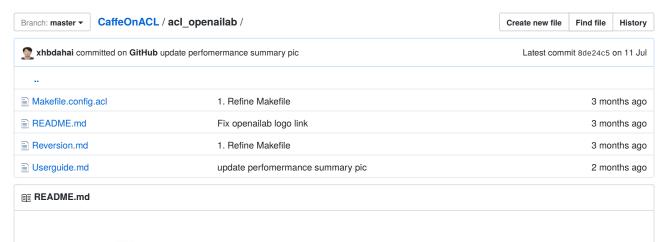
OAID / CaffeOnACL





1. Release Notes

license BSD

Please refer to CaffeOnACL Release NOTE for details

2. Preparation

2.1 General dependencies installation

```
sudo apt-get -y update
sodo apt-get -y upgrade
sudo apt-get install -y build-essential pkg-config automake autoconf protobuf-compiler cmake cmake-gui
sudo apt-get install -y libprotobuf-dev libleveldb-dev libsnappy-dev libhdf5-serial-dev
sudo apt-get install -y libatlas-base-dev libgflags-dev libgoogle-glog-dev liblmdb-dev libopenblas-dev
sudo apt-get install -y libopencv-dev python-dev
sudo apt-get install -y python-numpy python-scipy python-yaml python-six python-pip
sudo apt-get install -y scons git
sudo apt-get install -y --no-install-recommends libboost-all-dev
pip install --upgrade pip
```

2.2 Download source code

1 of 3 9/20/17, 5:31 PM

Recommend creating a new directory in your work directory to execute the following steps. For example, you can create a directory named "oaid" in your home directory by the following commands.

```
cd ~
mkdir oaid
cd oaid
```

Download "ACL" (arm_compute : v17.05):

git clone https://github.com/ARM-software/ComputeLibrary.git

Download "CaffeOnACL":

git clone https://github.com/OAID/caffeOnACL.git

Download "Googletest" :

git clone https://github.com/google/googletest.git

3. Build CaffeOnACL

3.1 Build ACL:

```
cd ~/oaid/ComputeLibrary scons Werror=1 -j8 debug=0 asserts=1 neon=1 opencl=1 embed_kernels=1 os=linux arch=arm64-v8a
```

3.2 Build Caffe:

```
export ACL_ROOT=-/oaid/ComputeLibrary
cd -/oaid/caffeOnACL
cp acl_openailab/Makefile.config.acl Makefile.config
make all distribute
```

3.3 Build Unit tests

Build the gtest libraries

```
cd ~/oaid/googletest
cmake CMakeLists.txt
make
sudo make install
```

Build Caffe Unit tests

```
export CAFFE_ROOT=~/oaid/caffeOnACL
cd ~/oaid/caffeOnACL/unit_tests
make clean
make
```

2 of 3 9/20/17, 5:31 PM

3.3 Run tests

If the output message of the following two tests is same as the examples, it means the porting is success.

 ${\tt export\ LD_LIBRARY_PATH=\sim/oaid/caffeOnACL/distribute/lib:\sim/oaid/ComputeLibrary/build}$

Reference Caffenet

Unit test

```
cd ~/oaid/caffeOnACL/unit_tests
./test_caffe_main
output message:
  [=======] 29 tests from 6 test cases ran. (1236 ms total) [ PASSED ] 29 tests.
```

3 of 3 9/20/17, 5:31 PM