

INSTALLATION GUIDE FOR INTEL OpenCL SDK

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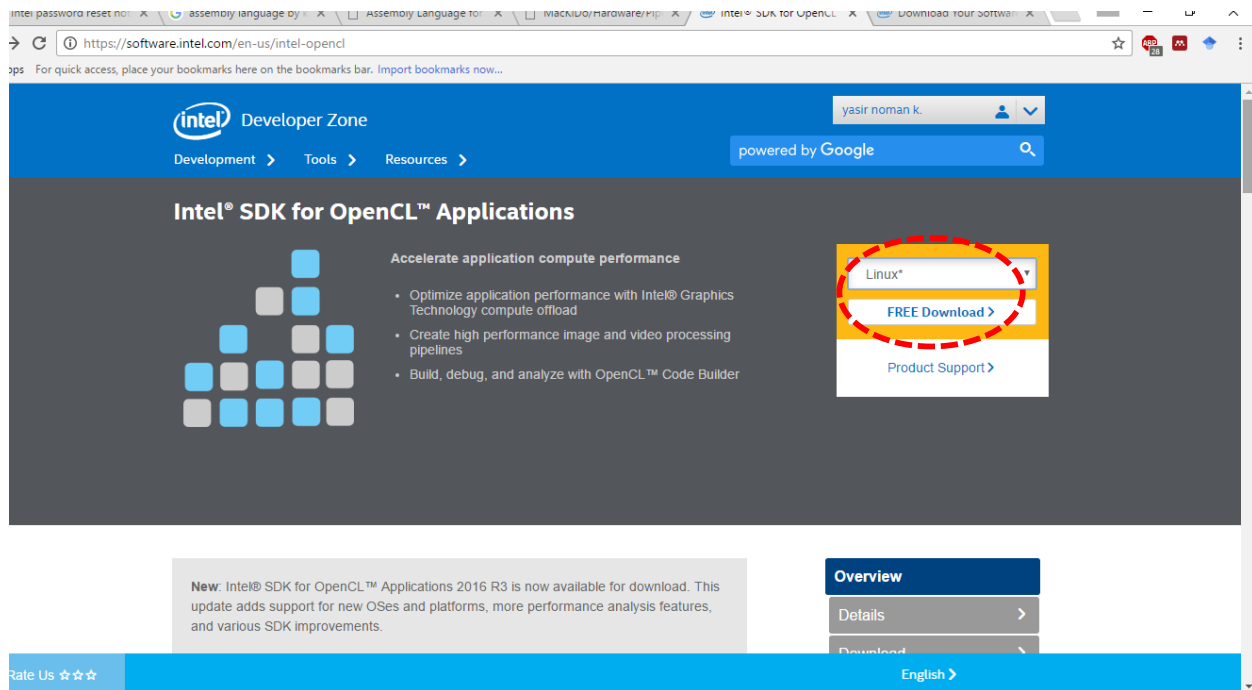
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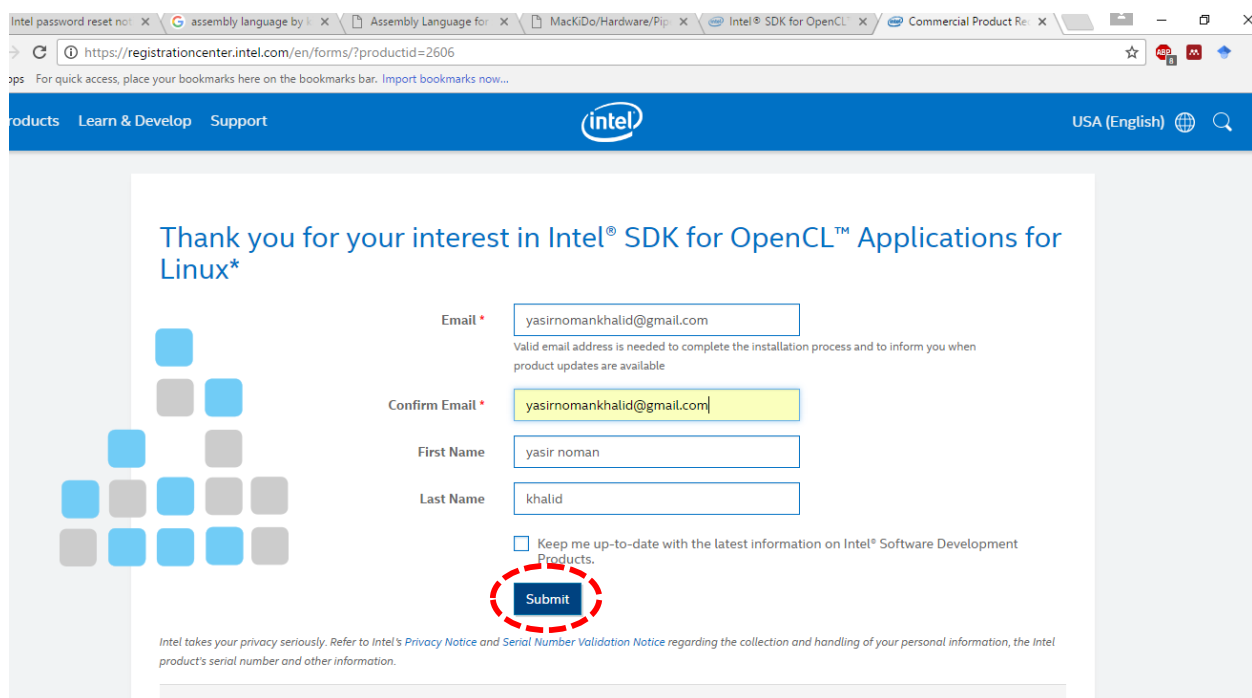
1. Downloading Intel OpenCL SDK

