-174] - concept_dimension.concept_cd is nullable in postgresql implementation
- [CORE-177] - Workbench may be using the wrong cell data when multiple projects and cells defined

Change Summary - i2b2 Web Client Software - Release 1.7.05

New Features

- [WEBCLIENT-78] - Ability to refresh in PQ and workplace
- [WEBCLIENT-80] - New view: Find Previous Queries
- [WEBCLIENT-89] - New Graph Results view to display patient breakdowns in a graph

Improvements

- [WEBCLIENT-85] - Display error message to user in Find for previous queries
- [WEBCLIENT-86] - Indicator needed to inform users the system is searching when doing a Find
- [WEBCLIENT-88] - Category names in Find (Previous Queries) can be misleading
- [WEBCLIENT-103] - Add text wrapping capabilities to the i2b2 Web Client

Bug Fixes

- [WEBCLIENT-73] - Wrong name displays when renaming a previous query in Workplace
- [WEBCLIENT-76] - Update the I.E. Emulation that is defined in the Web Client <meta> tag
- [WEBCLIENT-81] - Not able to select item from pop-up menu in Previous Queries
- [WEBCLIENT-83] - Need message to say no results found
- [WEBCLIENT-84] - Not able to search Previous Queries if "Any Categories" is selected
- [WEBCLIENT-90] - Query Results not cleared when clear query in Query Tool
- [WEBCLIENT-91] - Items are not staying with the pointer when dragged to another i2b2 view (Firefox only)
- [WEBCLIENT-92] - Refresh icon needs to updated to one with transparent background
- [WEBCLIENT-93] - Update the message that appears to users in Graph Results if using I.E. 7 or 8
- [WEBCLIENT-94] - ONT - Containers Dragable by Default
- [WEBCLIENT-95] - Help is not displaying in the Web Client
- [WEBCLIENT-97] - Selecting temporal constraint selection "Same encounter" is not changing selection at the individiual group level
- [WEBCLIENT-99] - Find view is not resizing properly
- [WEBCLIENT-101] - Date picker calendar does not close unless you choose a date
- [WEBCLIENT-105] - Previous Queries appear to be missing value constraints when dropped in Query Tool
- [WEBCLIENT-106] - Observation details are missing when viewed in Timeline
- [WEBCLIENT-107] - Graph Results panel temporarily attached to bottom of Show Query Status panel
- [WEBCLIENT-108] - Value constraint window doesn't open in I.E. 11
- [WEBCLIENT-109] - Web Client may be using the wrong cell data when multiple projects and cells defined
- [WEBCLIENT-112] - Find Terms: Search by Code does not display results returned

i2b2 Release 1.7.04

Release Date: **November 13, 2014**

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.04** from an earlier version of i2b2.
- If you are installing 1.7.04 from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

Upgrade Notes

i2b2 Release 1.7.04 contains changes to the following software components:

- Database Scripts
- i2b2 Server
- i2b2 Web Client
- i2b2 Workbench

Third Party Software Changes

No changes to third party software are included in release 1.7.04

Change Summary - i2b2 Core Software - Release 1.7.04

Improvements

- [CORE-134] - Improve appearance of tooltips in Ontology Views
- [CORE-136] - Jump to terms does not display modifiers
- [CORE-142] - Add ability to add metadataxml to a modifier from within Edit Terms view
- [CORE-144] - Add ability to expand inactive folders to view its children

Bug Fixes

- [CORE-61] - The crc_loader (triggered via a web service) does not correctly load data into the patient dimension
- [CORE-65] - Ontology term sorting order is case sensitive (should be case insensitive)

- [CORE-106] - The tooltip boxes don't always close in the Timeline view
- [CORE-107] - Duplicate concept appears multiple times in Timeline view
- [CORE-108] - Times in the tooltips are not always updated
- [CORE-109] - The contrast of the different bars of color in the timeline needs to be higher.
- [CORE-110] - Full concept not displayed when hovering over it in the timeline
- [CORE-112] - Remove hard coded link from the workbench code
- [CORE-113] - Browser spelled incorrectly in error message returned
- [CORE-114] - Date of birth column is displaying the date and time
- [CORE-115] - Can't edit value constraints in timeline view
- [CORE-130] - SQL stored procedure not inserting required data into PROJECT_ID
- [CORE-131] - FRC Error - Unable to get 'destdir' from File Repository Cell
- [CORE-132] - commons-dbcp.jar and commons-pool.jar are not present in i2b2 WEB-INF/lib directory
- [CORE-139] - DEMO Data: Alkaline Phosphatase (ALP) lab tests are missing from Navigate Terms view
- [CORE-145] - Users with LDS access can view de-identified data (i.e. reports)
- [CORE-148] - Values no longer visible in timeline view
- [CORE-150] - Left and Right arrows in previous queries not working correctly
- [CORE-152] - Wrong approval displays when selecting an approval to edit in the Admin Tool
- [CORE-153] - Only the first item in each section of a project request appears in the Admin Tool
- [CORE-155] - Base code doesn't display in the Edit Term Wizard

