

openCRX Server Installation

Version 2.10.0



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1 About this Book

This book describes how to **install an openCRX Server** with the IzPack cross-platform installer (works on Windows, Linux, Mac OS, etc.). Please note that this is a guide to set up a **runtime environment** suitable for evaluation and testing purposes. If you intend to use openCRX in a production environment it is recommended that you migrate (see Wiki) to one of the recommended database management systems.

openCRX is the leading enterprise-class open source CRM suite. openCRX is based on openMDX, an open source MDA framework based on the OMG's model driven architecture (MDA) standards. This guarantees total openness, compliance with all relevant standards, a state-of-the-art component-based architecture, and virtually unlimited scalability.

1.1 Who this book is for

The intended audience are openCRX administrators and advanced users interested in evaluating openCRX.

1.2 What you need to know with this book

This book describes how to install openCRX with the IzPack installer, which takes care of all the tricky configuration issues for you. The prerequisites are minimal (JDK and Apache Ant) and once they are met you should have openCRX up and running in less than 5 minutes.

1.3 Tips, Warnings, etc.

We make use the following pictograms:



Tip

Information provided as a "Tip" might be helpful for various reasons: time savings, risk reduction, etc. - it goes without saying that we advise you to follow our guides meticulously.

meticulous \muh-TIK-yuh-luhs\, *adjective*:
Extremely or excessively careful about details.



Important

You should carefully read information marked with "Important". Ignoring such information is typically not a good idea.



Warning

Warnings should not be ignored (risk of data loss, etc.).

2 Prerequisites

2.1 JDK 6.0

Install **OpenJDK JDK 6** (<http://openjdk.java.net/>) or **Sun Java JDK 6.0** (<http://www.oracle.com/technetwork/java/javasebusiness/downloads/java-archive-downloads-javase6-419409.html#jdk-6u33-oth-JPR>)



Warning

You really do need **Java 6**, i.e. Java 4, Java 5 or Java 7 will not work. On the Mac you should probably use the JDK provided by Apple.



Important

It is not sufficient to have a Java Runtime Environment (JRE) only. The full-blown **JDK** is required to run openCRX.



Tip

On Windows, it is a good idea to **avoid paths containing blanks** like the default installation directory ...\`Program Files`\....



Tip

Don't forget to set the **environment variable** `JAVA_HOME`. It should point to your JDK installation directory, e.g. to `D:\Java\jdk1.6.0` on Windows or `opt/jdk1.6.0` on Linux.

On the Mac you have to make sure that the default JDK is set properly because there are quite often multiple versions of Java installed. The following script will make it easy to switch between the various versions installed on a Mac (credit to "unknown" who provided this nifty solution):

Create a text file like "`switchJDK.sh`" and make it executable (can be done by executing `chmod +x switchJDK.sh`). The file should have the following content:

```
#!/bin/sh
cd /System/Library/Frameworks/JavaVM.framework/Versions

CURJDK=`readlink CurrentJDK`
echo Current JDK version: $CURJDK

if [ "$1" == "" ]; then
echo Installed versions:
ls
exit
fi

VERFOUND=`ls | grep $1 | head -n 1`

if [ "$VERFOUND" != "$1" ]; then
BASE=`basename $0`
echo Error: Could not change JDK-- version $1 not installed!
echo Run $BASE without arguments to see a list of installed versions.
exit 127
fi

echo You must now enter your Mac OS X password to change the JDK.
sudo ln -fhsv $1 CurrentJDK
```

Now you can switch between your default JDK in seconds. Simply execute the script (e.g. `./switchJDK.sh 1.6.0`). If you run it without parameters it will show you the JDKs installed.

2.2 Ant 1.8.4

Download Ant 1.8.4 (available from <http://ant.apache.org/>) for your platform **and install** it by expanding the downloaded file to a directory of your choice.



Don't forget to set the **environment variable** `ANT_HOME` as follows: **ANT_HOME** should point to the installation directory of Ant, e.g. `D:\apache-ant-1.8.4` on Windows or `/opt/apache-ant-1.8.4` on Linux.

