

Workbench VM



How to import and use the i2b2 Workbench VM

About this guide

Starting with version 2.0.01 the i2b2 Workbench will now have at least two VMs made available for the community to download and use in their local environment. This guide will walk the user through the process of importing and running the VM, as well as accessing the source code for the i2b2 Workbench and configuring the i2b2 Workbench application to work with your local hive.

Document management

Revision Number	Date	Author	Description of Change
2.0.01-0001	10/01/2017	Janice Donahoe	Created initial version of the new Workbench VM Guide for the 2.0.01 Software.
2.0.01-0002	10/17/2017	Janice Donahoe	Fixed link to Software Release page.

Prerequisites

There are two requirements that need to be met before you can move on with the installation of the i2b2 Workbench VMs.

i2b2 Workbench VM

Version 2.0.01 of the i2b2 Workbench has two VMs that are included with the release:

- i2b2WB-VM-lin-mac-2001.ova
- i2b2WB-VM-lin-mac-2001.ova

Both VMs are built on Unix and have the Mac version of the i2b2 Workbench Application installed on the Unix desktop. The only difference is **i2b2WB-VM-lin-src-2001.ova** also contains **Eclipse Neon** and the **source code** for the i2b2 Workbench.

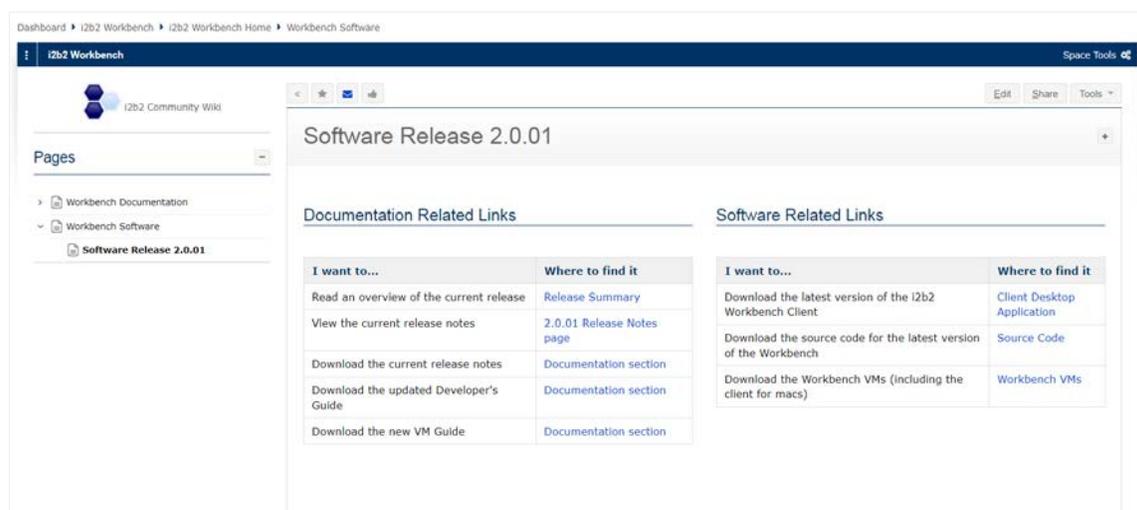
The VMs are packaged up in separate zip files and can be downloaded from the i2b2 Community Wiki. The name of each zip file corresponds to the name of the VM contained within it.

- i2b2WB-VM-lin-src-2001.zip
- i2b2WB-VM-lin-mac-2001.zip

Here are some basic steps you can take to download the zip files from the i2b2 Community Wiki.

1. Go to **Software Release 2.0.01** page in the **Workbench Space** on the i2b2 Community Wiki.

(<https://community.i2b2.org/wiki/display/WB/Software+Release+2.0.01>)



The screenshot shows the i2b2 Community Wiki page for 'Software Release 2.0.01'. The page layout includes a breadcrumb trail at the top: 'Dashboard > i2b2 Workbench > i2b2 Workbench Home > Workbench Software'. Below this is the page title 'Software Release 2.0.01' with 'Edit', 'Share', and 'Tools' options. The main content area is divided into two sections: 'Documentation Related Links' and 'Software Related Links', each containing a table of links.

I want to...	Where to find it
Read an overview of the current release	Release Summary
View the current release notes	2.0.01 Release Notes page
Download the current release notes	Documentation section
Download the updated Developer's Guide	Documentation section
Download the new VM Guide	Documentation section

I want to...	Where to find it
Download the latest version of the i2b2 Workbench Client	Client Desktop Application
Download the source code for the latest version of the Workbench	Source Code
Download the Workbench VMs (including the client for macs)	Workbench VMs

2. Scroll to the **Workbench VMs (Virtual Box)** section

Workbench VMs (VirtualBox)

Description	Software Version	Included on VM	Download Link	Additional Documentation
Unix VM of the i2b2 Workbench (user version)	2.0.01	i2b2 Workbench application (mac)	 i2b2WB-VM-lin-mac-2001.zip	
Unix VM of the i2b2 Workbench (developer version)	2.0.01	i2b2 Workbench application (mac) i2b2 Workbench source code Eclipse Neon	 i2b2WB-VM-lin-src-2001.zip	

3. In the **Download Link column**, click on the **name of the file** you want to download.

4. The download process will begin.

5. If prompted, answer any questions regarding the i2b2 license to continue.

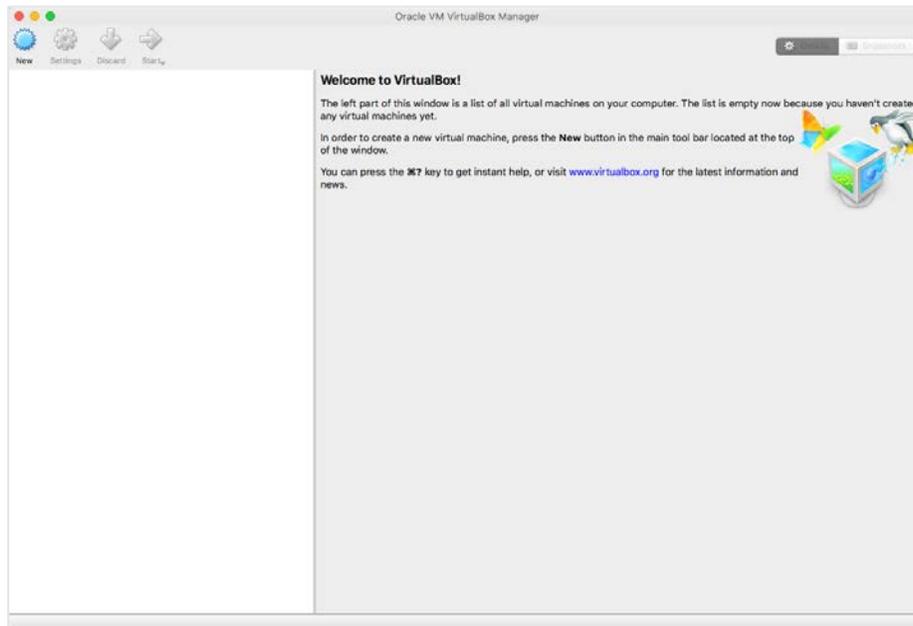
VirtualBox

The i2b2 Workbench VMs were built using VirtualBox and to run the VM you will need to download and install VirtualBox on a local machine. Information about VirtualBox and a link to download the software can be found on their website at <https://www.virtualbox.org/>