Change Summary - i2b2 Web Client Software - Release 1.7.04

Improvements

- [WEBCLIENT-67] - Add ability to expand inactive items to view its dependents / children

Bug Fixes

- [WEBCLIENT-13] - Data & admin roles specified in Project Request plug-in are listed 'undefined' in admin detail view
- [WEBCLIENT-50] - New Events for temporal queries are mislabled after using 'Clear'
- [WEBCLIENT-64] - Can't drop previous temporal query into query tool if span of time defined in query
- [WEBCLIENT-65] - Date constraint not available for Groups over Group3
- [WEBCLIENT-72] - Synonyms issue in 1.7.04 release

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i2b2 Release 1.7.03a

Release Date: **August 28, 2014**

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.03a** from an earlier version of i2b2.
- If you are installing 1.7.03a from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

Upgrade Notes

i2b2 Release 1.7.03a contains changes to the following software components:

- i2b2 Web Client

Third Party Software Changes

No changes to third party software are included in release 1.7.03a

Change Summary - i2b2 Web Client Software - Release 1.7.03a

Bug Fixes

- [WEBCLIENT-68] - Panel timing on anchoring observations can be changed to treat independently or same encounter
- [WEBCLIENT-69] - Print Query is only including the information for the first group / panel
- [WEBCLIENT-70] - The concept associated with a modifier is not printing when you print the query

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i2b2 Release 1.7.03

Release Date: **August 20, 2014**

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.03** from an earlier version of i2b2.
- If you are installing 1.7.03 from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.

- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

Upgrade Notes

i2b2 Release 1.7.03 contains changes to the following software components:

- i2b2 Server
- i2b2 Web Client

Third Party Software Changes

No changes to third party software are included in release 1.7.03

Change Summary - i2b2 Core Software - Version 1.7.03

Bug Fixes

- [CORE-143] - Do not require M_APPLIED_PATH when retrieving modifier information from the Ontology Cell

Improvements

- [CORE-135] - Edit tool to file C_PATH and C_SYMBOL when adding new item
- [CORE-141] - Remove carriage returns / line feeds from metadataxml when filing a term in Edit Terms view

Change Summary - i2b2 Web Client Software - Release 1.7.03

Bug Fixes

- [WEBCLIENT-63] - Temporal Queries: Wrong description is displaying in the list of constraints for "On or After"
- [WEBCLIENT-66] - Wrong operator sent for some temporal relationships

Improvement / New Feature Details

Edit tool to file C_PATH and C_SYMBOL when adding new item

JIRA ISSUES: [CORE-135]

In the i2b2 metadata table there are two columns (C_PATH and C_SYMBOL) that are used exclusively by the Ontology Mapping tool. Prior to release 1.7.03 these columns were not populated when you added a new term via the Edit Terms view. This situation has been rectified in that these columns will now be populated with the appropriate data when creating a new container, folder, term, or modifier from within the Edit Terms view.

Edit Tool view: Line feeds removed from Metadataxml

JIRA ISSUES: [CORE-141]

In the Edit Terms view users can create terms that have values associated to them. These values are stored in the C_METADATAXML column in the custom metadata table. Prior to release 1.7.03 when you created or edited a term with values in the Edit Tool view, the metadata was stored in the table with carriage returns / line feeds. This change improves the way the metadataxml if filed into the table by removing all line feeds from the data before filing it into the C_METADATAXML column

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i2b2 Release 1.7.02

Release Date: July 1, 2014

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.02** from an earlier version of i2b2.
- If you are installing 1.7.02 from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

Upgrade Notes

i2b2 Release 1.7.02 contains changes to the following software components:

- Database Scripts
- i2b2 Server
- i2b2 Web Client
- i2b2 Workbench

Third Party Software Changes

No changes to third party software are included in release 1.7.02

Change Summary - i2b2 Core Software - Version 1.7.02

Improvements

- [CORE-95] - Password Management Enhancement
- [CORE-123] - Update demo patient MRNs and sites

Bug Fixes

- [CORE-26] - "Your account does not have access to any i2b2 projects" in admin webclient
- [CORE-36] - Attempt to add a new CEL via the admin webclient fails
- [CORE-80] - Date restrict on non obs_fact values not added to generated SQL
- [CORE-86] - Ontology contains bad XML
- [CORE-91] - PostgreSQL: Error executing CRC stored procedure CREATE_TEMP_PROVIDER_TABLE
- [CORE-92] - Wrong user name entered in PM's datasource file for PostgreSQL and SQL Server examples
- [CORE-93] - compare integer with varchar
- [CORE-94] - Wrong built SQL statement causing SQLSyntaxErrorException at GetPDOFromInputList request
- [CORE-97] - User and cell confguration (data) in the Admin module does not display in some browsers
- [CORE-98] - Patient breakdown result types are not working when querying a PostgreSQL database
- [CORE-99] - Cell data changes made in i2b2 Admin are not saved
- [CORE-100] - Error executing CRC stored procedure CREATE_TEMP_PROVIDER_TABLE (PostgreSQL)
- [CORE-101] - Error occurs when expanding an Encounter set in Previous Queries
- [CORE-102] - PM datasource file has the wrong username listed in the example
- [CORE-103] - Error returned from the CRC when running a query with result type of Encounter set
- [CORE-116] - On Amazon Demo site, the Visit Detail AGE does not work
- [CORE-120] - Change Password displaying in Managers Tool View
- [CORE-125] - Query using concepts from the clinical trials folder always returns zero patients

Change Summary - i2b2 Web Client Software - Release 1.7.02

Improvements

- [WEBCLIENT-56] - Password Management Enhancement

Bug Fixes

- [WEBCLIENT-27] - Wrong icon appears when dragging folder to Workplace View
- [WEBCLIENT-43] - ontology cell concept navigation "Show Synonymous Terms" checkbox inconsistency
- [WEBCLIENT-46] - Renaming shared folders doesn't work in the webclient
- [WEBCLIENT-47] - "Delete Concept" in I2B2 web app deletes the first occurrence of the concept, not the one selected
- [WEBCLIENT-51] - Only 1 temporal relationship sent in xml even though multiple are defined
- [WEBCLIENT-52] - Modifier folders/containers don't work with i2b2 v1.7 and PostgreSQL
- [WEBCLIENT-54] - When an item in the Term Navigator has more than a certain number of elements underneath, the arithmetic in the 'Need more items' dialog box is incorrect

- [WEBCLIENT-55] - With error in data source the client runs on forever
- [WEBCLIENT-58] - Operators do not default correctly when adding a temporal relationship
- [WEBCLIENT-59] - Print Query not working in Chrome browser

Tasks

- [WEBCLIENT-61] - Disable changing passwords on the demo site

Improvement / New Feature Details

Password Management

JIRA ISSUES: [CORE-95] and [WEBCLIENT-56]

In release 1.7.02, i2b2 users are now able to change their password from within the i2b2 Web Client and Workbench. Previously to this release, users did not have the ability to change their own password. They would have to notify their administrator who would have to change it for them in the i2b2 administration module. This new feature adds a layer of security in that the user can manage their own password and not have the added risk of other users (i.e. the admin) knowing their password.

> **Important**
> If a user is setup to log into the i2b2 using either Active Directory or LDAP authentication methods then they will **not** be able to change their password from within the i2b2 Web Client or Workbench. If they need to change their password they will need to contact their site administrator and follow the protocols established at their institution.
>
> ***This feature is only available for those users that log in with the standard i2b2 Authentication method.***

In the i2b2 Web Client, a new option called **Change Password** now appears in the Web Client's toolbar.

Clicking on **Change Password** will open the **i2b2 Change Password window**.

In the i2b2 Workbench, a new button labeled **Password** has been added to the i2b2 desktop title bar.

Clicking on **Password** will open the **Set Password window**.

The functionality to change your password is the same regardless of whether you access the change password window from within the i2b2 Web Client or the workbench. There are basically three steps:

1. Enter your **current password**.
2. Enter a **new password** for your user.
3. **Retype** your password.

Once you do the above three steps and click on **OK** the system will verify you entered your "current" password correctly and the password you entered at the *New Password* and *Retype Password* fields match. Provided everything is correct your new password will be saved.

