# 260. i2b2 Wizard quick start

This section describes how to get started with i2b2 Wizard. Please make sure you have followed the previous sections closely.

## Installing OpenSSH

Note: This is only applicable for Ubuntu Linux. It's similar for other distributions.

Start your new Ubuntu Linux and log in.

Open a terminal. Click on the top icon on the left and search for **Terminal**. In the terminal, type in the following commands:

**sudo -s**   (and provide your password)

**passwd root**   (assign a password for user 'root')

**apt-get update**
**apt-get upgrade**
**apt-get install openssh-server**

These update the Linux system and install the OpenSSH server, which allows you to copy the i2b2 Wizard installation files to the machine and to work remotely.

You can check if SSH is running:

**netstat -tulpen**

should print a list with an entry like

```
tcp        0        0.0.0.0:22       0.0.0.0:*       LISTEN       0       11111       911/sshd
```

You may need to enable root ssh access as described here: http://askubuntu.com/questions/469143/how-to-enable-ssh-root-access-on-ubuntu-14-04

Then reboot the virtual machine by typing:

**reboot**

## Copying the i2b2 Wizard files to the VM

First, rename the i2b2 Wizard directory so that it does not contain spaces, e.g. to "i2b2wizard".

Then copy the directory with SFTP to the Linux machine into the **/root** directory. On Windows, you can use WinSCP (http://winscp.net), on a Mac the program Cyberduck (http://www.cyberduck.ch) or the excellent MacFusion (http://www.macfusionapp.org).

To connect to your virtual machine, use the "Host-Only-Adapter". The "Host-Only-Adapter" is the interface with the 192.168.56.XXX-IP. You can use the command **ifconfig** to find out the IP.

If the connection does not work, you may need to edit /etc/network/interfaces to look like:

**# interfaces(5) file used by ifup(8) and ifdown(8)**
**auto lo**
**iface lo inet loopback**

**auto eth0**
**iface eth0 inet dhcp**

**auto eth1**
**iface eth1 inet static**
**address 192.168.56.101**
**netmask 255.255.255.0**

From now on, it is highly recommended to not continue working in the VirtualBox window (because it's slow). Better connect remotely to the VM via SSH, e.g. with putty on Windows systems. Don't forget to copy the i2b2 source file to ./packages as explained in 220. Preparing the installation.

## Preparing the i2b2 Wizard

The first time you want to start the i2b2 Wizard, you might need to perform some preparations. Execute the following commands inside the i2b2 Wizard directory:

```
sudo -s
apt-get -y install dos2unix
chmod +x wizard.sh
find . -name "*.sh" -type f -exec dos2unix {} \;
```

Now it is highly recommended to create a "snapshot" of your VirtualBox virtual machine before running the i2b2 Wizard. If something goes wrong, you can easily revert to a "clean" machine.

## Launching i2b2 Wizard
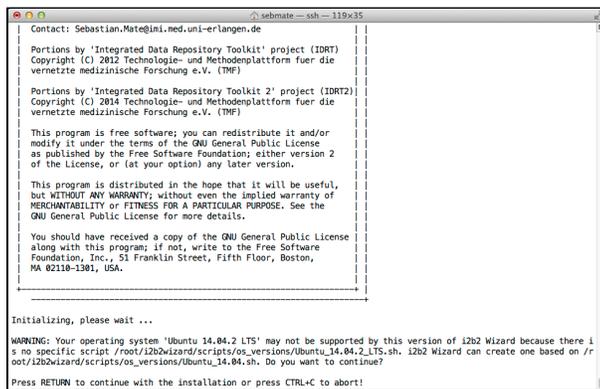
Launch the i2b2 Wizard by executing

**sudo -s**
**./wizard.sh**

Note: executing **sudo ./wizard.sh** will not work!

If everything is OK, you will be greeted by i2b2 Wizard after a few seconds (it will probably install the required tool "dialog" first) and asked to select your configuration (see below).