Import the VM

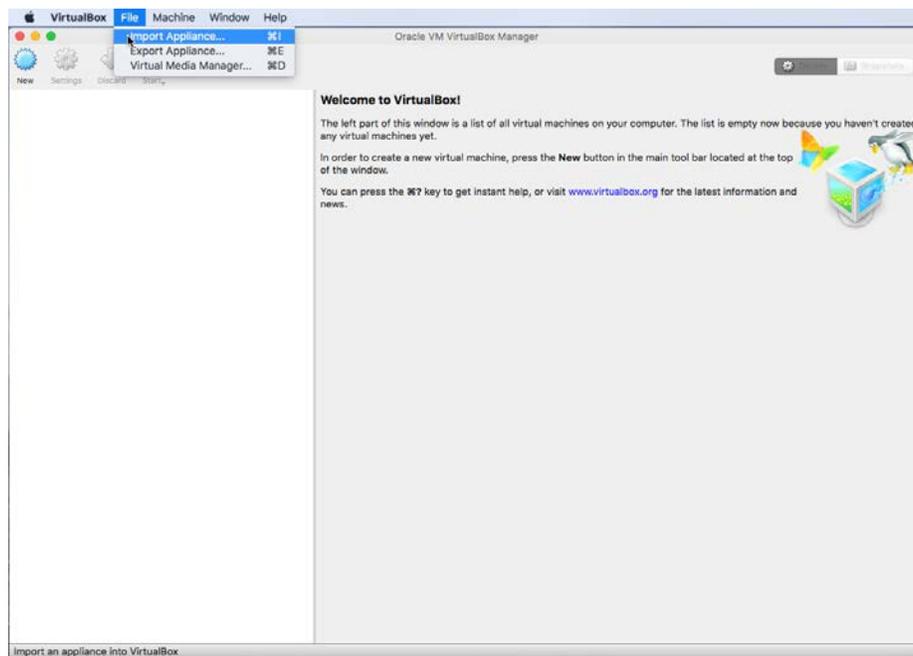
Once you have downloaded the required software the next step is to import the VM into VirtualBox.

1. Open your instance of **VirtualBox**; to display the **Oracle VM VirtualBox Manager**.

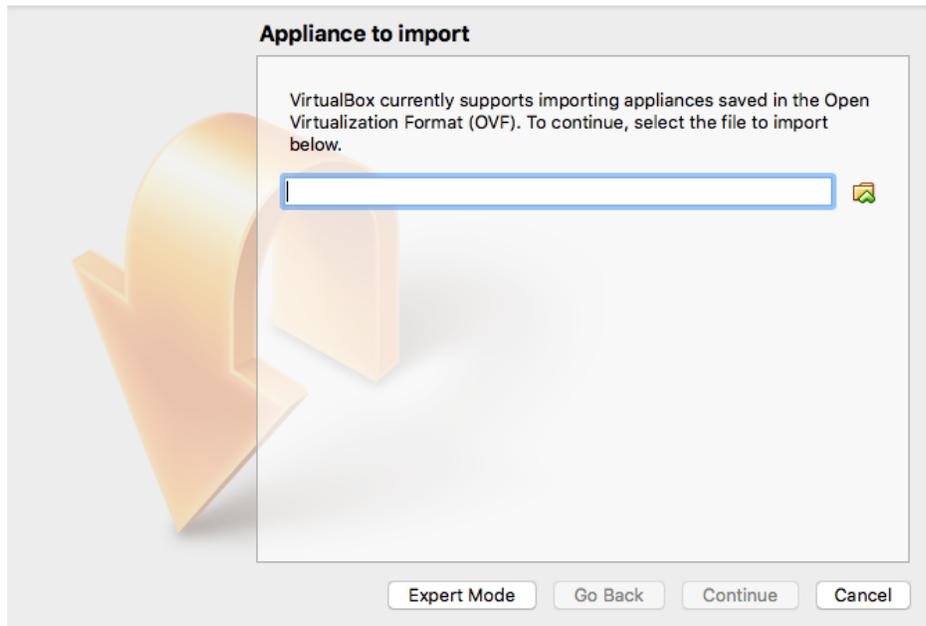


2. In the **toolbar**, click on **File** to display a menu

3. Select **Import Appliance**



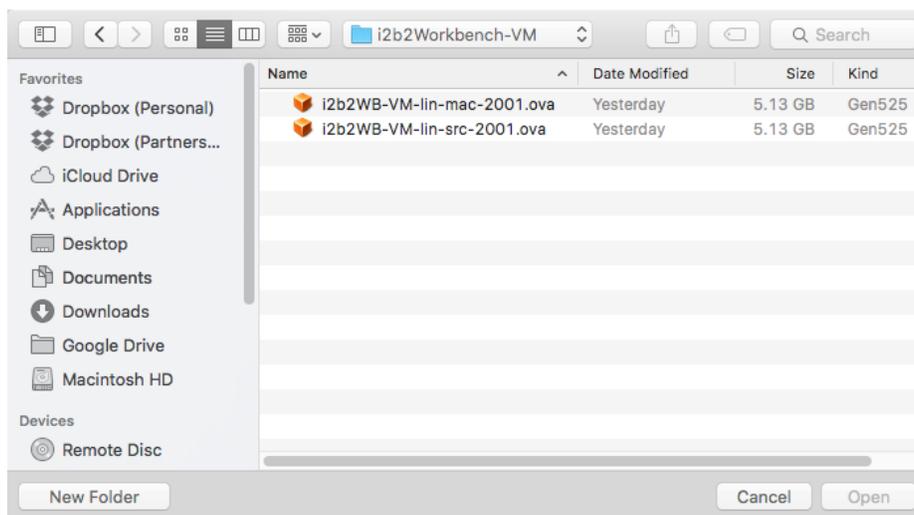
4. **Appliance to import window** will open



