INTEL® ADVISOR HANDS ON

Part of Intel® Parallel Studio XE

If you wish to try native viewer for Windows/Mac, get them there:

scp mn1.bsc.es:/home/nct00/nct00008/intel/install/advisor_2019_update2_setup.exe .

scp mn1.bsc.es:/home/nct00/nct00008/intel/install/advisor_2019_update2.dmg .

scp mn1.bsc.es:/home/nct00/nct00008/intel/install/advisor_license.lic .

After installation, put the license into directory:

<advisor_install_dir>/licenses

```
# See all commands below:
cat /home/nct00/nct00008/intel/examples/commands.txt


source /home/nct00/nct00008/intel/advisor/advixe-vars.sh
export ADVIXE_EXPERIMENTAL=int_roofline
# For your own codes you should run collections via sbatch
# see examples in /home/nct00/nct00008/intel/examples/*.sbatch
# For hands on we will use interactive session
salloc -n 1 -N 1 --exclusive
advixe-cl -collect survey --project-dir ./nbody --
/home/nct00/nct00008/intel/examples/nbody-demo-cpp/v0-nooptimizations/nbody.x
```

```
advixe-cl -collect tripcounts -flop -enable-cache-simulation -project-dir ./nbody --
/home/nct00/nct00008/intel/examples/nbody-demo-cpp/v0-nooptimizations/nbody.x

# check the data

advixe-cl -report survey --project-dir ./nbody

# pack the data to view somewhere else

advixe-cl --snapshot --project-dir ./nbody --pack --cache-sources --cache-binaries --
./nbody-snapshot

# get the roofline to view somewhere else

advixe-cl --report roofline --project-dir ./nbody --report-output ./nbody-roofline.html

# Let's see the data in GUI:

advixe-gui
```

For map and dependencies collection you may specify exactly which loops to profile #(reduce overhead). Collect Memory Access Patterns data for the hotspot

advixe-cl -collect map --mark-up-list=GSimulation.cpp:268 -project-dir ./nbody -- /home/nct00/nct00008/intel/examples/nbody-demo-cpp/v0-nooptimizations/nbody.x

Collect Dependencies for the hotspot. This may take very long time.

Interrupt with Ctrl-C after several minutes, it will preserve data already collected

advixe-cl -collect dependencies --mark-up-list=GSimulation.cpp:268 -project-dir ./nbody -- /home/nct00/nct00008/intel/examples/nbody-demo-cpp/v0-nooptimizations/nbody.x

Running Python API script for collected data

python /home/nct00/nct00008/intel/examples/time_in.py /home/nct00/nct00008/intel/projects/mpi/rank.0/ mpi

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