Set Up BOINC with ATI (AMD) Videocard under Slackware

This howto is used based on Slackware64 14.0 and boinc 7.2.33 x64, and ATI HD 4350 (RV710) videocard.

Firstly - install a fresh slackware64 14.0. Then we download the latest BOINC client from here

Put the file `boinc_7.2.33_x86_64-pc-linux-gnu.sh` in your user home directory, from who we plan start the boinc client/

note: from the same user we must start x window system, because otherwise BOINC will not see GPU

Then do:

```
sh boinc_7.2.33_x86_64-pc-linux-gnu.sh
```

After that in our home directory there will be the “BOINC” subdirectory, which contains all the binaries we want. Now is the time to prepare a video card.

Download catalyst 13.1 drivers from AMD/ATI site (the latest version is 13.1 - it supports legacy old 4350 video cards)

```
http://www2.ati.com/drivers/linux/amd-driver-installer-catalyst-13.1-linux-x86.x86_64.zip
```

Then we must also download SDK 2.9 from here to get OpenCL support for video card:

Now under root unzip catalyst 13.1 and type:

```
sh  amd-driver-installer-catalyst-13.1-legacy-linux-x86.x86_64.run
```

and install it.

After that untar AMD-APP-SDK-v2.8-lnx32.tgz, and install it.

Now you need to run a window manager from selected user (`startx` from a command line interface), then in KDE (or whichever window manager you choose), open a terminal, cd into ~/BOINC/ and type

```
./boinc
```

You should see something like:

```
bash-4.2$ boinc
```

```
boinc: /lib64/libssl.so.1.0.0: no version information available (required by
boinc)

boinc: /usr/lib64/libcurl.so.4: no version information available (required
by boinc)

boinc: /lib64/libcrypto.so.1.0.0: no version information available (required
by boinc)

31-Jan-2014 15:42:41 [---] cc_config.xml not found - using defaults

31-Jan-2014 15:42:41 [---] Starting BOINC client version 7.2.33 for x86_64-
pc-linux-gnu

31-Jan-2014 15:42:41 [---] log flags: file_xfer, sched_ops, task

31-Jan-2014 15:42:41 [---] Libraries: libcurl/7.27.0 OpenSSL/1.0.1c
zlib/1.2.6 libidn/1.25

31-Jan-2014 15:42:41 [---] Data directory: /home/someuser/BOINC

boinc: /lib64/libssl.so.1.0.0: no version information available (required by
boinc)

boinc: /usr/lib64/libcurl.so.4: no version information available (required
by boinc)

boinc: /lib64/libcrypto.so.1.0.0: no version information available (required
by boinc)

31-Jan-2014 15:42:41 [---] CAL: ATI GPU 0: ATI Radeon HD 4350/4550 (R710)
(CAL version 1.4.1734, 512MB, 439MB available, 192 GFLOPS peak)

31-Jan-2014 15:42:41 [---] OpenCL: AMD/ATI GPU 0: ATI Radeon HD 4350/4550
(R710) (driver version CAL 1.4.1734, device version OpenCL 1.0 AMD-APP
(937.2), 512MB, 439MB available, 192 GFLOPS peak)

31-Jan-2014 15:42:41 [---] OpenCL CPU: Intel(R) Core(TM)2 Duo CPU     E4500
@ 2.20GHz (OpenCL driver vendor: Advanced Micro Devices, Inc., driver
version 2.0 (sse2), device version OpenCL 1.2 AMD-APP (937.2))

getaddrinfo: Success

31-Jan-2014 15:42:41 [---] Host name: TESTslk64_14

31-Jan-2014 15:42:41 [---] Processor: 2 GenuineIntel Intel(R) Core(TM)2 Duo
CPU     E4500  @ 2.20GHz [Family 6 Model 15 Stepping 13]

31-Jan-2014 15:42:41 [---] Processor features: fpu vme de pse tsc msr pae
mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse
```

```
sse2 ss ht tm pbe syscall nx lm constant_tsc arch_perfmon pebs bts rep_good
nopl aperfmperf pni dtes64 monitor ds_cpl est tm2 ssse3 cx16 xtpr pdcm
lahf_lm dtherm

31-Jan-2014 15:42:41 [---] OS: Linux: 3.2.29

31-Jan-2014 15:42:41 [---] Memory: 3.79 GB physical, 1.91 GB virtual

31-Jan-2014 15:42:41 [---] Disk: 36.67 GB total, 17.73 GB free

31-Jan-2014 15:42:41 [---] Local time is UTC +2 hours

31-Jan-2014 15:42:41 [rosetta@home] URL http://boinc.bakerlab.org/rosetta/;
Computer ID 777; resource share 100

31-Jan-2014 15:42:41 [Milkyway@Home] URL
http://milkyway.cs.rpi.edu/milkyway/; Computer ID 7777; resource share 100

31-Jan-2014 15:42:41 [Einstein@Home] URL http://einstein.phys.uwm.edu/;
Computer ID 777777; resource share 100

31-Jan-2014 15:42:41 [Poem@Home] URL http://boinc.fzk.de/poem/; Computer ID
77777777; resource share 100

31-Jan-2014 15:42:41 [SETI@home] URL http://setiathome.berkeley.edu/;
Computer ID 777777777777; resource share 100

31-Jan-2014 15:42:41 [---] General prefs: from
http://www.worldcommunitygrid.org/ (last modified 01-Jan-1970 03:00:01)

31-Jan-2014 15:42:41 [---] Host location: none

31-Jan-2014 15:42:41 [---] General prefs: using your defaults

31-Jan-2014 15:42:41 [---] Reading preferences override file

31-Jan-2014 15:42:41 [---] Preferences:

31-Jan-2014 15:42:41 [---]    max memory usage when active: 1163.31MB

31-Jan-2014 15:42:41 [---]    max memory usage when idle: 1744.96MB

31-Jan-2014 15:42:41 [---]    max disk usage: 2.00GB

31-Jan-2014 15:42:41 [---]    max CPUs used: 1

31-Jan-2014 15:42:41 [---]    suspend work if non-BOINC CPU load exceeds 50%
31-Jan-2014 15:42:41 [---]    (to change preferences, visit a project web
site or select Preferences in the Manager)
31-Jan-2014 15:42:41 [---] Not using a proxy
31-Jan-2014 15:42:42 Initialization completed
```

```
31-Jan-2014 15:42:42 [Milkyway@Home] Restarting task
de_modfit_16_3s_bpl_128wrap_1_1390392603_1849719_0 using
milkyway_separation__modified_fit version 128 in slot 1
getaddrinfo: Success

31-Jan-2014 15:42:42 [Milkyway@Home] Sending scheduler request: To fetch
work.

31-Jan-2014 15:42:42 [Milkyway@Home] Requesting new tasks for CPU and ATI

31-Jan-2014 15:42:45 [Milkyway@Home] Scheduler request completed: got 1 new
tasks

getaddrinfo: Success
```