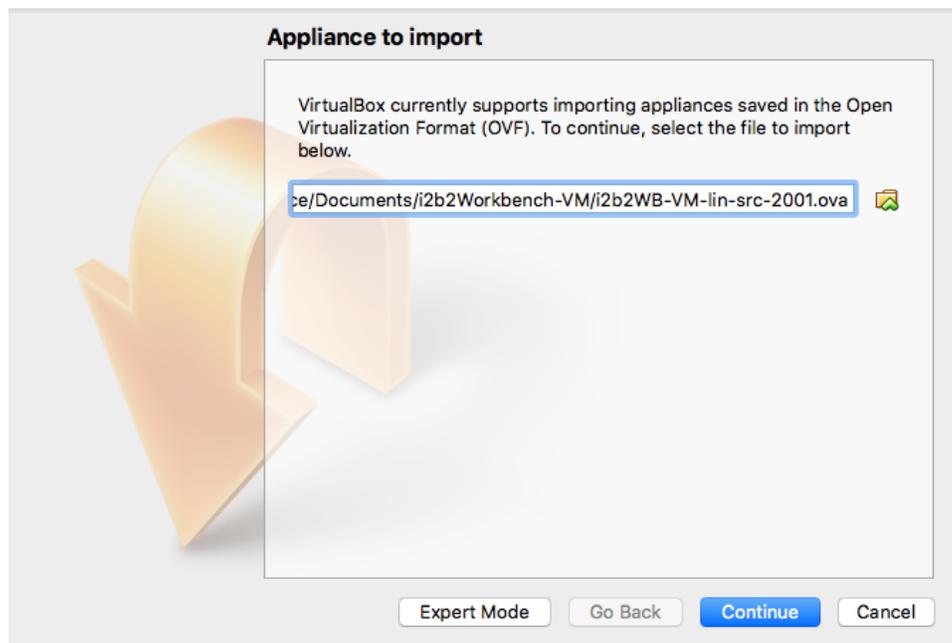
5. Click on the **folder** (📁) to open the **selection window**.

6. Go to the location where you downloaded the i2b2 Workbench VM.

7. Select the appropriate VM and click on **Open**

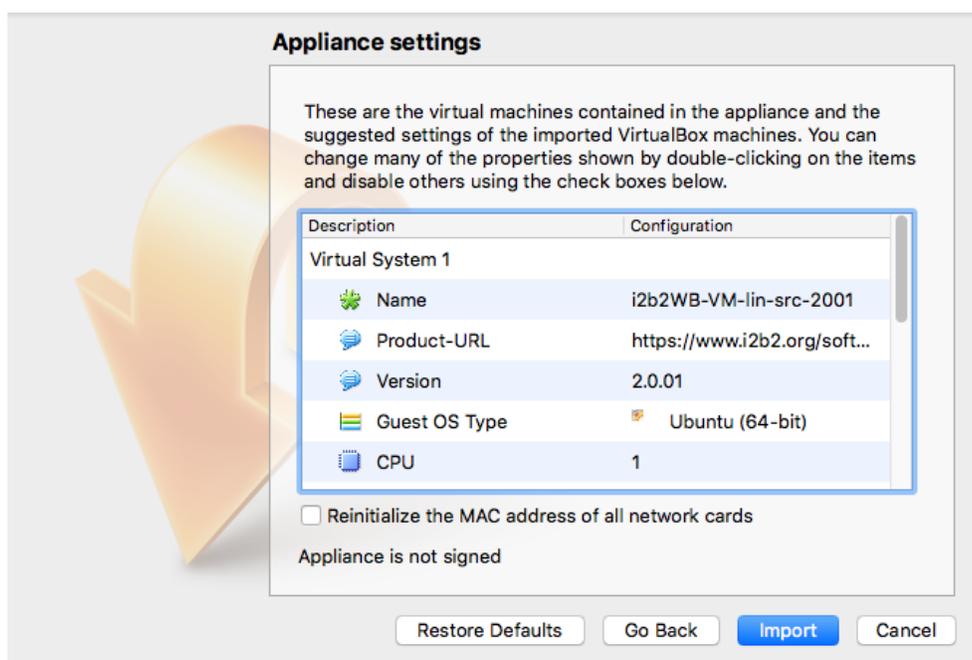


- The path to that image will now display in the **Appliance to import window** and the **Continue** button will be activated.