2.3 Unzip

In case there is no unzip command line utility installed on your system (e.g. clean install Ubuntu) you should install such a utility to avoid installer errors of the sort **Cannot run program "unzip"**.

2.4 openCRX Server Installer

Download the openCRX Server Installer `opencrxServer-2.10.0-installer.jre-1.6.jar` from Sourceforge: <http://www.opencrx.org/downloads.htm>

The openCRX Server installer installs Apache TomEE, the openCRX EAR, an openCRX database (HSQLDB) and various configuration files on your system.



Please note that HSQLDB is not exactly a high performance DBMS nor is it meant to be used as a productive DBMS for openCRX. However, it gets lots of points for "ease of installation" and that is what counts for getting off the ground fast.

Once you're comfortable with openCRX you can easily migrate to another DBMS without losing any data. More information about choosing a suitable DBMS and migrating from HSQLDB to another DBMS is available here:

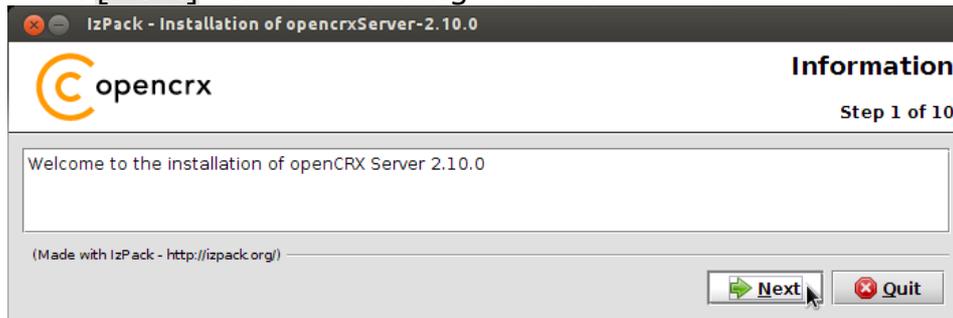
- <http://www.opencrx.org/faq.htm#db>
- <http://www.opencrx.org/faq.htm#changedb>

2.5 Hardware

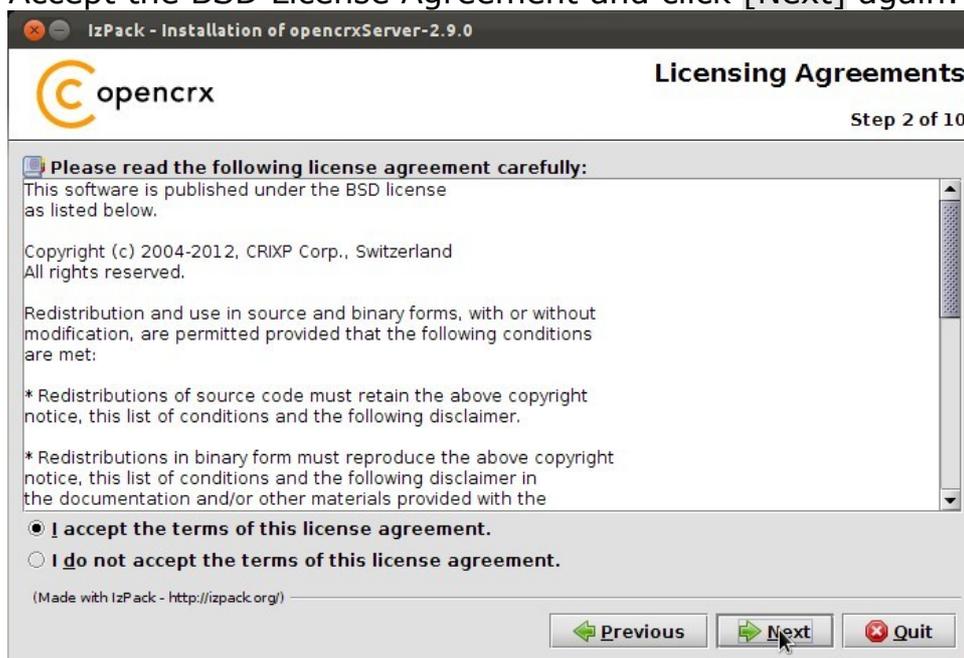
We recommend a decent CPU and at least 2GB RAM. More detailed information about the requirements of openCRX are available from <http://www.opencrx.org/faq.htm#hardware>

