



I2b2 Desktop Install: Full VM Server Windows Installation Guide

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DOCUMENT MANAGEMENT

Revision Number	Date	Author	Description of change
1.6.1	07/22/10	Janice Donahoe	Created 1.6 version of document.
1.7.1	02/20/2019	Michael Mendis	Upgraded to VMWare Player

1 ABOUT THIS GUIDE

Informatics for Integrating Biology and the Bedside (i2b2) is one of the sponsored initiatives of the NIH Roadmap National Centers for Biomedical Computing (<http://www.bisti.nih.gov/ncbc/>).

One of the goals of i2b2 is to provide clinical investigators broadly with the software tools necessary to collect and manage project-related clinical research data in the genomics age as a cohesive entity; a software suite to construct and manage the modern clinical research chart.

2 PREREQUISITES

2.1 Introduction

As with many client-server application installations, assuring a correct base system configuration is often the most challenging aspect of the installation. That is, one needs to be sure the OS, referenced libraries, and associated applications are all installed correctly before you can validate the newly installed i2b2 Hive and client are working correctly. A system may appear to be functioning even though some prerequisites are missing; problems may only become apparent later when certain features do not work, or work erratically. Besides issues with prerequisites, other inconsistencies that may cause system issues are:

- Similar software components running on the machine competing for the same system resources as i2b2 components: For example, the Hive Server runs within the Wildfly application server. Application servers communicate externally via ports dedicated to that server. While no standard exist as to which ports are used, one often sees the application server listening on Port 8080 or Port 8888. The issue is that a great percentage of servers have an application server running on them, most often Apache Tomcat or Wildfly, often both. When installing Wildfly onto a system that already has Tomcat running on it, one may find that the desired port already used by Tomcat. For this reason, installing on a dedicated system eliminates any of these types of issues, unless one is very familiar with all of the other applications running on the i2b2 server.
- Installing versions of prerequisites other than the recommended versions. Usually, versions of prerequisite software that are higher (more recent) than the recommended version result in no issues, as developers of such applications usually endeavor through convention to be completely backwards compatible, so that those with environments that have other applications depending upon their package (read: almost every environment) will work smoothly after upgrading. This should always be the case for minor revision upgrades. A minor revision is usually indicated by a version number which uses the same integer prefix, but the portion after the decimal point is higher (e.g, 5.3 is a minor upgrade from 5.2). Whenever possible, one might wish to use the highest minor revision available. If one wishes to use a higher major release, it should be tested after the i2b2 environment is set up and known to be working correctly, and one should be ready to "roll-back" to the last working version if problems are encountered. It is highly discouraged to use any versions lower than those recommended for any prerequisite referenced in these installation guides.
- Intermittent issues observed when other applications are running on the server. This may be different from an application that is always running, such as Apache Tomcat (see the item above on Application Servers). Specifically, this means that issues may only be encountered when other seemingly unrelated applications are running concurrently with the i2b2 server, but not present when these applications are not running. Again, a dedicated system, at least initially, can help ameliorate these potential issues.

Whenever practical, one can assure a configuration without conflicts by dedicating a piece of hardware as the i2b2 Server, and using it exclusively for that purpose.

3 INSTALL

3.1 Installing the VMware Player

1. Download VMware Player from <https://www.vmware.com/products/workstation-player.html>
2. Install VMware player into a directory of your choice.

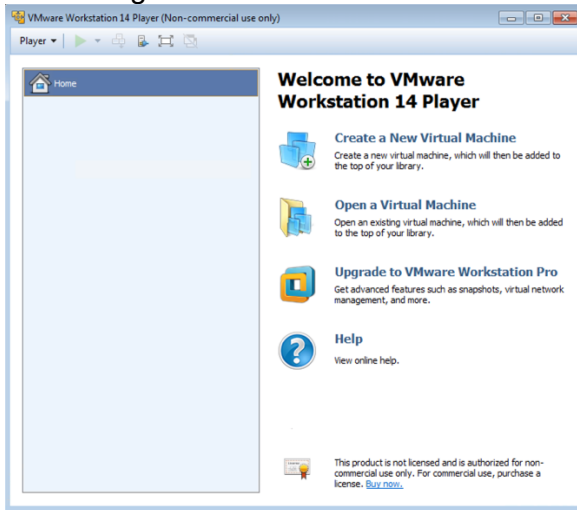
3.2 Installing the i2b2 VMware image application

1. Once on the main release candidate page, click on "login" and enter your email address and password.
2. Click on either the link that says "Download Page" or the "Download" located on the left hand navigation menu.
3. Scroll to the bottom of the download page where you will see a table listing all the files that can be downloaded.
4. Once you have located the file that has the description of i2b2 Virtual Image, click on the download link next to it.
5. Extract all the files from the downloaded zip file into C:\Virtual Machines\.
6. A folder called i2b2_server will be created automatically when the files are extracted from the zip file to the Virtual Machine directory.