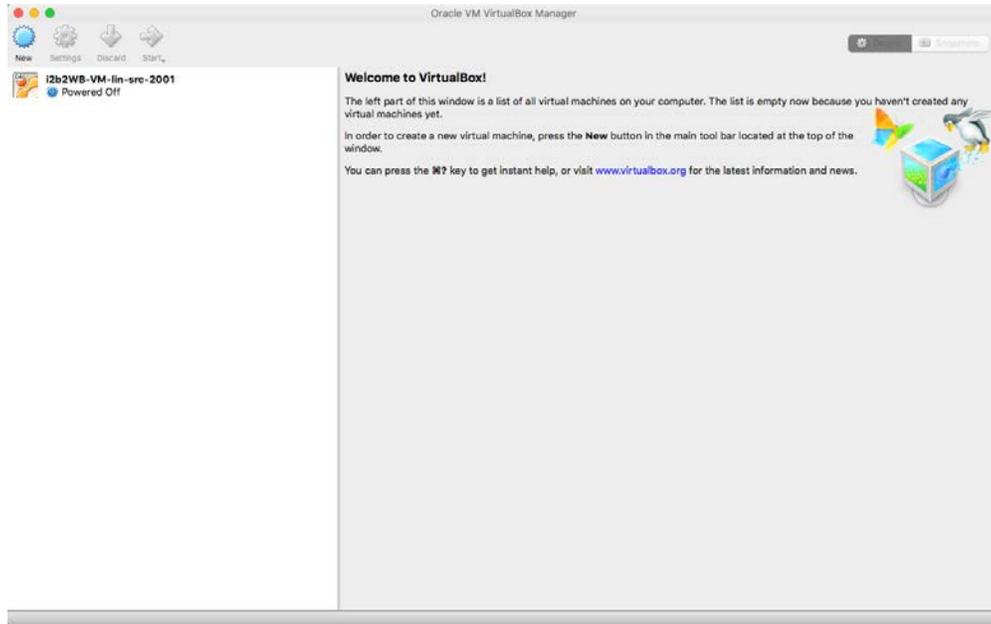


- Click on **Continue**

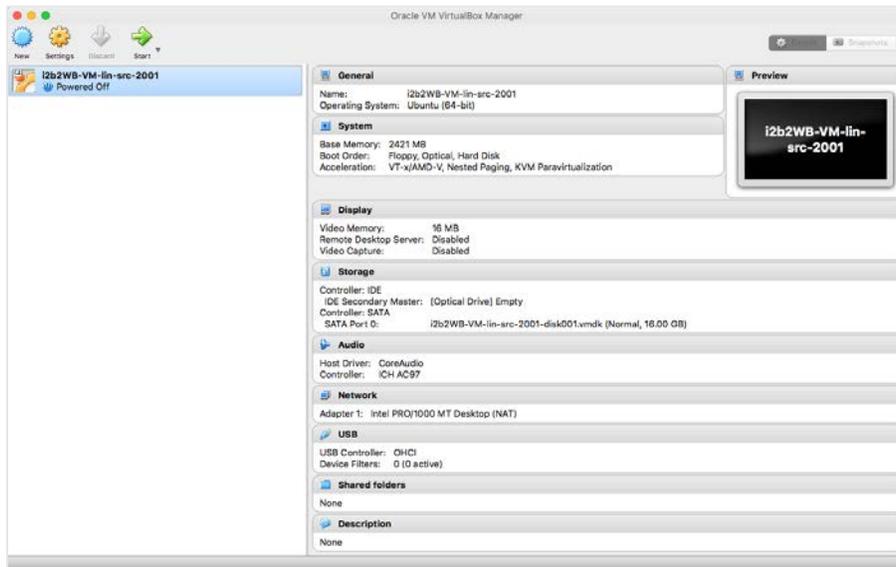
- Appliance settings window** will open listing the settings for this VM image.



11. Click on **Import**
12. **Progress bar** will show the status of the import
13. The VM will display in the left panel once the import has finished.



14. Click on the **name of the VM** you just imported.
15. The **settings** for that VM will display on the right side.

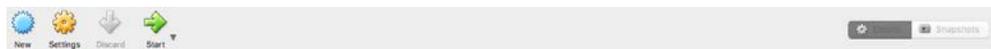


Note

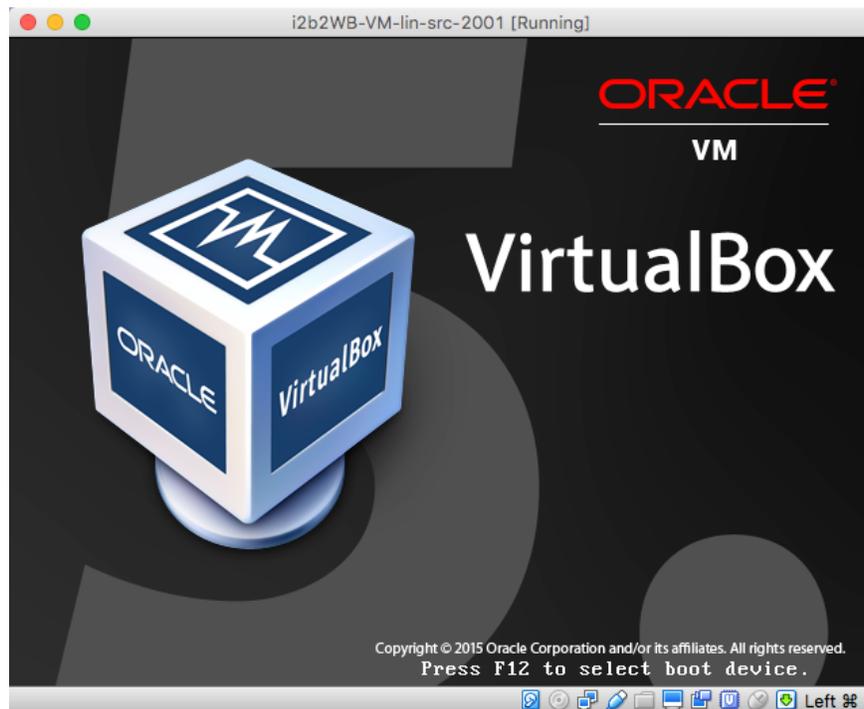
If you are going to be using both VMs you can import the other one now before moving on to the next section or you can do it later.

Running the VM

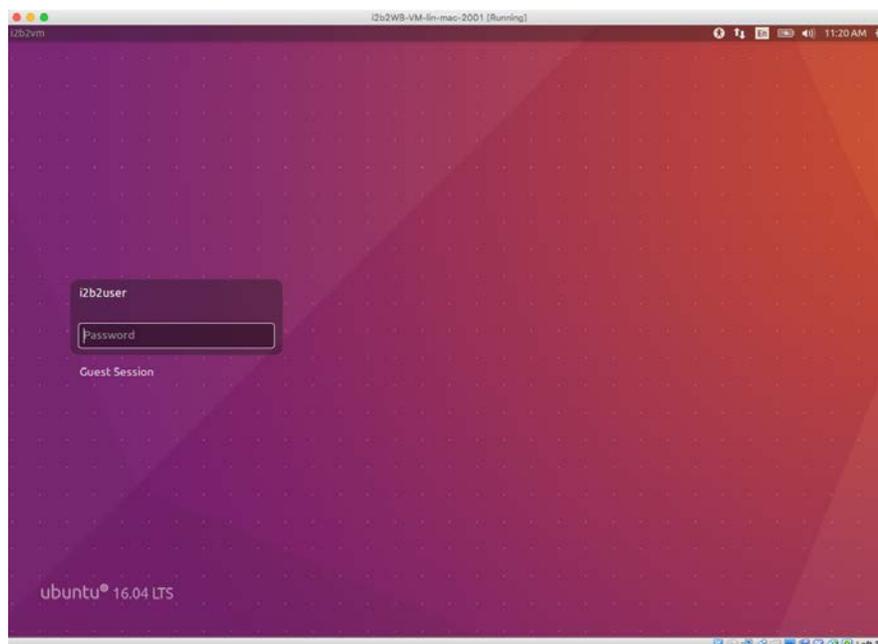
1. Click on the **name of the VM** you imported in the previous section.
2. Click on the **Start** icon that appears in the toolbar located at the top of the VirtualBox desktop.