> **Note**
> Once you change your password you will need to log out of the Web Client or Workbench and log back in using your new password.

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i2b2 Release 1.7.01

Release Date: February 4, 2014

Installation Notes

- This release note applies to you if you are **upgrading to 1.7.01** from an earlier version of i2b2.
- If you are installing 1.7.01 from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.

- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

Upgrade Notes

i2b2 Release 1.7.01 contains changes to the following software components:

- Database Scripts
- i2b2 Server
- i2b2 Web Client

Third Party Software Changes

No changes to third party software are included in release 1.7.01

Change Summary - i2b2 Core Software - Version 1.7.01

Improvements

- [CORE-88] - Confusing error message logged for non-Oracle users

Bug Fixes

- [CORE-83] - Trying to build and compile i2b2 Server on Fedora Core 20 with Wildfly 8.0.0
- [CORE-85] - Fresh install fails on PM Module and admin screen
- [CORE-87] - Installation process needs to put database drivers in i2b2.war/WEB-INF/lib
- Data Install: The stored procedures for PostgreSQL for the CRC Loader was enhanced and optimized.
- Server Install: JDBC Drivers not copied correctly. When installing i2b2 server-common, the JDBC drivers were not copied into the i2b2.war /WEB-INF/lib directory.
- CRC-Loader: Importing Visit Dimension Data. When using the CRC Loader, some primary key data such as inout_cd, location_cd, length_of_visit, etc, was not being imported correctly.

Documentation

- [CORE-58] - Workbench 1.6 and default install
- [CORE-77] - I2B2 installation Guide fixes
- [CORE-90] - Install Documentation: Wrong schema configurations documented for a PostgreSQL database

Change Summary - i2b2 Web Client Software - Release 1.7.01

Bug Fixes

- [WEBCLIENT-48] - Web client gets into non-functional state
- Clicking on the Clear button does not return the Query Tool to the default settings. When a temporal query is created, and a user clicks on the clear button to start a new query, the Temporal Constraint is changed to "Define sequence of events" and it should default to "Treat all groups independently.
- Date constraints not being stored with the previous query. When a date constraint was defined on a query the previous query would not maintain the constraint when you would use it to run another query.

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i2b2 Release 1.7

Release Date: December 20, 2013

Installation Notes

- This release note applies to you if you are **upgrading to 1.7** from an earlier version of i2b2.
- If you are installing 1.7 from a computer running the i2b2 Workbench, ensure that the workbench and all eclipse applications are closed prior to installing this release.
- If you are installing a new instance of i2b2 we recommend you refer to the installation documentation found on the i2b2 community wiki. This documentation will guide you through the entire installation process.

Upgrade Notes

i2b2 Release 1.7 contains changes to the following software components:

- Database Scripts
- i2b2 Server
- i2b2 Web Client
- i2b2 Workbench

Third Party Software Changes

In release 1.7 the **i2b2 Server** has been updated to use the following versions of third party software.

1. JBoss has been upgraded to 7.1.1
2. Apache Ant has been upgraded to 1.8.2
3. Apache Axis2 has been upgraded to 1.6.2

Warning

Only the i2b2 Server was upgraded to use the above versions of JBoss, Ant, and Axis2. The i2b2 Workbench will continue to use the previous versions. As a result, the source codes for the server and the workbench client have different plug-ins for the commons.

Server edu.harvard.i2b2.server-common

Client edu.harvard.i2b2.common

Change Summary - i2b2 Core Software - Release 1.7

Improvements

- Find Terms: New feature called "Jump to Term in Tree"
- Previous Query: Filter list by user
- Previous Query: Search Previous Queries View
- Previous Query: Page through previous queries by date
- Database: PROJECT_ID Column added to PATIENT_MAPPING and ENCOUNTER_MAPPING tables (support for new IM cell)
- Demo Data: Updated PATIENT_MAPPING table to support the new IM cell.