1. To Download Intel OpenCL SDK, Follow link provided below
<https://software.intel.com/en-us/intel-opencl>

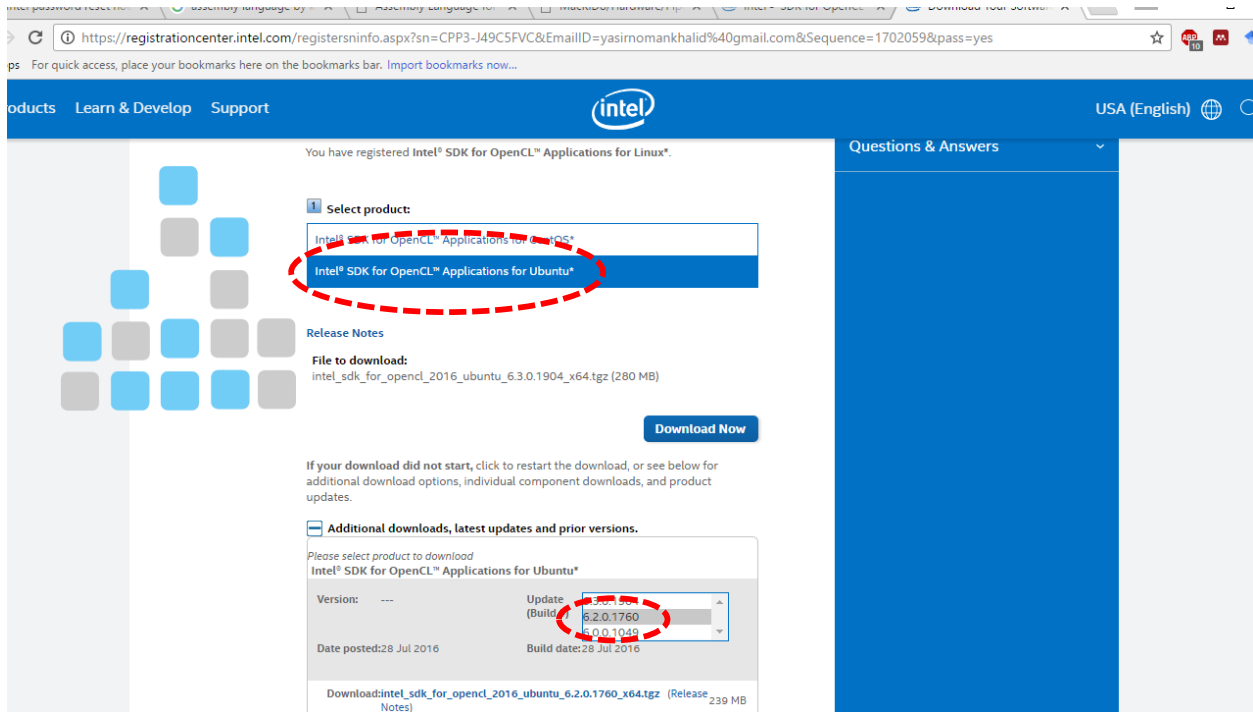
2. Select Linux as operating system and click on free download