3. VirtualBox will begin the process of starting up the VM



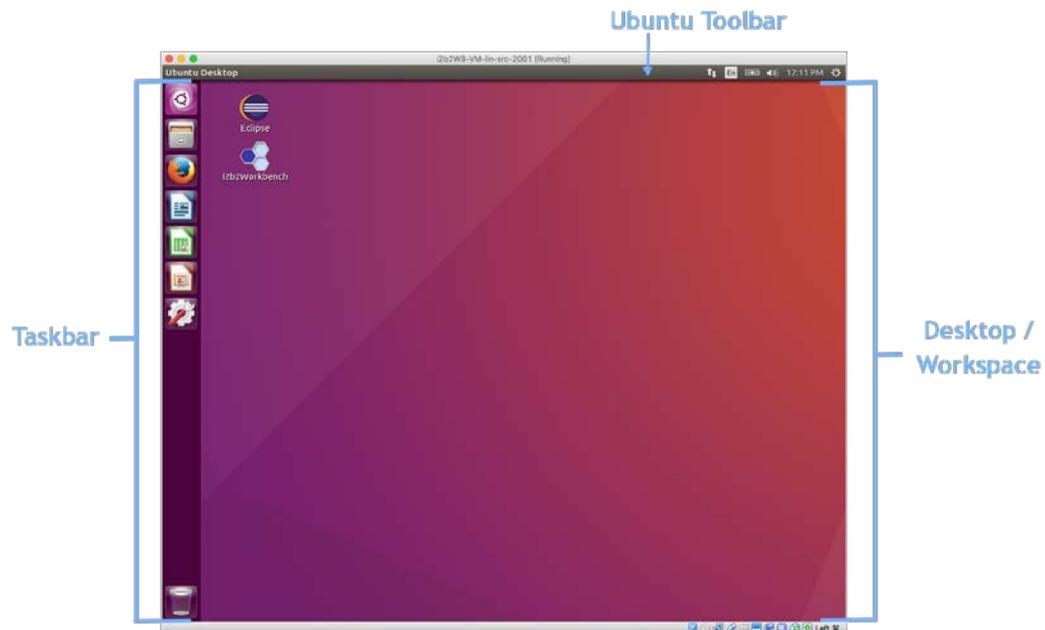
4. The i2b2vm **Ubuntu login** screen will display.



5. The user will default to **i2b2user**; Enter **demouser** as the password

6. Press the **Enter key** and you will be logged into the Ubuntu desktop.

Layout of the Ubuntu Desktop



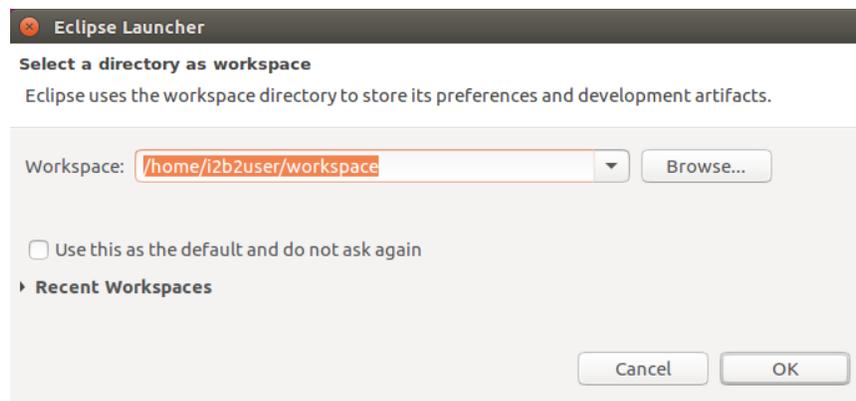
Access i2b2 Workbench Source Code

The source code for the i2b2 Workbench has been imported into Eclipse Neon and included in the i2b2WB-VM-lin-src-2001.zip file. The following steps outline how to log into Eclipse and access the i2b2 Workbench plugins.

1. Double click on the **Eclipse Application** located on the Ubuntu desktop.



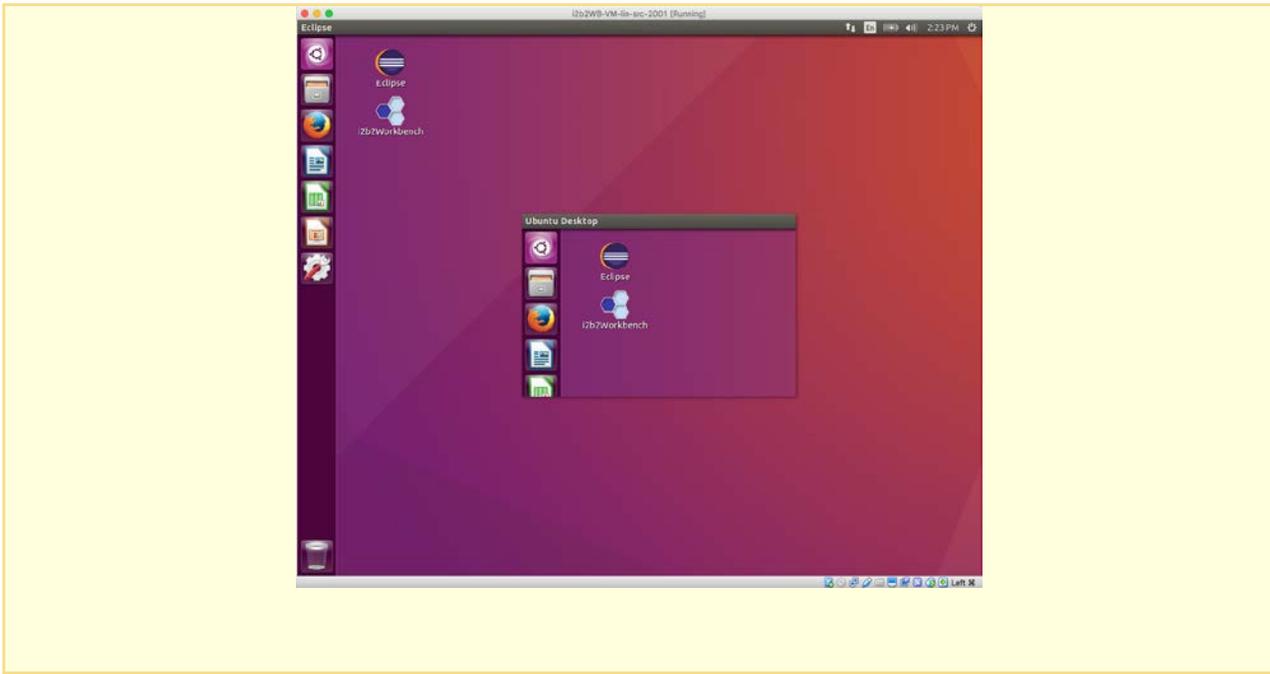
2. The **Eclipse Launcher window** will open with the path to the workspace that contains the i2b2 plugins.



