

# eOn Install Documentation

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## 1 Boinc client libraries on Ubuntu 10

Take a look at <http://boinc.berkeley.edu/trac/wiki/ServerIntro>, which served as inspiration for this text. In this document ... is used to represent a path that depends on the specific installation.

### 1.1 Prerequisites

Start by ensuring that all the packages listed below are installed:

- libssl-dev
- libglut3-dev
- glutg3-dev
- libglui-dev
- libglitz-glx1-dev
- libsdl1.2-dev
- libcurl4-gnutls-dev
- freeglut3
- freeglut3-dev
- libsm-dev
- libice-dev
- libxmu-dev
- libxi-dev
- libx11-dev
- libjpeg62-dev
- libgtk2.0-0
- libgtk2.0-0-dev

## 1.2 Making the Boinc client libraries

```
./configure --disable-server  
make  
sudo make install
```

Where the install option makes the created libraries and header files accessible system wide.

## 2 Boinc server setup on Ubuntu 10

Take a look at <http://boinc.berkeley.edu/trac/wiki/ServerIntro>, which served as inspiration for this text.

### 2.1 Prerequisites

Start by ensuring that all the packages listed below are installed:

- apache2-mpm-prefork
- libapache2-mod-php5
- mysql-client-5.0
- mysql-server-5.0
- php5-mysql
- php5-cli
- php5-gd
- phpmyadmin
- python-mysqldb
- libmysql++-dev
- libssl-dev

#### 2.1.1 boincadm user

Make a new user(boincadm) to handle boinc:

```
sudo useradd -m -s /bin/bash boincadm
```

Add www-data to group boincadm with:

```
sudo usermod -G boincadm www-data
```

### 2.1.2 MySQL

Start mysql:

```
mysql -h localhost -u root [-p]
```

Where the `-p` only should be used if the MySQL `root` user got a password.

Configure mysql

```
GRANT ALL ON *.* TO 'boincadm'@'localhost';  
SET PASSWORD FOR 'boincadm'@'localhost'='XXX';  
exit
```

where `XXX` represents the password.

## 2.2 Making the Boinc server software using boincadm

Start by changing user to boincadm:

```
su boincadm
```

It might be nesseary to use `sudo`.

Get the latest stable code from BOINC

```
svn co http://boinc.berkeley.edu/svn/branches/server_stable
```

Rename the obtained folder to boinc

```
mv server_stable boinc  
cd boinc
```

Build boinc server.

```
./_autosetup  
./configure --disable-client  
make
```

If `./autosetup` complains about a too old version of autoreconf the change line  
`if check_version autoreconf 2.58 to if check_version /usr/bin/autoreconf2.50`  
in this file.

## 3 Making a project

Make sure the hostname is the same as the address used when connecting to the computer. This setting are specified in `/etc/hosts` and `/etc/hostname`.

Enter the Boinc tools directiory and create a new project:

```
cd ../boinc/tools  
./make_project eon
```

where `eon` can be replaced with another project name if preferred. Follow the instructions in the created readme file until the command `bin/xadd`.

### 3.1 Secure the ops page

Go to eon/html/ops and run:

```
cd ../eon/html/ops
htpasswd -c .htpasswd USERNAME
```

where USERNAME is the name of the user that should have access to the ops page. In eon/html/project/project.inc edit function auth\_ops() by changing the default deny access auth\_ops\_deny() to //auth\_ops\_deny().

```
cd ../eon/html/project/
nano project.inc
```

### 3.2 Prepare the eOn to use the Boinc Communicator

Go to the root of the project and replace project.xml with the one provided by the eon source code in the directory boinc

```
cd ../eon
mv project.xml project.xml.org
cp /PATH_EON_SOURCE_CODE/boinc/project.xml .
```

Furthermore copy the template files:

```
cp /PATH_EON_SOURCE_CODE/boinc/client_re.xml ./template/client_re.xml
cp /PATH_EON_SOURCE_CODE/boinc/client_wu.xml ./template/client_wu.xml
```

Compile the eon client with Boinc support but without fortran potentials:

```
cd /PATH_EON_SOURCE_CODE/client
make BOINC=1 NO_FORTRAN=1
```

Copy the obtained executable to the application area of the Boinc project

```
cd ../eon/apps/
mkdir client
cd client
mkdir client_VERSION_PLATFORM
cd client_VERSION_PLATFORM
cp /PATH_EON_SOURCE_CODE/client client_VERSION_PLATFORM
```

where the client.VERSION\_PLATFORM would be client.1.0.i686-pc-linux-gnu for the first version (1.0) of the executable running on intel architecture on a linux platform (i686-pc-linux-gnu). Add the following daemons to the ../eon/config.xml:

```
<daemon>
  <cmd>
    sample_trivial_validator -d 3 -app client
  </cmd>
```

```
</daemon>
<daemon>
  <cmd>
    sample_assimilator -d 3 -app client
  </cmd>
</daemon>
```

To get the newly added application into the Boinc go to the root and run:

```
cd ../eon
./bin/xadd
./bin/update_versions
./bin/start
```

Add the environmental variable `BOINC_PROJECT_DIR` containing the path to the project:

```
cd
nano .bash_profile
BOINC_PROJECT_DIR="../eon"
export BOINC_PROJECT_DIR
```

and finally change the paths stated in the eon configuration file `config.ini` among the eon server files.