3. A new tab will open up, fill the form and click submit

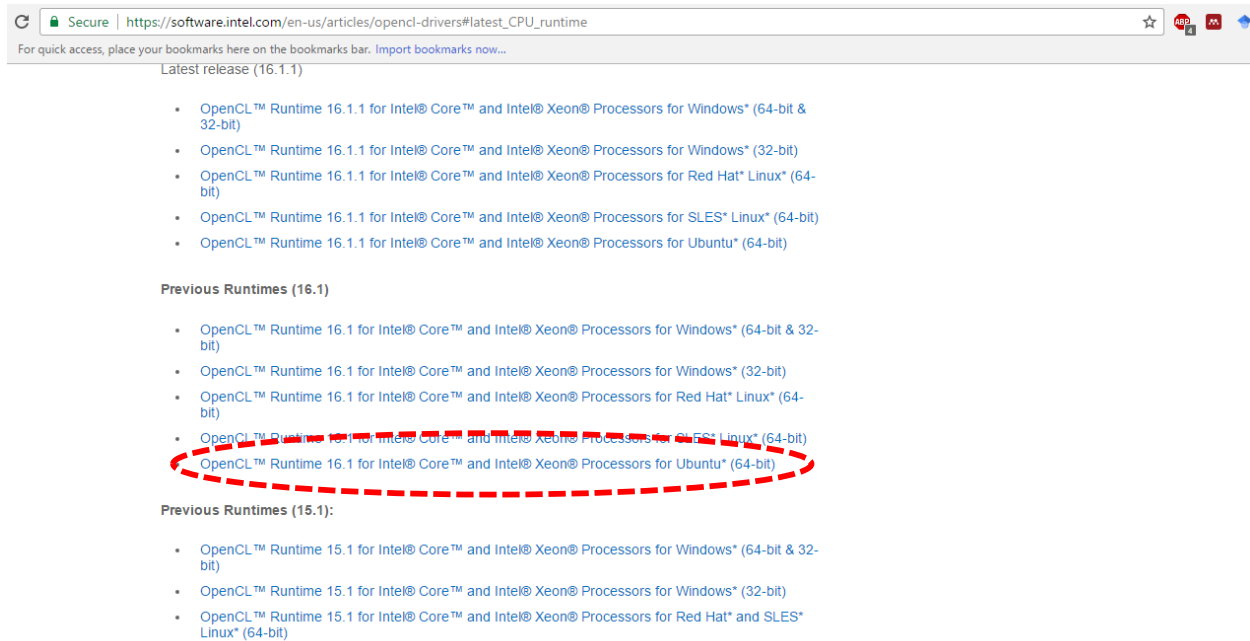


4. In the new tab
 - a. Select Ubuntu distribution of linux
 - b. Select Update (Build #) as 6.2.0.1760
 - c. Click on Download Now



2. Downloading Intel OpenCL Runtime

1. Before installing Intel SDK for OpenCL, we have to install Intel OpenCL Runtime
2. For this purpose, go to following link
https://software.intel.com/en-us/articles/openccl-drivers#latest_CPU_runtime
3. Under previous Runtimes 16.1, select
 - a. OpenCL™ Runtime 16.1 for Intel® Core™ and Intel® Xeon® Processors for Ubuntu* (64-bit) which will download this runtime for OpenCL



3. Additional steps for UBUNTU 16.04 LTS¹

As Ubuntu 16.04 is not officially supported intel, we to also install following packages

1. mono by typing following command in terminal:

sudo apt-get install mono-complete

2. libicu52 by download it from following link:

<http://packages.ubuntu.com/trusty/amd64/libicu52/download> and then

a. Open terminal (Alt+Ctrl+T) and type

cd Downloads

b. Now type following command

sudo dpkg -i libicu52_52.1-3ubuntu0.4_amd64.deb

3. Close Terminal

4. Installing Intel OpenCL SDK and Runtime:

1. Open Terminal by typing Alt+Ctrl+T

2. In terminal, type

cd Downloads

¹ For UBUNTU 14.04, 12.04 etc., don't follow these steps

4.1. Installing Intel OpenCL Runtime

1. Extract the tgz archive contents by typing in terminal:

```
tar xzf openccl_runtime_16.1_x64_ubuntu_5.2.0.10002.tgz
```

Highlighted part in above command is version number. Please replace it with version number of your downloaded package. Find it at the end of name of downloaded package e.g. name of package is openccl_runtime_16.1_x64_ubuntu_**VersionNumber**.tgz

2. After Extraction process is complete, type:

```
cd openccl_runtime_16.1_x64_ubuntu_5.2.0.10002
```

3. Run the following command (from terminal) and follow the installer prompts:

```
./install.sh (remember '.' before '/')
```

4. Alternatively (for installation with graphical user interface) run the following command:

```
./install_GUI.sh
```

4.2. Installing Intel OpenCL SDK

1. Extract the TGZ archive contents by typing in terminal:

```
tar xzf intel_sdk_for_openccl_2016_ubuntu_6.2.0.1760_x64.tgz
```

Highlighted part in above command is version number. Please replace it with version number of your downloaded package. Find it at the end of name of downloaded package e.g. name of package is intel_sdk_for_openccl_2016_ubuntu_**VersionNumber**_x64.tgz

2. After Extraction process is complete, type:

```
cd intel_sdk_for_openccl_2016_ubuntu_6.2.0.1760_x64
```

3. Run the following command (from terminal) and follow the installer prompts:

```
./install.sh
```

4. Alternatively (for installation with graphical user interface) run the following command:

```
./install_GUI.sh
```

5. Installation verification

To verify successful installation of Intel OpenCL SDK, install clinfo package by typing following commands in terminal:

- 1. sudo apt-get update***

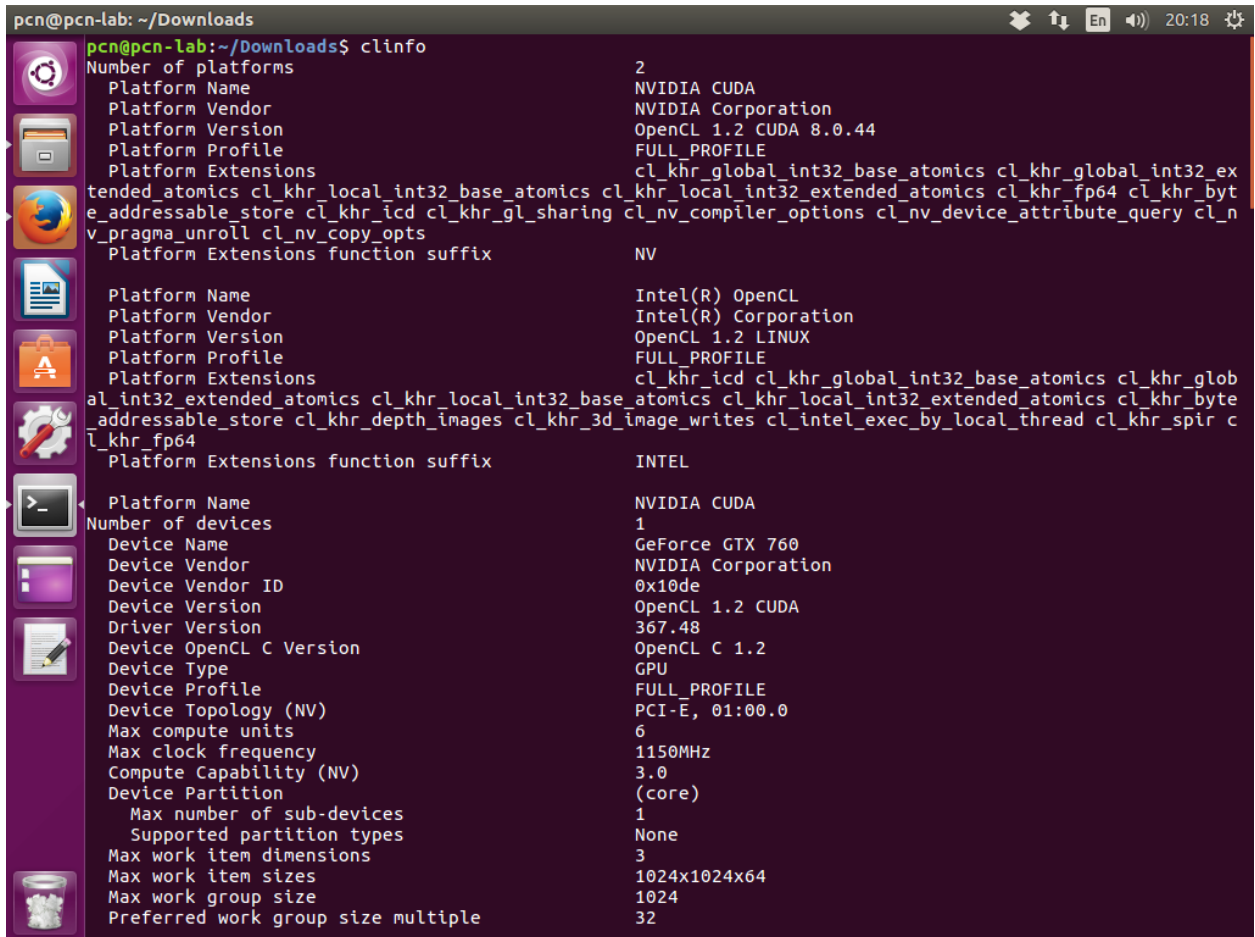
After typing this command, if you are prompted to provide password then provide password of your user_name for logging into UBUNTU