How to attach BOINC to project manager

After that you have a working BOINC installation. To start participating in projects, go to setiathome.berlkeley.edu, or bam.boincstats.com (if you plan to participate with more than one project), and register. In the second case (via bam.boinc.com) you can attach your project as follows:

- In one terminal window run ./boinc .
- Open another terminal window with the same user, and in the BOINC directory type:

```
./boinccmd --join_acct_mgr http://bam.boincstats.com boincstats_username
boincstats_password
```

- in first console (where you ran `./boinc`) you see messages like “account manager attached, project xxx attached, start to download,etc”....

If you want to edit boinc preferences, you can create the file global_prefs_override.xml in your boinc directory containing the following:

```
<global_preferences>
   <run_on_batteries>0</run_on_batteries>
   <run_if_user_active>1</run_if_user_active>
   <run_gpu_if_user_active>1</run_gpu_if_user_active>
   <suspend_cpu_usage>50.000000</suspend_cpu_usage>
   <start_hour>0.000000</start_hour>
   <end_hour>0.000000</end_hour>
   <net_start_hour>0.000000</net_start_hour>
   <net_end_hour>0.000000</net_end_hour>
   <leave_apps_in_memory>0</leave_apps_in_memory>
   <confirm_before_connecting>0</confirm_before_connecting>
   <hangup_if_dialed>0</hangup_if_dialed>
   <dont_verify_images>0</dont_verify_images>
   <work_buf_min_days>2.100000</work_buf_min_days>
   <work_buf_additional_days>0.250000</work_buf_additional_days>
```

```
   <max_ncpus_pct>75.000000</max_ncpus_pct>
   <cpu_scheduling_period_minutes>300.000000</cpu_scheduling_period_minutes>
   <disk_interval>360.000000</disk_interval>
   <disk_max_used_gb>2.000000</disk_max_used_gb>
   <disk_max_used_pct>75.000000</disk_max_used_pct>
   <disk_min_free_gb>0.950000</disk_min_free_gb>
   <vm_max_used_pct>10.000000</vm_max_used_pct>
   <ram_max_used_busy_pct>30.000000</ram_max_used_busy_pct>
   <ram_max_used_idle_pct>45.000000</ram_max_used_idle_pct>
   <max_bytes_sec_up>0.000000</max_bytes_sec_up>
   <max_bytes_sec_down>0.000000</max_bytes_sec_down>
   <cpu_usage_limit>80.000000</cpu_usage_limit>
   <daily_xfer_limit_mb>0.000000</daily_xfer_limit_mb>
   <daily_xfer_period_days>0</daily_xfer_period_days>
</global_preferences>
```

ATI GPU without X window manager

If you do not want to use X Window manager (say, on a server), but want to use ATI GPU in boinc, you can go that way:

In the home directory of the account you want to run `boinc` from, make a script called `dummy_wm.boinc`:

```
#!/bin/sh
/home/boinc/BOINC/boinc --dir /home/boinc/BOINC >/home/boinc/BOINC/boinc.log
2>/home/boinc/BOINC/berror.log
```

make that script executable:

```
chmod +x dummy_wm.boinc
```

Then in the same directory create a script called `xserv_boinc.scr`:

```
xinit /home/boinc/dummy_wm.boinc
```

Make it executable too:

```
chmod +x xserv_boinc.scr
```

Now you must run that script (`dummy_wm.boinc`) as shown below to keep it running. If you log in in your server via ssh, for example, and run that script, boinc will be running, but when you log out, it will stop. To keep the task running after you log out, start it as follows:

```
at -v -f /home/boinc/xserv_boinc.scr now+1min
```

It will start the task after 1 minute from now.

You can check the running status by checking log files:

```
/home/boinc/BOINC/boinc.log
```

and

```
/home/boinc/BOINC/berror.log
```

You can always get some info about tasks with the following command:

```
/home/boinc/BOINC/boinccmd --get_simple_gui_info

/home/boinc/BOINC/boinccmd --get_tasks
```

ATI VideoCard stats info

You can also get some info about your video card state via commands (must be executed under the root account):

```
DISPLAY=:0 aticonfig --odgc
```

and

```
DISPLAY=:0 aticonfig --odgt
```

Sources

- Originally written by John Ciemgals

howtos,, boinc,, ati,amd,, catalyst,, opencl,4350,slackware, author wisedraco

From:
https://docs.slackware.com/ - **SlackDocs**

Permanent link:
https://docs.slackware.com/howtos:software:boinc_gpu_ati_slackware

Last update: **2014/02/24 22:55 (UTC)**