New Features

- Temporal Queries (New Temporal Query Tool View)
- Identity Management Cell (IM)
- Identity Management Tables
- Managers Tool View
- OpenEMPI Support
- Patient Mapping View
- Patient Sets View
- PostgreSQL Database Support
- Workplace Find View

Bug Fixes

- [CORE-5] - CRC build from source deposits i2b2Common-core.jar in wrong directory
- [CORE-70] - I2b2 compilation of CRC Cell fails
- [CORE-74] - Typo in i2b2_config_data.js of admin interface
- [CORE-81] - No PATIENT_NUM in OBSERVATION_FACT_PK (conflict with documentation)

Documentation

- Architecture, design and messaging documents for the new Identity Management (IM) Cell.
- Design documentation for the new Temporal Query Tool plug-in.
- User guide for the new Temporal Query view.
- Documentation for the new views (Patient Set, Patient Mapping, Managers Tool, and Find in Workplace).
- [CORE-8] - Suggestions for improvements to installation documents
- [CORE-75] - CRC_Design.pdf page numbers are broken, all page numbers are set to 1 of 1, 2 of 2, etc. instead of 1 of xx
- [CORE-78] - Errors in I2B2 Hive Installation Guide v 1.7.0

Tasks

- [CORE-45] - Establish CRCLoader project (eclipse) from exiting ant build file failed

Change Summary - i2b2 Web Client Software - Release 1.7

New Features

- Temporal Queries (Modification made to existing Query Tool)

Documentation

- [WEBCLIENT-40] - Webclient: documentation should state that php and curl are prerequisites for the webclient

Improvement / New Feature Details

Temporal Queries

The ***temporal query*** is a new type of query introduced in release 1.7. There are two components to these queries that make them a little more complex than the type of queries available prior to 1.7 (classic i2b2 queries).

The first component to these queries is the list of events defined by the user.

The second component is the relationship between the events. This relationship is referred to a Temporal Relationship, which is best described as how the different events relate in regards to the time in which the event(s) occurred.

Users can also define a patient or event population in which they wish to run the temporal query against. This step is optional and is not required in order to run the temporal query.

The process in which temporal queries are defined is slightly different in the i2b2 Web Client and the i2b2 Workbench. In the i2b2 Web Client the existing Query Tool view has been modified to accommodate Temporal Queries while a new view called Temporal Query Tool view has been created for the i2b2 Workbench.

The new Temporal Query Tool view and the modifications to the existing Query Tool view extend the query functionalities provided by the classic Query Tool view.

It is important to note that while the manner in which users setup a temporal query is different in each of the clients the overall functionality is the same.

The following two sections will describe how to run Temporal Queries in the i2b2 Web Client and the i2b2 Workbench.

i2b2 Web Client: Temporal Queries

In the i2b2 Web Client there are five basic steps in defining a *temporal query* in the **Query Tool view**.

1. Change *Temporal Constraint* to **Define sequence of Events**.
2. Define *Population in which events occur* (optional step).
3. Define Events
4. *Define order of events* (temporal relationships)
5. Run the query

> **Note**
> For detailed information about creating Temporal Queries please see the Temporal Query help file located on-line from within the i2b2 Web Client.

Step 1: Change Temporal Constraint

The first step is to change the Temporal Constraint to *Define sequence of Events*.

Step 2: Define Population in which events occur

Once you have changed the Temporal constraint to be *Define sequence of Events* a new **Page selection box** will appear below the Temporal Constraint section. The default page will be **Population in which events occur**. It is on this page you will define your population requirements.

Step 3: Define Events

The events are the first component of a temporal query. There are no restrictions on the number of events you wish to define. The only requirement is that you have to define at least two events.

To define the events simply click on the *Page selection box* and select **Event 1** from the drop-down list.

The groups and constraints for the events work in the same manner as they did for a traditional i2b2 query. Simply drag the items you want to include in Event 1 to the appropriate groups.

Once you have added your items to the groups you can click on the *Page selection box* and select **Event 2** from the drop-down list. This will change the page to display the groups for Event 2.

If you need to add a third event you can click on the **New Event button** located next to the *Page selection box*.

Step 4: Define Order of Events (Temporal Relationship)

As stated earlier the second component of a temporal query is the relationship between the events (temporal relationship). In the i2b2 Web Client this is done on the **Define order of events page**, which is accessed by clicking on the *Page selection box* and selecting **Define order of events** from the drop-down list.

The page will display as follows:

Step 5: Run Query

In the Web Client running a query works the same regardless of whether or not it is a Temporal Query or a traditional i2b2 query. By clickin on the **Run Query button**, the i2b2 client will send the request to the i2b2 server which will run the query as defined.

i2b2 Workbench: New Temporal Query Tool View

In the i2b2 Workbench there are three pages or steps in defining and running a *temporal query* in the new **Temporal Query Tool view**.

