

Desktop Grid Installation Tutorial

In this tutorial you will go through the whole process of setting up a BOINC Desktop Grid Server, the SZTAKI packaged one. For this purpose you will be using a Debian 6 based virtual image. When the installation is done you will deploy the dsp application and attach a worker/client to the server. For simplicity the same virtual machine will be used as a client and server as well.

Follow the following steps carefully and ask for support from the tutors when required:

1. Download the VirtualBox image from here:

<http://dl.dropbox.com/u/64598016/deb6a.zip>

2. Start the VirtualBox and launch the Debian virtual machine

Login with root/test

3. Open the /etc/apt/sources.list file with your preferred editor

Add the following line to the end of sources.list:

deb [http://www.desktopgrid.hu/debian/ squeeze](http://www.desktopgrid.hu/debian/squeeze) szdg

Save the changes and close the editor

4. Download the GPG key of the repository with the following command:

wget <http://www.desktopgrid.hu/szdg-key.gpg>

Import the GPG key: **#apt-key add szdg-key.gpg**

5. Update the package list:

apt-get update

6. Issue the following command to install the BOINC packages:

apt-get install boinc-server boinc-skin-standard

When the mysql installer is prompted enter a root password

7. Provide automatic access for the root user to mysql, create the /root/.my.cnf file. Open it with you preferred text editor and add the following lines (using your mysql root password):

```
[mysql]
user = root
password = <password>
```

```
[mysqladmin]
user = root
password = <password>
```

8. Still as root, issue the *boinc_create_project* command (the project name will be test):

```
boinc_create_project --name=test --long-name="Test Project"
```

9. Create a desktopgrid user:

```
adduser desktopgrid
```

10. Grant project administrator rights to the desktopgrid Linux user:

```
boinc_admin --name=test --add desktopgrid
```

11. Our new project is up and running. If everything went well, you can load the website of your project into your browser. The URL of the project website:

```
http://localhost.tutorial.net/test/
```

12. It's time to deploy a real application into our project. We will use the Digital Signal Processing application of the University of Westminster for this purpose.

13. During the installation a new local user created: *boinc_test*. Switch to that user:

```
su - boinc-test
```

Create a new directory for deployment: **mkdir deploy**

Enter that directory: **cd deploy**

14. Download the installer package of the dsp application:

```
wget http://dl.dropbox.com/u/64598016/dsp_1.00.tar.gz
```

15. SZTAKI has developed a script. It makes application management easier which is in standard BOINC, application deployment is a many step process. Deploys a DG application and sets up the configuration files. The configuration files can be customised after deployment. Run the deployment script:

```
boinc_appmgr --add dsp_1.00.tar.gz
```

We will see the detailed description of this script later when we deploy our own application. At the moment, just run the script as shown if the script finishes properly, you can start to use the DSP application.

16. Update the application version in the server database:

xadd

update_versions

17. Start the server:

start

The previous script installed the DSP application as a daemon, so it starts automatically when the server starts

18. Now that we have a running application we need some clients to do the work for us. We need to install the BOINC client, which will fetch work units from the server:

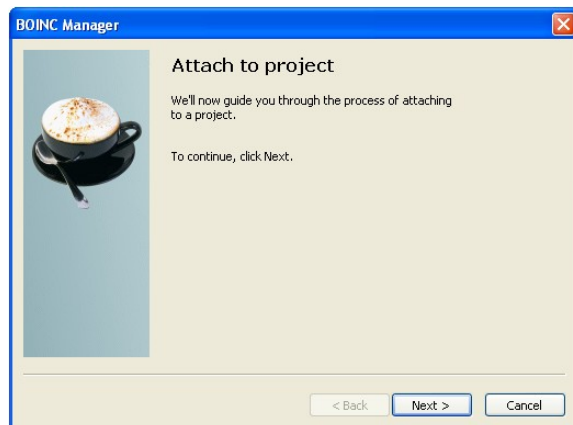
Open a terminal as a root user. (See 2-4)

Install the boinc client application: **apt-get install boinc-client boinc-manager**

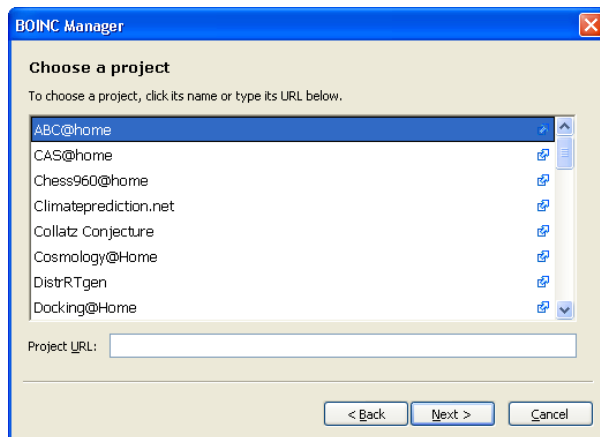
19. Start the BOINC manager:

boincmgr

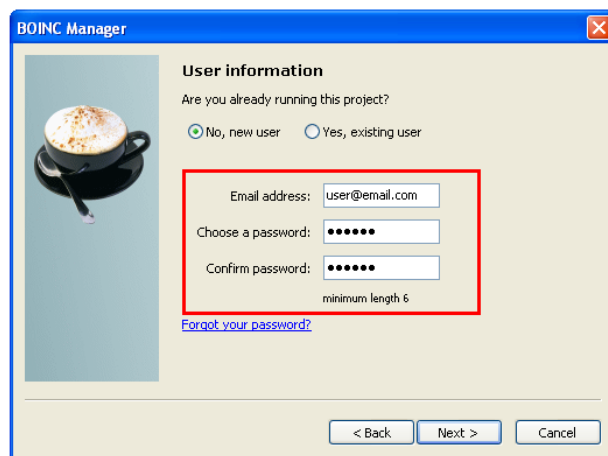
20. A graphical user interface pops up. **Click Next** on it:



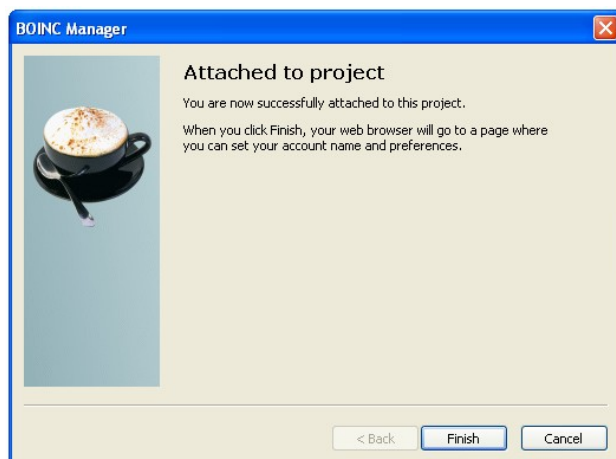
21. Enter your project url (<http://localhost.test.net/test>) and click Next



22. Create new user account and click Next:



23.If everything is OK, you should see the following:



24.You can also follow the project if you open the admin website (desktopgrid/desktopgrid): http://localhost.tutorial.net/test_ops