2. *sudo apt-get install clinfo*

After completing installation of clinfo, type following command in terminal:

clinfo

Its output will be similar to image below



```
pcn@pcn-lab: ~/Downloads
pcn@pcn-lab:~/Downloads$ clinfo
Number of platforms                                2
Platform Name                                       NVIDIA CUDA
Platform Vendor                                    NVIDIA Corporation
Platform Version                                    OpenCL 1.2 CUDA 8.0.44
Platform Profile                                    FULL_PROFILE
Platform Extensions                                cl_khr_global_int32_base_atomics cl_khr_global_int32_ex
tended_atomics cl_khr_local_int32_base_atomics cl_khr_local_int32_extended_atomics cl_khr_fp64 cl_khr_byt
e_addressable_store cl_khr_icd cl_khr_gl_sharing cl_nv_compiler_options cl_nv_device_attribute_query cl_n
v_pragma_unroll cl_nv_copy_opts
Platform Extensions function suffix                NV

Platform Name                                       Intel(R) OpenCL
Platform Vendor                                    Intel(R) Corporation
Platform Version                                    OpenCL 1.2 LINUX
Platform Profile                                    FULL_PROFILE
Platform Extensions                                cl_khr_icd cl_khr_global_int32_base_atomics cl_khr_glob
al_int32_extended_atomics cl_khr_local_int32_base_atomics cl_khr_local_int32_extended_atomics cl_khr_byte
_addressable_store cl_khr_depth_images cl_khr_3d_image_writes cl_intel_exec_by_local_thread cl_khr_spir c
l_khr_fp64
Platform Extensions function suffix                INTEL

Platform Name                                       NVIDIA CUDA
Number of devices                                  1
Device Name                                         GeForce GTX 760
Device Vendor                                       NVIDIA Corporation
Device Vendor ID                                   0x10de
Device Version                                    OpenCL 1.2 CUDA
Driver Version                                      367.48
Device OpenCL C Version                            OpenCL C 1.2
Device Type                                         GPU
Device Profile                                      FULL_PROFILE
Device Topology (NV)                               PCI-E, 01:00.0
Max compute units                                  6
Max clock frequency                                1150MHz
Compute Capability (NV)                            3.0
Device Partition                                    (core)
  Max number of sub-devices                          1
  Supported partition types                          None
Max work item dimensions                           3
Max work item sizes                                1024x1024x64
Max work group size                                1024
Preferred work group size multiple                  32
```