1. Page 1: Define Population
2. Page 2: Define Temporal Relationships
3. Page 3: Review and Submit Query

i2b2 Workbench: New Temporal Query Tool View

Define Date Constraints and Exclusions in Temporal Query Tool View

Defining the Date Constraints

Exclude Panel

Each page as well as defining constraints is further defined in the next few sections.

> **Note**
> For detailed information about using the Temporal Query Tool view, please see the help file for this view which is available on-line from within the i2b2 Workbench.

Page 1: Define Population

On this page you will define your population requirements.

Page 2: Define Temporal Relationships

As stated earlier there are two components to a ***temporal query***; (1) List of events and (2) the relationship between the events.

The second page is where you will define both the events and their relationship.

Page 3: Review and Submit

On this page the name of the query will default and if you wish to rename it you can do so at this point. Whatever is entered here will be the name given to the query when it is run. In addition you can select the Analysis Types that you want when running the query.

Defining Date Constraints and Exclusions in Temporal Query Tool View

There are some minor differences in terminology or layout that needs to be noted in this release note.

Defining the Date Constraints

In the classic Query Tool view you can only define date constraints on the group / panel level. In the new Temporal Query TOol view you can now define a date constraint on either the query or group levels. If you define it on the query level it will default the same date constraint for all the groups and the date constraint on the panel level will not be available for selection.

If you want to define it on the panel level select **Group-Specific**. Go to the group you wish to define the constraint and click on the column that displays *No Date Constraints*.

Exclude Panel

The ability to exclude all items in a group does exist in the new Temporal Query Tool view. However, the method in which it is defined differs between the classic Query Tool view and the Temporal Query Tool view.

In the existing **Query Tool view ("Classic")** the exclusion constraint was defined by clicking on the button labeled *Exclude*.

In the **Temporal Query Tool view (New)** the exclusion constraint was rolled into the window for defining the Occurrence constraint.

The *Specify Occurrence Constraints* windows will open when you click on the box that displays the occurrence constraint. To set the exclusion constraint you need to select "= 0 (No Occurrences)" from the drop-down list.

The above option is equivalent to the *Exclude* feature in the classic Query Tool view.

Previous Query: Filter list by user

New in release 1.7 is the ability to filter the list of previous queries by the user who created the query. In the options dialog ( ) window there is a new field called **Get previous queries for user**. The default is *all users* and can be changed to a specific user by clicking on the down arrow to display the drop-down list. Once you select the user and click on **OK**, the Previous Queries view will refresh and display only those previous queries created by the selected user.

Important
In i2b2 only managers are allowed to view queries for another user, therefore this feature is only available to those users who have the role of **MANAGER** defined for the project. If a user does not have the manager role then this field will be inactive and unavailable for selection.

Previous Query: Search Previous Queries View

In release 1.7 the ability to search the Previous Queries view has been added. The functionality is very similar to *Find Terms* view except it will search the *Previous Queries* view instead of *Navigate Terms* view. Users can search any of the three levels;

1. Previous Query (name)
2. Previous Query Result
3. Patient

Previous Query: Page through previous queries by date

Users can now retrieve the next or previous grouping of previous queries by the date in which the query was created.

The *Previous button* ( ) will retrieve the group of previous queries that occur **prior** to the date displayed in the date / time field.

The *Next button* ( ) will retrieve the group of previous queries that occur **after** the date displayed in the date / time field.

Identity Management Cell (IM)

A new cell called the Identity Management (IM) Cell was developed in release 1.7. This new cell contains Protected Health Information (PHI), which can be used to identify patients. The IM cell is used to manage this PHI in a manner consistent with the HIPAA privacy rule. The patient data will be available only as a HIPAA defined "Limited Data Set" to most of the hive.

The full functionality of the IM cell will be developed in stages. The initial framework and key services are released as part of the 1.7 release. Some of the key features being released in 1.7 are:

1. New tables to store identifiers from different sites, and patients that are included in a project.
2. Audit controls are implemented that are in compliance with the HIPAA privacy rules.
3. Services developed to set and validated an AES key for encrypting and decrypting patient MRNs in the IM cell.
4. Unencrypted patient identifiers sent in the PDO can be processed through the IM cell to retrieve all site IDs for the patient and project.