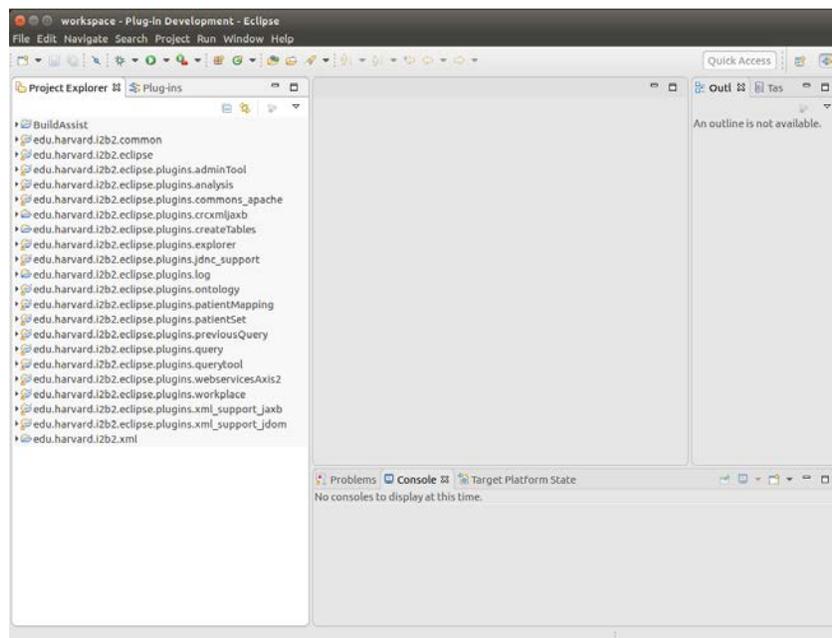
3. Click on **OK** to launch Eclipse

 **Important**

For a moment, you may see a window displaying an identical desktop will open. This is not an error. A script is running to allow the i2b2user to access the i2b2 source code.



4. The **Eclipse PDE workspace** will open with all the i2b2 Workbench plugins listed in the Project Explorer panel.



The **i2b2 Workbench Developers Guide** contains additional information on **how to build, configure** and **run** the i2b2 Workbench *from within Eclipse*.

Configure the i2b2 Workbench Application

Define the Hive Location

As part of the i2b2 Workbench application there is a file called **i2b2workbench.properties**. As part of the logon process, the i2b2 Workbench looks to this property file to find out where the **i2b2 hive** for the **target domain** is located.

The i2b2workbench.properties file delivered with the i2b2 software defaults to the public i2b2demo domain. Before you make any changes, you can verify the workbench is installed correctly by using the following credentials to log into the i2b2demo site.

i2b2demo Login Credential	
USER ID:	demo
PASSWORD:	demouser

For the i2b2 Workbench to work with your domain's hive you will need to update the properties file with your site information.

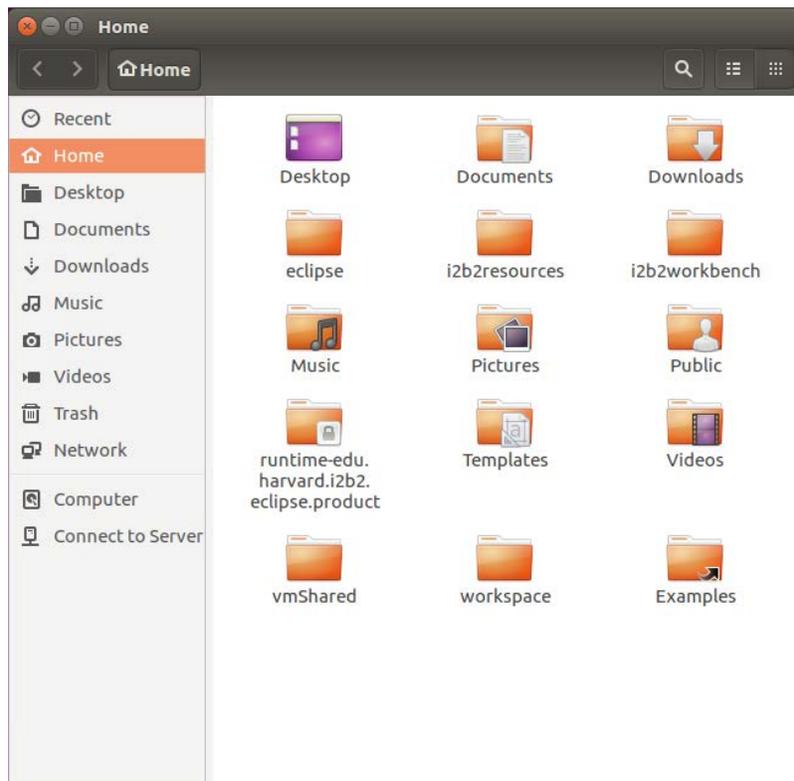
Access Properties file on VM (Mac)

The following steps outline how to access the i2b2Workbench.properties file for the mac version of the i2b2 Workbench on the VMs

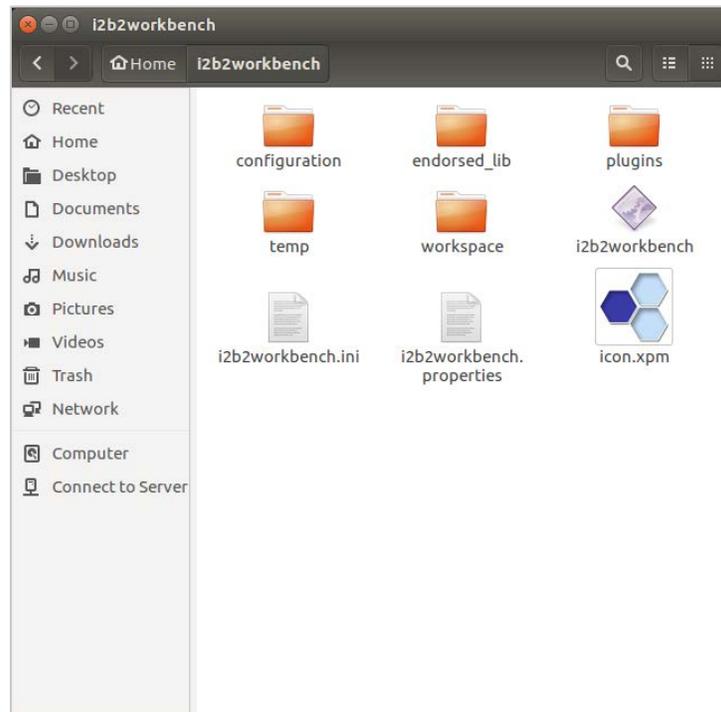
1. Click on the **filing cabinet** located in the **Ubuntu taskbar**.



