

# Secondo Installation Manual @ UNIBZ

This document briefly describes [Secondo DBMS](#) installation for Kubuntu Linux 6.06 Dapper Drake. If any important detail is missing, please inform [me](#) via e-mail [kasperovics\(a\)inf.unibz.it](mailto:kasperovics(a)inf.unibz.it) or add it yourself, if you have appropriate access permissions.

## Install Necessary Packages

Below are listed the packages I have on my laptop in order to download and compile secondo. All the packages are from a standard Kubuntu Dapper Drake repository. Of course, not all necessary packages are listed - package dependencies should apply.

Package	Version
subversion	1.3.1-3ubuntu1
gcc-4.0	4.0.3-1ubuntu5
flex-old	2.5.4a-7
bison	2.1-0.2ubuntu1
libc6-dev	2.3.6-0ubuntu20
libstdc++6-4.0-dev	4.0.3-1ubuntu5
sun-java5-bin	1.5.0-06-1
sun-java5-demo	1.5.0-06-1
sun-java5-jdk	1.5.0-06-1
sun-java5-jre	1.5.0-06-1
swi-prolog	5.2.13-1
swi-prolog-clib	5.2.13-1
libdb4.3	4.3.29-5build1
libdb4.3++c2	4.3.29-5build1
libdb4.3-dev	4.3.29-5build1
libdb4.3++-dev	4.3.29-5build1
libjpeg62	6b-11
libjpeg62-dev	6b-11
libreadline5	5.1-7build1
libreadline5-dev	5.1-7build1

## Download from SVN

There are different ways how you can download anything from an SVN repository. I prefer graphical environments and Eclipse plugin "Subclipse" is the best I have found for Linux. However, the use a command-line tool `svn` probably is more common. For this purpose you might wish to assign a path to Secondo SVN repository to an environment variable. This could be done in the following way:

```
echo "SECSVN=\"https://babbage.inf.unibz.it/dis/secondo\"" >> ~/.bashrc
```

The following command is used to list the content of the repository:

```
svn list $SECSVN
```

This command should ask you your password to the Secondo SVN repository, assuming that your linux account matches to your repository account. If it is not so, press `ctrl+c` and enter your repository account. To checkout a repository directory `secondo/` to a current directory use the command:

```
mkdir ~/workspace  
cd ~/workspace  
svn checkout $SECSVN/secondo
```

You can synchronize your previously checked out local copy with the current repository using `svn update` command.

**NEW:** Since 11.01.2007 the location of the repository has changed. If you have some work in your local copy from the old repository, do this:

```
cd ~/workspace/secondo  
svn switch --relocate  
svn+ssh://babbage.inf.unibz.it/var/lib/svn/dis/research/secondo  
https://babbage.inf.unibz.it/dis/secondo
```

## Set Compilation and Operation Pathes

Create a file that exports all necessary pathes as environment variables. On my machine the file is called `~/ .secondorc`. Below follows the content of the file.

```
export SECONDO_BUILD_DIR=$HOME/workspace/secondo  
export SECONDO_PLATFORM=linux  
export BERKELEY_DB_LIB="db_cxx"  
export BERKELEY_DB_DIR=/usr  
export J2SDK_ROOT=/usr/lib/jvm/java-1.5.0-sun  
export SWI_HOME_DIR=/usr/lib/swi-prolog  
export PL_LIB_DIR=$SWI_HOME_DIR/runtime/i386  
export PL_INCLUDE_DIR=$SWI_HOME_DIR/include  
export SECONDO_JAVA=$J2SDK_ROOT/bin/java
```

You can use these definitions wheather calling `source ~/ .secondorc` command in a terminal session, where you're going to compile or run `secondo`, wheather adding it to your `~/ .bashrc` file:

```
echo "source ~/ .secondorc" >> ~/ .bashrc
```

Secondo make file is expecting prolog runtime library to be called `libpl.a`, however, in Kubuntu package the library is called `libplmt.a`. To correct this error you can make a symbolic link running the following commands:

```
cd /usr/lib/swi-prolog/runtime/i386
```

```
sudo ln -sf libplmt.a libpl.a
```

In order to use installed Java2 SDK normally, you might have to setup JAVA\_HOME environment variable to point to the installed J2SDK directory. In my computer I have many java programs so I use a system-wide variable. On Kubuntu Linux system it is set with a command:

```
sudo echo "JAVA_HOME=/usr/lib/jvm/java-1.5.0-sun" >> /etc/environment
```

To ensure that you have a correct java version and it is correctly stated in system pathes, run `javac -version`.

## Compile

To compile secondo, run the following commands in a terminal session:

```
source ~/.secondorc
cd $SECONDO_BUILD_DIR
make
```

**NEW:** If you get an error

```
NLLex.cpp: In member function `virtual int NLScanner::yylex()':
NLLex.cpp:982: error: `yy_current_buffer' undeclared (first use this
function)
```

This means you have got a wrong flex version. To correct the error just delete file NLLex.cpp, because it is generated by flex and will be recreated during the next make.

## Edit Configuration Files

Under Construction

## Run

To run Secondo DBMS with a GUI client open two new terminal sessions. In the first session type the following commands:

```
source ~/.secondorc
cd $SECONDO_BUILD_DIR/bin
./SecondoMonitor
startup
```

In the second terminal type:

```
source ~/.secondorc
cd $SECONDO_BUILD_DIR/Javagui
```

```
./sgui
```

## Import and Commit

With any of the following commands the following option is compulsory -m "Your comment to the changes you're posting ... "

If you are going to post your directory to the repository for the first time use `import` command. The following command imports the content of the current directory (but not the current directory itself!) into `secondo/Algebras/DummyAlgebra` directory in the repository.

```
svn import $SECSVN/secondo/Algebras/DummyAlgebra -m "first import";
```

All the files imported are now under the version control. To post current changes to repository use `commit` command. Don't forget -m option. To add a new file to the version control use `add` command. To remove file from version control use `delete` command. Both commands `add` and `delete` are actually executed after the first `commit` command.

## Download from CVS

I'm going to regularly update Secondo SVN repository on `babbage.inf.unibz.it`, however, if you prefer to download the latest version of Secondo directly from FernUniversität Hagen you have to use `cv`s client. You can obtain a login and password writing a personal e-mail me or to `Igor(.)Timko(a)unibz(.)it`. To download the latest version of `secondo` to a directory `~/workspace` run the commands:

```
cd ~/workspace
cvs -d ":pserver:your_login@some.server.com/path/to/cvsroot" login
cvs -d ":pserver:your_login@some.server.com/path/to/cvsroot" export -f -r
HEAD secondo-src
cvs -d ":pserver:your_login@some.server.com/path/to/cvsroot" export -f -r
HEAD secondo-databases
cvs -d ":pserver:your_login@some.server.com/path/to/cvsroot" export -f -r
HEAD secondo-data
```

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Last update: **2019/01/16 10:03**