In addition to the above features, the i2b2 Worbench (eclipse client) has two new views that were created to support the new IM cell. These new views, called **Patient Mapping** and **Admin Tool** are further defined in the following two sections called *Patient Mapping View* and *Admin Tool View*.

Managers Tool View

The **Managers Tool** view was developed in release 1.7 and works in conjunction with the IM Cell. It currently has two main functions.

1. Set and / or validate that the project key is defined in the IM Cell.

- The project key is used by the IM cell to decrypte the patient id"s that are encrypted.
- The Set Key is used to define the key in the IM cell.
- The Validate Key is used to verify the key is set.

Important

If you are using the IM cell and your patient identifiers are encyrpted the you need to set the Project key in the IM cell. It is important to note that if you restart your i2b2 server or in the case of the VM image restarting the virtual machine then you will need to re-enter the project key.

The project key for the i2b2 demo project is: **i2b2demodatakey1**

In the VM image you need to log into the i2b2 Workbench as the i2b2 Admin user.

User ID: i2b2
Password: demouser

2. View the audit information.

- As part of the IM cell an audit table was created to track when a patient in the IM cell was accessed. This new view allows Project Managers or Administrators to run a report to see that audit information. The report can be run for a particular user, patient, or all audit information for the project you are logged into.

Patient Sets View

In release 1.7 a new view called **Patient Sets** was created. This new view will display a list of *Patient sets* that were created when a query was run. It is similar to the Previous Queries view except it only displays the patient sets and not the previous query or other result sets (i.e. Encounter sets, Number of patients, etc).

The patient sets can be expanded to display a list of patients.

Users can drag an entire patient set or a single patient to other views in the i2b2 Workbench.

Users can also perform a search in which they can search by the name of the patient set or for a list of patient sets that contain a specific patient.

Workplace Find View

A new view called **Find in Workplace** was created in release 1.7. This view is very similar to the *Find Terms* view except it will search the *Workplace* view instead of the *Navigate Terms* view.

Find Terms: New feature called "Jump to Term in Tree"

A new feature called **Jump to Term in Tree** has been added to the *Find Terms* view. Users can now easily jump directly to a term in the *Navigate Terms* view from the *Find Terms* view.

Once a term is found in the *Find Terms* view the user can click on the term using the *right mouse button* to display the pop-up menu. Selecting "Jump to Term in Tree" from the pop-up menu will bring the *Navigate Terms* view into focus and the hierarchical tree will automatically open to the location of the term selected in the *Find Terms* view.

OpenEMPISupport

OpenEMPI is an open source Enterprise Master Patient Index (EMPI) which is developed and supported by another community. The i2b2 IM cell has been developed to allow communication with OpenEMPI for those sites that choose to use it as their patient repository.

For additional information on OpenEMPI please see their website by going to the following location: https://openempi.kenai.com/

PostgreSQL Database Support

The ability to use a PostgreSQL database as an i2b2 database has been added to release 1.7. Both the create and insert data database scripts for PostgreSQL are included in this release.

Data: New Tables created for the IM Cell

The following new tables were created as part of the new IM cell.

Table Name	Description
IM_MPI_DEMOGRAPHICS	Contains General demographic information for the patients.
IM_MPI_MAPPING	Maps the patient"s *i2b2 number* and the *local MRN*.
IM_PROJECT_SITES	Contains information about the different sites (Source Systems).
IM_PROJECT_PATIENTS	Stores the patients that are part of a project(s).
IM_AUDIT	Stores the audit details of patients accessed in the IM cell. This includes; the user, site, and project requesting the access as well as the date in which it was accessed.

Data: New Columns added to support IM cell

A new column called **Project_ID** has been added to both the **PATIENT_MAPPING** and **ENCOUNTER_MAPPING** tables in the crc. The PROJECT_ID was added to support the IM cell. It will allow sites to track which project a patient is part of.

Data: Improved Patient Mapping Data

The **PATIENT_MAPPING** table in the CRC has been updated to include the following:

- Mappings of existing patients to multiple site MRNs.
- Project IDs added to patients.

Demo data has been added to all of the new IM tables except the AUDIT table. This IM data was added to provide examples for using the new IM cell.

> **Important**
> The mapping information added to the CRC and IM tables is strictly for demonstration purposes and does NOT contain real patient information.

New PostgreSQL Database Scripts

The i2b2 database scripts have been updated to include the table creation and data insert scripts for a PostgreSQL database.

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