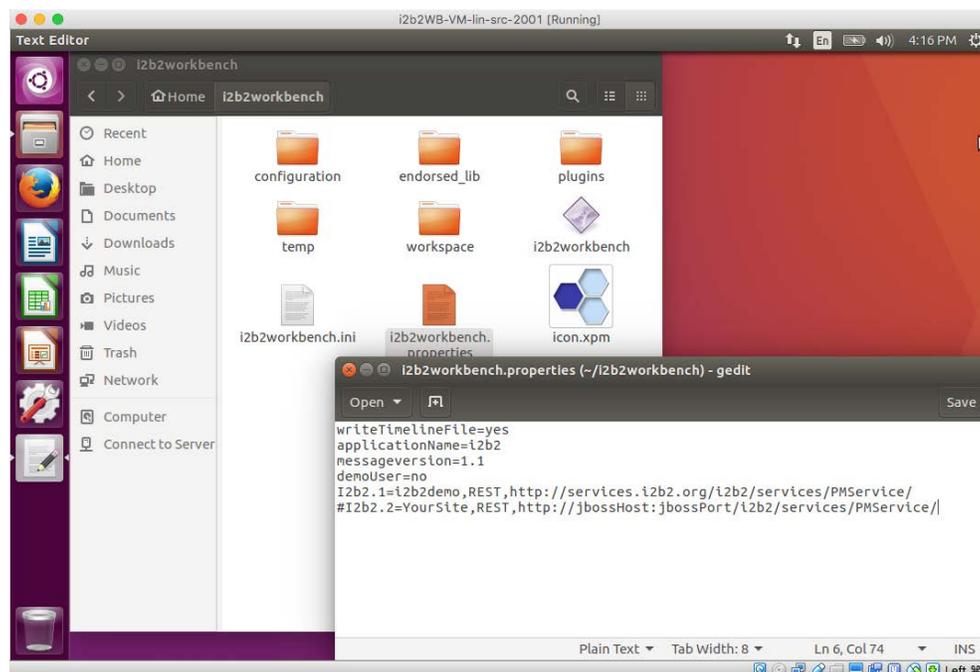
2. A window showing your **home directory** will open.



3. Open the **i2b2workbench folder** by double clicking on it.



4. Double click on the **i2b2Workbench.properties** file.
5. The i2b2Workbench.properties file will open.



Editing the i2b2workbench.properties file

The last two lines of the i2b2workbench.properties file contain information about the location of the i2b2 hive.

- The second to last line is the information for i2b2Demo
- The last line is an example that can be edited with your information



6. Edit the following information:

- a. Remove the pound sign (#) at the beginning of the line as this denotes a comment. If it is not removed the i2b2 Workbench will ignore the string and you will not be able to log onto that domain.
- b. Update **YourSite** with the name of **your** domain. Keep in mind this is case sensitive.
- c. Update **jbossHost:jbossPort** with the name of **your** jboss host and its port.

Tip

If you do not want to see i2b2demo as an option when logging into the i2b2 Workbench you can either remove it or comment it out by placing a pound sign (#) in front of the string.

7. If you have more than one environment you can include all of them in this on properties file by doing the following:

- a. Copy the string you just edited to a new line.
- b. Update the domain and jboss information with the correct information for the additional hive.

- c. Make sure you advance the number at the beginning of the string ("I2b2")

Example:

I2b2.1=i2b2demo,REST,http://services.i2b2.org/i2b2/services/PMService/

I2b2.2=**TestDomain**,REST,http://**mytestJboss.org:jbossPort**/i2b2/services/PMService/

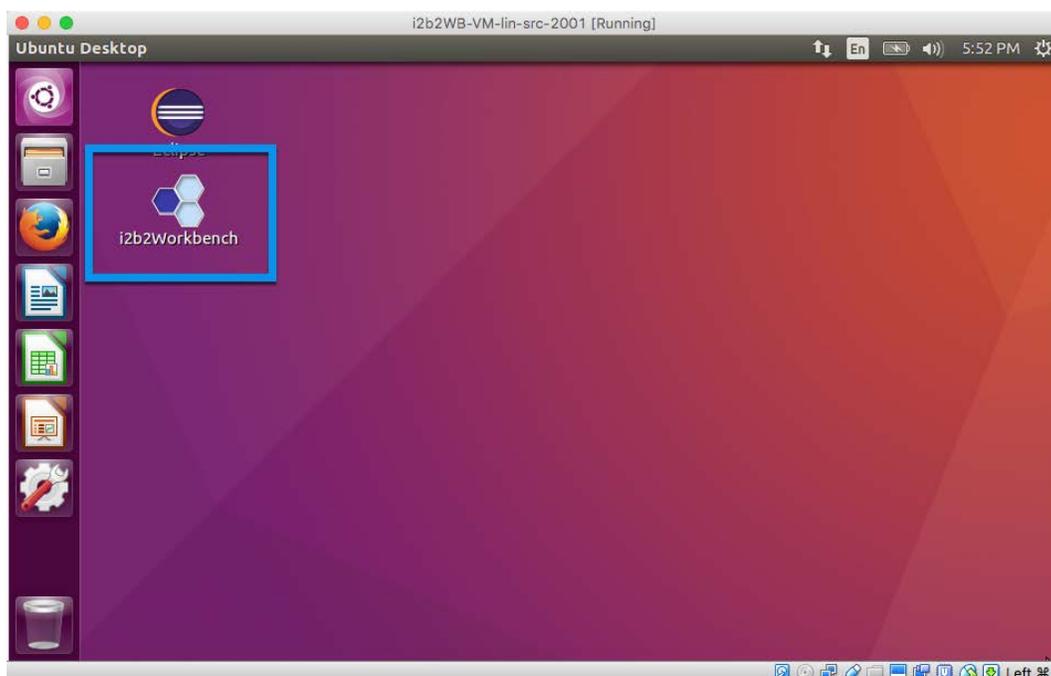
I2b2.3=**ProdDomain**,REST,http://**mytestJboss.org:jbossPort**/i2b2/services/PMService/