## Setting the configuration (i2b2 Version, database type)

You may encounter the following message:



Just hit RETURN. For the next questions, just hit RETURN as well. Or if you want to install a different database or i2b2 version, type in the corresponding values (note: it's case-sensitive). But for now, it is highly recommended to stick to the defaults.
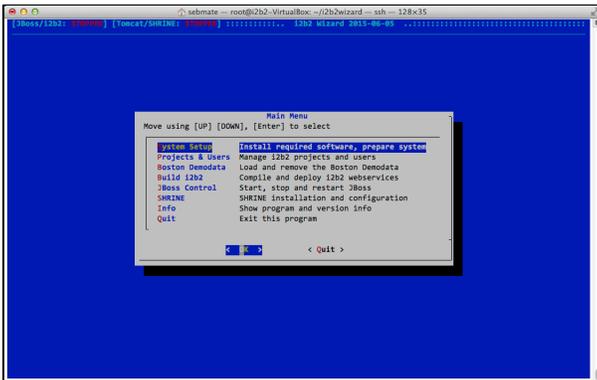


After a disclaimer screen, you will be presented with the default parameters screen:
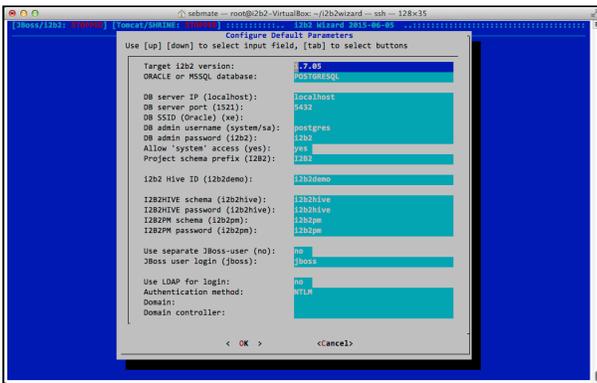
Again, just hit ENTER - and welcome to the main menu!



# Preparing the i2b2 hive (= server)

To download and to install the required server software, select **System Setup => Install Required Packages**. This will take a considerable amount of time depending on your internet connection speed. Please note that if you have selected to use a Oracle database and i2b2 Wizard has not been reconfigured to connect to Oracle database outside "localhost", i2b2 Wizard will attempt to install Oracle XE. In this case, the Oracle software license is accepted automatically by i2b2 Wizard.

A window may pop up and ask you which network interface is used to communicate with the i2b2 Workbenches:
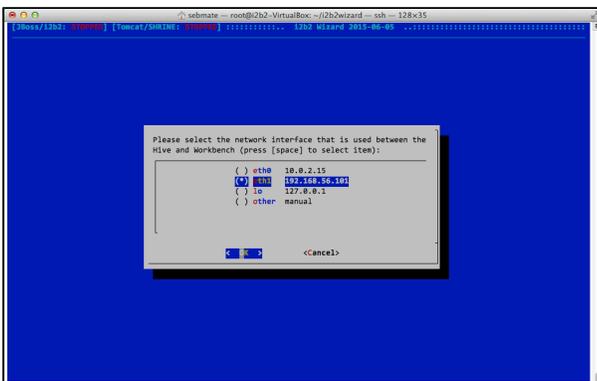


Select the interface with the 192.168.56.***-IP by pressing the space bar. This is the "Host-Only-Adapter" if you are using VirtualBox.

After all software components have been installed, go to the Menu **(Main Menu =>) System Setup => Hive Tasks** and select **Load I2B2PM and I2B2HIVE**.

# Creating an i2b2 project and user

To create an i2b2 project, go to **Projects & Users** and select **Create i2b2 Project**. Enter your desired parameters as shown in the following screenshot:
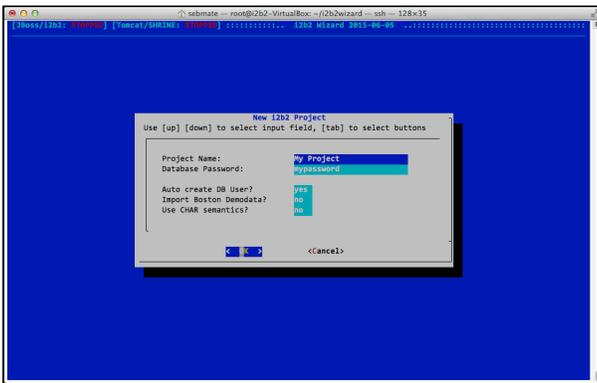
Now you need to create an i2b2 user. From the main menu, select **Projects & Users => Create i2b2 User**. Enter your desired parameters as shown in the following screenshot:
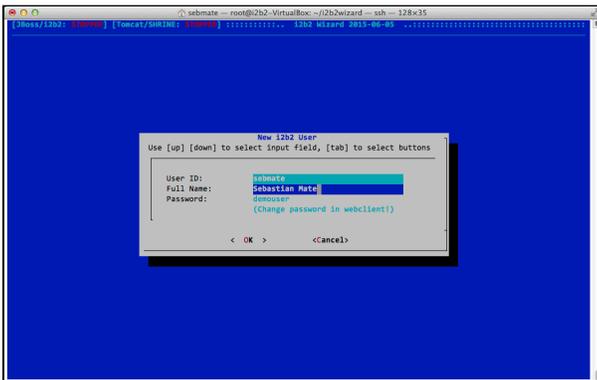