3 Installing openCRX Server

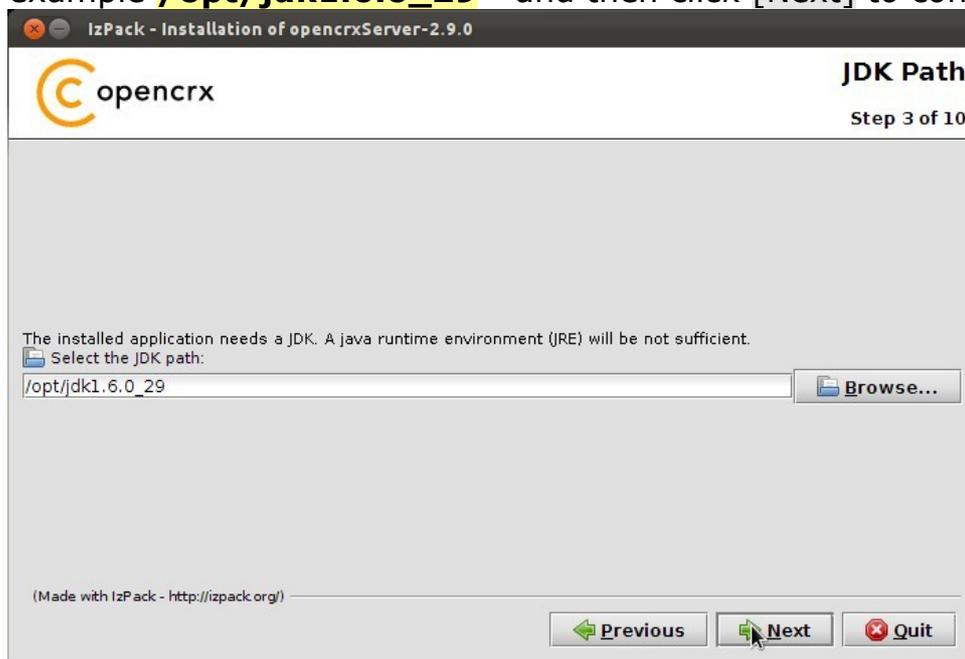
1. Open a console (Terminal window, DOS window, etc.) and navigate to the directory that contains the openCRX IzPack installer.
2. Launch the installer with the following command:
`java -jar opencrxServer-2.10.0-installer.jre-1.6.jar`
(use the option `-console` to launch the installer in text mode)
3. Click **[Next]** on the following screen:



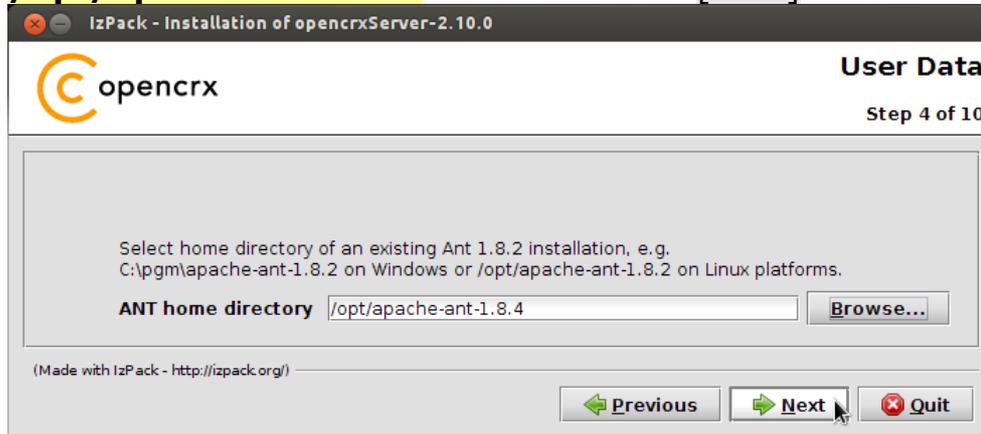
4. Accept the BSD License Agreement and click **[Next]** again:



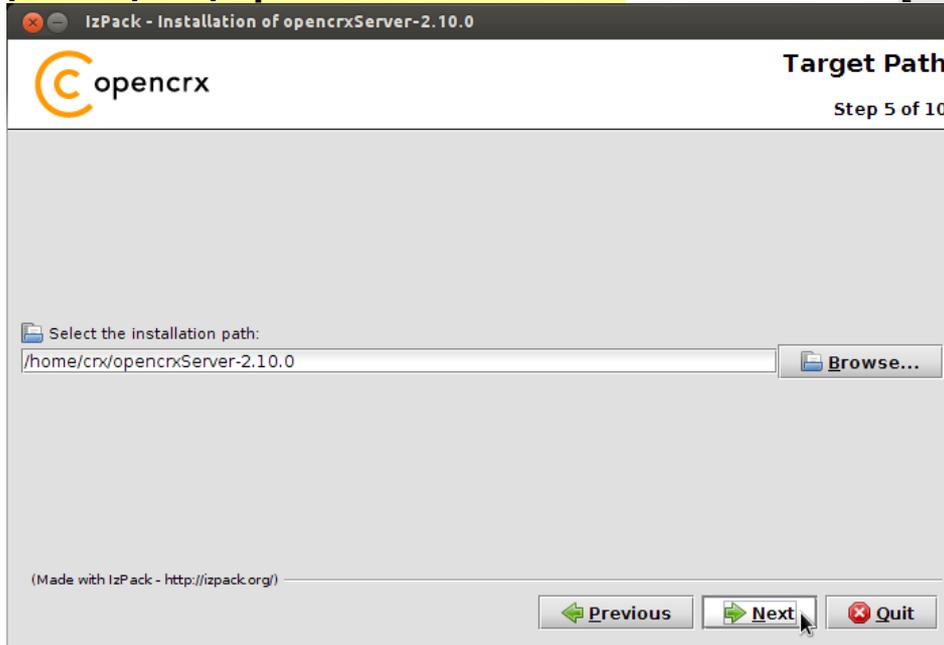
5. Select the home directory of your JDK 1.6 installation (automatically selected if the environment variable "JAVA_HOME" is set correctly) - for example **/opt/jdk1.6.0_29** - and then click [Next] to continue:



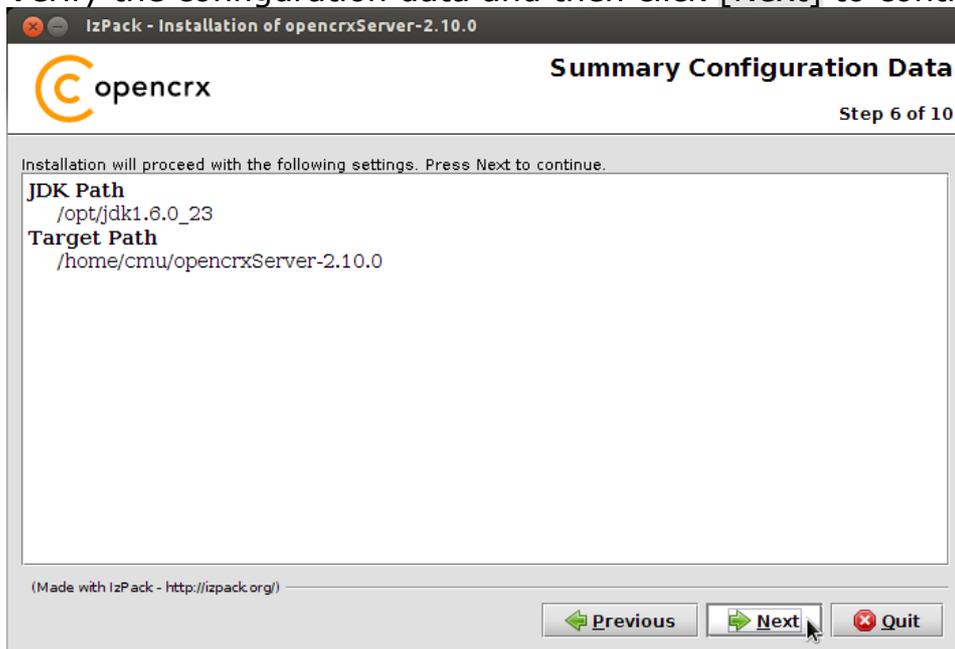
6. Select the home directory of your Ant installation (automatically selected if the environment variable "ANT_HOME" is set correctly) - for example **/opt/apache-ant-1.8.4** - and then click [Next] to continue:



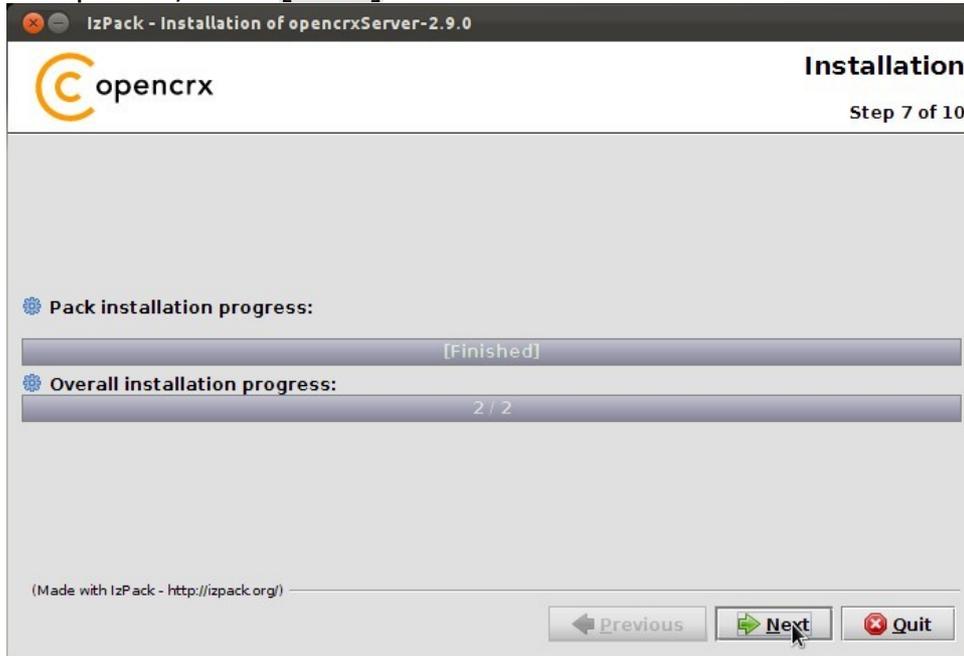
7. Select the installation directory – for example **/home/crx/opencrxServer-2.10.0** - and then click [Next] to continue:



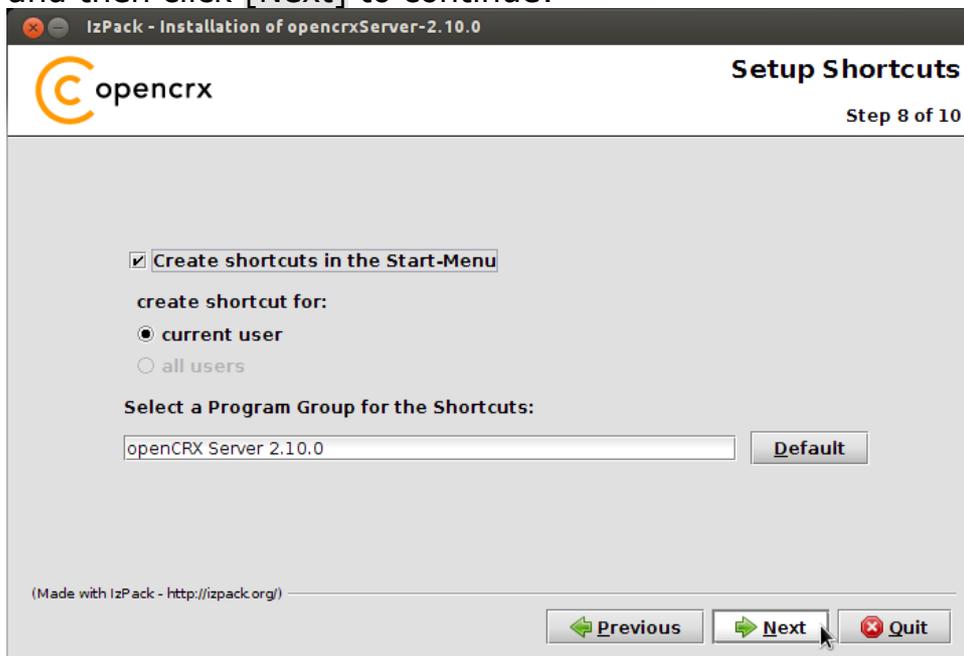
8. Verify the configuration data and then click [Next] to continue:



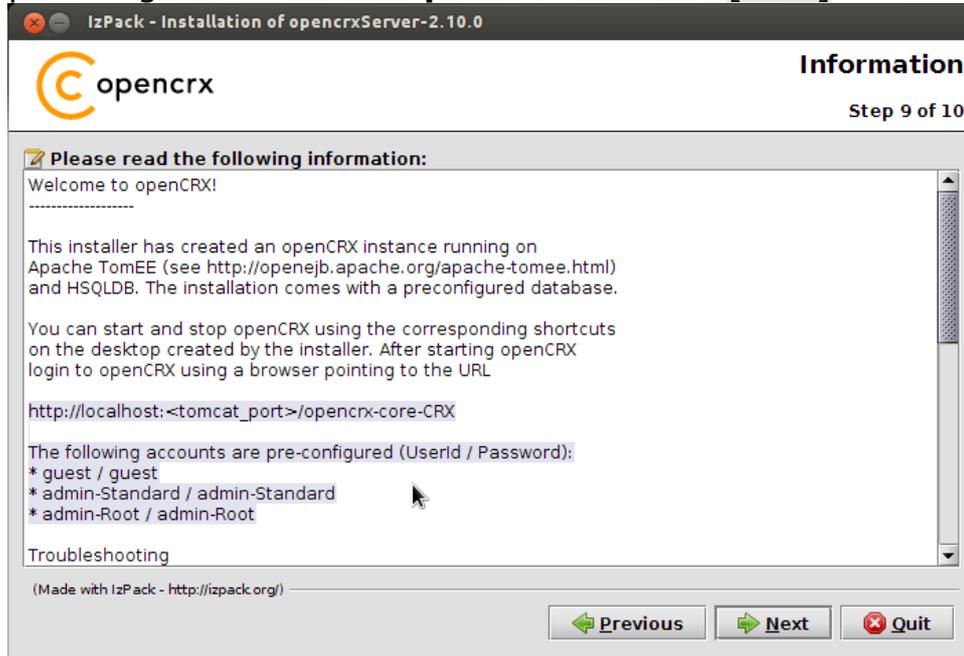
9. openCRX Server is now being installed. Once the installation process has completed, click [Next] to continue:



10. If you want the installer to create shortcuts, select options as shown below and then click [Next] to continue:



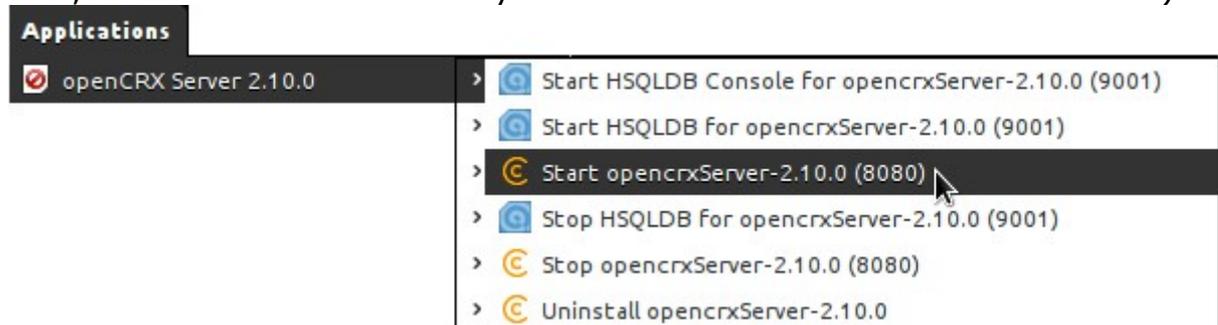
11. Carefully read the README, in particular information about **valid URLs**, preconfigured **users** and **passwords**. Click [Next] to continue:



12. Finally, click [Done] to finish:



13. The installer created a few shortcuts in your application menu (not on the Mac, as IzPack is unfortunately not able to create shortcuts on the Mac):



That's it for the installation. Move on to chapter 4 (Running openCRX Server).

4 Running openCRX Server

The installation process created various shortcuts in your Windows Start Menu (shortcuts/launchers in your application directory on Linux). Your version numbers might be different depending on the Tomcat version included in the installer:

 Start openCRX Server 2.10.0 (8080)	Start TomEE with openCRX Server
 Stop openCRX Server 2.10.0 (8080)	Stop TomEE with openCRX Server
 Start HSQLDB for openCRX Server 2.10.0 (9001)	Start HSQLDB
 Stop HSQLDB for openCRX Server 2.10.0 (9001)	Stop HSQLDB
 Start HSQLDB Console for openCRX Server 2.10.0 (9001)	Launch HSQLDB Management Console

4.1 Starting openCRX Server

Launch the shortcut  [Start openCRX Server 2.10.0 (8080)].



If you did not create the shortcuts (or if the installer could not create them) you can start openCRX Server with the command

`./opencrx.sh run` (Linux, Mac)

`opencrx.bat run` (Windows)

directly from a console (Terminal window, DOS window) once you have navigated to the openCRX Server installation directory, e.g.

`~/opencrxServer-2.10.0/apache-tomee-webprofile-1.0.0/bin`

Please note that on Linux/Mac platforms you might have to start the server with elevated rights, e.g. `sudo ./opencrx.sh run`

4.2 Connecting and Login

Launch your browser and load the URL

`http://localhost:8080/opencrx-core-CRX/`

If you want to load the login page in a specific language, see information at <http://www.opencrx.org/faq.htm#login> on how to do it.



Initialization takes place during the first login after (re)starting Tomcat, so please be patient. Subsequent logins will be very fast.

4.3 Stopping openCRX Server

Launch the shortcut  [Stop openCRX Server 2.10.0 (8080)].

5 Next Steps

Now that you have successfully installed openCRX you might want to have a look at some of the additional documentation published at <http://www.opencrx.org/documents.htm>.

5.1 Migrating from HSQLDB to the DBMS of your choice



Please note that the openCRX Server Installer installed HSQLDB. This DBMS is perfect for testing purposes. However, as all data is kept in memory while HSQLDB is running, we do not recommend to use this setup in a production environment due to potential data loss in case of a power outage, etc.

If you intend to use openCRX in a production environment it is recommended that you migrate (see Wiki) to one of the recommended database management systems (see <http://www.opencrx.org/faq.htm#db> for more information).

5.2 Securing your installation



Please note that the openCRX Server Installer installed Apache Tomee (Apache Tomcat w/ OpenEJB) pretty much as it is distributed, i.e. no hardening like closing of shutdown ports, etc. is done. It is not recommended that you run such a configuration for production use.

If you intend to use openCRX in a production environment it is recommended that you harden/secure Apache TomEE. Apache provides a good starting point to read up on security:

<http://tomcat.apache.org/tomcat-7.0-doc/security-howto.html>.