🌐 Installation instructions for BEAST and BEAGLE on Avell G1550 RTX MUV/A65 RTX MUV V.1

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VERSION 1

MAY 15, 2020

OPEN ACCESS

DOI:

dx.doi.org/10.17504/protocols.io.bgfntjme

Protocol Citation: Laise Moraes 2020. Installation instructions for BEAST and BEAGLE on Avell G1550 RTX MUV/A65 RTX MUV.

protocols.io

<https://dx.doi.org/10.17504/protocols.io.bgfntjme>

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Protocol status: Working

Created: May 15, 2020

Last Modified: May 15, 2020

PROTOCOL integer ID:
37070

Installing dependency packages

Open a terminal (Ctrl + Alt + T).

- 1 Update the package list and install the dependency packages for the BEAST and BEAGLE.

Command

```
sudo apt-get update
sudo apt-get install -y autoconf automake build-essential g++-8 gcc-8 git libcanberra-gtk-
module libcanberra-gtk3-module libfreetype6-dev libgl1-mesa-dev libglew-dev libglm-dev
libSDL2-dev libSDL2-image-dev libtool mesa-utils ocl-icd-ocl-dev ocl-icd-libopencl1 openjdk-8-
jdk openjdk-8-jre pkg-config
sudo apt-get update
```

Installing Intel OpenCL implementations

- 2 Create a directory called softwares to your HOME directory, switch to it and then download the Intel OpenCL implementations installer.
Unpack the compressed .tar.gz file, switch to installer directory and install the Intel OpenCL implementations, accepting defaults.
After installation, remove the Intel OpenCL implementations installer directory and installer.

Command

```
mkdir $HOME/softwares
cd $HOME/softwares
wget http://registrationcenter-
download.intel.com/akdlm/irc_nas/vcp/16284/intel_sdk_for_openccl_applications_2020.0.270.tar
.gz
tar -zxvf intel_sdk_for_openccl_applications_2020.0.270.tar.gz
cd intel_sdk_for_openccl_applications_2020.0.270
bash install.sh
cd ..
rm -rf intel_sdk_for_openccl_applications_2020.0.270*
```

Installing NVIDIA CUDA drivers

3 Get the PPA repository and install the NVIDIA CUDA driver.

Command

```
wget https://developer.download.nvidia.com/compute/cuda/repos/ubuntu1804/x86_64/cuda-ubuntu1804.pin
sudo mv cuda-ubuntu1804.pin /etc/apt/preferences.d/cuda-repository-pin-600
wget http://developer.download.nvidia.com/compute/cuda/10.2/Prod/local_installers/cuda-repo-ubuntu1804-10-2-local-10.2.89-440.33.01_1.0-1_amd64.deb
sudo dpkg -i cuda-repo-ubuntu1804-10-2-local-10.2.89-440.33.01_1.0-1_amd64.deb
sudo apt-key add /var/cuda-repo-10-2-local-10.2.89-440.33.01/7fa2af80.pub
sudo apt-get update
sudo apt-get -y install cuda
```

Installing BEAGLE

4 Build the BEAGLE from the source repository.

Command

```
git clone --depth=1 https://github.com/beagle-dev/beagle-lib.git
cd beagle-lib
./autogen.sh
./configure --prefix=$HOME/software/beagle --with-opencv=/opt/intel/system_studio_2020/opencv/SDK --with-cuda=/usr/local/cuda
make install
make check
cd ..
```

Installing BEAST

5 Download the BEAST installer and unpack the compressed .tgz file. After install, remove the compressed .tgz file.

Command

```
cd $HOME/software  
wget https://github.com/beast-dev/beast-  
mcmc/releases/download/v1.10.5pre1/BEASTv1.10.5pre.tgz  
tar -zxvf BEASTv1.10.5pre.tgz  
rm BEASTv1.10.5pre.tgz
```