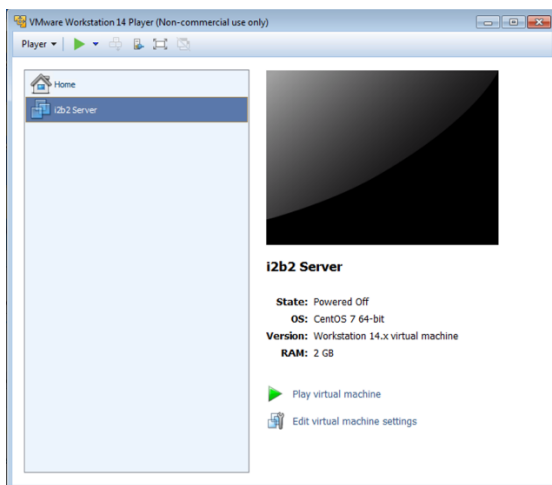
4 EXECUTE

4.1 Running the VMware Server Console

1. Click on the start menu.
2. Go to Programs -> VMware -> VMware Workstation Player



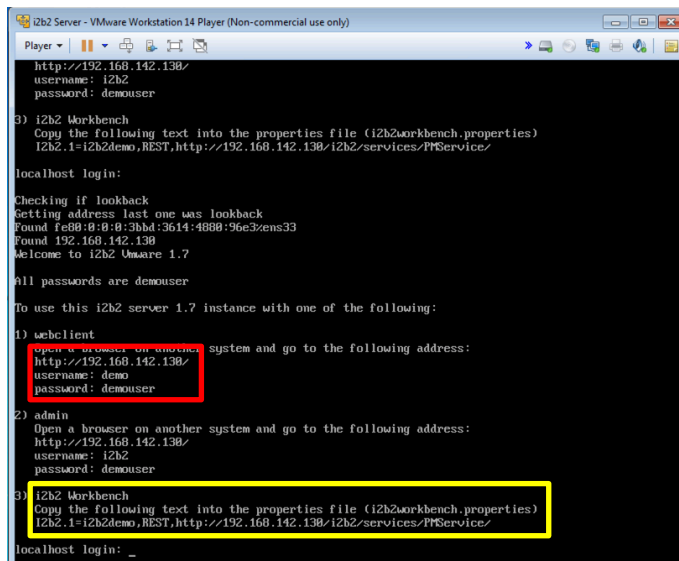
3. Click on the Open Virtual Machine icon.
4. The open Wizard Machine dialog screen appears, click the open button:
5. I2b2 Server will be added to the list and select it and click Play Virtual Machine.



5 CONFIGURE

5.1 Determine the IP Address

1. Once you start the Virtual Machine the following will appear in the terminal window.



```
i2b2 Server - VMware Workstation 14 Player (Non-commercial use only)
Player
http://192.168.142.130/
username: i2b2
password: demouser

3) i2b2 Workbench
Copy the following text into the properties file (i2b2workbench.properties)
i2b2.1=i2b2demo.REST,http://192.168.142.130/i2b2/services/PMService/

localhost login:

Checking if lookback
Getting address last one was lookback
Found fe80:0:0:3b6d:3614:4880:96e3:2ens33
Found 192.168.142.130
Welcome to i2b2 VMware 1.7

All passwords are demouser

To use this i2b2 server 1.7 instance with one of the following:

1) webclient
Open a browser on another system and go to the following address:
http://192.168.142.130/
username: demo
password: demouser

2) admin
Open a browser on another system and go to the following address:
http://192.168.142.130/
username: i2b2
password: demouser

3) i2b2 Workbench
Copy the following text into the properties file (i2b2workbench.properties)
i2b2.1=i2b2demo.REST,http://192.168.142.130/i2b2/services/PMService/

localhost login: _
```

Note

Make note of the “address” and/or “text” as it will be later in the setup

5.2 Configure the client

1. Install the i2b2 workbench (client based). The i2b2 Workbench Users Guide can be used as a reference for the installation process.

The web based client can be accessed by going to: <http://192.168.142.130/> where 192.168.142.130 is the IP address received earlier.

2. In your target’s i2b2workbench directory, edit the file i2b2workbench.properties in the line that begins with i2b2.1, change the following:

- HarvardDemo to i2b2demo
- services.i2b2.org to the IP above
- PM to i2b2.

For example:

I2b2.1=i2b2demo,REST,http://192.168.142.130/i2b2/services/PMService/

3. Launch C:\i2b2workbench\client\Windows\i2b2workbench.exe

6 LICENSE

The i2b2 source code is licensed under the Mozilla Public License 2.0. This includes but is not limited to all code in the edu.harvard.i2b2.* package namespace.