8. Click on the **Save** button () to keep the changes made to the file.

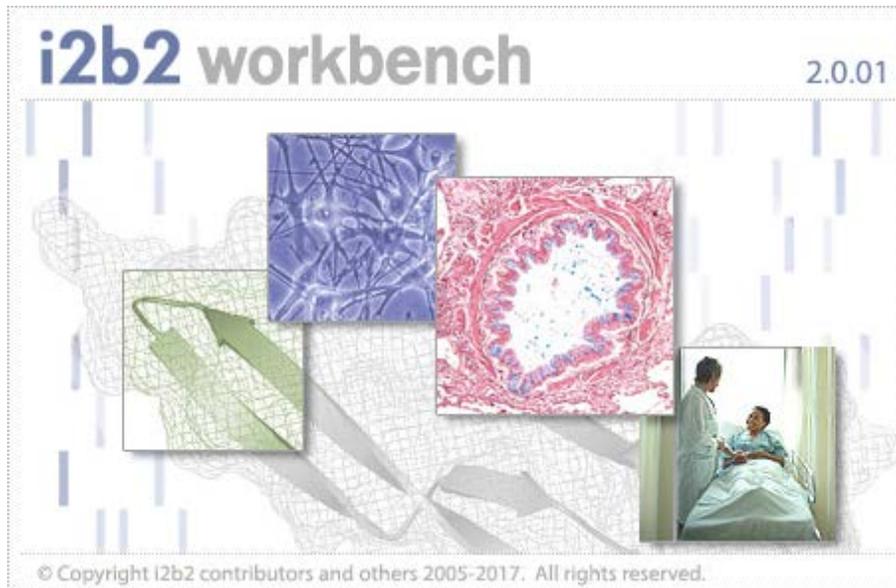
Logging into the i2b2 Workbench

After configuring the i2b2 Workbench to work within your i2b2 hive, the next step is to log onto the i2b2 Workbench and begin using it.

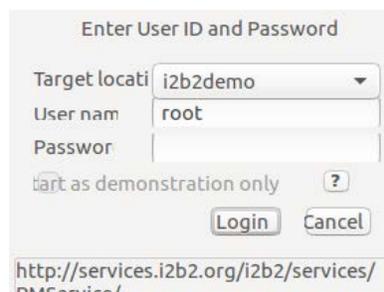
1. Go to the **Ubuntu desktop** and double click on the **i2b2Workbench Application**.



2. The **i2b2 Workbench splash screen** will display.



3. The **i2b2 Login dialog** window will open.

The image shows a "Login" dialog box titled "Enter User ID and Password". It contains a "Target location" dropdown menu set to "i2b2demo", a "User name" text box with "root", and a "Password" text box. Below these is a checkbox labeled "Start as demonstration only" with a question mark icon. At the bottom are "Login" and "Cancel" buttons. A URL "http://services.i2b2.org/i2b2/services/" is visible at the very bottom of the dialog.

4. Select your **Target** location.

 **Tip**

The URL at the bottom of the Login window should be the address of your PM cell. If it isn't then you need to update the `i2b2Workbench.properties` file to point to the correct location. The section titled Define Hive Location explains how to edit this file.

5. Enter your **user credentials** for the **domain** you are logging into.

For the **Target location** of **i2b2demo** the user login information is

i2b2demo Login Credential	
USER ID:	demo
PASSWORD:	demouser

6. Click the **Login** button.
7. The desktop of the i2b2 Workbench will open.

12b2 Workbench File Window Help 12b2 Workbench for 12b2 Demo 12b2 User Password Status: 12b2

● Navigate Terms ● Find Terms ● Edit Terms ● Query Tool ● Temporal Query Tool ● Workplace ● Find in Workplace ● Help

1000 Genomes Demographics

- Clinical Trials
- Custom Metadata
- Demographics
- Diagnoses
- Diagnoses (ICD10)
- Expression Profiles Data
- Laboratory Tests
- Medications
- Procedures
- Proteins
- Providers
- Reports
- Sequence Ontology Variants
- Visit Details

Query Name

Group 1			Group 2			Group 3		
Da	Occurs > Da	Excl.	Da	Occurs > Da	Excl.	Da	Occurs > Da	Excl.
Drag terms from Navigate, Find and Workplace into this group.								

Get Everyone Run Query Above Patient(s) returned

Analysis Types

- patient set
- encounter set
- Number of patients
- Gender patient break
- Vital status patient br
- Race patient breakdo
- Age patient breakdow
- Timeline

Query Timing

- Treat all groups indaga
- Selected groups occur
- Terms outside will be

● Previous Queries ● Patient Sets ● Timeline View ● Analysis View

Search By Name

Containing

Find Any Category

- Expre-Diagn-Medic@12:56:43 [09-13-2017] [demo]
- Expre-Diagn-Medic@12:56:19 [09-13-2017] [demo]
- Expre-Diagn-Medic@13:55:48 [09-13-2017] [demo]
- Expre-Diagn-Medic@13:55:30 [09-13-2017] [demo]
- Digestive system@12:33:47 [09-13-2017] [demo]
- Low income@12:46:16 [09-13-2017] [demo]
- High income@12:38:12 [09-13-2017] [demo]
- Admt-Diagnosis@10:13:58 [09-13-2017] [demo]
- Admt-D-Admt-D@10:10:23 [09-13-2017] [demo]
- Admt-Diagnosis@10:08:49 [09-13-2017] [demo]
- Admt-Diagnosis@10:06:23 [09-13-2017] [demo]
- Admt-D-Tumor@10:05:27 [09-13-2017] [demo]
- Admt-Admt-Admt@10:03:34 [09-13-2017] [demo]
- Diagnostic-and@10:02:43 [09-13-2017] [demo]
- Admt-D-Admt-D@10:01:51 [09-13-2017] [demo]

Begin: [09-13-2017 7:55:59]

Create model for Timeline Render a Timeline

Query Name:

Panel Name:

Ro...	Name of Terms	Date Constr.	Value Constr.	Modifier Const.	Shape	Co...
<input type="button"/> Delete From List <input type="button"/> Delete All <input type="button"/> Put in Order <input type="button"/> Move Up <input type="button"/> Move Down						

Display concepts with no data Display patient demographics Filter: none

Patient 5 star 1 increme 10 efresh