This creates an i2b2 user. Please note that the default password is "demouser". Due to an i2b2 bug (or difference) in the MD5 password calculation algorithm in i2b2, the password cannot be changed here. It can later be changed in the admin console (http://localhost/admin). It is also recommended to use LDAP authentication, which circumvents this problem.

The next step is to assign the user to the project.  From the main menu, select **Projects & Users => Assign User** as shown in this screenshot:
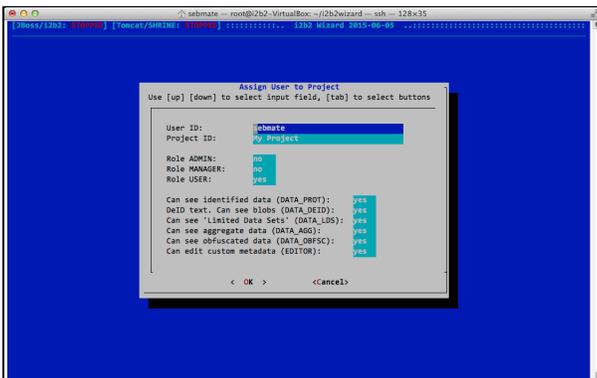


For all the roles and permissions please refer to the official i2b2 documentation (https://www.i2b2.org/software/, click on "i2b2 Source" and download the file i2b2core-doc-XXXX.zip).

## Starting the i2b2 server

Launch JBoss by selecting **JBoss Control => Start JBoss** from the main menu. This automatically deploys the i2b2 source code and configuration.

If you want to start JBoss automatically upon system startup, you could have a look at https://developer.jboss.org/wiki/StartJBossOnBootWithLinux. Please note that providing detailed instructions is out of the scope of this document and the procedure is different for various operating systems.

## Logging into i2b2

You can now log into your new project. To access it via the i2b2 Web Client, open http://localhost/Web Client in your browser (replace "localhost" with the IP if you want to access it from a different machine).
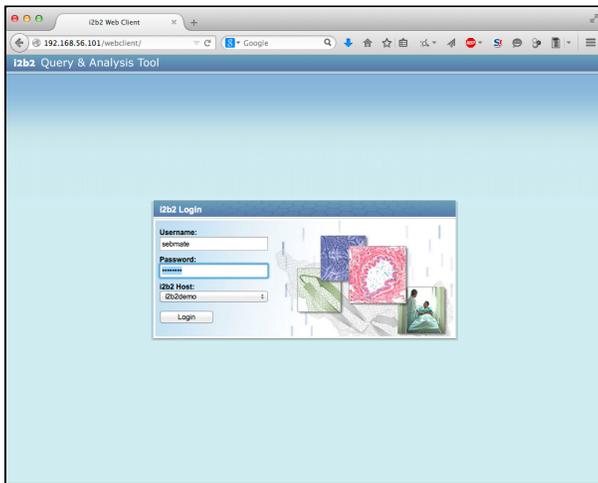
Note that this project contains no data (including no i2b2 ontology) and therefore throws errors if you want to use it. To upload data, you can use the IDRT tools.

## Loading the Boston Demodata

If you want to load the Boston Demodata as well, select **Boston Demodata => Load Boston Demodata** from the main menu. This creates the project as well as the two i2b2 users "i2b2" and "demo". Their passwords are "demouser".

Please note that loading the Demodata will take very long - about 30 minutes. It is OK if error messages appear after the import (because there are/were errors in the Demodata SQL files).